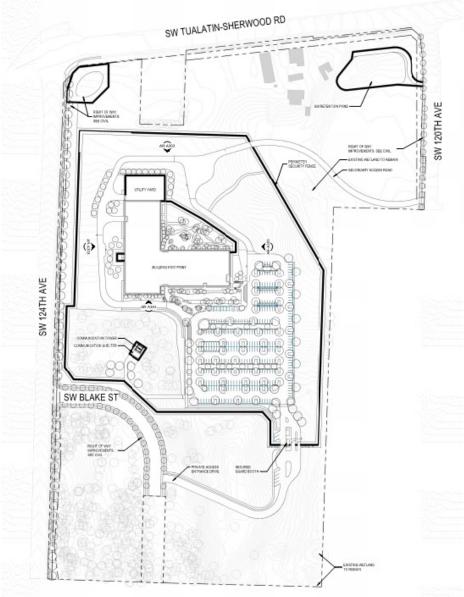
Portland General Electric INTEGRATED OPERATIONS CENTER

Introduction to Consolidated Conditional Use, Variance, and Architectural Review Application



April 18th, 2019

In Collaboration with

Dreyfuss + Blackford Architecture SERA Architects KPFF Consulting Engineers Lancaster Engineering





Winterbrook Planning

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Terms and Acronyms Used

The following terms and acronyms are used throughout this narrative - in the Introduction, Section 1: Conditional Use and Variance Review, and Section 2: Architectural Review.

AR	Architectural Review
ARB	Architectural Review Board
CU	Conditional Use for the WCF
CWS	Clean Water Services
Emergency Helipad	Emergency Helicopter Landing Facility

FERC	Federal Energy Regulatory Commission
IOC or "the center"	Integrated Operations Center (PGE Regional Operations
	Headquarters)
MBP	Manufactured Business Park zone
PGE	Portland General Electric Company
ROW	Right-of-way
sf	Square foot
TDC	Tualatin Development Code
TSP	Tualatin Transportation System Plan (2013)
VAR	Variance from height and setback standards for the WCF
WCF or "the tower"	Wireless Communications Facility

Drawings

Cover Sheet, Index	AR-G001, AR-G100, AR-G110
Civil Drawings	AR-C100 to AR-C801
Landscape and Site Plan Drawings	AR-L100 to AR-L350
Architectural Drawings	AR-A101 to AR-A303
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For full drawing list, see index on Sheet AR-G001

Appendices

- A. City Application Materials
- B. Service Provider Letters
- C. Transportation Impact Study
- D. Radio Frequency Report
- E. Arborist Report
- F. Public Facilities Narrative
- G. Lighting Cut Sheets
- H. Wetland Delineation and Flood Plain
- I. Stormwater Management Report
- J. Topographic Survey

General Information

Owner:	Portland General Electric Company 121 SW Salmon St. Portland, Oregon 97204 (Contact: Mark Lindley, Property Services Manager, 503-464-8102)
Representative:	Winterbrook Planning 610 SW Alder Street, Suite 810 Portland, Oregon 97205 (Contact: Ben Schonberger, Senior Planner, 503-827-4422)
Location:	12150 SW Tualatin-Sherwood Road
State ID No.:	2S1 27C 0701, 2S1 27C 0500
Zoning:	Manufacturing Business Park (MBP)
Case Types:	Conditional Use (CU), Variances (VAR) and Architectural Review (AR)
Procedure:	Type III Review before the Planning Commission (CU/VAR) and the Architectural Review Board (AR)
Pre-Application Mtg:	February 13, 2019
Proposal:	Integrated Operations Center (IOC) headquarters for Portland General Electric Company. Includes accessory wireless communications facility (WCF), outdoor mechanical and electrical equipment yard, emergency helipad, vehicle parking and circulation, landscaping, stormwater management, security fencing and related improvements.

SECTION 1: PROJECT NARRATIVE

Project Summary

Portland General Electric provides regional transmission and distribution services to over 40 percent of Oregon's population, mostly in the Portland metro, Salem, and neighboring counties. PGE proposes to consolidate its regional operations management and technical services on the subject 43-acre site in Tualatin.

The proposed Integrated Operations Center functions as PGE's regional operations headquarters and is designed to achieve two key objectives: first, to minimize power supply disruptions and second, to continue to decarbonize the grid system. PGE management and technical staff based at the center will manage and monitor energy supply, transmission network, distribution network and physical and cyber security operations, while providing computer hardware and software support and operational analysis services. The center will also serve as the emergency operations headquarters for PGE as the need arises.

The center will co-locate technical staff conducting 24/7 functions relating to grid and power supply operations as well as physical and cyber security. The IOC will also contain PGE's emergency operations center, which is activated when storms or other large-scale event disrupts normal electrical operations.

The IOC will employ approximately 300 management and technical staff in a building of 108,000 square feet. The center also includes a stand-alone wireless communications facility (WCF) that is required for operational needs. The IOC will be located on a 43-acre site on the west edge of Tualatin with frontage on SW 124th Avenue. Secured primary access is from a newly-constructed segment of SW Blake Street, which will be extended into the site from SW 124th Avenue. A secured secondary access will be provided from SW 120th Avenue to the east.

Organization of this Application

The IOC includes the corporate office / operations building and accessory uses, including the WCF (the tower), parking and circulation, outdoor mechanical and electrical equipment, security fencing, landscaping, and an emergency helipad. The consolidated land use application has four land use reviews:

- 1. Architectural review (AR) for the entire IOC (including the WCF),
- 2. Conditional use review for WCF,
- 3. Height variance for the WCF and
- 4. Setback variance for the security fence southwest of the tower, near the Blake Street extension.

The Architectural Review Board (ARB) will review the AR application. The Planning Commission will review the conditional use permit (CU) and both variances (VAR). Both applications are reviewed under Type III procedure. This requires a public hearing before the Planning Commission for the CU/VAR review, and separately, a public hearing before the ARB for the AR review.

This consolidated application is divided into three sections.

- 1. The **Introduction** includes background information and findings that apply to both the AR and the CU/VAR applications. The Introduction includes an overview of the consolidated application, identifies IOC design principles, describes the proposed program for development and site plan. This section also contains findings to demonstrate compliance with base zone use and development standards, since they apply to all development on the site.
- 2. **Section 1** addresses conditional use and variance criteria related to the WCF. Wireless communications facilities are a conditional use in the MBP zone. Conditional uses and variances are reviewed separately by the Tualatin Planning Commission. Two variances are requested.
 - <u>Tower height</u>: The height variance is necessary to allow the proposed IOC WCF to securely communicate with other PGE towers. As documented in the Radio Frequency Report (Appendix D), the proposed WCF must be a minimum of 140 feet high, taller than allowed in the MBP zone.
 - <u>Fence setback</u>: A second variance is necessary to allow a security fence within 50 feet of the SW Blake Street and SW 124th Avenue rights-of-way (ROW). The perimeter security fence is proposed at 20 feet from SW Blake Street and SW 124th Avenue at its closest point. The purpose of the setback variance is to preserve existing trees and better screen the tower from public view.
- 3. Section 2 focuses on the AR application and demonstrates compliance with the TDC Chapters 73A through 73F including site development and design standards related to the IOC. It also addresses the design components of the tower. This application will be reviewed by the ARB.

As discussed with city staff and as supported by TDC 32.020, the Planning Commission public hearing and CU/VAR decision will precede the ARB public hearing and AR decision.

Existing Site Conditions

The existing site is currently undeveloped and sits at the juncture of SW Tualatin-Sherwood Road and SW 124th Avenue on the western edge of Tualatin. The 43-acre site was annexed into the city on January 28, 2019 (ANN 18-0002). As shown on Figure 1, the rectangular "notch" property at the north edge of the site is not owned by PGE and is not part of this application.

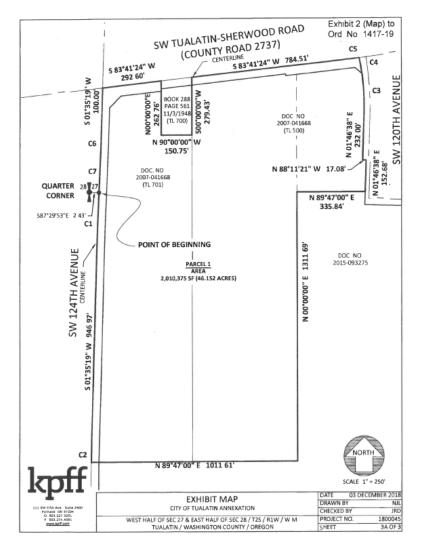


Figure 1. Map of site from city annexation application



Figure 2 is an aerial photograph of the subject property.

Figure 2. Oblique view of site, looking northwest.

Key elements of the site are as follows.

- The site slopes up from SW Tualatin-Sherwood Road, rising 75 feet in elevation from the roadway to a wooded knoll in the southwest corner of the site.
- The northern portion of the site is cleared of trees and has been used for farming activities. A cluster of six farm buildings, including a dwelling, garages, and sheds, is located at the north edge of the subject site, closest to SW Tualatin-Sherwood Road.
- The southwestern quarter of the site has a stand of mature trees that is most dense near SW 124th Avenue.
- Two small wetlands on the property are located at the southeast corner and east-central side of the site; these wetlands have been delineated and mapped (see Wetland Delineation and Flood Plain, Appendix H).

Most site development is proposed in the central, cleared portion of the site. The WCF is located within the grove of trees on the west side. Proposed development avoids both wetlands.

Surrounding Land Uses

Industrial uses surround most of the site.

- Land to the south and east shares the same Manufacturing Business Park (MBP) zoning as the subject site, as does the "notch" property that fronts SW Tualatin-Sherwood Road.
- Tigard Sand and Gravel occupies land east and south of the site. Much of this land is an active gravel quarry.
- North of the site, opposite SW Tualatin-Sherwood Road, land is zoned General Manufacturing (MG). A heavy-duty truck parts supplier and a packaging supply business occupy this land.
- The land west of the site, across SW 124th Avenue, is outside city limits in unincorporated Washington County. This land is undeveloped. The Tualatin Water District proposes a water treatment facility on this property.

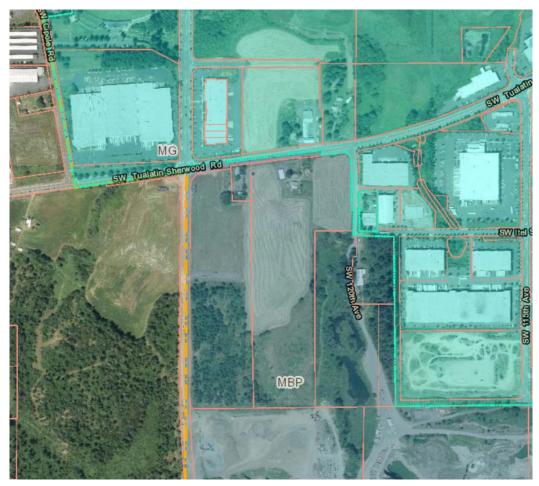


Figure 3. Aerial photo of site with zoning

The nearest residentially-zoned property is located about three-quarters of a mile (3,700 feet) southeast of the subject site. Land between the PGE site and these residences is occupied by other industrial properties and activities, including the gravel quarry, a railroad corridor, and a dense grove of trees.

Design Principles

The IOC is designed as a secure and reliable facility enabling current operations and the deployment of emerging grid technologies in a collaborative and flexible work environment.

Eight design principles drive the center's design. Site planning and design choices flow from these principles, especially security imperatives. Thus, the IOC has been designed:

- 1. As a secure 24-hour facility that deters and protects against existing and emergent physical and cyber threats, meets current and future regulatory requirements, and protects staff and critical assets.
- 2. For resiliency and immediate occupancy and functionality during and after natural disasters such as a major earthquake.
- 3. For flexibility, growth and future reconfigurations that allow adaptive responses to changes in technology and the electrical power marketplace.
- 4. To incorporate technologies and capabilities that allow PGE to operate a smarter evolving grid for the benefit of its customers.
- 5. To allow for the inclusion of all necessary operational functions into a fully integrated operations center that facilitates enhanced communications and knowledge sharing across multiple work groups.
- 6. As a modern collaborative workplace that fosters a work atmosphere that encourages employees to work at higher performance levels.
- 7. As an attractive, flexible, and desirable workplace that will assist PGE with attracting and retaining a highly skilled and talented workforce.
- 8. To bring tangible value and benefit to PGE, its employees, customers and regulators.

Security

IOC security needs are a major driver to structure and site design. The IOC is defined as "critical infrastructure" by the Federal Energy Regulatory Commission (FERC). The center has been designed to meet mandatory Critical Infrastructure Protection (CIP-014) reliability standards. (Order No. 802, Physical Security Reliability Standard, 149 FERC 61, 140 [2014]) The purpose of CIP-014 is:

"To identify and protect Transmission stations and Transmission substations, and their associated primary control centers, that if rendered inoperable or damaged as a result of a physical attack could result in widespread instability, uncontrolled separation, or Cascading within an Interconnection." (CIP-014-01.A.3)

As a transmission facility owner, PGE is required to follow physical and programmatic requirements outlined in the CIP-014 that dictate enhanced security provisions for transmission stations. The need for enhanced security explains why the IOC building is in the middle of the site. Separating critical electrical grid infrastructure from surrounding public ROWs by large setbacks, vegetation, and perimeter fencing protect the IOC from outside access. At the same time, the IOC building and accessory structures are designed to blend into the existing landscape, minimize street presence and reduce the profile of the development.

Site Plan and Design

The proposed site plan shows the location and orientation of buildings and infrastructure on the site. The main IOC building and parking area are in the northcentral portion of the site. The SW Blake Street extension provides site access; a private driveway leads to a guarded gate before entering the parking area.

The WCF is proposed in an existing clearing surrounded by trees southwest of the main building and north of the SW Blake Street extension. Stormwater detention ponds are located at the far northeast and northwest corners of the site.

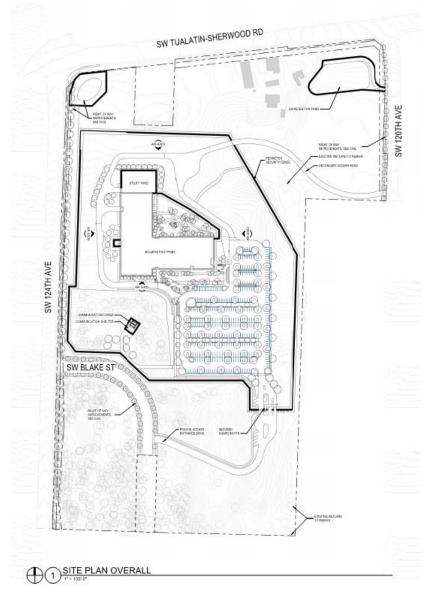


Figure 4. Site plan

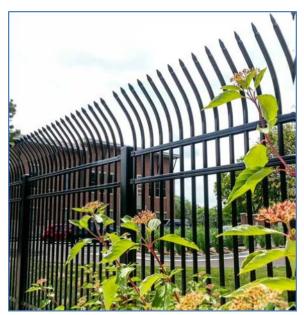


Figure 5. Security fence example

A perimeter security fence completely encircles all project development, except for the approach driveway and stormwater detention ponds in the northeast and northwest corners of the site. The perimeter fence will be constructed of 8-foot metal pickets and includes security cameras and lighting inside the fence perimeter to deter unauthorized access. To gain access to the developed area of the property, employees and visitors must stop at a gated guard booth.

Where the property abuts SW Tualatin-Sherwood Road and most of SW 124th Avenue, the fence will be set back 50 feet from the property line, to comply with fence setback standards. Along SW Blake Street

and some of SW 124th Avenue, a variance is requested to move the fence within 20 feet of the street lot line. The variance will allow more trees to be preserved and better screening for the proposed WCF.

A secondary access point, through a locked gate at the northeast corner of the secured perimeter area, is for emergency and service uses only. An emergency helicopter landing pad will be located at the juncture of two service/maintenance driveways leading to this secondary access and around the north side of the operations center building. The paved landing pad can also serve as an emergency vehicle turnaround. The circular, paved emergency helipad will be 100 feet in diameter, with in-ground lighting. This helipad will be available for use by PGE only in emergency situations such as major earthquakes, floods, wildfires or ice storms.

As shown on the following page, the proposed two-story, 108,000 square foot IOC building is L-shaped. The main building entry for all employees is on the south side of the new structure. Outdoor space for building users is in the "elbow" of the new structure. The building and its critical infrastructure and grid network technologies are, by design, deep within the site.

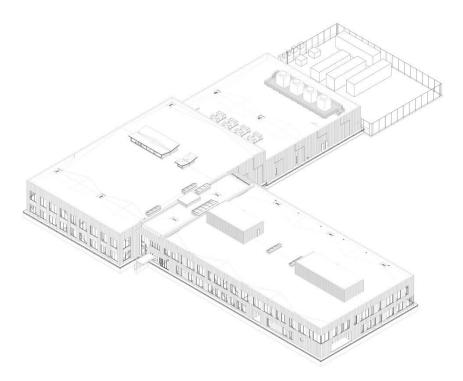


Figure 6. Axonometric elevation of IOC building

A proposed WCF will be part of PGE's regional microwave radio network that is critical to system monitoring and emergency response functions of the IOC. The tower will be a four-legged, self-supporting, lattice-style metal structure with attached microwave dish antennae.



BALD PEAK – Tower view Figure 7. Example WCF tower

The tower must be 140 feet tall to communicate with PGE's existing network of WCFs. A small utility shack will be located at the base of the tower. The WCF will be obscured by a grove of trees and enclosed within a security fence.

The landscape design connects the buildings and program together into a broader site improvement vision. Principles guiding the design are sustainability, simplicity, and durability. The landscape results in improved ecological functions including natural hydrology and wildlife values. Planting, grading and drainage approaches are integrated to allow stormwater management to be accommodated on site.

The design preserves many of the existing natural features of the site, including the forested area and drainage gully to the west and south of the proposed buildings. Where possible, existing trees are protected, and native trees will be planted as appropriate. Invasive or undesirable existing plantings will be removed to minimize future maintenance. Plant material that responds to native Oregon plant communities will be selected, focused on drought tolerance, durability, maintenance, and visual cohesion with the building design. The quantity, sizes, and species of plantings meets the Tualatin's requirements for landscape coverage, heritage tree replacement, and

parking lot shading. Landscaping screens the facility from the public ROW as much as possible.

Two areas are <u>not</u> proposed for development in this application and are reserved for future PGE use. They are:

- north of the fence along SW Tualatin-Sherwood Road (with the exception of stormwater detention ponds), and
- south of the driveway and SW Blake Street extension.

As noted above, the decision to set the IOC development back from SW Tualatin-Sherwood Road is to reduce the public profile of the facility and is largely based on security considerations.

Site Uses

The following is an overview of the uses and activities that will occur on the site.

IOC Office and Operations Building

The IOC building is the primary use of the site. The proposed use will be a regional office headquarters for PGE operations staff. Management and technical staff based at the center will manage and monitor regional energy supply, transmission and distribution network, and physical and cyber security operations, while providing computer hardware and software support and operational analysis services. The center will also serve as the emergency operations headquarters for PGE as the need arises.

The breakdown of activities within the building and their sizes are as follows:

Use	Building Area (square feet)
Offices	33,800
Computer Support	35,750
Operations Analysis	11,600
Meeting Rooms	15,250
Data Center	8,100
Dining Area	2,000
Fitness Area	1,500

A mechanical yard adjacent to the north side of the building will have mechanical, electrical, plumbing, and fire suppression equipment, including generators and fuel and water tanks. This area will be screened by vegetation and a separate security fence. Likewise, an outdoor area for employees is located in the "elbow" of the new building, and will be landscaped and limited by fencing.

Wireless Communications Facility (WCF)

Constant monitoring of the regional electrical grid requires that the site have a 24/7 control and data center with uninterrupted communications capabilities. As part of this, the IOC and its wireless communication facility will become part of the existing, private, microwave radio network PGE operates throughout the region. The tower is located inside the perimeter security fence to maintain a high level of security.

The proposed WCF is accessory to the primary IOC (regional office headquarters) use and is separate from the main building and parking area. Per code definitions, the proposed tower is a "wireless communications facility" that is not attached to a building (TDC 39.650 and TDC 31.060).

Emergency Helipad

The helipad is an emergency helicopter landing facility that will be used only in the event of a natural disaster or weather emergency, such as an earthquake, flood, wildfire fire or ice storm – and only by PGE staff or their authorized agents. No permanent storage for helicopters, fueling infrastructure, or other maintenance equipment will be located at the site. The 100-foot diameter pad will also be used as an emergency vehicle turnaround. Under routine conditions, the paved area will be used as the intersection of internal service driveways near the building.

The emergency helipad is permitted as an accessory use¹ per TDC 39.100(3)(c), which allows accessory uses in conjunction with the primary use. Accessory uses are defined as, "uses or activities that are subordinate and incidental to a primary use on a site." The primary use is the IOC building. The emergency helipad is subordinate to the IOC building because it:

- 1. would not have been proposed as a stand-alone facility if there were no IOC building on the site;
- 2. is exclusively for use by PGE and then only in emergency situations; and
- 3. is separate from, and much smaller than, the IOC building.

^{*t*} The TDC does not offer a definition of helipad. Chapter 39 – Use Categories does not have a prescribed category that fits the proposed use.

Other Accessory Uses

Other accessory uses on the site, like the helipad, directly relate to the integrated operations center use and are subordinate and incidental to the primary use. These accessory uses include parking, landscaping, the outdoor utility area, a guard booth at the site entrance, perimeter fencing, internal pedestrian pathways and service driveways, and stormwater management infrastructure. These accessory uses are common in campus-style developments and are clearly subordinate and incidental to the primary office / operations center use. None of these accessory uses would be necessary or even possible without the existence of the IOC office headquarters use.

Base Zone Standards

The following section addresses use and development standards in the base Manufacturing Business Park (MBP) zone. These standards apply to all development on the site, including the new operations center building and the WCF. Quotes from the TDC are shown in *italics*.

Chapter 64: Manufacturing Business Park Zone (MBP)

Section 64.200 - Use Categories.

(1) Use Categories. Table 64-1 lists use categories Permitted Outright (P) or Conditionally Permitted (C) in the MBP zone. Use categories may also be designated as Limited (L) and subject to the limitations listed in Table 64-1 and restrictions identified in TDC 64.210. Limitations may restrict the specific type of use, location, size, or other characteristics of the use category. Use categories which are not listed are prohibited within the zone, except for uses which are found by the City Manager or appointee to be of a similar character and to meet the purpose of this zone, as provided in TDC 31.070.

(2) Overlay Zones. Additional uses may be allowed in a particular overlay zone. See the overlay zone Chapters for additional uses.[...]

Section 64.210 - Additional Limitations on Uses. [...]

(3) Offices. Office uses are a permitted or conditional use as follows:

(a) Permitted Uses.

(i) Research and Development Offices. Research and development offices and laboratories for chemical, engineering, and physical sciences; medical and pharmaceutical products; alternative energy production from sources such as solar and wind; industrial products and consumer products.

(ii) Headquarters Offices. Corporate, regional, or district office headquarters are permitted outright if the headquarters is for any use permitted in this Code, the offices occupy at least 20,000 square feet, and no manufacturing is conducted that is otherwise not a permitted use in the MBP zone.[...]

Finding: The proposed IOC use is a regional office headquarters for PGE operations staff. This use is a permitted use in the zone per Section 64.210(3)(ii).

(The detached WCF is an integral, accessory part of the IOC and is listed in Table 64-1 as a conditional use. Conditional use findings for the WCF are found in a separate section of this consolidated application.)

The IOC building is the primary use of the site. The proposed use will be a regional office headquarters for PGE operations staff. Management and technical staff based at

the center will manage and monitor regional energy supply, transmission and distribution network, and physical and cyber security operations, while providing computer hardware and software support and operational analysis services. The center will also serve as the emergency operations headquarters for PGE as the need arises.

The proposed regional headquarters will employ approximately 300 management and technical staff in a building of 108,000 square feet. Office uses occupy more than 20,000 square feet of the structure, and no manufacturing activities are proposed.

(5) Outdoor Uses. All uses must be conducted wholly within a completely enclosed building, except off-street parking and loading, Basic Utilities, Wireless Communication Facilities, outdoor storage of materials and products directly related to the permitted use and outdoor play areas of child day care centers as required by state day care certification standards.

Finding: As shown on the site plan, IOC office and operations uses occur within the enclosed building. The WCF, parking and circulation (including the emergency vehicle turnaround / helipad), and outdoor utility yard north of the main building are all permitted outdoor uses. These uses are also shown on the site plan.

A fenced mechanical yard adjacent to the north side of the building will have mechanical, electrical, plumbing, and fire suppression equipment, including generators and fuel and water tanks. These materials are "directly related to the permitted use." This area will be screened by vegetation and a separate security fence.

The proposed WCF is an accessory use that is critical to the monitoring and emergency response functions of the IOC. It is expressly listed above as an allowed outdoor use.

The helipad is an emergency helicopter landing facility that will be used only in the event of a natural disaster or weather emergency, such as an earthquake, flood, wildfire fire or ice storm – and only by PGE staff or their authorized agents. The 100-foot diameter paved area can also be used as an emergency vehicle turnaround. Under routine conditions, the paved area will be used as the intersection of internal service driveways. As described in more detail above, the helipad is subordinate and incidental to the primary use and therefore allowed as an accessory use.

Other uses on the site – parking, landscaping, a guard booth, perimeter fencing, internal pedestrian pathways and service driveways, and stormwater management infrastructure – are also accessory. That is, they directly relate to the primary integrated operations center use but are subordinate and incidental to it. None of these accessory outdoor uses would occur without the existence of the IOC office headquarters use.

Section 64.300 - Development Standards.

Development standards in the MBP zone are listed in Table 64-2. Additional standards may apply to some uses and situations, see TDC 64.310.

Finding: MPB zone development standards apply to primary, conditional, and accessory uses. All development standards are either met or a variance to the standard has been requested in Section 1 of this consolidated application. Two variances are proposed: (1) a height variance for the WCF and (2) a fence setback variance that will allow for greater preservation of existing trees and increased tower security.

Development standards for the site are found primarily in the base zone, Table 64-2. This section applies to all development in the zone, including the IOC, the tower, and all the accessory development on the site. Development standards that clearly are not applicable – such as standards for land within the RSIA boundary, land divisions and private streets – are not further addressed in this application.

STANDARD	REQUIREMENT	LIMITATIONS AND CODE REFERENCES	HOW STANDARD IS MET BY THIS DEVELOPMENT
		LOT DIMENSIONS	
Minimum Lot Width	100 feet	When lot has frontage on public street, minimum lot width at the street is 100 feet. When lot has frontage on cul-de-sac street, minimum lot width at the street is 50 feet.	The tax lots have frontage along three different public streets – all of which exceed the 100-foot minimum standard. Tax lot 2S127C 701: 216 ft. frontage along SW Tualatin-Sherwood Road; 945 feet of frontage along SW 124 th Avenue. Tax lot 2S127C 500: 716 ft. of frontage along SW Tualatin- Sherwood Road; 418 ft. of frontage along SW 120 th Avenue.
MINIMUM SETBACKS			
Front	30-50 feet		Blake and 124 th are "front" lot lines Closest non-fence structure is WCF tower, set back roughly 160 feet from Blake, and roughly 260 feet from

Table 64-2 Development Standards in the MBP Zone

STANDARD	REQUIREMENT	LIMITATIONS AND CODE REFERENCES	HOW STANDARD IS MET BY THIS DEVELOPMENT
			124 th .
			Variance requested for security fence setback.
Side	0-100 feet	Determined through Architectural Review Process. No minimum setback if adjacent to railroad right-of-way or spur track. For a Corner Lot, the minimum setback must be 30-50 feet from a public street.	South property line is "side" lot line. Closest building is guard booth, approximately 490 feet from lot line.
Rear	0-100 feet	Determined through Architectural Review Process. No minimum	East side lot line is "rear" property line. Closest structure is guard booth, located approximately 130 feet from lot line.
Rear Setback Adjacent to Residential or Manufacturing Park District	50 feet	setback if adjacent to railroad right-of-way or spur track.	Not applicable. The site is not adjacent to any residential district. The nearest residentially zoned area is approximately three-quarters of a mile from the subject property.
Parking and Circulation Areas Adjacent to Public Right-of-Way	20-25 feet		Parking area located approximately 130 feet from SW Blake, and approximately 450 feet from SW 124th
Parking and Circulation Areas Adjacent to any Other Property Line	10 feet		Parking area located approximately 130 feet from SW Blake, and approximately 450 feet from SW 124th
Fences	50 feet	From public right-of-way.	In two locations, the perimeter fence is proposed within the 50' setback area: (1) 20 feet along approximately 275 feet of SW 124 th and (2) 20 feet

STANDARD	REQUIREMENT	LIMITATIONS AND CODE REFERENCES	HOW STANDARD IS MET BY THIS DEVELOPMENT
			from SW Blake Street. Therefore, a fence setback variance is requested.
		STRUCTURE HEIGHT	
Maximum Height	65 feet	May be increased to 85 feet if yards adjacent to structure are not less than a distance equal to one and one-half times the height of the structure. Flagpoles may extend to 100 feet.	The IOC building is two-stories and well below the 65' height maximum. However, the proposed WCF will be 140 feet tall. Therefore, a height variance is requested for the WCF.
Maximum Height Adjacent to Residential District	28 feet	Measured at the 50-foot setback line, includes flagpoles. The building height may extend above 28 feet on a plane beginning at the 50-foot setback line at a slope of 45 degrees extending away from the 50-foot setback line.	Not applicable. The site is not adjacent to any residential district. The nearest residentially zoned area is approximately three-quarters of a mile from the subject property.

Section 64.310 - Additional Development Standards.

(1) Industrial Master Plan. Minimum lot size, setbacks, maximum height, and other development standards may be modified by submittal of an Industrial Master Plan application. *See TDC* 33.050.

(2) Spur Rail Tracks. Spur rail tracks are not permitted within 200 feet of an adjacent residential district.

(3) Minimum Lot Size in RSIA.

Finding: The above provisions are not applicable. This proposal does not include an Industrial Master Plan. However, height and setback variances are addressed in Section 1 of this narrative. No spur rail tracks are proposed. Map 9-5 shows that the site is not within the Metro RSIA.

(4) Sound Barrier Construction. Sound barrier construction is required to mitigate the impact of noise associated with overhead doors and building mechanical equipment, including but not limited to heating, cooling and ventilation equipment, compressors, waste evacuation systems, electrical transformers, and other motorized or powered machinery located on the exterior of a building. Sound barrier construction must conform to the following standards:[...]

Finding: Subsection (b) of this code section indicates that sound barriers are required to intercept "paths of 450 feet or less between a residential property in a residential planning district and" the noise-emitting object. The "nearest residential property in a residential planning district" to the subject property is 3,700 feet away to the southeast. Consequently, no sound barriers are required.

(5) Wetland Conservation Lots. No minimum lot size, width or frontage requirement must apply to wetland conservation lots.

Finding: The site is not a Wetland Conservation Lot. This standard does not apply.

(6) Setbacks for Conditional Uses. Setback requirements for conditional uses must be as determined and approved through the Conditional Use Permit process in accordance with TDC Chapter 33 and the Architectural Review process in accordance with TDC Chapter 33 and TDC Chapter 73A through 73F. However, no setback greater than 50 feet may be required.

Finding: The proposed regional operations headquarters is a permitted use, not a conditional use. The setback requirements for conditional uses do not apply. However, the above requirements are applicable to the detached wireless communication facility, which is a conditional use in the MBP zoning district. Setback requirements are addressed in Section 1 (CU/VAR) and Section 2 (AR) of this narrative.

(7) Setback Reduction for Developments Adjacent to Greenways and Natural Areas. To preserve natural areas and habitat for fish and wildlife, the decision-authority may provide a front, side, or rear yard setback reduction for developments that are adjacent to Greenways or Natural Areas that dedicate land for conservation or public recreational purposes, in accordance with the following standards.

Finding: The property is not adjacent to any greenways or natural areas.

Additional Narrative and Findings

This document and prior sections are applicable to all development on the site. Findings for the conditional use (*i.e.*, the WCF), the tower height and fence setback variances, and the architectural review are located in separate sections since they are separate land use reviews and will be reviewed by different city decision-makers. These documents are Section 1: Conditional Use and Variance, and Section 2: Architectural Review.

Portland General Electric INTEGRATED OPERATIONS CENTER

Section 2: Architectural Review Findings



April 18th, 2019

In Collaboration with

Dreyfuss + Blackford Architecture SERA Architects KPFF Consulting Engineers Lancaster Engineering





Winterbrook Planning

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SECTION 2: ARCHITECTURAL REVIEW

PGE's consolidated land use application includes multiple sections, applicable to proposed corporate office / operations building and accessory uses, including the WCF tower, parking and circulation, outdoor mechanical and electrical equipment, security fencing, landscaping, and an emergency helipad. The sections address different city standards – the AR application reviewed by the ARB, and the CU/VAR applications reviewed by the Planning Commission.

- The **Introduction** includes an overview of the consolidated application, identifies IOC design principles, describes the proposed site plan, and demonstrates compliance with base Manufacturing Business Park (MBP) zone use and development standards.
- Section 1 addresses conditional use and variance criteria related to the WCF. Wireless communications facilities are a conditional use in the MBP zone. Conditional uses and variances are reviewed by the Tualatin Planning Commission.
- Section 2 (this section) focuses on the AR application and demonstrates compliance with the TDC Chapters 73A through 73F including site development and design standards related to the IOC. It also addresses the design components of the tower.

Quotes from the TDC are presented in *italic font* followed by findings demonstrating compliance.

Integrated Operations Center

The IOC will serve as PGE's regional operational and emergency response headquarters. Because the IOC is primarily an office building that is larger than 50,000 square feet, it is a subject to a Type III review by the ARB.

Importantly, the IOC is an atypical commercial use because it is:

- 1. defined as critical infrastructure,
- 2. not open to the public,
- 3. has highly restricted access, and
- 4. is surrounded by a security fence.

PGE is required to follow physical and programmatic requirements outlined in federal guidelines. These rules dictate enhanced security provisions for critical electrical grid infrastructure. Sites are protected from outside access by large setbacks, vegetation, and perimeter fencing. The IOC building and accessory structures are designed to blend into the existing landscape, minimize street presence and reduce the profile of the development. Because of these limitations and specialized requirements, design standards that normally apply to public-facing retail and office development require some interpretation regarding how they apply to the proposed IOC.

Chapter 33: Architectural Review Approval Criteria

Section 33.020 - Architectural Review

(2) Applicability.

(a) The following types of development are subject to Architectural Review:[...]

(i) Any exterior modifications to improved or unimproved real property;

(b) Examples of development subject to Architectural Review, include but are not limited to the following:[...]

- (vi) New wireless communication facilities, and new attached wireless communication;[...]
- (3) Types of Architectural Review Applications Procedure Type. [...]

(d) Large Commercial, Industrial, and Multifamily Development. Development applications that propose any of the following are subject to Type III Review by the Architectural Review Board as the hearing body:

(i) New Commercial Buildings 50,000 square feet and larger[...].

Finding: The proposed commercial building is greater than 50,000 square feet and an exterior modification to real property. TDC 33.020(3)(d)(i) is applicable, and this project is therefore subject to a Type III Architectural Review. The WCF on site is also subject to AR per TDC 33.020(2)(b)(vi). The ARB will also review the tower design.

(4) Application Materials. The application must be on forms provided by the City. In addition to the application materials required by TDC 32.140 (Application Submittal), the following application materials are also required: (a) The project name and the names, addresses, and telephone numbers of the architect, landscape architect, and engineer on the project;
(b) Existing conditions plan, site plan, grading plan, utility plan, landscape plan, and lighting plan all drawn to scale; (c) A materials board that includes example building materials and textures; (d) Title report; and (e) A Service Provider Letter from Clean Water Services.

Finding: The submitted drawings and appendices to this narrative contain all the required elements listed above.

(5) Approval Criteria... (c) Large Commercial, Industrial, and Multifamily Development. Applications for Large Commercial, Industrial, and Multifamily Development must comply with the applicable standards and objectives in TDC Chapter 73A through 73G. **Finding**: The proposed development is a large commercial development and therefore subject to the approval criteria in TDC Chapter 73A through 73G, as described in subsection (5)(c) above. Findings against each of these sections are provided later in this document.

(6) Conditions of Approval. (a) Architectural Review decisions may include conditions of approval that apply restrictions and conditions that: (i) Protect the public from the potentially deleterious effects of the proposal; (ii) Fulfill the need for public facilities and services created by the proposal, or increased or in part attributable to the proposal; and (iii) Further the implementation of the requirements of the Tualatin Development Code. (b) Types of conditions of approval that may be imposed include, but are not limited to: [...]

Finding: The applicant understands that the ARB may apply conditions of approval where necessary to ensure compliance with TDC standards and criteria.

(7) Modifications to Previously Approved Final Architectural Review Decisions. An applicant who wishes to modify a previously approved final Architectural Review decision may utilize one of the following procedures: [...]

Finding: This request is for an architectural review, not a modification to a previous review. This standard does not apply.

(8) Effective Date. The effective date of an Architectural Review decision or Minor Architectural Review decision is the date the notice of decision is mailed.
(9) Permit Expiration. Architectural Review decisions (including Minor Architectural Review decisions) expire two (2) years from the effective date unless the applicant has received a building, or grading permit submitted in conjunction with a building permit application, substantial construction has occurred pursuant to the building permit, and an inspection has been performed by a member of the Building Division.

Finding: PGE plans to begin construction immediately upon approval and issuance of land use and construction permits.

Chapter 73A – Site Design

Section 73A.010 - Site and Building Design Standards Purpose and Objectives.

(1) Purpose. The purpose of the site and building design objectives and standards found in TDC 73A through TDC 73G is to promote functional, safe, innovative, and attractive sites and buildings that are compatible with the surrounding environment, including, but not limited to:
(a) The building form, articulation of walls, roof design, materials, and placement of elements such as windows, doors, and identification features; and

(b) The placement, design, and relationship of proposed site elements such as buildings, vehicular parking, circulation areas, bikeways and bike parking, accessways, walkways, buffer areas, and landscaping.

(2) *Objectives.* The objectives of site and building design standards in TDC 73A through TDC 73G are to:

(a) Enhance Tualatin through the creation of attractively designed development and streetscapes;(b) Encourage originality, flexibility, and innovation in building design;

(c) Create opportunities for, or areas of, visual and aesthetic interest for occupants and visitors to the site;

(*d*) *Provide a composition of building elements which responds to function, land form, identity and image, accessibility, orientation and climatic factors;*

(e) Conserve, protect, and restore fish and wildlife habitat areas, and maintain or create visual and physical corridors to adjacent fish and wildlife habitat areas;

(f) Enhance energy efficiency through the use of landscape and architectural elements; and *(g)* Minimize disruption of natural site features such as topography, trees, and water features.

Finding: The purpose and objectives listed above are not in themselves approval criteria. Nevertheless, the proposed development carries out the purpose and objectives of the site and building design by:

- locating the building and associated development in an appropriate location on a large site at the western edge of the city,
- orienting development to allow the use and ease of circulation while fulfilling critical and extremely strict site security demands,
- proposing a building form that reflects the design vocabulary and material palette of surrounding commercial and industrial development,
- integrating landscaping into the site that enhances the building and serves as screening where needed.

The building responds to its natural landscape elements by placing the building and parking area on cleared areas and mostly preserving a mature stand of trees on the west side of the property and establishing a modern and functional structure that will be an attractive and unobtrusive addition to this area of the city.

Section 73A.100 - Single Family Design Standards

Section 73A.200 - Common Wall Design Standards

Finding: The proposed development contains no residential uses. These sections do not apply.

Section 73A.300 - Commercial Design Standards.

The following standards are minimum requirements for commercial development in all zones: (1) *Walkways. Commercial development must provide walkways as follows:*

(a) Walkways must be a minimum of 6 feet in width;

(b) Walkways must be constructed of asphalt, concrete, or a pervious surface such as pavers or grasscrete (not gravel or woody material);

(c) Walkways must meet ADA standards applicable at time of construction or alteration;(d) Walkways must be provided between the main building entrances and other on-site

buildings, accessways, and sidewalks along the public right-of-way;

(e) Walkways through parking areas, drive aisles, and loading areas must be visibly raised and of a different appearance than the adjacent paved vehicular areas;

(f) Bikeways must be provided that link building entrances and bike facilities on the site with adjoining public right-of-way and accessways; and

(g) Outdoor Recreation Access Routes must be provided between the development's walkway and bikeway circulation system and parks, bikeways and greenways where a bike or pedestrian path is designated.

Finding: As shown on the site plan, paved, minimum 6-foot-wide, ADA accessible walkways are provided in the following locations:

- Between the main building entrance and the parking lot
- On the south and west sides of the main building
- Around the west and south perimeter of the parking lot
- From the main building entrance to the guard booth
- From the SW Blake Street frontage to the guard booth

These pedestrian facilities will accommodate on-site pedestrian circulation for employees and visitors, while maintaining the necessary high level of access control and site security. The developed area of the site has only a single, highly-secure opening in the perimeter fence. Pedestrian connections outside the fence all funnel through this opening.

Bicycle access to the site is available between SW Blake Street and the main building via the controlled access point monitored by a gate and a guard booth. The IOC has ample bicycle parking both inside and outside the building, and entry for users will be via the main entry and around the west side of the parking lot.

(2) Accessways.

(a) When Required. Accessways are required to be constructed when a common wall development is adjacent to any of the following:
(3) Drive-up Uses. Drive-up uses must comply with the following:[...]

Finding: The proposed development is not a common wall development nor does it have any drive up uses. These standards do not apply.

(4) *Safety and Security. Commercial development must provide safety and security features as follows:*

(a) Locate windows and provide lighting in a manner that enables tenants, employees, and police to watch over pedestrian, parking, and loading areas;

Finding: As documented above and the Introduction section of this consolidated application, the site is purposefully isolated from surrounding streets for security reasons. The IOC will have 24-hour staffing and security monitoring, in addition to perimeter fencing and highly restricted access.

As shown on elevation drawings, the proposed building has generous windows that face pedestrian, parking, and loading areas that are on the south and west sides of the development area.

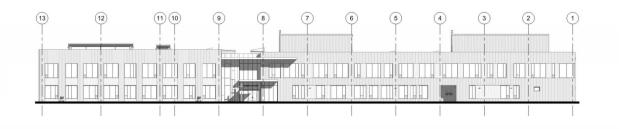


Figure 1. South elevation of building

In addition, the building has site lighting around the building to illuminate pedestrian zones, and lighting within the parking lot to illuminate this area for evening and night use.

(b) Locate windows and interior lighting to enable surveillance of interior activity from the public right-of-way;

Finding: The IOC is not a typical, public-facing office or retail commercial development, this standard is not directly applicable. Interior lighting will enable trained security staff to monitor interior activity from outside the building. Elevation drawings show generous glazing on the building exterior. There will be building-mounted light at the main entry canopies, at service entries, at the waste enclosure, and within the outdoor utility yard.

As documented in the above and the Introduction section of this application, the site is purposefully isolated from surrounding streets for security reasons. The IOC will have 24-hour monitoring in addition to fencing and highly restricted access. By design, developed areas are at the center of the 43-acre site and are minimally visible from surrounding streets.

Site safety and security imperatives require that the IOC be set back a significant distance from streets, surrounded by security fencing to provide defensible space around the critical electrical infrastructure.

(c) Locate, orient, and select exterior lighting to facilitate surveillance of on-site activities from the public right-of-way without shining into public rights-of-way or fish and wildlife habitat areas;

Finding: Exterior lighting is shown on the lighting plan, which is included as part of the application drawing package. The lighting is designed to facilitate surveillance of onsite activities by trained security professionals on a 24-hour basis. Lighting on poles inside the security fence will be motion-activated. Planned lighting focuses on activity areas inside the perimeter fence and does not shine into public rights-of-way. There are no inventoried fish and wildlife habitat on the site; lighting will not be directed towards the two delineated wetlands.

As noted above, developed areas are at the center of the 43-acre site, to satisfy site safety and security imperatives. Site security requires that the building be set back a significant distance from streets, and that berms and fencing provide defensible space around the critical electrical infrastructure. With the exception of a perimeter fence near the Blake Street and 124th Avenue near the tower, site development will be set back a significant distance from the edge of adjacent rights-of-way.

(*d*) *Provide an identification system which clearly locates buildings and their entries for patrons and emergency services; and*

Finding: The new building will have a clearly designated identification number for patrons and emergency services. This application has been closely coordinated with the Tualatin Fire Department to enable future provision of those services. The only patrons of the highly secure new development will be PGE employees and visitors; the IOC is not open to the general public.

(e) Above ground sewer or water pumping stations, pressure reading stations, water reservoirs, electrical substations, and above ground natural gas pumping stations must provide a minimum 6 foot tall security fence or wall.

Finding: The IOC and related development will be enclosed behind an 8-foot security fence. At this point, the proposed development does not include any of the above listed elements; however, security fencing will be provided if any of the above-listed utilities are constructed on the site.

(5) Service, Delivery, and Screening. Commercial development must provide service, delivery, and screening features as follows:

(a) Above grade and on-grade electrical and mechanical equipment such as transformers, heat pumps and air conditioners must be screened with sight obscuring fences, walls or landscaping;

Finding: Proposed electrical or mechanical equipment such as that described will be screened, as shown on project drawings. Equipment that is within the outdoor mechanical/utility yard will be screened by a 14 foot fence and a landscaping. Rooftop mechanical equipment will be partially screened by parapet walls. Air-handling units will be enclosed in penthouses on the east wing of the building.

(b) Outdoor storage must be screened with a sight obscuring fence, wall, berm or dense evergreen landscaping; and

Finding: The entire IOC development will be screened by a combination of a landscaped berm and security fencing. The yard adjacent to the north side of the building will have building mechanical, electrical, plumbing, and fire suppression related equipment, including generators and fuel and water tanks. The mechanical yard will be screened with a 14-foot security fence and landscaping, as shown on site drawings.

(c) Above ground pumping stations, pressure reading stations, water reservoirs; electrical substations, and above ground natural gas pumping stations must be screened with sight-obscuring fences or walls and landscaping.

Finding: The proposed development does not include any of the above listed elements. Nevertheless, all the proposed development shown on the site plan is within an 8-foot security fence, which is required to protect critical electrical infrastructure. The only development outside the fence are driveways leading to the main entrance and secondary entrance, and a stormwater detention ponds in the northwest and northeast corners of the site, which will also be fenced.

(6) Adjacent to Transit. Commercial development adjacent to transit must comply with the following:

(a) Development on a transit street designated in TDC Chapter 11 (Figure 11-5) must provide either a transit stop pad on-site, or an on-site or public sidewalk connection to a transit stop along the subject property's frontage on the transit street.

Finding: Because the IOC is not typical, public-facing commercial development, this standard is not directly applicable. The IOC is not open to the public and is subject to FERC's CIP-014 rule, which requires a physical security plan restricting access from public streets to critical infrastructure.

The IOC and accessory uses will be surrounded by an 8-foot security fence to prevent unauthorized access to the site. The only employee and visitor access to the site comes from a private, gated driveway off SW Blake Street. The site has a gated emergency access from SW 120th Avenue. Neither SW Blake or SW 120th are shown on City Figure 11-5 as transit streets.

The site has frontage on SW Tualatin-Sherwood Road, which is shown on this map as "Partial Fixed Route Shuttle Service" and "Expansions of Fixed Route Bus Transit Service." However, providing an on-site public sidewalk connection from the IOC building to a transit stop along the SW Tualatin-Sherwood Road would be inconsistent with the security imperatives of the site. There is a public sidewalk connection to the site from SW 124th Avenue and SW Blake Road into the site, leading to the guard booth.

Under FERC regulations, it would not be feasible within the security parameters of the site to have an open pedestrian connection at the north side of the development area leading to SW Tualatin-Sherwood Road. A secure fence is a baseline requirement for the proposed development. The first design principle identified in the introductory narrative explains, *"The IOC will be designed as a secure 24 hour facility that deters and protects against existing and emergent physical and cyber threats, meets current and future regulatory requirements, and protects staff and critical assets."* Restricting access is a primary method for protecting the critical assets located on the site.

The actual building where employees work is located approximately 540 feet from the edge of this frontage. Employees are not permitted to have regular access to the building except through the main entry at the south side of the development area. In the long run, other development may occur north of the IOC security fence line, closer to SW Tualatin-Sherwood Road. Washington County has plans to build out future SW Tualatin Sherwood Road improvements that will likely include sidewalks, plantings, and transit stops. PGE would be willing to commit to constructing a "transit stop pad" on its property, should the northern portion of the site develop for a publicly-accessible commercial use in the future.

(b) Development abutting major transit stops as designated in TDC Chapter 11 (Figure 11-5) must:[...]

Finding: City Map Figure 11-5 shows that the property does not abut any major transit stops. These requirements do not apply.

Section 73A.400 - Industrial Design Standards

Section 73A.400 - Institutional Design Standards

Finding: The proposed IOC regional headquarters is not industrial or institutional development. These sections do not apply.

Chapter 73B – Landscaping Standards

Section 73B.010 - Landscape Standards Purpose and Objectives.

(1) Purpose. The purpose of this Chapter is to establish standards for landscaping within Tualatin in order to enhance the environmental and aesthetic quality of the City.

(2) Objectives. The objectives of this Chapter are to:

(a) Encourage the retention and protection of existing trees and requiring the planting of trees in new developments;

(b) Use trees and other landscaping materials to temper the effects of the sun, wind, noise, and air pollution.

(c) Use trees and other landscaping materials to define spaces and the uses of specific areas; and (d) Use trees and other landscaping materials as a unifying element within the urban environment.

Finding: Although landscaping standards purpose and objectives are not in themselves approval standards, the landscape design connects the buildings and program together into a broader site improvement vision. Principles guiding the design are sustainability, simplicity, and durability. The landscape results in improved ecological functions including natural hydrology and wildlife values. Planting, grading and drainage approaches are integrated to allow stormwater management to be accommodated on site.

The design preserves many of the existing natural features of the site, including the forested area and drainage gully to the west and south of the proposed buildings. Where possible, existing trees are protected, and native trees will be planted as appropriate. Invasive or undesirable existing plantings will be removed to minimize future maintenance. Plant material that responds to native Oregon plant communities will be selected, focused on drought tolerance, durability, maintenance, and visual cohesion with the building design. The quantity, sizes, and species of plantings meets the Tualatin's requirements for landscape coverage, heritage tree replacement, and parking lot shading. The landscape screens the facility from the public ROW as much as possible, providing views from the street that are mostly vegetation.

Section 73B.020 - Landscape Area Standards Minimum Areas by Use and Zone.

The following are the minimum areas required to be landscaped for each use and zone:

Zone	Minimum Area Requirement	<i>Minimum Area Requirement with dedication for a fish and wildlife habitat*</i>
(6) Industrial Business Park Overlay District and MBP – must be approved through Industrial Master Plans	20% of the total area to be developed	Not applicable

Finding: The proposed development is in the MBP zone. As shown in a table on the Landscape Plan, 383,000 square feet of the developed area on the site (44%) will be landscaped. Developed areas include the area within the security fence, and driveways leading to it. (An industrial master plan listed under the "zone" column above is allowed but not required for new development in the MBP zone, and none is requested.)

Section 73B.030 – Additional Minimum Landscaping Requirements for Common Wall Residential Uses.

Finding: The proposed development contains no common wall residential uses. This standard does not apply.

Section 73B.040 – Additional Minimum Landscaping Requirements for Commercial Uses.

(1) General. In addition to requirements in TDC 73B.020, commercial uses must comply with the following:

(a) All areas not occupied by buildings, parking spaces, driveways, drive aisles, pedestrian areas, or undisturbed natural areas must be landscaped.

(i) This standard does not apply to areas subject to the Hedges Creek Wetlands Mitigation Agreement.

Finding: The northern and southern portions of the site will remain vacant and undeveloped. Existing tree cover and vegetation in the southern area will remain.

The Landscape Plan shows that all areas to be developed – not occupied by buildings, parking, driveways, drive aisles, pedestrian areas, and undisturbed natural areas – are landscaped. The site is not subject to the Hedges Creek Wetlands Mitigation Agreement.

Although not part of the Hedges Creek Wetlands Mitigation Agreement, the two wetlands on the site will be protected per CWS standards and will remain undisturbed.

(b) Minimum 5-foot-wide landscaped area must be located along all building perimeters viewable by the general public from parking lots or the public right-of-way, but the following may be used instead of the 5-foot-wide landscaped area requirement:

(i) Pedestrian amenities such as landscaped plazas and arcades; and

(ii) Areas developed with pavers, bricks, or other surfaces, for exclusive pedestrian use and contain pedestrian amenities, such as benches, tables with umbrellas, children's play areas, shade trees, canopies.

Finding: A five foot landscaped area is provided around the base of the building where it can be viewed from the parking lot. Because of topography, distance, and screening, much of the north and east sides of the building are not visible from any public right-of-way.

(c) 5-foot-wide landscaped area requirement does not apply to:
(i) loading areas,
(ii) bicycle parking areas,
(iii) pedestrian egress/ingress locations, and
(iv) where the distance along a wall between two vehicle or pedestrian access openings (such as entry doors, garage doors, carports and pedestrian corridors) is less than 8 feet.

Finding: A five foot landscaped area is provided around the base of the building where it can be viewed from the parking lot. Because of topography and screening, much of the building is not visible from public rights-of-way. Exceptions are applicable for bicycle parking and pedestrian ingress/egress areas from the main entrance to the parking area.

(d) Development that abuts an RL or MP Zone must have landscaping approved through Architectural Review and must provide and perpetually maintain dense, evergreen landscaped buffers between allowed uses and the adjacent RL and MP zones.

Finding: The proposed development does not abut any RL or MP zoned property. This standard does not apply.

(2) Manufacturing Park (MP) – Wetland Buffer. Wetland buffer areas up to 50 feet in width may be counted toward the required percentage of site landscaping, subject to the following:

Finding: The proposed development site is not in the MP zone. This standard does not apply. Nevertheless, wetland buffers will be provided around the two delineated wetlands per CWS standards.

Section 73B.050 – Additional Minimum Landscaping Requirements for Industrial Uses.

Section 73B.060 - Additional Min. Landscaping Requirements for Institutional Uses.

Finding: The proposed development is not industrial or institutional. These requirements do not apply.

Section 73B.070 - Minimum Landscaping Standards for All Zones.

The following are minimum standards for landscaping for all zones.[...]

Finding: Sheet L-4, Landscape Plan has details and specifications that demonstrate compliance with the planting standards contained in the detailed table in TDC 73B.070.

Section 73B.080 - Minimum Standards Trees and Plants

The following minimum standards apply to the types of landscaping required to be installed for all zones. [...]

Finding: The proposed plans have details that demonstrate compliance with the planting standards contained in the detailed table in TDC 73B.080.

Chapter 73C – Parking Standards

Section 73C.010 Off-Street Parking and Loading Applicability and General Requirements

- (1) Applicability. Off-street parking and loading is required to be provided by the owner and/or developer, in all zones, whenever the following occurs:
- (a) Establishment of a new structure or use;

(b) Change in use; or

(c) Change in use of an existing structure.

Finding: The proposed development establishes both a new structure and use. This section applies.

(2) General Requirements. Off-street parking spaces, off-street vanpool and carpool parking spaces, off-street bicycle parking, and off-street loading berths must be as provided as set forth in TDC 73C.100, unless greater requirements are otherwise established by the conditional use permit or the Architectural Review process.

(a) The following apply to property and/or use with respect to the provisions of TDC 73C.100: (i) The requirements apply to both the existing structure and use, and enlarging a structure or use; (ii) the floor area is measured by gross floor area of the building primary to the function of the particular use of the property other than space devoted to off-street parking or loading;(iii) Where employees are specified, the term applies to all persons, including proprietors, working on the premises during the peak shift;

(iv) Calculations to determine the number of required parking spaces and loading berths must be rounded to the nearest whole number;

Finding: The existing structures on the site at the north side of the property facing SW Tualatin-Sherwood Road will be removed before building occupancy. Parking and loading requirements will be applied to the new IOC building.

The quantity of parking provided is based on the entire building being a "general office" use. This is based on floor area and not employees. Calculations provided in response to the parking ratios are rounded up to the nearest whole number.

(v) If the use of a property changes, thereby increasing off-street parking or loading requirements, the increased parking/loading area must be provided prior to commencement of the new use;

Finding: The development proposed for the site is new, and off-street parking and loading for the new use will be provided prior to the commencement of that activity on the property.

(vi) Parking and loading requirements for structures not specifically listed herein must be determined by the City Manager, based upon requirements of comparable uses listed;

Finding: The proposed parking and loading requirements for the IOC building (a "general office" use) are specifically listed. Parking is not required for accessory uses, which include the WCF, parking and loading, outdoor equipment, emergency turnaround and helistop, landscaping, and fencing.

(vii) When several uses occupy a single structure, the total requirements for off-street parking may be the sum of the requirements of the several uses computed separately or be computed in accordance with TDC 73.370(1)(m), Joint Use Parking;

Finding: The proposed structure is occupied by office uses. This is a single use that does not need to be computed separately. This requirement does not apply.

(viii) Off-street parking spaces for dwellings must be located on the same lot with the dwelling. Other required parking spaces may be located on a separate parcel, provided the parcel is not greater than five hundred (500) feet from the entrance to the building to be served, measured along the shortest pedestrian route to the building. The applicant must prove that the parking located on another parcel is functionally located and that there is safe vehicular and pedestrian access to and from the site. The parcel upon which parking facilities are located must be in the same ownership as the structure;

Finding: The proposed development and its parking are on the same parcel.

(ix) Required parking spaces must be available for the parking of operable passenger automobiles of residents, customers, patrons and employees and must not be used for storage of vehicles or materials or for the parking of trucks used in conducting the business;

Finding: The Parking and Circulation Plan shows that the required parking is available for passenger automobiles for employees and visitors to the site. No storage of vehicles or materials, or parking of trucks will occur in these spaces.

(x) Institution of on-street parking, where none is previously provided, must not be done solely for the purpose of relieving crowded parking lots in commercial or industrial zones; and

Finding: The proposed development does not institute any on-street parking.

(xi) Required vanpool and carpool parking must meet the 9-foot parking stall standards in Figure 73-1 and be identified with appropriate signage.

Finding: The Parking and Ciruculation Plan shows 14 carpool spaces. These spaces meet the dimensional standards in Figure 73-1 and have the appropriate signage.

Section 73C.020 - Parking Lot Design Standards.

A parking lot, whether an accessory or principal use, intended for the parking of automobiles or trucks, must comply with the following:

(1) Off-street parking lot design must comply with the dimensional standards set forth in Figure 73-1; (a) Exception: Parking structures and underground parking where stall length and width requirements for a standard size stall must be reduced by .5 feet and vehicular access at the entrance if gated must be a minimum of 18 feet in width.

Finding: The Site Plan shows the parking lot to the southeast of the operations center building. The Parking and Circulation Plan shows that the parking lot design meets all the dimensional standards in Figure 73-1.

(2) Parking lot drive aisles must be constructed of asphalt, concrete, or pervious concrete;
(3) Parking stalls must be constructed of asphalt, concrete, previous concrete, or a pervious surface such as pavers or grasscrete, but not gravel or woody material. Pervious surfaces, are encouraged for parking stalls in or abutting the Natural Resource Protection Overlay District, Other Natural Areas, or in a Clean Water Services Vegetated Corridor; (4) Parking lots must be maintained adequately for all-weather use and drained to avoid water flow across sidewalks;

Finding: All the driving surfaces of the parking area will be paved, including aisles and stalls. The parking lot will be sloped and maintained to enable all-weather use and manage stormwater. There are no public sidewalks near the proposed lot.

(5) Parking bumpers or wheel stops or curbing must be provided to prevent cars from encroaching on adjacent landscaped areas, or adjacent pedestrian walkways.
(6) Disability parking spaces and accessibility must meet ADA standards applicable at time of construction or alteration;

(7) Parking stalls for sub-compact vehicles must not exceed 35 percent of the total parking stalls required by TDC 73C.100. Stalls in excess of the number required by TDC 73C.100 can be sub-compact stalls;

Finding: As shown on the Parking and Circulation Plan, a combination of curbs and wheel stops have been provided as needed to avoid encroachment on adjacent landscaped areas. Eight ADA spaces are provided in the northwest corner of the parking area consistent with ADA regulations. No sub-compact spaces have been provided.

(8) Groups of more than 4 parking spaces must be so located and served by driveways that their use will require no backing movements or other maneuvering within a street right-of-way other than an alley;

(9) Drives to off-street parking areas must be designed and constructed to facilitate the flow of traffic, provide maximum safety of traffic access and egress, and maximum safety of pedestrians and vehicular traffic on the site;

Finding: As shown on the Site Plan, the parking lot is not located next to any street right-of-way, so no vehicles will be required to back into a street right-of-way. The long driveway from SW Blake Street to the parking lot on site has been designed to accommodate the flow of traffic into and out of the site and maximum safety of access and egress, considering the guard booth at the perimeter fence. Pedestrian movement will be along the western edge and runs the entirety of the parking area to the outdoor bike facilities and main building entrance.

(10) On-site drive aisles without parking spaces, which provide access to parking areas with regular spaces or with a mix of regular and sub-compact spaces, must have a minimum width of 22 feet for two-way traffic and 12 feet for one-way traffic; When 90 degree stalls are located on both sides of a drive aisle, a minimum of 24 feet of aisle is required. On-site drive aisles without parking spaces, which provide access to parking areas with only sub-compact spaces, must have a minimum width of 20 feet for two-way traffic and 12 feet for one-way traffic;

Finding: There are a variety of drive aisles within the parking area – without parking (*e.g.*, the approach to the guard booth), and with parking. As shown on the Parking and Circulation Plan, all of these aisles have widths of 22 feet or more. The parking lot is designed with 90 degree stalls; the aisle widths serving these stalls is at least 24 feet. The

drive aisles that serve as fire lanes meet width requirements for emergency vehicle access, which exceeds 24 feet.

(11) Artificial lighting, must be deflected to not shine or create glare in a residential zones, street right-of-way, a Natural Resource Protection Overlay District, Other Natural Areas, or a Clean Water Services Vegetated Corridor;

Finding: Parking lot lighting is provided as shown on the Lighting Plan. Lighting will be full cut off and directed downwards towards the driving and walking surfaces. A luminaire schedule with details is included with the Lighting Plan. Since the parking lot is distant from streets that abut the site, lights will not shine into any street rights-of-way. The site is almost three-quarters of a mile (3,700 feet) from the nearest residential area, and hundreds of feet from any natural resource overlay district or natural areas.

(12) Parking lot landscaping must be provided pursuant to the requirements of TDC 73C.200; and

Finding: As shown on the Landscape Plan and Site Plan, the parking area is interspersed with trees and other landscaping as required by TDC 73C.200. Specific responses are given below in that section.

(13) Except for parking to serve residential uses, parking areas adjacent to or within residential zones or adjacent to residential uses must be designed to minimize disturbance of residents.

Finding: The parking lot on site is 3,700 feet from the nearest residential zone. There will be no disturbance to residents at this distance.

Section 73C.030 - Shared Parking Requirements[...]

Section 73C.040 - Joint Use Parking Requirements[...]

Finding: No shared parking or joint use parking is proposed. All the off-street parking on the site will be for exclusive use by employees or visitors to the site.

Section 73C.050 - Bicycle Parking Requirements and Standards.

(1) Requirements. Bicycle parking facilities must include:

(a) Long-term parking that consists of covered, secure stationary racks, lockable enclosures, or rooms in which the bicycle is stored;

(i) Long-term bicycle parking facilities may be provided inside a building in suitable secure and accessible locations.

(b) Short-term parking provided by secure stationary racks (covered or not covered), which accommodate a bicyclist's lock securing the frame and both wheels.

Finding: The on-site bicycle parking includes both long-term and short-term racks. 22 Long-term spaces are provided within the building in a secure room with a separate entrance to the exterior. In addition, 32 short-term staple-type racks are provided outside the building on the south side of the structure, as shown on the Parking and Circulation Plan.

(2) Standards. Bicycle parking must comply with the following:

(a) Each bicycle parking space must be at least six feet long and two feet wide, with overhead clearance in covered areas must be at least seven feet;

(b) A five (5) foot-wide bicycle maneuvering area must be provided beside or between each row of bicycle parking. It must be constructed of concrete, asphalt, or a pervious hard surface such as pavers or grasscrete, and be maintained;

(c) Access to bicycle parking must be provided by an area at least three feet in width. It must be constructed of concrete, asphalt, or a pervious hard surface such as pavers or grasscrete, and be maintained;

(*d*) Bicycle parking areas and facilities must be identified with appropriate signing as specified in the Manual on Uniform Traffic Control Devices (MUTCD) (latest edition). At a minimum, bicycle parking signs must be located at the main entrance and at the location of the bicycle parking facilities;

(e) Bicycle parking must be located in convenient, secure, and well-lighted locations approved through the Architectural Review process. Lighting, which may be provided, must be deflected to not shine or create glare into street rights-of-way or fish and wildlife habitat areas;

(f) Required bicycle parking spaces must be provided at no cost to the bicyclist, or with only a nominal charge for key deposits, etc. This does not preclude the operation of private for-profit bicycle parking businesses;

(g) Bicycle parking may be provided within the public right-of-way in the Core Area Parking District subject to approval of the City Engineer and provided it meets the other requirements for bicycle parking; and

(h) The City Manager or the Architectural Review Board may approve a form of bicycle parking not specified in these provisions but that meets the needs of long-term and/or short-term parking pursuant to Architectural Review.

Finding: Bike parking will be provided as shown on the Parking and Circulation Plan. Indoor parking is provided through a secondary entry in the front (south side) of the building. The short-term bike parking area will be outside of this secondary entry, adjacent to the building. This bike parking area is paved, lighted, close to the main entrance of the building, within a highly secure facility, and spaced to meet all the listed maneuvering standards.

Section 73C.060 - Transit Facility Conversion.

Parking on existing residential, commercial, and industrial development may be redeveloped as a transit facility as a way to encourage the development of transit supportive facilities such as bus stops and pullouts, bus shelters and park and ride stations. Parking spaces converted to such

uses in conjunction with the transit agency and approved through the Architectural Review process will not be required to be replaced.

Finding: No redevelopment is proposed. This standard is not applicable.

Section 73C.100 - Off-Street Parking Minimum/Maximum Requirements.

(1) The following are the minimum and maximum requirements for off-street motor vehicle parking in the City, except these standards do not apply in the Core Area Parking District. The Core Area Parking District standards are in TDC 73C.110.

USE	MINIMUM MOTOR VEHICLE PARKING	MAXIMUM MOTOR VEHICLE PARKING	BICYCLE PARKING	PERCENTAGE OF BICYCLE PARKING TO BE COVERED
(e) Commercial				
(vi) General office	2.70 spaces per 1,000 square feet of gross floor area	Zone A: 3.4 spaces per 1,000 square feet of gross floor area Zone B: 4.1 spaces per 1,000 square feet of gross floor area	2, or 0.50 spaces per 1,000 gross square feet, whichever is greater	First 10 spaces or 40%, whichever is greater

Finding: The proposed development is an office headquarters use. This most closely fits the category "general office" listed in the parking table under section (1)(e)(vi).

The required ratio for motor vehicle parking is 2.7 - 4.1 spaces per 1,000 square feet. At 108,000 square feet, the motor vehicle space requirement is a range: 292 spaces minimum and 443 spaces maximum. The site plan shows 338 spaces – within the required range.

The required ratio for bike parking is 0.5 spaces per 1,000 square feet, of which 40 percent must be covered. At 108,000 square feet, 54 bike parking spaces are required. 22 of which must be covered. The site provides 54 total bike parking spaces, 22 of which are interior to the building and therefore covered. This meets the standard.

(2) In addition to the general parking requirements in subsection (1), the following are the minimum number of off-street vanpool and carpool parking for commercial, institutional, and industrial uses.

Number of Required Parking Spaces	Number of Vanpool or Carpool Spaces	
0 to 10	1	
10 to 25	2	
26 and greater	1 for each 25 spaces	

Finding: The proposed parking area has 338 parking spaces. This results in a requirement for 14 carpool spaces. 14 carpool spaces are provided as shown on the Parking and Circulation plan. Therefore, the requirement is met.

Section 73C.110 – Core Area Parking District Minimum Parking Requirements. Uses in the Core Area Parking District must comply with the following parking requirements:[...]

Finding: The proposed development is not in the Core Area Parking District. This requirement does not apply.

Section 73C.120 - Off-Street Loading Facilities Minimum Requirements.

(1) The minimum number of off-street loading berths for commercial, industrial, and institutional uses is as follows:

Use	Square Feet of Floor Area	Number of Berths	Dimensions of Berth	Unobstructed Clearance of Berth
Commercial	Less than 5,000	0	0	0
	5,000 - 25,000	1	12 feet x 25 feet	14 feet
	25,000 - 60,000	2	12 feet x 35 feet	14 feet
	60,000 and over	3	12 feet x 35 feet	14 feet

(2) Loading berths must not use the public right-of-way as part of the required off-street loading area.

(3) Required loading areas must be screened from public view, public streets, and adjacent properties by means of sight-obscuring landscaping, walls or other means, as approved through the Architectural Review process.

Finding: Consistent with requirements for commercial uses, three off-street loading berths (delivery unloading areas) are proposed for IOC functions. As shown on the AR-L090, two delivery unloading areas are located on the west side of the building, adjacent to the utility yard and the north portion of the main buildings. A third delivery unloading area is adjacent to the exterior waste area at the southeast corner of the main building. The west delivery unloading areas and east delivery area near the main building entry are all larger than the minimum 12 feet by 35 feet requirement. All three delivery unloading areas are uncovered and have unobstructed berth clearance of 14 feet. Since all delivery unloading areas are within the security fence perimeter on private property, public ROWs are not used as loading berth areas in this development.

The delivery unloading areas only service the IOC building, and the IOC building is set deep within a 43-acre site. All delivery areas are within a security fence perimeter that acts as a screen for all IOC activities from public ROWs, public view, and adjacent properties. Additionally, the two delivery unloading areas on the west side of the building are screened from the public by a row of trees along SW 124th, and additional trees planted closer to the drive aisle delivery access. Berms and an oak savannah planting mix are also used as screening materials for the west side delivery unloading areas. The east delivery unloading area is screened from public view by both the security perimeter fence and the parking lot landscaping. Views of the delivery unloading area are obstructed by three parking islands planted with trees – two to the east, one for the south. The screening around the exterior waste storage area screens the delivery unloading area from the north.

(4) Required loading facilities must be installed prior to final building inspection and must be permanently maintained as a condition of use.

(5) The off-street loading facilities must in all cases be on the same lot or parcel as the structure they are intended to serve. In no case must the required off-street loading spaces be part of the area used to satisfy the off-street parking requirements.

Finding: All delivery unloading areas are a planned improvement with the proposed IOC, and they will be installed prior to the final building inspection. All three delivery unloading areas are on the same lot as, and will serve, the IOC.

(6) A driveway designed for continuous forward flow of passenger vehicles for the purpose of loading and unloading children must be located on the site of a school or child day care center having a capacity greater than 25 students.

Finding: The IOC is a commercial use. This standard does not apply.

Section 73C.130 - Parking Lot Driveway and Walkway Minimum Requirements.

Parking lot driveways and walkways must comply with the following requirements:[...] (2) *Commercial Uses. Ingress and egress for commercial and institutional uses must not be less than the following:*

Required Parking Spaces	Minimum Number Required	Minimum Pavement Width	Minimum Pavement Walkways, Etc.
1-99	1	32 feet for first 50 feet from ROW, 24 feet thereafter	Curbs required; walkway 1 side only
100-249	2	32 feet for first 50 feet from ROW, 24 feet thereafter	Curbs required; walkway 1 side only
Over 250	As required by City Manager	As required by City Manager	As required by City Manager

Finding: The proposed development requires 292 parking spaces (338 are provided). Consequently, the parking area requires ingress and egress, minimum pavement width, and minimum pavement walkways "as required by city manager."

The proposed parking lot plan shows one primary point of ingress and egress, to maintain a high level of site security. There is a second ingress/egress path from the parking lot to the northeast and SW 120th Avenue, which will be used in case of emergencies. The width of the driveway leading to the parking area is 26 feet. The walkway along the driveway and circulating along the west edge of the parking area to the main building entrance is a minimum of six feet wide. This presents a generous and appropriate environment for pedestrian activity, while maintaining smooth circulation for vehicles.

(5) One-way Ingress or Egress. When approved through the Architectural Review process, oneway ingress or egress may be used to satisfy the requirements. However, the hard surfaced pavement of one-way drives must not be less than 16 feet for multi-family residential, commercial, or industrial uses.

Finding: The proposed ingress and egress from the parking area is two-way. No one-way drives are proposed.

(6) Maximum Driveway Widths and Other Requirements.

(a) Unless otherwise provided in this chapter, maximum driveway widths for Commercial, Industrial, and Institutional uses must not exceed 40 feet.

(b) Driveways must not be constructed within 5 feet of an adjacent property line, unless the two adjacent property owners elect to provide joint access to their respective properties, as provided by TDC73C.040.

(c) The provisions of subsection (b) do not apply to townhouses and duplexes, which are allowed to construct driveways within 5 feet of adjacent property lines.

(d) There must be a minimum distance of 40 feet between any two adjacent driveways on a single property unless a lesser distance is approved by the City Manager.

(e) Must comply with the distance requirements for access as provided in TDC 75.

(f) Must comply with vision clearance requirements in TDC 75.

Finding: The proposed main driveway width from SW Blake Street is 26 feet, as shown on the site plan. The driveway access is located much farther than 5 feet from any property line

Parking Lot Landscaping

Section 73C.200 - Parking Lot Landscaping Standards Purpose and Applicability.

(1) **Purpose.** The goals of the off-street parking lot standards are to create shaded areas in parking lots, to reduce glare and heat buildup, provide visual relief within paved parking areas, emphasize circulation patterns, reduce the total number of spaces, reduce the impervious surface area and stormwater runoff, and enhance the visual environment. The design of the off-street parking area must be the responsibility of the developer and should consider visibility of signage, traffic circulation, comfortable pedestrian access, and aesthetics.

(2) *Applicability.* Off-street parking lot landscaping standards apply to any surface vehicle parking or circulation area.

Finding: The proposed site plan includes a parking area that is subject to the landscaping standards of this section.

Section 73C.210 - Common Wall Parking Lot Landscaping Requirements.[...]

Finding: The proposed development does not have common wall development. This standard does not apply.

Section 73C.220 - Commercial Parking Lot Landscaping Requirements.

Commercial uses must comply with the following landscaping requirements for parking lots in all zones:

(1) General. Locate landscaping or approved substitute materials in all areas not necessary for vehicular parking and maneuvering.

Finding: The proposed parking area has landscaping in all areas that are not necessary for parking and maneuvering. This includes the areas around the edge of the parking lot but within the perimeter fence, and islands between parking spaces.

(2) Clear Zone. Clear zone required for the driver at ends of on-site drive aisles and at driveway entrances, vertically between a maximum of 30 inches and a minimum of 8 feet as measured from the ground level.

(a) Exception: does not apply to parking structures and underground parking.

Finding: The parking lot plan contains clear zones at the ends of on-site drive aisles as indicated.

(3) Perimeter. Minimum 5 feet in width in all off-street parking and vehicular circulation areas, including loading areas and must comply with the following.

(a) Deciduous trees located not more than 30 feet apart on average as measured on center;

(b) Shrubs or ground cover, planted so as to achieve 90 percent coverage within three years;

(c) Plantings which reach a mature height of 30 inches in three years which provide screening of vehicular headlights year round;

(d) Native trees and shrubs are encouraged; and

(e) Exception: Not required where off-street parking areas on separate lots are adjacent to one another and connected by vehicular access.

Finding: As shown on the site plan and landscape plan, there is perimeter landscaping in all parking and vehicular circulation areas that meet the planting standards identified above.

(4) Landscape Island. Minimum 25 square feet per parking stall must be improved with landscape island areas and must comply with the following.

(a) May be lower than the surrounding parking surface to allow them to receive stormwater runoff and function as water quality facilities as well as parking lot landscaping;

(b) Must be protected from vehicles by curbs, but the curbs may have spaces to allow drainage into the islands;

(c) Islands must be utilized at aisle ends to protect parked vehicles from moving vehicles and emphasize vehicular circulation patterns;

(d) Landscape separation required for every eight continuous spaces in a row.

(e) Must be planted with one deciduous shade trees for every four parking spaces; Required trees must be evenly dispersed throughout the parking lot;

(f) Must be planted with groundcover or shrubs;

(g) Native plant materials are encouraged;

(*h*) Landscape island areas with trees must be a minimum of five feet in width (from inside of curb to curb);

(i) Required plant material in landscape islands must achieve 90 percent coverage within three years; and

(j) Exceptions:

(i) Landscape island requirements do not apply to Duplexes and Townhouses; and *(ii)* Landscape square footage requirements do not apply to parking structures and underground parking.

Finding: Landscape islands are provided in the parking lot in accordance with the requirements above, as demonstrated on the site plan and landscape plan. Area calculations are provided in a table on the plan.

(5) Driveway Access. For lots with 12 or more parking spaces, site access from the public street must be defined by:
(a) Landscape area at least 5 feet in width on each side of the site access;
(b) Landscape area must extend 25 feet from the right-of-way line; and
(c) Exceptions: Does not apply to parking structures and under-ground parking which must be determined through the Architectural Review process.

Finding: The driveway access from SW Blake Street is landscaped along the first 25 feet from the ROW line, as shown on the Landscape Plan.

Section 73C.230 - Industrial Parking Lot Landscaping Requirements. [...]

Section 73C.240 - Institutional Parking Lot Landscaping Requirements [...]

Finding: The proposed development is not industrial or institutional. These sections do not apply.

Chapter 73D – Waste and Recyclables Management Standards

Section 73D.010 - Applicability and Objectives.

- (1) Applicability. The requirements of this Chapter apply to all new or expanded:
- (a) Common wall residential developments containing five or more units;
- (b) Commercial developments;
- (c) Industrial developments;
- (d) Institutional developments.

(2) Objectives. Mixed solid waste and source separated recyclable storage areas should be designed to the maximum extent practicable to:

- (a) Screen elements such as garbage and recycling containers from view;
- (b) Ensure storage areas are centrally located and easy to use;
- (c) Meet dimensional and access requirements for haulers;
- (d) Designed to mitigate the visual impacts of storage areas;
- (e) Provide adequate storage for mixed solid waste and source separated recyclables; and

(f) Improve the efficiency of collection of mixed solid waste and source separated recyclables.

Finding: The proposed development is an integrated operations center, a commercial development. This chapter applies.

Section 73D.020 - Design Methods.

An applicant required to provide mixed solid waste and source separated recyclables storage areas must comply with one of following methods:

(1) The minimum standards method in TDC 73D.030;

(2) The waste assessment method in TDC 73D.040;

(3) The comprehensive recycling plan method in TDC 73D.050; or

(4) The franchised hauler review method in TDC 73D.060.

Finding: As shown on the included Site Plan, the development proposes a solid waste and recyclables storage facility on the east side of the main building. The size and location of the waste storage area has been coordinated with Republic Services, the waste-hauler for this location of the city, and follows the Minimum Standards method in subsection (1).

Section 73D.030 - Minimum Standards Method.

This method specifies a minimum storage area requirement based on the size and general use category of the new or expanded development. This method is most appropriate when specific use of a new or expanded development is not known. It provides specific dimensional standards for the minimum size of storage areas by general use category.

(1) The size and location of the storage area(s) must be indicated on the site plan. Requirements are based on an assumed storage area height of four feet for mixed solid waste and source separated recyclables. Vertical storage higher than four feet, but no higher than 7 feet may be used to accommodate the same volume of storage in a reduced floor space (potential reduction of 43 percent of specific requirements). Where vertical or stacked storage is proposed, submitted plans must include drawings to illustrate the layout of the storage area and dimensions for containers.

Finding: The size and location of the waste storage areas are indicated on AR-A101, Level 1 Plan, and AR-A120, Site Structures. In summary, there are two locations for waste storage: an interior waste room, directly accessible from the exterior of the building, and an exterior waste storage area. Haulers will provide service for the exterior waste storage area, while the internal waste storage area will serve employees. The exterior waste storage area will hold a rolling compost bin and two 8-yard waste bins dedicated for landfill and recycling. The exterior storage area is a three-sided enclosure with an 18-foot wide, clear-opening access and no center post. No vertical or stacked storage is proposed.

(2) The storage area requirement is based on uses. If a building has more than one use and that use occupies 20 percent or less of the gross leasable area (GLA) of the building, the GLA occupied by that use must be counted toward the floor area of the predominant use(s). If a building has more than one use and that use occupies more than 20 percent of the GLA of the building, then the storage area requirement for the whole building must be the sum of the area of each use. Minimum storage area requirements by use is as follows:

(a) Common wall residential 5-10 units must provide 50 square feet.

(b) Common wall residential greater than 10 units must provide 50 square feet plus an (additional 5 square feet per unit above 10.

(c) Commercial, industrial, and institutional developments must provide a minimum storage area of 10 square feet plus:

(i) Office - 4 square feet/1000 square feet gross leasable area (GLA);

(ii) Retail - 10 square feet/1000 square feet GLA;

(iii) Wholesale/Warehouse/Manufacturing - 6 square feet/1000 square feet GLA;

(iv) Educational and Institutional - 4 square feet/1000 square feet GLA; and

(v) All other uses- 4 square feet/1000 square feet GLA.

(3) Mixed solid waste and source separated recyclables storage areas for multiple tenants on a single site may be combined and shared.

Finding: The proposed IOC contains 100,000 square feet of gross leasable area. As a commercial development with 100,000 square feet of GLA, the minimum storage area requirement is 410 sq. ft. The waste storage area inside the building is 200 sq. ft.; the waste storage area outside the building is 260 sq. ft. Therefore, 460 sq. ft. of waste storage area is proposed in total, which exceeds the minimum standard of 410 sq. ft.

Section 73D.070 - Location, Design and Access Standards.

The following location, design, and access standards are applicable to all storage areas: (1) Location Standards.

(a) The storage area for source separated recyclables may be collocated with the storage area for mixed solid waste.

(b) Storage area space requirements can be satisfied with a single location or multiple locations, and can combine both interior and exterior locations.

(c) Exterior storage areas must:

(i) Be located in central and visible locations on the site to enhance security for users;

(ii) Be located in a parking area; and

(iii) Not be located within a required front yard setback or in a yard adjacent to a public or private street.

Finding: The proposed development plans for two mixed solid waste storage areas, one interior and one exterior. The exterior waste storage area is located adjacent to the parking area, east of the IOC building. The waste storage area is visible on the site for users and waste haulers. As shown on the Site Plan, the interior waste storage area is

planned directly inside the building with direct pedestrian access to the exterior storage area. The exterior storage area is set close to the IOC and not located within yard setbacks or ROWs.

(2) Design Standards.

(a) The dimensions of the storage area must accommodate containers consistent with current methods of local collection at time of construction or alteration.

(b) Indoor and outdoor storage areas must comply with Oregon Building and Fire Code requirements.

(c) Exterior storage areas must be enclosed by a sight obscuring fence or wall at least 6 feet in height.

(*d*) Evergreen plants must be placed around the enclosure walls, excluding the gate or entrance openings for common wall, commercial, and institutional developments.

Finding: The exterior waste storage area will accommodate two 8-yard waste bins, and it has been designed to Oregon's current Building and Fire Code requirements. Both the Tualatin Fire Department and Republic Services, the site's waste-hauler, have been consulted to ensure ease of access and compliance. The exterior waste storage area will have a 6-foot high concrete wall with no overhead canopy. Evergreen plants are planned along the north, west, and south sides of the exterior waste storage area.

(e) Gate openings for haulers must be a minimum of 10 feet wide and must be capable of being secured in a closed and open position.

Finding: The exterior waste storage area provides 120-degree swinging gates with an 18-foot clear opening. These gates will have bolt holes at both the open and closed positions. This configuration has been approved by the site's waste-hauler, Republic Services.

(*f*) Horizontal clearance must be a minimum of 10 feet and a vertical clearance of 8 feet is required if the storage area is covered.

(g) A separate pedestrian access must also be provided in common wall, commercial, and institutional developments.

Finding: The waste storage area will not be covered, and the development is not a common wall commercial development. This standard does not apply.

(*h*) Exterior storage areas must have either a concrete or asphalt floor surface.(*i*) Storage areas and containers must be clearly labeled to indicate the type of material accepted.

Finding: The exterior waste storage area will be based on a concrete pad, and all waste storage containers will be clearly labeled to indicate landfill, recycling, or compost collection.

(3) Access Standards.

(a) Storage areas must be accessible to users at convenient times of the day, and to hauler personnel on the day and approximate time they are scheduled to provide hauler service.(b) Storage areas must be designed to be easily accessible to hauler trucks and equipment, considering paving, grade, gate clearance and vehicle access.

(c) Storage areas must be accessible to hauler trucks without requiring backing out of a driveway onto a public street. If only a single access point is available to the storage area, adequate turning radius must be provided to allow hauler trucks to safely exit the site in a forward motion.
(d) Storage areas must located so that pedestrian and vehicular traffic movement are not

obstructed on site or on public streets adjacent to the site.

(e) The following is an exception to the access standard:

(i) Access may be limited for security reasons

Finding: For ease of user access and for site security reasons, the exterior waste storage area will be near the east wall of the IOC, adjacent to the parking area, and within the security fence perimeter. Republic Services will have access to the enclosure through the main site entrance from SW Blake Street. The 26-foot drive aisles and straight truck approach into the exterior waste storage area ensures that convenient access for haulers. Republic Services has reviewed the proposed waste storage area orientation and has confirmed access is acceptable. The waste storage area also includes a human door for pedestrian access. The door is placed on the south wall of the waste storage area. A paved pedestrian path connects the interior waste room with the exterior waste area. The location choice, door placements, and pedestrian connection create convenient user access.

The design of the storage area allows haulers avoid any backward movements during circulation. The waste-haulers can drive directly into the enclosure from the east, and then turn left to exit south through the parking lot.

Sidewalks do not cross in front of the waste storage area. Pedestrian circulation is directed to the west and south, away from crossing between the waste storage area and waste-hauler access in the parking lot. Locating the waste storage area near the east wall of the IOC building reduces the possibility of either pedestrian or traffic obstruction. There are two north-south drive aisles in the parking lot that allow traffic an exit route when waste-haulers are servicing the site. Additionally, by maintaining the waste storage area on site, adjacent to the parking lot, within the security perimeter fencing, public ROW is not obstructed.

Chapter 73F – Wireless Communications Facilities

Section 73F.010 - Purpose and Objectives.

(1) Purpose. The purpose of wireless communication facility design objectives and standards is to implement the purpose and objectives of TDC 73A.010 by focusing on the placement, design and relationship of proposed site elements such as support structure location, lighting, screening, fencing and landscaping.

(2) Objectives. All wireless communication facilities and attached facilities should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new development. In the case of conflicts between objectives, the proposal must provide a desirable balance between the objectives. Site elements must be placed and designed, to the maximum extent practicable, to: Be aesthetically and architecturally designed and located to be compatible with the surrounding environment and analyze co-location before seeking new sites.

(a) Select colors in consideration of lighting conditions and the context under which the structure is viewed, the ability of the material to absorb, reflect or transmit light and the color's functional role, e.g., aesthetic reasons.

Finding: The proposed wireless communication tower will be a neutral, non-reflective, gray color. Based on PGE's experience with similar facilities in other locations, this color has been found to blend in to the background conditions as much as possible, given the constant changes in sky color and different background contexts.

(b) Select platform and antenna designs which minimize their size and visual appearance to surrounding development.

Finding: The tower platform is a concrete pad that will support the proposed support structure. The base of the tower and its platform will be entirely concealed from neighboring properties by a fence and the surrounding tree grove. As much as possible, as described in this document, the design and locational choices for the WCF minimize the size and visual appearance of the tower. Surrounding development that could be affected is largely industrial in nature.

(c) Provide a composition of structural material elements which is cohesive and responds to use needs, site context, land form, a sense of place and identity, safety, and climatic factors.

Finding: The proposed WCF is a self-supporting, lattice-type tower, composed of sturdy, lightweight steel elements, on a concrete pad base. Microwave radio dish antennae are attached to the upper part of the tower. The composition of the tower is industry-standard for it to carry out its purpose and be operational. At the same time, the structure is placed in a grove of tall trees and is therefore hidden as much as possible within its setting. A monopole tower of this height would need to be so thick that it would be much more visually obtrusive. The lattice-type metal tower is more visually transparent. This area is also an industrial corner of the city where major communications infrastructure is not out of place.

(*d*) Select materials which contribute to the project's form and function, as well as to the surrounding environment.

Finding: The communication tower will be a four-legged, self-supporting, lattice-style metal structure with attached microwave dish antennae. A small utility shack will be located at the base of the tower, and the footprint of the entire communications facility will be enclosed within a security fence. The materials of which the tower is made are industry-standard for a tower of this height and to achieve its function

(e) Minimize disruption of natural site features such as topography, trees, and water features.
(f) Take into consideration the existing topography of the site and surrounding vicinity.
(g) Reduce the visual impact of the support structure by locating within stands of existing vegetation and trees.

(h) Screen elements such as mechanical and electrical equipment from view.

Finding: The proposed tower is located on a small rise in this area of the site, to achieve additional natural height without building it, and among a grove of existing mature trees. In this way, the siting of the tower minimizes disruption and takes into consideration natural topography.

By tucking the tower into a stand of existing trees, the base of the facility will be screened from the right of way and other surrounding properties. (This will be made even more effective if the proposed variance for fence setbacks from rights of way is approved.) The base of the WCF includes a small equipment shack that will be concealed by a sight-obscuring safety fence. In addition, natural topography and existing vegetation will largely obscure these elements of the WCF from view.

(i) Locate a wireless communication facility attached to existing rooftop mechanical equipment before placement on the exterior wall of a building.(j) Co-locate wireless communication facility or attached facility.

Finding: The proposed WCF is required, for functional reasons, to be exclusively dedicated for PGE use and 140 feet tall. The rationale for the height of the structure is so that it can communicate directly with other PGE structures in the region. The type of signal broadcast and received by the WCP needs a direct line of sight to maintain this constant connection. As such, it cannot be co-located on another structure or attached to the roof of the new operations center building.

(*k*) Construct wireless communication support structures at the minimum height necessary to serve the operational requirements of the system.

Finding: The proposed tower is 140 feet tall, which is the minimum height necessary to create a line of sight to other PGE communications towers, which is necessary to meet

the operational requirements of the system. The attached radio frequency report explains the technical details and supports the height variance.

(*l*) Separate wireless communication support structures from each other.

Finding: The proposed communication support structure is 4,600 feet from the nearest WCF in Tualatin. That tower is noted on Figure 2 along with the closest WCF overall, which is outside city limits in Sherwood. As noted, the proposed communication facility must be exclusive to PGE for security purposes and cannot co-locate.

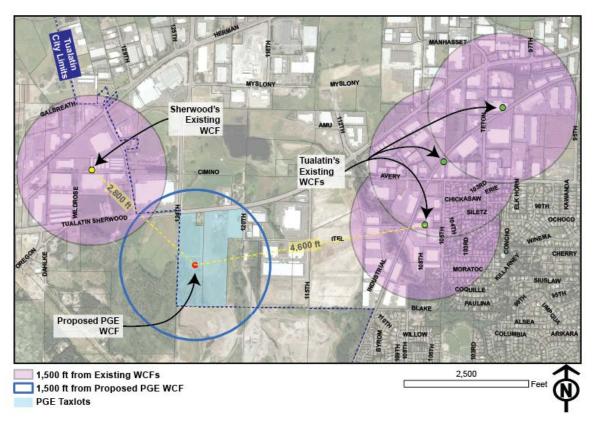


Figure 2. Nearest WCFs from proposed tower

Section 73F.020 - Maximum Height.

The maximum height for wireless communication facilities, support structures, and antennas is as follows:

PLANNING DISTRICT	MAXIMUM STRUCTURE HEIGHT	
(18) Manufacturing Business Park (MBP)	 65 feet 85 feet if all yards adjacent to the structure are not less than a distance equal to one and one-half times the height of the structure 28 feet if a property line, street, or alley separates MBP land from land in a residential district 	

Finding: The proposed tower will be 140 feet tall. As described, the reason for this height is that the antenna must communicate directly and without interruption with other PGE communication facilities in the region. The type of signal broadcast and received by the WCF needs a direct line of sight to maintain this constant connection. Because the operational requirements of the tower require that it be taller than the maximum height allowed in the district, a variance is requested in findings below.

Section 73F.030 - Site Design Standards.

(1) All Wireless Communication Facilities must comply with the following minimum design standards:
(a) A wireless communication facility attached must not be attached to buildings which are designed solely for single family residential use;

Finding: The proposed WCF is not attached to any building. This standard does not apply.

(b) Mechanical and electrical equipment and the bottom six feet of the support structure for a wireless communication facility must be screened from the public right-of-way and abutting property by the use of a minimum six foot tall security fence or wall consisting of chain link fencing with vinyl slats, solid wood fencing, concrete masonry unit block, or brick;

Finding: The base of the tower, including the mechanical and electrical equipment next to the antenna support structure, will be within a ten-foot tall, sight-obscuring safety fence. This fence will be chain link with vinyl privacy slats. In addition, the structure will be screened from any adjacent property by natural vegetation (*i.e.*, mature trees), proposed vegetation, distance, and a security perimeter fence.

(c) Equipment shelters, buildings or cabinets to house radio electronics equipment must be concealed, camouflaged, screened by vegetative, or placed underground.

Finding: The proposed WCF has a small shed for electronic equipment associated with the tower and antenna, as shown on project plans. This building will be concealed by the privacy fence, existing vegetation, and the site perimeter security fence.

(*d*) A wireless communication facility must utilize existing site conditions such as surrounding vegetation and trees;

Finding: One of the main locational criteria for siting the proposed WCF, in addition to getting the required minimum height to maintain communication with other PGE facilities, was to minimize its impact on the landscape and on surrounding properties. Fortunately, one of the high elevation points on the site is within a small clearing inside a larger grove of mature trees on the property's west side. This has enabled the WCF to utilize existing site conditions, specifically the surrounding vegetation and trees.

(e) A wireless communication facility support structure must be constructed to the minimum height necessary to serve the operational requirements of the facility;

Finding: The proposed support structure for the WCF is the minimum height necessary to serve the operational requirements of the facility. The radio frequency report included with the application materials explains the need for line-of-sight capability to other PGE microwave towers in the region. A shorter structure would simply not allow the necessary always-on microwave radio connection to other facilities, which is the baseline operational requirement. In order to have this functionality, it was determined that the support structure for the microwave radio antennae needed to be 140 feet tall.

(f) A wireless communication facility must be designed to allow co-location of facilities;

Finding: In theory, the support structure for the PGE communications antennae is designed to allow co-location. However, in practice, the tower is inside a secure perimeter fence for protection of critical infrastructure. For this reason, other private companies would be permitted access to the tower.

(g) Wireless communication support structure towers must be used in all zones, except when colocating on an existing structure.

Finding: The proposal is for a self-supporting communications tower.

(h) Antennas and platforms must be designed to minimize their size and appearance to surrounding development;

Finding: One of the main locational criteria for siting the proposed WCF, in addition to getting the required minimum height to maintain communication with other PGE facilities, was to minimize its visual impact on surrounding properties. The primary

method for doing so is siting, i.e., placing the tower within a small clearing inside a larger grove of mature trees. This also makes the platform effectively invisible to any surrounding property. The dish antennae are relatively small and will only be visible from a great distance, as the nearest developed property is about 750 horizontal feet away and the antenna are more than 100 feet in the air. In these ways, the antennae and platform are not visually impactful to neighbors.

(i) Obsolete or unused wireless communication support structures and associated equipment and antennas must be removed within 12 months of cessation of operations at a site;

Finding: The support structure will be removed if the operations at the site ever cease, which is not anticipated and would only be in the far distant future.

(*j*) No new wireless communication support structure is permitted unless the applicant submits a co-location report showing whether or not any existing tower or support structure within one-half mile of the proposed site can accommodate the applicant's proposed antennae. The report must address the following:

(i) Do existing towers or support structures, or approved but not yet constructed towers or support structures, located within the geographic area meet the applicant engineering requirements;

(ii) Are existing towers or support structures of sufficient height to meet the applicant's engineering requirements;

(iii) Do existing towers or support structures have sufficient structural strength to support the applicants proposed antennae and related equipment;

(iv) Would the applicant's proposed antennae cause electromagnetic interference with the antennae on the existing tower or support structure, or would existing antennae cause interference with the applicant's proposed antennae; and

(v) Are there other limiting factors that render existing towers and support structures unsuitable or unavailable.

Finding: Figure 2 shows the closest permitted WCF to the proposed tower, including a 1,500 foot ring, which is addressed in subsection (k) below. The other tower is 2,800 feet from the proposed tower site, in Sherwood. The closest tower that is inside Tualatin city limits, according to city maps, is 4,700 feet away, to the east, in an industrial area off SW 105th Avenue.

Because there are no towers within the stated distance where PGE could co-locate its tower, the listed elements of a co-location report do not apply. In any case, as previously explained, the required height and strict security needs of the proposed tower make co-locating on other structures impossible consistent with CIP-14 requirements.

(k) The minimum distance between wireless communication support structure towers is 1,500 feet. Separation must be measured by following a straight line from one wireless communication

support structure tower to the next. For purposes of this section, a wireless communication support structure tower includes wireless communication support structure tower for which the City has issued a development permit, or for which an application has been filed and not denied.

Finding: The next closest WCF in Tualatin is 2,800 feet from the proposed tower, in Sherwood. This exceeds the minimum 1,500 foot distance required by this standard. The closest tower inside Tualatin city limits is even farther, 4,700 feet to the east.

(2) In addition to complying with subsection (1), all Wireless Communication Facilities Attached must comply with the following:

(a) Wireless communication facility attached antennas must use existing rooftop mechanical equipment, and only if not practicable be placed on the exterior wall of a building; and(b) Wireless communication facility attached antennas must be painted to match the color of the mechanical screen wall or building to which it is attached.

Finding: The proposed facility is a stand-alone communications tower, and not attached to a building. Consequently, it is not a "Wireless Communication Facilities Attached," and this standard does not apply.

Section 73F.040 - Setback Requirements.

Setbacks for all Wireless Communication Facilities are determined through the Architectural Review process, and must be consistent with the following:

(1) The minimum setback must be 5 feet, except as otherwise specified in (2), below;

(2) *The minimum setback from an RL zone or from an RML zone with an approved small lot subdivision must be determined as follows:*[...]

(3) In making a determination of compliance with the setback requirements, the City Manager must consider the following factors:

(a) If the abutting property is in the Low Density Residential (RL) Zone or in the Medium-Low Density Residential (RML) Zone with an approved small lot subdivision, and if natural vegetation, such as evergreen trees, does not exist to act as a screen, then a greater setback than the minimum required may be appropriate. If such natural vegetation exists, then the minimum required setback may be appropriate;

(b) If the abutting property is in the Low Density Residential (RL) Zone or in the Medium-Low Density Residential (RML) Zone with an approved small lot subdivision, and it is vacant or its use is a single family dwelling, then a greater setback than the minimum required may be appropriate. If the use is not a single family dwelling, then the minimum required setback may be appropriate; and

(c) If the abutting property is in the Low Residential Density (RL) Zone or in the Medium-Low Density Residential (RML) Zone with an approved small lot subdivision, and it is vacant or its use is a single family dwelling and it is at a lower elevation than the subject property, then a greater setback than the minimum required may be appropriate.

Finding: The proposed tower is set back 160 feet from the nearest property line, which will be the edge of the SW Blake Street ROW. It will be set back 260 feet from the edge

of the SW 124th Avenue ROW. These setbacks far exceed the applicable five foot minimum listed in subsection (1). The other subsections do not apply, because the property does not abut any land that is zoned RL or RML.

Section 73F.050. Variances. Variances to the provisions of this Chapter are as provided in TDC 33.120.

Finding: No variances are required to this chapter. Variances to two base zone development standards, for tower height and a fence setback, are requested below.

Architectural Review Summary

The proposed building and site design creates a secure and reliable facility that enables current operations and supports a modern, collaborative, and flexible work environment. The unique security needs of the facility are accommodated, and the site elements include all necessary operational functions into a fully integrated operations center. The architectural, landscaping, and site orientation choices provide a low-profile, visually appealing presence along abutting rights of way and as viewed from surrounding properties. Overall, the site and its building elements are functional, safe, and attractive.