PUBLIC MEETING NOTICE
FOR THE
WASHINGTON COUNTY PLANNING COMMISSION
HILLSBORO CIVIC CENTER - SHIRLEY HUFFMAN AUDITORIUM
150 EAST MAIN STREET, HILLSBORO, OR  97123

WEDNESDAY, AUGUST 16, 2017  PUBLIC MEETING  6:30 PM

Prior to scheduled public hearing items, the Planning Commission schedules time to receive briefings from county staff as work session items. These briefings provide the Planning Commission an opportunity to conduct informal communications with each other, review the agenda, and identify questions they may ask before taking action on the agenda items during the public meeting. No public testimony is taken on work session items.

Following work session briefings, the Planning Commission considers items published in their agenda, including scheduled public hearing items and consideration of minutes. The public is welcome to speak during the public hearing portions of the meeting. The public may also speak on any item not on the agenda during the Oral Communications section of the agenda.

Upon request, the county will endeavor to arrange provision of the following services:
  ▪ Qualified sign language interpreters for persons with speech or hearing impairments; and
  ▪ Qualified bilingual interpreters

Since these services must be scheduled with outside service providers, it is important to allow as much lead time as possible. If you need a sign language interpreter, assistive listening device, or a language interpreter, please call 503- 846-3519 (or 7-1-1 for Telecommunications Relay Service) by 5:00 p.m. on the Monday preceding the meeting date.

[Signature]
Andy Back
Planning and Development Services Division Manager
The Planning Commission welcomes your attendance at the Public Meeting. If you wish to speak on a public hearing agenda item or during Oral Communications, please feel free to do so. Time is generally limited to five minutes for individuals and 10 minutes for an authorized representative of a Citizen Participation Organization (CPO). The Chair may adjust the actual time limits. However, in fairness to others, we respectfully ask your cooperation on the following:

- When your name is announced, please be seated at the table in front and state your name and home or business address for the record.
- Groups or organizations wishing to make a presentation are asked to designate one spokesperson in the interest of time and to avoid repetition.
- When more than one citizen is heard on any matter, please avoid repetition in your comments. Careful attention to the previous speakers’ remarks will be helpful in this regard.
- If you plan to present written testimony at the hearing, please bring 15 copies for distribution to Commission members and staff.

### PUBLIC MEETING DATES

<table>
<thead>
<tr>
<th>BOARD OF COMMISSIONERS WORK SESSIONS</th>
<th>PLANNING COMMISSION MEETINGS</th>
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<tbody>
<tr>
<td>8:30 a.m. 1st and 3rd Tuesdays</td>
<td>1:30 p.m. 1st Wednesday</td>
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<td>2:00 p.m. 4th Tuesday</td>
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<th>BOARD OF COMMISSIONERS MEETINGS</th>
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<tr>
<td>10 a.m. 1st and 3rd Tuesdays</td>
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*Note: Occasionally it may be necessary to cancel or add a meeting date.*
PUBLIC MEETINGS BEFORE THE PLANNING COMMISSION  
HILLSBORO CIVIC CENTER  
SHIRLEY HUFFMAN AUDITORIUM

WEDNESDAY     AUGUST 16, 2017        6:30 PM

AGENDA

CHAIR:       A. RICHARD VIAL  
VICE-CHAIR:  JEFF PETRILLO  
COMMISSIONERS: ED BARTHOLEMY, IAN BEATY, TEGAN ENLOE, DEBORAH LOCKWOOD, ANTHONY MILLS, ERIC URSTADT, AND MATT WELLNER

PUBLIC MEETING (SHIRLEY HUFFMAN AUDITORIUM)

1. CALL TO ORDER

2. ROLL CALL

3. DIRECTOR’S REPORT

4. WORK SESSION

5. ORAL COMMUNICATIONS (Limited to items not on the agenda)

6. PUBLIC HEARING
   a. Ordinance No. 826: Wireless Facilities – An Ordinance Amending the Community Development Code Relating to Telecommunication Facilities Standards
   b. Ordinance No. 827: Parking Standards – An Ordinance Amending the Community Development Code Relating to Parking and Loading Standards

7. CONSIDERATION OF MINUTES
   • July 19, 2017

8. ADJOURN
WASHINGTON COUNTY PLANNING COMMISSION
MINUTES OF WEDNESDAY, JULY 19, 2017

ALL PUBLIC MEETINGS ARE RECORDED

1. CALL TO ORDER: 6:30 P.M. Shirley Huffman Auditorium

The meeting was called to order by Chair Vial.

2. ROLL CALL


Staff present: Andy Back, Anne Kelly, Michelle Miller, Sambo Kirkman, John Floyd, and Susan Aguilar, Long Range Planning (LRP); Jacquilyn Saito-Moore, County Counsel.

3. DIRECTOR’S REPORT

Andy Back, Manager for the Planning and Development Services (PDS), provided the PC with updates:
- PDS Project Updates:
  - The Aloha Tomorrow project team is holding office hours with area business owners to share information and answer questions about possible land use changes and transportation projects.
- Future PC meetings:
  - August 2 – PC hearings on Ordinance No. 823: Retirement Communities and Ordinance No. 824: Quarries
  - September 6 – PC hearing on the Housekeeping ordinance.
4. **WORK SESSION**

Anne Kelly, senior planner with the Community Planning group provided a PowerPoint presentation on Ordinance No. 824 – Quarries. Staff provided background, reason for ordinance, existing and proposed standards and key considerations. The ordinance was moved from a Tier Two to a Tier One prioritization due to input from Engineering and Construction Service and ODOT (Oregon Department of Transportation).

**Next steps**
- August 2 – PC hearing
- A possible second phase of amendments to quarry standards for the 2018 LRP Work Program, including updates to existing standards and potential refinement of those proposed through this ordinance.

**PC discussion**
- Comment on a need to visually see and compare two million tons.
- Questions regarding who sets size and quality thresholds and why other land use districts can’t be considered.
- Comment that livability issue should be considered and not overlooked.
- Comment that staff should try to match the approval criteria to the current process for larger quarries.
- A request for more information regarding the need for quarries in numbers or examples.
- Suggestion that staff should contact OCAPA (Oregon Concrete & Aggregate Producers Association) for information about reserves and anticipated needs.

5. **ORAL COMMUNICATIONS**

None

6. **Public Hearing**

a. **Quasi-Judicial Plan Amendment Hearing**

Sambo Kirkman, associate planner for the Community Planning group provided a PowerPoint presentation regarding the Jossy Plan Amendment 17-237-PA. Staff provided background information regarding the plan amendment and discussed the request to change the EFU (Exclusive Farm Use) land use designation of two tax lots to AF-5 (Agriculture and Forest-5 Acre). Staff indicated based on the facts and findings of the staff report, the applicant’s information, supplemental materials dated July 18, 2017 and the information presented, that the proposed plan amendment meets the criteria for an exception to Goal 3 and the plan amendment request.

**Recommendation**
- Staff recommends the Planning Commission recommend approval of plan amendment application to the Board of Commissioners (Board).
- The Board makes the final decision on plan amendments that affect rural resource lands.
Oral Testimony provided on Plan Amendment 17-237-PA

- Greg Hathaway, 1331 Lovejoy St, Portland, OR – Attorney representing applicant provided testimony in favor of application and indicated that all legalities have been met.
- Robert Jossy, 31965 NW Beach Rd, Portland, OR discussed air strip usage requirements.

PC Discussion

- Question regarding land use history and the reason for the change from RS 1 (Suburban Residential) to EFU (Exclusive Farm Use).
- Question regarding the difference between the two designations and whether buildings and residences can be built on AF-5 lots.
- Question as to whether lots will have airport and airstrip access.

Final Vote

Commissioner Mills moved to recommend to the Board, approval of the plan amendment application casefile 17-237-PA pursuant to the staff recommendations. Commissioner Beaty seconded motion. **Vote: 8 – 0. Motion passed.**

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b. Ordinance No. 822

Michelle Miller, senior planner for the Community Planning group provided a PowerPoint presentation on Ordinance No. 822 – Omnibus. Staff indicated that Ordinance No. 822 proposes minor amendments to the Rural/Natural Resource Plan, the Comprehensive Framework Plan for the Urban Area and the Community Development Code (CDC).

**Recommendation**

- Staff recommends engrossment of Ordinance No. 822 to the Board to include proposed amendments as shown in the handout.
Written Testimony received in Ordinance No. 822
- A letter dated July 19, 2017 was submitted by Mary Manseau for Kathy Stallkamp – Committee for Community Involvement (CCI).

Oral Testimony received in Ordinance No. 822
- Joseph Schaefer – Jordan Ramis Attorney at Law Office, 2 Centerpointe #600, Lake Oswego, OR 97035 – representing Cal-Am Properties requesting that front setback rules be changed to mirror current side setback allowances. The request was due to the replacement of smaller units with larger ones.
- Firas Aboulhosn, 12450 SW Fisher Rd, Tigard, OR 97224 – also in favor of changing front setback rules to reflect the side setback rules for mobile home subdivisions. He also indicated that every foot counts when replacing the smaller units with larger ones.
- Mary Manseau – CCI, 5230 NW 137th Ave, Portland, OR 97229 – advocated that the policy be consistent with reference to the requirement for neighborhood meetings for Type II and III Development Applications regardless of the development type and distance from the residential development. Ms. Manseau also commented on the importance of neighborhood meetings and advocated for a notice to be sent if there’s residential within 500 feet. She cited two situations (Taco Bell and Nike development) where citizens got upset due to not receiving notices.
- Louise Hoppes, 17865 NW Emmaus Ln, Portland, OR 97231 – commented on notices and that most people may not understand land use or what it means. Ms. Hoppes commented that if notices are sent, this allows opportunities for people to share information with others regarding development concerns.

PC Discussion
- Questions regarding how other jurisdictions approach neighborhood meeting requirements.
- Discussion about neighborhood meeting requirements and the pros and cons of expanding them.
- Discussion regarding one foot clearance or setback for heating and A/C units versus a zero setback, concerns regarding adequacy of space in the side setback area to service mechanical units, and potential noise issues.
- Concerns with large heating or A/C units potentially being a barrier for fire service.

Final Vote
Commissioner Mills moved to recommend to the Board approval of Ordinance No. 822 to include staff proposed engrossments. Commissioner Bartholemy seconded motion.

Commissioner Beaty moved to amend Ordinance No. 822 which includes staff proposed engrossments to adopt a 500 feet notice requirement for a neighborhood meeting as well as for the general notice. Petrillo seconded. **Vote: 4 – 4. Motion failed.**
First motion was repeated.

Commissioner Mills moved to recommend to the Board approval of Ordinance No. 822 to include staff proposed engrossments. Commissioner Bartholemy seconded motion. **Vote: 7 – 2. Motion passed.**

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7. CONSIDERATION OF MINUTES

- June 21, 2017

Commissioner Mills moved to approve June 21, 2017 PC meeting minutes. Commissioner Lockwood seconded motion. **Vote: 8-0. Motion passed.**

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8. **ADJOURN: 8:30 P.M.**

There being no further business to come before the Planning Commission, the meeting was adjourned.

_________________________  _____________________________
A. Richard Vial                Andrew Singelakis
Chairman, Washington County  Secretary, Washington County
Planning Commission            Planning Commission

Minutes approved this _______ day of __________________________, 2017

Submitted by Long Range Planning
To: Washington County Planning Commission
From: Andy Back, Manager
Planning and Development Services

Subject: PROPOSED LAND USE ORDINANCE NO. 826 - An Ordinance Amending the Community Development Code Relating to Telecommunication Facilities Standards.

STAFF REPORT

For the August 16, 2017 Planning Commission Hearing
(The public hearing will begin no sooner than 6:30 p.m.)

I. STAFF RECOMMENDATION

Conduct the public hearing for Ordinance No. 826. At the conclusion of the hearing, order engrossment of the ordinance to incorporate the proposed amendments shown in on Page 12 of this staff report.

II. OVERVIEW

Ordinance No. 826 proposes updates to the Community Development Code (CDC) relating to telecommunication facilities to implement federal regulations that streamline the review process and submittal requirements for applications proposing changes to existing telecommunication facilities. The ordinance also addresses requests from staff and prior applicants to review and remove outdated and unnecessary requirements to make telecommunication facilities regulations clearer and more user friendly. On April 4, 2017, the Board of Commissioners (Board) adopted the 2017 Long Range Planning Work Program, authorizing staff to proceed with amending the CDC to address these issues.

This staff report provides an overview of the history of telecommunication facility regulations in the County, changes to federal law, and a description of the County’s current regulations. In the Analysis Section it reviews stakeholder involvement and then reviews the proposed CDC changes in detail. Finally, the report addresses comments from stakeholders on the proposed language changes.

Department of Land Use & Transportation
Planning and Development Services • Long Range Planning
155 N. First Ave., Suite 350, MS14, Hillsboro, OR 97124-3072
phone: 503-846-3519 • fax: 503-846-4412
www.co.washington.or.us/lu • lutplan@co.washington.or.us
III. BACKGROUND

Telecommunication Facilities
Telecommunication Facilities, also known as cellular towers, wireless facilities or communication facilities, are found throughout the county. They are located on existing structures and buildings and as independent structures. Telecommunication facilities include all equipment that support this function including, but not limited to, antennas, towers, fencing, landscaping, and equipment cabinets.

The purpose of these facilities is to transmit and receive various kinds of signals to provide wireless communication to the entire community. According to the industry, the need for wireless connectivity will continue to increase based on advances in technology such as smart phone applications, wireless meter readings for utility companies, and the future use of self-driving cars. The industry indicates that demand for this technology will exceed the capacity of current telecommunication facilities and that more antennas will be needed.

While local jurisdictions are able to regulate land use aspects of telecommunication facilities, federal regulations place limitations on their authority. For example, federal statutes prevent local agencies from addressing environmental effects of radio frequency (RF) emissions as long as the facility complies with federal regulations. The CDC currently regulates the location, size, design and site characteristics of telecommunication facilities.

History of Telecommunication Facility Regulations in Washington County
Radio and television transmitters were a conditional use in the County’s code as far back as 1959, however, in 1983, Ordinance No. 279 adopted the CDC and established Special Use Section 430-109 Radio, Television and other Transmitter or Related Towers. This ordinance adopted special standards for communication facilities, including rules for new towers. A-Engrossed Ordinance No. 402, adopted in 1992, updated the CDC to include standards for commercial broadcast (radio and television) and telecommunication facilities (e.g., cell towers) that included receiving antennas, towers and monopoles. The purpose of this ordinance was to limit the number of new towers, especially in the residential areas, by developing less restrictive standards in non-residential areas, and more restrictive ones in residential areas. The stricter requirements in residential districts included greater setbacks and a maximum tower height of 100 feet.

In 1996, the Federal Telecommunications Act (FTA) changed the state’s siting requirements for communication facilities. It also increased the number and type of wireless services and providers, which now include cellular, personal communication service, specialized mobile radio transmitter services, and other wireless communication advancements. The FTA placed limitations on state and local agencies on what could be addressed through a land use review, which included removing environmental effects of radio frequency as a factor that local agencies can consider. No changes were made to the CDC in response to the FTA until 2004.

In 2000, Ordinance No. 560 made other changes to these regulations, including exempting antennas from a development permit requirement if mounted on existing utility poles located
within the public road right-of-way. This change was based on a request by a service provider interested in using these existing utility poles.

In 2002, the County revisited regulations pertaining to telecommunication facilities and broadcast services through Ordinance No. 591 to address issues such as: co-location standards, standards for removal of abandoned facilities, and standards for siting facilities in Exclusive Farm Use (EFU) and Agriculture and Forest District (AF-20) lands.

The last update to Section 430-109 occurred in 2004 as part of Ordinance No. 623 to adopt changes that included: adding more exemptions to Section 430-109, updating the CDC to be more compliant with the FTA, and encouraging stealth and concealment designs for antennas and towers.

**Spectrum Act**

In 2012, the U.S. Congress passed the Spectrum Act, also known as Section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012. The purpose of the Spectrum Act was to simplify and expedite the local land use review process for the modification of existing telecommunication facilities or expansion of facilities on existing structures that did not “substantially change” the physical characteristics of an existing facility. To meet the purpose of the Act, local agencies must approve applications for these types of facilities and must modify review processes to:

- Reduce the amount of supporting documentation required for submittal with an application; and
- Limit review time to 60 days, including the completeness review process.

The Federal Communication Commission (FCC) approved rules to interpret the Spectrum Act in October 2014, which took effect in April 2015. In order to comply with the new federal regulations, the County modified its review procedures for certain co-location applications, however, this new procedure and the review requirements have not been codified in the CDC.

**Overview of Existing Regulations**

Under the existing CDC regulations, telecommunications facilities are regulated as a special use, subject to the Special Use requirements found in Section 430-109, *Receiving and Transmitting Antennas, Communication and Broadcast Towers*. Definitions relating to telecommunication facilities are located in Section 106, Definitions. Article III, Land Use Districts, specifies the locations where different types of telecommunication facilities are allowed and under which type of review procedure.

Special Use Section 430-109 categorizes the various telecommunication facilities into four main facility types, labeled as Facility 1 through 4. Facility type is ranked by level of impact to the area. The four facility types range from lesser to greater perceived impacts, and are as follows:

- Facility 1: Co-location [the addition of antennas and/or their supporting equipment to existing telecommunication facilities or structures]
• Facility 2: Concealment [use of stealth technology to hide the tower/antenna/supporting equipment by designing it to resemble natural or man-made features commonly found in an area]
• Facility 3: Screening of new towers [use of the surrounding vegetation or buildings allow the facility to blend with the surrounding environment]
• Facility 4: New towers with no screening [no mitigation]

Special Use Section 430-109 includes subsections on:
.1 - Exemptions - a list of uses for which the standards and requirements in this section do not apply
.2 - Requirements for expansions and alterations of existing facilities, including nonconforming uses
.3 - Co-location of antennas, including standards for co-locating on existing towers, structures, buildings, and their associated submittal requirements
.4 - New concealment towers. These types of towers are generally encouraged if a new tower is needed

Section 430-109.5 identifies the four facility types (1 through 4). The purpose of these regulations is to reduce impacts of these facilities to the surrounding area. The facility type with the least impact is co-location of antennas on existing towers and the facility with the most impact is new towers with no mitigation measures. The type of facility in many cases affects the type of land use process needed. For example co-location and concealment towers, Facility 1 and 2 are reviewed through a Type 1 procedure in all land use districts. In most land use districts, Facility 3 and 4 projects require the more extensive Type II or III review process.

Section 430-109 also includes the following subsections:
.6 - Prohibited uses related to telecommunication facilities;
.7 - Submittal requirements for telecommunication facilities;
.8 - General design standards, including installation requirements for antennas, painting requirements for towers and antennas, and design elements for ground-mounted equipment shelters;
.9 - Site Standards, including setback, access, or noise requirements;
.10 - Additional documentation requirements that specifically require other agency coordination;
.11 - Special requirements associated with facilities located on EFU and AF-20 lands; and
.12 - Abandonment.

Ordinance Notification
Ordinance No. 826 and an accompanying summary were mailed July 21, 2017, to community participation organizations (CPOs) and interested parties. A display advertisement regarding the proposed ordinance was published July 28, 2017, in the Oregonian newspaper. Individual Notice 2017-06 describing proposed Ordinance No. 826 was mailed July 21, 2017, to 327 people on the General Notification List. A copy of this notice was also mailed to the Planning Commission at that time.
IV. ANALYSIS

The purpose of Ordinance No. 826 is to amend sections of the CDC related to telecommunication facilities in order to comply with updates to federal law and streamline County regulations by removing unclear, outdated and subjective language.

Stakeholder Involvement

Over the years the telecommunication industry and staff planners have requested review of and changes to the wireless facilities regulations to reflect current practices and to streamline processes. Since the County was updating the Code to implement federal requirements, there was an opportunity to coordinate with various stakeholders to identify other changes to existing regulations that could improve their performance and make the regulations easier to understand and implement.

Feedback was gathered from industry experts, consultants that have submitted telecommunication facilities applications with the County and cities in the region, other jurisdictions preparing telecommunications facilities regulations, and staff planners that implement the regulations. Additionally, preparation of this ordinance was advertised to CPOs and members of the public, though to date no comments from these groups have been received.

Following are some key comments collected from both internal and external stakeholders:

- Some provisions of the CDC are not consistent with the Spectrum Act (Section 6409).
- Submittal requirements are excessive and staff is unsure what to do with some of the information. The Spectrum Act limits supporting documentation for co-location and expansions of existing facilities. Reduction in submittal requirements should be considered for other telecommunication facilities.
- Definitions are confusing and difficult to locate within the code.
- Special Use Section 430-109 is unclear and not well organized.
- Categories of facilities (Facility 1 to 4) are difficult to understand and can be confused with the Type I through III land use review procedures.
- Wireless facility standards include subjective language and outdated telecommunication facility standards and terms and should be reviewed and updated.
- Standards between macro cellular towers/antennas (traditional cellular facilities) and Distributed Antenna Systems (DAS)\(^1\) should be differentiated.
- Agencies such as Washington County Consolidated Communication Agency (WCCCCA) have additional federal regulations and restrictions compared to private companies, therefore regulation of non-commercial communication facilities like emergency services should be reviewed.

\(^1\) DAS are networks of multiple antennas installed in the right-of-way on existing utility poles and structures or on existing buildings in public/private spaces.
**Changes to the CDC**

Because many stakeholders and Current Planning staff commented that it was difficult to understand where and which processes and standards were required under the current structure of Section 430-109, staff developed a new format that reorganizes and clarifies many of the provisions within this section. Below is a comparison of the existing subsections for Section 430-109 and the format proposed with this ordinance.

<table>
<thead>
<tr>
<th>Current Section Format</th>
<th>Proposed Section Format</th>
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<tbody>
<tr>
<td>430-109.1 The following are exempt from the standards provided in this Section:</td>
<td>430-109.1 Intent and Purpose</td>
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<tr>
<td>430-109.2 Expansion or Alteration of Existing Telecommunication Facilities:</td>
<td>430-109.2 Telecommunication Facility Definitions</td>
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<tr>
<td>430-109.3 Antennas may be co-located (i.e., Facility 1) in all land use districts…</td>
<td>430-109.3 Exemptions</td>
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<tr>
<td>430-109.4 Communication Towers (i.e., Facility 2) may be located in all land use districts…</td>
<td>430-109.4 Prohibited Uses</td>
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<tr>
<td>430-109.5 Facility Siting Requirements for Procedure Type II and III Applications…</td>
<td>430-109.5 New Telecommunication Facilities in the Public Right-of-Way</td>
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<tr>
<td>430-109.6 The following are prohibited in all land use districts:</td>
<td>430-109.6 Co-location Requiring Type 1 Review</td>
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<td>430-109.7 Submittal Requirements for Telecommunication Facilities not otherwise exempt …</td>
<td>430-109.7 Expansion of Existing Telecommunication Facilities</td>
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<tr>
<td>430-109.8 General Design Standards for…:</td>
<td>430-109.8 New Telecommunication Facilities</td>
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<tr>
<td>430-109.9 Site-Specific Standards…</td>
<td>430-109.9 General Design Standards for Telecommunication Facilities</td>
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<tr>
<td>430-109.10 Agency Coordination Documentation</td>
<td>430-109.10 Site Standards for Telecommunication Facilities</td>
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<tr>
<td>430-109.11 Application Requirements for Telecommunication Facilities less than two hundred (200) feet proposed on lands designated EFU and AF-20:</td>
<td>430-109.11 Submittal Requirements for Telecommunication Facilities not otherwise exempt under Sections 430-109.3 and 201-2</td>
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<td>430-109.12 Abandonment</td>
<td>430-109.12 Abandonment</td>
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The proposed changes include creating two new sections in Special Use Section 430-109, *Purpose and Intent* and *New Telecommunication Facilities in the Public Right-of-Way*. The changes also include restructuring Section 430-109, including moving specific definitions from Section 106 to 430-109, updating sections such as general design and site standards and simplifying the titles of each subsection. Staff also proposes to simplify the title of Section 430-109 from *Receiving and Transmitting Antennas, Communication and Broadcast Towers* to *Telecommunication Facilities*.
Because there is a large amount of restructuring of Section 430-109 that required moving language from one portion of this section to another, Exhibit 1 to Ordinance No. 826 shows strikeout and replacement of the entire Section 430-109. Staff believed it was less confusing to show it this way than to show all changes in strike-through / underline format. Table 1 on Page 11 provides a cross-reference table identifying where the current sections are relocated in the proposed ordinance.

Following are key changes to CDC sections modified by this ordinance, with the rationale for the proposed changes. Additional changes are discussed in more detail in Attachment A to this report.

1. **Article III Land Use Districts**
   As part of the reorganization of Section 430-109, the current references to Facility 1 through 4 are replaced with more descriptive titles for telecommunication facility types covered in the CDC. As a result, references to the facility types allowed in each district needed to be updated to reflect the new titles. This required changes to text in all of the land use districts in Article III of the CDC.

2. **Special Use Section 430-109.1 Intent and Purpose**
   This new section provides context for the telecommunication facilities regulations and specifies the types of uses to be regulated through land use review.
   
   As noted, as part of the proposed reorganization of Section 430-109, references to Facilities 1 through 4 are removed from Section 430-109.5 and replaced with the following four facility types:
   
   - Telecommunication facilities in the right-of-way
   - Co-location of antennas
   - Expansion of existing telecommunication facilities
   - New telecommunication facilities (including those either using or not using stealth design)

3. **Special Use Section 430-109.4 Prohibited Uses**
   Prohibited uses are being moved from Section 430-109.6 to Section 430.109.4. Changes to this section include adding language to clarify the continued prohibition on speculation towers and clarifying language reflecting the current County policy prohibiting the use of County-owned assets (e.g. signals, street lights, and street furniture) for co-location on existing facilities. This language is proposed in Section 201-2 and added to this section to clarify what is not allowed by the CDC.

4. **Special Use Section 430-109.5 New Telecommunication Facilities in the Public Right-of-Way**
   This new section allows telecommunication facilities in the public right-of-way, subject to specific standards. CDC Section 201-2.30 exempts antennas on existing utility poles from permit requirements; however, the exemption does not address new poles used solely for wireless antennas. Based on the current Section 430-109, new telecommunication towers would not be permitted in the public right-of-way since they could not meet certain standards, such as setbacks. Allowing new telecommunication facilities in the public right-of-way was a key issue raised by many stakeholders.
Current capacity issues for continuous wireless coverage may be addressed by allowing new facilities in the right-of-way. With the need for additional carrying capacity for wireless communication based on current and new technology trends, more antennas will likely be needed to keep up with this demand. While addition of this section would allow more poles in the right-of-way, impacts to the community would be minimized through application of proposed standards.

The public expects that the road right-of-way will include utility poles, however, the number of poles could increase as a result of this new code section. This could potentially create visual clutter with the multiple antennas found on telecommunication facility towers not found on other utility poles. Proposed standards include limitation on the height and diameter of the towers/poles, and on the location and type of antennas. Section 430-109.5 also creates thresholds that trigger public involvement or a higher level of review based on the location of the facility and the tower height requested.

5. **Special Use Section 430-109.6 Co-location Requiring Type I Review**
   Co-location is the addition of antennas and/or their supporting equipment to an existing telecommunication facility or structure. Co-location, known as Facility 1 in current Section 430-109.3, is relocated to Section 430-109.6 with certain modifications. Since the standards required for co-location for both existing towers and existing structures were similar, the proposed changes consolidate subsection A and B of former Section 430-109.3 into proposed Section 430-109.6 A.

   Thresholds for a Type 1 review were updated in this section to be consistent with the thresholds established by the Spectrum Act for co-location. The updated thresholds include expansion of a site area that is less than 25 percent of the original area approved. Language from former Section 430-109.3 C, which is now Section 430-109.3.B, is updated for clarity. Since all antennas are to meet the same standards, a separate section on whip antennas is proposed to be deleted.

6. **Special Use Section 430-109.7 Expansion of Existing Telecommunication Facilities**
   This section updates and relocates the standards from the former Section 430-109.2 and adds four requirements (Section 430-109.7 B. through E) found in other sections of Section 430-109. These standards require expansions to meet applicable requirements established with their original approval and/or meet general design and site standards.

7. **Special Use Section 430-109.8 New Telecommunication Facilities**
   The current CDC identifies three types of new towers: stealth, screened, and non-screened. To simplify this section, staff proposes two tower types: stealth (designs that hide a tower by having it resemble natural or man-made features commonly found in an area) and non-stealth. The table below identifies where the current facility types and their standards are to be placed in the proposed changes.

<table>
<thead>
<tr>
<th>Current Code Section</th>
<th>Proposed Code Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility Type 2</td>
<td>Telecommunication Facility with Towers using Stealth Design (Section 430-109.8 A)</td>
</tr>
<tr>
<td>(Section 430-109.4)</td>
<td></td>
</tr>
<tr>
<td>Facility Type 3 and Type 4</td>
<td>Telecommunication Facility with Towers not using Stealth Design (Section 430-109.8 B)</td>
</tr>
</tbody>
</table>
The proposed changes consolidate Facility 3 (Screening of new towers) and Facility 4 (New towers with no screening) into one tower type, since they have the same procedure type and are required to meet the same standards. Facility Type 2 (Concealment) will remain as a separate tower type. The process types for these facilities are not changing.

8. **Special Use Section 430-109.9 General Design Standards for Telecommunication Facilities**

Design standards regulate elements of the facility such as installation requirements for antennas, illumination of the facility, painting requirements for towers and antennas, and design elements for ground-mounted equipment shelters. The proposed amendment will update and relocate standards in Section 430-109.8 to this new section.

Design standards from current code that were interspersed in other sections have been consolidated and moved into proposed Section 430-109.9. These include standards related to cabling and wiring, screening of accessory equipment and agency coordination documentation. Standards specific to co-location were relocated to proposed Section 430-109.6.

9. **Special Use Section 430-109.10 Site Standards for Telecommunication Facilities**

Site standards address where and how elements of a telecommunication facility are to be designed and located. Site standards address setback, access, location, noise, and sign requirements. This section is to be relocated from former Section 430-109.9 to Section 430.109.10 and the standards are proposed to be updated to remove references to Facility 2 and clarify standards. The proposed changes include exempting Essential Public Communication Services Facilities from certain site standards such as fence design and the 1,000 feet location restriction due to the nature of the service they provide and the additional federal regulations they must comply with.

Additionally, to simplify the proposed site standards, a number of current standards are proposed to be removed, including:

- Section 430-109.9C(2) - Preservation of on-site native vegetation. This standard is not required in other Special Use sections, therefore staff proposes it be removed.
- Section 430-109.9D - Radio Frequency (RF) Emissions. This standard is addressed when the applicant obtains FCC approval. As stated earlier, federal statutes prevent local agencies from addressing environmental effects of RF emissions as long as the facility complies with federal regulations. Therefore, County review of RF emissions is not allowed.
- Section 430-109.9H 1 - Additional items to be submitted prior to building permit. These standards are proposed to be removed since they are not reviewed by a planner at the time of the land use approval, and many are addressed with the building permit rather than the land use review.

Currently Section 430-109.7E.(2), prohibits clustering of telecommunication towers in residential districts. Clustering is when more than one tower is located within an area. This standard requires facilities in residential zones to be located 1,000 feet or more from one another. No changes are proposed to this standard, except to exempt Essential Public Communication Services Facilities. This standard is to be relocated to this section (Section 430.109.10) since it is a site standard.
The proposed Setback Provisions table, Table B referenced in this section and located at the end of Section 430-109, is proposed to be modified to clarify how the setback standards are implemented based on the proposed use and whether the facility is located in a residential or non-residential district. The illustrations referenced in this table were also updated to provide clearer visual examples. Substantive changes are not proposed to the setbacks and illustrations.

10. **Special Use Section 430-109.11 Submittal Requirements for Telecommunication Facilities not otherwise exempt under Sections 430-109.3 and 201-2**

Many of the stakeholders commented that the County’s submittal requirements were excessive and at times difficult to meet. The Spectrum Act requires jurisdictions to streamline the materials needed for their review. Staff’s analysis expanded to evaluate the submittal requirements for all telecommunication facility requests and found that many of the materials were not pertinent to the land use review, therefore staff is recommending that the requirements be simplified.

Submittal requirements are proposed to be consolidated in one location. Proposed Section 430-109.11A consolidates former Sections 430-109.7A and B. This section will still require that all applications include scaled site plans and elevations. For new telecommunication facilities, staff proposes that language be added requiring applicants to provide information about the location of the new facility, information on potential co-location on other sites, and confirmation that their new facility can include co-location. This will provide the information needed by the County to make findings, but simplifies the submittal requirements by eliminating the need for detailed engineering reports. For the level of review, submittal requirements for telecommunication facilities were considered by both applicants and staff to be excessive.

Staff proposes two new sections (430-109.11B (1) and (2)) to replace the following submittal requirements that are not considered pertinent to the land use review:

- Section 430-109.7 C. An Alternative Sites Analysis
- Section 430-109.7 D. A Tower Sharing Plan
- Section 430-109.7 E. A District Siting Analysis
- Section 430-109.7 F.(1) Certified documentation from a structural engineer licensed in Oregon that the tower is structurally sound and complies with all applicable building and structural codes...
- Section 430-109.7 F.(2) Evidence that it is feasible to comply with applicable DEQ noise standards if the installation contains heating, cooling, electrical generating or other equipment likely to produce noise...
- Section 430-109.7 G. A copy of a signed contractual agreement, excluding financial information, between the tower provider and a telecommunications service provider to provide wireless service on the proposed tower.
Table 1: Cross-Reference of Reformatting Changes in Section 430-109

<table>
<thead>
<tr>
<th>Proposed Section 430-109 Format</th>
<th>Current Section 430-109 Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>430-109.1 Intent and Purpose</td>
<td>New Section</td>
</tr>
<tr>
<td>430-109.2 Telecommunication Facility Definitions</td>
<td>Definitions are in 106-174 except co-location and concealment located in 430-109.5.</td>
</tr>
<tr>
<td>430-109.3 Exemptions</td>
<td>430-109.1 The following are exempt from the standards provided in this Section:</td>
</tr>
<tr>
<td>430-109.4 Prohibited Uses</td>
<td>430-109.6 The following are prohibited in all land use districts:</td>
</tr>
<tr>
<td>430-109.5 New Telecommunication Facilities in the Public Right-of-Way</td>
<td>New Section</td>
</tr>
<tr>
<td>430-109.6 Co-location Requiring Type I Review</td>
<td>430-109.3 Antennas may be co-located (i.e., Facility 1) in all land use districts…</td>
</tr>
<tr>
<td>430-109.7 Expansion of Existing Telecommunication Facilities</td>
<td>430-109.2 Expansion or Alteration of Existing Telecommunication Facilities:</td>
</tr>
</tbody>
</table>
| 430-109.8 New Telecommunication Facilities | • 430-109.4 Communication Towers (i.e., Facility 2) may be located in all land use districts…  
  • 430-109.5 Facility Siting Requirements for Procedure Type II and III Applications… |
| 430-109.9 General Design Standards for Telecommunication Facilities | • 430-109.8 General Design Standards for…:  
  • 430-109.10 Agency Coordination Documentation |
| 430-109.10 Site Standards for Telecommunication Facilities | 430-109.9 Site-Specific Standards… |
| 430-109.11 Submittal Requirements for Telecommunication Facilities not otherwise exempt under Sections 430-109.3 and 201-2 | • 430-109.7 Submittal Requirements for Telecommunication Facilities not otherwise exempt …  
  • 430-109.11 Application Requirements for Telecommunication Facilities less than two hundred (200) feet proposed on lands designated EFU and AF-20: |
| 430-109.12 Abandonment           | 430-109.12 Abandonment          |
Stakeholder Comments
A draft of proposed language changes was provided to all the stakeholders for comments. Attachment B is a summary of the comments provided by representatives from Verizon, AT&T, and Washington County Consolidated Communications Agency (WCCCA), and staff’s response to their comments. Attachment C contains the letters provided by Verizon, AT&T, and WCCCA.

Verizon, AT&T, and WCCCA had comments related to specific language of the proposed ordinance that they would like to see changed. Staff believes that several of them would need more analysis to understand the potential implications and does not recommend the requested changes.

However, one comment that staff finds warrants consideration has to do with Section 430.109.9, General Design Standards for Telecommunication Facilities. Subsection C states:

Antennas on towers not using stealth design shall be made of a non-reflective material, flush-mounted, and painted to match the tower or structure. In case of co-locating, the antennas shall match the design of the approved facility;

This standard does not permit antennas on davit arms, which is a permitted design for antennas in Section 430.109.8 B, Telecommunication Facilities with Towers not using Stealth Design. To create consistent standards, staff recommends engrossment of the ordinance to change the language in proposed Section 430.109.9C as follows (engrossed language shown in gray):

29. SECTION 430 - SPECIAL USE STANDARDS

430-109 Telecommunication Facilities Receiving and Transmitting Antennas, Communication and Broadcast Towers

430-109.9 General Design Standards for Telecommunication Facilities

C. Antennas on towers not using stealth design shall be made of a non-reflective material, flush-mounted, and painted to match the tower or structure. The antennas shall be flush-mounted, or mounted on davit arms extending a maximum of five (5) feet from the tower. In case of co-locating, the antennas shall match the design of the approved facility;

***
Summary of Proposed Changes

Ordinance No. 826 proposes to amend CDC sections to streamline the review process and submittal requirements for telecommunication facilities to include restructuring Section 430-109 for clarity and compliance with federal requirements. The following are main provisions proposed to be changed:

- Relocate terms and definitions specifically related to telecommunication facilities from Section 106 (Definitions) to Section 430-109 (Telecommunication Facilities).
- In CDC Article III (Land Use Districts), update uses related to telecommunications in all land use districts to include the types of telecommunication facilities identified in Section 430-109 for consistency.
- Add a new exemption in Section 430-109.3 to include co-location requests that comply with the federal Spectrum Act.
- General restructure of Section 430-109 to include renaming the section title to Telecommunication Facilities, adding a new Intent and Purpose section, and renaming references to Facility Types 1 through 4.
- Update prohibited uses to include co-location of antennas on County-owned assets.
- Create a process and standards section for telecommunication facilities in the public right-of-way.
- Update review procedures and standards for co-location, expansion of telecommunication facilities, and new telecommunication facilities to be more consistent with the Spectrum Act and to make the review level compatible to the impacts of the proposed development.
- Update General Design and Site Standards for telecommunication facilities including the setback provision table and associated illustrations for clarity.
- Update submittal requirements for telecommunication facilities so that only pertinent documents are required.
- Update temporary telecommunication facilities in Section 430-135 to include a new temporary use that is currently located in the exemption section of Section 430-109.

List of Attachments

The following attachments identified in this staff report are provided:

Attachment A: Summary of Proposed Changes within Filed Ordinance No. 826
Attachment B: Summary of Stakeholder Comments with Staff Response
Attachment C: Stakeholder Testimony
Summary of Proposed Changes within Filed Ordinance No. 826

Following is an explanation of additional changes proposed in Ordinance 826 not specifically addressed in the staff report.

A. Section 106 Definitions
   Terms and definitions relating to telecommunication facilities are currently located in both Sections 106 and 430-109. As part of the reorganization of these regulations, terms and definitions related specifically to telecommunication facilities are consolidated and moved to Section 430-109. Language is added to Section 106 indicating that terms and definitions related to specific uses may be located in their own sections of the Code.

Terms that are used in other sections of the CDC, such as Oregon Department of Aviation and Federal Aviation Administration, were not relocated and remain in Section 106.

B. Section 201-2 Exclusion from Permit Requirement
   Currently, installations of certain pole mounted antennas on utility poles in the public road right-of-way are excluded from the requirement to obtain a permit. Under this exclusion in Section 201-2.30, new language is added to clarify that installation of telecommunication facility equipment is prohibited on any county-owned assets (e.g. county signals, street lights, street furniture, etc).

Amendment of this section includes increasing the height of the replacement utility pole from 15 feet to 20 feet to ensure adequate clearance between the antennas and utilities found on these poles.

C. Special Use Section 430-109 Title
   The current title, Receiving and Transmitting Antennas, Communication and Broadcast Towers, does not encompass the full range of regulations in this section. For example, the standards on supporting equipment associated with antennas and towers. Staff proposes changing the section title to Telecommunication Facilities consistent with the generic term used by other jurisdictions (e.g., Hillsboro and Cornelius) that applies not only to the tower and antennas, but also includes associated equipment.

D. Special Use Section 430-109.2 Definitions
   As discussed earlier, the proposed reorganization of the telecommunication facilities regulations includes moving and updating telecommunication facilities terms and definitions from Section 106 to Section 430-109.2. Updates include adding new terms such as:
   - Concealment
   - Essential public communication service
   - Essential public communication facility
   - Flush mounted antenna

The update also includes deleting outdated and unused terms such as:
   - Base station
   - Radio frequency engineer
• Top hat antenna array
• Use accessory to an antenna
• Visually subordinate

E. **Special Use Section 430-109.3 Exemptions**
Types of telecommunication facilities or their components that are exempt from the standards in Section 430-109 were moved from Section 430-109.1 to Section 430-109.3. The current exemption section contains 10 different exemptions. To streamline this list, staff proposes to consolidate exemption for replacement of existing antennas and transmitters (formerly subsection 430-109.1.B) and reconstruction or replacement of telecommunication facilities (formerly subsection 430-109.1.C) since these two sections have similar requirements. Also proposed is the removal of outdated or unnecessary uses such as radio transceivers and radio frequency machines. Temporary communication uses are being moved into the Temporary Use section in 430-135, consistent with other temporary uses.

Added to this exemption section is co-location of lawfully established telecommunication facilities (Section 430-109.3.C). This exempts certain co-locations from meeting the requirements in Section 430-109. These co-locations are similar to the type of facilities identified in the Spectrum Act. By including these types of co-location in the exemption, the CDC is meeting the intent of the Spectrum Act to streamline the review and submittal process for these facilities.

F. **Special Use Section 430-109.12 Abandonment**
The Abandonment Section will remain as Section 430-109.12. The proposed amendment to this section is the removal of 430-109.12.C, a requirement that annual documentation be provided by service providers that the facility is still in operation. This is not currently done in practice, is not enforced and would be difficult to implement and maintain with the number of facilities located countywide.
Summary of Stakeholder Comments with Staff Response

A draft of proposed language changes was provided to stakeholders for comments. Representatives from Verizon, AT&T, and Washington County Consolidated Communications Agency (WCCCA) provided comments. The following is a summary of these comments and staff response:

1. **Consider changing the size standard for equipment cabinets in Section 201-3 from 12 cubic feet to 21.** Verizon’s and AT&T’s request would exempt review of these larger cabinets. Due to the increased size of the cabinets and the potential impacts to the surrounding area with these cabinets mounted on the pole, staff does not recommend this change at this time.

2. **Consider changing the term microcell to small cell.** Microcell is defined in the County CDC, however Verizon notes the term small cell is a more common term used by the industry. They also asked that the County consider removing repeater and telecom hotel as definitions since they state that they are not used in the code. Staff does not recommend changes to this section. Repeaters are referenced in the definition for microcell and telecom hotels are identified as a prohibited use in the Transit Oriented district.

3. **Consider using FCC Terminology.** Verizon and AT&T requests that the language in Section 430-109.3.C should be more consistent with the FCC terminology for example; references to the FCC’s term “substantial change” should be included. Staff finds the proposed changes in Ordinance No. 826 are consistent with the requirements of the Spectrum Act, though the proposed language is not taken directly from the Spectrum Act where it may add more confusion to this section. Therefore staff does not recommend this proposed change.

4. **Consider removing language prohibiting antennas on County assets.** Verizon and AT&T noted that removing this language in Sections 201-2 and 430-109.4 would provide the County the opportunity in the future to allow antennas on County assets. Staff does not recommend this change, since this language was added to clarify that the current County policy does not permit outside use of County assets.

5. **Consider allowing taller towers in other rights-of-way.** Verizon noted that for Arterials and Collectors within pedestrian/bicycle districts and Neighborhood Route/Local Streets, towers between 30 to 50 feet should be permitted through a Type II process, since facilities may be needed in these areas that require undergrounding and no utility poles are available. AT&T request taller towers in all street classification through an administrative review. The proposed code change allows for new towers in these types of public right-of-way; however with the pedestrian nature of these areas, staff recommends that tower height be limited to 30 feet to mitigate visual impacts to these higher use pedestrian areas. Staff does not recommend changes to this section.
6. *Consider adding Essential Public Communication Services facility in Exclusion.* WCCCA requested an exclusion from the requirements of the Section for facilities that met the dimensional and development standards in all land use districts except EFU and AF-20. In these two districts, WCCCA requests that these types of facilities would be reviewed through a Type II process. Staff finds aesthetic impacts are still associated with any non-stealth tower, which warrants additional review and noticing to the surrounding area. Additional analysis would be needed to analyze this request, therefore staff does not recommend this proposed change at this time.

7. *Consider top of tower to be facility height not top of antenna.* WCCCA’s request is to measure the maximum height of the structure from the top of the tower and not the top of the antenna. Since there are visual impacts associated with antennas, staff recommends that the maximum height remain the top of the antenna.
August 7, 2017

Via email
Chair Vial
Commissioners Petrillo, Beaty, Mills, Lockwood, Enloe, Wellner, Urstadt, and Bartholemy
Washington County Planning Commission
Planning and Development Services
155 N First Avenue, Suite: 350
Hillsboro, OR 97124-3072,

Dear Commissioners:

Thank you for the opportunity to provide input on behalf of Verizon on Washington County’s wireless code update. Verizon generally supports the direction the County is taking and provides a few targeted suggested changes. My colleague, Meridee Pabst, worked with me on the code comments and Verizon’s suggested revisions and comments are marked with her name.

The attached redline contains suggested edits and comments on the following sections:

201-2 Exclusions from Permit Requirement

- Clarifying language added that single utility poles are exempt.
- Requesting that the FCC standard of 21 cubic feet be applied to equipment for small cells in the ROW.

430-109.2 Telecommunication Facility Definitions

- Replace “microcell” with “small cell”.
- Eliminate definitions for repeaters and telecom hotel, as they are not used elsewhere in the code.
430-109.3 Exemptions

Eligible Facilities Requests

- Suggest use of FCC language.

430-109.4 Prohibited Uses

- County owned street furniture, including poles, light standards and traffic standards cannot be used for small cells. Verizon suggests that the County consider making these assets available for small cell attachments pursuant to a master lease agreement.

430-109.5 New Telecommunication Facilities in the Public Right-of-Way

- Added language to clarify that utility poles are addressed.

Section 430-109.5 - Table A: Procedure Type for New Telecommunication Towers in the Right-of-Way

- Suggest that new poles in the ROW between 30 and 50 feet be permitted with a Type II review in Arterials and Collectors within pedestrian/bicycle districts and residential districts, rather than an outright prohibition.

- Suggest that new poles in the ROW between 30 and 50 feet be permitted with a Type II review in Arterials and Collectors within pedestrian/bicycle districts and residential districts, rather than an outright prohibition.

Thank you for the opportunity to participate in this code update. We appreciate the work that staff has done and look forward to continued collaboration on a code that reflects community values and offers an efficient and workable process for the wireless industry to deliver the reliable, high quality service that your citizens and businesses expect have come to expect.
Please let me know if we can provide additional assistance.

Sincerely,

[Signature]

Kim Allen
Wireless Policy Group, LLC
Representatives for Verizon Wireless

cc

Sambo Kirkman, Associate Planner
106-174.23 **Tower** (e.g., broadcast and communication) types include:

A. **Guyed tower**. A tower that is permanently connected to the ground by cables (guy wires).

B. **Lattice tower**. A self-supporting multiple-leg tower comprised of an open framework of either structural steel or diagonal cables or a combination thereof.

C. **Monopole**. A self-supporting, single, upright pole and requiring no guy wires or diagonal cables to stabilize the structure. Monopoles are typically constructed of wood or steel.

106-174.24 **Transmitting Antenna**. A device that emits and may receive non-ionizing electromagnetic energy.

106-174.25 **Uses Accessory to an Antenna**. A use that is customarily incidental to a receiving or transmitting antenna and is generally situated on the same property as the antenna, such as an equipment shelter.

106-174.26 **Visually Subordinate**. The relative visibility of a broadcast or communication tower where the tower does not noticeably contrast with the surrounding built or natural landscape. Visibly subordinate towers may be partially visible, but not visually dominate in relation to their immediate surroundings.

2. **SECTION 201 – DEVELOPMENT PERMIT**

**201-2 Exclusions from Permit Requirement**

**201-2.30** Installation of compact pole-mounted receiving and transmitting antennas on electric and other utility poles in the public road right-of-way, **excluding street lights on power poles and traffic signal lights**, where the subject support pole is part of an existing above ground electric transmission, distribution, communication or signal line, and where "pole" is defined as a utility pole, monopole, double pole or lattice utility structure, subject to the following:

A. Within the public road right-of-way, existing poles may be replaced with new poles in order to support the new antenna, provided the new pole is not more than **twenty (20) fifteen (15)** feet higher than the pole to be replaced;

B. **Up to one (1) associated equipment cabinets totalling no more than not to exceed twelve (12) twenty one (21)** cubic feet may be mounted on the pole. The cabinet(s) shall be painted with or constructed of material with a non-reflective neutral color that matches or is similar to that of the pole. All associated ground-mounted equipment shelters located in the right-of-way are subject to the applicable standards of ODOT or Washington County to occupy or perform operations upon the affected roadway;

C. Installation of receiving and transmitting antennas on County-owned street furniture is prohibited. Street furniture includes, but is not limited to, street lights, utility poles, and traffic signals;

D. Antennas, excluding whip antennas, shall extend no more than ten (10) feet above the pole it is mounted on. Antennas, excluding whip antennas, shall be **twenty (20) fifteen (15)** feet higher than the pole to be replaced;

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Comment [MP1]: Adding to include single pole distribution and/or transmission poles

Comment [MP2]: Verizon suggests that the County consider making these assets available for small cell attachments pursuant to a master lease agreement. Deleting this subsection will allow the County to choose to do so later without a change to the zoning code.
Terms and definitions that apply throughout the Community Development Code are found in Section 106. Following are definitions for the terms found in Section 201-2.30 and Section 430-109:

**Antenna.** A device for transmitting or receiving radio frequency (RF) signals or electromagnetic radiation, such as digital and analog signals, radio frequencies, broadcast signals, such as television and radio signals, and other communication signals. Antennas are typically mounted on a supporting tower, pole or mast, building or other approved structure. Types of antennas include directional antennas such as panel antennas, microwave dishes, and omni-direction antennas such as whip antennas. Antennas do not include domestic satellite dishes. Additionally, some antennas operate as both transmitting and receiving devices.

**Broadcast Tower.** A tower, pole, or mast whose primary purpose is to elevate an antenna above the surrounding terrain or structures for the transmission of radio or television signals. The actual broadcast tower itself may also function as the antenna, (e.g., for AM broadcast radio) if part of the apparatus is necessary to produce a clear signal or message within the licensee’s operating range, as allowed by the Federal Communications Commission. Broadcast towers are often sited within a non-staffed broadcast facility for the transmission of radio or television signals.

**Co-location.** The installation of one or more antennas and/or improvements to accessory equipment facilities, on an existing tower, structure, or building for transmitting and/or receiving radio frequency signals for communications purposes.

**Concealment.** When design elements are used to minimize the visual appearance of telecommunication facilities; also known as stealth design.

**Equipment Shelter.** An enclosed structure or cabinet usually placed at or near the base of a communication tower where electrical and other equipment necessary for the operation of the facility are housed. Cables connect the shelters to the antenna(s).

**Essential Public Communication Service.** Emergency communication network for emergency response by public agencies including fire and rescue, medical, law enforcement and other public agencies, including but not limited to water and sanitary and storm sewer providers.

**Essential Public Communication Service Facility.** All equipment including antennas for the transmission and reception of radio frequency signals (wireless telecommunication, wireless Internet, radio/television broadcast, and other related wireless communications) for essential public communication services. These facilities also include associated towers, equipment shelters, accessory support equipment (generators, fuel sources, HVAC), landscaping, fencing, and parking areas located on the site for the network.

**Federal Communications Commission (FCC).** An independent government agency established by the Communications Act of 1934 and charged with regulating interstate and international communications by radio, television, wire, satellite and cable.

**Flush Mounted Antenna.** Antenna or antenna array attached directly to the face of a tower or building.

**Microcell/Small Cell.** A low-power facility used to provide increased capacity to wireless telecommunications demand areas or provide infill coverage in areas of weak reception, including a separate transmitting and receiving station serving the facility. (See also “Repeater”)

Comment [MP3]: Small cell is the more common industry term for these facilities. Verizon proposes adding it to the 201-2 exemption. (Microcell is not used in this draft.)
Non-Residential Land Use Districts. FD-20, FD-10, NC, OC, CBD, GC, IND, INST, SID, TO:RC, TO:EMP, TO:BUS, EFU, EFC, AF-20, R-COM, R-IND, NCC NB, NCMU NB, INST NB and MAE.

Radio Frequency Emission. Electromagnetic radiation that is of low photon energy unable to cause ionization and is generated by a transmitting antenna.

Repeater. A small receiver/relay transmitter and antenna of relatively low power output designed to provide service to areas unable to receive adequate coverage directly from the base or primary station.

Replacement Tower. A new telecommunication tower capable of supporting co-located antennas that is intended to replace an existing tower that is incapable of supporting co-located antennas.

Residential Land Use District. R-5, R-6, R-9, R-15, R-24, R-25+, R-6 NB, R-9 NB, R-15 NB, R-24 NB, R-25+ NB, TO:R9-12, TO:R12-18, TO:R18-24, TO:R24-40, TO:R40-80, TO:R80-120, AF-5, AF-10 and RR-5.

Speculation or "Spec" Tower. A tower for the purpose of providing location mounts for future antennas without a binding contractual commitment by a service provider to locate an antenna upon the tower at time of the original application submittal.

Stealth Design. The design of new antennas or towers in a manner that camouflages, conceals, or disguises the facilities so that they are visually compatible with the surroundings as described in Section 430-109.8 A. Examples include an indigenous evergreen tree, flag pole, light post, pole sign, clock or bell tower, steeple, or silo.

Telecom Hotel. A building or structure designed to warehouse telecommunications equipment, including utility hookups and connections to fiber-optic networks.

Telecommunication Facility. All equipment, including: antennas for the transmitting and/or receiving of radio frequency signals or electromagnetic radiation (e.g., wireless telecommunication service and wireless Internet/Wi-Fi), broadcast signals (e.g., radio and television), and other communication signals; broadcast or telecommunication tower or existing structures used to support antennas; accessory equipment and accessory improvements such as landscaping, fencing and parking areas, located on the site.

Telecommunication Facility Site. A whole or a portion of a parcel, which is owned or leased by one or more broadcast or wireless telecommunications provider where a broadcast or telecommunication tower and its supporting equipment are located. The site also includes the equipment shelter and required site improvements, including landscaping, but does not include site access. When located on a portion of a parcel, these areas are usually fenced off from the remainder of the parcel.

Telecommunication Tower. Any structure built for the sole or primary purpose of elevating any FCC-licensed or authorized antenna above the surrounding terrain, or structures for the transmission and/or receiving of radio frequency (RF) signals or electromagnetic radiation to provide wireless telecommunication service, including wireless Internet service. This includes structures that are constructed for wireless communication services (e.g., broadcast and communication). Tower types include:

Guyed tower. A tower that is permanently connected to the ground by cables (guy wires).
Lattice tower. A self-supporting multiple-leg tower comprised of an open framework of either structural steel or diagonal cables or a combination thereof.

Monopole tower. A self-supporting, single, upright pole requiring no guy wires or diagonal cables to stabilize the structure.

430-109.3 Exemptions

The standards of this Section apply to all wireless telecommunication facilities except as otherwise provided herein. The following are exempt from the standards in this Section:

A. Telecommunication facilities that are exempt from a development permit under Section 201-2;

B. Reconstruction or replacement of telecommunication facilities lawfully established after November 26, 1992, the effective date of Ordinance No. 402, provided that it:
   (1) Does not increase the height or base diameter of the existing tower or structure as originally approved or constructed;
   (2) Does not expand the existing fenced equipment area around the tower or structure;
   (3) Does not reduce existing landscape buffers unless replaced with vegetation with similar characteristics, plant densities and maturity;
   (4) Does not use colors or lights that make the tower or antenna more visually obtrusive, unless required by either the Oregon Department of Aviation (ODA) or the Federal Aviation Administration (FAA);
   (5) Uses antennas and transmitters that are similar in nature to the antennas and transmitters they are replacing; and
   (6) Does not increase the number of antennas or transmitters.

Reconstruction or replacement of telecommunication facilities, excluding transmitter and antenna replacements pursuant to Section 430-109.3 B., approved before November 26, 1992 is subject to the provisions of Section 440, Nonconforming Uses, and applicable provisions of 430-109 as required by Section 440.

C. Eligible Facility Requests/Co-location on lawfully established telecommunication facilities provided that:
   (1) The height increase is no more than twenty (20) feet or (ten) 10 percent of the existing tower height, whichever is greater. Antennas cannot protrude interfere with the use of into the right-of-way;
   (2) No expansion to the existing fenced equipment enclosure is required;
   (23) Antennas do not protrude from the edge of an existing tower more than 20 feet or the width of the tower structure at the base of the tower, whichever is greater;
   (34) Antennas on other lawfully established structures do not increase the height of the structure by more than ten (10) feet or ten (10) percent of the existing height, whichever is greater, or protrude from the upper edge of the structure by more than six (6) feet;

Comment [MP6]: Verizon suggests using FCC terminology for clarity. Interpretation of this section will be more consistent with federal law if the County were to restate the FCC’s definition of “substantial change” here. See 47 CFR Sec. 1.40001(b)(7). Also suggest incorporating by reference the FCC’s other definitions for EFRs, some of which (collocation) are different from definitions listed above in Section 430-109.2.

Comment [MP7]: Antennas are above the right of way on utility poles and should not interfere with the safe use of the ROW. The suggested language is targeted at the safety concerns, which may be addressed in a 6406 modification. Also suggest relocating this requirement for clarity.
(45) The telecommunication facility requires installation of less than four (4) new equipment cabinets on the site;

(56) Excavation or deployment is not required outside the current telecommunication facility site;

(67) Design complies with the does not defeat existing concealment elements, if approved with the existing facility; and

(78) Design complies with the conditions of approval associated with the existing facility, unless non-compliance is due to an increase in height, increase in width, addition of cabinets, or new excavation that complies with the requirements in subsection 1 through 7 above.

D. The following telecommunication facilities that are regulated by the Federal Communications Commission (FCC) pursuant to the Code of Federal Regulations:

1. Industrial, scientific, and medical equipment;
2. Military and government radar antennas and associated communication and broadcast towers used for aviation services; and
3. Amateur (ham) and citizen band transmitting and receiving antennas and associated communication and broadcast towers.

E. A telecommunication facility as a temporary use - Section 430-135.1 H.;

F. Temporary telecommunication facilities used solely for emergency communications by essential public communication service providers in the event of a natural disaster, emergency preparedness or for public health or safety purposes;

G. Antennas to provide enhanced 911 (i.e., E911) network coverage when required by the FCC, subject to the following:

1. E911 antennas shall not increase existing facility height and shall be painted or otherwise constructed of materials with the same or similar color as the tower; and
2. Accessory equipment and related equipment are either located completely within the existing structure (e.g., tower, building or other structure), or are located within an existing fenced site. In the case of a tower that includes stealth design, E911 antennas shall also incorporate stealth design. Existing 911 antennas may remain for a period not to exceed six (6) months in order to accommodate the transfer of service from the existing 911 antennas to the E911 antennas.

430-109.4 Prohibited Uses

The following uses are prohibited in all land use districts:

A. Installation of towers without antennas based on speculation of future antenna installation, also known as speculation (“spec”) towers;

B. The attachment of any antennas or associated equipment to trees; and

C. Installation of antennas on County-owned street furniture. Street furniture includes but is not limited to street lights, utility poles, and traffic signals.
430-109.5 New Telecommunication Facilities in the Public Right-of-Way

New Telecommunication facilities in the public right-of-way that are not exempt from a development permit under Section 201-2 shall meet the following requirements:

A. The tower or utility pole shall not exceed a maximum diameter of twenty-four (24) inches, except where additional diameter is required to conceal antennas, cables, and/or equipment within the structure.

C. The tower or utility pole, including any antennas, shall not exceed the maximum height permitted for a tower as shown in Table A below.

D. Antennas shall be placed internal to the tower or utility pole or flush mounted or otherwise installed using stealth design.

E. Equipment cabinets may be mounted to the tower or utility pole or placed in or near the right-of-way.

F. For non-wood towers and poles, supporting cables and equipment connecting to the equipment cabinets or attached to a tower shall be placed underground or internal to the tower or tower pole.

G. The telecommunication facility shall meet the County’s vision clearance standards.

H. A right-of-way permit shall be obtained.

I. Unless otherwise identified, telecommunication facilities in the right-of-way shall be subject to standards in Section 430.109.9 (General Design Standards), but shall not be subject to Section 430-109.10 (Site Standards).

J. The procedure type for new telecommunication towers and poles within the right-of-way shall be based on the roadway type and height of the tower as shown in Table A below:

Section 430-109.5 - Table A:

<table>
<thead>
<tr>
<th>Procedure Type for New Telecommunication Towers and Poles in the Right-of-Way</th>
<th>Arterial/Collector</th>
<th>Arterials and Collectors within pedestrian/bicycle districts</th>
<th>Neighborhood Route/Local Street</th>
</tr>
</thead>
<tbody>
<tr>
<td>New tower to 30 feet height</td>
<td>Type I</td>
<td>Type II</td>
<td>Type II</td>
</tr>
<tr>
<td>New tower more than 30 feet to 50 feet height</td>
<td>Type II</td>
<td>Prohibited Type II</td>
<td>Prohibited Type II</td>
</tr>
<tr>
<td>New tower more than 50 feet to 100 feet height</td>
<td>Type III</td>
<td>Prohibited</td>
<td>Prohibited</td>
</tr>
</tbody>
</table>

430-109.6 Co-location Requiring Type I Review

abcdef Proposed additions

abcdef Proposed deletions
August 8, 2017

Ms. Sambo Kirkman
Washington County Department of Land Use & Transportation
Planning & Development Services|Long Range Planning
155 N First Avenue, Suite 350 MS14|
Hillsboro, OR 97124

SEN VIA EMAIL: sambo_kirkman@co.washington.or.us

Re: Telecommunication Facility Code Amendments
   CDC Section 430-109 and related sections

Dear Ms. Kirkman:

Thank you for providing the opportunity to comment on the County’s proposed changes to its Telecommunications Facilities Code, Section 430-109 and related sections, which regulate wireless communications facilities both within and outside of the County’s right-of-way. We submit these comments on behalf of AT&T.

AT&T supports the County’s efforts to make its code consistent with federal law governing Eligible Facilities Requests – Section 6409\(^1\) and 47 C.F.R. §1.40001. Our comments below offer suggestions in this regard.

AT&T further supports code changes that facilitate the installation of small cell facilities in the County’s rights-of-way to serve the community’s growing demand for wireless service. Small cells have minimal visual impact and usually rely on infrastructure (such as utility and light poles) that is already part of the built environment. Due to these significant benefits, other communities have adopted measures to encourage small cells or exempt them from land use review. Appropriate regulations for the County’s rights-of-way can similarly guide the installation of small cell improvements.

While we understand that the County is not comprehensively updating its code for small cells at this time (adding consolidation of permits, for example), we have several

\(^1\) 47 U.S.C. §1455(a).
comments with regard to placement of small cells in the right-of-way under this proposed new code.

**Skyrocketing Demand for Wireless Service**

AT&T and other carriers are responding to a significant increase in demand for wireless services. For example:

- Since 2007, AT&T has seen data usage on its network increase by 250,000 percent.\(^2\)
- Over half (50.8%) of American homes no longer use traditional landline telephone service and instead choose to be wireless only.\(^3\)
- More than two-thirds of American adults aged 25–29 (72.7%) and aged 30-34 (71%) live in households with only wireless telephones.\(^4\)

Furthermore, mobile communications are a critical tool for first responders in emergency situations. According to the Federal Communications Commission (“FCC”), nearly 70 percent of 911 calls are made from wireless phones and that percentage is expected to continue to grow.\(^5\)

To meet the skyrocketing demand for wireless service in residential areas, better serve businesses, and enhance public safety, carriers need viable options for siting new facilities in a way that will provide meaningful coverage and capacity and high-quality service. Small cells can add much-needed capacity, and in some cases coverage, to targeted areas with minimal impacts to the community.

**Regulating Small Cells**

Size. AT&T supports an approach that establishes volumetric size parameters for a “small cell” facility and then regulates these facilities in a manner commensurate with their minimal impact. The County’s limitation on cabinets attached to utility poles is more restrictive than the standards other jurisdictions have adopted, and we suggest that the County follow the example from other jurisdictions by amending Section 201-2.30(B) to:

---

\(^2\) [http://about.att.com/story/att_details_5g_evolution.html](http://about.att.com/story/att_details_5g_evolution.html)

\(^3\) CDC Wireless Substitution: Early Release of Estimates from the National Health Interview Survey, July-December 2016 (released May 2017).

\(^4\) Id.

• Allow more than one cabinet or equipment enclosure on a pole, with a cumulative cap on size. This change will allow the visual impact to be less. Two smaller cabinets will most likely have less impact to the profile of the pole than one larger cabinet.

• Cumulatively cap the cabinet size at 28 cubic feet.

County-Owned Street Furniture. AT&T suggests that the County’s zoning code not prohibit placement of wireless facilities on County-owned street furniture, such as light poles. See proposed Sections 201-2.30(C) and 430-109.4(C).

The zoning code does not need to address attachments to County-owned street furniture. Allowing attachments to County-owned street furniture benefits all parties and is something that can be addressed through a non-discriminatory attachment agreement and not the zoning code.

New Poles in the Right-of-Way. AT&T supports the County’s creation of a new use category for new poles in the right-of-way, see Section 109-430.5, and suggests the following clarifications:

• This section refers to “towers,” which by definition are installed for the sole or primary purpose of providing wireless service, but not utility poles. Some commonly used small cell designs are new light poles with wireless antennas. We suggest revising 109-430.5 to apply to both towers and utility poles.

• Limitations on pole diameter should be subject to an exception where additional width is needed for internal concealment of antennas, equipment, and cables. Subsection (A).

• The standard for attached equipment and cabling is confusing. We suggest an exception to internal cabling when the pole is a wood utility pole, as well as a clarification that equipment can be pole-mounted or on the ground, either within or adjacent to the right-of-way. Subsection (E).

• AT&T suggests that new poles which are the greater of 50 feet or ten feet in height above the tallest existing pole in place be allowed in all street classifications subject to an administrative review. Table A.

Consistency with Federal Law (Section 6409 and 47 C.F.R. §1.40001)

Some of the County’s proposed provisions for Eligible Facilities Requests (Section 430-109.3(C)) are not consistent with the FCC’s rules, codified in 47 C.F.R. §1.40001.

Specifically, Subsections (C)(1)-(8) are somewhat different from the FCC’s “substantial change” test. For instance, the federal rule provides that the change may not “defeat
existing concealment elements."^6 Compare with Subsection (C)(7). Subsection (C)(2) does not appear in the federal rule at all. And, some defined terms used here, such as co-location and site, are not consistent with the FCC’s definitions in 47 C.F.R. §1.40001.

AT&T suggests that the County restate the federal rule’s definition of “substantial change” in this section and incorporate by reference the other FCC terms for clarity. This can help avoid ambiguity and the need for interpretations in the future.

Thank you for your consideration of these comments. We look forward to working with the County as your code change process continues.

Very truly yours,

[Signature]

Ken Lyons  
206.227.0020  
ken.lyons@wirelesspolicy.com

---

^6 47 C.F.R. §1.40001(b)(7)(v).
Washington County Consolidated Communications Agency

August 7, 2017

To: Department of Transportation and Development
Planning and Development Services
Long Range Planning Section
155 N 1st Ave, #350-13
Hillsboro, OR 97124

ATTN: Sambo Kirkman

Dear Sambo,

Thanks for providing WCCCA the opportunity to meet and discuss the County’s upcoming land use code revision. And thanks for the follow up to allow additional proposed changes with respect to our Essential Public Communication Services Facilities.

Attached are 11 pages from your code change work up document stating the code changes the Agency feels are necessary to site our facilities within the County.

Please contact me, or if desired, Ron Polluconi or Ken Seymour, with any questions or if you require more detail or changes.

Allen R (Skip) Greene
Permitting Agent for WCCCA
6233 SW Orchid Dr
Portland, OR 97219
503-866-5111
skip.greene@comcast.net
Attached C

Reduction of off-street required minimum automobile parking spaces in existing development for replacement bicycle parking is subject to Section 413-11. Replacement bicycle parking spaces must meet the standards of Sections 429-7, 429-8 and 429-9.

New Exclusion: 201-2.34

Installation of an Essential Public Communication Services facility in the following zones:

a. All urban residential zones in Section 302 through 309 subject to the dimensional and development standards in those sections as well as applicable standards in chapter 430-109.

b. All rural residential zones in Section 350 subject to the dimensional and development standards in those sections as well as applicable standards in chapter 430-109.

c. All commercial zones in Section 311 through 314 and section 352 subject to the dimensional and development standards in those sections as well as applicable standards in chapter 430-109.

d. All industrial zones in Section 320 through 330 and section 354 subject to the dimensional and development standards in those sections.

e. All Ag/Forest zones in Section 344 through 348 subject to the dimensional and development standards in those sections.

Note that the EFU and AF-20 zones an EPCSRSF would be a Type II process subject to the dimensional and development standards in those code sections but not subject to the standards in chapter 430-109, just subject to ORS 215.275.
L. EPCS F’s less than 200’ in height that are utility facilities necessary for public service must comply with ORS 215.275 but are exempt from section 430-109.

**Attachment C**

330-4.54 New Telecommunication Facilities with Communication Towers up to two hundred (200) feet in height, not otherwise allowed through a Type I Procedure - Section 430-109.

330-4.66 Construction of a local street not in conjunction with a development application or within existing right-of-way.

330-4.76 Uses Accessory and Incidental to an Allowed Use, not otherwise permitted by Section 330-3.2:

***

330-4.87 Day Care Facility - 430-53.2 l.

330-4.98 Tree removal in areas identified in the applicable Community Plan as Significant Natural Resources, subject to Section 407-3.

330-4.109 Indoor Marijuana Production - Section 430-80.

330-5 Uses Which May be Permitted Through a Type III Procedure

***

330-5.17 New Telecommunication Facilities with Communication towers greater than two hundred (200) feet in height - Section 430-109.

330-5.18 Broadcast Towers - Section 430-109.

330-5.1819 Religious Institution - Section 430-116.

17. **SECTION 340 - EXCLUSIVE FARM USE DISTRICT (EFU)**

340-3 Uses Permitted Through a Type I Procedure

***

340-3.5 Co-location of antennas, excluding those antennas regulated by Section 430-109.11 or otherwise exempt pursuant to Sections 430-109.31 and 201-2 - Section 430-109.3.

***

340-4 Uses Permitted Through a Type II Procedure

The uses listed in Sections 340-4.1 and 340-4.2 are permitted subject to the specific standards for the use set forth below and in applicable Special Use Sections of Section 430, as well as the general standards for the District, the Development Standards of Article IV and all other applicable standards of the Code. Approval may be further conditioned by the Review Authority pursuant to Section 207-5. Unless the use is specifically exempted, the Review Authority shall make specific findings with respect to the standards in Section 340-4.3.

340-4.1 Permitted Uses which are exempt from Section 340-4.3:

***

K. New Telecommunication Facilities with Broadcast and Communication towers less than two hundred (200) feet in height that are utility facilities necessary for public service - Section 430-109.44.
Section 342-2.10, and transmission towers up to two hundred (200) feet in height - Section 430-109.

***

V. Expansion of Existing Telecommunication Facilities, including co-located antennas, not otherwise allowed through a Type I Procedure pursuant to Section 430-109.6 or exempt pursuant to Sections 430-109.3 and 201-2 - Section 430-109.

342-4 Uses Which May be Permitted Through a Type III Procedure

***

342-4.1 Uses which may be allowed:

***

J. New Telecommunication Facilities with Microwave facilities, Broadcast and Communication-Towers and transmission-towers greater than two hundred (200) feet in height - Section 430-109.

***

342-5 Creation of Lots or Parcels by a Land Division Through a Type II Procedure

***

342-5.2 Creation of a parcel less than eighty (80) acres - only uses listed in the following sections may be permitted - See Section 610-1.1 C for required standards.

***

C. New Telecommunication Facilities with Towers Communication facilities & transmission-towers - Sections 342-3.2 M. and 342-4.1 J.;

19. SECTION 344 - AGRICULTURE AND FOREST DISTRICT (AF-20)

344-3 Uses Permitted Through a Type I Procedure

***

344-3.5 Co-location of antennas, excluding those antennas regulated by Section 430-109.11 or otherwise exempt pursuant to Sections 430-109.34 and 201-2 - Section 430-109.3.

***

344-4 Uses Permitted Through a Type II Procedure

***

344-4.1 Permitted Uses which are exempt from Section 344-4.3:

***

K. New Telecommunication Facilities with towers Broadcast and Communication towers less than two hundred (200) feet in height that are utility facilities necessary for public service - Section 430-109.44.

L. Expansion of Existing Telecommunication Facilities, including co-located antennas, not otherwise allowed through a Type I Procedure pursuant to M. EPCSF's less than 200' in height that are utility facilities necessary for public service must comply with ORS 215.275 but are exempt from section 430-109.
Section 430-109.6 or exempt pursuant to Sections 430-109.3 and 201-2 - Section 430-109.4.

***

R. Utility facilities necessary for public service, including wetland waste treatment systems. Utility facilities necessary for public service do not include:

(1) Commercial facilities for the purpose of generating power for public use by sale;

(2) Transmissions towers over two hundred (200) feet in height;

(3) New Telecommunication Facilities Receiving and transmitting antennas, broadcast and communication towers listed under J. and K. and L. above and under Section 344-5.2 LM. below;

***

344-5 Uses Which May be Permitted Through a Type III Procedure

***

344-5.2 Uses which may be allowed subject to Section 344-5.3:

***


20. SECTION 346 - AGRICULTURE AND FOREST DISTRICT (AF-10)

346-2 Uses Permitted Through a Type I Procedure

***

346-2.10 Co-located of-antennas, excluding those antennas exempt pursuant to Sections 430-109.31 and 201-2 - Section 430-109.3;

346-2.11 New Telecommunication Facilities with Towers using Stealth Design Facility-2 communication-towers to a maximum height of one hundred (100) feet, excluding those towers exempt pursuant to Sections 430-109.31 and 201-2 - Section 430-109.4;

***

346-3 Uses Permitted Through a Type II Procedure

***

346-3.5 Expansion of Existing Telecommunication Facilities, including co-located antennas, not otherwise allowed through a Type I Procedure pursuant to Section 430-109.6 or exempt pursuant to Sections 430-109.3 and 201-2 - Section 430-109.

***

346-4 Uses Which May be Permitted Through a Type III Procedure

***

346-4.1 Uses which may be allowed:

***

abcdef Proposed additions
abcdef Proposed deletions
Terms and definitions that apply throughout the Community Development Code are found in Section 106. Following are definitions for the terms found in Section 201-2.30 and Section 430-109:

**Antenna.** A device for transmitting or receiving radio frequency (RF) signals or electromagnetic radiation, such as digital and analog signals, radio frequencies, broadcast signals, such as television and radio signals, and other communication signals. Antennas are typically mounted on a supporting tower, pole or mast, building or other approved structure. Types of antennas include directional antennas such as panel antennas, microwave dishes, and omni-direction antennas such as whip antennas. Antennas do not include domestic satellite dishes. Additionally, some antennas operate as both transmitting and receiving devices.

**Broadcast Tower.** A tower, pole, or mast whose primary purpose is to elevate an antenna above the surrounding terrain or structures for the transmission of radio or television signals. The actual broadcast tower itself may also function as the antenna, (e.g., for AM broadcast radio) if part of the apparatus is necessary to produce a clear signal or message within the licensee's operating range, as allowed by the Federal Communications Commission. Broadcast towers are often sited within a non-staffed broadcast facility for the transmission of radio or television signals.

**Co-location.** The installation of one or more antennas and/or improvements to accessory equipment facilities, on an existing tower, structure, or building for transmitting and/or receiving radio frequency signals for communications purposes.

**Concealment.** When design elements are used to minimize the visual appearance of telecommunication facilities, also known as stealth design.

**Equipment Shelter.** An enclosed structure or cabinet usually placed at or near the base of a communication tower where electrical and other equipment necessary for the operation of the facility are housed. Cables connect the shelters to the antenna(s).

**Essential Public Communication Service.** Emergency communication network for emergency response by public agencies including fire and rescue, medical, law enforcement and other public agencies, including but not limited to water and sanitary and storm sewer providers.

**Essential Public Communication Service Facility.** All equipment including antennas for the transmission and reception of radio frequency signals (wireless telecommunication, wireless Internet, radio/television broadcast, and other related wireless communications) for essential public communication services. These facilities also include associated towers, equipment shelters, accessory support equipment (generators, fuel sources, HVAC), landscaping, fencing, and parking areas located on the site for the network.

**Federal Communications Commission (FCC).** An independent government agency established by the Communications Act of 1934 and charged with regulating interstate and international communications by radio, television, wire, satellite and cable.

**Flush Mounted Antenna.** Antenna or antenna array attached directly to the face of a tower or building.

**Microcell.** A low-power facility used to provide increased capacity to wireless telecommunications demand areas or provide infill coverage in areas of weak reception, including a separate transmitting and receiving station serving the facility. (See also "Repeater")

abcdef Proposed additions
abcdef Proposed deletions
(6) Excavation or deployment is not required outside the current telecommunication facility site;

(7) Design complies with the concealment elements, if approved with the existing facility; and

(8) Design complies with the conditions of approval associated with the existing facility, unless non-compliance is due to an increase in height, increase in width, addition of cabinets, or new excavation that complies with the requirements in subsection 1 through 7 above.

D. The following telecommunication facilities that are regulated by the Federal Communications Commission (FCC) pursuant to the Code of Federal Regulations:

(1) Industrial, scientific, and medical equipment;

(2) Military and government radar antennas and associated communication and broadcast towers used for aviation services; and

(3) Amateur (ham) and citizen band transmitting and receiving antennas and associated communication and broadcast towers.

E. A telecommunication facility as a temporary use - Section 430-135.1 H.;

F. Temporary telecommunication facilities used solely for emergency communications by essential public communication service providers in the event of a natural disaster, emergency preparedness or for public health or safety purposes;

G. Antennas to provide enhanced 911 (i.e., E911) network coverage when required by the FCC, subject to the following:

(1) E911 antennas shall not increase existing facility height and shall be painted or otherwise constructed of materials with the same or similar color as the tower; and

(2) Accessory equipment and related equipment are either located completely within the existing structure (e.g., tower, building or other structure), or are located within an existing fenced site. In the case of a tower that includes stealth design, E911 antennas shall also incorporate stealth design.

Existing 911 antennas may remain for a period not to exceed six (6) months in order to accommodate the transfer of service from the existing 911 antennas to the E911 antennas.

H. EPCSF’s in the IND, INST, SID, TO:EMP, TO:BUS, EFC, EFU, AF-20,R-COM, R-IND, AF-5, AF-10 & RR-5 zones.

430-109.4 Prohibited Uses

The following uses are prohibited in all land use districts:

A. Installation of towers without antennas based on speculation of future antenna installation, also known as speculation ("spec") towers;

B. The attachment of any antennas or associated equipment to trees; and

C. Installation of antennas on County-owned street furniture. Street furniture includes but is not limited to street lights, utility poles, and traffic signals.
(a) The structures and accessory uses shall be arranged to minimize visual and noise impacts on adjacent developments and surrounding land uses; and

(b) The structures and uses shall be located and designed in a manner that preserves scenic views or vistas identified in the applicable community plan and viewable from adjacent properties or public thoroughfares, by considering setbacks, building height, bulk and landscaping.

430-109.9 General Design Standards for Telecommunication Facilities

A. New towers not using stealth design shall be painted or otherwise treated in a manner that blends in with the surrounding area in order to minimize visual impact, unless state or federal regulations require different colors. The exterior color of the tower shall also be non-reflective in nature and make the tower as visually unobtrusive as possible. If there are stands of trees or other site-obscuring vegetation on site or in the immediate area, the tower shall be painted or finished to blend with the landscape;

B. New towers shall be illuminated only when required by the ODA, FAA or other state or federal agency;

C. Antennas on towers not using stealth design shall be made of a non-reflective material, flush-mounted, and painted to match the tower or structure. In case of co-locating, the antennas shall match the design of the approved facility;

D. Cabling and wiring shall be hidden from public view through installation internal to the tower or painted to match the color of the tower;

E. When ground-mounted equipment shelters extend above site-obscuring fencing, the shelters shall be constructed of materials and/or finished with earth-tone colors that are non-reflective in nature and no taller than twelve (12) feet high;

F. Accessory equipment shall be screened or otherwise hidden from public view; and

G. Documentation shall be submitted indicating the telecommunication facility can feasibly comply with the requirements of the FAA, the Oregon Department of Aviation, the FCC and any other applicable state or federal regulation.

430-109.10 Site Standards for Telecommunication Facilities

A. Setbacks (See 430-109.10 Table B and Illustrations at end of Section 430-109).

(1) New telecommunication facilities shall comply with the setback provisions of the individual land use districts, unless greater setbacks are required by Table B;

(2) New ground-mounted equipment shelters shall comply with the setback provisions of the individual land use districts, except as set forth below:

Underground vaults containing equipment cabinets and other associated equipment supportive of wireless telecommunication facilities may be located in a required setback, except as otherwise restricted by the Uniform Building Code (UBC), the Uniform Fire Code (UFC) or subsection C. below.

(3) Notwithstanding the requirements set forth in (1) and (2) above, the Review Authority may reduce the required setbacks through a Type III adjustment process, provided

abcdef Proposed additions
abcdef Proposed deletions
Recommend top of tower be considered tower height, not top of antenna, when omnidirectional antennas proposed
Recommend top of tower be considered tower height, not top of antenna, when omnidirectional antennas proposed.
Recommend top of tower be considered tower height, not top of antenna, when omnidirectional antennas proposed
Recommend top of tower be considered tower height, not top of antenna, when omnidirectional antennas proposed.
To:        Washington County Planning Commission
From:    Andy Back, Manager
          Planning and Development Services
Subject: PROPOSED LAND USE ORDINANCE NO. 827 - An Ordinance Amending the
Community Development Code Related to Parking and Loading Standards

August 9, 2017

STAFF REPORT

For the August 16, 2017 Planning Commission Hearing
(The public hearing will begin no sooner than 6:30 p.m.)

I. STAFF RECOMMENDATION

Conduct the public hearing; and either recommend approval of Ordinance No. 827 to the Board of Commissioners (Board), or consider potential engrossments as identified in the staff report.

II. OVERVIEW

Ordinance No. 827 proposes amendments to the Community Development Code (CDC) to update the County’s parking and loading standards. The amendments reduce minimum parking ratios for future development or redevelopment to better reflect prevailing demand, and are founded on local parking analyses, available research, and consistency with local and regional jurisdictions. The amendments also expand upon allowed reductions and increase flexibility of existing off-street supply in commercial and mixed-use areas where transit service and a pedestrian-supportive environment may result in a reduction of automobile trips.

Ordinance No. 827 also enhances the viability of affordable housing developments by decreasing the costs necessary to build parking facilities, based on recent utilization studies that indicate reduced demand at these residential properties in Washington County.
The following amendments are proposed to improve consistency with local, regional and state policy objectives:

- Revise on and off-street parking requirements to simplify and provide additional flexibility.
- Revise the minimum off-street parking ratios for attached residential, as well as some institutional, business and commercial, and office uses.
- Expand the provisions for reducing required off-street parking by allowing up to a 50 percent reduction for a combination of shared parking agreements and mixed-use development, increasing allowance for proximity to transit, and adding a reduction for on-street parking.
- Add a discretionary provision allowing an applicant to submit a parking study for up to a 100 percent reduction in required off-street parking.
- Add clear and objective off-street parking requirements related to regulated affordable housing.
- Add provisions for electric vehicle and motorcycle parking.

III. BACKGROUND

Updating the parking standards was identified as a high priority through the County’s Greening the Code project in 2012 and the Aloha-Reedville Study and Livable Community Plan in 2014. Considering parking reductions for affordable housing development has been recommended by the Washington County 2015-2020 Consolidated Plan (and prior 2010-2015) and the Portland State University Master’s in Urban and Regional Planning (MURP) report: Washington County Affordable Housing Development Strategy (presented to the Board in May 2016). Approved as part of the 2016 Long Range Planning Work Program, Tier 1 Task 1.14, the Rightsizing the Parking Code study identified potential changes to existing policies and code standards.

During the course of the Rightsizing the Parking Code study, a series of technical memoranda were prepared, several meetings took place with technical and stakeholder work groups, and key stakeholders were interviewed for input - culminating in draft recommendations described in the Long Range Planning Issue Paper No. 2017-04: Rightsizing the Parking Code, approved as part of the 2017 LRP Work Program, Tier 1 Task 1.18 and released April 12, 2017 available online. The eight technical memorandums prepared during the study are listed below and available in the Appendices of Issue Paper No. 2017-04:

- **Public Outreach Plan.** The project team began by developing a public outreach plan to organize how public input on the project would be collected and used in the study.
- **Background and Policy Framework.** The project team reviewed all applicable County, regional and state documents to understand current County parking policies, and identify deficiencies.
- **Parking Management Best Practices.** The project team analyzed best practices from other local and national studies on parking management related to suburban environments.
• **Evaluation Criteria.** Staff developed criteria to evaluate the effectiveness and appropriateness of various parking management strategies, consistent with the project objectives. The criteria were applied to the parking management strategies included in Technical Memorandum 3, to determine those most appropriate for Washington County.

• **Project Case Study, Cedar Mill Town Center:** Parking Inventory, Occupancy and Turnover Study Methodology. A case study was completed to inventory existing parking conditions in the Cedar Mill Town Center area. This memorandum outlined the methodology for collecting and assessing the off-street and on-street parking supply and demand.

• **Parking Inventory, Occupancy and Turnover Study Conclusions.** The analysis of the data from the Cedar Mill Town Center case study revealed that the study area contains an abundance of off-street parking. Peak parking utilization rates were, on average, below 65 percent for most commercial properties. The study found that existing and future parking demands in the area could be accommodated even with a reduced parking supply, which could encourage a more efficient use of the land.

• **Parking Management Strategies for Washington County.** From the findings of the other technical memoranda, this document summarized the results of the evaluation of parking management strategies appropriate for Washington County, and suggested potential changes in the County’s parking policies and development code.

The technical memoranda were shared with the project’s Stakeholder Advisory Group during the study process to obtain input for recommended changes to the County’s policies and CDC. Table 1 illustrates the study recommendations and related CDC changes, all of which are elements included in proposed Ordinance No. 827 and discussed in more detail in the analysis section of this staff report.

**Table 1: Study recommendations**

<table>
<thead>
<tr>
<th>Rightsizing the Parking Code</th>
<th>Related CDC Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Study Recommendations</strong></td>
<td><strong>Related CDC Changes</strong></td>
</tr>
<tr>
<td>Allow for greater flexibility in the use of parking</td>
<td>• Expand context-sensitive allowances for reducing parking minimums</td>
</tr>
<tr>
<td>Expand the distance between where required parking can be provided and the land use</td>
<td>• Increase the maximum distance allowed for shared parking off-site</td>
</tr>
<tr>
<td>Reduce parking minimums</td>
<td>• Modify uses listed in the minimum parking tables</td>
</tr>
<tr>
<td></td>
<td>• Reduce minimum off-street parking ratios for attached residential, as well as some institutional, business and commercial, and office uses</td>
</tr>
</tbody>
</table>

An initial draft of the CDC amendments found in Ordinance No. 827 was presented in *Technical Memorandum #8: Potential Comprehensive Plan and Community Development Code Language,*
available in Appendix B of Issue Paper No. 2017-04. This language was introduced and discussed with Current and Long Range Planning Staff and, later, at the Planning Commission April 19 and May 15, 2017 work sessions. Staff incorporated feedback from staff and the Planning Commission the results of which were presented to the Board of Commissioners June 27, 2017 work session.

**Ordinance Notification**

Ordinance No. 827 and an accompanying summary were mailed to community participation organizations (CPOs) and interested parties on July 21, 2017. A display advertisement regarding the proposed ordinance was published in the *The Oregonian* newspaper on July 28, 2017. Individual Notice 2017-07 describing proposed Ordinance No. 827 was mailed to 327 people on the General Notification List on July 21, 2017. A copy of this notice was also mailed to the Planning Commission at that time.

**IV. ANALYSIS**

This analysis is divided into four sections. The first section addresses the proposed reductions to minimum off-street parking requirements in revised Table 413-6.1. The second section discusses the scope of changes for affordable housing developments based on available research. The third section reviews the additional parking reductions that developments can use based on 1) proximity to quality transit service, 2) allowing shared parking agreements in mixed-use developments to increase the flexibility of parking supply, and 3) the opportunity to conduct a parking analysis to determine the right amount of parking necessary to meet expected demand. Finally, the fourth section is a summary of additional amendments not related to the previous topic areas provided.

The Rightsizing the Parking Code study, as described in Long Range Planning Issue Paper No. 2017-04: *Rightsizing the Parking Code* investigated existing regulations and determined that constructing parking spaces either in surface lots or in structured parking adds to development costs. Surface parking typically costs $5,000-10,000 per space¹—but, also, takes up space that could otherwise be used for structures or amenities. Structured parking may consume less land area, but has a significantly higher development cost. The national median parking structure construction cost is over $18,000 per space ($55/square foot).²

From an affordable housing lens, when a smaller amount of land is used for parking, more housing units may be developed—which is often necessary to achieve economies of scale that make residential development feasible. For example, the additional cost of providing structured parking for a multifamily project will almost certainly increase development costs and result in higher housing costs for residents—and may increase development cost sufficiently that it is not feasible to produce units that will be affordable to lower income households. This is also true for commercial projects.

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¹ Transportation Cost and Benefit Analysis II – Parking Costs. Victoria Transport Policy Institute (www.vtpi.org)
Small-scale regulatory changes, such as enabling shared parking agreements, that increase the flexibility of parking requirements have shown to incentivize developers to build developments that achieve a wide range of planning goals for centers and corridors (i.e. compact, mixed-use, and accessible).

The Rightsizing the Parking Code study recommended CDC amendments that reflect the current state of research on the subject, which demonstrates that jurisdictions are seeking to achieve a parking utilization rate that optimizes parking supply. In some cases this means allowing less off-street parking for new development by relying on existing publicly available parking or through other parking arrangements.

Proposed Ordinance No. 827 reorganizes CDC Section 413 – Parking and Loading, with several existing sections moved to new locations within the text and adds new sections. The analysis below primarily makes reference to new or renumbered sections.

Reducing Off-Street Parking Minimums

The majority of proposed amendments are located in Section 413 – Parking and Loading, which incorporates changes to off-street minimum parking requirements, reductions to off-street parking requirements, and adds new or revised design standards for electric vehicles and motorcycles.

The proposed CDC amendments in Section 413-6.1 are supported by findings from the Rightsizing the Parking Code Study and included as Appendix B in Issue Paper No. 2017-04, which are based on current industry standards and parking utilization findings. More information on the revised parking minimums can be found in Technical Memorandum #6: Parking Inventory, Occupancy, and Turnover Study Conclusions Report and Technical Memorandum #7: Parking Management Strategies, completed as part of the Rightsizing the Parking Code Study and included as Appendix B in Issue Paper No. 2017-04.

At its April 19 and May 15 work sessions, the Planning Commission expressed a desire to see a more market-based approach, including removing all off-street parking minimums and maximums. Findings from the Rightsizing the Parking Code Study did support providing greater flexibility for a developer to assess the appropriate parking supply based on land use and transportation context, but did not recommend removing all minimum standards. The proposed changes increase the bookends for developers to choose the right amount of parking supply for their respective developments, while maintaining some regulatory assurance that some off-street parking be provided.

Along with local policies, public policies at the state and regional levels provide policy direction and legal requirements for planning related to reducing excess supply of parking for vehicles in Washington County. The Transportation Planning Rule (TPR) section -0045(5)(c) requires local jurisdictions to adopt code provisions that implement a parking plan which must achieve a 10 percent reduction in the number of parking spaces per capita, and must aid in achieving vehicle miles traveled (VMT) reduction targets and mode share targets. Strategies such as adopting code provisions that reduce parking minimums are identified in Section -0045(5)(d) as a ‘safe haven’
alternative, and are supported by Policy 39 implementing strategy f. in the County Comprehensive Framework Plan for the Urban Area, which encourages the efficient use of land and promotion of non-automobile trips.

The 2014 Metro Regional Transportation Plan includes 10 major goals, supported by multiple objectives. Goal 1 and Goal 4 include specific references to parking management in order to use land and resources more effectively and to manage travel demand in order to reduce use of single occupant vehicles (SOVs) and promote use of walking, biking and transit for travel needs. Parking management strategies also help to achieve goals and objectives related to increased transit use by helping to create a more transit-supportive environment and leverage investments in transit facilities and services (RTP, Pages 2-43 to 2-45).

Title 6 of the Metro Urban Growth Management Functional Plan Title 6 (Metro Code section 3.07.610 – 3.07.650) sets forth requirements local jurisdiction plans and codes for 2040 Centers, Corridors, Station Communities and Main Streets must meet in in order to be eligible for regional investments. The requirements include adoption of a parking management program consistent with section 3.08.410 of the Metro Regional Transportation Functional Plan (RTFP), which includes recommended regional parking minimum and maximum ratios in Table 3.08-3.

The following lists the changes made to Section 413-6.1 and supporting justifications:

- The detached residential use category is expanded to include manufactured dwellings. The change removes manufactured dwellings as a separate use category and effectively reduces the minimum parking ratio to 1 space per dwelling unit from 2 spaces per dwelling unit.

- The attached residential use category is streamlined to only include two subcategories: 1) 1 Bedroom or Studio and 2) 2 or more Bedrooms. There is no longer a separate category for units with three or more bedrooms. For attached residential, the upper limit of required minimum parking has been reduced from 1.75 spaces for each dwelling unit to 1.5 spaces. This is supported based on parking analysis completed as part of the supplement for Technical Memorandum #6 in the Rightsizing the Parking Code Study (Attachment A). The study demonstrated that demand ratios warrant a reduction in required parking for residential developments by up to five percent.

- A new category has been added for Regulated Affordable Housing with a minimum parking requirement of 0.75 spaces per each dwelling unit. Section 413-6.2 includes the definition for “regulated affordable housing.” The implications of this code change are discussed in greater detail below.

- The golf course use category has been streamlined with the same regulations applicable to both public and private courses. Off-street parking for golf courses will be based on a parking study submitted at the time of the development application, and will be reviewed through the same procedure as required for the use. Previously, the standard was 4 parking spaces for each golf hole and 1 space for each employee. This change is based on

- The parking ratio for libraries, museums, and post offices has been revised from 1 space per 500 square feet to 2 spaces per 1000 square feet to achieve methodological consistency with parking requirements for other uses, although the parking ratio remains functionally the same.

- Minimum parking requirements for unspecified public office buildings has been reduced from 2.7 to 2 spaces per 1000 square feet of gross area. The reduction in parking requirements is supported by findings from the Rightsizing the Parking Code Study.

- The Telecommunications Facilities use categories have been removed. Staff determined that these facilities are so infrequently accessed and often have sufficient space to accommodate parking of a maintenance truck that the category appeared to be unnecessary.

- The method of calculating minimum parking spaces for beauty parlor or barber shops has been revised to require 3 spaces per 1000 square feet of gross area, in order to achieve methodological consistency with parking requirements for other uses. Previously, the standard was 3 spaces for each of the first 2 beauty or barber chairs, and 1.5 spaces for each additional chair. The reduction in parking requirements is supported by findings from the Rightsizing the Parking Code Study.

- Minimum parking requirements for bowling alleys have been reduced from 4 spaces per bowling lane to 3.5 spaces. The reduction in parking requirements is supported by findings from the Rightsizing the Parking Code Study.

- Minimum parking requirements for restaurants has been reduced from 9.9 spaces per 1000 square feet of gross floor area to 5 spaces for drive-in restaurants, and from 15.3 spaces per 1000 square feet of gross floor area to 8 spaces for general restaurants. The reduction in parking requirements is supported by findings from the Rightsizing the Parking Code Study.

- The method for calculating parking has changed slightly for the category of “Furniture and appliances, household equipment, repair shops, showroom of plumber, decorator, electrician or similar trade, shoe repair and other similar uses.” The new minimum standard requires 0.75 spaces per 1000 square feet of gross area, compared to 1 space per 800 square feet of usable area, effectively reducing the parking ratio by 40 percent assuming that usable and gross area are calculated similarly. The reduction in parking requirements is supported by findings from the Rightsizing the Parking Code Study.

- The Miniature or “par 3” golf course use category has been eliminated, and all golf courses share identical requirements for minimum parking as described above.
• Minimum parking requirements for motels, hotels, and other commercial lodging establishments have been reduced from 1 space for each occupancy unit to 0.8 spaces. The proposed code amendment includes additional parking requirements for accessory uses, such as an attached restaurant, based on the appropriate standards for that use in the code. Previously, the code required “extra spaces for dining rooms, ballrooms or meeting rooms…where the capacity of such areas exceeds the number of beds in the building.” The reduction in parking requirements is supported by findings from the Rightsizing the Parking Code Study.

• The methodology for calculating parking minimums at motor vehicle and service establishments has changed slightly, from 1 space per 200 square feet of usable floor space in sales rooms, to 2 spaces per 1000 square feet of usable floor space for the overall facility, which corresponds to a 60 percent decrease in required parking. Functionally, however, the decrease is even greater, as the new standards no longer include an additional provision for 1 parking space for each auto service stall in service rooms. The reduction in parking requirements is supported by findings from the Rightsizing the Parking Code Study.

• Minimum parking requirements for retail stores not otherwise specified in the CDC have been reduced from 4.1 spaces for each 1000 square feet of gross area to 2.5 spaces, effectively reducing the parking ratio by 39 percent. The reduction in parking requirements is supported by findings from the Rightsizing the Parking Code Study.

• Minimum parking requirements for banks have been reduced from 4.3 spaces for each 1000 square feet of gross area to 2.5 spaces, effectively reducing the parking ratio by 42 percent. The reduction in parking requirements is supported by findings from the Rightsizing the Parking Code Study.

• Minimum parking requirements for business offices or professional offices (not including medical/dental offices) have been reduced from 2.7 spaces for each 1000 square feet of gross area to 2 spaces, effectively reducing the parking ratio by 24 percent. The reduction in parking requirements is supported by findings from the Rightsizing the Parking Code Study.

• Minimum parking requirements for medical and dental offices have been reduced from 3.9 spaces for each 1000 square feet of gross area to 3 spaces, effectively reducing the parking ratio by 23 percent. The reduction in parking requirements is supported by findings from the Rightsizing the Parking Code Study.
**Additional Off-Street Parking Reductions Based on Site Context**

Ordinance No. 827 proposes to expand the provisions for reductions in off-street parking minimum requirements. In general, proposed changes to CDC Section 413-8 would expand the allowances available to developers for targeted reductions in minimum required parking based on site context, which would help achieve stated policy goals of providing greater flexibility, reduced costs, and improved community design. The ordinance also enables developers to undergo parking analysis in order to substantiate the need for further reduction below what’s allowed in the proposed CDC amendments, or if the amendments do not apply to the specific development.

Local justification for these provisions is found in the county Transportation System Plan (TSP), which includes the following policy strategies:

- **Strategy 3.1.7**: Regulate the provision of parking as identified in the CDC.
- **Strategy 3.2.1**: Plan and provide a multi-modal transportation system that encourages the land uses, mixes and densities indicated in the Comprehensive Plan, community plans and/or other applicable, adopted land use plans.
- **Strategy 4.1.1**: Meet regional air pollutant and greenhouse gas reduction performance targets by implementing the active transportation, travel demand management and accessibility strategies in this plan.
- **Strategy 4.1.2**: Help the region meet the air quality emission budgets for mobile sources for carbon monoxide and ground-level ozone precursors.
- **Strategy 4.1.3**: Using the Comprehensive Framework Plan and the Community Development Code, implement the Metro 2040 Growth Concept to create a compact urban form that increases the accessibility of destinations and reduces vehicle miles traveled.
- **Strategy 5.4.1**: Develop and emphasize Travel Demand Management and reduction strategies as mechanisms for reducing vehicle trips and shifting travel to off-peak periods.
- **Strategy 8.3.4**: Maintain and periodically revisit bicycle parking requirements in the CDC and provisions for bicycle parking in applicable new development.
- **Strategy 9.2.1**: Utilize the development review process to review development applications, apply transportation related standards (including parking and other requirements) and require transportation related improvements and/or right-of-way dedication.

Shared parking that serves multiple users or destinations is a transportation system management strategy identified in the Climate Smart Strategy to reduce the number of parking spaces required in some locations, allowing land to be used for other purposes, and the costs of development to be reduced. This strategy also supports Policy 39 implementing strategy f. of the Comprehensive Framework Plan for the Urban Area, which encourages the efficient use of land and promotion of non-automobile trips by adopting minimum and maximum parking standards based upon the frequency and location of transit service. Policy 38 stresses the importance of coordinating land
use and transportation in order to reduce the reliance on automobiles and increase travel mode split.

Generally, the Planning Commission and the Board of Commissioners have shown broad support for providing additional flexibility to reduce parking requirements in areas with access to MAX or frequent bus service that offer transit-supportive densities, walkable urban form, and a diverse mix of uses.

CDC Section 413-8 establishes that required parking for a given development can be cumulatively reduced by a maximum of 50 percent, depending on whether the site meets certain qualifications, except for when a parking analysis concludes that additional reductions are warranted. Currently, the code allows for a cumulative reduction of only 40 percent.

The transit reduction allowance is maintained and expanded in Section 413-8.1, with up to 30 percent reduction available for office, institutional, industrial, or residential uses, which represents an increase from the existing maximum transit reduction of 20 percent. To qualify, developments must be located within 0.5 mile of a major transit stop (consisting of existing high-capacity transit stations, transit centers, and enhanced bus stops on existing or planned Frequent Service bus lines), or within 0.25 mile of a regular or Frequent Service bus route (defined by TriMet as having 15 minute or better service for most of the day, 7 days a week). This definition of transit clarifies the current code and is consistent with the definitions provided in the TSP. However, staff suggests revisiting the definition of major transit stop in the TSP. Major Transit Stop is broadly defined in the TSP as applying to existing high capacity transit stations, transit centers, and bus stops on existing or planned frequent bus service lines that are intended to provide a higher degree of passenger amenities. Staff believes this definition is too broad to adequately justify lower parking requirements at developments that are up to 0.5 miles away from the transit facility. An opportunity to update the definition may coincide with updating other elements of the TSP in 2018.

For office, industrial, or institutional uses, the proposed amendments also would require developers to provide a Transportation Demand Management (TDM) Plan demonstrating strategies designed to increase non-single occupant vehicle mode split, such as long-term bicycle parking and onsite shower and locker facilities, provision of subsidized or discounted transit passes to employees, and availability of car and/or rideshare programs.

Developers can continue to offer bicycle parking as a means to reduce minimum parking requirements. Section 413-8.3 proposes updates to allow the substitution of 1 automobile space for every 2 bicycle spaces provided, with a maximum parking reduction allowance of 10 percent. This would be the same rule for all developments; a change from current code regulations which set different standards depending on the number of automobile spaces at a development site.

Ordinance No. 827 introduces the concept of shared parking agreements to the CDC as a parking management strategy to more efficiently utilize parking supply. Section 413-8.4 allows for mixed-use developments with two or more uses to reduce the number of parking spaces required if there is an agreement in place to jointly use the same pool of parking and loading spaces. The
intention is to incentivize mixed-use development by providing more flexible parking standards. It’s important to consider that additional staff time and resources would be needed to monitor and enforce parking agreements, and tenant turnover at the site could impact future parking demand, especially if there is a change in use. This may necessitate new or modified parking agreements to reflect the adjustment in parking utilization.

During the Planning Commission work sessions, some members relayed concerns about allowing comprehensive reductions to off-street parking for mixed-use development not located near transit. In response, staff has made changes to the initial proposal that are designed to make parking regulations more sensitive to prevailing land use and transportation context, by proposing a range of requirements that take into account whether the peak demand for the shared uses are overlapping or are offset. The proposed regulations also consider the possibility for off-site shared parking to reduce the likelihood of excess supply.

All shared parking facilities would be required to provide full access to the shared parking without being blocked or impeded in any form, and have the shared parking arrangement be codified in a recorded deed, lease, or contract. This raises questions as to whether the County has the appropriate mechanism or resources to monitor shared parking agreements, and whether parking-related deed restrictions or other legally enforceable agreements that restrict use of the property could impact a future sale.

CDC Section 413-8.4A establishes parameters for shared uses exhibiting simultaneous peak-hour demand (such as two office buildings, or a movie theater and a restaurant). The proposed code amendments will require that the site be located in a mixed-use development, and located within the newly defined 0.25 – 0.5 mile proximity to transit service, as described above.

The County proposes a tiered system to measure the total aggregate of required minimum parking based on a formula that would determine the primary use of the development, which is the use with the largest proportion of total trips generated at the site, the secondary use accounting for the second largest percentage of total trips generated, and so on. The shared parking facility would be required to build 100 percent of minimum parking for the specific primary use as provided in the code. The facility must include additional spaces as needed to satisfy 85 percent of the required minimum parking for the secondary use. For all other uses, additional spaces would have to be provided to meet 70 percent of the required minimum parking for each of those specific uses.

CDC Section 413-8.4B describes regulations for shared parking facilities where the hours of peak demand are complementary and do not overlap (such as an office building and residential housing). In addition to the same allocation formula used in Section 413-8.4A, all participating uses must be located within 500 feet of the shared parking facility, and pedestrians should not be required to cross an arterial street except at a signalized intersection along a designated accessway. Proximity to quality transit service, such as MAX or Frequent Service bus routes, would not be required.
CDC Section 413-8.4C includes regulations for shared parking facilities located off-site that serve two or more non-residential uses with concurrent peak-hour demand. All regulations in 413-8.4B also apply in this scenario, except that the shared parking facility can be located no greater than 800 feet away from all participating uses. Expanding shared parking provisions may require disseminating information about parking locations and operating characteristics to visitors.

In addition to available parking reductions for developments with transit adjacency or bicycle parking, Section 413-8.5 introduces the option to reduce the minimum number of off-street parking spaces required in Section 413-6 for non-residential uses, if it can be demonstrated that on-street parking is available along the frontage of the site, and that the parking consists of delineated parallel or angled spaces in accordance with the Washington County Road Design and Construction Standards. Minimum off-street parking can be reduced by 1 space for every 2 available on-street spaces.

For developers that are interested in more precisely calibrating the correct amount of parking to build for a site, Ordinance No. 827 provides the opportunity to conduct a parking analysis that would allow the Review Authority to reduce minimum off-street parking requirements, up to a maximum of 100 percent. The parking analysis must be prepared by a qualified parking or traffic consultant or civil engineer, would need to provide substantiated evidence for the parking reduction, and must ensure that lowered requirements would satisfy the expected parking demand for each phase of development, including the full buildout. Among other items, the analysis would need to include an inventory of all on-street and publicly accessible off-street parking facilities within 500 feet of the proposed site, assess current parking utilization at existing facilities during peak hour demand, provide an estimate for new parking demand generated by the proposed use, create a shared parking feasibility assessment, and develop a parking strategy if the demand cannot be accommodated on-site, including the location of available off-site parking and lease arrangements, if applicable.

**Affordable Housing**

As a starting point for discussion, Ordinance No. 827 introduces new minimum parking standards for “regulated affordable housing” at a ratio of 0.75 spaces per dwelling unit, lower than the 1.0-1.5 spaces per unit for all other residential development. Sites defined as affordable housing would have the opportunity for further reductions based on site context.

The following is the proposed definition of regulated affordable housing, as stated in CDC Section 413-6.2 of the proposed ordinance:

> Regulated affordable housing shall be defined as housing that is made affordable through public subsidies and/or statutory regulations that restrict or limit resident income levels and/or rents. To be considered regulated affordable housing, units must:

> A. Have a local, state, or federal compliance agreement or contract;
B. Be affordable to households at or below sixty (60) percent Median Family Income as defined annually by Housing and Urban Development (HUD); and

C. Remain regulated affordable housing units for a minimum of twenty (20) years from the date of occupancy.

Issue Paper No. 2017-04 recommended allowing affordable housing projects to request parking reductions based on projected resident needs, grounded in the premise that reducing capital costs needed to build required parking may provide additional financial incentive for constructing future affordable housing developments. This approach is consistent with implementation strategies d. and h. in Policy 21 of the Comprehensive Framework Plan for the Urban Area, to review design and development standards in an effort to reduce unnecessary housing costs, and encourage housing developers to build adequate numbers of new affordable housing to help meet regional targets.

The Rightsizing the Parking Code Study did not specifically examine the impact of building parking on the feasibility of affordable housing, but it was acknowledged during stakeholder interviews, and staff introduced the reduction as a potential policy change in the initial draft of CDC revisions. Planning Commission members generally supported a parking reduction if the site was in close proximity to transit. However, they were not able to reach consensus on whether to allow for blanket parking reductions at affordable housing developments, citing the lack of available parking utilization data at existing developments in the county to know whether or not reductions would be appropriate.

In response to Planning Commission requests for additional data, staff examined available research on the topic. The most recent National Household Travel Survey from 2009 showed that about 24 percent of households below the poverty line do not own a vehicle. Moreover, individuals below the poverty line are more likely to take non-single occupancy vehicle mode trips compared to those in higher income brackets, including three times as many transit trips and 50 percent more walking trips. Individuals below the poverty line are also twice as likely to carpool when using a personal vehicle.3

Data taken from the US Census also suggests that households at lower income levels tend to own fewer automobiles and are less likely to commute by single-occupant vehicle. See Tables 2 and 3 with data from the American Community Survey for Washington County and the State of Oregon, if applicable.

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Table 2: Relationship between Number of Vehicles and Average Household Income

<table>
<thead>
<tr>
<th>Total Vehicles in Household</th>
<th>Average Household Income in Last 12 Months – Washington County&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Average Household Income in Last 12 Months – State of Oregon&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>No vehicles</td>
<td>$34,047</td>
<td>$27,217</td>
</tr>
<tr>
<td>One vehicle</td>
<td>$58,369</td>
<td>$44,550</td>
</tr>
<tr>
<td>Two vehicles</td>
<td>$109,856</td>
<td>$78,901</td>
</tr>
<tr>
<td>Three vehicles</td>
<td>$129,443</td>
<td>$93,321</td>
</tr>
<tr>
<td>Four vehicles</td>
<td>$142,565</td>
<td>$99,786</td>
</tr>
<tr>
<td>Five vehicles</td>
<td>$155,986</td>
<td>$113,860</td>
</tr>
<tr>
<td>Six or more vehicles</td>
<td>$142,676</td>
<td>$107,541</td>
</tr>
</tbody>
</table>

Note: ACS data compiled using Public Use Microdata Sample (PUMS) files which are a set of untabulated records about individual people or housing units that are produced to allow for custom tables not generally available through pre-tabulated or summary ACS data products. Public Use Microdata Areas (PUMAs) are statistical geographic areas defined for the dissemination of PUMS data. PUMAs are built on census tracts and counties, contained entirely within states, include at least 100,000 people, and are geographically contiguous.

<sup>a</sup> Washington County data tabulated using ACS PUMS 1-year files for the year 2015, consisting of Household Income (Past 12 Months) [HINCP] and Number of Vehicles [VEH] datasets for PUMAs 01320, 01321, 01322, 01323, and 01324. While 5-year estimates are more precise, PUMA-level data is only available for 1-year files, and therefore 5-year statewide data is also provided for context.

<sup>b</sup> Oregon data tabulated using ACS PUMS 5-year files for the years 2011-2015, consisting of Household Income (Past 12 Months) [HINCP] and Number of Vehicles [VEH] datasets.
Table 3: Relationship between Means of Transportation to Work by Median Earnings in Past 12 Months

<table>
<thead>
<tr>
<th>Means of Transportation to Work</th>
<th>Median Earnings in Last 12 Months – Washington County&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car, truck, or van – drove alone</td>
<td>$41,593</td>
</tr>
<tr>
<td>Car, truck, or van – carpooled</td>
<td>$29,502</td>
</tr>
<tr>
<td>Public transportation (excluding taxicab)</td>
<td>$25,146</td>
</tr>
<tr>
<td>Walked</td>
<td>$22,344</td>
</tr>
<tr>
<td>Taxicab, motorcycle, bicycle, or other means</td>
<td>$41,524</td>
</tr>
<tr>
<td>Worked at home</td>
<td>$37,507</td>
</tr>
</tbody>
</table>

<sup>a</sup> Washington County data sourced from Table B08121 (Median Earnings In The Past 12 Months [In 2015 Inflation-Adjusted Dollars] By Means Of Transportation To Work) in ACS 5-year estimate dataset for the years 2011-2015.

In addition, Washington County’s Department of Housing Services and REACH Community Development, an affordable housing developer, enlisted traffic engineering firm Kittelson and Associates to measure parking occupancy at six affordable housing developments in the Portland metro region between 2012 and 2017. All six properties are located in suburban jurisdictions near high-capacity transit, three are situated in Washington County adjacent to stations along the MAX Blue Line. Based on the findings, the parking analyses appear to provide policy justification for the 0.75 minimum ratio with the potential for further reductions, as Kittelson found that average peak demand for all surveyed properties ranged from 0.67-0.7 spaces per unit, with the following peak demand for specific Washington County locations:

- City Center Station (Downtown Hillsboro), 0.49 spaces per unit (51 percent utilization)
- Orchards at Orenco, 0.9 spaces per unit (64 percent utilization)
- Wyndhaven Apartments (Willow Creek), 0.78 spaces per unit (88 percent utilization)

Coalition of Housing Advocates and REACH CDC, offered their organization’s support for reducing parking minimums in order to promote additional investment in affordable housing, in letters to staff dated May 9, 2017 and June 23, 2017, respectively. In both letters, they provide rationale for lowering minimum parking standards. Coalition of Housing Advocates recommended “establishing a reliable process to allow reductions for regulated units targeted to those at or below 60 percent of area median income,” and suggested that based on their experience “parking ratios from 0.5 to 0.75 (spaces) per unit is sufficient in transit-oriented areas
and with special populations.” REACH CDC’s letter stated that residents “often own and operate less automobiles than a resident of a conventional or market-rate development” and that “the reduction of these spaces has proven beneficial to the construction costs and enabled us as a developer to seek fewer public resources.”

This policy outcome would feasibly promote the continued siting of affordable housing properties near quality transit service, which would reduce costs to developers, enhance competitiveness for low-income housing tax credits (LIHTC), and provide residents with readily available alternatives to vehicle ownership and/or reduce vehicle trips.

LIHTCs are an indirect federal subsidy available to private developers as an incentive to help finance the construction and rehabilitation of low-income affordable rental housing. The LIHTC is designed to subsidize either 30 percent or 70 percent of the low-income unit costs in a project. Generally, the 30 percent subsidy, commonly referred to as the 4 percent tax credit, is used in projects financed with tax-exempt bonds. However, the 70 percent subsidy, or 9 percent tax credit, supports new construction without any additional federal subsidies, and is subject to a competitive application process for funds that are allocated to Oregon. The selection criteria for the 9 percent tax credit includes location efficiency and in Oregon can qualify for an increase in the max amount of subsidy if they are located near transit.

Staff presented the proposed 0.75 minimum parking ratio at the Board’s June 27 work session. Board members were generally in favor of reduced parking for affordable housing. Subsequent to the Board work session, the issue of potential parking scarcity at affordable housing developments was raised by staff. This could potentially occur if developers exercise the full allowance of reductions in the proposed CDC amendments (up to 50 percent for a minimum ratio of .375 spaces per unit).

**Other Changes**
Ordinance No. 827 updates CDC Section 413 wherever loading regulations are cited to indicate that the same requirements apply for drop-off facilities.

Section 413-2.1 expands the maximum distance that developers are allowed to site off-street parking for non-residential uses within transit-oriented developments (TODs) from 400 to 800 feet to help foster pedestrian-scale development, and reflect the reduced priority for automobile access at these locations.

CDC Section 413-4 incorporates a new graphic (Figure 1) illustrating the Off-Street Parking Lot design principles included in the CDC amendments at a more realistic scale, and also reformats information regarding aisle and stall dimensions from two existing tables into one combined table.

Section 413-5 reduces the minimum amount of vehicle spaces necessary to trigger the requirement for building a separate walkway at off-street parking lots from 100 spaces to 50, in order to facilitate safe pedestrian access and circulation.
New regulations for electric vehicle parking are located in CDC Section 413-3.6 which establish the opportunity for electric vehicle charging spaces to substitute for standard parking spaces at a 1 - 1 ratio, for the purpose of meeting minimum off-street parking requirements. This may help encourage electric vehicle use and more shared ride or carshare programs. These spaces must be posted with clear signage not to exceed 5 feet in size, and at least 1 of these spaces must be compliant with the Americans with Disabilities Act. Charging unit outlets and operable parts must be located no higher than 48 inches off the ground, with indoor units located at minimum 18 inches off the ground, and outdoor units located at minimum 24 inches off the ground. This change is consistent with Strategy 4.3.3 in the TSP, which encourages efforts to “standardize, codify and incentivize” the installation of additional electronic vehicle charging/parking spaces. It is also listed as an off-street parking strategy in the Metro Climate Smart Strategy.

Motorcycle parking spaces are also allowed to count toward minimum off-street parking requirements in CDC Section 413-3.7, up to either 5 percent of total parking spaces, or 5 motorcycle parking spaces, whichever is fewer.

Section 413-5.1 through 5.3 relaxes the proximity requirements for mandated on-street parking associated with single-family detached and attached dwellings in urban residential districts, including TODs. The proposed amendment increases the maximum site distance allowed for on-street parking from 100 to 200 feet. Section 413-5.3 also increases the maximum amount of spaces allowed in a parking court from 8 to 12. This is based on feedback that staff received from Planning Commissioners indicating that existing residential parking regulations in the CDC were too restrictive and did not allow for enough supply to meet expected demand.

Section 413-9.2 reclassifies the use category “Convalescent home; institution for children; welfare; correction institute; institutions for the aged” as “Group Care Facilities.”

**Potential engrossment**

Subsequent to filing Ordinance No. 827 staff identified a number of potential minor as well as more substantive changes. The following lists some potential engrossments:

- As noted above, Ordinance No. 827 introduces new minimum parking standards for “regulated affordable housing” at a ratio of 0.75 spaces per dwelling unit, lower than the 1.0-1.5 spaces per unit for all other residential development. Based on the allowed cumulative reduction of required minimum off-street spaces of up to 50 percent as proposed in Section 413-8, this would permit an absolute minimum ratio of .375 spaces per dwelling unit. This is well below the ratios supported by the parking utilization studies noted above, which indicate that an absolute minimum ratio of 0.5 spaces per dwelling unit would be more appropriate. As part of a possible engrossment ordinance, staff is considering one of the following three options.

  - The first option is to set the new minimum parking ratio for “regulated affordable housing” at 1.0 space per dwelling unit, while maintaining the maximum 50 percent allowance for parking reductions based on site-specific context proposed
in the ordinance. In this scenario, the effective minimum ratio for all residential development, either affordable or market-rate, would be 0.5 spaces per unit.

- The second option is to retain the proposed 0.75 minimum parking ratio, but limit the reductions available to regulated affordable housing projects to include only the 30 percent transit reduction. This would culminate in an absolute minimum ratio of .525 spaces per dwelling unit for affordable housing.

- The third option is to add a provision to cap the reductions available to regulated affordable housing projects so as to result in an effective minimum ratio of 0.5 spaces per unit, in agreement with previous parking studies. This would allow an affordable housing project to take advantage of other context appropriate reductions allowed in Section 413-8.

- Adding the qualification that in order to qualify for a vehicular parking reduction based on bicycle parking, the bicycle spaces must meet the *long-term bicycle parking* standards of Sections 429-7, 429-8, and 429-9.

- Amend language in Section 413-5 to require developers to provide a pedestrian accessway in parking lots with 50 or more spaces, deleting the phrase “be encouraged” to harmonize with CDC requirements for Accessways in Section 408.

**Summary of Proposed Changes**

Ordinance No. 827 proposes to amend the Community Development Code related to parking regulations. It includes the following key provisions:

- Revise on and off-street parking requirements to simplify and provide additional flexibility.

- Revise the minimum off-street parking ratios for attached residential, as well as some institutional, business and commercial, and office uses.

- Expand the provisions for reducing required off-street parking by allowing up to a 50 percent reduction for a combination of shared parking agreements and mixed-use development, increasing allowance for proximity to transit, and adding a reduction for on-street parking.

- Add a discretionary provision allowing an applicant to submit a parking study for up to a 100 percent reduction in required off-street parking.

- Add clear and objective off-street parking requirements related to regulated affordable housing.
• Add provisions for electric vehicle and motorcycle parking.

List of Attachments
The following attachments identified in this staff report are provided:

Attachment A: Right Sizing the Parking Code Technical Memorandum #6 Supplemental: Kittelson Residential Parking Inventory, Occupancy, and Turnover Study Conclusions Report
Attachment B: Kittelson Parking Study Findings at Affordable Housing Developments
Attachment C: Comment Letter from Community Housing Fund Executive Director Sheila Greenlaw-Fink on behalf of Coalition of Housing Advocates
Attachment D: Comment Letter from REACH CDC Executive Director Jessica Woodruff
MEMORANDUM

Date: September 8, 2016

To: Dyami Valentine, Washington County

From: Matthew Bell, Kittelson & Associates, Inc.

Project: Washington County Rightsizing Parking Project

Subject: Supplemental Data Summary

This memorandum supplements the June 2016 memorandum prepared by Kittelson and Associates, Inc. (KAI) for the Washington County Rightsizing Parking Project. This memorandum includes additional information related to on-street parking demand within the study area and off-street parking demand within several residential zones during the early morning peak time period (2:00 to 4:00 a.m.). This information provides additional insight into on-street and off-street parking conditions during the residential peak to inform potential changes to the parking requirements for residential developments in the Community Development Code (CDC).

Parking Demand

Supplemental parking demand data was collected within the study area on a typical mid-week day (Thursday, April 21st, 2016) and a typical weekend day (Saturday, April 23rd, 2016) during the early morning peak time period (2:00 to 4:00 a.m.). The data includes the total number of vehicles parked on-street within the study area and within several residential zones throughout the study period. The following provides a summary of the supplemental parking demand data.

On-street Parking Demand

Chart 1 illustrates on-street parking demand within the study area during the early morning peak time period and during each hour of the study. As shown, on-street parking demand is approximately 14 percent on Thursday and 13 percent on Saturday during the early morning peak time periods (2:00 a.m.), which is generally lower than the corresponding daytime peak time periods (16 percent and 18 percent at 10:00 a.m.).

Further review of the data shown in Chart 1 indicates that there is a total of 136 vehicles parked on-street during the early morning peak time period on Thursday and 130 vehicles parked on-street during the early morning peak time period on Saturday. That means a total of 861 stalls were available on Thursday and 867 stalls were available on Saturday to accommodate an increase in on-street parking demand.
Figures 1 and 2 illustrate on-street parking demand along each block face during the early morning peak time period on Thursday and Saturday, respectively. As shown, on-street parking demand is relatively low (<25%) along all minor streets throughout both peak time periods, with the exception of a few roadways located in the southeast corner of the NW Murray Boulevard/NW Cornell Road intersection where multiple multi-family apartments have limited off-street parking. On-street parking along NW Cornell Road and NW Barnes Road is also relatively low (<50%) throughout both study periods.

**Off-street Parking Demand**

Chart 4 illustrates off-street parking demand within the several residential zones during the early morning peak time period and during each hour of the study. As shown, off-street parking demand within the residential zones is approximately 78 percent on Thursday and 75 percent on Saturday during the early morning peak time periods (2:00 a.m.), which is generally higher than the corresponding daytime peak time periods (52 percent on Thursday at 6:00 p.m. and 54 percent on Saturday at 9:00 a.m.). Residential parking demand is usually at its peak in the early morning (2:00 to 4:00 a.m.) or in the late evening (10:00 p.m.), therefore the data shown in Chart 2, can be used to reflect the peak parking conditions within the residential zones.
On-Street Parking Occupancy - Weekend Day (Saturday)
Early Morning Peak Time Period (2:00 to 4:00 a.m.)
Cedar Mills Town Center

Parking Occupancy
- No Parking
- 0% to 25%
- 25% to 50%
- 50% to 75%
- 75% to 85%
- 85% to 100%
Further review of the data shown in Chart 2 indicates that a total of 1,642 vehicles were parked off-street within the residential zones during the peak time period on Thursday and 1,583 vehicles were parked during the peak time period on Saturday. That means a total of 472 stalls were available on Thursday and 531 stalls were available on Saturday to accommodate an increase in off-street parking demand from residents.

Chart 2: Off-street Parking Demand

Figures 3 and 4 illustrate off-street parking demand within several residential zones during the early morning peak time period on Thursday and Saturday, respectively. As shown, off-street parking demand is relatively high (>65%) in a majority of the residential zones throughout both peak time periods, with the exception of one zone where parking demand exceeds 85%. Further review of this zone indicates that it has a relatively small parking supply as compared to other residential zones. Also shown, off-street parking demand is generally lower on Saturday than it is on Thursday, which reflects the residential nature of the zones; however, it is still above 65% in a majority of the zones with the exception of the one described above.
Utilization Rates

- less than 25%
- 26% to 50%
- 50% to 65%
- 65% to 75%
- 75% to 85%
- more than 85%
- No Data

Off-street Parking Occupancy - Mid-week Day (Thursday)
Early Morning Peak Time Period (2:00 to 4:00 a.m.)
Cedar Mills Town Center

Figure 3
Off-street Parking Occupancy - Weekend Day (Saturday)
Early Morning Peak Time Period (2:00 to 4:00 a.m.)
Cedar Mills Town Center

Utilization Rates
- less than 25%
- 25% to 50%
- 50% to 65%
- 65% to 75%
- 75% to 85%
- more than 85%
- No Data
Parking Demand Ratios

Table 1 summarizes parking demand ratios for several residential zones within the study area and identifies where there are surpluses and deficits in the parking supply.

### Table 1: Washington County Parking Demand Ratios

<table>
<thead>
<tr>
<th>Zoning</th>
<th>Land Use</th>
<th>Building Size (Units)</th>
<th>Parking Supply Ratio</th>
<th>Peak Parking Demand Ratio</th>
<th>Demand Ratio + 15% Buffer</th>
<th>Surplus (Deficit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TO: Business</td>
<td>Apartments</td>
<td>12</td>
<td>0.92</td>
<td>0.92</td>
<td>1.05</td>
<td>(0.14)</td>
</tr>
<tr>
<td>TO: Residential</td>
<td>Condominiums</td>
<td>14</td>
<td>1.93</td>
<td>1.50</td>
<td>1.73</td>
<td>0.20</td>
</tr>
<tr>
<td>TO: Retail Commercial/Residential</td>
<td>Apartments</td>
<td>46</td>
<td>1.59</td>
<td>0.96</td>
<td>1.10</td>
<td>0.49</td>
</tr>
<tr>
<td>TO: Residential</td>
<td>Apartments</td>
<td>148</td>
<td>1.72</td>
<td>1.25</td>
<td>1.44</td>
<td>0.27</td>
</tr>
<tr>
<td>TO: Residential</td>
<td>Apartments</td>
<td>80</td>
<td>1.49</td>
<td>0.95</td>
<td>1.09</td>
<td>0.40</td>
</tr>
<tr>
<td>TO: Residential</td>
<td>Apartments</td>
<td>19</td>
<td>1.79</td>
<td>1.16</td>
<td>1.33</td>
<td>0.46</td>
</tr>
<tr>
<td>TO: Residential</td>
<td>Apartments</td>
<td>48</td>
<td>1.29</td>
<td>1.06</td>
<td>1.22</td>
<td>0.07</td>
</tr>
<tr>
<td>TO: Residential</td>
<td>Apartments</td>
<td>62</td>
<td>1.65</td>
<td>1.41</td>
<td>1.63</td>
<td>0.02</td>
</tr>
<tr>
<td>TO: Residential</td>
<td>Apartments</td>
<td>20</td>
<td>1.50</td>
<td>1.15</td>
<td>1.32</td>
<td>0.18</td>
</tr>
<tr>
<td>TO: Residential</td>
<td>Apartments</td>
<td>608</td>
<td>1.58</td>
<td>1.49</td>
<td>1.71</td>
<td>(0.13)</td>
</tr>
<tr>
<td>TO: Residential</td>
<td>Condominiums</td>
<td>200</td>
<td>1.50</td>
<td>1.14</td>
<td>1.31</td>
<td>0.19</td>
</tr>
<tr>
<td>TO: Retail Commercial/Residential</td>
<td>Apartments</td>
<td>47</td>
<td>1.40</td>
<td>1.09</td>
<td>1.25</td>
<td>0.16</td>
</tr>
</tbody>
</table>

As shown in Table 1, the peak parking demand ratios are lower than the parking supply ratios, which is generally consistent with the occupancy data described above that shows occupancies of less than 100 percent. However, a parking occupancy rate of 85% is the industry standard for residential parking. As such, a 15% buffer was added to the demand ratio to ensure enough parking is available during peak time periods. With the 15 percent buffer there are two residential zones that show a deficit in the parking supply ratio.

Further review of the data show in Table 1 indicates that the average parking demand ratio (with a 15 percent buffer) with the residential zones is 1.35 stalls per unit, or 1.31 for apartments and 1.52 for condominiums. Given the County’s current parking requirements, the County could consider reducing the parking requirements for residential developments by up to 5%. A 5% reduction in the parking requirements would allow developers to build less parking and intensify the land use (i.e., allow for additional units).
SUMMARY

The following provides a summary of the supplemental parking demand data.

**Parking Demand**

- On-street parking demand along all minor streets is relatively low (<25%) during the early morning peak time periods, with the exception of a few roadways located in the southeast corner of the NW Murray Boulevard/NW Cornell Road intersection.
- On-street parking along NW Cornell Road and NW Barnes Road is also relatively low (<50%) during the early morning peak time periods.
- Off-street parking demand within the residential zones is relatively high (>65%) during the early morning peak time periods.

**Parking Ratios**

- Parking demand ratios are lower than parking supply ratios; however, with a 15 percent buffer there are two residential zones that show a deficit in the parking supply ratio.
- The parking demand ratios suggest the County could consider reducing required parking requirements for residential developments by up to 5%.

The information provided in this memorandum was incorporated into the final version of Technical Memorandum #7: Parking Management Strategies of the Washington County Rightsizing Parking study.
MEMORANDUM

Date: July 5, 2016

To: Ruth Klein, City of Hillsboro
    Alfreda Amyotte, City of Hillsboro

Cc: Colin Cooper, City of Hillsboro
    Ben Sturtz, REACH Community Development, Inc.

From: Chris Brehmer, P.E. & Julia Kuhn, P.E.

Project: Orchards at Orenco

Subject: Phase I Parking Study Findings

This memorandum documents our analysis of parking needs at the Phase I Orchards at Orenco site. At the time of the data collection, the 57 housing units within Phase I were 100 percent occupied. To understand the number of parking spaces needed per housing unit, parking demand was measured on a typical mid-week day and on Saturday both within the Phase 1 parking lot and on the adjacent NE Cherry Drive site frontage. We compared the recorded parking demand to pre-construction parking estimates that projected a parking need of 0.84 spaces per unit\(^1\) and used it to ensure that the proposed supply for Phases 2 and 3 provides for an 85 – 90 percent full standard.

In addition to collecting typical mid-week and weekend data, parking demand data was also collected during the peak holiday season. While not typically considered for design purposes, the parking demand on Christmas Eve, Christmas Day, New Year’s Eve, and New Year’s Day was also collected to assess how parking patterns compare to typical conditions.

Based on our review, we found that peak non-holiday demand occurred on a mid-week day with an observed demand ratio of 0.82 parking spaces per unit (on-site and on-street combined), slightly lower than the amount projected prior to construction and well below the City Code standard of 1.5 spaces per unit. Excluding the eight on-street parking spaces along the NE Cherry Drive frontage (which may be used by adjacent properties and/or commuters to the nearby MAX station), the peak non-holiday demand occurred on the same mid-week day reduced to 0.68 parking spaces per unit.

Typical Saturday demand was measured at a demand ratio of 0.77 parking spaces per unit when on-street parking was included; if the on-street were excluded the demand ratio reduced to 0.65 parking

\(^1\) Our 2012 parking study for the Orenco Station REACH Apartments (pre-construction) recommended a parking supply of 0.84 spaces per unit based on application of an 85 percent full standard and data collected at other similar sites.
spaces per unit. The observed Christmas Day demand peaked at a ratio of 0.81 parking spaces per unit while the observed New Year’s Day demand peaked at a ratio of 0.93 parking spaces per unit (inclusive of on-street parking). All of the typical conditions and holiday conditions (even when considering on-street demand) were within the projected need of 0.84 spaces per unit with the exception of New Year’s Day.

Table 1 summarizes the observed parking demand along with additional study details.
## Table 1  Parking Demand Summary

<table>
<thead>
<tr>
<th>Data Collection Date</th>
<th>Data Collection Times</th>
<th>On-Site Parking Supply (spaces)</th>
<th>On-Site Parking Demand</th>
<th>Peak On-Site Parking Occupancy</th>
<th>Peak On-Site Parking Demand Ratio (spaces/unit)</th>
<th>On-Street Parking Supply</th>
<th>Peak On-Street Parking Demand</th>
<th>Peak On-Street Parking Occupancy</th>
<th>Combined Peak On-Site &amp; On-Street Parking Occupancy</th>
<th>Combined On-Site &amp; On-Street Total Parking Demand Ratio (spaces/unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Typical Week</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thursday, January 14, 2016</td>
<td>5-10 AM &amp; 5-9 PM</td>
<td>57</td>
<td>39</td>
<td>68%</td>
<td>0.68</td>
<td>8</td>
<td>8</td>
<td>100%</td>
<td>72%</td>
<td>0.82</td>
</tr>
<tr>
<td>Saturday, January 9, 2016</td>
<td>5-10 AM &amp; 5-9 PM</td>
<td>57</td>
<td>37</td>
<td>65%</td>
<td>0.65</td>
<td>8</td>
<td>7</td>
<td>88%</td>
<td>68%</td>
<td>0.77</td>
</tr>
<tr>
<td><strong>Holidays</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 24, 2015 (Christmas Eve)</td>
<td>5-11 PM</td>
<td>57</td>
<td>30</td>
<td>53%</td>
<td>0.53</td>
<td>8</td>
<td>7</td>
<td>88%</td>
<td>57%</td>
<td>0.65</td>
</tr>
<tr>
<td>December 25, 2015 (Christmas Day)</td>
<td>5-10 AM &amp; 5-9 PM</td>
<td>57</td>
<td>39</td>
<td>68%</td>
<td>0.68</td>
<td>8</td>
<td>7</td>
<td>88%</td>
<td>71%</td>
<td>0.81</td>
</tr>
<tr>
<td>December 31, 2015 (New Year’s Eve)</td>
<td>5-11 PM</td>
<td>57</td>
<td>32</td>
<td>56%</td>
<td>0.56</td>
<td>8</td>
<td>6</td>
<td>75%</td>
<td>55%</td>
<td>0.63</td>
</tr>
<tr>
<td>January 1, 2016 (New Year’s Day)</td>
<td>5-10 PM</td>
<td>57</td>
<td>46</td>
<td>81%</td>
<td>0.81</td>
<td>8</td>
<td>7</td>
<td>88%</td>
<td>82%</td>
<td>0.93</td>
</tr>
</tbody>
</table>
To calculate a total parking supply needed, typically an 85 to 90 percent full standard is applied to the measured demand ratio. Table 2 illustrates the recommended parking supply using an 85 percent full standard. As shown, the combined on-site/on-street parking supply is below 1.0 parking spaces/unit with the exception of New Year’s Day, which is not typically used for design purposes.

Table 2  Recommended Parking Supply Ratios

<table>
<thead>
<tr>
<th>Data Collection Date</th>
<th>Peak On-Site Parking Demand Ratio (spaces/unit)</th>
<th>Recommended On-Site Parking Supply</th>
<th>Combined On-Site &amp; On-Street Peak Parking Demand Ratio (spaces/unit)</th>
<th>Recommended Combined Parking Supply (spaces/unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Weekday</td>
<td>0.68</td>
<td>0.80</td>
<td>0.82</td>
<td>0.96</td>
</tr>
<tr>
<td>Typical Weekend</td>
<td>0.65</td>
<td>0.76</td>
<td>0.77</td>
<td>0.91</td>
</tr>
<tr>
<td>Christmas Eve</td>
<td>0.53</td>
<td>0.62</td>
<td>0.65</td>
<td>0.76</td>
</tr>
<tr>
<td>Christmas Day</td>
<td>0.68</td>
<td>0.80</td>
<td>0.81</td>
<td>0.95</td>
</tr>
<tr>
<td>New Year’s Eve</td>
<td>0.56</td>
<td>0.66</td>
<td>0.63</td>
<td>0.74</td>
</tr>
<tr>
<td>New Year’s Day</td>
<td>0.81</td>
<td>0.95</td>
<td>0.93</td>
<td>1.09</td>
</tr>
</tbody>
</table>

COMPLIANCE WITH CITY DEVELOPMENT CODE

City of Hillsboro Community Development Code (CDC) Section 12.50.320 defines residential parking requirements and stipulates a minimum 1.5 vehicle parking spaces be provided per residential unit in multiple dwelling structures (Table 12.50.320-1). CDC Section 12.80.158.G defines the criteria for seeking an adjustment to reduce the number of parking spaces provided. As part of the Orchards at Orenco development, REACH is seeking an adjustment per 12.80.158.G.7, which specifies:

**Other Reductions.** Off-street parking for other uses may be reduced up to 30% below the required minimum standard during the Development Review process if an applicant provides a parking study prepared by a traffic engineer licensed in Oregon, which demonstrates that transit use and/or special characteristics of the customers, clients, employees or residents of the development will:

a. Reduce expected vehicle use as compared to standard ITE trip generation rates; and

b. Reduce expected parking demand below the minimum parking requirements.

Vehicle Parking Reduction Request

REACH Community Development is requesting a reduction in parking for Phase III that would result in an overall parking supply of 1.11 vehicle parking spaces per unit for the fully developed three-phase Orchards at Orenco Station project, a 26 percent reduction from the 1.5 vehicle spaces per unit. This reduction is within the maximum allowable reduction specified under CDC Section 12.80.158.G.7. The following section outlines considerations associated with the proposed reduction to ensure compliance with the adjustment criteria outlined in the CDC.
Actual Phase 1 Site Demand

The Orchards at Orenco was created by REACH as an affordable housing project. All units have income restrictions that residents earn less than 60% of area median income (which is currently $29,160 for a single individual and $41,640 for a family of four). The income limits apply for 60 years and are recorded with the land. The income limitations are important in understanding parking demand because national studies have shown that personal income is related to household vehicle availability, and that lower income areas have lower parking requirements\(^2\). Furthermore, travel demand modeling prepared by METRO and relied upon by Washington County and the City of Hillsboro uses household income as a surrogate for calculating auto ownership and subsequently number of trips generated.

The additional parking data collected at the now occupied Phase 1 Orchards at Orenco demonstrates a typical measured peak parking demand of less than 1.0 space per apartment unit even during peak holiday conditions. As reflected in Table 2, the actual measured typical weekday peak demand was 0.68 spaces on-site whereas the peak holiday demand was 0.81 spaces on-site (New Year’s Day). Combined with on-street parking (which may actually have been used by other off-site and/or commuters to the nearby MAX station), the peak non-holiday weekday demand occurred was measured at a demand ratio of 0.82 parking spaces per unit while the observed New Year’s Day demand peaked at a ratio of 0.93 parking spaces per unit. In reviewing the compliance of the REACH proposal with the adjustment criteria, it is important to note that the recommended parking supply ratio incorporates three key pieces:

- An adjustment of the measured parking demand to reflect an 85 percent full standard (i.e., measured demand divided by 0.85);
- A review of typical weekday and weekend conditions as well as peak holiday conditions (i.e., Christmas and New Year’s Day); and,
- A combination of both on-site and on-street demand (some of which is likely attributable to other users unrelated to the Orchards residential uses).

To ensure that any adjustments to the criteria do not result in off-site parking impacts, the recommended parking supply ratio is based on peak holiday conditions with the 85 percent full standard applied and the on-street parking adjacent to the site.

Other Similar Affordable Housing Projects

As a basis of comparison, the proposed vehicle parking supply ratio of 1.09 spaces per unit is higher than the recorded parking demand observed at other similar affordable housing projects located in the Portland metropolitan area. The recommended ratio is also lower than the actual number of parking

spaces supplied per unit at each of the sites with one exception. As will be shown in Tables 3 and 4 below, the Rosewood Plaza currently supplies 1.94 spaces per unit whereas a maximum of 0.72 spaces per unit were occupied when the data was collected. Further details of these sites are provided below.

Kittelson & Associates, Inc. previously measured parking demand at four other affordable housing locations for REACH Community Development including:

- **City Center Apartments** – a 91-unit apartment complex located at 160 SE Washington Street in Hillsboro. This complex is composed of affordable, workforce units.
- **Town Center Station Apartments** – a 52-unit apartment complex located at 8719 SE Monterey Avenue in Happy Valley. This complex is composed of affordable, workforce units.
- **The Rockwood Building** – a 47-affordable unit apartment complex located at 124 NE 181st Avenue in Gresham; this complex is owned by Human Solutions. This complex is also home to other retail and service oriented uses, including meals-to-wheels, which affects the overall parking demand at this location.
- **Rosewood Plaza** – a 26-unit apartment complex located on NE 181st Avenue in Gresham; this complex is owned by Human Solutions and is adjacent to the Rockwood Building.

Both The Rockwood Building and Rosewood Place have income limits similar to the Orchards at Orenco; income limits at the other two projects are unknown.

The parking supply and demand (measured in terms of utilized spaces) were observed and recorded for all parking locations associated with the four complexes to identify vehicle parking demand per residential unit. Table 3 illustrates the vehicle parking supply and date in which parking supply was recorded at each of the locations.

<table>
<thead>
<tr>
<th>Location</th>
<th>Parking Supply</th>
<th>Number of Apartment Units</th>
<th>On-Site Parking Supply Ratio (Spaces Provided per Unit)</th>
<th>Dates of Parking Demand Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>City Center</td>
<td>89 spaces</td>
<td>91 units</td>
<td>0.98 spaces per unit</td>
<td>February 22 and 25, 2012</td>
</tr>
<tr>
<td>Town Center Station</td>
<td>43 spaces</td>
<td>52 units</td>
<td>0.83 spaces per unit</td>
<td>February 28 and March 3, 2012</td>
</tr>
<tr>
<td>Rosewood Plaza</td>
<td>28 spaces</td>
<td>26 units</td>
<td>1.07 spaces per unit</td>
<td>January 2014</td>
</tr>
<tr>
<td>Rockwood Building</td>
<td>91 spaces</td>
<td>47 units</td>
<td>1.94 spaces per unit</td>
<td>January 2014</td>
</tr>
</tbody>
</table>

Table 4 shows the measured parking demand at each of the sites surveyed.
Table 4  Parking Demand Results*

<table>
<thead>
<tr>
<th>Location</th>
<th>Average Weekday Demand</th>
<th>Peak Weekday Demand</th>
<th>Average Weekend Demand</th>
<th>Peak Weekend Demand</th>
<th>Peak Demand Measured per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>City Center</td>
<td>0.40 spaces per unit</td>
<td>0.46 spaces per unit</td>
<td>0.41 spaces per unit</td>
<td>0.49 spaces per unit</td>
<td>0.49 spaces per unit</td>
</tr>
<tr>
<td>Town Center Station</td>
<td>0.53 spaces per unit</td>
<td>0.65 spaces per unit</td>
<td>0.55 spaces per unit</td>
<td>0.65 spaces per unit</td>
<td>0.65 spaces per unit</td>
</tr>
<tr>
<td>Rosewood Plaza</td>
<td>0.62 spaces per unit</td>
<td>0.77 spaces per unit</td>
<td>0.67 spaces per unit</td>
<td>0.81 spaces per unit</td>
<td>0.81 spaces per unit</td>
</tr>
<tr>
<td>Rockwood Building</td>
<td>0.69 spaces per unit</td>
<td>0.72 spaces per unit</td>
<td>0.59 spaces per unit</td>
<td>0.70 spaces per unit</td>
<td>0.72 spaces per unit</td>
</tr>
<tr>
<td>Average</td>
<td>0.56 spaces per unit</td>
<td>0.65 spaces per unit</td>
<td>0.56 spaces per unit</td>
<td>0.66 spaces per unit</td>
<td>0.67 (average) spaces per unit</td>
</tr>
</tbody>
</table>

*Values reflected in Table 2 for the Rockwood Building are reflective of the period from 5 AM – 8 AM and 6 PM – 10 PM due to non-residential users during the 9 AM to 5 PM time period.

As shown in Table 4, the highest peak measured demand at the four sites was 0.81 vehicles spaces per unit and was measured on a weekend. Applying an 85 percent full standard, would equate to a recommended parking supply of 0.95 spaces per unit (i.e., 0.81/0.85). No holiday demand data was collected at any of these sites as part of the previous studies.

OTHER ISSUES OF CONSIDERATION

In reviewing the recommended parking supply, it is helpful to consider whether other considerations may impact future parking demand at Orchards at Orenco. These are discussed below.

Implications of Unbundled Parking

City staff have noted that a recent trend in apartments in Hillsboro and the greater Portland area has involved the “unbundling” of apartment rent and on-site parking. In essence, residents of some apartment complexes are being charged a fee above and beyond their monthly rent to park on-site. In many of these cases, cities have noted an increase in on-street parking demand when companion restrictions on residential parking on-street are not included as well.

Staff has noted that the unbundling of parking at nearby apartment buildings may be impacting on-street parking in the site vicinity; however, REACH will not employ this same practice. Due to restrictions specific to the Low Income Tax Credit program being used to finance the development of all three phases, REACH is not allowed to charge for parking for the 60-year term of affordability.

Furthermore, prior studies of multi-family residential parking demand in the Orenco station area pre-dated the unbundling of parking and found that parking demand and resultant supply ratios were below 1.0 vehicle spaces per unit even when no parking fees were being imposed (refer to the attached July 5, 2012 parking study completed for the Orchards at Orenco Station).
Implications of Number of Bedrooms per Apartment Unit

In both jurisdictional development codes and recommended guidance on both national trip generation and parking generation rates, the number of units (not number of bedrooms) is used as the appropriate measure by which to estimate parking demand and supply. Although the Orchard I bedroom composition is slightly different than the Orchards II and III, the data is still appropriate for use in each of the three phases. As part of the parking studies we have conducted at other apartments (both market rate and affordable), the demand has been correlated to the number of units.

We are also unaware of any national data that comprehensively links apartment parking demand to number of bedroom units. The Institute of Transportation Engineer’s *Parking Generation, Fourth Edition* (2010) parking demand rates are based on the number of apartment units.

From an empirical perspective, the Rockwood Building cited in Table 4 of this letter is comprised of 50 percent small units (studios/1 bedroom) and 50 percent family units (2 and 3 bedroom units). While the Rockwood Building had more on-site parking spaces available per unit than any of the other sites examined, the vehicle parking demand ratio and 85 percent full standard was still below 1 space per unit.

Affordable Housing Car Ownership Considerations

Resident car ownership rates directly impact vehicle parking demand. REACH researched car ownership at Orchards I and documented findings as shown in Table 5.

Table 5  Orchards I Parking Supply Data (As of June 2016)

<table>
<thead>
<tr>
<th>Data for All Units</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of residential units</td>
<td>57</td>
</tr>
<tr>
<td>Total number of residential units with a vehicle</td>
<td>38 (67%)</td>
</tr>
<tr>
<td>Total number of residential units with no vehicle</td>
<td>19 (33%)</td>
</tr>
<tr>
<td>Total number of residents</td>
<td>89</td>
</tr>
<tr>
<td>Number of registered resident vehicles</td>
<td>42</td>
</tr>
<tr>
<td>Average number of vehicles/residential unit</td>
<td>0.74 vehicles/unit</td>
</tr>
<tr>
<td>Average number of vehicles/resident</td>
<td>0.47 vehicles/resident</td>
</tr>
<tr>
<td>Average household (unit) population</td>
<td>1.56 residents/unit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data for Two-bedroom Units Only</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of 2-bedroom units</td>
<td>17</td>
</tr>
<tr>
<td>Total number of vehicles registered to 2-bedroom units</td>
<td>15</td>
</tr>
<tr>
<td>Total number of residents in 2-bedroom units</td>
<td>41</td>
</tr>
<tr>
<td>Average number of vehicles/2-bedroom unit</td>
<td>0.88 vehicles/unit</td>
</tr>
<tr>
<td>Average household population in 2-bedroom units</td>
<td>2.4 residents/unit</td>
</tr>
</tbody>
</table>

As shown in Table 5, 33 percent of the Orchards I residents do not have a vehicle. Four of the units have two vehicles with three of the four being two-bedroom units.
SUMMARY & CONCLUSIONS

This memorandum documents site-specific parking demand data collected at the Orchards at Orenco as well as at other affordable housing projects in the area. Based on this information, we find that the parking data collected supports the Applicant’s conclusion that a reduction in required off-street parking supply is appropriate for the proposed affordable housing project. Approval of a 26 percent reduction is less than the maximum reduction allowed under CDC Section 12.80.158.G.7 and is supported by evidence collected at the subject site as well as at comparable sites.

The reduction sought directly relates to the special characteristics of development site residents as well as the site’s proximity to transit services. We believe the data available is sufficient for the City to approve a parking supply of 1.11 parking spaces per unit for the fully developed three-phase project recognizing the purpose “of the underlying zoning of the Orenco Station sub-area to create a compact, transit-supportive Mixed-Use neighborhood with reduced automobile reliance” (CDC Section 12.62.100.C).

Please let us know if you have any questions regarding our analyses or findings.

Attachment: July 5, 2012 parking study completed for the Orchards at Orenco
MEMORANDUM

Date: July 5, 2012

To: Don Odermott, City of Hillsboro
Cc: Jessica Woodruff, REACH Community Development, Inc.

From: Chris Brehmer, P.E.

Project: Orenco Station REACH Apartments
Subject: Parking Study Findings

This memorandum supplements our June 13, 2012 parking study memorandum for the proposed REACH project in Orenco Station. REACH Community Development is proposing a variance to allow 0.80 parking spaces per unit, a level higher than the observed conditions at other affordable, workforce locations as previously documented.

At City staff’s request, a third study site was reviewed to further assess parking needs in the Orenco Station area. Specifically, parking data was reviewed for a 274-unit market rate housing apartment complex located near the proposed REACH site. As would be expected, the market rate housing was found to have a higher trip rate than the two previously studied affordable housing developments. Combining data for the two affordable housing projects and the market rate project, the average parking need among the three sites requires a parking supply of 0.84 spaces per unit (the current REACH site plan accommodates 0.86 spaces per unit).

Considering the differences between affordable housing and market rate housing, the additional parking study data results support the proposed variance level of 0.80 spaces per unit. Further details of our study are discussed below.

PARKING DATA

In addition to the parking data described in the June 13, 2012 parking memorandum, parking demand was measured at the Orenco Gardens Apartments located at 6199 NE Alder in Hillsboro. Although this 274-unit apartment complex is market rate housing market-rate project with more bedrooms per unit than the proposed REACH project, its parking demand data offers insights as to potential benefits associated with the multimodal, mixed-use environment provided within Orenco Station. We analyzed this data to identify parking demand per residential unit.
Table 1 illustrates the parking supply and date in which parking supply was recorded at each of the three study locations.

Table 1  Parking Supply Data

<table>
<thead>
<tr>
<th>Location</th>
<th>Parking Supply</th>
<th>Number of Apartment Units</th>
<th>Parking Supply Ratio (Spaces Provided per Unit)</th>
<th>Dates of Parking Demand Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orenco Gardens</td>
<td>320 spaces plus 129 on-street spaces (449 total spaces)</td>
<td>274 units</td>
<td>1.70 total spaces per unit (on-site and off-site)</td>
<td>November 9 and 19, 2011</td>
</tr>
<tr>
<td>Town Center Station</td>
<td>43 spaces</td>
<td>52 units</td>
<td>0.83 spaces per unit</td>
<td>February 28 and March 3, 2012</td>
</tr>
<tr>
<td>City Center</td>
<td>89 spaces</td>
<td>91 units</td>
<td>0.98 spaces per unit</td>
<td>February 22 and 25, 2012</td>
</tr>
</tbody>
</table>

PARKING STUDY FINDINGS

Table 2 shows the measured parking demand at each of the sites surveyed.

Table 2  Parking Demand Results

<table>
<thead>
<tr>
<th>Location</th>
<th>Average Weekday Demand</th>
<th>Peak Weekday Demand</th>
<th>Average Weekend Demand</th>
<th>Peak Weekend Demand</th>
<th>Peak Demand Measured per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orenco Gardens</td>
<td>0.62 spaces per unit (38% utilization)</td>
<td>0.96 spaces per unit (58% utilization)</td>
<td>0.83 spaces per unit (50% utilization)</td>
<td>0.99 spaces per unit (61% utilization)</td>
<td>0.99 spaces per unit</td>
</tr>
<tr>
<td>Town Center Station</td>
<td>0.53 spaces per unit (64% utilization)</td>
<td>0.65 spaces per unit (79% utilization)</td>
<td>0.55 spaces per unit (67% utilization)</td>
<td>0.65 spaces per unit (79% utilization)</td>
<td>0.65 spaces per unit</td>
</tr>
<tr>
<td>City Center</td>
<td>0.40 spaces per unit (40% utilization)</td>
<td>0.46 spaces per unit (47% utilization)</td>
<td>0.41 spaces per unit (42% utilization)</td>
<td>0.49 spaces per unit (51% utilization)</td>
<td>0.49 spaces per unit</td>
</tr>
<tr>
<td>Average</td>
<td>0.51 spaces per unit</td>
<td>0.69 spaces per unit</td>
<td>0.60 spaces per unit</td>
<td>0.72 spaces per unit</td>
<td>0.72 (average) spaces per unit</td>
</tr>
</tbody>
</table>

1Results for Orenco Gardens reflect on-site and off-site parking.

Figures 1 and 2 illustrate how the parking demand ratio (spaces utilized per apartment unit) varies over the course of a weekday and a weekend, respectively. As shown in the figures, the two workforce apartment complexes exhibit similar parking demand profiles, with little variation throughout the day. The Orenco Gardens apartments in general yield higher demand ratios and reflect more of a typical vehicular commute pattern with potentially half of the residents leaving for work in the morning and returning in the evenings.
REQUIRED PARKING SUPPLY

Similar to our June 13 memorandum methodology, we used an 85 percent full standard to convert parking demand ratios to required parking supply. Using 0.72 spaces per unit as the average maximum demand recorded, a parking supply of 0.84 spaces per unit would be required. If only the workforce housing results are considered, a parking supply of 0.68 spaces per unit would be required.
FINDINGS & CONCLUSIONS

The additional parking data presented for the market rate housing within Orenco Station demonstrates a measured peak parking demand of less than 1.0 space per apartment unit in a market-rate project with more bedrooms per unit than the REACH project. This information, in conjunction with the previously documented parking demand measured at other existing affordable workforce housing units, clearly demonstrates that parking demand will be less than 1.0 spaces per unit, which is less than the City’s minimum parking requirements for the proposed development site.

Strictly averaging the three sites surveyed, one could conclude that a supply of up to 0.84 parking spaces per unit would be needed; however, this averaging process would be mixing affordable workforce housing and market rate housing. The data from June 13, 2012 memorandum offers clear evidence as to the impacts of the unique vehicle ownership and travel characteristics associated with affordable, workforce housing units.

We also note that the Applicant (REACH) proposes to implement an affirmative Transportation Demand Management strategy, and as a fallback, proposes to maintain the ability to add more parking spaces to meet Phase I demand in future phases, should they be required. While the parking data collected indicates that the additional measures proposed by REACH will not be necessary, they offer additional assurance to the City and to the neighborhood that parking demand will be accommodated on-site.

Based on this information, we find that the parking data collected supports the Applicant's conclusion that a variance to approve a parking supply of 0.8 parking spaces per unit better meets the purpose of the underlying zoning to provide "transit-supportive developments" with "less reliance on the automobile than is typical elsewhere in the community." (Hillsboro Zoning Ordinance Section 136.I.B)

Please let us know if you have any questions regarding our analyses or findings.
MEMORANDUM

Date: January 21, 2016

To: Colin Cooper, City of Hillsboro
Cc: Ben Sturtz, REACH Community Development, Inc.

From: Chris Brehmer, P.E.
Project: Orchards at Orenco
Subject: Phase 1 Parking Study Findings

This memorandum documents parking studies at the Phase I Orchards at Orenco site. At the time of the data collection, the 57 housing units within Phase I were 100 percent occupied. To understand the number of parking spaces needed per housing unit, parking demand was measured on a typical mid-week day and on Saturday both within the Phase 1 parking lot and on the adjacent NE Cherry Drive site frontage. We compared the measured parking demand to pre-construction parking estimates that projected a parking need of 0.84 spaces per unit and to ensure that a supply of 1.0 spaces per unit provides for an 85 – 90 percent full standard.

In addition to collecting typical mid-week and weekend data, parking demand data was also collected during peak holiday season. While not typically considered for design purposes, the parking demand on Christmas Eve, Christmas Day, New Year’s Eve, and New Year’s Day was also collected to assess how parking patterns compare to typical conditions.

Based on our review, we found that peak non-holiday demand occurred on a mid-week day with an observed demand ratio of 0.82 parking spaces per unit, slightly lower than the amount projected prior to construction and well below the City Code standard of 1.5 spaces per unit. Excluding the eight on-street parking spaces along the NE Cherry Drive frontage (which may be used by adjacent properties and/or commuters to the nearby MAX station), the peak non-holiday demand occurred on the same mid-week day reduced to 0.68 parking spaces per unit.

Typical Saturday demand was measured at a demand ratio of 0.77 parking spaces per unit when on-street parking was included; if the on-street were excluded the demand ratio reduced to 0.65 parking spaces per unit. The observed Christmas Day demand peaked at a ratio of 0.81 parking spaces per unit while the observed New Year’s Day demand peaked at a ratio of 0.93 parking spaces per unit (inclusive of on-street parking). All of the typical conditions and holiday conditions were within the projected need of 0.84 spaces per unit with the exception of New Year’s Day.

Table 1 summarizes the observed parking demand along with additional study details.
<table>
<thead>
<tr>
<th>Data Collection Date</th>
<th>Data Collection Times</th>
<th>On-Site Parking Supply (spaces)</th>
<th>Peak On-Site Parking Demand</th>
<th>Peak On-Site Parking Occupancy</th>
<th>Peak On-Site Parking Demand Ratio (spaces/unit)</th>
<th>On-Street Parking Supply</th>
<th>Peak On-Street Parking Demand</th>
<th>Peak On-Street Parking Occupancy</th>
<th>Combined Peak On-Site &amp; On-Street Parking Occupancy</th>
<th>Combined On-Site &amp; On-Street Total Parking Demand Ratio (spaces/unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Week</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thursday, January 14, 2016</td>
<td>5-10 AM &amp; 5-9 PM</td>
<td>57</td>
<td>39</td>
<td>68%</td>
<td>0.68</td>
<td>8</td>
<td>8</td>
<td>100%</td>
<td>72%</td>
<td>0.82</td>
</tr>
<tr>
<td>Saturday, January 9, 2016</td>
<td>5-10 AM &amp; 5-9 PM</td>
<td>57</td>
<td>37</td>
<td>65%</td>
<td>0.65</td>
<td>8</td>
<td>7</td>
<td>88%</td>
<td>68%</td>
<td>0.77</td>
</tr>
<tr>
<td>Holidays</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 24, 2015 (Christmas Eve)</td>
<td>5-11 PM</td>
<td>57</td>
<td>30</td>
<td>53%</td>
<td>0.53</td>
<td>8</td>
<td>7</td>
<td>88%</td>
<td>57%</td>
<td>0.65</td>
</tr>
<tr>
<td>December 25, 2015 (Christmas Day)</td>
<td>5-10 AM &amp; 5-9 PM</td>
<td>57</td>
<td>39</td>
<td>68%</td>
<td>0.68</td>
<td>8</td>
<td>7</td>
<td>88%</td>
<td>71%</td>
<td>0.81</td>
</tr>
<tr>
<td>December 31, 2015 (New Year’s Eve)</td>
<td>5-11 PM</td>
<td>57</td>
<td>32</td>
<td>56%</td>
<td>0.56</td>
<td>8</td>
<td>6</td>
<td>75%</td>
<td>55%</td>
<td>0.63</td>
</tr>
<tr>
<td>January 1, 2016 (New Year’s Day)</td>
<td>5-10 PM</td>
<td>57</td>
<td>46</td>
<td>81%</td>
<td>0.81</td>
<td>8</td>
<td>7</td>
<td>88%</td>
<td>82%</td>
<td>0.93</td>
</tr>
</tbody>
</table>
To calculate a total parking supply needed, typically an 85 – 90 percent full standard is applied to the measured demand ratio. Table 2 illustrates the estimated parking supply using an 85 percent full standard. As shown, the combined on-site/on-street recommended parking supply is below 1.0 parking spaces/unit with the exception of New Year’s Day, which is not typically used for design purposes.

<table>
<thead>
<tr>
<th>Data Collection Date</th>
<th>Peak On-Site Parking Demand Ratio (spaces/unit)</th>
<th>Recommended On-Site Parking Supply</th>
<th>Combined Peak Parking Demand Ratio (spaces/unit)</th>
<th>Recommended Combined Parking supply (spaces/unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical Weekday</td>
<td>0.68</td>
<td>0.80</td>
<td>0.82</td>
<td>0.96</td>
</tr>
<tr>
<td>Typical Weekend</td>
<td>0.65</td>
<td>0.76</td>
<td>0.77</td>
<td>0.91</td>
</tr>
<tr>
<td>Christmas Eve</td>
<td>0.53</td>
<td>0.62</td>
<td>0.65</td>
<td>0.76</td>
</tr>
<tr>
<td>Christmas Day</td>
<td>0.68</td>
<td>0.80</td>
<td>0.81</td>
<td>0.95</td>
</tr>
<tr>
<td>New Year’s Eve</td>
<td>0.56</td>
<td>0.66</td>
<td>0.63</td>
<td>0.74</td>
</tr>
<tr>
<td>New Year’s Day</td>
<td>0.81</td>
<td>0.95</td>
<td>0.93</td>
<td>1.09</td>
</tr>
</tbody>
</table>

FINDINGS & CONCLUSIONS

The additional parking data collected at the now occupied Phase 1 Orchards at Orenco demonstrates a typical measured peak parking demand of less than 1.0 space per apartment unit even during peak holiday conditions. The typical weekday and weekend data observed is consistent with prior projections made for the site based on parking demand measured at other existing affordable housing units. Furthermore, the supplemental peak holiday parking data clearly demonstrates that parking demand will be less than 1.0 space per unit, which is less than the City’s minimum 1.5 parking space/unit requirement for the development site. Furthermore, the recommended supply ratio for all study periods is less than 1.0 space per unit, with the exception of New Year’s Day.

Based on this information, we find that the parking data collected supports the Applicant’s conclusion that a variance to approve a parking supply of 1.09 parking spaces per unit for the fully developed three-phase project better meets the purpose of the underlying zoning to provide "transit-supportive developments" with "less reliance on the automobile than is typical elsewhere in the community." (Hillsboro Zoning Ordinance Section 136.1.B)

Please let us know if you have any questions regarding our analyses or findings.
DRAFT MEMORANDUM

Date: March 3, 2017

To: Andrew Crampton, City of Hillsboro
    Christina Fera-Thomas, PE, City of Hillsboro

Cc: Melora Banker, DBG Group
    Komi Kalevor, Washington County Department of Housing Services

From: Julia Kuhn, PE & Chris Brehmer, PE

Project: Willow Creek Apartments

Subject: Parking Study Findings – DRAFT

This memorandum documents our analysis of parking needs at the proposed Willow Creek site to be located in the northwest quadrant of the W Baseline Road/SW 185th Avenue intersection. Upon development, the site will facilitate a mixed use building with 122 apartments, approximately 2,151 square feet of office, and 111 parking spaces.

DBG Group, in partnership with Washington County Department of Housing Services, is requesting a reduction in the minimum number of parking spaces required as part of the proposed Willow Creek Apartments. Their experience on similar projects indicates that the number of spaces required by the City of Hillsboro’s Zoning Ordinance does not reflect the unique vehicle ownership and travel characteristics associated with the type of affordable, workforce housing units that will be provided. This memorandum provides our analyses of the parking demand measured at other similar housing developments within Hillsboro and how those findings may affect the proposed Willow Creek project.

Our study found that, on average, other similar developments have a required parking supply of 0.83 spaces per unit whereas the current City Code specifies 1.5 spaces per residential unit. DBG Group is proposing 107 spaces for the apartments (i.e., 0.88 spaces per unit), a level consistent with the observed conditions at other affordable, workforce locations. In addition, they are supplying 4 spaces for the office uses for a total of 111 parking spaces on-site. Further details of our study are discussed below.
STUDY METHODOLOGY

City of Hillsboro Zoning Ordinance No. 1945 offers requirements, codes and standards to “… encourage the most appropriate use of land [...] facilitate adequate provisions for community utilities [...] and in general to promote public health, safety, convenience, and general welfare” (Reference 1). Section 137 of the Zoning Ordinance stipulates development regulations for station community planning areas, including minimum and maximum parking regulations. These regulations indicate that apartment units in the vicinity of Willow Creek should provide a minimum of 1.5 off-street parking spaces per unit.

Per discussions with DBG and County staff, other similar developments within Washington County are experiencing parking demand levels much lower than 1.5 spaces per unit. To this end, we measured parking demand at the following locations in 2017:

- **Orchards at Orenco Phases 1 and 2** – a 105-unit apartment complex located at 6520/6598 NE Cherry Drive in Hillsboro. This property is managed by REACH Community Development as affordable, workforce housing with maximum income requirements. At this location, we measured parking on-site and on-street along the NE Cherry Drive frontage.
- **Wyndhaven Apartments** – a 396-unit apartment complex located at 230 SW Edgeway. This property is managed by GSL Properties as affordable, workforce housing with maximum income requirements.

Parking demand for both sites was observed on hourly intervals during the following times:

- Typical weekday when school was in-session between 5 AM and 10 AM and between 6 PM and 10 PM;
- Typical Saturday between 5 AM and 10 AM and between 6 PM and 10 PM; and,
- New Year’s Day 2017 between 5 AM and 2 PM. While not typically considered for design purposes, the parking demand on New Year’s Day was collected to assess how holiday parking patterns compare to typical conditions.

We also supplemented this with data collected and previously presented to the City of Hillsboro in support of the REACH apartment development in Orenco Village in 2012. For this study, we evaluated the Town Center Station Apartments, a 52-unit apartment complex located at 8719 SE Monterey Avenue in Happy Valley, and City Center Apartments, 91-unit apartment complex located at 160 SE Washington Street in Hillsboro. Both complexes are composed of affordable, workforce units.

In all cases, the parking supply and demand (measured in terms of utilized spaces) were observed and recorded for all parking locations associated with the complexes. We analyzed this data to identify parking demand per residential unit.

Table 1 illustrates the parking supply and date in which parking supply was recorded at each of the locations.
Table 1. Parking Supply Data Collection Sites

<table>
<thead>
<tr>
<th>Location</th>
<th>Parking Supply</th>
<th>Number of Apartment Units</th>
<th>Parking Supply Ratio (Spaces Provided per Unit)</th>
<th>Dates of Parking Demand Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2017 Data Collection</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orchards at Orenco Phases 1 and 2</td>
<td>139 on-site spaces plus 22 on-street spaces (161 total spaces)</td>
<td>115 units</td>
<td>1.21 spaces per unit on-site and 1.40 total spaces per unit (on-site and off-site)</td>
<td>January 1, 4 and 21, 2017</td>
</tr>
<tr>
<td>Wyndhaven Apartments</td>
<td>349 on-site spaces per unit; however on the days of the data collection up to 9 of these were coned off and prohibited from use</td>
<td>396 units</td>
<td>0.88 spaces per unit in total; 0.86 on the days of the data collection</td>
<td>January 1, 4 and 21, 2017</td>
</tr>
<tr>
<td><strong>2012 Data Collection from Orenco Station Parking Study</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Town Center Station</td>
<td>43 spaces</td>
<td>52 units</td>
<td>0.83 spaces per unit</td>
<td>February 28 and March 3, 2012</td>
</tr>
<tr>
<td>City Center</td>
<td>89 spaces</td>
<td>91 units</td>
<td>0.98 spaces per unit</td>
<td>February 22 and 25, 2012</td>
</tr>
</tbody>
</table>

Table 2. Parking Demand Results for Typical Weekday and Weekend Conditions

<table>
<thead>
<tr>
<th>Location</th>
<th>Average Weekday Demand</th>
<th>Peak Weekday Demand</th>
<th>Average Weekend Demand</th>
<th>Peak Weekend Demand</th>
<th>Peak Demand Measured per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orchards at Orenco¹</td>
<td>0.80 spaces per unit</td>
<td>0.89 spaces per unit</td>
<td>0.80 spaces per unit</td>
<td>0.90 spaces per unit</td>
<td>0.90 spaces per unit</td>
</tr>
<tr>
<td></td>
<td>(57% utilization)</td>
<td>(63% utilization)</td>
<td>(57% utilization)</td>
<td>(64% utilization)</td>
<td>(64% utilization)</td>
</tr>
<tr>
<td>Wyndhaven Village</td>
<td>0.65 spaces per unit</td>
<td>0.76 spaces per unit</td>
<td>0.67 spaces per unit</td>
<td>0.78 spaces per unit</td>
<td>0.78 spaces per unit</td>
</tr>
<tr>
<td></td>
<td>(75% utilization)</td>
<td>(88% utilization)</td>
<td>(77% utilization)</td>
<td>(88% utilization)</td>
<td>(88% utilization)</td>
</tr>
<tr>
<td>Average 2017 Sites</td>
<td>0.72 spaces per unit</td>
<td>0.82 spaces per unit</td>
<td>0.73 spaces per unit</td>
<td>0.84 spaces per unit</td>
<td>0.84 spaces per unit</td>
</tr>
<tr>
<td>Town Center Station</td>
<td>0.53 spaces per unit</td>
<td>0.65 spaces per unit</td>
<td>0.55 spaces per unit</td>
<td>0.65 spaces per unit</td>
<td>0.65 spaces per unit</td>
</tr>
<tr>
<td></td>
<td>(64% utilization)</td>
<td>(79% utilization)</td>
<td>(67% utilization)</td>
<td>(79% utilization)</td>
<td>(79% utilization)</td>
</tr>
<tr>
<td>City Center</td>
<td>0.40 spaces per unit</td>
<td>0.46 spaces per unit</td>
<td>0.41 spaces per unit</td>
<td>0.49 spaces per unit</td>
<td>0.49 spaces per unit</td>
</tr>
<tr>
<td></td>
<td>(40% utilization)</td>
<td>(47% utilization)</td>
<td>(42% utilization)</td>
<td>(51% utilization)</td>
<td>(51% utilization)</td>
</tr>
<tr>
<td>Average All Sites</td>
<td>0.59 spaces per unit</td>
<td>0.69 spaces per unit</td>
<td>0.61 spaces per unit</td>
<td>0.70 spaces per unit</td>
<td>0.70 spaces per unit</td>
</tr>
</tbody>
</table>

¹Results for Orchards at Orenco reflect on-site and off-site parking per Table 1.

Figures 1 and 2 illustrate how the parking demand ratio (spaces utilized per apartment unit) varies over the course of a typical weekday and a weekend at the two locations measured in 2017. The Orchards at Orenco and Wyndhaven sites are also located close to an adjacent MAX light rail stop similar to the proposed Willow Creek Apartments.
Figure 1. Average Weekday Parking Demand Ratio Variation (spaces occupied per unit by hour)

Figure 2. Average Weekend Parking Demand Ratio Variation (spaces occupied per unit by hour)
PARKING STUDY FINDINGS FOR HOLIDAY CONDITIONS

Table 3 shows the measured parking demand at the two sites surveyed on New Year’s Day 2017. As mentioned previously, this peak holiday condition is not usually evaluated for design. Based on conversations with staff and previous experience with other projects in Hillsboro, we measured New Year’s Day for comparison to typical weekday and typical weekend day conditions.

Table 3. Parking Demand Results for New Year’s Day 2017 Conditions

<table>
<thead>
<tr>
<th>Location</th>
<th>Average New Year’s Day Demand</th>
<th>Peak New Year’s Day Demand</th>
<th>Difference from Typical Average Weekend Condition</th>
<th>Difference from Typical Peak Weekend Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orchards at Orenco¹</td>
<td>0.81 spaces per unit (58% utilization)</td>
<td>0.88 spaces per unit (63% utilization)</td>
<td>+0.01 spaces per unit</td>
<td>-0.02 spaces per unit</td>
</tr>
<tr>
<td>Wyndhaven</td>
<td>0.70 spaces per unit (81% utilization)</td>
<td>0.77 spaces per unit (89% utilization)</td>
<td>+0.03 spaces per unit</td>
<td>-0.01 spaces per unit</td>
</tr>
<tr>
<td>Average of 2017 Sites</td>
<td>0.75 spaces per unit</td>
<td>0.82 spaces per unit</td>
<td>+0.02 spaces per unit</td>
<td>-0.02 spaces per unit</td>
</tr>
</tbody>
</table>

¹Results for Orchards at Orenco reflect on-site and off-site parking per Table 1.

As shown, at both the Orchards and Wyndhaven sites, the New Year’s Day demand is nearly identical to the typical weekend demand, as measured on the dates of the data collection.

Figure 3 illustrates how the parking demand ratio (spaces utilized per apartment unit) varies over the course of New Year’s Day.

Figure 3. New Year’s Day 2017 Parking Demand Ratio Variation (spaces occupied per unit by hour)

RECOMMENDED PARKING SUPPLY

We used an 85 percent full standard to convert parking demand ratios to required parking supply. Table 4 illustrates the peak demand and peak 85 percent full ratios at each location during the typical weekday and typical weekend day.
### Table 4. Parking Demand Results for Typical Weekday and Weekend Conditions

<table>
<thead>
<tr>
<th>Location</th>
<th>Peak Weekday Demand</th>
<th>Peak Weekday 85% Full Ratio</th>
<th>Peak Weekend Demand</th>
<th>Peak Weekend 85% Full Ratio</th>
<th>Peak 85% Full Ratio Measured per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orchards at Orenco¹</td>
<td>0.89 spaces per unit</td>
<td>1.04 spaces per unit</td>
<td>0.90 spaces per unit</td>
<td>1.05 spaces per unit</td>
<td>1.05 spaces per unit</td>
</tr>
<tr>
<td>Wyndhaven</td>
<td>0.76 spaces per unit</td>
<td>0.89 spaces per unit</td>
<td>0.78 spaces per unit</td>
<td>0.92 spaces per unit</td>
<td>0.92 spaces per unit</td>
</tr>
<tr>
<td>Town Center Station</td>
<td>0.65 spaces per unit</td>
<td>0.76 spaces per unit</td>
<td>0.65 spaces per unit</td>
<td>0.76 spaces per unit</td>
<td>0.76 spaces per unit</td>
</tr>
<tr>
<td>City Center</td>
<td>0.46 spaces per unit</td>
<td>0.54 spaces per unit</td>
<td>0.49 spaces per unit</td>
<td>0.58 spaces per unit</td>
<td>0.58 spaces per unit</td>
</tr>
<tr>
<td>Average</td>
<td>0.69 spaces per unit</td>
<td>0.81 spaces per unit</td>
<td>0.70 spaces per unit</td>
<td>0.83 spaces per unit</td>
<td>0.83 spaces per unit</td>
</tr>
</tbody>
</table>

¹Results for Orchards at Orenco reflect on-site and off-site parking per Table 1.

Using 0.83 spaces per unit as the peak demand recorded during non-holiday conditions, a parking supply of 101 spaces per unit would be required for the proposed Willow Creek apartments.

### OTHER ISSUES OF CONSIDERATION

In reviewing the recommended parking supply, it is helpful to consider whether other considerations may impact future parking demand at the site. These are discussed below.

**Implications of Unbundled Parking**

City staff have noted that a recent trend in apartments in Hillsboro and the greater Portland area has involved the “unbundling” of apartment rent and on-site parking. In essence, residents of some apartment complexes are being charged a fee above and beyond their monthly rent to park on-site. In many of these cases, cities have noted an increase in on-street parking demand when companion restrictions on residential parking on-street are not included as well.

The Willow Creek Apartments project will not employ this same practice. Due to restrictions specific to the Low Income Tax Credit program being used to finance the development, Willow Creek is not allowed to charge for parking for the 60-year term of affordability.

**Implications of Number of Bedrooms per Apartment Unit**

Development codes and recommended guidance on both national trip generation and parking generation rates use the number of units (not number of bedrooms) as the appropriate measure by which to estimate parking demand and supply. We are also unaware of any national data that comprehensively links apartment parking demand to number of bedroom units. The Institute of Transportation Engineer’s *Parking Generation, Fourth Edition* (2010) parking demand rates are based on the number of apartment units.

**Affordable Housing Car Ownership Considerations**

Resident car ownership rates directly impact vehicle parking demand. By way of example, REACH researched car ownership at the Orchards I site in Orenco Station and documented findings as shown in Table 5.
Table 5. Orchards I Parking Supply Data (As of June 2016)

<table>
<thead>
<tr>
<th>Data for All Units</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of residential units</td>
<td>57</td>
</tr>
<tr>
<td>Total number of residential units with a vehicle</td>
<td>38 (67%)</td>
</tr>
<tr>
<td>Total number of residential units with no vehicle</td>
<td>19 (33%)</td>
</tr>
<tr>
<td>Total number of residents</td>
<td>89</td>
</tr>
<tr>
<td>Number of registered resident vehicles</td>
<td>42</td>
</tr>
<tr>
<td>Average number of vehicles/residential unit</td>
<td>0.74 vehicles/unit</td>
</tr>
<tr>
<td>Average number of vehicles/resident</td>
<td>0.47 vehicles/resident</td>
</tr>
<tr>
<td>Average household (unit) population</td>
<td>1.56 residents/unit</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data for Two-bedroom Units Only</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of 2-bedroom units</td>
<td>17</td>
</tr>
<tr>
<td>Total number of vehicles registered to 2-bedroom units</td>
<td>15</td>
</tr>
<tr>
<td>Total number of residents in 2-bedroom units</td>
<td>41</td>
</tr>
<tr>
<td>Average number of vehicles/2-bedroom unit</td>
<td>0.88 vehicles/unit</td>
</tr>
<tr>
<td>Average household population in 2-bedroom units</td>
<td>2.4 residents/unit</td>
</tr>
</tbody>
</table>

As shown in Table 5, 33 percent of the Orchards I residents do not have a vehicle. Four of the units have two vehicles with three of the four being two-bedroom units.

COMPLIANCE WITH CITY DEVELOPMENT CODE

City of Hillsboro Community Development Code (CDC) Section 12.50.320 defines residential parking requirements and stipulates a minimum 1.5 vehicle parking spaces be provided per residential unit in multiple dwelling structures (Table 12.50.320-1). The current CDC does not provide parking rates for affordable housing communities (where car ownership is typically less than market rate housing) or housing located directly adjacent to high capacity transit stops such as light rail stations. CDC Section 12.80.158.G defines the criteria for seeking an adjustment to reduce the number of parking spaces provided. As part of the Willow Creek Apartments, DBG Group, in collaboration with Washington County Department of Housing Services, is seeking an adjustment per 12.80.158.G.7, which specifies:

**Other Reductions.** Off-street parking for other uses may be reduced up to 30% below the required minimum standard during the Development Review process if an applicant provides a parking study prepared by a traffic engineer licensed in Oregon, which demonstrates that transit use and/or special characteristics of the customers, clients, employees or residents of the development will:

a. Reduce expected vehicle use as compared to standard ITE trip generation rates; and

b. Reduce expected parking demand below the minimum parking requirements.
Vehicle Parking Reduction Request

DBG Group is requesting a reduction in parking for Willow Creek Apartments that would result in an overall parking supply of 111 vehicular parking spaces, including 4 spaces for the office and 107 spaces for the apartments, a 42 percent reduction from the 1.5 vehicle spaces per apartment unit (e.g., 1.5 spaces per unit * 122 units = 183 spaces). This reduction exceeds the maximum allowable reduction specified under CDC Section 12.80.158.G.7 but is consistent with observed conditions at other affordable, workforce locations.

CONCLUSIONS

This memorandum documents site-specific parking demand data collected at affordable housing projects in the area. DBG Group is proposing a reduction in required off-street parking supply to allow a parking supply ratio of 0.88 spaces per unit commensurate with observed conditions at other affordable, workforce locations. In addition, they are supplying four spaces for the office uses for a total of 111 parking spaces on-site.

Please let us know if you have any questions regarding our analyses or findings.
MEMORANDUM

Date: July 5, 2012

To: Don Odermott, City of Hillsboro
Cc: Jessica Woodruff, REACH Community Development, Inc.

From: Chris Brehmer, P.E.
Project: Orenco Station REACH Apartments
Subject: Parking Study Findings

This memorandum supplements our June 13, 2012 parking study memorandum for the proposed REACH project in Orenco Station. REACH Community Development is proposing a variance to allow 0.80 parking spaces per unit, a level higher than the observed conditions at other affordable, workforce locations as previously documented.

At City staff’s request, a third study site was reviewed to further assess parking needs in the Orenco Station area. Specifically, parking data was reviewed for a 274-unit market rate housing apartment complex located near the proposed REACH site. As would be expected, the market rate housing was found to have a higher trip rate than the two previously studied affordable housing developments. Combining data for the two affordable housing projects and the market rate project, the average parking need among the three sites requires a parking supply of 0.84 spaces per unit (the current REACH site plan accommodates 0.86 spaces per unit).

Considering the differences between affordable housing and market rate housing, the additional parking study data results support the proposed variance level of 0.80 spaces per unit. Further details of our study are discussed below.

PARKING DATA

In addition to the parking data described in the June 13, 2012 parking memorandum, parking demand was measured at the Orenco Gardens Apartments located at 6199 NE Alder in Hillsboro. Although this 274-unit apartment complex is market rate housing market-rate project with more bedrooms per unit than the proposed REACH project, its parking demand data offers insights as to potential benefits associated with the multimodal, mixed-use environment provided within Orenco Station. We analyzed this data to identify parking demand per residential unit.
Table 1 illustrates the parking supply and date in which parking supply was recorded at each of the three study locations.

### Table 1  Parking Supply Data

<table>
<thead>
<tr>
<th>Location</th>
<th>Parking Supply</th>
<th>Number of Apartment Units</th>
<th>Parking Supply Ratio (Spaces Provided per Unit)</th>
<th>Dates of Parking Demand Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orenco Gardens</td>
<td>320 spaces plus 129 on-street spaces (449 total spaces)</td>
<td>274 units</td>
<td>1.70 total spaces per unit (on-site and off-site)</td>
<td>November 9 and 19, 2011</td>
</tr>
<tr>
<td>Town Center Station</td>
<td>43 spaces</td>
<td>52 units</td>
<td>0.83 spaces per unit</td>
<td>February 28 and March 3, 2012</td>
</tr>
<tr>
<td>City Center</td>
<td>89 spaces</td>
<td>91 units</td>
<td>0.98 spaces per unit</td>
<td>February 22 and 25, 2012</td>
</tr>
</tbody>
</table>

### PARKING STUDY FINDINGS

Table 2 shows the measured parking demand at each of the sites surveyed.

### Table 2  Parking Demand Results

<table>
<thead>
<tr>
<th>Location</th>
<th>Average Weekday Demand</th>
<th>Peak Weekday Demand</th>
<th>Average Weekend Demand</th>
<th>Peak Weekend Demand</th>
<th>Peak Demand Measured per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orenco Gardens</td>
<td>0.62 spaces per unit (38% utilization)</td>
<td>0.96 spaces per unit (58% utilization)</td>
<td>0.83 spaces per unit (50% utilization)</td>
<td>0.99 spaces per unit (61% utilization)</td>
<td>0.99 spaces per unit</td>
</tr>
<tr>
<td>Town Center Station</td>
<td>0.53 spaces per unit (64% utilization)</td>
<td>0.65 spaces per unit (79% utilization)</td>
<td>0.55 spaces per unit (67% utilization)</td>
<td>0.65 spaces per unit (79% utilization)</td>
<td>0.65 spaces per unit</td>
</tr>
<tr>
<td>City Center</td>
<td>0.40 spaces per unit (40% utilization)</td>
<td>0.46 spaces per unit (47% utilization)</td>
<td>0.41 spaces per unit (42% utilization)</td>
<td>0.49 spaces per unit (51% utilization)</td>
<td>0.49 spaces per unit</td>
</tr>
<tr>
<td>Average</td>
<td>0.51 spaces per unit</td>
<td>0.69 spaces per unit</td>
<td>0.60 spaces per unit</td>
<td>0.72 spaces per unit</td>
<td>0.72 (average) spaces per unit</td>
</tr>
</tbody>
</table>

1Results for Orenco Gardens reflect on-site and off-site parking.

Figures 1 and 2 illustrate how the parking demand ratio (spaces utilized per apartment unit) varies over the course of a weekday and a weekend, respectively. As shown in the figures, the two workforce apartment complexes exhibit similar parking demand profiles, with little variation throughout the day. The Orenco Gardens apartments in general yield higher demand ratios and reflect more of a typical vehicular commute pattern with potentially half of the residents leaving for work in the morning and returning in the evenings.
REQUIRED PARKING SUPPLY

Similar to our June 13 memorandum methodology, we used an 85 percent full standard to convert parking demand ratios to required parking supply. Using 0.72 spaces per unit as the average maximum demand recorded, a parking supply of 0.84 spaces per unit would be required. If only the workforce housing results are considered, a parking supply of 0.68 spaces per unit would be required.
FINDINGS & CONCLUSIONS

The additional parking data presented for the market rate housing within Orenco Station demonstrates a measured peak parking demand of less than 1.0 space per apartment unit in a market-rate project with more bedrooms per unit than the REACH project. This information, in conjunction with the previously documented parking demand measured at other existing affordable workforce housing units, clearly demonstrates that parking demand will be less than 1.0 spaces per unit, which is less than the City’s minimum parking requirements for the proposed development site.

Strictly averaging the three sites surveyed, one could conclude that a supply of up to 0.84 parking spaces per unit would be needed; however, this averaging process would be mixing affordable workforce housing and market rate housing. The data from June 13, 2012 memorandum offers clear evidence as to the impacts of the unique vehicle ownership and travel characteristics associated with affordable, workforce housing units.

We also note that the Applicant (REACH) proposes to implement an affirmative Transportation Demand Management strategy, and as a fallback, proposes to maintain the ability to add more parking spaces to meet Phase I demand in future phases, should they be required. While the parking data collected indicates that the additional measures proposed by REACH will not be necessary, they offer additional assurance to the City and to the neighborhood that parking demand will be accommodated on-site.

Based on this information, we find that the parking data collected supports the Applicant's conclusion that a variance to approve a parking supply of 0.8 parking spaces per unit better meets the purpose of the underlying zoning to provide "transit-supportive developments" with "less reliance on the automobile than is typical elsewhere in the community." (Hillsboro Zoning Ordinance Section 136.I.B)

Please let us know if you have any questions regarding our analyses or findings.
REACH Community Development, Inc. wishes to reduce the minimum number of parking spaces required as part of their proposed Orenco Station Apartment development. Their experience on similar projects indicates that the number of spaces required by the City of Hillsboro’s Zoning Ordinance does not reflect the unique vehicle ownership and travel characteristics associated with the type of affordable, workforce housing units that will be provided. This memorandum provides our analyses of the parking demand measured at other similar housing developments within the Metro area and how those findings may affect the proposed Orenco Station project.

Our study found that, on average, other similar developments have a required parking supply of 0.84 spaces per unit whereas the current City Code specifies 1.5 spaces per residential unit. REACH Community Development is proposing 0.80 spaces per unit, a level consistent with the observed conditions at other affordable, workforce locations. Further details of our study are discussed below.

STUDY METHODOLOGY

City of Hillsboro Zoning Ordinance No. 1945 offers requirements, codes and standards to “… encourage the most appropriate use of land […] facilitate adequate provisions for community utilities […] and in general to promote public health, safety, convenience, and general welfare” (Reference 1). Section 137 of the Zoning Ordinance stipulates development regulations for station community planning areas, including minimum and maximum parking regulations. These regulations indicate that apartment units in the Orenco Station area located should provide a minimum of 1.5 off-street parking spaces per unit.
Per discussions with REACH staff, other similar developments within the Metro area are experiencing parking demand levels much lower than 1.5 spaces per unit. To this end, we measured parking demand at the following locations:

- Orenco Gardens Apartments – a 274-unit apartment complex located at 6199 NE Alder in Hillsboro. Although this complex is market rate housing, we measured its parking demand to determine potential benefits associated with the multimodal, mixed use environment provided within Orenco Station.

- Town Center Station Apartments – a 52-unit apartment complex located at 8719 SE Monterey Avenue in Happy Valley. This complex is composed of affordable, workforce units.

- City Center Apartments – a 91-unit apartment complex located at 160 SE Washington Street in Hillsboro. This complex is composed of affordable, workforce units.

Parking demand for the Town Center Station and City Center complexes were observed on hourly intervals between 6 AM and 8 PM on a typical weekday and a Saturday. Parking demand at Orenco Gardens was observed between 6 AM and 8 PM on a typical weekday and from 8 AM to 9 PM on a Saturday. The parking supply and demand (measured in terms of utilized spaces) were observed and recorded for all parking locations associated with the complexes. We analyzed this data to identify parking demand per residential unit.

Table 1 illustrates the parking supply and date in which parking supply was recorded at each of the locations.

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<tr>
<th>Location</th>
<th>Parking Supply</th>
<th>Number of Apartment Units</th>
<th>Parking Supply Ratio (Spaces Provided per Unit)</th>
<th>Dates of Parking Demand Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orenco Gardens</td>
<td>320 spaces plus 129 on-street spaces (449 total spaces)</td>
<td>274 units</td>
<td>1.70 total spaces per unit (on-site and off-site)</td>
<td>November 9 and 19, 2011</td>
</tr>
<tr>
<td>Town Center Station</td>
<td>43 spaces</td>
<td>52 units</td>
<td>0.83 spaces per unit</td>
<td>February 28 and March 3, 2012</td>
</tr>
<tr>
<td>City Center</td>
<td>89 spaces</td>
<td>91 units</td>
<td>0.98 spaces per unit</td>
<td>February 22 and 25, 2012</td>
</tr>
</tbody>
</table>
PARKING STUDY FINDINGS

Table 2 shows the measured parking demand at each of the sites surveyed.

Table 2  Parking Demand Results

<table>
<thead>
<tr>
<th>Location</th>
<th>Average Weekday Demand</th>
<th>Peak Weekday Demand</th>
<th>Average Weekend Demand</th>
<th>Peak Weekend Demand</th>
<th>Peak Demand Measured per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orenco Gardens</td>
<td>0.62 spaces per unit (38% utilization)</td>
<td>0.96 spaces per unit (58% utilization)</td>
<td>0.83 spaces per unit (50% utilization)</td>
<td>0.99 spaces per unit (61% utilization)</td>
<td>0.99 spaces per unit</td>
</tr>
<tr>
<td>Town Center Station</td>
<td>0.53 spaces per unit (64% utilization)</td>
<td>0.65 spaces per unit (79% utilization)</td>
<td>0.55 spaces per unit (67% utilization)</td>
<td>0.65 spaces per unit (79% utilization)</td>
<td>0.65 spaces per unit</td>
</tr>
<tr>
<td>City Center</td>
<td>0.40 spaces per unit (40% utilization)</td>
<td>0.46 spaces per unit (47% utilization)</td>
<td>0.41 spaces per unit (42% utilization)</td>
<td>0.49 spaces per unit (51% utilization)</td>
<td>0.49 spaces per unit</td>
</tr>
<tr>
<td>Average</td>
<td>0.51 spaces per unit</td>
<td>0.69 spaces per unit</td>
<td>0.60 spaces per unit</td>
<td>0.72 spaces per unit</td>
<td>0.72 (average) spaces per unit</td>
</tr>
</tbody>
</table>

1Results for Orenco Gardens reflect on-site and off-site parking.

Figures 1 and 2 illustrate how the parking demand ratio (spaces utilized per apartment unit) varies over the course of a weekday and a weekend, respectively. As shown in the figures, the two workforce apartment complexes exhibit similar parking demand profiles, with little variation throughout the daily. The Orenco Gardens apartments in general yield higher demand ratios and reflect more of a typical vehicular commute pattern with potentially half of the residents leaving for work in the morning and returning in the evenings.

Figure 1  Weekday Parking Demand Ratio Fluctuations
REQUIRED PARKING SUPPLY

We used an 85 percent full standard to convert parking demand ratios to required parking supply. Using 0.72 spaces per unit as the average maximum demand recorded, a parking supply of 0.84 spaces per unit would be required. If only the workforce housing results are considered, a parking supply of 0.68 spaces per unit would be required.

CONCLUSIONS

Based on the three sites surveyed, a supply of up to 0.84 parking spaces per unit appears to be a more reasonable representation of the potential parking needs of the proposed REACH Community Development apartment complex in Orenco Station, rather than the 1.5 space per unit required by the City’s Code. Please let us know if you have any questions regarding our analyses or findings.
May 9, 2017

Andy Back, Manager
Washington County
Dept. of Land Use & Transportation
Planning and Development Services
155 N First Ave., Suite 350, MS 14
Hillsboro, OR 97124

RE: Comments on Rightsizing the Parking Code

Dear Andy:

The Coalition of Housing Advocates (CHA) consists of individual representatives of various development corporations, service providers, advocacy groups, and city planners interested in promoting the availability of affordable housing throughout Washington County. The group meets on the first Thursday of most months at Beaverton City Hall.

While some of our members participated directly in this process with your staff and consultants via interviews or participation in work groups beginning in 2015, we would like to take this opportunity to comment holistically on the goals you have laid out, and recommendations you are now considering.

We concur that parking is an essential component of the transportation system and has major land use implications. A few data points selected from your reports are particularly striking:

- ...that Washington County and the cities within it have collectively developed 8 parking spaces (on and off street) for every car in the county.
- ...that if placed in one location, these parking spaces would make up a geographic area the size of Tigard.
- ..."The Cedar Mill case study showed an abundance of parking, with maximum utilization below 40% even in the peak period." Without changes, in areas like this, we will continue the pattern of oversupplied parking, underutilized land, and higher development costs.

The oversupply of parking, as you note, can result in:

- Inefficient land use (too much land used for parking)
- Higher development costs (increasing housing cost burdens for residents)
- Incentives to drive rather than using active transportation (readily available parking)
- Disincentives for redevelopment (i.e. if insufficient land to meet current parking requirements)
At the same time, we know that we have a significant shortage of spaces (homes) for people, particularly for those of modest means. Our Consolidated Plan notes a gap of between 14-23,000 units for households at or below 50% of area median income.

While we are interested in all aspects of your study and recommendations, we will focus our comments on those matters we think have the greatest potential to help us close our affordable housing gap.

- We strongly support reductions in required off-street parking for affordable housing.
- We support strategies that lead to increased transit use by providing a more transit-supportive environment.
- We support the development of shared parking arrangements, as well as preferential standards for ride and car-sharing, electric vehicles and motorcycles.
- We support more environmentally-friendly design in parking areas.
- We agree that a regional parking management program could help provide consistency between jurisdictions. We appreciate the leadership role you are taking, and hope many of the cities within Washington County will consider similar changes.

When considering the impact on affordable housing, it is important to note:

- Surface parking typically costs $5-10,000 per space, and structured parking (national median cost) $18,000 per space.
- Land required for parking cannot be used to meet other needs (such as interior and exterior common spaces, recreational areas, or, most importantly, additional homes).
- Regulated affordable housing is underwritten with a relatively slim margin—every additional housing unit can add to the project’s feasibility, just as every reduction in parking space can.
- Since households living in affordable housing frequently cannot support the purchase or maintenance of a vehicle, these developments often have an oversupply of parking. Similarly, certain target populations (seniors and those with disabilities) have much lower auto ownership rates than the population as a whole.
- Many studies indicate that residents of affordable housing tend to have higher rates of transit use, which means transit-oriented locations with far more limited parking work well.

Therefore, we recommend that you establish a reliable process to “Allow [parking] reductions for affordable housing” for regulated units targeted to those at or below 60% of area median income. Our experience indicates that parking ratios from .5 to .75 per unit is sufficient in transit-oriented areas and with special populations. For large families, this is likely between 1-2 spaces. We agree that these reductions should be based on the specific project and location.

We appreciate your efforts to “rightsize the parking code,” and look forward to working together with you towards adoption of a new ordinance--one that will lead to an increased supply of living spaces for people, rather than cars.

Sincerely,

Sheila Greenlaw-Fink
Executive Director, Community Housing Fund
On behalf of the Coalition of Housing Advocates
June 23, 2017

Washington County Department of Land Use and Transportation  
Planning and Development Services  
Long Range Planning  
155 N. First Avenue, Suite 350, MS 14  
Hillsboro, OR 97124  

To Whom It May Concern:  

The purpose of this letter is to express our enthusiastic support for a reduction to the parking requirements associated with affordable housing in Washington County. I understand that there is an upcoming Work Session at Washington County delving into this particular issue.  

As an affordable housing developer serving three counties in the Portland metropolitan region, REACH Community Development has a good perspective on the economic impacts parking requirements have on the financing and construction of affordable housing. REACH Community Development has successfully reduced parking spaces in two of our last three projects in Washington County. The reductions were supported by a third-party traffic engineer prior to construction and tenant car ownership post construction. The reduction of these spaces has proven beneficial to the construction costs and enabled us as a developer to seek fewer public resources. Our residents often own and operate less automobiles than a resident of a conventional or market-rate development, but the current parking requirements seem to assume car ownership and operation is equal across developments in the County. We hope that our work in right-sizing the parking code in Washington County can help us all get to a point where public policy can line up with the constraints of development in our region.  

I applaud Washington County for continuing to review how reductions to parking requirements can help to create more affordable housing in our region. If there is anything I can assist with as part of your work, please don’t hesitate to ask.  

Sincerely,  

Jessica Woodruff  
Director of Housing Development  
jwoodruff@reachcdc.org  
503-501-5735