



# CITY COUNCIL MEETING

Monday, December 04, 2023 at 6:00 PM  
Sandy City Hall and via Zoom

## AGENDA

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### TO ATTEND THE MEETING IN-PERSON:

Come to Sandy City Hall (lower parking lot entrance) - 39250 Pioneer Blvd., Sandy, OR 97055

### TO ATTEND THE MEETING ONLINE VIA ZOOM:

Please use this link: <https://us02web.zoom.us/j/89439727236>

Or by phone: (253) 215-8782; Meeting ID: 89439727236

### WORK SESSION

1. [Comprehensive Plan: Housing Capacity Analysis Work Session](#)

### REGULAR MEETING

### PLEDGE OF ALLEGIANCE

### ROLL CALL

### CHANGES TO THE AGENDA

### PUBLIC COMMENT (3-minute limit)

The Council welcomes your comments on other matters at this time. The Mayor will call on each person when it is their turn to speak for up to three minutes.

-- **If you are attending the meeting in-person**, please submit your comment signup form to the City Recorder before the regular meeting begins at 7:00 p.m. Forms are available on the table next to the Council Chambers door.

-- **If you are attending the meeting via Zoom**, please complete the online comment signup webform by 4:00 p.m. on the day of the meeting:  
<https://www.ci.sandy.or.us/citycouncil/webform/council-meeting-public-comment-signup-form-online-attendees>.

### RESPONSE TO PREVIOUS PUBLIC COMMENTS

### CONSENT AGENDA

2. [City Council Minutes: November 20, 2023](#)
3. [Library Advisory Board Appointments](#)

## **NEW BUSINESS**

4. [Contract Approval: Design for Portland to Sandy Water Filtration Plant Transmission System](#)
5. [Resolution 2023-35: SDC Charges for Commercial to Residential Use Conversions, Per HB 2984](#)

## **REPORT FROM THE CITY MANAGER**

## **COMMITTEE / COUNCIL REPORTS**

## **STAFF UPDATES**

Monthly Reports: <https://reports.cityofsandy.com/>

## **ADJOURN**

Americans with Disabilities Act Notice: Please contact Sandy City Hall, 39250 Pioneer Blvd. Sandy, OR 97055 (Phone: 503-668-5533) at least 48 hours prior to the scheduled meeting time if you need an accommodation to observe and/or participate in this meeting.



# STAFF REPORT

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**Meeting Type:** City Council and Planning Commission Joint Work Session  
**Meeting Date:** December 4, 2023  
**From:** Kelly O'Neill, Jr., Development Services Director  
 Beth Goodman and Nicole Underwood, ECONorthwest  
**Subject:** Comprehensive Plan: Housing Capacity Analysis Work Session

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## PURPOSE / OBJECTIVE:

The purpose of this joint work session is to gather input from the City Council and the Planning Commission on the Housing Capacity Analysis (HCA). A Housing Capacity Analysis (HCA) includes an assessment of current and future (20 year) demand for housing units across a range of prices, rent levels, locations, housing types, and densities. The HCA then compares these needs with the community's 20-year supply of buildable residential land.

## BACKGROUND / CONTEXT:

The City recently completed a draft HCA as part of the broader Comprehensive Plan update process. The HCA provides essential information about Sandy's residential land sufficiency and housing growth needs over the 20-year planning period from 2023 to 2043. Sandy must complete an HCA every eight years as required by Goal 10 (housing) of Oregon's Statewide Land Use Planning Goals. This HCA report must be completed and adopted by December 31, 2025.

In particular, the HCA examines how population growth, demographics, and economic factors including housing costs and incomes will impact the types of housing that Sandy will need in the future. Forecasting housing growth allows the City to ensure there is enough residential land to accommodate population growth, as well as set policies to ensure that the City is planning for housing that will be affordable at the income levels of Sandy's households. The HCA provides the factual basis for updating the City's Comprehensive Plan as well as the foundation for developing a Housing Production Strategy (HPS) which the City is planning to undertake in 2024 as required by House Bill 2003.

## KEY FINDINGS

- **Sandy is forecast to grow by 6,350 people between 2023 and 2043.** To accommodate this population growth, the city will need 2,424 new dwelling units over the 20-year period, averaging construction of 121 units annually.
- **Sandy does not have enough land to meet its projected housing need.** The analysis identified a deficit of 8 acres (70 units) in the R-2 zoning designation. The city has sufficient residential capacity in other zones to accommodate this deficit within the Sandy UGB. Addressing this 8-acre shortfall will be important to meet Sandy's housing needs over the next 20 years. Sandy is required to address this land deficit before adopting the HCA.
- **Sandy needs a wider range of housing types for both rent and ownership.** The HCA projects a housing mix for future development in Sandy of 60% single-family detached, 7% townhouses, 5% duplexes, triplexes, quadplexes, and 28% multifamily structures with 5+ units. This represents a shift from Sandy's current housing stock, which is 79% single-family detached homes. The projections align with the need for more diverse and affordable options for more income ranges.
- **Housing prices have risen substantially in Sandy over the past decade.** The median sales home price increased 80% since 2015 and rents increased 41%. The median home sales price reached \$475,000 in December 2022. The average asking rent for an apartment (including utilities) is about \$1,840.
- **Housing in Sandy is becoming difficult to afford for many people who work in Sandy.** In 2021, the average wage for a covered employee in Sandy was \$43,856. To afford the average monthly rent for an apartment including utilities of \$1,840, households need at least two earners making average or higher wages. Even two-worker households with relatively high-wage jobs cannot afford today's home sales prices. A household would need to earn about \$146,000 annually to afford Sandy's median home sales price of \$475,000.
- **Long-time Sandy residents are also impacted by rising housing costs.** Many people who grew up in Sandy and are ready to form their own households can no longer afford to rent or buy starter homes in Sandy. With average rents requiring two incomes and home prices far exceeding what most can pay, Sandy residents who may want to remain in their hometown are being priced out as costs rapidly escalate. About 32% of current Sandy residents are cost burdened (spending 30% or more of their income on housing). Renters are even more cost burdened with about 60% of current Sandy residents who rent being cost burdened.
- **Sandy's wastewater deficiencies limit the City's ability to accommodate projected growth.** Sandy has a development moratorium in place due to the limited capacity of its wastewater infrastructure. Building capacity in Sandy's wastewater system will be essential in meeting the housing needs of future residents, but this will obviously take time to accomplish.

The HCA gives the City a fact-based foundation to make plans and investments in residential development. With the needs and opportunities identified in the HCA, the City can refine the policies in the Comprehensive Plan.

**KEY CONSIDERATIONS / ANALYSIS:**

Staff is requesting that the City Council and the Planning Commission consider the following questions during this work session:

- Do you have questions or concerns about the inventory of buildable land, need for housing affordable to people who live in Sandy, or the forecast of residential land needs?

Any edits generated at this work session will be incorporated into the HCA document, at which point the HCA will be considered to be complete pending final adoption.

**BUDGET IMPACT:**

None at this time.

**LIST OF ATTACHMENTS / EXHIBITS:**

- Exhibit A. Housing Capacity Analysis (HCA)
- Exhibit B. HCA Presentation

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# City of Sandy

## Housing Capacity Analysis

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October 2023

Prepared for: City of Sandy

**DRAFT** Report

**ECONorthwest**

ECONOMICS • FINANCE • PLANNING

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# Acknowledgements

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ECONorthwest prepared this report for the City of Sandy. ECONorthwest and the City thank the many people who helped to develop the Sandy Housing Capacity Analysis. This project is funded by Oregon general fund dollars through the Department of Land Conservation and Development (DLCD). The contents of this report do not necessarily reflect the views or policies of the State of Oregon.

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 Khrys Jones, Sandy Area Chamber of  
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 Greg Brewster, City of Sandy IT Director

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# Executive Summary

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The City of Sandy has changed considerably since it last conducted a housing capacity analysis (HCA) in 2015. Sandy grew from 9,570 people in 2010 to 12,991 people in 2022, an addition of 3,421 people or 36% growth. Between 2014 and May 2023, 852 new units were built in the City of Sandy, of which 69% were for single-family units and 31% for multi-dwelling units.

Sandy, much like Clackamas County and the broader Portland metro region, has witnessed a surge in housing costs. Median home sale prices increased 80% between December 2015 and December 2022, from \$264,000 to \$475,000. In 2020, 32% of all households in Sandy were cost burdened. Cost burden was most common among renters, with 60% of renters experiencing cost burden in 2020—33% of which were severely cost burdened.

Concerns about housing affordability affect people who live and work in Sandy. Many workers in Sandy cannot afford to live in Sandy. In 2021, the average worker's wage was \$43,856. To cover the \$1,840 average rent plus utilities, a household needs at least two people earning average or higher wages. The median home sales price reached \$475,000 in December 2022, making it unaffordable even for higher-wage two-worker households, which would need to earn around \$146,000 annually. This situation poses challenges for residents who have grown up in Sandy and are now forming their own households, as it is becoming increasingly unaffordable to rent and acquire starter homes.

This report presents Sandy's Housing Capacity Analysis for the 2023 to 2043 period. It considers these issues and is intended to comply with statewide planning policies that govern planning for housing and residential development, including Goal 10 (Housing) and OAR 660 Division 8. The methods used for this study generally follow the *Planning for Residential Growth* guidebook, published by the Oregon Transportation and Growth Management Program (1996).

This report focused on the technical analysis to understand Sandy's housing needs over the next twenty years. It presents information about buildable land and residential capacity in Sandy, as well as expected population and housing growth. It identifies key housing needs and provides information necessary to develop policy responses to Sandy's housing needs.

The technical analysis, which is the focus of this report, required a broad range of assumptions that influenced the outcomes. The City of Sandy and ECONorthwest solicited input about these assumptions from the City's Technical Advisory Committee, Planning Commission, City Council, and the public. Local review and community input were essential to developing a locally appropriate and politically viable housing capacity analysis that will feed into *Sandy's Housing Production Strategy* report.

## How much population growth is Sandy planning for?

Sandy's population within its urban growth boundary (UGB) is expected to grow by around 6,350 people between 2023 and 2043, at an average annual growth rate of 1.9%.

### Exhibit 1. Forecast of Population Growth, Sandy UGB, 2023 to 2043

Source: ECONorthwest based on US Decennial Census 2000, and Portland State University, Population Research Center 2020.

<b>13,877</b>	<b>20,227</b>	<b>6,350</b>	<b>46% increase</b>
Residents in 2023	Residents in 2043	New Residents 2023 to 2043	1.9% AAGR

## How much housing will Sandy need?

To accommodate the city's forecasted population growth of 6,350 people, Sandy needs to plan for 2,424 new dwelling units or about 121 new dwelling units per year over the twenty-year planning period. The housing mix for this growth is expected to consist of 60% single-family detached homes, 7% townhouses, 5% duplexes, triplexes, and quadplexes, and 28% multi-dwelling housing with five or more units in each structure.

This housing mix aligns with Sandy's anticipated need for a broader range of housing types at a wider range of price points than is currently available in Sandy's housing stock, which is predominantly (79%) single-family detached homes. In particular, if Sandy wants to provide opportunities for people to live and work in Sandy, there needs to be more housing that is affordable to people with jobs in Sandy. In 2021, the average wage for people working in Sandy was \$43,856. People earning this amount can afford monthly housing costs of about \$1,100 or \$2,200 for a two-worker household earning average wages.

This planning approach builds upon the findings of Sandy's 2015 Urbanization Study, which projected that 69% of new housing would be for single-family detached and attached units, while 31% would consist of duplexes, triplexes, quadplexes, and multi-dwelling units with five or more units per structure. To better address the increasing demand for affordable housing options in Sandy, this projection assumes that a larger percentage of duplexes, triplexes, quadplexes, and multi-dwelling units (5+) will be developed in Sandy over the 20-year period. Recent development trends in Sandy have also demonstrated a shift toward more multi-dwelling development, illustrating that changes in Sandy's housing market are underway.

## How much buildable residential land does Sandy currently have?

Sandy has 657 acres of unconstrained vacant or partially vacant land, which can accommodate over 3,500 dwelling units (Exhibit 70). Sandy has approximately 449 acres available in the SFR zone, 93 acres in R-1, 68 acres in R-2, 28 acres in R-3, and 19 acres in C-2.<sup>1</sup>

## What are the key housing needs in Sandy?

- **Demographic changes suggest a shift in housing demand toward smaller, more affordable housing for both rent and ownership.** Sandy's existing housing mix is predominately single-family detached. However, key demographic and socioeconomic trends that will affect Sandy's future housing needs are increasing housing costs and housing affordability concerns for millennials, Generation Z, and Latino populations as well as an aging population. The implications of these trends are increased demand for affordable housing for families, both for ownership and rent as well as increased demand from smaller, older (often single-person) households.
- **Sandy needs more affordable housing types for homeowners.** Housing sales prices increased in Sandy over the last seven years. Between 2015 and 2022, the median sales price in Sandy increased by \$211,000 (80%). A household earning 100% of Sandy's median household income (\$114,400) could afford a home valued between about \$315,000 and \$372,000, which is less than Sandy's median home sales price of \$475,000. A household can start to afford median home sales prices in Sandy at about 128% (\$146,000) of Sandy's median household income.

Average wages in Sandy are also not high enough to pay for the median home sales price of \$475,000. In 2021, the overall average wage for people working at a business located in Sandy was \$43,856. Even two-worker households with relatively high-wage jobs cannot afford the median home sales price. Between 2015 and 2020, the median household income increased 33%. Between 2015 and 2022 the median home sales price rose by 80%

- **Sandy needs more affordable housing types for renters.** To afford the average asking rent of a multi-dwelling unit of \$1,840 (which includes basic utilities), a household would need to earn about \$73,600 or 64% of Median Family Income (MFI). About 44% of Sandy's households earn less than \$73,600 and cannot afford these rents. In addition, about 17% of Sandy's households have incomes of less than \$34,320 (30% of MFI) and are at risk of becoming houseless.

Households need to have at least two people working average-wage jobs (or above) to afford the average asking rent plus utilities. In 2021, the overall average wage for people working at a business located in Sandy was \$43,856. Single-worker

<sup>1</sup> Note: ECONorthwest reduced the "total unconstrained buildable acres" in the C-2 zone on the assumption that about 15% of vacant land in commercial areas will develop with housing, based on historical development in these plan designations.

households or two-worker households with lower-wage jobs cannot afford this rent. Between 2015 and 2020, the median household income for *renter* households decreased 10%. Between 2015 and 2022, the average asking rent increased 41%.

## What are the key findings of the Housing Capacity Analysis?

The key findings and conclusions of Sandy's Housing Capacity Analysis are that:

- **Sandy's population is forecast to grow slower than in the past.** Sandy's UGB is forecast to grow from 13,877 people in 2023 to 20,227 people in 2043, an increase of 6,350 people. This population growth will occur at an average annual growth rate of 1.9%.
- **Sandy does not have sufficient land to accommodate population growth over the twenty-year planning period.** The forecasted growth of 6,350 people will result in the demand for 2,424 new dwelling units over the twenty-year planning period, averaging 121 new dwelling units annually. Sandy has sufficient land in all plan designations *except* Village R-2, which has a deficit of about 8 acres or 70 dwelling units.
- **Sandy will need to address its deficit of 8 acres (70 dwelling units) in the R-2 zone to meet housing needs over the next 20 years.** The City could address this deficit through rezoning or other land use efficiency measures. The deficit could be met through zoning land to R-2 in any Comprehensive Plan Designation, including Medium Density Residential or Village.
- **Sandy's housing needs require an increase in affordable options for both renters and homeowners, including a greater variety of attached and multi-dwelling housing types.** Historically, around 79% of Sandy's housing consisted of single-family detached homes. While it is projected that 60% of new housing in Sandy will be single-family detached, the city must also create opportunities for the development of other housing types, including single-family attached homes (7% of new housing), duplexes, triplexes, and quadplexes (5% of new housing), and multi-dwelling structures with five or more units (28% of new housing).<sup>2</sup> Sandy can effectively address its housing needs based on these assumptions.
  - Several factors are driving this shift in housing demand in Sandy, including changing demographics and decreasing housing affordability. Household formations among millennials and Gen Zers, as well as the aging of baby boomers, will generate demand for both rental and owner-occupied housing, spanning a range of options from single-family detached homes to accessory dwelling units,

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<sup>2</sup> This housing mix aligns with Sandy's anticipated need for a broader range of housing types, catering to a wider spectrum of price points than currently available in Sandy's housing stock. This planning approach builds upon the findings of Sandy's 2015 Urbanization Study, which projected that 69% of new housing would be for single-family detached and attached units, while 31% would consist of duplexes, triplexes, quadplexes, and multi-dwelling units with five or more units per structure.

- townhouses, duplexes, triplexes, quadplexes, and multi-dwelling structures. Some millennials and Gen Zers along with aging baby boomers may prefer housing in walkable neighborhoods with convenient access to services. Moreover, some housing units must be spacious enough to accommodate growing families while remaining reasonably affordable.
- Sandy complied with the requirements of House Bill 2001 to allow duplexes on lots where single-family detached housing is allowed. Enabling a broader range of housing options in more areas is expected to result in a shift in the housing mix developed over the next two decades, especially in regions with significant expanses of vacant buildable land.
  - Failure to diversify housing types and provide housing options affordable to households with incomes below 80% MFI (\$91,500), will perpetuate affordability challenges. About 32% of Sandy's households are cost burdened (paying more than 30% of their income on housing), including a cost burden rate of 60% for renter households. However, providing opportunities for housing affordable to households with incomes below 80% of MFI is likely to require more than zoning code changes, an issue that will be addressed in Sandy's Housing Production Strategy.
  - **Sandy needs more housing options affordable to lower and middle-income households.** Sandy requires more housing options that cater to lower and middle-income households, encompassing those with extremely low incomes, very low incomes, individuals experiencing homelessness, and families with low to middle incomes. These housing needs encompass both the current unmet demands for housing (from those experiencing cost burden and homelessness) as well as the anticipated requirements for new households throughout the twenty-year planning duration.
    - About 32% of Sandy's households have extremely low incomes or very low incomes, with household incomes below \$57,000. At most, these households can afford \$1,430 in monthly housing costs. The average asking price for a multi-dwelling unit with utilities was \$1,840 in 2022. Development of housing affordable to these households (either rentals or homes for sale) rarely occurs without government subsidy or other assistance. Meeting the housing needs of extremely low-income and very low-income households will be a significant challenge to Sandy.
    - About 47% of Sandy's households have low or middle incomes, with household incomes between \$57,000 and \$137,000. These households can afford between \$1,430 and \$2,860 in monthly housing costs. Households at the lower end of this income category may struggle to find affordable rental housing, especially with the growing costs of rental housing across Oregon. Some of the households in this group are part of the 32% of all households that are cost burdened. Development of rental housing affordable to households in this income category (especially those with middle incomes) can occur without government subsidy.
    - The need for these types of affordable housing has impacts on Sandy's economy when people who work in Sandy cannot find housing, much less affordable housing,

in the city. People working in Sandy frequently commute from places like Gresham, Portland, and the communities by Mount Hood.

- **Implement development code modifications to allow and support development of prefabricated housing.** The State is developing new model codes to support use of mass timber in newly built modular housing, a type of prefabricated housing. Sandy could implement this code to allow for development of these types of prefabricated housing, which can provide more affordable housing. ORS 197.314 requires prefabricated housing to be allowed on all land zoned to allow the development of single-family dwellings, the same as manufactured housing. Sandy will need to modify its development code to define prefabricated housing<sup>3</sup> and to allow for siting of prefabricated housing in manufactured home parks and where it allows single-unit housing. Sandy is currently pursuing a grant to support these changes.
- **Update the development code to remove special requirements for manufactured housing on lots.** ORS 197.314 requires that manufactured housing not be subject to development standards that are different from single-family housing. Sandy may need to modify its development code to remove requirements for unit size, roofs, and siding to be consistent with requirements for single-family units. Sandy is currently undergoing a Clear and Objective Code Audit which will address these requirements.
- **Key infrastructure barriers limit Sandy’s ability to accommodate projected growth.** Sandy has a development moratorium in place due to the limited capacity of its wastewater infrastructure. Building capacity in Sandy’s wastewater system will be essential in meeting the housing needs of future residents, but this will take time. While the exact timeline of the moratorium is unknown, the City is conducting an analysis to determine how much capacity is available for development over the next few years. This analysis is expected to be completed in fall 2023.

The *Sandy Housing Production Strategy* will include recommendations for a wide range of policies to support the development of housing for people experiencing homelessness and housing for extremely low to middle-income households. The *Housing Production Strategy* will also include recommendations that are intended to improve equitable outcomes for housing development, as well as strategies to support the development of all types of housing.

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<sup>3</sup> ORS 455.010 defines a prefabricated structure as “a building or subassembly that has been in whole or substantial part manufactured or assembled using closed construction at an off-site location to be wholly or partially assembled on-site.”

In addition, ORS 197.286 (5) adds an additional qualifier for the purposes of land use planning, requiring prefabricated structures, as defined in ORS 455.010, to be relocatable, more than eight and one-half feet wide, and designed for use as a single-family dwelling.



# 1. Introduction

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Sandy has emerged as an attractive residential destination, boasting easy access to outdoor recreational opportunities, a charming small-town atmosphere, and close proximity to the bustling Portland metro region. Between 2000 and 2022, the city more than doubled in population, growing at a faster rate than both the county and the state. Sandy is home to a variety of industries, encompassing retail trade, manufacturing, and services catering to both residents and visitors. Need for affordable housing affects people who live and work in Sandy.

Sandy, much like Clackamas County and the broader Portland metro region, has witnessed a surge in housing costs. Median home sale prices increased 80% between December 2015 and December 2022, from \$264,000 to \$475,000. The average asking rent increased 41% over the same period. Between 2015 and 2020 Sandy's median household income increased 33%.<sup>4</sup>

Concerns about housing affordability affect people who live and work in Sandy. Many workers in Sandy cannot afford to live in Sandy. The average wage of a worker in Sandy was \$43,856 in 2021. Households need to have at least two people working average-wage jobs (or above) to afford the average asking rent plus utilities of \$1,840.<sup>5</sup> The median home sales price of a house in Sandy was \$475,000 as of December 2022. Even two-worker households with relatively high-wage jobs cannot afford the median home sales price. Workers would need to earn approximately \$146,000 annually to afford this sales price. In 2020, approximately 32% of households in Sandy were cost burdened by housing expenses. This cost burden was most prevalent among renters, with 60% experiencing cost burden, including 33% of renters who were severely cost burdened.<sup>6</sup>

This situation poses challenges for residents who have grown up in Sandy and are now forming their own households, as renting and acquiring starter homes becomes progressively unaffordable. Sandy also has a larger share of households with children (46%) than Clackamas County (29%) or Oregon (25%), suggesting a need for housing that can accommodate larger families.

Sandy last conducted a housing capacity analysis (HCA) in 2015 as part of a broader urbanization study that considered whether Sandy had enough land for both housing and employment over the 2014-2034 period. The study concluded that Sandy had a deficit of land zoned for low and medium-density residential and commercial development. In 2017 the City, Clackamas County, and the Department of Land Conservation and Development (DLCD)

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<sup>4</sup> The median household income for *renter* households decreased 10% between 2015 and 2020.

<sup>5</sup> Average asking rent was about \$1,590 in 2022 according to Costar. ECONorthwest assumed \$250 per month for utilities for a total housing cost of \$1,840.

<sup>6</sup> Households paying more than 30% of their income on housing experience "cost burden" and households paying more than 50% of their income on housing experience "severe cost burden."

approved an urban growth boundary expansion that added over 300 acres for residential development.

Continuing to plan for future growth, especially given increasing housing prices in the Portland region, make this a good time for Sandy to conduct an HCA to effectively plan for the city's housing needs over the next two decades. This report serves as a factual foundation for updating Sandy's Housing Element within the Comprehensive Plan and zoning code, as well as for guiding future planning initiatives aimed at addressing unmet housing needs. By providing up-to-date information on the housing market in Sandy, this analysis equips decision-makers with the necessary information to determine if the city has sufficient land to accommodate growth over the next twenty years. Additionally, the HCA aligns with statewide planning policies, including Goal 10 (Housing) and OAR 660 Division 8, ensuring compliance and enabling the development of targeted actions to effectively address Sandy's unmet housing needs.

## Framework for a Housing Capacity Analysis

Housing is a bundle of services that people are willing to pay for, which includes shelter, proximity to other attractions (employment, shopping, recreation), amenities (type and quality of fixtures and appliances, landscaping, views), prestige, and access to public services (quality of schools). Because it is impossible to maximize all these services and simultaneously minimize costs, households must, and do, make trade-offs. What they can get for their money is influenced both by economic forces and government policy. Moreover, different households will value what they can get differently. They will have different preferences, which in turn are a function of many factors like income, age of household head, number of people and children in the household, number of workers and job locations, number of automobiles, and so on.

Most of the housing in the United States is built by the private market and, therefore, responds to economic and market factors. These economic and market forces have resulted in the production of units that have housed most of our nation's households. But they have consistently left lower-income communities and communities of color with fewer housing options, forcing them to compete for a limited supply of affordable housing units. The last two decades have seen significant increases in housing costs with much slower growth in household income, resulting in an increasing unmet need for affordable housing.

This report provides information about how the choices of individual households and the housing market in Clackamas County and Sandy have interacted, focusing on implications for future housing need in Sandy over the 2023 to 2043 period. This report provides policy options that can influence future housing development, considering opportunities to increase access to affordable housing for lower-income communities and communities of color, as well as housing needs for all residents of Sandy.

## Statewide Planning Goal 10

Oregon has long been a national leader in planning to accommodate growth. The state mandates local government compliance with 19 statewide planning goals, which include public engagement, planning for natural areas, planning for housing, and planning for adequate land to support economic development and industry growth, among others. Oregon's Goal 10 requires each city to develop a housing capacity analysis, which must tie twenty years of projected household growth to dwelling units of varying densities and then determine whether there is adequate land inside the city's urban growth boundary to accommodate those units. Goal 10 directs cities to plan for "housing that meets the housing needs of households of all income levels." Oregon's statewide land use planning system requires one of the most comprehensive approaches to planning for housing in the country.

Goal 10 provides guidelines for local governments to follow in developing their local comprehensive land use plans and implementing policies. At a minimum, local housing policies must meet the requirements of Goal 10 and the statutes and administrative rules that implement it (ORS 197.295 to 197.314, ORS 197.475 to 197.490, and OAR 600-008). Goal 10 requires incorporated cities, such as Sandy, to complete an inventory of buildable residential lands. Goal 10 also requires cities to encourage the development of housing units in price and rent ranges commensurate with the financial capabilities of its households. This can look like removing development code barriers or providing incentives for the development of certain housing types. Analysis of need for these types of policy changes will be discussed in development of Sandy's Housing Production Strategy.

Goal 10 defines needed housing types as "all housing on land zoned for residential use or mixed residential and commercial use that is determined to meet the need shown for housing within an urban growth boundary at price ranges and rent levels that are affordable to households within the county with a variety of incomes, including but not limited to households with low-incomes, very low-incomes and extremely low-incomes." ORS 197.303 defines needed housing types as:

- (a) Housing that includes, but is not limited to, attached and detached single-family housing and multi-dwelling housing for both owner and renter occupancy.
- (b) Government-assisted housing.<sup>7</sup>
- (c) Mobile home or manufactured dwelling parks as provided in ORS 197.475 to 197.490.
- (d) Manufactured homes on individual lots planned and zoned for single-family residential use that are in addition to lots within designated manufactured dwelling subdivisions.
- (e) Housing for farmworkers.

Sandy must identify needs for all the housing types listed above, as part of the HCA. Through development of the Housing Production Strategy, the City must adopt policies that increase the

<sup>7</sup> Government-assisted housing can be any housing type listed in ORS 197.303 (a), (c), or (d).

likelihood that needed housing types will be developed. This Housing Capacity Analysis was developed to meet the requirements of Goal 10 and its implementing administrative rules and statutes.

## Public Process

Development of the HCA was informed by feedback from a Technical Advisory Committee (TAC) composed of City staff. The TAC met three times and discussed:

- **Meeting 1:** introduction to an HCA
- **Meeting 2:** residential building lands inventory (BLI), preliminary results of the HCA
- **Meeting 3:** draft HCA

Public engagement occurred through the Sandy Comprehensive Plan project via the following:

- **Community Conversations.** To reach a wide spectrum of Sandy community members, project staff and members of the Community Advisory Committee (CAC) facilitated community conversations with local groups, clubs, committees, and organizations in Sandy, including targeted outreach to Spanish speakers and high school students. The discussions focused on what community members value about Sandy today and what could make it a better place in the future.
- **Community Events.** The project team engaged with the community at a variety of community events throughout 2022 and 2023, staffing an *Envision Sandy 2050* booth and conducting targeted outreach through intercept surveys in English and Spanish. Events included:
  - Farmers Markets (May-August, 2022-2023)
  - Longest Day Parkway (June 2022-2023)
  - Sandy Mountain Festival (July 2022-2023)
- **Stakeholder Workshops.** Two day-long workshops conducted with City staff, Community Advisory Committee members, and technical experts to identify natural hazard vulnerabilities in Sandy and develop cross-sector strategies to address those vulnerabilities in the Comprehensive Plan.
- **Surveys and Online Engagement.** Throughout the process, online surveys were conducted to gather community priorities and identify strategies for the future of Sandy. Surveys were provided in both English and Spanish, and paper copies were available at key locations around the city. Running concurrently with outreach through community conversations and community events, the first survey was live for six months in 2022 and received 137 responses. The second survey opened in April 2023 and received 24 responses at the time of writing (*September 2023*).
- **Community Meetings.** In September 2022, the project team held *Future Fest*, a community meeting to unveil the new *Envision Sandy 2050* Vision Statement and

provide Sandy community members an opportunity to share their ideas for achieving the vision. The open house format provided an opportunity for Sandy residents and business owners to engage with their neighbors face-to-face and share ideas for the Comprehensive Plan.

The Comprehensive Plan process also included 6 decision-maker work sessions to ensure that elected and appointed officials were engaged in the process and had the opportunity to provide input and direction.

## Organization of This Report

The rest of this document is organized as follows:

- **Chapter 2. Residential Buildable Lands Inventory** presents the methodology and results of Sandy’s inventory of residential land.
- **Chapter 3. Historical and Recent Development Trends** summarizes the state, regional, and local housing market trends affecting Sandy’s housing market.
- **Chapter 4. Demographic and Other Factors Affecting Residential Development in Sandy** presents factors that affect housing need in Sandy, focusing on the key determinants of housing need: age, income, and household composition. This chapter also describes housing affordability in Sandy relative to the larger region.
- **Chapter 5. Housing Need in Sandy** presents the forecast for housing growth in Sandy, describing housing need by density ranges and income levels.
- **Chapter 6. Residential Land Sufficiency in Sandy** estimates Sandy’s residential land sufficiency needed to accommodate expected growth over the planning period of 2023 to 2043.
- **Appendix A. Residential Buildable Lands Inventory Overview of the Methodology**
- **Appendix B. National and State Demographic and Other Trends Affecting Residential Development in Sandy**

## 2. Residential Buildable Lands Inventory

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The steps in developing a buildable lands inventory (BLI) for Sandy are:

1. Calculate the gross vacant acres by plan designation, including fully vacant and partially vacant parcels.
2. Calculate gross buildable vacant acres by plan designation by subtracting unbuildable acres from total acres.
3. Calculate net buildable acres by plan designation, subtracting land for future public facilities from gross buildable vacant acres.
4. Calculate total net buildable acres by plan designation by adding redevelopable acres to net buildable acres.

The methods used for this study are consistent with many others completed by ECONorthwest that have been acknowledged by DLCD and LCDC. A detailed discussion of the methodology used in this study is provided in Appendix A.

The BLI for Sandy includes all residential land designated in the comprehensive plan within the Sandy UGB. From a practical perspective, this means that all lands within tax lots identified by the Clackamas County Assessor's Office that fall within the UGB were inventoried. ECONorthwest used the most recent tax lot shapefile from Clackamas County for the analysis. The inventory then builds from the tax lot-level database to estimate buildable land by plan designation.

## Residential Buildable Lands Inventory Results

### Land Base

The land base for the Sandy residential BLI includes all tax lots within the urban growth boundary (UGB) in residential plan designations or plan designations where housing development is allowed with clear and objective standards. Exhibit 2 shows the land base by comprehensive plan designation and zone in the UGB.

#### Exhibit 2. Land Base by Plan Designation, Sandy UGB, 2023

Source: Clackamas County, ECONorthwest analysis. Note: The number of tax lots represented is greater than the actual total number of tax lots in the analysis due to split plan designations.

Comprehensive Plan Designation/Zone	Number of tax lots	Percent	Total tax lot acreage	Percent
<b>Low Density Residential (LDR)</b>	<b>2,109</b>	<b>47%</b>	<b>1,154</b>	<b>51%</b>
Low Density Residential (R-1)	239	5%	31	1%
Medium Density Residential (R-2)	1	0%	0	0%
Single-Family Residential (SFR)	1,869	42%	1,123	49%
<b>Medium Density Residential (MDR)</b>	<b>491</b>	<b>11%</b>	<b>273</b>	<b>12%</b>
Medium Density Residential (R-2)	444	10%	262	12%
High Density Residential (R-3)	45	1%	11	0%
Single-Family Residential (SFR)	1	0%	0	0%
General Commercial (C-2)	1	0%	0	0%
<b>High Density Residential (HDR)</b>	<b>515</b>	<b>12%</b>	<b>135</b>	<b>6%</b>
High Density Residential (R-3)	515	12%	135	6%
<b>Village (V)</b>	<b>980</b>	<b>22%</b>	<b>331</b>	<b>15%</b>
Low Density Residential (R-1)	566	13%	202	9%
Medium Density Residential (R-2)	164	4%	29	1%
High Density Residential (R-3)	135	3%	23	1%
Single-Family Residential (SFR)	109	2%	69	3%
Village Commercial (C-3)	6	0%	8	0%
<b>Commercial (C)</b>	<b>365</b>	<b>8%</b>	<b>383</b>	<b>17%</b>
Central Business District (C-1)	231	5%	54	2%
General Commercial (C-2)	134	3%	328	14%
<b>Total</b>	<b>4,460</b>	<b>100%</b>	<b>2,277</b>	<b>100%</b>

## Development Status

Exhibit 3 shows the total acres of residential tax lots classified by development status. We used a rule-based classification (described in Appendix A) to define an initial development status. We confirmed development status through a series of reviews by ECONorthwest and City staff, based on local knowledge and review of aerial maps. Committed acres includes developed land on tax lots that are fully developed or the portions of lots that are partially developed, as well as lands given a development status of public (see Appendix A: Residential Buildable Lands Inventory) which includes publicly owned land, churches, and cemeteries. Constrained acres are land constrained by development constraints (e.g., floodplains), as described below and shown in

Exhibit 4.

### Exhibit 3. Residential Land by Development Status, Sandy UGB, 2023

Source: Clackamas County, ECONorthwest analysis.

Note: This table excludes the following zones, as they have less than 1 acre of land in tax lots: the R-2 zone in the Low Density Residential plan designation, and the SFR and C-2 zone in the Medium Density Residential plan designation.

Comprehensive Plan Designation/Zone	Total Acres	Committed Acres	Constrained Acres	Buildable Acres Unconstrained Vacant & Partially Vacant
<b>Low Density Residential (LDR)</b>	<b>1,154</b>	<b>421</b>	<b>314</b>	<b>420</b>
Low Density Residential (R-1)	31	26	4	2
Single-Family Residential (SFR)	1,123	395	310	418
<b>Medium Density Residential (MDR)</b>	<b>273</b>	<b>140</b>	<b>74</b>	<b>60</b>
Medium Density Residential (R-2)	262	134	68	60
High Density Residential (R-3)	11	5	6	0
<b>High Density Residential (HDR)</b>	<b>135</b>	<b>95</b>	<b>29</b>	<b>12</b>
High Density Residential (R-3)	135	95	29	12
<b>Village (V)</b>	<b>331</b>	<b>140</b>	<b>40</b>	<b>151</b>
Low Density Residential (R-1)	202	95	15	91
Medium Density Residential (R-2)	29	19	2	8
High Density Residential (R-3)	23	6	2	16
Single-Family Residential (SFR)	69	18	20	31
Village Commercial (C-3)	8	3	1	4
<b>Commercial (C)</b>	<b>383</b>	<b>178</b>	<b>76</b>	<b>128</b>
Central Business District (C-1)	54	51	3	1
General Commercial (C-2)	328	127	73	128
<b>Total</b>	<b>2,277</b>	<b>974</b>	<b>532</b>	<b>771</b>



## Development Constraints

The buildable lands inventory identifies the following conditions as constraints that prohibit development:

- Bonneville Power Administration (BPA) Right-of-Way
- FEMA Regulatory Floodway and 100-Year Floodplains
- Flood and Slope Hazard (FSH) Overlay Stream and Slope Setbacks
- Landslide Susceptibility “High” or “Very High”
- Locally Significant Wetlands

Slopes Greater than 25 Percent

Exhibit 4 shows these constraints.

Exhibit 4. Development Constraints, Sandy UGB, 2023

Source: Clackamas County, ECONorthwest analysis

Note: The FSH Overlay is the Flood and Slope Hazard (FSH) Overlay Stream and Slope Setbacks

### Sandy Buildable Lands Inventory Constraints

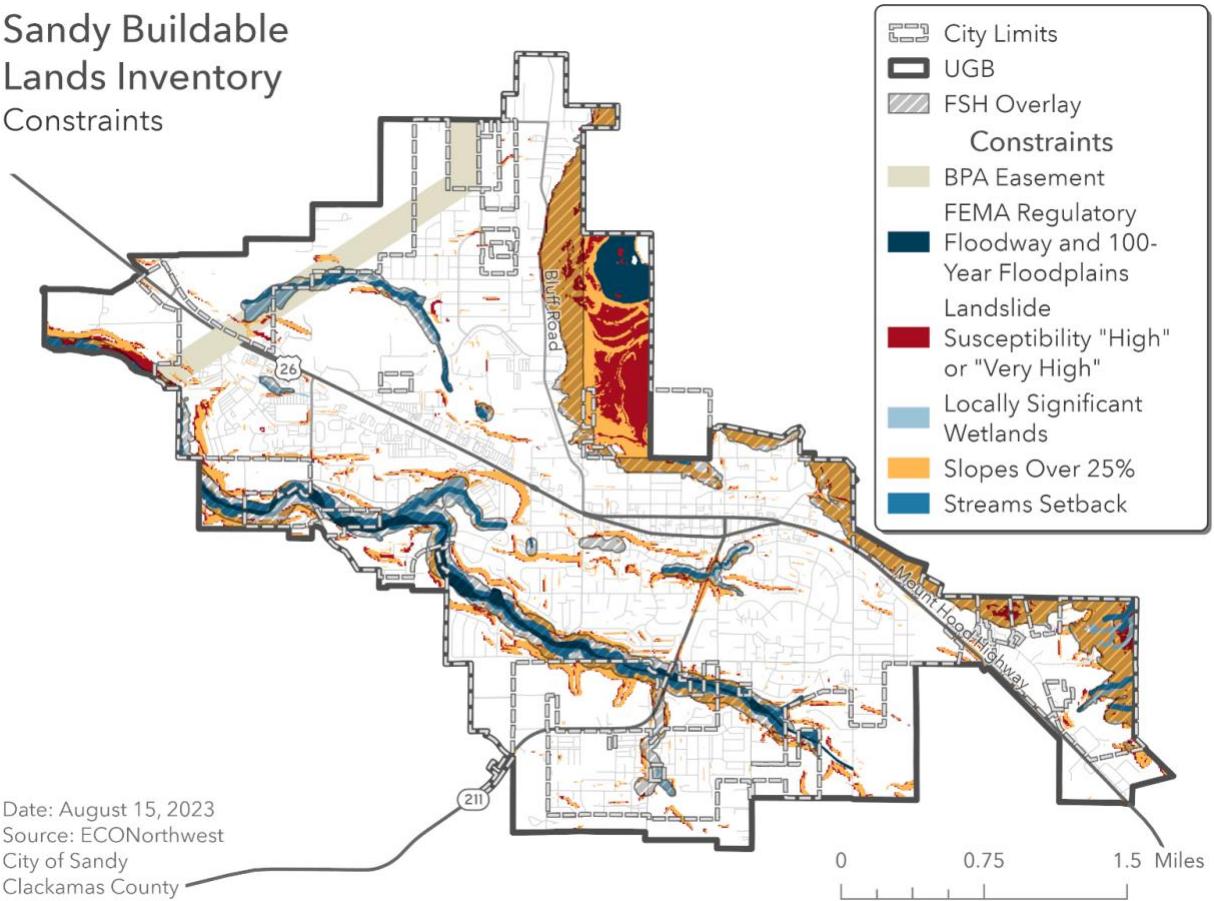
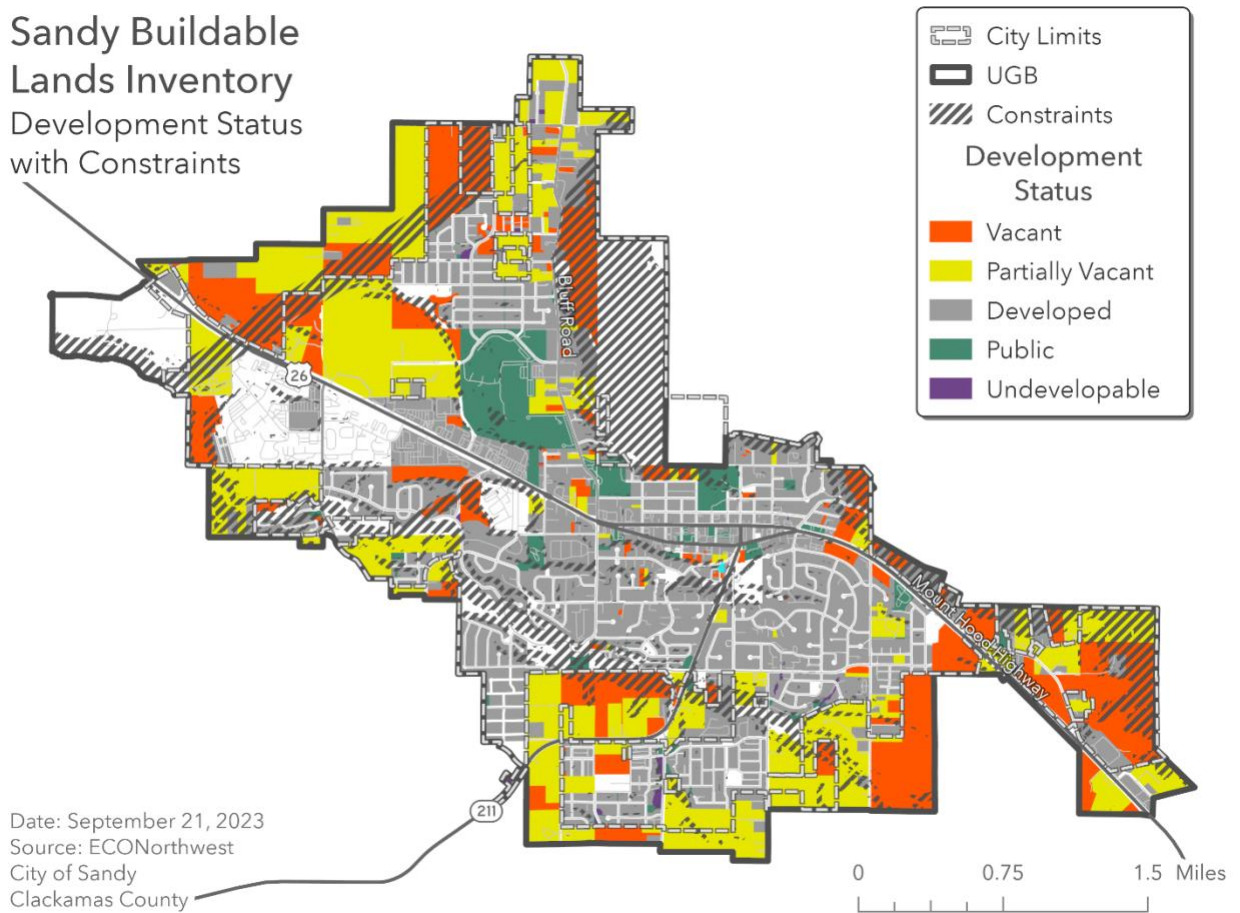


Exhibit 5 shows development status with constraints applied, resulting in buildable acres. Vacant or partially vacant land within these constraints is considered unavailable for development and was removed from the inventory of buildable land.

Exhibit 5. Development Status with Constraints, Sandy UGB, 2023  
Source: Clackamas County, ECONorthwest analysis.

### Sandy Buildable Lands Inventory Development Status with Constraints



## Vacant Unconstrained Buildable Land

Exhibit 6 shows buildable acres (i.e., acres in tax lots after constraints are deducted) for vacant and partially vacant land by zone.

Exhibit 6. Buildable Acres in Vacant/Partially Vacant Tax Lots by Plan Designation, Sandy UGB, 2023  
Source: Clackamas County, ECONorthwest analysis.

Comprehensive Plan Designation/Zone	Total Buildable Acres	Buildable Acres on Vacant Lots	Buildable Acres on Partially Vacant Lots
<b>Low Density Residential (LDR)</b>	<b>420</b>	<b>127</b>	<b>293</b>
Low Density Residential (R-1)	2	2	-
Single-Family Residential (SFR)	418	125	293
<b>Medium Density Residential (MDR)</b>	<b>60</b>	<b>24</b>	<b>36</b>
Medium Density Residential (R-2)	60	24	36
High Density Residential (R-3)	0.1	0	-
<b>High Density Residential (HDR)</b>	<b>12</b>	<b>11</b>	<b>0</b>
High Density Residential (R-3)	12	11	0
<b>Village (V)</b>	<b>151</b>	<b>71</b>	<b>80</b>
Low Density Residential (R-1)	91	34	58
Medium Density Residential (R-2)	8	8	-
High Density Residential (R-3)	16	14	2
Single-Family Residential (SFR)	31	15	17
Village Commercial (C-3)	4	1	3
<b>Commercial (C)</b>	<b>128</b>	<b>50</b>	<b>78</b>
Central Business District (C-1)	1	0	1
General Commercial (C-2)	128	50	78
<b>Total</b>	<b>771</b>	<b>283</b>	<b>488</b>

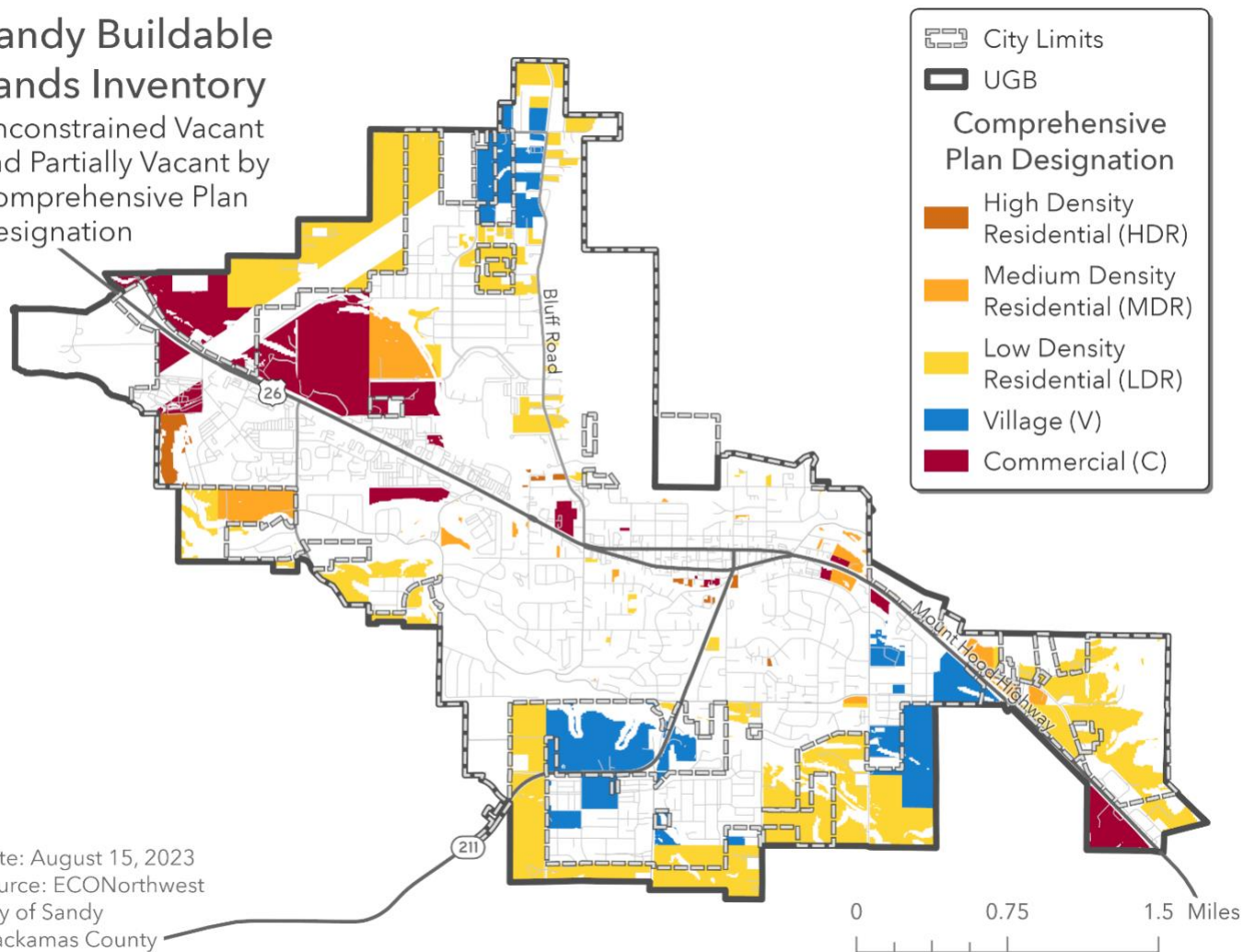
Exhibit 7 shows Sandy's buildable vacant and partially vacant residential land.

Exhibit 7. Unconstrained Vacant and Partially Vacant Residential Land, Sandy UGB, 2023

Source: Clackamas County, ECONorthwest analysis.

### Sandy Buildable Lands Inventory

Unconstrained Vacant and Partially Vacant by Comprehensive Plan Designation



Date: August 15, 2023  
Source: ECONorthwest  
City of Sandy  
Clackamas County

### 3. Historical and Recent Development Trends

Analysis of historical development trends in Sandy provides insight into the local housing market. In particular, the mix of housing types and densities are key variables in forecasting the capacity of residential land to accommodate new housing and to forecast future land need.

This Housing Capacity Analysis examines changes in Sandy’s housing market from 2000 to 2020, as well as residential development from 2014 to 2021. We selected this period because (1) Sandy last adopted its Housing Needs Analysis in 2015; (2) the period provides information about Sandy’s housing market before and after the national housing market bubble’s growth, deflation, and the more recent increase in housing costs; and (3) data about Sandy’s housing market during this period is readily available from sources such as the Census and the City building permit database.

For the purposes of this analysis, we grouped housing types based on (1) whether the structure is stand-alone or attached to another structure and (2) the number of dwelling units in each structure. The housing types used in this analysis are consistent with needed housing types as defined in ORS 197.303:<sup>8</sup>

- **Single-family detached** includes single-family detached units, manufactured homes on lots and in mobile home parks, and accessory dwelling units. Single-family detached also includes cottage cluster housing.
- **Single-family attached** are all structures with a common wall where each dwelling unit occupies a separate lot, such as row houses or town houses.
- **Multi-dwelling with 2 to 4 units** are attached structures such as duplexes, triplexes, and quadplexes. These units are referred to as “plexes” in this report.
- **Multi-dwelling with 5 or more units** are attached structures with five or more dwelling units per structure.

In Sandy, government-assisted housing (ORS 197.303[b]) and housing for farmworkers (ORS 197.303[e]) can be any of the housing types listed above. Sandy’s development code does not mention prefabricated housing. ORS 197.314 requires prefabricated to be allowed on all land zoned to allow the development of single-family dwellings, the same as manufactured housing.<sup>9</sup> Analysis within this report discusses housing affordability at a variety of incomes, as required in ORS 197.303.

<sup>8</sup> ORS 197.303 defines needed housing as “all housing on land zoned for residential use or mixed residential and commercial use that is determined to meet the need shown for housing within an urban growth boundary at price ranges and rent levels that are affordable to households within the county with a variety of incomes.”

<sup>9</sup> Sandy is currently undergoing a code audit that will address the requirements of ORS 197.314.

## Data Used in This Analysis

Throughout this analysis (including the subsequent Chapter 4) we used data from multiple well-recognized and reliable data sources. One of the key sources for housing and household data is the US Census. This report primarily uses data from three Census sources:<sup>10</sup>

- The **Decennial Census**, which is completed every ten years and is a survey of *all* households in the United States. The Decennial Census does not collect more detailed household information, such as income, housing costs, housing characteristics, and other important household information.
- The **American Community Survey (ACS)**, which is completed every year and is a *sample* of households in the United States. The ACS collects detailed information about households, including demographics (e.g., number of people, age distribution, ethnic or racial composition, country of origin, language spoken at home, and educational attainment), household characteristics (e.g., household size and composition), housing characteristics (e.g., type of housing unit, year unit built, or number of bedrooms), housing costs (e.g., rent, mortgage, utility, and insurance), housing value, income, and other characteristics. The most up-to-date ACS data available for this report was for the 2016-2020 period.
- **Comprehensive Housing Affordability Strategy (CHAS)**, which is custom tabulations of American Community Survey (ACS) data from the US Census Bureau for the US Department of Housing and Urban Development (HUD). CHAS data show the extent of housing problems and housing needs, particularly for low-income households. CHAS data are typically used by local governments as part of their consolidated planning work to plan how to spend HUD funds and for HUD to distribute grant funds. The most up-to-date CHAS data covers the 2015-2019 period, which is a year older than the most recent ACS data for the 2016-2020 period.

This report primarily uses data from the 2016-2020 ACS for Sandy and comparison areas. Where information is available and relevant, we report information from the 2000 and 2010 Decennial Census.<sup>11</sup> Among other data points, this report also includes data from Oregon’s Housing and

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<sup>10</sup> The American Community Survey (ACS) is a national survey that uses continuous measurement methods. It uses a sample of about 3.54 million households to produce annually updated estimates for the same small areas (census tracts and block groups) formerly surveyed via the Decennial Census long-form sample. All ACS data are subject to sample variability or “sampling error” that is expressed as a band or “margin of error” (MOE) around the estimate. This report uses Census and ACS data because, despite the inherent methodological limits, they represent the most thorough and accurate data available to assess housing needs. We consider these limitations in making interpretations of the data and have strived not to draw conclusions beyond the quality of the data.

<sup>11</sup> The 2020 Census was completed at the end of 2020 but was more limited than usual because of the COVID-19 pandemic. This report uses 2016-2020 ACS data, rather than 2020 Decennial Census data, for up-to-date information. Throughout the report for readability, information based on the 2016-2020 ACS will be reported as 2020.

Community Services Department, the US Department of Housing and Urban Development, and the City of Sandy. The foundation of the HCA is the population forecast for Sandy from the Oregon Population Forecast Program. The forecast is prepared by the Portland State University Population Research Center.

## Trends in Housing Mix

This section provides an overview of changes in the mix of housing types in Sandy and compares Sandy to Clackamas County and Oregon. These trends demonstrate the types of housing developed in Sandy historically. Key trends in Sandy's housing mix include:

- **Since 2000, Sandy's housing stock has more than doubled.** Sandy's housing stock grew by about 108% (2,246 new units) between 2000 and 2020.
- **Sandy's housing stock is predominantly single-family detached housing units.** Seventy-nine percent of Sandy's housing stock is single-family detached; 10% is multi-dwelling (with five or more units per structure); 4% is duplexes, triplexes, and quadplexes; and 11% is single-family attached (e.g., town houses).
- **Single-family housing accounted for the majority of new housing built in Sandy between 2014 and May 2023.** About 69% were for single-family units and 31% for multi-dwelling units. Since 2019, 253 units of multi-dwelling housing were permitted.

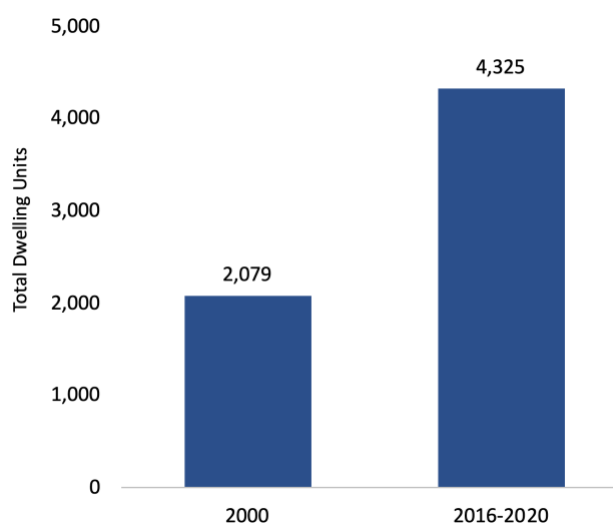
### Housing Mix

**The total number of dwelling units in Sandy increased by 108% from 2000 to 2020.**

Sandy added 2,246 new dwelling units since 2000.

Exhibit 8. Total Dwelling Units, Sandy, 2000 and 2016-2020

Source: US Census Bureau, 2000 Decennial Census, SF3 Table H030, and 2016-2020 ACS Table B25024.



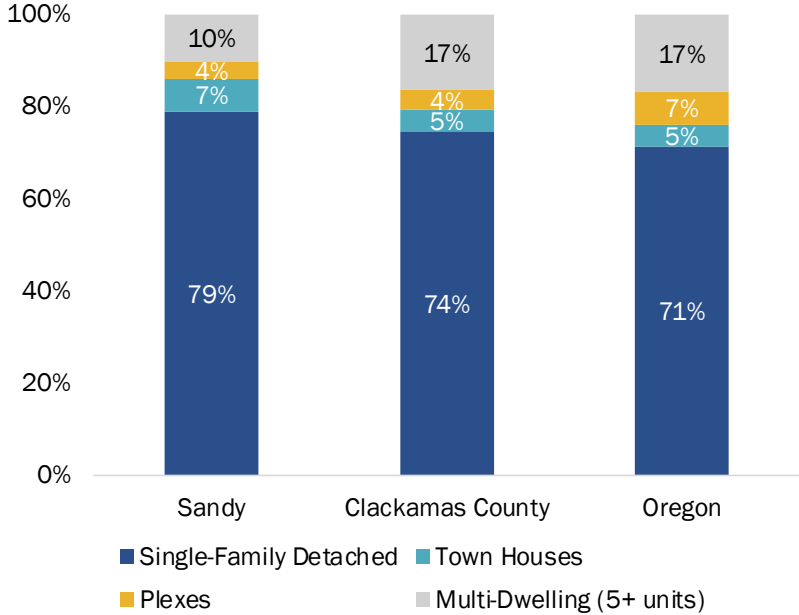


**Seventy-nine percent of Sandy's housing stock was single-family detached.**

Sandy had a smaller share of multi-dwelling housing (5+ units per structure) than Clackamas County and the state.

**Exhibit 9. Housing Mix, Sandy, Clackamas County, and Oregon, 2016-2020**

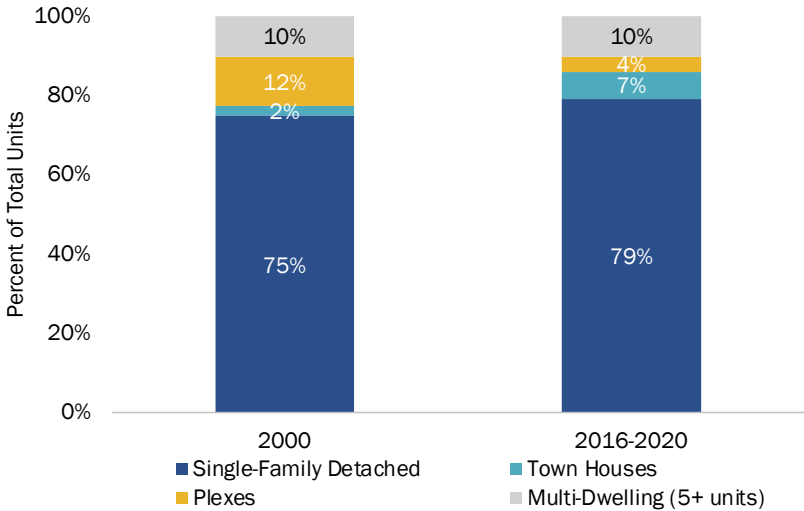
Source: US Census Bureau, 2016-2020 ACS Table B25024.  
 Note: Plexes are duplexes, triplexes, and quadplexes.



**From 2000 to 2020, the share of single-family detached housing in Sandy increased.**

**Exhibit 10. Change in Housing Mix, Sandy, 2000 and 2016-2020**

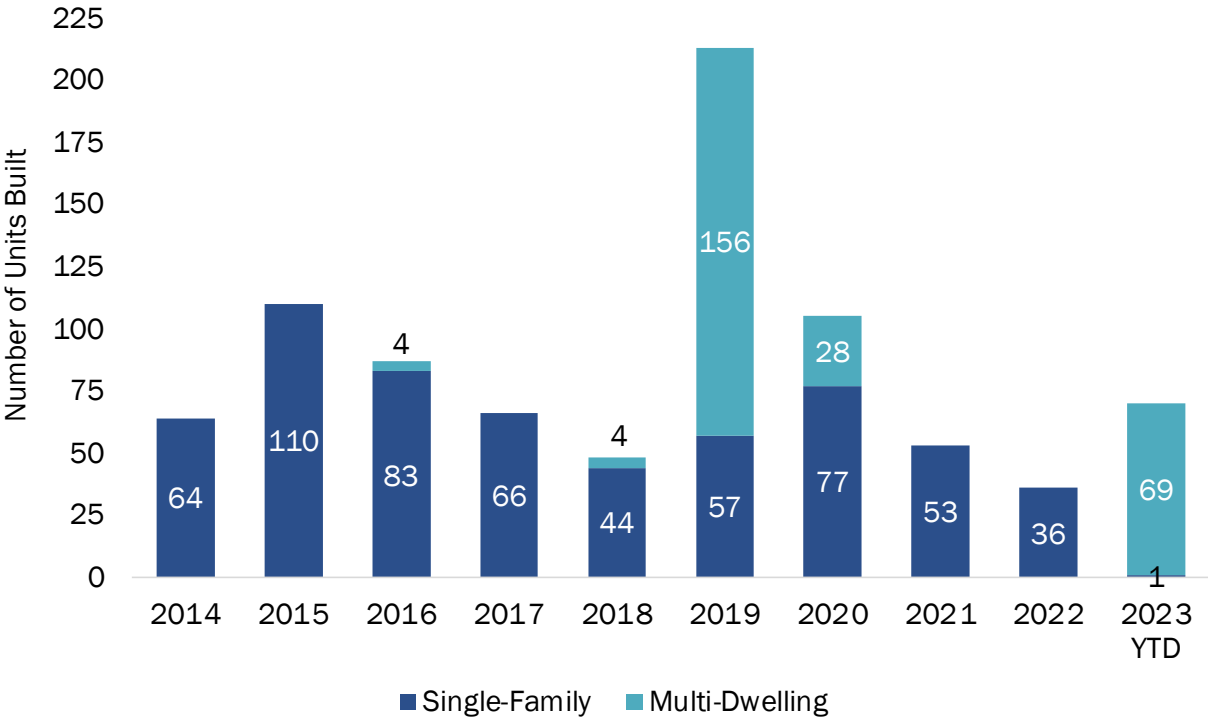
Source: US Census Bureau, 2000 Decennial Census, SF3 Table H030, and 2016-2020 ACS Table B25024.  
 Note: Plexes are duplexes, triplexes, and quadplexes.



### Building Permits

Over the 2014 to May 2023 period, 852 units were built in the City of Sandy. Of the 852 units built, about 69% were for single-family units and 31% for multi-dwelling units.

Exhibit 11. Units Built By Structure Type, Sandy 2014 through May 2023  
Source: City of Sandy, Permit Database.



In addition to the units built shown above, the City issued an additional five building permits prior to 2022 for a total of 67 units. These units have not been completed as of May 2023 and consist of 67 units as part of a condo development, two duplexes, and two single-family units. This data suggests a trend toward more multi-dwelling development in the City in recent years.

## Trends in Tenure

Housing tenure describes whether a dwelling is owner or renter occupied. This section shows:

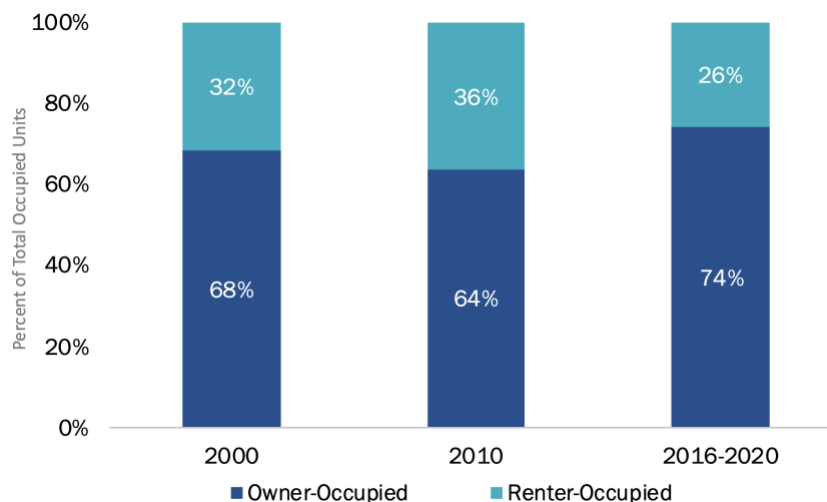
- **Homeownership rates were slightly higher in Sandy than Clackamas County and Oregon.** About 74% of Sandy's households own their home. In comparison, 71% of Clackamas County households and 63% of Oregon households are homeowners.
- **Homeownership rates in Sandy increased between 2000 and 2020.** In 2000, 68% of Sandy households were homeowners. This increased to 74% in 2020.
- **Most of Sandy's homeowners (93%) live in single-family detached housing, while more than half of renters (55%) lived in multi-dwelling housing** (including units in duplexes, triplexes, quadplexes, and housing with five or more units per structure).

The implications for the forecast of new housing are that Sandy has an imbalance of opportunities for homeownership and renting. Relatively few multi-dwelling housing types (including duplexes) were owner occupied which, when combined with information about housing affordability in Chapter 4, may suggest a need for homeownership opportunities for a wider range of housing types such as town houses, cottage housing, duplexes, triplexes, quadplexes, and possibly multi-dwelling condominiums. In addition, broadening the types of rental housing may provide more opportunity for affordable rents.

**The homeownership rate in Sandy increased by 6% from 2000 to 2020.**

Exhibit 12. Tenure, Occupied Units, Sandy, 2000, 2010, 2016-20

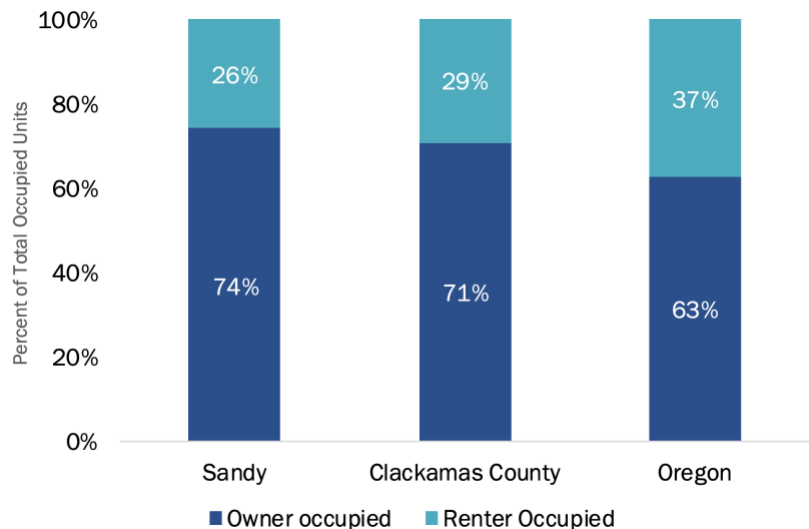
Source: US Census Bureau, 2000 Decennial Census SF1 Table H004, 2010 Decennial Census SF1 Table H4, 2016-2020 ACS Table B25003.



**Sandy had a higher homeownership rate than Clackamas County and Oregon.**

**Exhibit 13. Tenure, Occupied Units, Sandy, Clackamas County, and Oregon, 2016-2020**

Source: US Census Bureau, 2016-2020 ACS 5-Year Estimates, Table B25003.



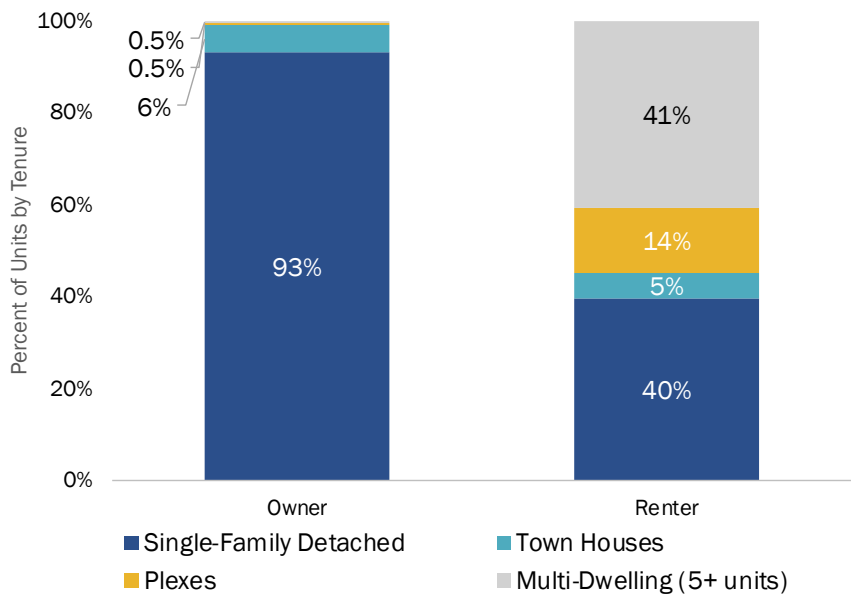
**Nearly all of Sandy's homeowners (93%) lived in single-family detached housing.**

In comparison, only 40% of Sandy households that rent lived in single-family detached housing.

About 14% of renters lived in duplex, triplex, or quadplex housing, and 41% lived in multi-dwelling housing with 5+ dwelling units.

**Exhibit 14. Housing Units by Type and Tenure, Sandy, 2016-2020**

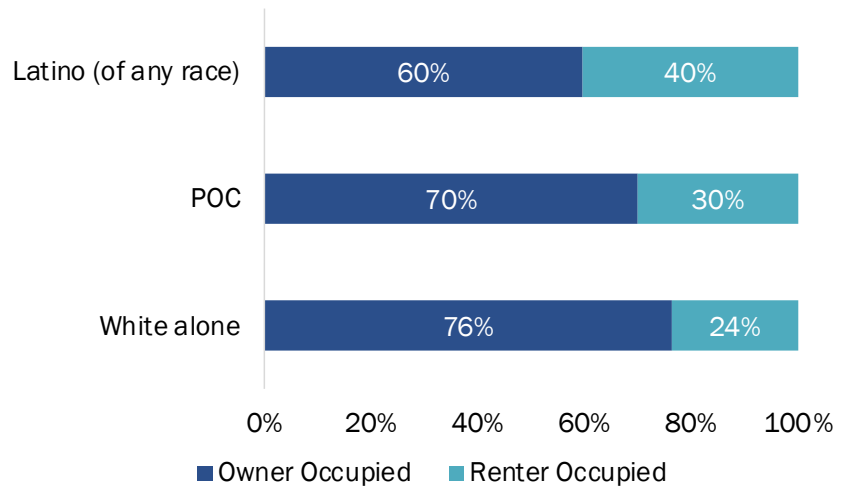
Source: US Census Bureau, 2016-2020 ACS Table B25032.



**Latino and POC (people of color) households were more likely to be renters than White Alone households.**

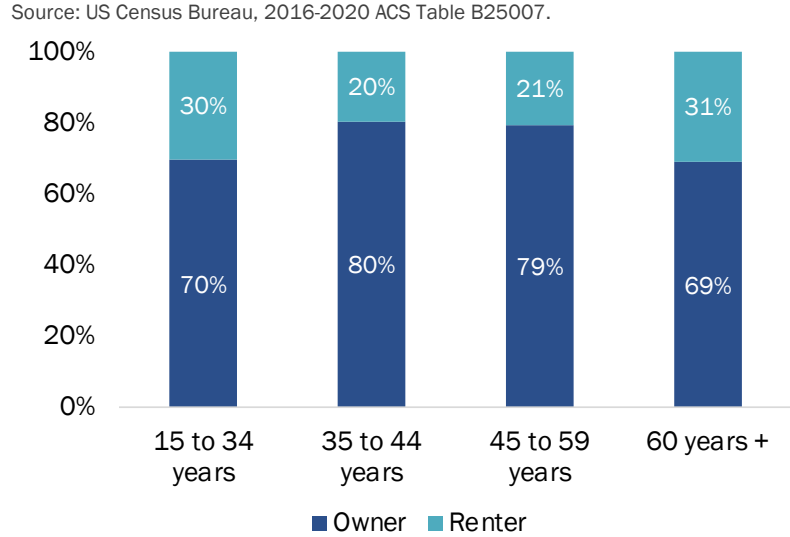
While about three-quarters of White Alone households owned their homes, about 70% of POC and 60% of Latinos were homeowners.

Exhibit 15. Tenure by Race and by Ethnicity, Sandy, 2016-2020  
Source: US Census Bureau, 2016-2020 ACS Table B25003A-I.



**The homeownership rate in Sandy is high across all age groups. However, the homeownership rate declined for households over 60.**

Exhibit 16. Tenure by Age of the Head of Household, Sandy, 2016-2020  
Source: US Census Bureau, 2016-2020 ACS Table B25007.



## Vacancy Rates

Housing vacancy is a measure of housing that is available to prospective renters and buyers. It is also a measure of unutilized housing stock. The Census defines vacancy as "unoccupied housing units . . . determined by the terms under which the unit may be occupied, e.g., for rent, for sale, or for seasonal use only." The Census identified vacancy through an enumeration, separate from (but related to) the survey of households. Enumerators are obtained using information from property owners and managers, neighbors, rental agents, and others.

According to the 2016-2020 American Community Survey, the vacancy rate in Sandy was 5.0%, compared to 5.6% for Clackamas County and 8.2% for Oregon.

## Government-Assisted Housing

Governmental agencies and nonprofit organizations offer a range of housing assistance to low and moderate-income households in renting or purchasing a home. There are six government-assisted housing developments in Sandy with a total of 142 dwelling units.

### Exhibit 17. Government-Assisted Housing, Sandy, 2022

Source: Oregon Department of Health and Human Services, Affordable Housing Inventory in Oregon, July 2022.

Development Name	Total Units	Unit Size					
		SRO	Studio	1-bd	2-bd	3-bd	4-bd
Cedar Park Gardens	20	-	-	18	2	-	-
Country Garden Apts	10	-	-	10	-	-	-
Evans Street Senior	28	-	-	24	4	-	-
Hummingbird Apts	6	-	-	6	-	-	-
Sandy Vista I	30	-	-	10	8	12	-
Sandy Vista II	24	-	-	-	10	10	4
Timer Grove - Firwood Village	24	-	-	2	16	6	-
<b>Total</b>	<b>142</b>	<b>-</b>	<b>-</b>	<b>70</b>	<b>40</b>	<b>28</b>	<b>4</b>

The Clackamas County Continuum of Care (CoC) region has 181 emergency shelter beds, 54 transitional shelter beds, and 1,020 permanently supportive housing beds supporting persons experiencing homelessness in the Clackamas County region.

### Exhibit 18. Facilities and Housing Targeted to Households Experiencing Homelessness, Clackamas County Continuum of Care Region, 2022

Source: HUD 2022 Continuum of Care Homeless Assistance Programs, Housing Inventory Report, Clackamas County CoC.

	Family Beds	Adult-Only Beds	Child-Only Beds	Total Yr-Round Beds	Subset of Total Bed Inventory		
					Chronic Beds	Veteran Beds	Youth Beds
<b>Emergency Shelter</b>	79	102	0	181	n/a	23	0
<b>Transitional Housing</b>	33	21	0	54	n/a	2	25
<b>Permanent Housing</b>	584	436	0	1,020	180	222	99
<b>Total</b>	<b>696</b>	<b>559</b>	<b>0</b>	<b>1,255</b>	<b>180</b>	<b>247</b>	<b>124</b>

## Manufactured Homes

Manufactured homes provide a source of affordable housing in Sandy. They provide a form of homeownership that can be made available to low and moderate-income households. Cities must plan for manufactured homes—both on lots and in manufactured home parks (ORS 197.475-492).

Generally, manufactured homes in parks are owned by the occupants who pay rent for the space within the park. Monthly housing costs are typically lower for a homeowner in a manufactured home park for several reasons, including the fact that property taxes levied on the value of the land are paid by the property owner, rather than the manufactured homeowner, although some of this is likely passed on to the occupant of the manufactured homes in the form of rent. Unfortunately, the value of the manufactured home generally does not appreciate in the way a conventional home would. Manufactured homeowners in parks are also subject to the mercy of the property owner in terms of rent rates and increases. It is generally not within the means of a manufactured homeowner to relocate to another manufactured home park to escape rent increases. Homeownership in a manufactured home park is desirable to some people because it can provide a more secure community with on-site managers and amenities, such as laundry and recreation facilities. OAR 197.480(4) requires cities to inventory the mobile home or manufactured dwelling parks sited in areas planned and zoned or generally used for commercial, industrial, or high-density residential development.

As shown in Exhibit 19, Sandy has six manufactured home parks within its UGB. Within these parks, there are a total of 247 spaces (of which 7 spaces were vacant as of January 2023).

### Exhibit 19. Inventory of Mobile/Manufactured Home Parks, Sandy UGB, 2023

Source: Oregon Manufactured Dwelling Park Directory, 2023

Name	Location	Type	Total Spaces	Vacant Spaces	Zone
Hood Chalet Mobile Estates	17655 Bluff Rd Sp 1	Family	82	0	R-3
Johnston Park	17805 Sue Ln	Family	16	7	R-3
Knollwood Mobile Estates	37600 Sunset St	Family	59	0	R-3
Swiss Meadow Village	38595 Strawbridge Pkwy	Family	50	0	R-3
Sandy Trailer Park	17340 University Ave	Family	7	unknown	C-2
Wunder Mobile Park	1900 SE Bornstedt Rd	Family	33	0	R-2
<b>Total</b>			<b>247</b>	<b>7</b>	

## 4. Demographic and Other Factors Affecting Residential Development in Sandy

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Demographic trends are important for a thorough understanding of the dynamics of Sandy's housing market. Sandy exists in a regional economy; trends in the region impact the local housing market. This chapter documents demographic, socioeconomic, and other trends relevant to Sandy at the national, state, and regional levels.

Demographic trends provide a context for growth in a region; factors such as age, income, migration, and other trends show how communities have grown and how they will shape future growth. To provide context, we compare Sandy to Clackamas County and Oregon. We also compare Sandy to nearby cities where appropriate. Characteristics such as age and ethnicity are indicators of how the population has grown in the past and provide insight into factors that may affect future growth.

### Demographic and Socioeconomic Factors Affecting Housing Choice<sup>12</sup>

Analysts typically describe housing demand as the preferences for different types of housing (e.g., single-family detached or apartment) and the ability to pay for that housing (the ability to exercise those preferences in a housing market by purchasing or renting housing; in other words, income or wealth).

Many demographic and socioeconomic variables affect housing choice. However, the literature about housing markets finds that age of the householder, size of the household, and income are most strongly correlated with housing choice.

- **Age of householder** is the age of the person identified (in the Census) as the head of household. Households make different housing choices at different stages of life. This chapter discusses generational trends, such as housing preferences of baby boomers (people born from about 1946 to 1964), millennials (people born from about 1980 to 1997), and Generation Z (people born after 1997).
- **Size of household** is the number of people living in the household. Younger and older people are more likely to live in single-person households. People in their middle years are more likely to live in multiperson households (often with children).
- **Household income** is probably the most important determinant of housing choice. Income is strongly related to the type of housing a household chooses (e.g., single-family

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<sup>12</sup> The research in this chapter is based on numerous articles and sources of information about housing and adapted to Sandy's unique circumstances from a prior housing capacity analysis conducted by ECONorthwest.

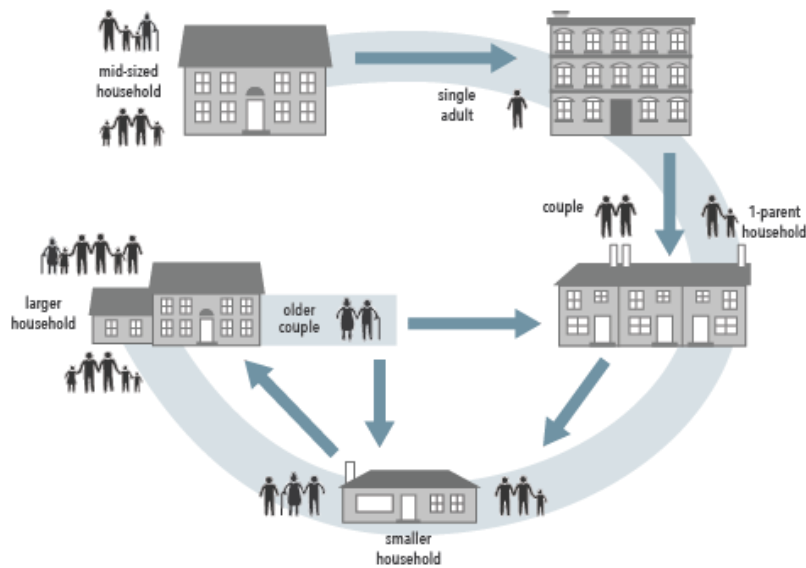


detached housing, duplexes, or buildings with five or more units and to household tenure (e.g., rent or own).

An individual's housing needs change throughout their life, with changes in income, family composition, and age, as shown in Exhibit 20. The types of housing needed by a twenty-year-old college student differ from the needs of a forty-year-old parent with children, or an eighty-year-old single adult. As Sandy's population ages, different types of housing will be needed to accommodate older residents. The housing characteristics by age data below reveal this cycle in action in Sandy.

**Housing needs and preferences change in predictable ways over time, such as with changes in marital status and size of family.**  
Households of different sizes need different types of housing.

**Exhibit 20. Effect of Demographic Changes on Housing Need**  
Source: ECONorthwest, adapted from Clark, William A.V. and Frans M. Dieleman. 1996. Households and Housing. New Brunswick, NJ: Center for Urban Policy Research.



## Regional and Local Demographic Trends May Affect Housing Need in Sandy

### Growing Population

Sandy's population growth will drive future demand for housing in the city over the planning period. Exhibit 21 shows that Sandy's population grew by 141% between 2000 and 2022, adding 7,606 new residents at an average annual growth rate of 4.1%. Sandy grew faster than both Clackamas County and Oregon.

Exhibit 21. Population, Sandy, Clackamas County, Oregon, U.S., 2000, 2010, 2022

Source: US Decennial Census 2000 and 2010, and Portland State University, Population Research Center.

	2000	2010	2022	Change 2000 to 2022		
				Number	Percent	AAGR
Oregon	3,421,399	3,831,074	4,278,910	857,511	25%	1.0%
Clackamas County	338,391	375,992	430,421	92,030	27%	1.1%
Sandy	5,385	9,570	12,991	7,606	141%	4.1%

The population forecast in Exhibit 22 is Sandy's official population forecast from the Oregon Population Forecast Program. Sandy must use this forecast as the basis for forecasting housing growth over the 2023 to 2043 period. Sandy is expected to add 6,350 new residents between 2023 and 2043.

**Sandy's population within its UGB is projected to grow by about 6,350 people between 2023 and 2043, at an average annual growth rate of 1.9%.**

Exhibit 22. Forecast of Population Growth, Sandy UGB, 2023 to 2043

Source: ECONorthwest based on US Decennial Census 2000, and Portland State University, Population Research Center 2020.

<b>13,877</b>	<b>20,227</b>	<b>6,350</b>	<b>46% increase</b>
Residents in 2023	Residents in 2043	New Residents 2023 to 2043	1.9% AAGR

### Aging Population

This section shows two key characteristics of Sandy's population, with implications for future housing demand in Sandy:

- Sandy has a larger proportion of younger working-aged people than Clackamas County and Oregon.** Sandy has a younger population than Clackamas County and the state, with a larger percentage of people under 39 years old and a smaller share of people over 60 years old. The fastest-growing group between 2010 and 2020 was people aged 20 to 39, with the group of people over 60 years old growing the slowest. Sandy's age distribution shows that the city is attracting working-age residents, and Exhibit 33 shows that Sandy has a larger percentage of households with children than Clackamas County or Oregon.

Sandy is currently attracting millennials and Gen Zers. By 2045, millennials will be about 45 to 65 years of age and Gen Zers will be 33 to 48 years of age. The community's ability to continue to attract and retain people in this age group will depend, in large part, on whether the city has opportunities for housing that both appeals to and is affordable to millennials and Gen Zers, as well as jobs that allow younger people to live and work in Sandy. As they age and form their own households, their housing needs will contribute to housing needs in Sandy.

In the near term, millennials and Gen Zers may increase demand for rental units. Some households in this age group will need housing that accommodates children. In the long term, surveys about housing preference suggest that millennials want affordable single-family homes in areas that offer transportation alternatives to cars, such as areas with walkable neighborhoods.<sup>13</sup> Recent growth in homeownership among millennials proves that millennials prefer to become homeowners, with the millennial homeownership rate increasing from 33% in 2009 to 43% in 2019.<sup>14</sup> While researchers do not yet know how Gen Zers will behave in adulthood, many expect they will follow patterns of previous generations.<sup>15</sup>

Growth in millennials and Gen Zers in Sandy will result in increased demand for both affordable single-family detached housing (such as small single-family detached units like cottages), as well as increased demand for affordable town houses, plexes (duplexes, triplexes, quadplexes, etc.), and multi-dwelling housing. Demand will be for both ownership and rental opportunities. There is potential for attracting new residents to housing in Sandy's commercial areas, especially if the housing is relatively affordable and located in proximity to services.

- **Growth in seniors and retirees.** Sandy currently has a smaller share of people over 60 years old than Clackamas County, but the Clackamas County forecast from Portland State University suggests that the population over 60 years old will grow at a faster rate than other age groups. The share of residents aged 60 years and older in Clackamas County is expected to account for 29% of the population in 2040 compared to 27% in 2020. It is reasonable to expect that Sandy's senior population will grow consistent with regional trends, which will increase demand for housing that is suitable for seniors.

Demand for housing for seniors will grow over the planning period as baby boomers continue to age and retire and members of Gen X begin to retire. The impact of change

<sup>13</sup> The American Planning Association, "Investing in Place; Two generations' view on the future of communities." 2014.

"Access to Public Transportation a Top Criterion for Millennials When Deciding Where to Live, New Survey Shows," Transportation for America.

"Survey Says: Home Trends and Buyer Preferences," National Association of Home Builders International Builders.

<sup>14</sup> "Millennials and Housing: Homeownership Demographic Research." Freddie Mac Single-Family, 2021.

[https://sf.freddie.com/content/\\_assets/resources/pdf/fact-sheet/millennial-playbook\\_millennials-and-housing.pdf](https://sf.freddie.com/content/_assets/resources/pdf/fact-sheet/millennial-playbook_millennials-and-housing.pdf).

<sup>15</sup> "2021 Home Buyers and Sellers Generational Trends Report." National Association of Realtors, 2021.

<https://www.nar.realtor/sites/default/files/documents/2021-home-buyers-and-sellers-generational-trends-03-16-2021.pdf>.

in seniors in Sandy will depend, in part, on whether older people already living in Sandy continue to reside there as they retire. National surveys show that, in general, most retirees prefer to age in place by continuing to live in their current home and community as long as possible.<sup>16</sup>

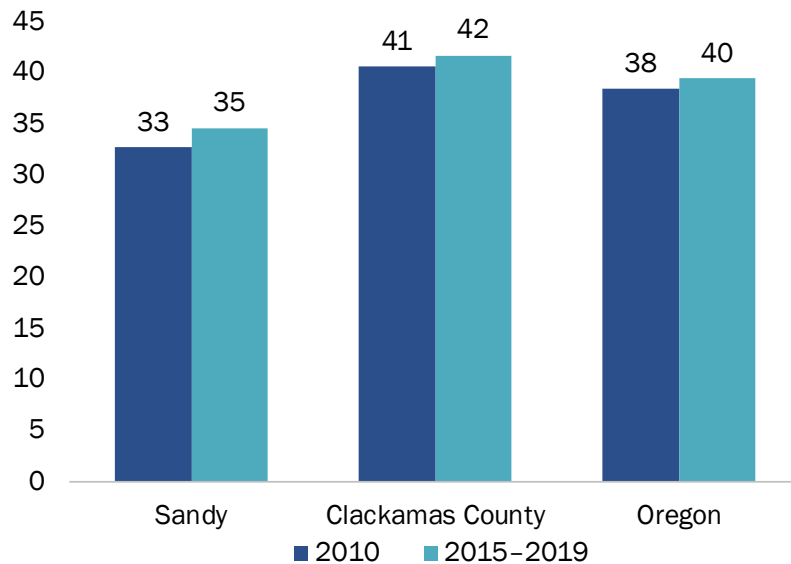
Growth in the number of seniors will result in demand for housing types specific to seniors, such as small and easy-to-maintain dwellings, assisted-living facilities, or age-restricted developments. Senior households will make a variety of housing choices, including remaining in their homes as long as they are able, downsizing to smaller single-family homes (detached and attached) or multi-dwelling units, or moving into group housing (such as assisted-living facilities or nursing homes) as they age. The challenges aging seniors face in continuing to live in their community include changes in health-care needs, loss of mobility, the difficulty of home maintenance, financial concerns, and increases in property taxes.<sup>17</sup>

**Sandy's median age is lower than the County or State averages.**

From 2000 to 2020, Sandy's median age increased from 33 to 35 years old.

Exhibit 23. Median Age, Sandy, Clackamas County, and Oregon, 2000 to 2016-2020

Source: US Census Bureau, 2000 Decennial Census Table B01002, 2016-2020 ACS, Table B01002.



<sup>16</sup> A survey conducted by AARP indicates that 90% of people 50 years and older want to stay in their current home and community as they age. See <http://www.aarp.org/research>.

<sup>17</sup> "Aging in Place: A toolkit for Local Governments" by M. Scott Ball.

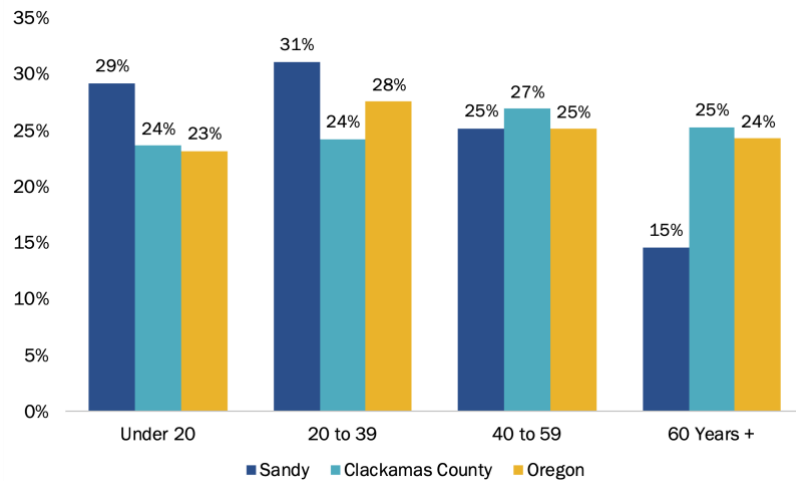
**About 31% of Sandy's residents were between the ages of 20 and 39 years old.**

Sandy had a lower share of people over the age of 60 years old when compared to Clackamas County and Oregon.

Almost a third of Sandy's population is under 20 years old.

**Exhibit 24. Population Distribution by Age, Sandy, Clackamas County, and Oregon, 2016–2020**

Source: US Census Bureau, 2016–2020 ACS, Table B01001.

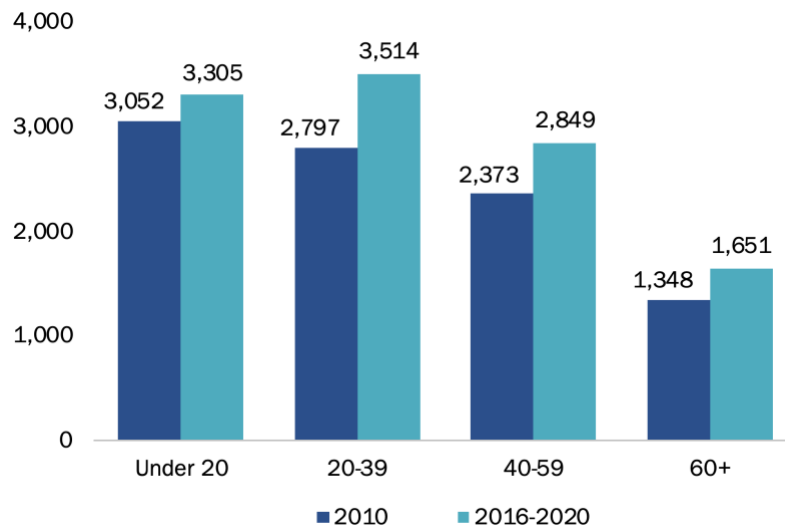


**Between 2010 and 2020, all age groups in Sandy increased.**

The largest increase in residents were those aged 20-39 (growth of 717 people) followed by those aged 40-59 (growth of 476 people).

**Exhibit 25. Population Growth by Age, Sandy, 2010, 2016–2020**

Source: US Census Bureau, 2010 Decennial Census Table P012 and 2016–2020 ACS, Table B01001.



**People in all age groups are expected to grow in Clackamas County over the next two decades.**

People aged 60 and over are forecast to increase 31% between 2020 and 2040, adding more than 34,500 new people. People aged 40 to 59 are forecast to grow by nearly as many, adding 32,500 people.

**Exhibit 26. Fastest-Growing Age Groups, Clackamas County, 2020 to 2040**

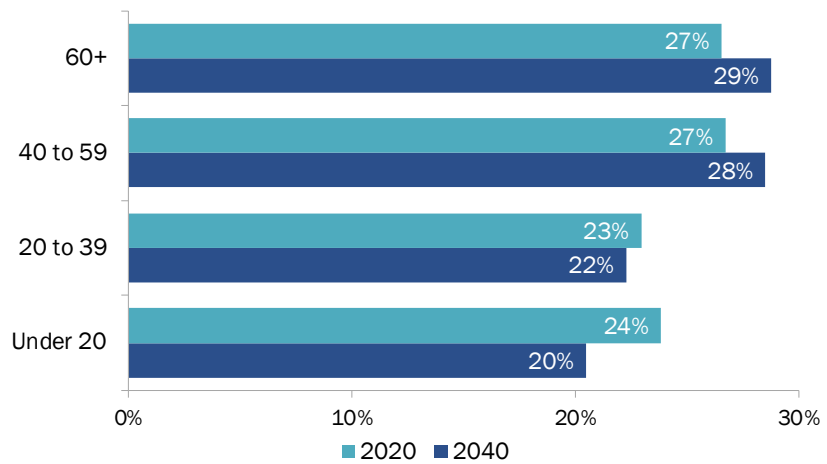
Source: PSU Population Research Center, Clackamas County Forecast, June 2020

4%	18%	29%	31%
4,060	16,808	32,576	34,579
People	People	People	People
<b>Under 20</b>	<b>20-39 Yrs</b>	<b>40-59 Yrs</b>	<b>60+ Yrs</b>

**By 2040, Clackamas County residents aged 40 and older will make up to 57% of the county's total population, a 3% increase in share from 2020.**

**Exhibit 27. Population Growth by Age Group, Clackamas County, 2020 and 2040**

Source: PSU Population Research Center, Clackamas County Forecast, June 2020.



## Racial and Ethnic Diversity

Sandy has a similar racial and ethnic makeup as Clackamas County, with about 17% of Sandy residents identifying as a person of color (Asian, Black or African American, American Indian and Alaska Native, Some Other Race Alone, and Two or More Races) or Latino. Housing needs do not generally differ by race or ethnicity, but other characteristics of households that affect housing needs (and the housing choices available to these households) may vary by race or ethnicity. For example, Exhibit 37 shows a difference in income by race and ethnicity. These differences in income result in households making different choices (often by necessity) based on income and the availability of affordable housing. To the extent that characteristics of current housing situations for people of color are different from the overall average, these differences are more likely to reflect availability of affordable housing or the impact of housing discrimination from lending institutions, rather than different preferences by race or ethnicity.

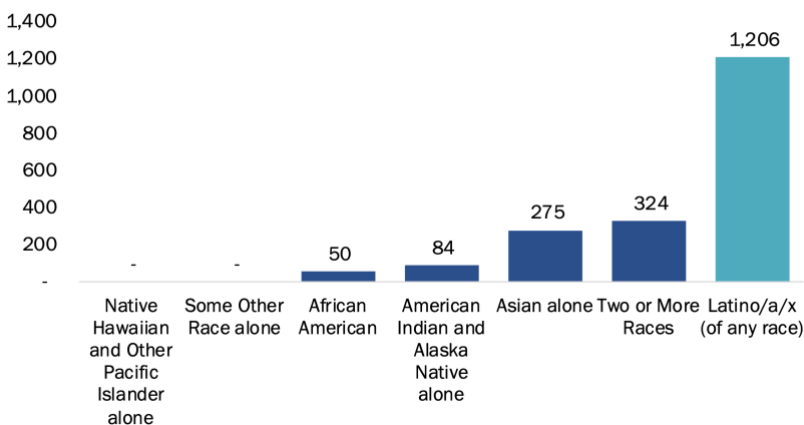
Exhibit 28 shows Sandy’s population by race and ethnicity, excluding those who identified as White Alone. Sandy has a large population of Latino residents, almost four times the size of the second-largest racial or ethnic group.

**In Sandy, about 1,939 people identified as a race or ethnicity other than White, non-Hispanic, accounting for about 17% of Sandy’s population.**

Not shown in the exhibit are the 9,380 people identifying as White, non-Hispanic in Sandy.

Exhibit 28. Number of People by Race and Ethnicity, Sandy, 2016-2020

Source: US Census Bureau, 2016-2020 ACS, Table B03002.



**Sandy was less racially diverse than Clackamas County and Oregon.**

Exhibit 29. Population by Race/Ethnicity as a Percent of Total Population, Sandy, Clackamas County, Oregon, 2016–2020  
Source: US Census Bureau, 2016–2020 ACS Table B02001 and B03002.

	Sandy	Clackamas Co.	Oregon
White Alone	<b>83%</b>	<b>81%</b>	<b>75%</b>
Latino (of any race)	<b>11%</b>	<b>9%</b>	<b>13%</b>
Two or More Races	<b>3%</b>	<b>4%</b>	<b>4%</b>
Asian Alone	<b>2%</b>	<b>4%</b>	<b>4%</b>
American Indian and Alaska Native Alone	<b>1%</b>	<b>0%</b>	<b>1%</b>
Black or African American Alone	*	<b>1%</b>	<b>2%</b>
Native Hawaiian and Other Pacific Islander Alone	*	*	*
Some Other Race Alone	*	*	*

The number of residents that identified as Latino increased in Sandy by 322 people, from 884 people in 2010 to 1,206 people in 2020. The US Census Bureau forecasts that at the national level, the Latino population will continue growing faster than most other populations between 2020 and 2040. The Census forecasts that the Latino population will increase 93% from 2016 to 2060 and foreign-born Latino populations will increase by about 40% in that same time.<sup>18</sup>

Continued growth in the Latino population will affect Sandy’s housing needs in a variety of ways. Growth in first and, to a lesser extent, second and third-generation Latino immigrants will increase demand for larger dwelling units to accommodate the, on average, larger household sizes for these households. Latino households are twice as likely to include multigenerational households than the general populace.<sup>19</sup> As Latino households change over generations, household size typically decreases and housing needs become similar to housing needs for all households.

According to the *State of Hispanic Homeownership* report from the National Association of Hispanic Real Estate Professionals, the Latino population accounted for 29% of the nation’s new household formation between 2017 and 2021.<sup>20</sup> The rate of homeownership for Latino

<sup>18</sup> US Census Bureau, *Demographic Turning Points for the United States: Population Projections for 2020 to 2060*.

<sup>19</sup> Pew Research Center. (2013). *Second-Generation Americans: A Portrait of the Adult Children of Immigrants*. National Association of Hispanic Real Estate Professionals (2019). *2019 State of Hispanic Homeownership Report*.

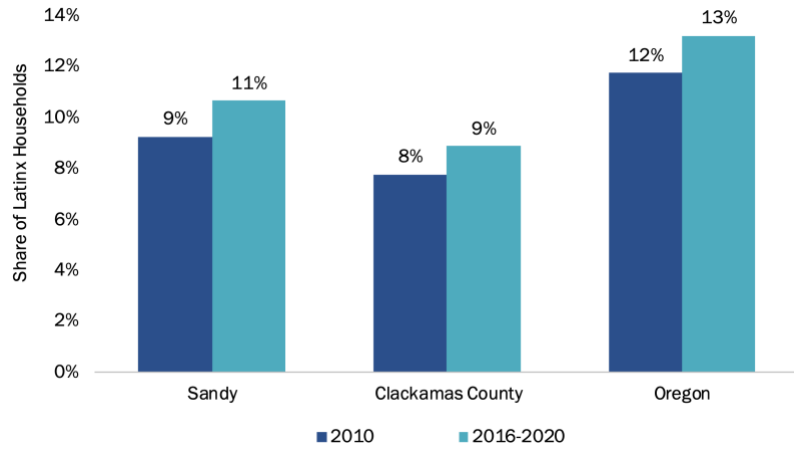
<sup>20</sup> National Association of Hispanic Real Estate Professionals (2021). *2021 State of Hispanic Homeownership Report*.



households increased from 45.6% in 2015 to 48.4% in 2021. Latino homeownership growth has remained steady over the last decade and is at its highest rate since 2009.

**Between 2000 and 2020 the share of Sandy's households that identified as Latino increased at a faster rate than both the county and the state.**

Exhibit 30. Latino Population as Percent of Total Population, Sandy, Clackamas County, Oregon, 2010 and 2016–2020  
Source: US Census Bureau, 2000 Decennial Census Table P008, 2016–2020 ACS Table B03002.



## Household Size and Composition

On average, Sandy’s households are larger than both Clackamas County and the state with a larger share of households with children, consistent with Sandy’s age distribution.

**Sandy’s average household size was larger than both Clackamas County’s and Oregon’s.**

Exhibit 31. Average Household Size, Sandy, Clackamas County, Oregon, 2016-2020

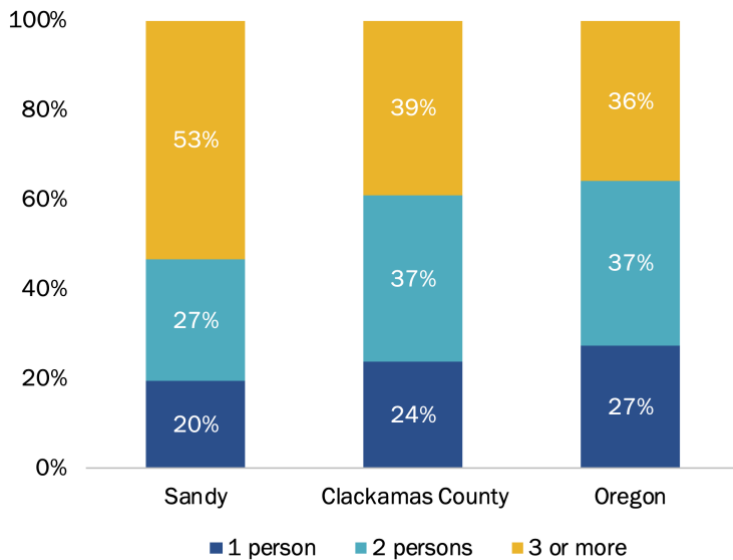
Source: US Census Bureau, 2016-2020 ACS 5-Year Estimate, Table B25010.



**Sandy has a larger share of households with 3 or more people than Clackamas County and Oregon.**

Exhibit 32. Household Size, Sandy, Clackamas County, Oregon, 2016-2020

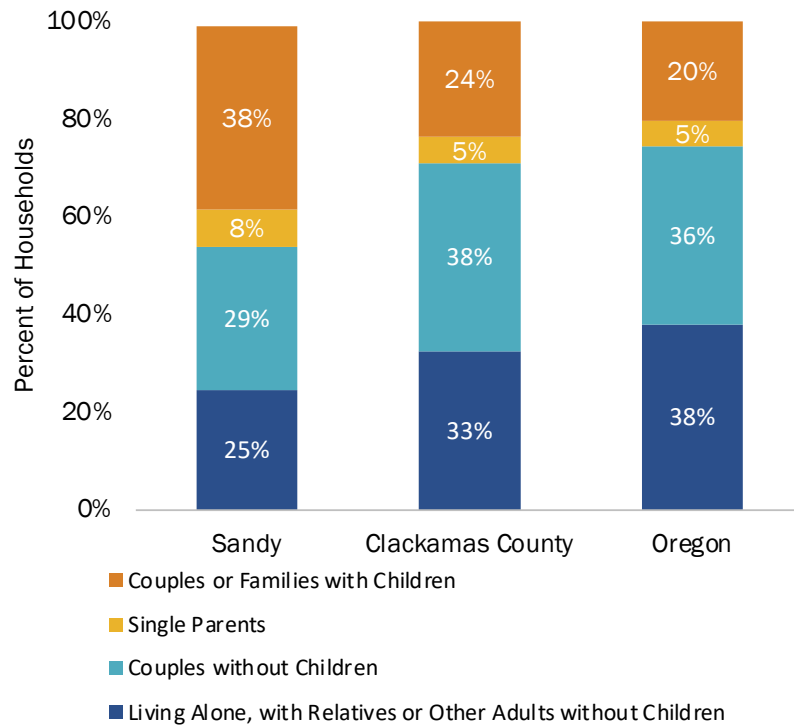
Source: US Census Bureau, 2016-2020 ACS 5-Year Estimate, Table B25010.



**Sandy has a larger share of households with children (46%) than Clackamas County (29%) or Oregon (25%).**

**Exhibit 33. Household Composition, Sandy, Clackamas County, Oregon, 2016-2020**

Source: US Census Bureau, 2016-2020 ACS 5-Year Estimate, Table DP02.



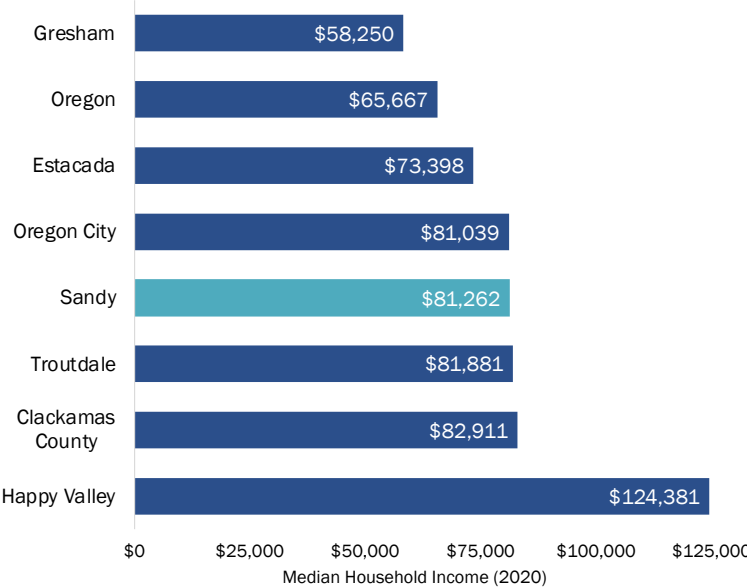
### Income of Sandy Residents

Income is a key determinant in housing choice and households' ability to afford housing. Sandy's median household income was slightly lower than the Clackamas County median (less than \$2,000 lower). Adjusted for inflation, Sandy's household income increased by 27% since 2000, eclipsing county and statewide growth trends. The increase in household income occurred at a time when rent and housing prices in Sandy (and the whole region) increased substantially.

**Sandy's median household income was similar to that of Clackamas County and higher than the state's median household income.**

Exhibit 34. Median Household Income, Sandy, Clackamas County, Oregon, Comparison Cities, 2016-2020

Source: US Census Bureau, 2016-2020 ACS 5-Year Estimate, Table B25119.

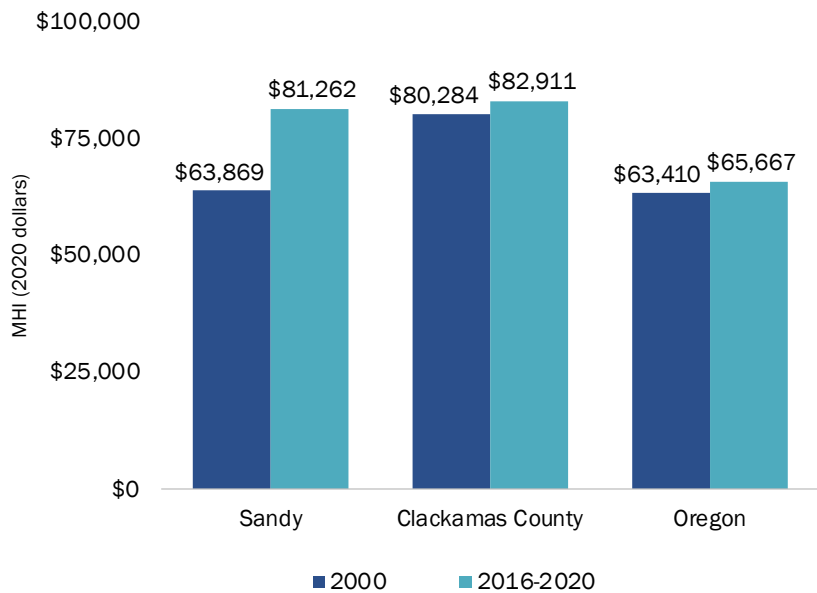


**After adjusting for inflation, Sandy's median household income increased by 27% from 2000 to 2020.**

Without adjusting for inflation, Sandy's median household income increased from about \$41,000 in 2000 to \$81,000 in 2020, an increase of 100%.

**Exhibit 35. Change in Median Household Income, Sandy, Clackamas County, Oregon, 2000 to 2016-2020, Inflation-Adjusted (2020 dollars)**

Source: US Census Bureau, 2000 Decennial Census, Table HCT012; 2016-2020 ACS 5-Year Estimate, Table B25119.

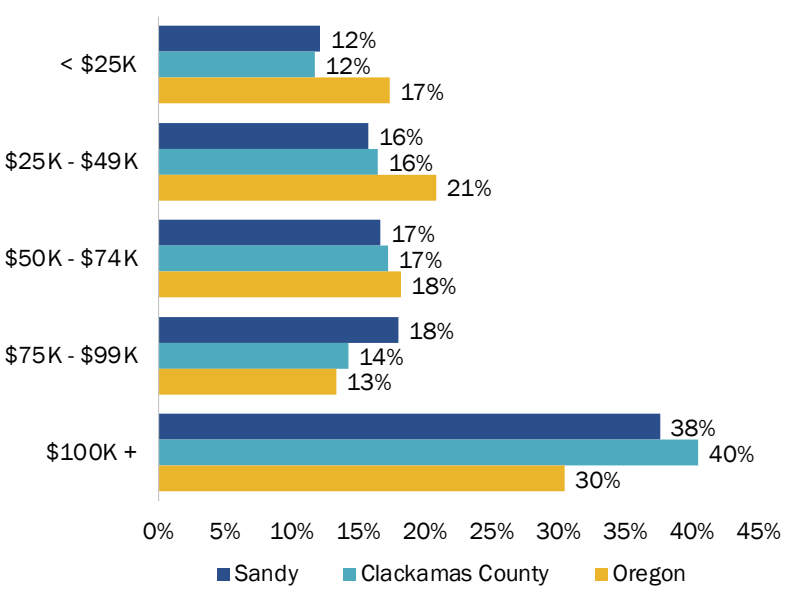


**Just over half of all households in Sandy (56%) earned more than \$75,000, compared to 54% of Clackamas County households and 43% of Oregon households.**

Sandy has a smaller share of households earning less than \$50,000 than the state.

**Exhibit 36. Household Income, Sandy, Clackamas County, Oregon, 2016-2020**

Source: US Census Bureau, 2016-2020 ACS 5-Year Estimate, Table B19001.

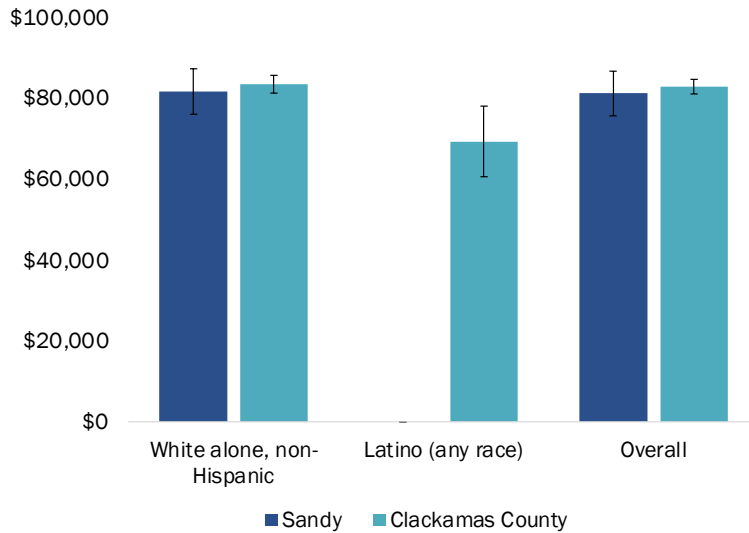


**In Clackamas County, Latino households had median household incomes between \$61,000 and \$78,000, which was below the overall county median household income of about \$83,000.**

While City-level data had a high margin of error, it is reasonable to assume that Latino households may similarly have lower median household incomes than the City's overall median household income of \$81,262.

**Exhibit 37. Median Household Income by Race/Ethnicity of the Head of Household, Sandy, 2016-2020**

Source: US Census Bureau, 2016-2020 ACS 5-Year Estimate, Table S1901. Note: The black lines for each bar in this chart denote an estimate's margin of error. These are displayed because, when parsing Census survey data for a cross-section of data, there is more statistical noise when computing estimates. The inclusion of the bars indicates the range in which the true estimate likely lies (within a degree of statistical certainty). Note: Latino not included at the city level due to high margins of error.

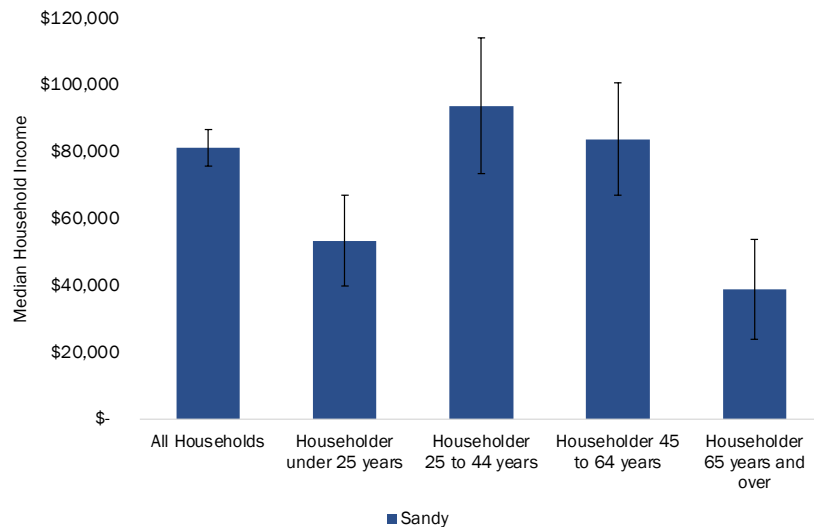


**Senior households had median household incomes of approximately \$39,000, which was below the overall city median household income of about \$81,000.**

Working-aged households (those 25 to 65 years old) had the highest median income, consistent with county and state data.

**Exhibit 38. Median Household Income by Age of Householder, Sandy, 2016-2020**

Source: US Census Bureau, 2016-2020 ACS 5-Year Estimate, Table B19049. Note: The black lines for each bar in this chart denote an estimate's margin of error. These are displayed because, when parsing Census survey data for a cross-section of data, there is more statistical noise when computing estimates. The inclusion of the bars indicates the range in which the true estimate likely lies (within a degree of statistical certainty).



## Commuting Trends

Sandy is part of the complex, interconnected economy within the Portland metro region. Of the 3,700 jobs in Sandy in 2019, 80% of workers commuted into Sandy from other areas, most notably from Gresham, Portland, and Mount Hood. About 5,200 residents of Sandy commuted out of the city for work, many of them to Portland, Gresham, and Beaverton.

**About 3,700 people worked in Sandy in 2019. Most of these people commuted into Sandy for work.**

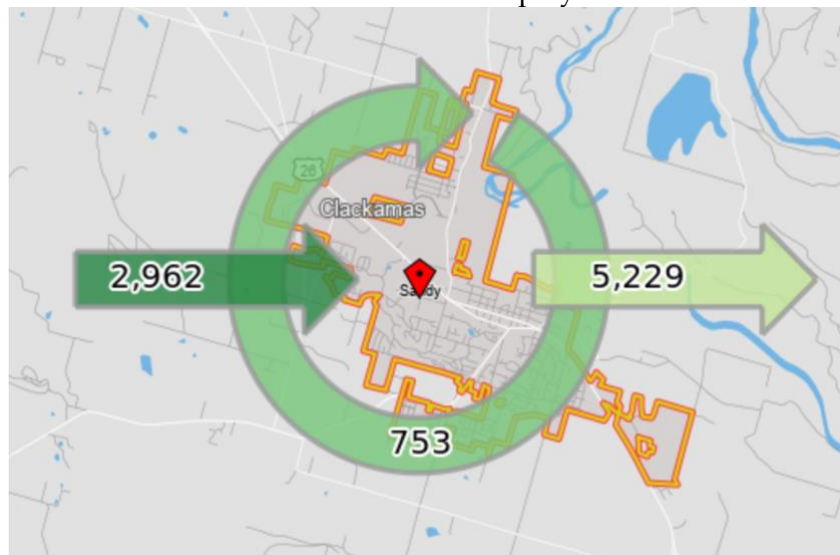
About 750 people lived and worked in Sandy, accounting for 20% of jobs in Sandy.

About 5,200 people lived in Sandy but commuted outside of the city for work.

Exhibit 39. Commuting Flows, Sandy, 2019

Source: US Census Bureau, Census on the Map.

Note: This is an estimate of covered employment.



**About 20% of Sandy's workforce lived in Sandy in 2019.**

The remaining 80% commuted from Gresham, Portland, and other parts of the region.

Exhibit 40. Top Places where Sandy Workers Lived, 2019

Source: US Census Bureau, Census on the Map. Note: This is an estimate of covered employment.



**About 13% of Sandy residents worked in Sandy.**

27% of Sandy residents commuted to Portland for work. The remaining 60% of residents who work commuted to other parts of the region.

Exhibit 41. Top Places where Sandy Residents Were Employed, 2019

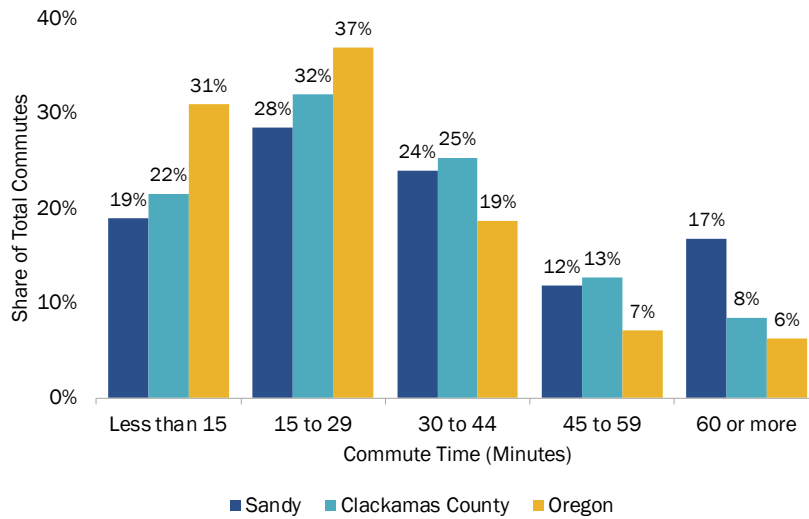
Source: US Census Bureau, Census On the Map. Note: This is an estimate of covered employment.



**Sandy residents, on average, have a longer commute time than residents of Clackamas County and Oregon.**

Just over half (53%) of Sandy residents have a commute time of greater than 30 minutes compared to 46% for Clackamas County and 32% for Oregon. About 17% of Sandy residents commute for over an hour to get to work.

Exhibit 42. Commute Time by Place of Residence, Sandy, Clackamas County, Oregon, 2016-2020  
Source: US Census Bureau, 2016-2020 ACS 5-Year Estimate, Table B08303.





## Populations with Unique Housing Needs

### People Experiencing Houselessness

Gathering reliable data from individuals experiencing houselessness is difficult precisely because they are unstably housed. People can cycle in and out of houselessness and move around communities and shelters. Moreover, the definition of houselessness can vary between communities. Individuals and families temporarily living with relatives or friends are often insecurely housed, but they are often not included in houselessness data. Even if an individual is identified as lacking sufficient housing, they may be reluctant to share information. As a result, information about people experiencing houselessness in Sandy is limited. AntFarm Youth Services, a community partner that serves the houseless population in Sandy, estimated there are 10 adults (25 and older) and 40 youth (24 and younger) experiencing houselessness in Sandy as of 2023.<sup>21</sup>

According to HUD's 2022 Annual Homeless Assessment Report (AHAR), across the United States, the number of people experiencing homelessness increased slightly (less than one percent) between 2020 and 2022.<sup>22</sup> This increase reflects a 3% increase in people experiencing *unsheltered* homelessness, offset by a 2% decline in people experiencing *sheltered* homelessness. However, between 2021 and 2022, *sheltered* homelessness increased by 7%, possibly due to the easing of pandemic-related restrictions that resulted in fewer beds available and declines in the perceived health risks of staying in a shelter.

**About 571 sheltered and unsheltered people were identified as experiencing houselessness in Clackamas County in 2022.**

Exhibit 43. Number of Persons Homeless, Sheltered and Unsheltered, Clackamas County, Point-in-Time Count, 2017, 2019, and 2022

Source: Oregon Housing and Community Services.

<b>497 Persons</b>	<b>471 Persons</b>	<b>571 Persons</b>
2017	2019	2022

### Homelessness Data Sources

**Point-in-Time (PIT) count:** The PIT count is a snapshot of individuals experiencing homelessness on a single night in a community. The count records the number and characteristics of people who live in emergency shelters, transitional housing, rapid rehousing, Safe Havens, or PSH—as well as recording those who are unsheltered.

**McKinney Vento data:** This data records the number of school-aged children who live in shelters or hotels/motels and those who are doubled up, unsheltered, or unaccompanied. This is a broader definition of homelessness than that used in the PIT.

Although these sources of information are known to undercount people experiencing homelessness, they are consistently available for counties in Oregon.

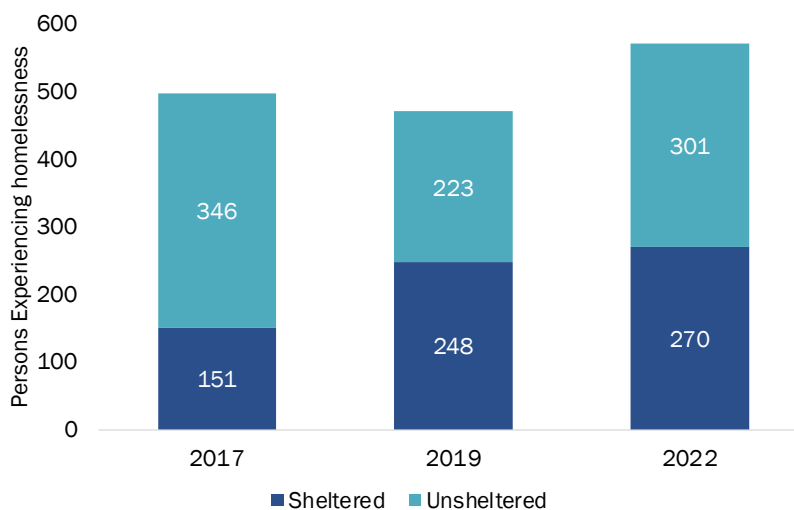
<sup>21</sup> These numbers are for all of Sandy zip code and not necessarily within city limits.

<sup>22</sup> From 2020 and 2022 the number of people in the US increased 0.6%. The proportion of people experiencing homelessness compared to the total US population stayed about the same.

**In 2022, 47% of people experiencing homelessness were sheltered (270 people) and 53% were unsheltered (301 people).**

AntFarm, a nonprofit serving the houseless population in Sandy, estimated that there were 10 adults experiencing houselessness in Sandy in 2023.<sup>23</sup>

Exhibit 44. Number of Persons Homeless by Living Situation, Clackamas County, Point-in-Time Count, 2017, 2019, and 2022  
Source: Oregon Housing and Community Services.



**In the 2019-2020 school year, 70 students were experiencing homelessness.**

AntFarm, a nonprofit serving the houseless population in Sandy, estimated that there were 40 youths (24 and younger) experiencing houselessness in in Sandy 2023.<sup>24</sup>

Exhibit 45. Students Homeless by Living Situation, Oregon Trail School District, 2018-2019 and 2019-2020  
Source: McKinney Vento, Houseless Student Data.

**75 Students**  
2018-2019

**70 Students**  
2019-2020

<sup>23</sup> These numbers are for all of Sandy zip code and not necessarily within city limits.

<sup>24</sup> These numbers are for all of Sandy zip code and not necessarily within city limits.

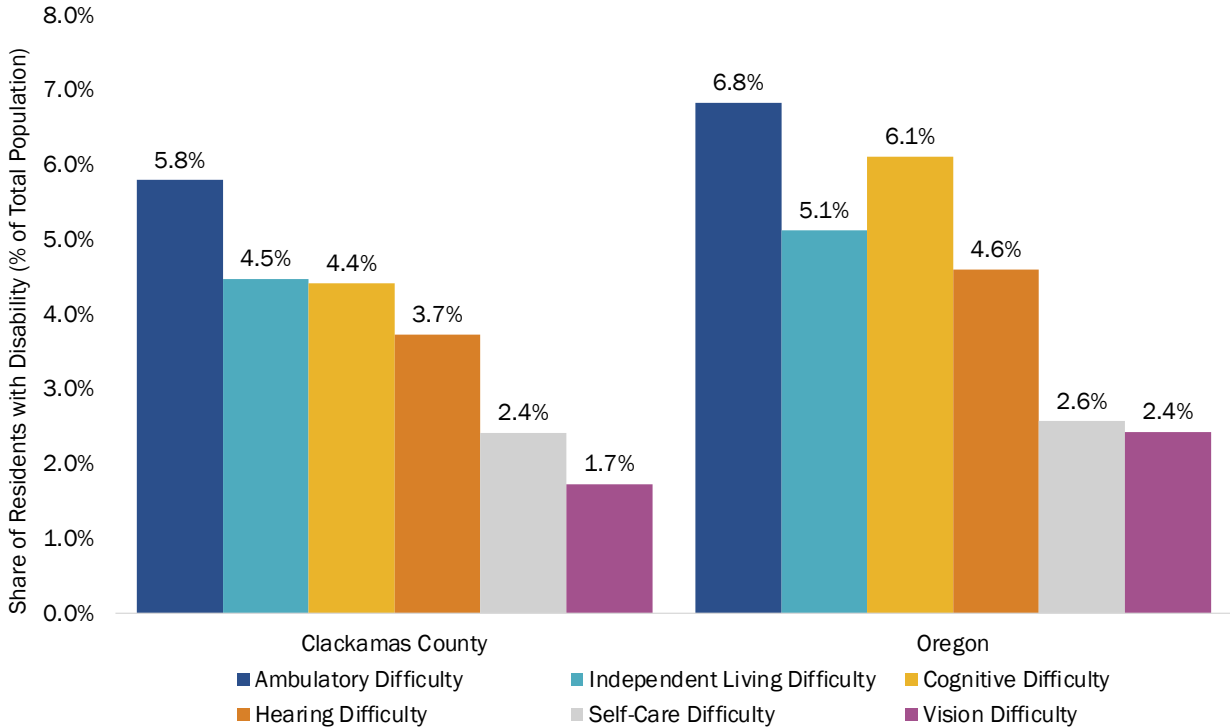
People with Disabilities

Persons with disabilities often require housing accommodations such as single-story homes or ground floor dwelling units, unit entrances with no steps, wheel-in showers, widened doorways, visual alarms or alerts (like a fire alarm or doorbell), accommodations for service animals, and other accessibility features. Limited supply of these housing options poses additional barriers to housing access for these groups.

The sample size for Sandy is too small to have accurate persons with disabilities data, so instead, Exhibit 46 shows Clackamas County and Oregon disability data. About 12% of Clackamas County’s population has one or more disabilities (about 49,032 people), slightly lower than the state average of 15%.

Exhibit 46. Persons Living with a Disability by Type and as a Percent of Total Population, Clackamas County, Oregon, 2016-2020

Source: US Census Bureau 2016-2020 ACS, Table K201803.



## Regional and Local Trends Affecting Affordability in Sandy

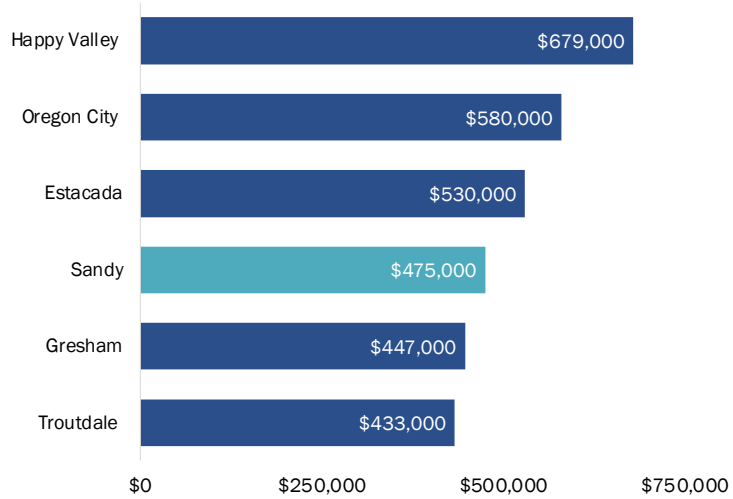
This section describes changes in sales prices, rents, and housing affordability in Sandy and comparison areas. Overall, Sandy’s median home sales price was about \$475,000 at the end of 2022 (Exhibit 47).

### Changes in Housing Costs

**Sandy’s median home sales price was \$475,000 in December 2022.**

**Exhibit 47. Median Home Sales Price, Sandy and Comparison Cities, December 2022**

Source: Redfin Data Center



**Sandy’s median home sales price increased by \$211,000 (80%), from \$264,000 in December 2015 to \$475,000 in December 2022.**

**Exhibit 48. Median Sales Price, Sandy and Comparison Cities, Dec 2015 through Dec 2022**

Source: Redfin Data Center

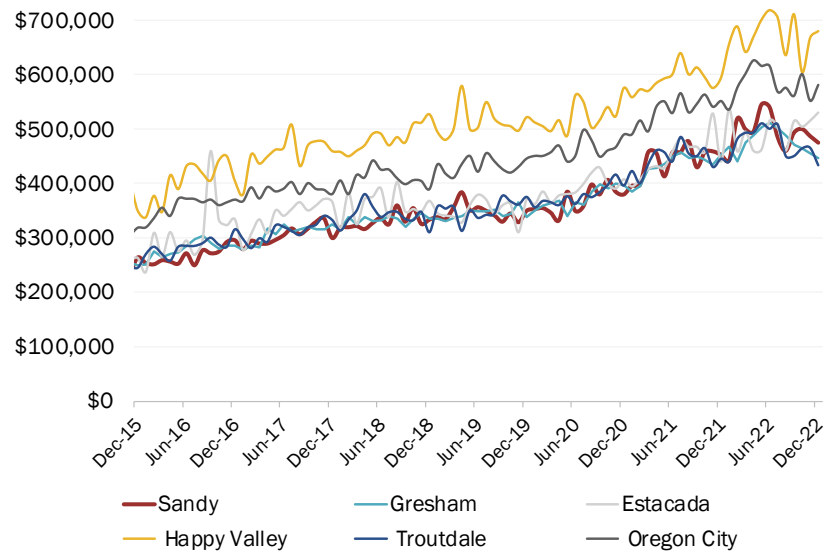
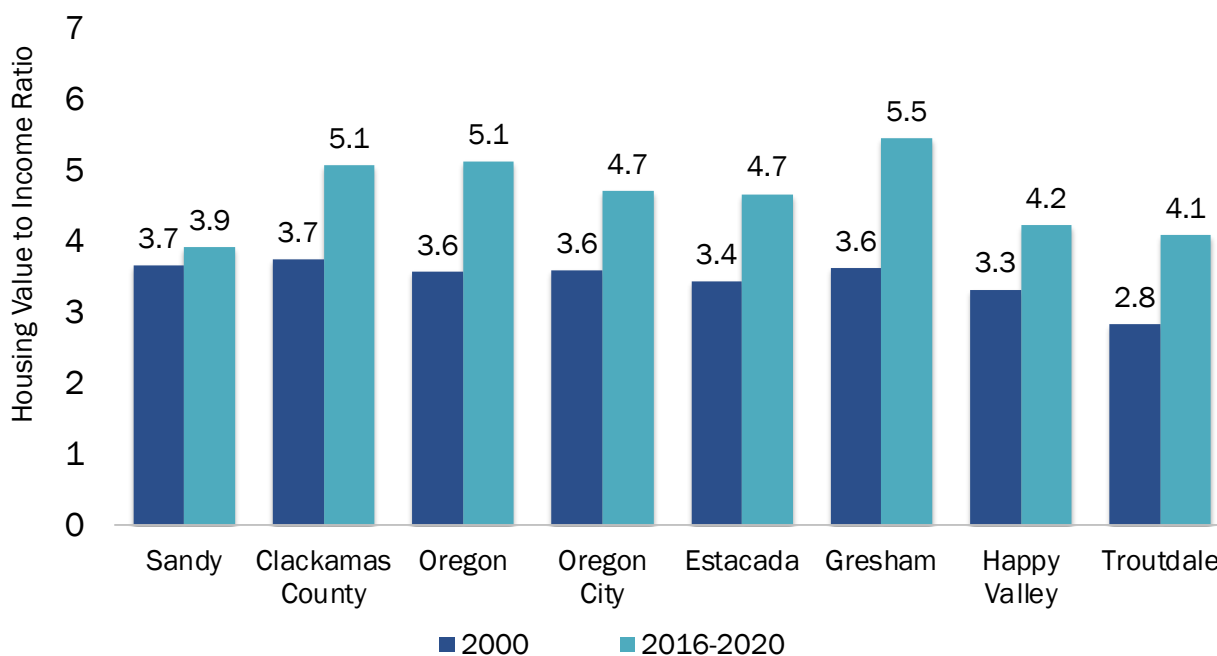


Exhibit 49 shows that, since 2000, housing costs in Sandy increased slightly faster than incomes. The household-reported median value of a house in Sandy was 3.7 times the median household income in 2000 and 3.9 times the median household income in 2020. Sandy's ratio of median housing value to median household income was lower than other comparison cities likely because Sandy's median household income grew faster. Sandy's median household income increased nearly 100% between 2000 and 2020, whereas Clackamas County's median household income increased by about 60% (not adjusted for inflation). This could be partly attributed to Sandy attracting more high-income residents.

Exhibit 49. Ratio of Median Housing Value to Median Household Income, Sandy, Comparison Counties, Oregon, and Comparison Cities, 2000 to 2016-2020

Source: US Census Bureau, 2000 Decennial Census (Table HCT012, H085); 2016-2020 ACS (Table B19013, B25077).



### Rental Costs

Multi-dwelling average asking rents were \$1,591 per unit in 2022, not including cost of utilities. The asking rents in 2022 vary from \$1,475 for a studio unit to \$1,936 for a three-bedroom unit.

**The average asking price per multi-dwelling unit in Sandy has increased steadily over the past decade.**

Between 2015 and 2022, Sandy's average multi-dwelling asking rent increased by about \$462 (41%), from \$1,129 per month to \$1,591 per month.

ECONorthwest surveyed three properties in February 2023 to better understand the current rental market. The cost of a two-bedroom apartment ranged from \$1,399 to \$1,965 across three properties surveyed.

**In 2021, Sandy's average multi-dwelling asking rent was \$1.52 per square foot, up from \$1.21 per square foot in 2015, a 26% increase.**

In this time, Sandy's multi-dwelling vacancy rate decreased from 2.7% in 2015 to 1.9% in 2021.

Exhibit 50. Average Multi-Dwelling Asking Rent per Unit, Sandy, 2012 through 2022

Source: CoStar.

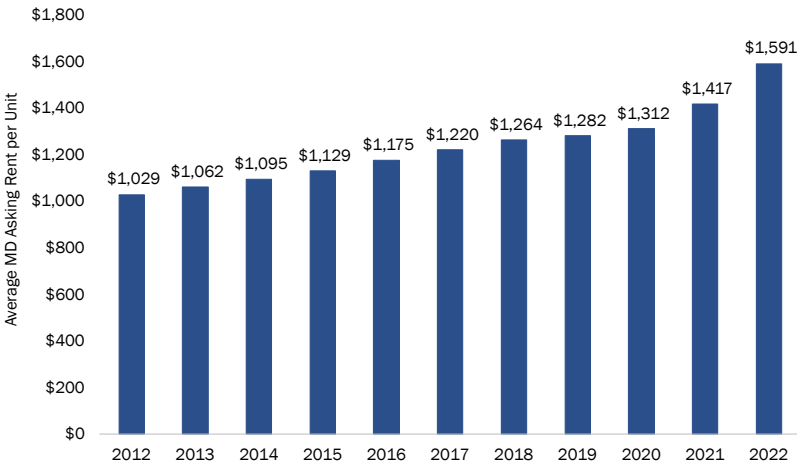
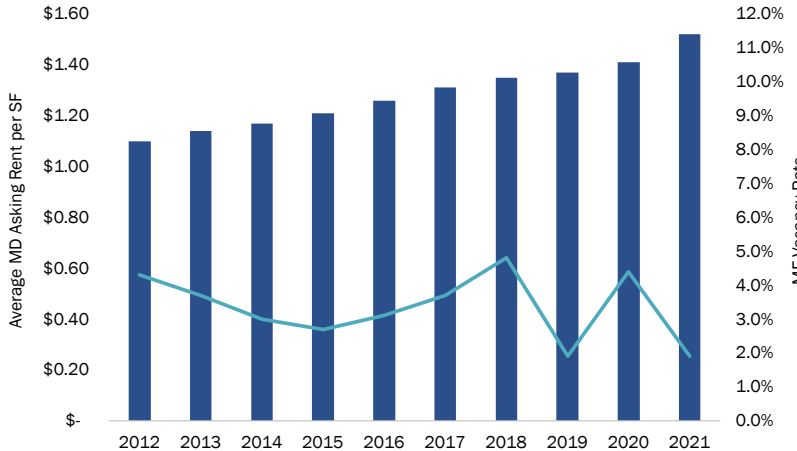


Exhibit 51. Average Multi-Dwelling Asking Rent per Square Foot and Average Multi-Dwelling Vacancy Rate, Sandy, 2012 through 2021

Source: CoStar.



## Housing Affordability

A typical standard used to determine housing affordability is that a household should pay no more than a certain percentage of household income for housing, including payments and interest or rent, utilities, and insurance. The Department of Housing and Urban Development's guidelines indicate that households paying more than 30% of their income on housing experience "cost burden" and households paying more than 50% of their income on housing experience "severe cost burden." Using cost burden as an indicator is one method of determining how well a city is meeting the Goal 10 requirement to provide housing that is affordable to all households in a community.

For example, about 17% of Sandy's households have an income of less than \$34,000 per year. In accordance with the Department of Housing and Urban Development's guidelines, these households can afford rent of less than \$860 per month. Most, but not all, of these households are cost burdened.

About 32% of Sandy's households were cost burdened in 2020 and 13% were severely cost burdened. In this period, about 60% of *renter* households were cost burdened or severely cost burdened, compared with 23% of homeowners. Sandy experienced similar cost burden rates to Clackamas County and Oregon.

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While cost burden is a common measure of housing affordability, it does have some limitations. A household is defined as cost burdened if the housing costs exceed 30% of their income, regardless of actual income. The remaining 70% of income is expected to be spent on nondiscretionary expenses, such as food or medical care expenses. Households with higher incomes may be able to pay more than 30% of their income on housing without impacting the household's ability to pay for necessary nondiscretionary expenses.

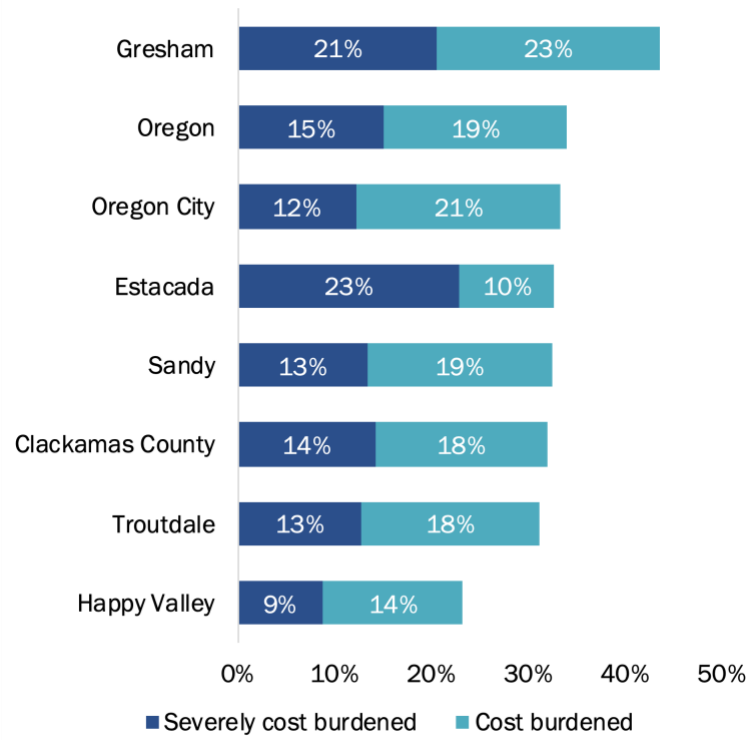
In addition, cost burden compares income to housing costs and does not account for accumulated wealth. As a result, the estimate of how much a household can afford to pay for housing does not include the impact of a household's accumulated wealth.

Cost burden also does not account for debts, such as college loans, credit card debt, or other debts. As a result, households with high levels of debt may be less able to pay up to 30% of their income for housing costs.

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**Overall, about 32% of all households in Sandy were cost burdened, similar to Clackamas County (32%) and slightly lower than Oregon (34%).**

Exhibit 52. Housing Cost Burden, Sandy, Clackamas County, Oregon, Other Comparison Cities, 2016-2020  
Source: US Census Bureau, 2016-2020 ACS Tables B25091 and B25070.

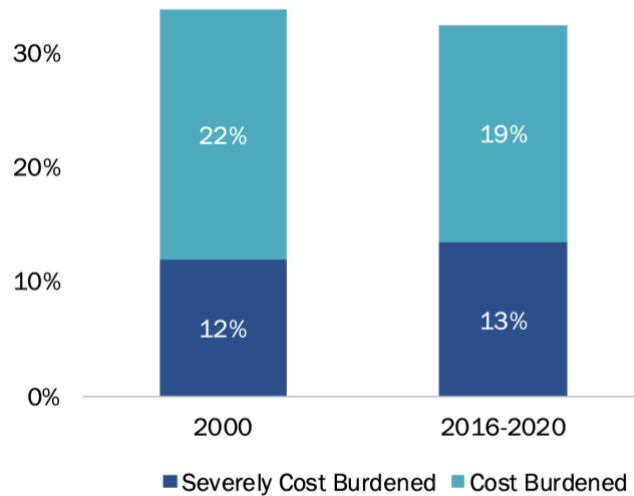




**From 2000 to 2020 the number of cost-burdened households decreased slightly.**

**Exhibit 53. Change in Housing Cost Burden, Sandy, 2000 to 2016-2020**

Source: US Census Bureau, 2000 Decennial Census, Tables H069 and H094 and 2016-2020 ACS Tables B25091 and B25070.



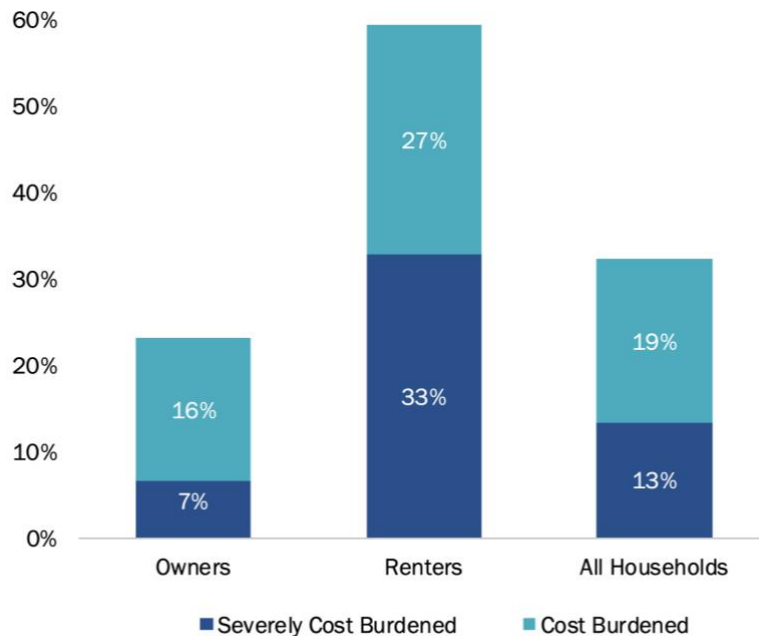
**Renters are much more likely to be cost burdened than homeowners.**

About 60% of Sandy's renters were cost burdened or severely cost burdened, compared to 23% of homeowners.

About 33% of Sandy's renters were severely cost burdened (meaning they paid more than 50% of their income on housing costs alone).

**Exhibit 54. Housing Cost Burden by Tenure, Sandy, 2016-2020**

Source: US Census Bureau, 2016-2020 ACS Tables B25091 and B25070.



**Cost burden is highest for renter households with the lowest incomes. About 65% of Sandy's renter households have incomes below \$50,000, compared with 15% of Sandy's owner households.**

Most renter households earning less than \$50,000 are cost burdened.

About 85% of renter households that earn less than \$20,000 are severely cost burdened.

**Exhibit 55. Cost-Burdened Renter Households, by Household Income, Sandy, 2016-2020**

Source: US Census Bureau, 2016-2020 ACS Table B25074.



Exhibit 56 through

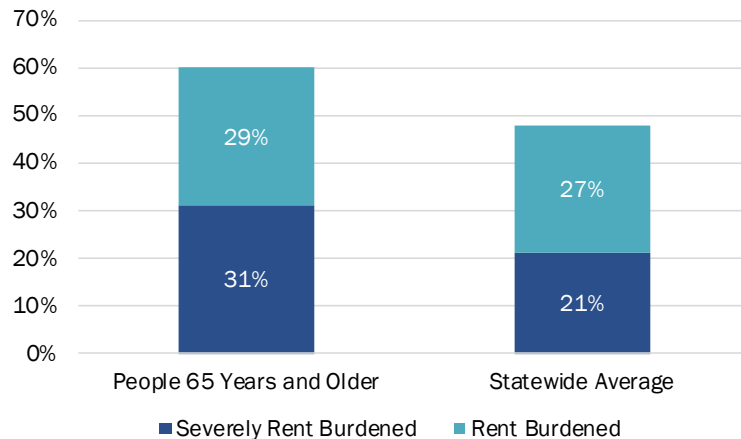
Exhibit 58 show cost burden in Oregon for renter households for seniors, people of color, and people with disabilities.<sup>25</sup> This information is not readily available for a city with a population as small as Sandy, which is why we present statewide information. These exhibits show that these groups experience cost burden at higher rates than the overall statewide average.

**Renters 65 years of age and older were disproportionately rent burdened compared to the state average.**

About 60% of renters aged 65 years and older were rent burdened, compared with the statewide average of 48% of renters.

**Exhibit 56. Cost-Burdened Renter Households, for People 65 Years of Age and Older, Oregon, 2018**

Source: US Census, 2018 ACS 1-Year PUMS Estimates. From the Report *Implementing a Regional Housing Needs Analysis Methodology in Oregon: Approach, Results, and Initial Recommendations* by ECONorthwest, August 2020.

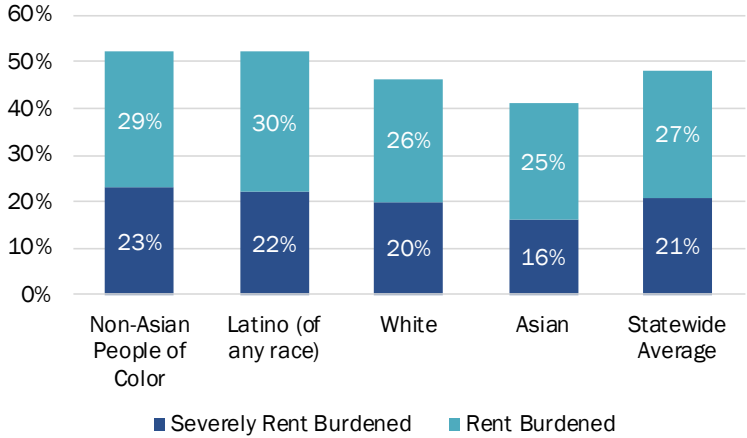


<sup>25</sup> From the report *Implementing a Regional Housing Needs Analysis Methodology in Oregon*, prepared for Oregon Housing and Community Services by ECONorthwest, March 2021.

Compared to the average renter household in Oregon, those that identified as a non-Asian person of color or as Latino/a/x were disproportionately rent burdened.

Exhibit 57. Cost-Burdened Renter Households, by Race and Ethnicity, Oregon, 2018

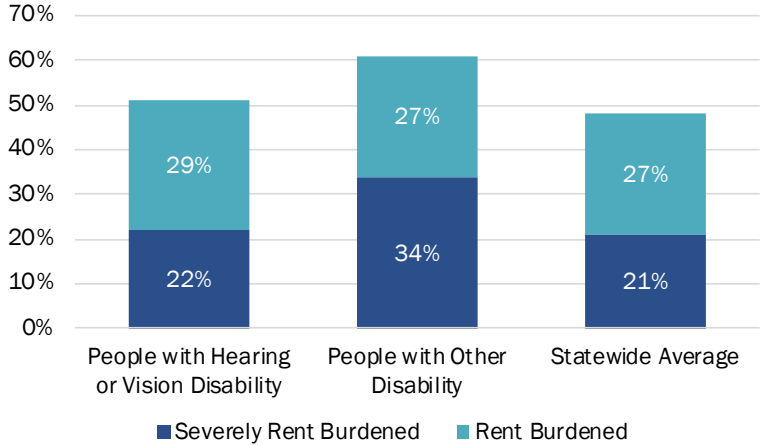
Source: US Census, 2018 ACS 1-Year PUMS Estimates. From the Report *Implementing a Regional Housing Needs Analysis Methodology in Oregon: Approach, Results, and Initial Recommendations* by ECONorthwest, August 2020.



Renters with a disability in Oregon were disproportionately cost burdened.

Exhibit 58. Cost-Burdened Renter Households, for People with Disabilities, Oregon, 2018

Source: US Census, 2018 ACS 1-Year PUMS Estimates. From the Report *Implementing a Regional Housing Needs Analysis Methodology in Oregon: Approach, Results, and Initial Recommendations* by ECONorthwest, August 2020.



Another way of exploring the issue of financial need is to review housing affordability at varying levels of wages and household income.

**Fair Market Rent for a 2-bedroom apartment in Portland-Vancouver-Hillsboro, OR-WA MSA is \$1,839.**

ECONorthwest’s research about the costs of a 2-bedroom apartment in Sandy showed that the costs range between \$1,399 and \$1,965.

**Exhibit 59. HUD Fair Market Rent (FMR) by Unit Type, Portland-Vancouver-Hillsboro, OR-WA MSA, 2023**

Source: US Department of Housing and Urban Development.

<b>\$1,500</b>	<b>\$1,610</b>	<b>\$1,839</b>	<b>\$2,574</b>	<b>\$2,995</b>
Studio	1-Bedroom	2-Bedroom	3-Bedroom	4-Bedroom

**A person must earn at least \$35.37 per hour to afford two-bedroom Fair Market Rent (\$1,839).**

That is \$73,560 for a full-time job. About 44% of Sandy’s households have incomes below \$73,600 per year.

**Exhibit 60. Affordable Housing Wage, Portland-Vancouver-Hillsboro, OR-WA MSA, 2021**

Source: US Department of Housing and Urban Development; Oregon Bureau of Labor and Industries.

**\$35.37 per hour**

Affordable housing wage for two-bedroom unit in Portland-Vancouver-Hillsboro, OR-WA MSA

In 2021, the overall average wage for people working at a business located in Sandy was \$43,856, compared to \$71,512 in the Portland metro region. Households need to have at least two people working average-wage jobs (or above) to afford the average asking rent plus utilities of \$1,840.<sup>26</sup> Single-worker households or two-worker households with lower-wage jobs cannot afford this rent. A household would need to have income of about \$73,600 to afford these rents.

Average wages in Sandy are also not high enough to pay for the median home sales price of \$475,000. Even two-worker households with relatively high-wage jobs cannot afford the median home sales price. Households would need to earn approximately \$146,000 annually to afford this sales price.

#### Exhibit 61. Financially Attainable Housing for Workers in Sandy

Source: 2021 covered employment from confidential Quarterly Census of Employment and Wage (QCEW) data provided by the Oregon Employment Department; Redfin Data Center (2022), Costar (2022).

		Workers in Sandy can afford...			
		monthly housing costs of:	average asking rent?	median home sales price?	
<i>Can people who work in Sandy afford to live in Sandy?</i>	Average Wage \$43,856	Single-Worker Household: \$43,856	\$1,100	✗	✗
		Two-Worker Household: \$87,713	\$2,200	✓	✗
<i>Average Asking Rent (from Costar) plus \$250 for utilities: \$1,840</i>	Food Service Average Wage (low wage) \$23,042	Single-Worker Household: \$23,042	\$580	✗	✗
		Two-Worker Household: \$46,084	\$1,200	✗	✗
<i>Median Home Sales Price: \$475,000</i>	Manufacturing Average Wage (high wage) \$64,470	Single-Worker Household: \$64,470	\$1,600	✗	✗
		Two-Worker Household: \$128,940	\$3,200	✓	✗
	Mixed (one high and one low-wage worker)	Two-Worker Household: \$87,512	\$2,200	✓	✗

<sup>26</sup> Average asking rent was about \$1,590 in 2022 according to Costar. ECONorthwest assumed \$250 per month for utilities for a total housing cost of \$1,840.

Exhibit 62 shows housing affordability based on the regional median family income (MFI) for Clackamas County, which is used by HUD to understand the differences in housing affordability in different places across the nation. In Clackamas County (and the rest of the Portland region), the MFI for a family of four was \$114,400 in 2023.

A household earning 100% of MFI (\$114,400) could afford monthly housing costs of about \$2,860 or a home roughly valued between \$315,000 and \$372,000, depending on the interest rate of the loan, the loan term, and the amount of down payment.

To afford the median home sales price of \$475,000, a household would need to earn about \$146,000 or 128% of MFI. About 20% of Sandy's households have income sufficient to afford this median home sales price in accordance with HUD guidelines.

A household would need to have income of about \$73,600 (about 64% of MFI) to afford the average asking rent for multi-dwelling housing plus basic utilities like power, heat, and water of \$1,840.<sup>27</sup> About 44% of Sandy's households earn less than \$73,600 and cannot afford these rents. In addition, about 17% of Sandy's households have incomes of less than \$34,320 (30% of MFI) and are at risk of becoming houseless.

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<sup>27</sup> Average asking rent was about \$1,590 in 2022 according to Costar. ECONorthwest assumed \$250 per month for utilities for a total housing cost of \$1,840.

### Exhibit 62. Financially Attainable Housing, by Median Family Income (MFI) for Clackamas County (\$114,400), 2023

Source: U.S. Department of Housing and Urban Development, Portland MSA, 2023. Note: Note: The estimates of affordable home sales prices below are rough estimates. The affordable home sales prices will vary for each borrowing household, based on interest rates, loan term, down payment, and similar factors. These sales prices are illustrative estimates and do not make assumptions about specific interest rates (assumed 6.5% or more), amount of down payment, whether mortgage insurance will be required, or other factors that are unique to an individual household's mortgage.

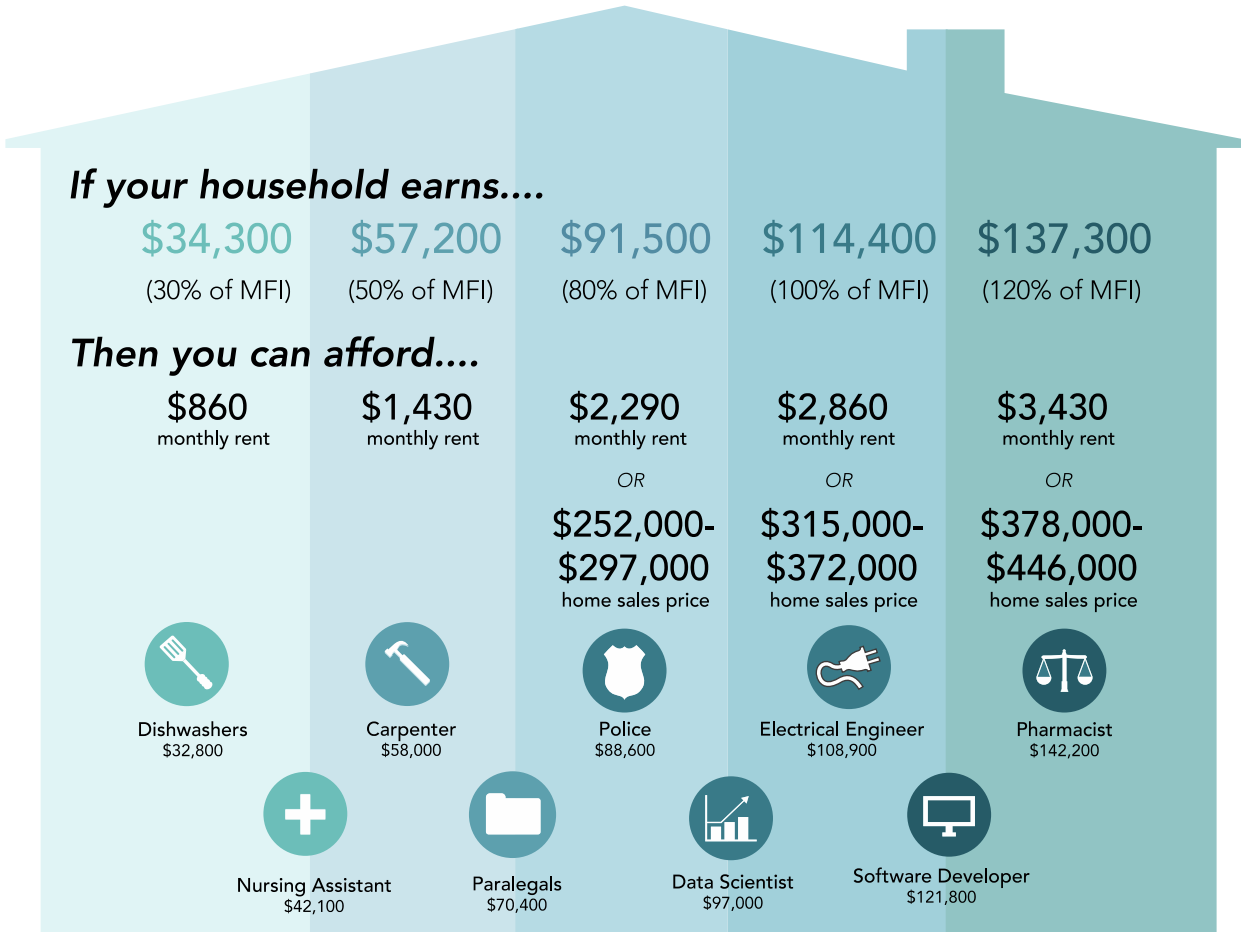


Exhibit 63. Share of Households by Median Family Income (MFI) for Clackamas County, Sandy, 2023  
Source: US Department of HUD. US Census Bureau, 2016-2020 ACS Table 19001.

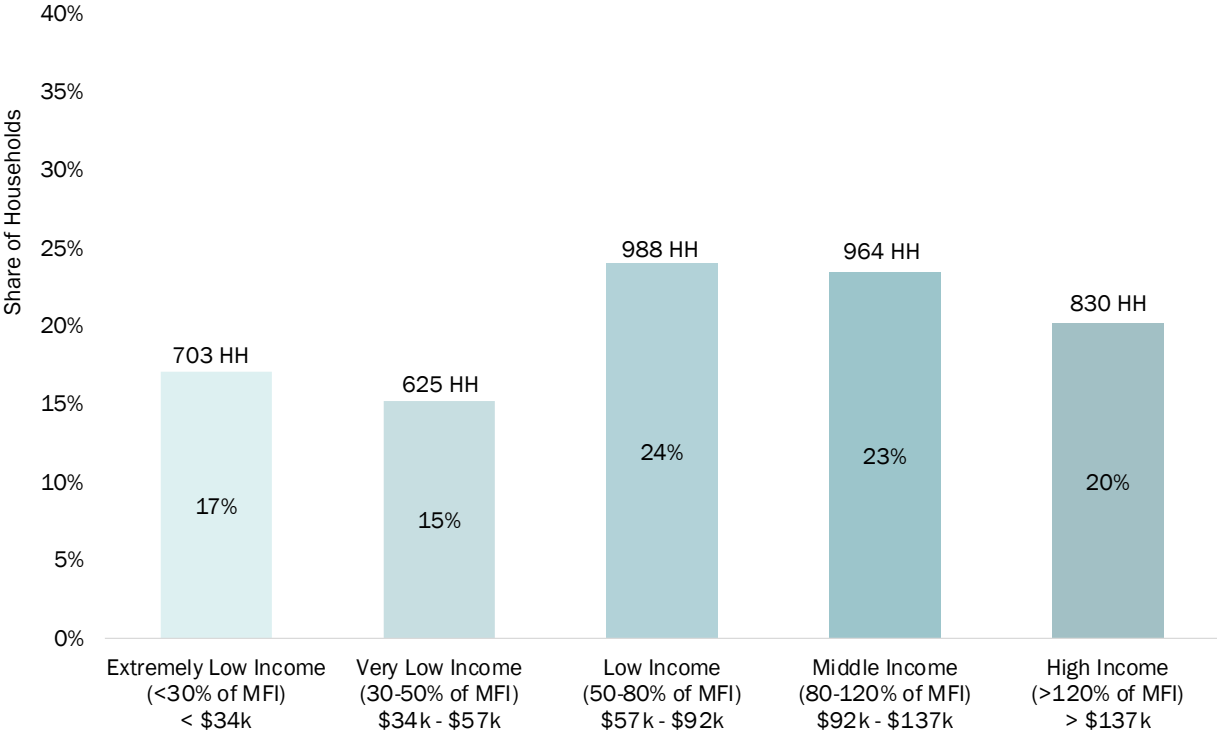


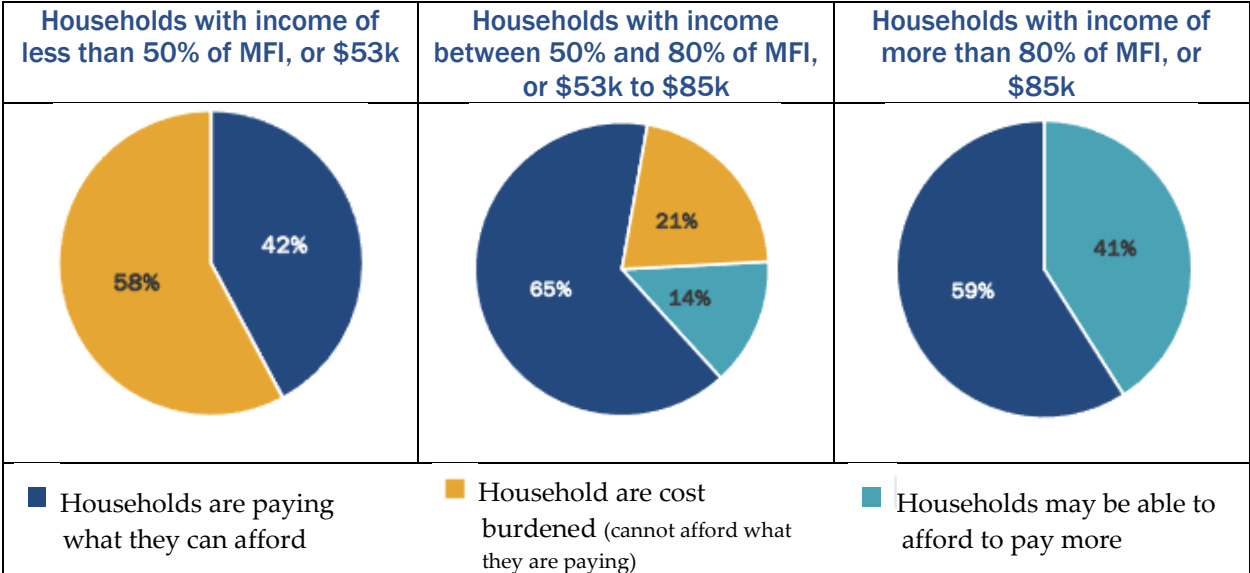
Exhibit 64 illustrates housing unit affordability based on information from HUD and the US Census about unit affordability and household income. It compares the amount that the household could pay for housing with the amount that they are paying for housing. Households can afford what they are paying (dark blue), could afford to pay more than they are paying (teal blue), or are cost burdened and cannot afford to pay as much as they are paying (yellow).

- Households with income of less than 50% of MFI (or \$53,000) are most likely to be cost burdened. Only 42% of households in this income can afford their housing. Sandy has a deficit of about 610 units that are affordable to these households.
- Most households with income between 50% and 80% of MFI (or \$53,000 to \$85,000) can afford their housing costs. About 14% of these households may be able to afford to pay more than they do for their housing. And about 21% of households in this income group are cost burdened, accounting for 144 households.
- All households with income of more than 80% of MFI (or \$85,000) can either afford their current housing or may be able to afford to pay more than they do for their housing.



**Exhibit 64. Unit Affordability by Household Income, Sandy, 2015-2019**

Source: CHAS, 2015-2019, Table 18.



Sandy currently has a deficit of housing units for households earning 0-50% of the MFI (less than \$53,250 per year), resulting in cost burden of these households. This indicates a deficit of more affordable housing types (such as government-subsidized housing, existing lower-cost apartments, and manufactured housing). This finding is consistent with the other information presented in this section.

For households earning 50-80% MFI, some are cost burdened likely because they cannot find housing that is affordable. Some households earning 50-80% MFI and some earning over 80% MFI may be able to afford more than they are paying for housing, which means that they are occupying units affordable to lower-income households. These households could afford more expensive housing but either choose to live in less costly housing or cannot find higher-cost housing that meets their needs.

## Summary of the Factors Affecting Sandy's Housing Needs

The following is a discussion of how demographic and housing trends are likely to affect housing in Sandy over the next twenty years:

- **The high cost of homeownership is a growing challenge in Sandy.** Housing affordability presents a challenge in Clackamas County and the broader Portland metro region. Sandy is affected by these regional trends. In Sandy, housing costs have increased faster than incomes. Between 2015 and 2022, home sales prices increased by about 80%. Between 2015 and 2020, the median household income increased 33%

Many people who work in Sandy cannot afford to own a home in Sandy. The average wage of a worker in Sandy was \$43,856 in 2021. The median home sales price in Sandy was \$475,000 as of December 2022. Even two-worker households with relatively high-wage jobs cannot afford the median home sales price. Workers would need to earn approximately \$146,000 annually to afford this sales price (assuming 6.5% interest rate or more).<sup>28</sup>

- **Finding affordable rental housing is becoming increasingly challenging in Sandy.** Between 2015 and 2022, rental costs increased by 41% in Sandy. Between 2015 and 2020, the median household income for *renter* households decreased by 10%. Sandy has a small supply of multi-dwelling housing (about 14% of the city's housing stock) which is likely contributing to increasing rents. Over half of renter households were cost burdened (60%) in 2020.

Many people who work in Sandy cannot afford to rent in Sandy. The average wage of a worker in Sandy was \$43,856 in 2021. Households need to have at least two people working average-wage jobs (or above) to afford the average asking rent plus utilities of \$1,840.<sup>29</sup> Single-worker households or two-worker households with lower-wage jobs cannot afford this rent. A household would need to have income of about \$73,600 to afford these rents.

- **Demographic trends will change Sandy's housing needs over the planning period.** Key demographic and economic trends that will affect Sandy's future housing needs are (1) the aging of millennials and Gen Zers, (2) the growth of the older adult population, and (3) the growth of the Latino population.
  - *Millennials and Gen Zers will continue to form households and make a variety of housing choices.* Sandy has a greater share of younger working-aged people than Clackamas County and Oregon. About 31% of Sandy's population is between 20 and 39 years

<sup>28</sup> The affordable home sales prices varies for each borrowing household, based on interest rates, loan term, down payment, and similar factors.

<sup>29</sup> Average asking rent was about \$1,590 in 2022 according to Costar. ECONorthwest assumed \$250 per month for utilities for a total housing cost of \$1,840.

old, compared to 24% for Clackamas County, and 28% for Oregon. Sandy also has a larger percentage of households with children than the county and state.

This age group includes both millennials (who will be 45 to 65 years old by 2045) and Gen Zers (who will be 25 to 45 years old by 2045). The ability to retain current millennial and Gen Zer residents in Sandy as they age will depend on the City's availability of renter and ownership housing that is large enough to accommodate growing families while still being relatively affordable.

Homeownership is becoming increasingly common among millennials, but financial barriers to homeownership remain for some millennials and Gen Zers, resulting in the need to rent housing, even if they prefer to become homeowners. Housing preferences for Gen Zers are not yet known but are expected to be similar to millennials, with the result that they will also need affordable housing—both for rental and, later in life, for ownership. Some millennial and Gen Zer households will occupy housing that is currently occupied but will become available over the planning period, such as housing that is currently owned or occupied by baby boomers. The need for housing large enough for millennial and Gen Zer families may be partially accommodated by these existing units through future sales.

- *Growth in the senior population.* Fifteen percent of Sandy residents are aged 60 or older compared to Clackamas County (25%) or the state as a whole (24%). However, countywide projections suggest that older residents will make up a greater share of the population in the future. A rise in the number of Sandy's older adult population will result in an increased demand for housing types specific to this population, such as assisted-living facilities or age-restricted developments.
- *Latino population will continue to grow.* Latino population growth will be an important driver in growth of housing demand in Sandy, both for owner and renter-occupied housing. Growth in the Latino population, similar to regional and statewide trends, will drive demand for housing for families with children. Given the lower income for some Latino households, especially first-generation immigrants, growth in this group will also drive demand for affordable housing, both for ownership and renting.

In summary, increasing housing costs and changing demographics underscore the need for more affordable housing in a variety of housing types.

## 5. Housing Need in Sandy

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### Projected New Housing Units Needed in the Next Twenty Years

The results of the Housing Capacity Analysis are based on (1) the official population forecast for growth in Sandy over the twenty-year planning period, (2) information about Sandy's housing market relative to Clackamas County, Oregon, and nearby cities, and (3) the demographic composition of Sandy's existing population and expected long-term changes in the demographics of Clackamas County.

#### Forecast for Housing Growth

This section describes the key assumptions and presents an estimate of new housing units needed in Sandy between 2023 and 2043. The key assumptions are based on the best available data.

- **Population.** A twenty-year population forecast (in this instance, 2023 to 2043) is the foundation for estimating needed new dwelling units. Based on PSU's population forecast, Sandy's UGB is projected to grow from 13,877 persons in 2023 to 20,227 persons in 2043, an increase of 6,350 people.
- **Household Size.** According to the 2016-2020 American Community Survey, the average household size in Sandy was 2.75 people. **Thus, for the 2023 to 2043 period, we assume an average household size of 2.75 persons.**
- **Vacancy Rate.**<sup>30</sup> According to the 2016-2020 American Community Survey, Sandy's vacancy rate was 5%. **Thus, for the 2023 to 2043 period, we assume a 5% vacancy rate.**

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<sup>30</sup> The Census defines vacancy as "unoccupied housing units [that] are considered vacant. Vacancy status is determined by the terms under which the unit may be occupied, e.g., for rent, for sale, or for seasonal use only."

Sandy will have demand for 2,424 new dwelling units over the 20-year period, with an annual average of 121 dwelling units.

Exhibit 65. Forecast of Demand for New Dwelling Units, Sandy UGB, 2023 to 2043

Source: Calculations by ECONorthwest.

Variable	New Dwelling Units (2023-2043)
Change in persons	6,350
Average household size	2.75
New occupied DU	2,309
<i>times</i> Vacancy rate	5.0%
<i>equals</i> Vacant dwelling units	115
<b>Total new dwelling units</b>	<b>2,424</b>
<b>Annual average of new dwelling units</b>	<b>121</b>

## Housing Units Needed Over the Next Twenty Years

Exhibit 66 presents a forecast of new housing in Sandy's UGB for the 2023 to 2043 period. This section determines the needed mix and density for the development of new housing developed over this twenty-year period in Sandy.

Over the next twenty years, the need for new housing developed in Sandy will generally include a wider range of housing types and housing that is more affordable. This conclusion is based on the following information, found in the previous sections:

- Sandy's existing housing mix is predominately single-family detached. In 2020, 79% of Sandy's housing was single-family detached, 7% was single-family attached, 4% was multi-dwelling housing (with two to four units per structure), and 10% was multi-dwelling housing (with five or more units per structure). Over the 2014 to May 2023 period, 852 units were built in the City of Sandy. Of the 852 units built, about 69% were for single-family units and 31% were for multi-dwelling units.
- Demographic changes across Sandy suggest increases in demand for single-family attached housing and multi-dwelling housing. The key demographic and socioeconomic trends that will affect Sandy's future housing needs are increasing housing costs, housing affordability concerns for millennials and Gen Zers, need for housing for families with children, growth of the Latino population, and an aging population. The implications of these trends are increased demand for housing that is affordable for families and for smaller, older (often single-person) households. Sandy has need for housing both for ownership and rent.
- Sandy's median household income was \$81,262 in 2020, which is similar to Clackamas County's median household income. Since 2000, housing costs in Sandy have been increasing faster than incomes. When considering the income of residents, housing in Sandy is more affordable than comparison regions.

- About 32% of Sandy’s households are cost burdened (paying 30% or more of their household income on housing costs). About 60% of Sandy’s **renters** are cost burdened and about 23% of Sandy’s **homeowners** are cost burdened. Cost burden rates in Sandy are similar to those in Clackamas County.
- Sandy needs more affordable housing types for renters. Between 2015 and 2022, rental costs increased by 41%. Between 2015 and 2020, the median household income for *renter* households decreased 10%. A household would need to have an income of \$73,600 (about 64% of MFI) to afford the average asking rent for multi-dwelling housing plus utilities of \$1,840. According to 2016-2020 ACS data about 44% of Sandy’s households earn less than \$73,600 and cannot afford these rents. In addition, about 17% of Sandy’s households have incomes of less than \$34,320 (30% of MFI) and are at risk of becoming houseless.
- Sandy needs more affordable housing types for homeowners. In Sandy, housing costs have increased faster than incomes. Between 2015 and 2022, home sales prices increased by 81%. Between 2015 and 2020 the median household income increased 33%. To afford the median home sales price in Sandy of \$475,000, a household would need to earn about \$146,000 or 128% of MFI. About 20% of Sandy’s households have income sufficient to afford this median home sales price.

These factors suggest that Sandy needs a broader range of housing types with a wider range of price points than are currently available in Sandy’s housing stock. This includes providing opportunity for the development of housing types across the affordability spectrum, such as less expensive single-family detached housing (e.g., small-lot single-family detached units, cottages, and accessory dwelling units), town houses, duplexes, triplexes, quadplexes, and multi-dwelling buildings with five or more units.

Exhibit 66 shows the forecast of needed housing in the Sandy UGB during the 2023 to 2043 period. The projection is based on the following assumptions:

- The assumptions about the mix of housing (based on the discussion above) in Exhibit 66 are as follows. This represents Sandy’s needed housing mix:
  - **About 60% of new housing will be single-family detached**, a category which includes manufactured housing, cottage housing, and accessory dwelling units. About 79% of Sandy’s existing housing was single-family detached in 2020.
  - **About 7% of new housing will be single-family attached**. About 7% of Sandy’s existing housing was town houses in 2020.
  - **About 5% of new housing will be duplexes, triplexes, and quadplexes**. About 4% of Sandy’s existing housing was plexes in 2020.
  - **About 28% of new housing will be multi-dwelling housing (with five or more units per structure)**. About 10% of Sandy’s existing housing was multi-dwelling in 2020.

Sandy is forecast to grow by 2,424 new dwelling units over the 20-year period, 28% of which will be multi-dwelling (5+ units).

Exhibit 66. Forecast of Demand for New Dwelling Units, Sandy, 2023 to 2043

Source: Calculations by ECONorthwest.

Variable	Preliminary Needed Mix
<b>Needed new dwelling units (2023-2043)</b>	<b>2,424</b>
Dwelling units by structure type	
Single-family detached	
Percent single-family detached DU	60%
Total new single-family detached DU	1,454
Single-family attached	
Percent single-family attached DU	7%
Total new single-family attached DU	170
Duplex, Triplex, Quadplex	
Percent duplex, triplex, quadplex	5%
Total new duplex, triplex, quadplex	121
Multi-dwelling (5+ units)	
Percent multi-dwelling (5+ units)	28%
Total new multi-dwelling (5+ units)	679
<b>Total new dwelling units (2023-2043)</b>	<b>2,424</b>

Exhibit 67 allocates needed housing to plan designations in Sandy. The allocation is based, in part, on the types of housing allowed in the zoning districts of each plan designation. It also considers the densities allowed (Note: densities do not reflect middle housing allowances) and required in each designation. Exhibit 67 shows:

- **Single Family Residential (SFR)** allows single-family detached, duplexes, and accessory dwelling units. Density for development is a minimum of 3 dwelling units per net acre and a maximum of 5.8 units per net acre. The minimum single-family lot size is 7,500 square feet.
- **Low Density Residential (R-1)** allows single-family detached and attached, duplexes, and accessory dwelling units. The minimum density for development is 5 dwelling units per net acre and the maximum density is 8 units per net acre. Minimum lot size for single-family detached is 5,500 square feet. Other uses have no minimum lot size.
- **Medium Density Residential (R-2)** allows single-family detached and attached, duplexes, accessory dwelling units, and multi-dwelling. The minimum density for development is 8 dwelling units per net acre and the maximum density is 14 units per net acre. There is no minimum lot size.
- **High Density Residential (R-3)** allows single-family detached and attached, duplexes, accessory dwelling units, and multi-dwelling. The minimum density for development is

10 dwelling units per net acre and the maximum density is 20 units per net acre. There is no minimum lot size.

- **Village (SFR, R-1, R-2, R-3)** allows the uses according to the implementing zone as described above.
- **Commercial (C-2)** allows multi-dwelling over commercial uses with no minimum lot sizes. The City allows housing development in the C-1 and C-3 zoned but Exhibit 6 shows these zones have very little buildable land. If the City rezones land to these zones in the future, they may accommodate housing development as well.

Exhibit 67. Allocation of Needed Housing by Housing Type and Plan Designation and Zone, Sandy UGB, 2023 to 2043

Source: ECONorthwest.

Housing Type	Single Family Residential (SFR)	Medium Density Residential (R-2)	High Density Residential (R-3)	Village (SFR, R-1, R-2, R-3)	Commercial (C-2)	Total
<b>Dwelling Units</b>						
Single-family detached	654	436	-	363	-	1,453
Single-family attached	-	61	12	96	-	169
Duplex, triplex, quadplex	18	24	12	66	-	120
Multi-dwelling (5+ units)	-	48	145	151	333	677
<b>Total</b>	<b>672</b>	<b>569</b>	<b>169</b>	<b>676</b>	<b>333</b>	<b>2,419</b>
<b>Percent of Units</b>						
Single-family detached	27%	18%	0%	15%	0%	60%
Single-family attached	0%	3%	0%	4%	0%	7%
Duplex, triplex, quadplex	1%	1%	0%	3%	0%	5%
Multi-dwelling (5+ units)	0%	2%	6%	6%	14%	28%
<b>Total</b>	<b>28%</b>	<b>24%</b>	<b>7%</b>	<b>28%</b>	<b>14%</b>	<b>100%</b>

Exhibit 68 shows the assumed development densities in gross acres (accounting for land for rights-of-way) based on the following assumptions:

- **Low Density Residential (LDR):** 25% of land is in rights-of-way in areas with existing development. The densities in this plan designation average 4.9 dwelling units per net acre and 3.7 dwelling units per gross acre for the SFR zone and 7.2 dwelling units per net acre and 5.4 dwelling units per gross acre for the R-1 zone. Exhibit 68 assumes that housing in LDR will develop at 85% (for the SFR zone) to 90% (for the R-1 zone) of the maximum density allowed, consistent with recent development trends.
- **Medium Density Residential (MDR):** 23% of land is in rights-of-way in areas with existing development. The densities in this plan designation average 12.6 dwelling units per net acre and 9.7 dwelling units per gross acre for the R-2 zone and 19.0 dwelling units per net acre and 14.6 dwelling units per gross acre for the R-3 zone. Exhibit 68 assumes that housing in MDR will develop at 90% (for the R-2 zone) to 95% (for the R-3 zone) of the maximum density allowed, consistent with recent development trends.
- **High Density Residential (HDR):** 22% of land is in rights-of-way in areas with existing development. The densities in this plan designation average 19.0 dwelling units per net acre and 14.8 per gross acre. Exhibit 68 assumes that housing in HDR will develop at



95% of the maximum density allowed in the R-3 zone, consistent with recent development trends.

- **Village:** 29% of land is in rights-of-way in areas with existing development. The densities in this plan designation average 4.9 dwelling units per net acre and 3.5 dwelling units per gross acre for the SFR zone; 7.2 dwelling units per net acre and 5.1 dwelling units per gross acre for the R-1 zone; 12.6 dwelling units per net acre and 8.9 dwelling units per gross acre for the R-2 zone; and 19.0 dwelling units per net acre and 13.5 dwelling units per gross acre for the R-3 zone. Exhibit 68 assumes development at the same densities per zone as described above.
- **Commercial:** 13% of land is in rights-of-way in areas with existing development. Development densities in this plan designation average 20.0 dwelling units per net acre and 17.4 dwelling units per gross acre.

Exhibit 68. Assumed Densities (gross acres) for Needed Housing by Housing Type and Plan Designation, Sandy UGB, 2023 to 2043

Source: ECONorthwest

Plan Designation	Avg. Net Density (DU/net acre)	% for Rights-of-Way	Avg. Gross Density (DU/gross acre)
Low Density Residential			
SFR	4.9	25%	3.7
R-1	7.2	25%	5.4
Medium Density Residential			
R-2	12.6	23%	9.7
R-3	19.0	23%	14.6
High Density Residential			
R-3	19.0	22%	14.8
Village			
SFR	4.9	29%	3.5
R-1	7.2	29%	5.1
R-2	12.6	29%	8.9
R-3	19.0	29%	13.5
Commercial			
C-2	20.0	13%	17.4

## Needed Housing by Income Level

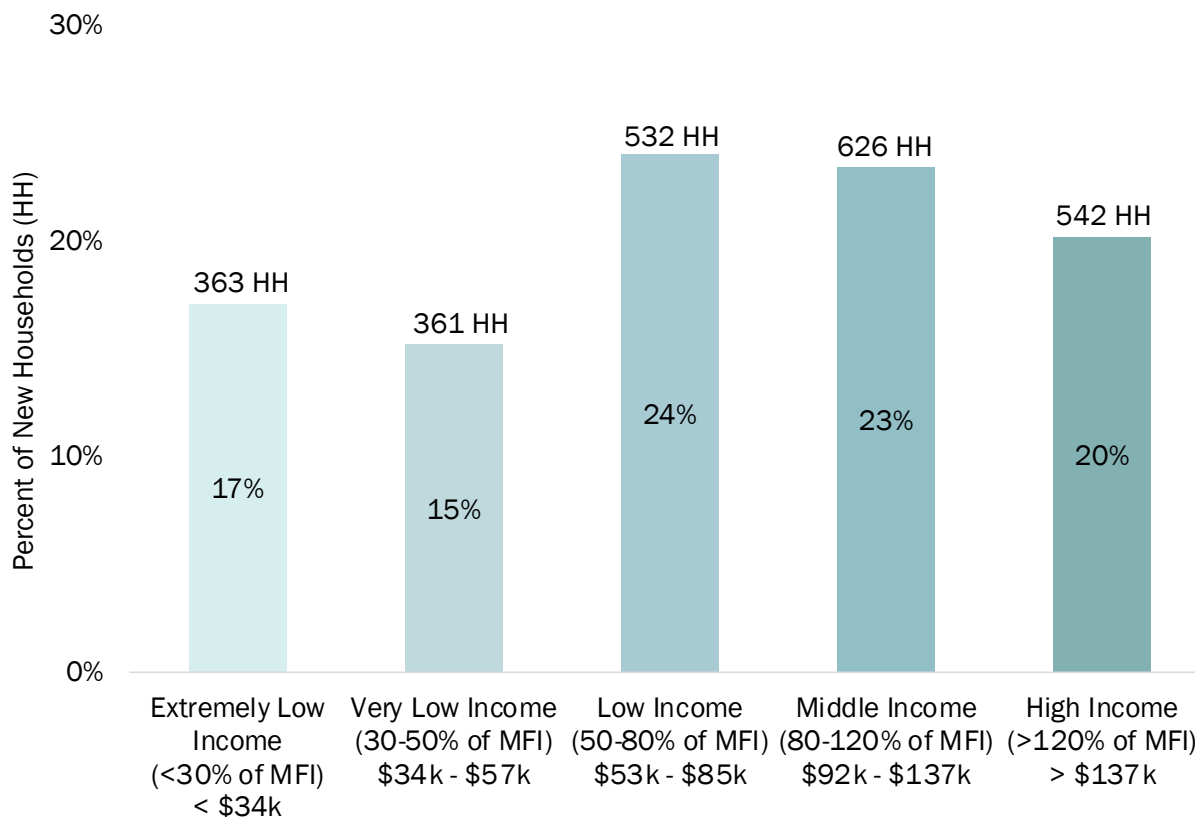
The next step in the Housing Capacity Analysis is to develop an estimate of housing need by income and housing type. This analysis requires an estimate of the income distribution of current and future households in the community. Estimates presented in this section are based on secondary data from the Census and analysis by ECONorthwest.

The analysis in Exhibit 69 is based on Census data about household income levels for existing households in Sandy. Income is distributed into market segments consistent with HUD income level categories, using Clackamas County’s 2023 median family income (MFI) of \$106,500. The exhibit assumes that approximately the same percentage of households will be in each market segment in the future.

Based on Exhibit 69, 32% of Sandy’s future households will have income below 50% of Clackamas County’s median family income (less than \$53,000). About 47% will have incomes between 50% and 120% of the county’s MFI (between \$53,000 and \$128,000). Exhibit 69 shows that, as Sandy’s population grows, Sandy will continue to have demand for housing across the affordability spectrum.

Exhibit 69. Future (New) Households, by Median Family Income (MFI) for Clackamas County, Sandy, 2023

Source: US Department of HUD 2023. US Census Bureau, 2016-2020 ACS Table 19001.



## Other Housing Needs

ORS 197.303, 197.307, 197.312, and 197.314 require cities to plan for government-assisted housing, farmworker housing, manufactured housing on lots and in manufactured home parks, and housing for people with disabilities and people experiencing homelessness.

- **Income-restricted and government-subsidized housing.** Government subsidies can apply to all housing types (e.g., single-family detached, multi-dwelling, etc.). Sandy allows development of government-assisted housing in all residential plan designations, with the same development standards for market-rate housing. Because government-assisted housing is similar in character to other housing (with the exception being the subsidies), it is not necessary to develop separate forecasts for government-subsidized housing.
- **Farmworker housing.** Farmworker housing can also apply to all housing types, and the City allows development of farmworker housing in all residential zones, with the same development standards as market-rate housing. Because it is similar in character to other housing (with the possible exception of government subsidies, if population restricted), it is not necessary to develop separate forecasts for farmworker housing.
- **Manufactured housing and prefabricated housing on lots.** Sandy allows manufactured homes in all of its residential plan designations and zoning districts.
  - Sandy’s development code includes standards for manufactured homes that are different from single-family housing. House Bill 4064 requires that manufactured housing not be subject to development standards that are different from single-family housing. Sandy may need to modify its development code to remove requirements for unit size, roofs, and siding to be consistent with requirements for single-family units. Sandy is currently undergoing a Clear and Objective Code Audit which will address these requirements.
  - Sandy’s development code does not mention prefabricated housing, an issue we recommend the City address to meet the requirements of House Bill 4064. Prefabricated housing is built piece by piece (generally in a factory) and is transported to the building site for assembly. Prefabricated housing includes housing built in panels or modules (called modular housing).
- **Manufactured housing in manufactured home parks.** Sandy allows manufactured homes in manufactured home parks in all of its residential zones except for Single Family Residential (SFR). OAR 197.480(4) requires cities to inventory the mobile home or manufactured dwelling parks sited in areas planned and zoned or generally used for commercial, industrial, or high-density residential development. According to the Oregon Housing and Community Services’ Manufactured Dwelling Park Directory,<sup>31</sup> Sandy has six manufactured home parks within the city, with 247 spaces.
 

ORS 197.480(2) requires Sandy to project need for mobile home or manufactured dwelling parks based on (1) population projections, (2) household income levels, (3) housing market trends, and (4) an inventory of manufactured dwelling parks sited in

<sup>31</sup> Oregon Housing and Community Services, Oregon Manufactured Dwelling Park Directory, <http://o.hcs.state.or.us/MDPCRParcs/ParkDirQuery.jsp>.

areas planned and zoned or generally used for commercial, industrial, or high-density residential development.

- Exhibit 66 shows that Sandy will grow by 2,424 dwelling units over the 2023 to 2043 period. Analysis of housing affordability shows that about 30% of Sandy’s new households will be considered very low or extremely low income, earning 50% or less of the region’s median family income. One type of housing affordable to these households is manufactured housing. The households most likely to live in manufactured homes in manufactured home parks are those with incomes between \$32,000 and \$53,000 (30% to 50% of MFI), which includes 15% of Sandy’s households. However, households in other income categories may live in manufactured homes in manufactured home parks.
- Manufactured home parks provide an important opportunity for affordable housing for homeownership. Preserving existing manufactured home parks and allowing smaller manufactured units in manufactured home parks are important ways to provide opportunities for affordable, lower-cost homeownership opportunities. Manufactured housing accounts for about 6.5% of Sandy’s current housing stock.
- If the City has additional need for a new manufactured home park over the 2024-2044 period, it could be for up to about 158 new units (6.5% of new units) on 20 to 26 acres of land, with 6 to 8 dwelling units per acre. If an additional new manufactured home park were developed in Sandy, the City would have sufficient capacity to accommodate it in zones where manufactured housing is allowed. The housing forecast includes new manufactured homes on lots and in manufactured home parks in the category of single-family detached housing.
- Over the next twenty years (or longer), one or more manufactured home parks may close in Sandy. This may be a result of manufactured home park landowners selling or redeveloping their land for uses with higher rates of return, rather than lack of demand for spaces in manufactured home parks. Manufactured home parks contribute to the supply of low-cost affordable housing options, especially for affordable homeownership. The closure of manufactured home parks may be especially difficult in terms of availability of affordable housing, given the large need for affordable homeownership opportunities in Clackamas County and Sandy.
- While there is statewide regulation of manufactured home park closures designed to lessen the financial difficulties of closures for park residents,<sup>32</sup> the City has a role to play in ensuring that there are opportunities for housing for the displaced residents. The City’s primary roles are to ensure that there is sufficient land zoned for new multi-dwelling housing and to reduce barriers to residential development to allow for the development of new, relatively affordable housing.

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<sup>32</sup> ORS 90.645 regulates rules about the closure of manufactured dwelling parks. It requires that the landlord must give at least one year’s notice of park closure and pay tenants between \$5,000 and \$9,000 for each manufactured dwelling park space, in addition to not charging tenants for demolition costs of abandoned manufactured homes.

In addition to these required housing types, this section also addresses housing for people with disabilities and housing for people experiencing homelessness.

- **Housing for People with Disabilities.** Housing for people with disabilities can apply to all housing types, with the same development standards as market-rate housing. It can also apply to other residential/group living uses (such as nursing homes, residential care homes or facilities, or room and boarding facilities) as well as government-subsidized housing (including units that are population restricted). Broadly, housing options for people with disabilities include (1) living in housing independently (alone or with roommates/family), (2) living in housing with supportive services (e.g., with help from a live-in or visiting caregiver), or (3) living in housing in a supervised residential setting. Meeting the housing needs for people with disabilities will require addressing affordability issues, as well as ensuring that people with disabilities have access to housing that addresses their disability and that they have access to housing without discrimination.
- **Housing for People Experiencing Homelessness.** Meeting the housing needs of people experiencing homelessness ranges from emergency shelters, transitional housing, and permanent supportive housing (including supportive housing with services) and improved access to an affordable unit (including rent and utility assistance). Persons experiencing homelessness or those at risk of becoming homeless will require assistance with addressing individual, complex barriers to improve long-term housing stability.

## 6. Residential Land Sufficiency in Sandy

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This chapter presents an evaluation of the sufficiency of vacant residential land in Sandy to accommodate expected residential growth over the 2023 to 2043 period. This chapter includes an estimate of residential development capacity (measured in new dwelling units) and an estimate of Sandy’s ability to accommodate needed new housing units for the 2023 to 2043 period.

### Capacity Analysis

The buildable lands inventory summarized in Chapter 2 provides a *supply* analysis (buildable land by type), and Chapter 5 provided a *demand* analysis (population and growth leading to demand for more residential development). The comparison of supply and demand allows the determination of land sufficiency.

There are two ways to calculate estimates of supply and demand into common units of measurement to allow their comparison: (1) housing demand can be converted into acres, or (2) residential land supply can be converted into dwelling units. A complication of either approach is that not all land has the same characteristics. Factors such as zone, slope, parcel size, and shape can affect the ability of land to accommodate housing. Methods that recognize this fact are more robust and produce more realistic results. This analysis uses the second approach: it estimates the ability of vacant residential lands within the UGB to accommodate new housing. This analysis, sometimes called a “capacity analysis,”<sup>33</sup> can be used to evaluate different ways that vacant residential land may build out by applying different assumptions.

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<sup>33</sup> There is ambiguity in the term *capacity analysis*. It would not be unreasonable for one to say that the “capacity” of vacant land is the maximum number of dwellings that could be built based on density limits defined legally by plan designation or zoning and that development usually occurs—for physical and market reasons—at something less than full capacity. For that reason, we have used the longer phrase to describe our analysis: “Estimating how many new dwelling units the vacant residential land in the UGB is likely to accommodate.” That phrase is, however, cumbersome, and it is common in Oregon and elsewhere to refer to that type of analysis as “capacity analysis,” so we use that shorthand occasionally in this memorandum.

## Sandy Capacity Analysis Results

The capacity analysis estimates the development potential of vacant residential land to accommodate new housing based on the needed densities by the housing type categories shown in Exhibit 67.

Exhibit 70 shows that **Sandy has 657 acres of vacant or partially vacant land to accommodate dwelling units**, based on the following assumptions:

- **Buildable residential land.** The capacity estimates start with the number of buildable acres in plan designations that allow residential uses outright, as shown in Exhibit 3. Exhibit 70 assumes that the commercial plan designations will be able to accommodate 333 dwelling units on about 15% of buildable commercial land, consistent with recent housing development in commercial areas.
- **Needed densities.** The capacity analysis assumes development will occur at needed densities. Those densities were derived from the needed densities shown in Exhibit 68. Based on these assumptions, Sandy’s development capacity is 5.3 dwelling units per gross acre.

### Exhibit 70. Estimate of Capacity on Buildable Land, Sandy UGB, 2023 to 2043

Source: Buildable Lands Inventory; Calculations by ECONorthwest. \*Note: ECONorthwest reduced the “total unconstrained buildable acres” in the Commercial plan designations on the assumption that about 15% of vacant land in commercial areas will develop with housing, based on historical development in these plan designations.

Plan Designation	Total Unconstrained Buildable Acres	Density Assumption (DU/Gross Acre)	Capacity (Dwelling Units)
<b>Low Density Residential</b>			
SFR	418	3.7	1,545
R-1	2	5.4	9
<b>Medium Density Residential</b>			
R-2	60	9.7	582
R-3	0	14.6	1
<b>High Density Residential</b>			
R-3	12	14.8	172
<b>Village</b>			
SFR	31	3.5	109
R-1	91	5.1	465
R-2	8	8.9	74
R-3	16	13.5	214
<b>Commercial</b>			
C-2	19	17.4	333
<b>Total</b>	<b>657</b>	<b>5.3</b>	<b>3,504</b>

## Residential Land Sufficiency

The next step in the analysis of the sufficiency of residential land within Sandy is to compare the demand for housing by plan designation (Exhibit 67) with the capacity of land by plan designation (Exhibit 70).

Exhibit 71 shows that Sandy **has** sufficient land to accommodate housing development in each of its residential plan designations except Village R-2, which has a slight deficit of eight acres. Sandy has capacity for 3,504 dwelling units and demand for 2,419 dwelling units. The result is that Sandy has a surplus of capacity for housing, beyond the forecast of housing growth over the next twenty years of about 1,085 dwelling units. The largest surplus is in SFR.

### Exhibit 71. Comparison of Capacity of Existing Residential Land with Demand for New Dwelling Units and Land Surplus or Deficit, Sandy UGB, 2023 to 2043

Source: Buildable Lands Inventory; Calculations by ECONorthwest.

\*Note: ECONorthwest reduced the "total unconstrained buildable acres" in the Commercial plan designations on the assumption that not all vacant land in commercial areas will develop with housing, based on historical development in these plan designations.

Plan Designation	Total Capacity (Dwelling Units)	Demand (Dwelling Units)	Capacity less Demand (Dwelling Units)
<b>Low Density Residential</b>			
SFR	1,545	672	873
R-1	9	-	9
<b>Medium Density Residential</b>			
R-2	582	569	13
R-3	1	-	1
<b>High Density Residential</b>			
R-3	172	169	3
<b>Village</b>			
SFR	109	66	43
R-1	465	339	126
R-2	74	144	(70)
R-3	214	127	87
<b>Commercial</b>			
C-2	333	333	0
<b>Total</b>	<b>3,504</b>	<b>2,419</b>	<b>1,085</b>



## Conclusions

The key findings and conclusions of Sandy's Housing Capacity Analysis are that:

- **Sandy's population is forecast to grow slower than in the past.** Sandy's UGB is forecast to grow from 13,877 people in 2023 to 20,227 people in 2043, an increase of 6,350 people. This population growth will occur at an average annual growth rate of 1.9%.
- **Sandy does not have sufficient land to accommodate population growth over the twenty-year planning period.** The growth of 6,350 people will result in the demand for 2,424 new dwelling units over the twenty-year planning period, averaging 121 new dwelling units annually. Sandy has sufficient land in all plan designations *except* Village R-2, which has a deficit of about 8 acres or 70 units.
- **Sandy will need to address its deficit of 8 acres (70 dwelling units) in the R-2 zone to meet housing needs over the next 20 years.** The City could address this deficit through rezoning or other land use efficiency measures. The deficit could be met through zoning land to R-2 in any Comprehensive Plan Designation, including Medium Density Residential or Village. **Sandy's housing needs require an increase in affordable options for both renters and homeowners, including a greater variety of attached and multi-dwelling housing types.** Historically, around 79% of Sandy's housing consisted of single-family detached homes. While it is projected that 60% of new housing in Sandy will be single-family detached, the city must also create opportunities for the development of other housing types, including single-family attached homes (7% of new housing), duplexes, triplexes, and quadplexes (5% of new housing), and multi-dwelling structures with five or more units (28% of new housing).<sup>34</sup> Sandy can effectively address its housing needs based on these assumptions.
  - Several factors are driving this shift in housing demand in Sandy, including changing demographics and decreasing housing affordability. Household formations among millennials and Gen Zers, as well as the aging of baby boomers, will generate demand for both rental and owner-occupied housing, spanning a range of options from single-family detached homes to accessory dwelling units, townhouses, duplexes, triplexes, quadplexes, and multi-dwelling structures. Some millennials and Gen Zers along with aging baby boomers may prefer housing in walkable neighborhoods with convenient access to services. Moreover, some housing units must be spacious enough to accommodate growing families while remaining reasonably affordable.

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<sup>34</sup> This housing mix aligns with Sandy's anticipated need for a broader range of housing types, catering to a wider spectrum of price points than currently available in Sandy's housing stock. This planning approach builds upon the findings of Sandy's 2015 Urbanization Study, which projected that 69% of new housing would be for single-family detached and attached units, while 31% would consist of duplexes, triplexes, quadplexes, and multi-dwelling units with five or more units per structure.

- Sandy complied with the requirements of House Bill 2001 to allow duplexes on lots where single-family detached housing is allowed. Enabling a broader range of housing options in more areas is expected to result in a shift in the housing mix developed over the next two decades, especially in regions with significant expanses of vacant buildable land.
- Failure to diversify housing types and provide housing options affordable to households with incomes below 80% MFI (\$91,500), will perpetuate affordability challenges. About 32% of Sandy’s households are cost burdened (paying more than 30% of their income on housing), including a cost burden rate of 60% for renter households. However, providing opportunities for housing affordable to households with incomes below 80% of MFI is likely to require more than zoning code changes, an issue that will be addressed in Sandy’s Housing Production Strategy.
- **Sandy needs more housing options affordable to lower and middle-income households.** Sandy requires more housing options that cater to lower and middle-income households, encompassing those with extremely low incomes, very low incomes, individuals experiencing homelessness, and families with low to middle incomes. These housing needs encompass both the current unmet demands for housing (from those experiencing cost burden and homelessness) as well as the anticipated requirements for new households throughout the twenty-year planning duration.
  - About 32% of Sandy’s households have extremely low incomes or very low incomes, with household incomes below \$57,000. At most, these households can afford \$1,430 in monthly housing costs. The average asking price for a multi-dwelling unit with utilities was \$1,840 in 2022. Development of housing affordable to these households (either rentals or homes for sale) rarely occurs without government subsidy or other assistance. Meeting the housing needs of extremely low-income and very low-income households will be a significant challenge to Sandy.
  - About 47% of Sandy’s households have low or middle incomes, with household incomes between \$57,000 and \$137,00. These households can afford between \$1,430 and \$2,860 in monthly housing costs. Households at the lower end of this income category may struggle to find affordable rental housing, especially with the growing costs of rental housing across Oregon. Some of the households in this group are part of the 32% of all households that are cost burdened. Development of rental housing affordable to households in this income category (especially those with middle incomes) can occur without government subsidy.
  - The need for these types of affordable housing has impacts on Sandy’s economy when people who work in Sandy cannot find housing, much less affordable housing, in the city. People working in Sandy frequently commute from places like Gresham, Portland, and the communities by Mount Hood.
- **Implement development code to allow and support development of prefabricated housing.** The State is developing new model codes to support use of mass timber in newly built modular housing, a type of prefabricated housing. Sandy could implement

this code to allow for development of these types of prefabricated housing, which can provide more affordable housing. ORS 197.314 requires prefabricated to be allowed on all land zoned to allow the development of single-family dwellings, the same as manufactured housing. Sandy will need to modify its development code to define prefabricated housing<sup>35</sup> and to allow for siting of prefabricated housing in manufactured home parks and where it allows single-unit housing. Sandy is currently pursuing a grant to support these changes.

- **Update the development code to remove special requirements for manufactured housing on lots.** ORS 197.314 requires that manufactured housing not be subject to development standards that are different from single-family housing. Sandy may need to modify its development code to remove requirements for unit size, roofs, and siding to be consistent with requirements for single-family units. Sandy is currently undergoing a Clear and Objective Code Audit which will address these requirements.
- **Key infrastructure barriers limit Sandy’s ability to accommodate projected growth.** Sandy has a development moratorium in place due to the limited capacity of its wastewater infrastructure. Building capacity in Sandy’s wastewater system will be essential to meeting the housing needs of future residents, but this will take time. While the exact timeline of the moratorium is unknown, the City is conducting an analysis to determine how much capacity is available for development over the next few years. This analysis is expected to be completed in fall 2023.

The *Sandy Housing Production Strategy* will include recommendations for a wide range of policies to support the development of housing for people experiencing homelessness related to unaffordable housing and housing for extremely low to middle-income households. The *Housing Production Strategy* will also include recommendations that are intended to improve equitable outcomes for housing development, as well as strategies to support the development of all types of housing.

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<sup>35</sup> ORS 455.010 defines a prefabricated structure as “a building or subassembly that has been in whole or substantial part manufactured or assembled using closed construction at an off-site location to be wholly or partially assembled on-site.”

In addition, ORS 197.286 (5) adds an additional qualifier for the purposes of land use planning, requiring prefabricated structures, as defined in ORS 455.010, to be relocatable, more than eight and one-half feet wide, and designed for use as a single-family dwelling.

# Appendix A: Residential Buildable Lands Inventory

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The buildable lands inventory uses methods and definitions that are consistent with Goal 10/OAR 660-008. This appendix describes the methodology that ECONorthwest used for this report based on 2020 data. The results of the BLI are discussed in Chapter 2.

## Overview of the Methodology

Following are the statutes and administrative rules that provide guidance on residential BLIs:

### **OAR 660-008-0005(2):**

*“Buildable Land” means residentially designated land within the urban growth boundary, including both vacant and developed land likely to be redeveloped, that is suitable, available and necessary for residential uses. Publicly owned land is generally not considered available for residential uses. Land is generally considered “suitable and available” unless it:*

- (a) Is severely constrained by natural hazards as determined under Statewide Planning Goal 7;*
- (b) Is subject to natural resource protection measures determined under Statewide Planning Goals 5, 6, 15, 16, 17 or 18;*
- (c) Has slopes of 25 percent or greater;*
- (d) Is within the 100-year flood plain; or*
- (e) Cannot be provided with public facilities.*

## Inventory Steps

The BLI consists of several steps:

1. Generate UGB “land base”
2. Classify land by development status
3. Identify constraints
4. Verify inventory results
5. Tabulate and map results

### Step 1: Generate “land base”

Per Goal 10, this involves selecting all of the tax lots in the Sandy UGB with residential and other nonemployment plan designations. Plan designations and zones included in the residential inventory include:

- Low Density Residential (LDR)
- Medium Density Residential (MDR)
- High Density Residential (HDR)
- Village (V)
- Commercial (C)
  - Central Business District (C-1)
  - Retail/Commercial (C-2)

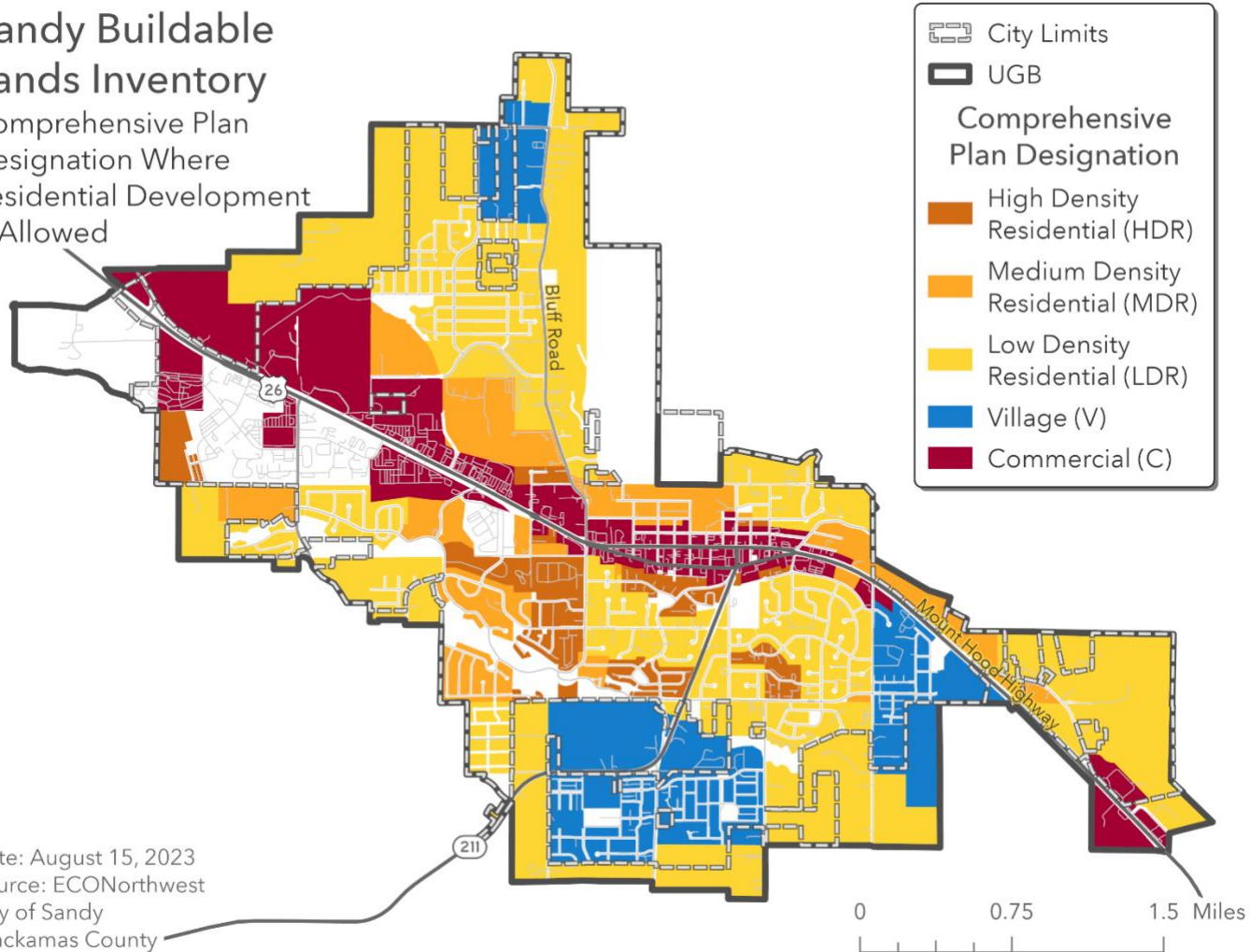
Exhibit 72 shows the residential plan designations included in the BLI.

Exhibit 72. Residential Land Base by Plan Designation, Sandy UGB, 2023  
Source: Clackamas County, ECONorthwest

### Sandy Buildable Lands Inventory

Comprehensive Plan Designation Where Residential Development is Allowed

Date: August 15, 2023  
Source: ECONorthwest  
City of Sandy  
Clackamas County



## Step 2: Classify lands

In this step, ECONorthwest classified each tax lot with a plan designation that allows residential uses into one of five mutually exclusive categories based on development status:

- Vacant land
- Partially vacant land
- Undevelopable land
- Public land
- Developed land

ECONorthwest initially identified buildable land and classified development status using a rule-based methodology consistent with the DLCD Residential Lands Workbook and applicable administrative rules. The rules are described below in Exhibit 73.

Exhibit 73. Rules for Development Status Classification

Development Status	Definition	Statutory Authority
Vacant Land	Tax lots that have no structures or have buildings with very little improvement value. For this inventory, lands with improvement values of less than \$10,000 will be considered vacant (not including lands that are identified as having mobile homes).	OAR 660-008-0006(2) (2) "Buildable Land" means residentially designated land within the urban growth boundary, including both vacant and developed land likely to be redeveloped, that is suitable, available, and necessary for residential uses. Publicly owned land is generally not considered available for residential uses.
Partially Vacant Land	Partially vacant tax lots can use safe harbor established in State statute:  <i>The infill potential of developed residential lots or parcels of one-half acre or more may be determined by subtracting one-quarter acre (10,890 square feet) for the existing dwelling and assuming that the remainder is buildable land.</i>  Tax lots with partially vacant land that is completely constrained are not designated as Partially Vacant.	OAR 660-024-0050 (2)(a)
Undevelopable Land	Vacant tax lots less than 3,000 square feet and with improvement values of less than \$10,000 in size are considered undevelopable.	No statutory definition

Development Status	Definition	Statutory Authority
Public Land	Lands in public are considered unavailable for residential development. This includes lands in Federal, State, County, or City ownership. In addition, we recommend including land for cemeteries in this category.	OAR 660-008-0005(2) - Publicly owned land is generally not considered available for residential uses.
Developed Land	Land that is developed at densities consistent with zoning and improvements that make it unlikely to redevelop during the analysis period. Lands not classified as vacant, partially vacant, undevelopable, or public or exempt are considered developed.	No statutory definition

### Step 3: Identify constraints

Consistent with OAR 660-008-0005(2) guidance on residential buildable lands inventories, ECONorthwest deducted certain lands with development constraints from the BLI. We used the following constraints, as listed in Exhibit 74.

Exhibit 74. Constraints to be included in BLI

Constraint	Statutory Authority	Threshold	Source
<b>Goal 5 Natural Resource Constraints</b>			
<b>Wetlands</b>	OAR 660-015-0000(5)	Areas designated as locally significant	Oregon Department of State Lands
<b>Flood and Slope Hazard (FSH) Overlay District</b>	OAR 660-015-0000(5)	Wetlands, slopes greater than 25%, and perennial streams given setback lengths according to Sec. 17.60.30 of the City of Sandy Code of Ordinances.	City of Sandy
<b>Natural Hazard Constraints</b>			
<b>Regulatory Floodway</b>	OAR 660-008-0005(2a)	Lands within FEMA FIRM identified floodway	FEMA via National Map
<b>100-Year Floodplain</b>	OAR 660-008-0005(2d)	Lands within FEMA FIRM 100-year floodplain	FEMA via National Map
<b>Steep Slopes</b>	OAR 660-008-0005(2c)	Slopes greater than 25%	Oregon Department of Geology and Mining Industries
<b>Landslide Hazards</b>	OAR 660-008-0005(2a)	High or Very High Landslide Susceptibility	Oregon Department of Geology and Mining Industries

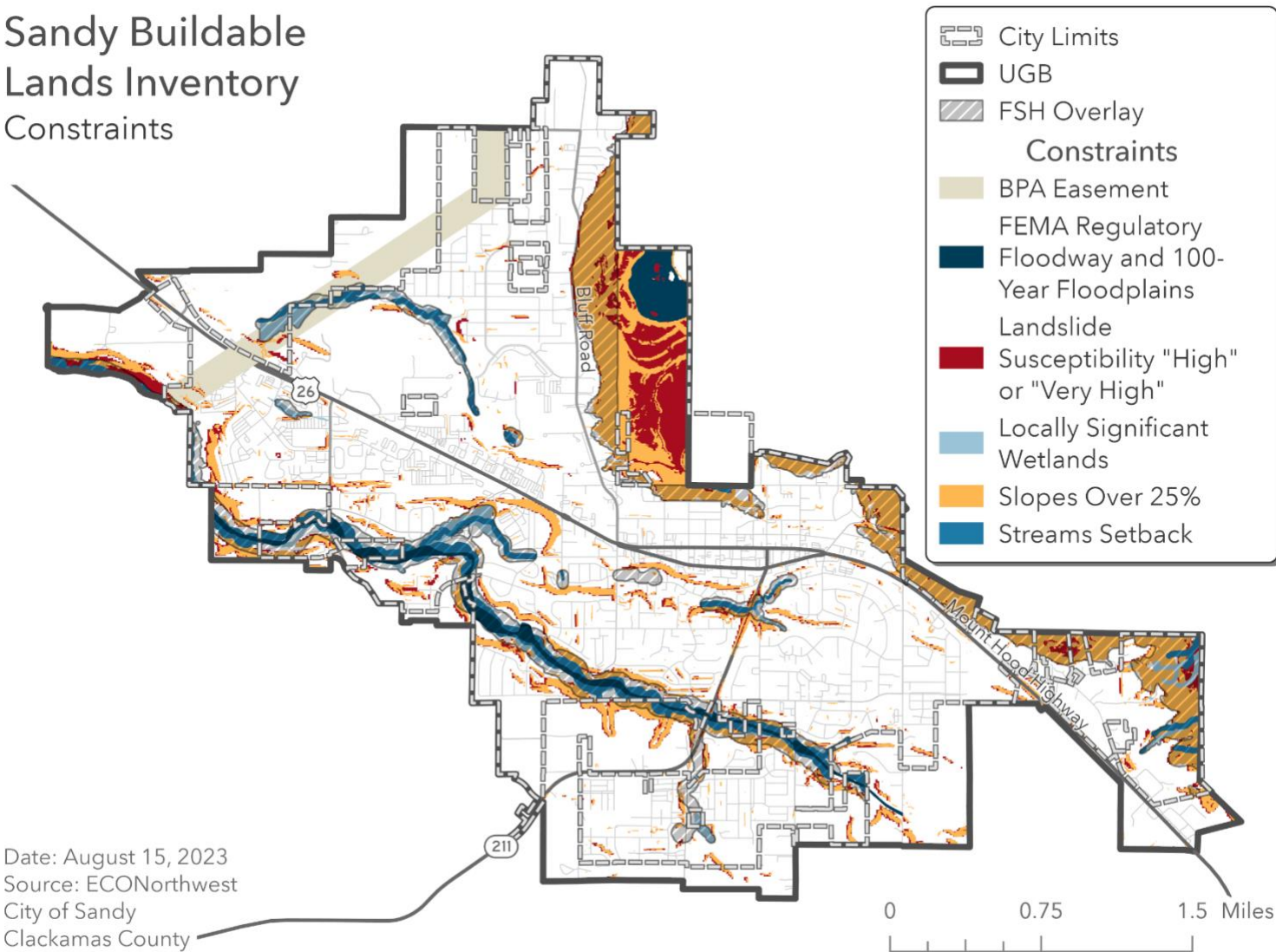


We treated these constrained areas as prohibitive constraints (unbuildable) as shown in Exhibit 75. All constraints were merged into a single constraint file, which was then used to identify the area of each tax lot that is constrained. These areas were deducted from lands that are identified as vacant or partially vacant.

Lack of access to water, sewer, power, road, or other key infrastructure cannot be considered a prohibitive constraint unless it is an extreme condition. This is because tax lots that are currently unserved could potentially become serviced over the twenty-year planning period.

Exhibit 75. Residential Development Constraints, Sandy UGB, 2023  
Source: Clackamas County, ECONorthwest analysis

# Sandy Buildable Lands Inventory Constraints



Date: August 15, 2023  
Source: ECONorthwest  
City of Sandy  
Clackamas County

## Step 4: Verification

ECONorthwest used a multistep verification process. The first verification step involved a “rapid visual assessment” of land classifications using GIS and recent aerial photos. The rapid visual assessment involves reviewing classifications overlaid on recent aerial photographs to verify uses on the ground. ECONorthwest reviewed all tax lots included in the inventory using the rapid visual assessment methodology.

City staff and ECONorthwest performed multiple additional rounds of verification, such as the verification about partially vacant land described in Exhibit 73, which involved verifying the development status determination and the results of the rapid visual assessment.

ECONorthwest amended the BLI based on City staff review and a discussion of the City’s comments.

## Step 5: Tabulation and mapping

The results are presented in tabular and map format. We included a comprehensive plan map, the land base by classification, vacant and partially vacant lands by plan designation, and vacant and partially vacant lands by plan designation with constraints showing.

# Appendix B: National and State Demographic and Other Trends Affecting Residential Development in Sandy

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## National Trends<sup>36</sup>

This brief summary on national housing trends builds on previous work by ECONorthwest as well as Urban Land Institute (ULI) reports, conclusions from *The State of the Nation's Housing* report from the Joint Center for Housing Studies of Harvard University, and other research cited in this section. *The State of the Nation's Housing* report (2021) summarizes the national housing outlook as follows:

Even as the US economy continues to recover, the inequalities amplified by the COVID-19 pandemic remain front and center. Households that weathered the crisis without financial distress are snapping up the limited supply of homes for sale, pushing up prices and further excluding less affluent buyers from homeownership. At the same time, millions of households that lost income during the shutdowns are behind on their housing payments and on the brink of eviction or foreclosure. A disproportionately large share of these at-risk households are renters with low incomes and people of color. While policymakers have taken bold steps to prop up consumers and the economy, additional government support will be necessary to ensure that all households benefit from the expanding economy.

The domestic housing market sees many interlocking challenges remaining as the world transitions from the COVID-19 pandemic. An extremely limited inventory of entry-level homes makes housing unaffordable for many Americans, especially younger ones. However, the conditions for homebuying are ripe for many, resulting in strong demand in the market and increasing home sales prices to record levels. Furthermore, the costs of labor and materials to build new homes increased steeply. While the current amount of new housing starts is robust, newly built homes will not make up the shortfall in residential housing in the near term, especially for single-family homes. The challenges and trends shaping the housing market are summarized below.

- **A continued bounce back in residential construction was led by an increase in single-family and multi-dwelling housing starts.** After a sharp comeback in summer 2020 led by single-family construction, single-family housing starts fell below a 700,000-unit annual rate in April 2020 due to the COVID-19 pandemic. Following that dip, housing

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<sup>36</sup> These trends are based on information from (1) the Joint Center for Housing Studies of Harvard University's publication "The State of the Nation's Housing 2021," (2) Urban Land Institute's "2022 Emerging Trends in Real Estate," and (3) the US Census.

starts nearly doubled to a high of 1,315,000 new housing units in December 2020. It was the strongest month for single-family homebuilding in over 13 years, with a consistent annual rate of production since then ranging from 1,061,000 to 1,255,000 units – most recently hitting 1,215,000 in February 2022. Multi-dwelling unit starts followed similar trends, reaching a 33-year high in January 2020 of more than half a million buildings with 5 units or more, then hitting a 6-year low in April 2020 of a quarter million. Since that low, multi-dwelling starts have increased 47%, reaching 501,000 units in February 2022.

- **Strong construction numbers did not alleviate the shortage of existing homes for sale.** Inventories fell from three months in December 2019 to just under two months in December 2020, well below what is considered balanced (six months), with lower-cost and moderate-cost homes experiencing the tightest inventories. While *The State of the Nation's Housing* report cited the COVID-19 pandemic as sharing some blame for these tight conditions, the larger cause was the result of underproduction of new homes since the mid-2000s. Restrictive land use regulations, the cost and availability of labor, and the cost of building materials were also cited as constraints on residential development.
- **Homeownership rates slowly, but consistently, increased.** After years of decline, the national homeownership rate increased slightly from 64.4% in 2018 to 65.5% in late 2021. Trends suggest the recent homeownership increases are among householders of all age groups, with households under age 35 making up the largest proportions of this increase. About 88% of net new growth (2013 to 2019) was among households with incomes of \$150,000 or more. Significant disparities also still exist between households of color and White households, with the Black-White homeownership gap being 28.1 percentage points in early 2021 and the Hispanic-White gap at 23.8 percentage points (a 1.8 percentage point decrease from 2019).
- **Housing affordability.** Despite a recent downward trend, 37.1 million American households spent more than 30% of their income on housing (the industry standard used for assessing affordability) in 2019, which is 5.6 million more households than in 2001. Renter households experienced cost burden at more than double the rate of homeowners (46% versus 21%) with the number of cost-burdened renters exceeding cost-burdened homeowners by 3.7 million in 2019. Affordability challenges were most likely to affect households with low incomes, as 60% of renters and nearly half of homeowners earning less than \$25,000 were reported to be severely cost burdened<sup>37</sup> in 2019, as well as one in six renters and one in eight homeowners earning between \$25,000 and \$49,999. Households under the age of 25 and over the age of 85 had the highest rates of housing cost burden, as well as households of color.

The Department of Housing and Urban Development's guidelines indicate that households paying more than 30% of their income on housing experience "cost burden" and households paying more than 50% of their income on housing experience "severe

<sup>37</sup> A household is considered cost burdened if they spent 30% or more of their gross income on housing costs. They are severely cost burdened if they spent 50% or more of their gross income on housing costs.

cost burden.” Using cost burden as an indicator is one method of determining how well a city is providing housing that is affordable to all households in a community.

- **Long-term growth and housing demand.** The Joint Center for Housing Studies forecasts that, nationally, demand for new homes could total as many as 10 million units between 2018 and 2028 if current low immigration levels continue. Much of the demand will come from baby boomers, millennials, Gen Z,<sup>38</sup> and immigrants. The Urban Land Institute cites an increased acceptance of working from home as increasing demand in more suburban or rural environments over closer-in markets.
- **Growth in rehabilitation market.**<sup>39</sup> Aging housing stock and poor housing conditions are growing concerns for jurisdictions across the United States. With the median age of the US housing stock rising to 41 years in 2019 from 34 years in 2009, Americans are spending in excess of \$400 billion per year on residential renovations and repairs. As housing rehabilitation becomes the primary solution to address housing conditions, the home remodeling market has grown nearly \$20 billion in 2017, topping out at \$433 billion in 2021.

Despite trends showing growth in the rehabilitation market, rising construction costs and complex regulatory requirements pose barriers to rehabilitation. Lower-income households (who are more likely to live in older housing than higher-income households), or households on fixed incomes, may defer maintenance for years due to limited financial means, escalating rehabilitation costs. At a certain point, the cost of improvements may outweigh the value of the structure, which may necessitate new responses such as demolition or redevelopment. Regardless, there is a rising urgency with the aging housing stock, particularly with respect to increased disaster events caused by changes in climate. In 2019, spending on disaster repairs hit a record high of 10% of total rehabilitation spending and 2020 saw a record number of billion-dollar climate-related disasters.

- **Declining residential mobility.**<sup>40</sup> Residential mobility rates have declined steadily since 1980. Nearly one in five Americans moved every year in the 1980s, compared to one in ten Americans between 2018 and 2019. While residential mobility took a further dip in the initial stages of the COVID-19 pandemic, soon conditions emerged that encouraged homebuying, such as historically low mortgage rates, the normalization of working from home, and a growing number of first-time millennial buyers. Due to such conditions,

<sup>38</sup> According to the Pew Research Center, millennials were born between the years of 1981 to 1996 and Gen Zers were born between 1997 and 2012 (inclusive). Read more about generations and their definitions here: <http://www.pewresearch.org/fact-tank/2018/03/01/defining-generations-where-millennials-end-and-post-millennials-begin/>.

<sup>39</sup> These findings are copied from the Joint Center for Housing Studies. (2021). Improving America’s Housing, Harvard University. Retrieved from: [https://www.jchs.harvard.edu/sites/default/files/Harvard\\_JCHS\\_Improving\\_Americas\\_Housing\\_2019.pdf](https://www.jchs.harvard.edu/sites/default/files/Harvard_JCHS_Improving_Americas_Housing_2019.pdf)

<sup>40</sup> Frost, R. (2020). “Are Americans stuck in place? Declining residential mobility in the US.” Joint Center for Housing Studies of Harvard University’s Research Brief.

existing home sales rose by more than 20% year over year from September 2020 through January 2021. These optimal buying conditions have created competition that puts an additional squeeze on the nationwide housing shortage, likely further dampening residential mobility.

Other reasons for decline in residential mobility include factors such as demographics, housing affordability, and labor-related changes. For instance, as baby boomers and millennials age, mobility rates are expected to fall, as people typically move less as they age. Harvard University's Research Brief (2020) also suggests that increasing housing costs could be preventing people from moving if they are priced out of desired neighborhoods or if they prefer to stay in current housing as prices rise around them. Other factors that may impact mobility include the rise in dual-income households (which complicates job-related moves), the rise in work-from-home options, and the decline in company-funded relocations. While decline in mobility rates span all generations, they are greatest among young adults and renters, two of the more traditionally mobile groups.

- **Changes in housing demand.** Housing demand will be affected by changes in demographics, most notably the aging of baby boomers, housing preferences of millennials and Gen Zers, and growth of immigrants.
  - *Baby boomers.* In 2020, the oldest members of this generation were in their seventies and the youngest were in their fifties. The continued aging of the baby boomer generation will affect the housing market. In particular, baby boomers will influence housing preference and homeownership trends. Preferences (and needs) will vary for boomers moving through their sixties, seventies, and eighties (and beyond). They will require a range of housing opportunities. For example, “aging baby boomers are increasingly renters-by-choice, [preferring] walkable, high-energy, culturally evolved communities.”<sup>41</sup> Many seniors are also moving to planned retirement destinations earlier than expected, as they experience the benefits of work-from-home trends (accelerated by COVID-19). Additionally, the supply of caregivers is decreasing as people in this cohort move from giving care to needing care, making more inclusive, community-based, congregate settings more important. Senior households earning different incomes may make distinctive housing choices. For instance, low-income seniors may not have the financial resources to live out their years in a nursing home and may instead choose to downsize to smaller, more affordable units. Seniors living in proximity to relatives may also choose to live in multigenerational households.

Research shows that “older people in western countries prefer to live in their own familiar environment as long as possible,” but aging in place does not only mean growing old in their own homes.<sup>42</sup> A broader definition exists, which explains that aging in place means “remaining in the current community and living in the

<sup>41</sup> Urban Land Institute. Emerging Trends in Real Estate, United States and Canada. 2019.

<sup>42</sup> Vanleerberghe, Patricia, et al. (2017). The quality of life of older people aging in place: a literature review.

residence of one's choice."<sup>43</sup> Some boomers are likely to stay in their home as long as they are able, and some will prefer to move into other housing products, such as multi-dwelling housing or age-restricted housing developments, before they move into a dependent-living facility or into a familial home. Moreover, "the aging of the US population, [including] the continued growth in the percentage of single-person households, and the demand for a wider range of housing choices in communities across the country is fueling interest in new forms of residential development, including tiny houses."<sup>44</sup>

- *Millennials.* Over the last several decades, young adults have increasingly lived in multigenerational housing—more so than older demographics.<sup>45</sup> However, as millennials move into their early thirties to mid-thirties, postponement of family formation is ending and they are more frequently becoming homeowners, frequently of single-family detached homes.

Millennials only started forming their own households at the beginning of the 2007–2009 recession. The number of millennial homeowners has seen an uptick over the past few years. While the overall US homeownership rate slowly decreased from 2009 to 2019, the millennial homeownership rate increased from 33% in 2009 to 43% in 2019, with 6% of that growth since 2016. The age group of people 35 years old and younger accounted for about 15% of the annual household growth in 2019, up from about 10% in 2018. Older millennials (those age 35–44) also accounted for a growing share of growth in homeownership.<sup>46</sup> However, racial disparities also exist in millennial homeownership rates, with Non-Hispanic White homeowners accounting for 53%, Hispanic homeowners for 35%, and Black homeowners for 21%.<sup>47</sup>

As this generation continues to progress into their homebuying years, they will seek out affordable, modest-sized homes. This will prove challenging, as the market for entry-level single-family homes has remained stagnant. Although construction of smaller homes (< 1,800 sq. ft.) increased in 2019, it only represented 24% of single-family units.

Millennials' average wealth may remain far below boomers and Gen Xers, and student loan debt will continue to hinder consumer behavior and affect retirement savings. As of 2022, millennials comprised 43% of homebuyers while Gen Xers

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<sup>43</sup> *Ibid.*

<sup>44</sup> American Planning Association. Making Space for Tiny Houses, Quick Notes.

<sup>45</sup> According to the Pew Research Center, in 1980, just 11% of adults aged 25 to 34 lived in a multigenerational family household, and by 2008, 20% did (82% change). Comparatively, 17% of adults aged 65 and older lived in a multigenerational family household, and by 2008, 20% did (18% change).

<sup>46</sup> The Joint Center for Housing Studies of Harvard University's publication "The State of the Nation's Housing 2021."

<sup>47</sup> "Millennials and Housing: Homeownership Demographic Research." Freddie Mac Single-Family, 2021. [https://sf.freddiemac.com/content/\\_assets/resources/pdf/fact-sheet/millennial-playbook\\_millennials-and-housing.pdf](https://sf.freddiemac.com/content/_assets/resources/pdf/fact-sheet/millennial-playbook_millennials-and-housing.pdf).



comprised 22% and boomers 29%.<sup>48</sup> “By the year 2061, it is estimated that \$59 trillion will be passed down from boomers to their beneficiaries,” presenting new opportunities for millennials (as well as Gen Xers).<sup>49</sup>

- *Generation Z.* In 2020, the oldest members of Gen Z were in their early twenties and the youngest in their early childhood years. By 2040, Gen Z will be between 20 and 40 years old. While they are more racially and ethnically diverse than previous generations, when it comes to key social and policy issues, they look very much like millennials. Gen Z enters into adulthood with a strong economy and record-low unemployment, despite the uncertainties of the long-term impacts of the COVID-19 pandemic.<sup>50</sup>

Gen Z individuals have only just started entering the housing market in the past few years, and with a maximum age range of 23 as of 2022, this age cohort is the smallest so far in terms of homebuyers and sellers, accounting for 2% of each type. While researchers do not yet know how Gen Z will behave in adulthood, many expect they will follow patterns of previous generations.<sup>51</sup> A segment is expected to move to urban areas for reasons similar to previous cohorts (namely, the benefits that employment, housing, and entertainment options bring when they are in close proximity). However, this cohort is smaller than millennials (67 million vs. 72 million), which may lead to slowing real estate demand in city centers.

- *Immigrants.* Research on foreign-born populations shows that immigrants, more than native-born populations, prefer to live in multigenerational housing. Still, immigration and increased homeownership among minorities could also play a key role in accelerating household growth over the next ten years. Current population survey estimates indicate that the number of foreign-born households rose by nearly 400,000 annually between 2001 and 2007, and they accounted for nearly 30% of overall household growth. Beginning in 2008, the influx of immigrants was stanchied by the effects of the Great Recession. After a period of declines, the foreign-born population again began contributing to household growth, despite decline in immigration rates in 2019. The Census Bureau’s estimates of net immigration in 2021 indicate that just 247,000 immigrants moved to the United States

<sup>48</sup> National Association of Realtors. (2020). 2020 Home Buyers and Sellers Generational Trends Report, March 2020. Retrieved from: <https://www.nar.realtor/research-and-statistics/research-reports/home-buyer-and-seller-generational-trends>

<sup>49</sup> PNC. (n.d.). Ready or Not, Here Comes the Great Wealth Transfer. Retrieved from: <https://www.pnc.com/en/about-pnc/topics/pnc-pov/economy/wealth-transfer.html>

<sup>50</sup> Parker, K. & Igielnik, R. (2020). On the cusp of adulthood and facing an uncertain future: what we know about gen Z so far. Pew Research Center. Retrieved from: <https://www.pewsocialtrends.org/essay/on-the-cusp-of-adulthood-and-facing-an-uncertain-future-what-we-know-about-gen-z-so-far/>

<sup>51</sup> “2021 Home Buyers and Sellers Generational Trends Report.” National Association of Realtors, 2021. <https://www.nar.realtor/sites/default/files/documents/2021-home-buyers-and-sellers-generational-trends-03-16-2021.pdf>.

from abroad, down from a previous high of 1,049,000 between 2015 and 2016.<sup>52</sup> As noted in *The State of the Nation's Housing 2020* report, “because the majority of immigrants do not immediately form their own households upon arrival in the country, the drag on household growth from lower immigration only becomes apparent over time.”

- *Diversity.* The growing diversity of American households will have a large impact on the domestic housing markets. Over the coming decade, minorities will make up a larger share of young households and constitute an important source of demand for both rental housing and small homes. The growing gap in homeownership rates between White and Black/African American households, as well as the larger share of minority households that are cost burdened, warrants consideration. White households had a 74.4% homeownership rate in 2021 compared to a 43.1% rate for Black households.<sup>53</sup> This 30-percentage-point gap is the largest disparity since 1983. Although homeownership rates are increasing for some minorities, Black and Hispanic households are more likely to have suffered disproportionate impacts of the pandemic and forced sales could negatively impact homeownership rates. This, combined with systemic discrimination in the housing and mortgage markets and lower incomes relative to White households, leads to higher rates of cost burden for some groups of people. For example, of renters in arrears, Black renters account for 29% and Hispanic renters for 21%, compared to White renters at 11%. For low-income homeowners, 72% of Hispanics, 74% of Blacks and 84% of Asians faced cost burdens, compared to 68% of White households. As noted in *The State of the Nation's Housing (2020)* report, “the impacts of the pandemic have shed light on the growing racial and income disparities in the nation between the nation’s haves and have-nots are the legacy of decades of discriminatory practices in the housing market and in the broader economy.”
- **Changes in housing characteristics.** The US Census Bureau’s Characteristics of New Housing Report (2020) presents data that show trends in the characteristics of new housing for the nation, state, and local areas. Several long-term trends in the characteristics of housing are evident from the New Housing Report:<sup>54</sup>
  - *Larger single-family units on smaller lots.* Between 2000 and 2020, the median size of new single-family dwellings increased by nearly 10% nationally, from 2,057 sq. ft. to 2,261 sq. ft., and 14% in the western region from 2,014 sq. ft. in 1999 to 2,279 sq. ft. in 2020. Moreover, the percentage of new units smaller than 1,400 sq. ft. nationally decreased by half, from 14% in 2000 to 7% in 2020. The percentage of units greater

<sup>52</sup> Jason Schachter, Pete Borsella, and Anthony Knapp (US Census, December 21, 2021), <https://www.census.gov/library/stories/2021/12/net-international-migration-at-lowest-levels-in-decades.html>.

<sup>53</sup> “Federal Reserve Economic Data: Fred: St. Louis Fed,” Federal Reserve Economic Data (Federal Reserve Bank of St. Louis), accessed April 18, 2022, <https://fred.stlouisfed.org/>.

<sup>54</sup> US Census Bureau, Highlights of Annual 2020 Characteristics of New Housing. Retrieved from: <https://www.census.gov/construction/chars/highlights.html>

than 3,000 sq. ft. increased from 18% in 2000 to 23% of new single-family homes completed in 2020. In addition to larger homes, a move toward smaller lot sizes was seen nationally. Between 2010 and 2020, the percentage of lots less than 7,000 sq. ft. increased from 25.5% to 34.8% of lots.

Based on a national study about homebuying preferences that differ by race/ethnicity, African American homebuyers wanted a median unit size of 2,664 sq. ft., compared to 2,347 sq. ft. for Hispanic buyers, 2,280 sq. ft. for Asian buyers, and 2,197 sq. ft. for White buyers.<sup>55</sup> This same study found that minorities were less likely to want large lots.

- *Larger multi-dwelling units.* Between 2000 and 2020, the median size of new multi-dwelling units increased by 4.6% nationally. In the western region, the median size increased by 3.6%. Nationally, the percentage of new multi-dwelling units with more than 1,200 sq. ft. increased from 29.5% in 2000 to 32.8% in 2020 and increased from 23.3% to 25.2% in the western region.
- *Household amenities.* Across the United States since 2013, an increasing number of new units had air-conditioning (fluctuating year by year at over 90% for both new single-family and multi-dwelling units). In 2000, 93% of new single-family houses had two or more bathrooms, compared to 96.8% in 2020. The share of new multi-dwelling units with two or more bathrooms decreased from 55% of new multi-dwelling units to 42.6%. As of 2020, 92% of new single-family houses in the United States had garages for one or more vehicles (from 88% in 2000). Additionally, if work-from-home dynamics remain a more permanent option, then there may be rising demand for different housing amenities such as more space for home offices or larger yards for recreation.
- *Shared amenities.* Housing with shared amenities grew in popularity, as it may improve space efficiencies and reduce per-unit costs/maintenance costs. Single-room occupancies (SROs),<sup>56</sup> cottage clusters, cohousing developments, and multi-dwelling products are common housing types that take advantage of this trend. Shared amenities may take many forms and include shared bathrooms, kitchens, other home appliances (e.g., laundry facilities, outdoor grills), security systems, outdoor areas (e.g., green spaces, pathways, gardens, rooftop lounges), fitness rooms, swimming pools, tennis courts, and free parking.<sup>57</sup>

<sup>55</sup> Quint, Rose. (April 2014). *What Home Buyers Really Want: Ethnic Preferences*. National Association of Home Builders.

<sup>56</sup> Single-room occupancies are residential properties with multiple single-room dwelling units occupied by a single individual. From: US Department of Housing and Urban Development. (2001). *Understanding SRO*. Retrieved from: <https://www.hudexchange.info/resources/documents/Understanding-SRO.pdf>

<sup>57</sup> Urbsworks. (n.d.). *Housing Choices Guidebook: A Visual Guide to Compact Housing Types in Northwest Oregon*. Retrieved from: [https://www.oregon.gov/lcd/Publications/Housing-Choices-Booklet\\_DIGITAL.pdf](https://www.oregon.gov/lcd/Publications/Housing-Choices-Booklet_DIGITAL.pdf)

Saiz, Albert and Salazar, Arianna. (n.d.). *Real Trends: The Future of Real Estate in the United States*. Center for Real Estate, Urban Economics Lab.

## State Trends

In August 2019, the State of Oregon passed statewide legislation—Oregon House Bill 2001 and 2003. **House Bill 2001 (HB2001)** required many Oregon communities to accommodate middle housing within single-family neighborhoods. “Medium cities” —those with 10,000 to 25,000 residents outside the Portland metro area—are required to allow duplexes on each lot or parcel where a single-family home is allowed. “Large cities” —those with over 25,000 residents and nearly all jurisdictions in the Portland metro urban growth boundary (UGB)—must meet the same duplex requirement, in addition to allowing single-family homes and triplexes, fourplexes, townhomes, and cottage clusters in all areas that are zoned for residential use. Note that the middle housing types (other than duplexes) do not have to be allowed on *every* lot or parcel that allows single-family homes, which means that larger cities maintain some discretion.

**Middle housing** is generally built at a similar scale as single-family homes but at higher residential densities. It provides a range of housing choices at different price points within a community.

**House Bill 2003 (HB2003)** envisions reforming Oregon’s housing planning system from a singular focus (on ensuring adequate available land) to a more comprehensive approach that also achieves these critical goals: (1) support and enable the construction of sufficient units to accommodate current populations and projected household growth and (2) reduce geographic disparities in access to housing (especially affordable and publicly supported housing). In that, HB 2003 required the development of a methodology for projecting *regional* housing need and required allocating that need to local jurisdictions. It also expanded local government responsibilities for planning to meet housing need by requiring cities to develop and adopt housing production strategies.

Oregon developed its *2021-2025 Consolidated Plan*, which includes a detailed housing needs analysis as well as strategies for addressing housing needs statewide. The plan concluded that the “state’s performance in accomplishing past goals has been very strong, and project areas of focus remain consistent with the current needs identified in this new five-year plan. Tenant based rental assistance, in particular, has demonstrated strong demand, as has the ongoing need for rental units (including those newly developed) which meet fair market rent standards, and community facilities. The unusual events during 2020—the COVID-19 pandemic and historical wildfire activity—tilt current needs and priorities toward housing stability efforts, as well as community health care projects and access to telehealth services.” It identified the following top needs in its Needs Assessment:<sup>58</sup>

- The most common housing problem in Oregon is cost burden. Nearly 390,000 households pay more than 30% of their incomes in housing costs, up by 7% since the last

<sup>58</sup> These conclusions are copied directly from the report, Oregon’s 2021–2025 Consolidated Plan. Retrieved from: <https://www.oregon.gov/ohcs/development/Documents/conplan/2021-2025%20Action%20Plan/State-of-Oregon-2021-2025-Consolidated-Plan-Final-with-appendices.pdf>.

five-year Consolidated Plan. Renters are more likely to be cost burdened. About 27% of Oregon renters households were found to be severely cost burdened. This proportion increased significantly from 2000 (19%) and disproportionately falls on persons of color in the state: more than 50% of households with persons of color are cost burdened compared to 34% of White households.

- Cost burden largely affects those with lower incomes—especially extremely low and very low-income renters, who have cost burden rates of 70% and 76%, respectively.
- According to Oregon’s Statewide Housing Plan for 2019-2023, more than 85,000 units affordable to extremely low-income households (making less than 30% AMI) are needed to meet demand and more than 26,000 units affordable to moderate-income households (making 50% to 80% AMI) are needed to meet demand. This is down from the previous gap of 102,500 units in the 2016-2021 Plan.

By income range and special need, the estimated needs of Oregon households include the following:

- Extremely low-income families—those earning incomes below the poverty level—total nearly 182,000 households in Oregon. Those with unmet housing needs will grow by 10,000 households over the next five years.
- Low-income families—those earning incomes between the poverty level and the median income—total 261,000 in Oregon. Their needs will grow by much less (8,300 additional households) over the next five years.
- Elderly households (62+) total nearly 905,381 and live in 526,675 households. Of these households, 23% have unmet housing needs. Those with unmet housing needs are expected to grow by 7,000 households by 2025. Many of these needs will take the form of home accessibility modifications, home repairs, and home health care, as seniors make up a large share of residents who live alone and who have disabilities. Frail elderly (defined as an elderly person who requires assistance with three or more activities of daily living) total 61,518 residents.
- Oregon residents with disabilities total 581,000 and occupy 428,000 households. By 2025, these households with needs are forecast to grow by nearly 12,000.
- More than 300,000 persons in Oregon struggled with substance abuse challenges before the COVID-19 pandemic occurred, and these needs grew during the pandemic. Oregonians who have ever had mental health challenges total 757,000, with 172,000 having serious mental health challenges.
- Approximately 178,000 residents 18 and older in Oregon have experienced some type of domestic violence, dating violence, sexual assault, and/or stalking by an intimate partner in the previous year. In the most severe cases, these victims must leave their homes—an estimated 4,200 residents who are victims of domestic violence in Oregon require housing services each year.

- Nearly 16,000 people were identified as experiencing houselessness in Oregon in 2019, an increase of 13% since 2017. Two in three people are unsheltered.
- Nearly 17,000 households live in substandard housing, based on Census surveys of housing units lacking complete plumbing or kitchen facilities. The number of households in substandard housing decreased by 4% compared to the 2021-2025 plan.
- Approximately 29,000 households live in units that are either overcrowded or severely overcrowded. The number of households in overcrowded conditions increased by 19% since the last plan.

As part of the Consolidated Plan’s stakeholder perspective, activities to address urgent housing needs selected by the greatest number of respondents were:

- Housing activities that result in more rental units for households with income below 60% of AMI and households with incomes between 60% and 80% of AMI, emergency shelters for people who are houseless, and transitional housing for people moving out of houselessness.
- Repurposing vacant buildings for affordable housing.
- Affordable and accessible housing for people with disabilities.
- In 2022, minimum wage in Oregon<sup>59</sup> was \$12.75, compared to \$14.00 in the Portland metro region and \$12.00 for nonurban counties.

Oregon developed its *Statewide Housing Plan 2019-2023* in 2019.<sup>60</sup> The Plan identified six housing priorities to address in communities across the state over the 2019 to 2023 period (summarized below). In January 2022, Oregon Housing and Community Services (OHCS) released a summary of their progress.<sup>61</sup> The following section includes summaries and excerpts from their status report:

- **Equity and Racial Justice.** Advance equity and racial justice by identifying and addressing institutional and systemic barriers that have created and perpetuated patterns of disparity in housing and economic prosperity.

OHCS continued to build relationships, tools, and connections to further its equity and racial justice focus. OHCS continued to update the Culturally Specific Organization (CSO) list, tracking funding received by CSOs. OHCS developed customized tools for

<sup>59</sup> The 2016 Oregon Legislature, Senate Bill 1532, established a series of annual minimum wage rate increases beginning July 1, 2016, through July 1, 2022. Retrieved from: <https://www.oregon.gov/boli/whd/omw/pages/minimum-wage-rate-summary.aspx>

<sup>60</sup> This section uses many direct excerpts from the OHCS Statewide Housing Plan 2019-2023. Oregon Statewide Housing Plan. <https://www.oregon.gov/ohcs/Documents/swhp/SWHP-Report-Y1-Summary.pdf>

<sup>61</sup> This section uses many direct excerpts from the OHCS Statewide Housing Plan, Year 3 Quarter 1 Update September 2021 Report to HSC. Oregon Statewide Housing Plan, Status Reports. <https://www.oregon.gov/ohcs/Documents/swhp/01-07-2022-JAN-SWHP-Quarterly-Summary.pdf>

equity and racial analysis and prepared to start equity and inclusion training for OHCS staff and committee chairs.

- **Houselessness.** Build a coordinated and concerted statewide effort to prevent and end houselessness, with a focus on ending unsheltered houselessness of Oregon’s children and veterans.

The Homeless Services Section (HSS) made progress in demonstrating increased Housing Stability with 26,940 households paid out via the Oregon Emergency Rental Assistance Program. Additional staffing and funding (\$100 million) were secured to build a program of eviction prevention. OHCS developed a dashboard to provide transparency in processing, equity, and capacity issues related to houselessness. OHCS executed grant agreements with HSS providers to deliver strategic housing stability services.. Work is ongoing to enter more partnerships with new investments in eviction prevention.

- **Permanent Supportive Housing.** Invest in permanent supportive housing (PSH), a proven strategy to reduce chronic houselessness and reduce barriers to housing stability.

OHCS funded and/or created 915 units, part of their target to create 1,000 PSH units. In addition, 416 of the 915 supportive home units were funded with PSH resources. Other accomplishments included developing a compliance and monitoring plan for PSH, distribution of service funds, outreach to partners to ensure PSH resource information is reaching tribal and rural partners, and a hiring staff to support the PSH program.

- **Affordable Rental Housing.** *Work to close the affordable rental housing gap and reduce housing cost burden for low-income Oregonians.*

OHCS funded and/or created 18,329 affordable rental homes, part of their target to create 25,000 homes. OHCS developed internal tools, such as a reporting matrix for analysis of subcontracts and an incorporated Compliance Policy, and conducted community outreach with a tribal housing workgroup rules committee. OHCS also conducted a survey to get initial feedback on key program topics and projected changes, along with additional outreach on related issues.

- **Homeownership.** *Provide more low and moderate-income Oregonians with the tools to successfully achieve and maintain homeownership, particularly in communities of color.*

OHCS assisted 1,187 households in becoming successful homeowners, part of its target to assist a total of 6,500 households. OHCS made strides by doubling the number of homeowners of colors in its homeownership programs. OHCS launched new programs to support homeownership, including lending programs. In order to align programs with the needs of communities of color, OHCS developed relationships with underrepresented organizations, maintained addressing the needs of communities of color as a focus in its programmatic frameworks, and regularly shared and encouraged training opportunities with its team.

- **Rural Communities.** Change the way OHCS does business in small towns and rural communities to be responsive to the unique housing and service needs and unlock the opportunities for housing development.

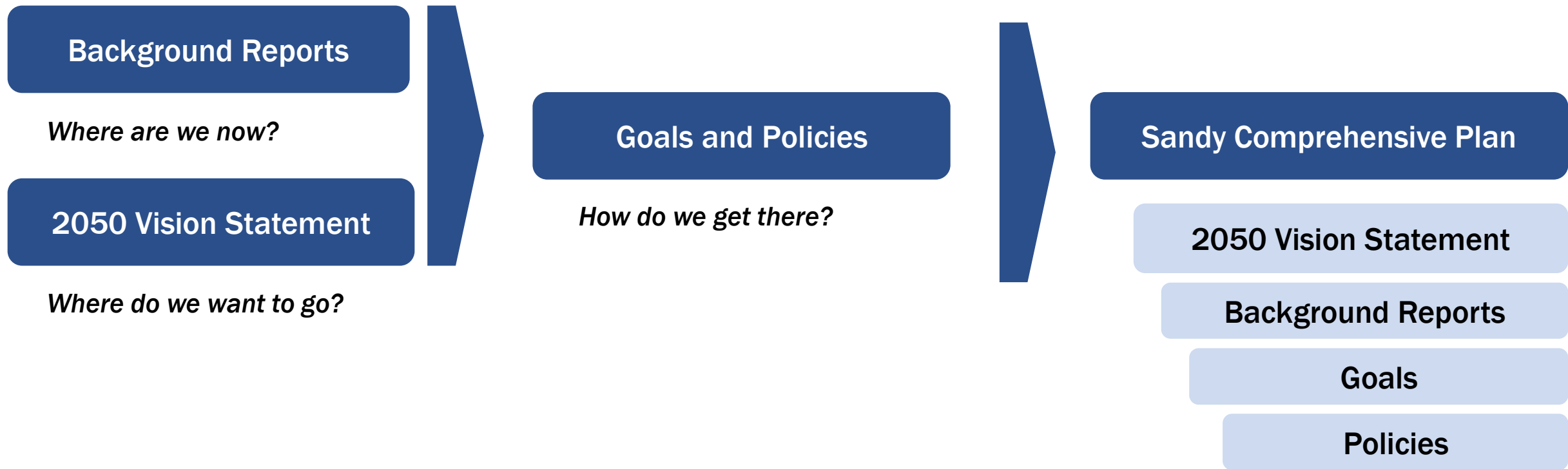
OHCS focused on developing a better understanding of rural community needs and increasing rural capacity to build more affordable housing. OHCS hired a program manager for rural communities and delivered funding for multiple direct awards, increased funding for CSOs, and updated its Land Acquisition Program to include new funding amounts and set asides. OHCS funded and/or created 2,158 units in rural communities out of a total of 2,543 units in the five-year goal, or 85% of its target.





Housing Capacity Analysis  
City Council and Planning Commission Joint Work Session  
December 4, 2022

# Envision Sandy 2050 and Comprehensive Plan Update Process



## Why do an HCA?

- Legal requirements (Goal 10: Housing), updated every 8 years
- Factual basis for updating the Comprehensive Plan
- Determine whether Sandy has enough land to accommodate population growth



## Housing Capacity Analysis\*

*Technical report about:*

- Buildable lands inventory
- Housing market
- Demographic and socioeconomic characteristics of residents
- Housing affordability
- Forecast of new housing
- Land sufficiency

\*New name for a Housing Needs Analysis (HNA)

## Revised Comprehensive Plan

*Recommended changes to the Housing Element of the Sandy Comprehensive Plan*

## **Housing Production Strategy**

Actions to address unmet housing need from the HCA

Changes to Zoning Code

Housing Policies and Programs



Item # 1.

# What are Sandy's Housing Needs?

# Who lives in Sandy? How has that changed over time?

Item # 1.



Population: 13,877

Sandy grew faster than the county and state over the past 20 years.



MHI: \$81,262

Sandy's median household income grew faster than the county and state over the past 20 years.



Race/Ethnicity: 11% Latino/ Hispanic, 83% white, non-Hispanic

The share of Sandy's households that identified as Latino increased at a faster rate than both the county and the state over the past 20 years.

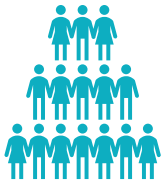
# Who lives in Sandy? How has that changed over time?

Item # 1.



## Household Size and Composition

Sandy generally has larger households with more children than the county and state.



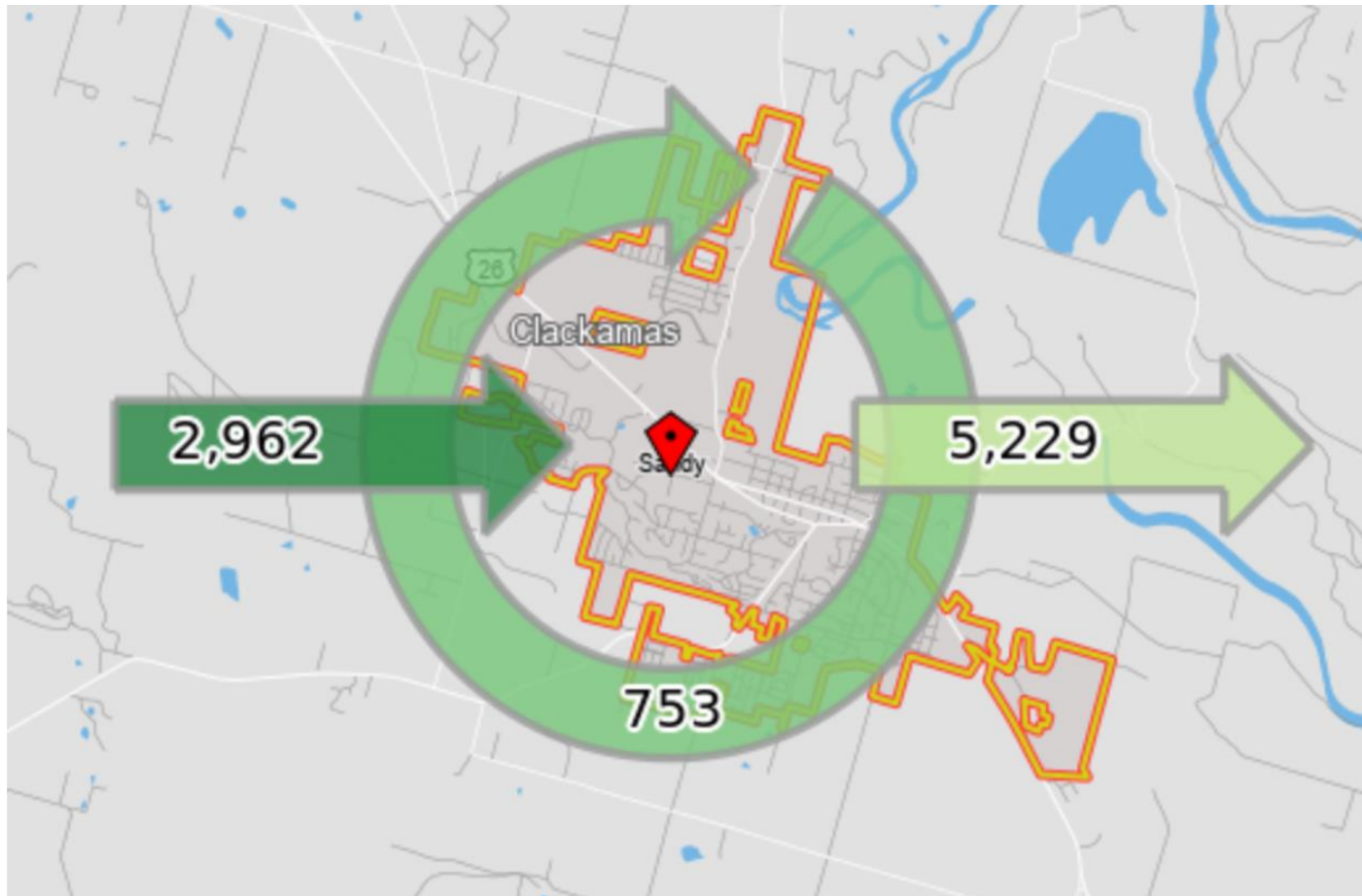
## Population Distribution

Sandy has a larger share of younger, working age population than the county or state.



## Aging Population

While Sandy generally has a younger population than the county and the state, Sandy's median age has increased over the last 10 years.



Source: Census OnTheMap, 2019

## Commuting out of Sandy is common

- 20% of jobs in Sandy are held by people who live and work in Sandy
- 80% of people who work at businesses in Sandy live elsewhere
- The average wage for jobs in Sandy is \$43,856





Median income for *all* households **increased 33%**  
Median income for *renter* households **decreased 10%**  
(2015-2020)



Average asking rent **increased 40%**  
(2015-2022)



Median home sales price **increased 80%**  
(2015-2022)

# How are rising housing costs impacting those who live and work in Sandy?



# People who work in Sandy cannot afford to live in Sandy

Item # 1.

		Workers in Sandy can afford...			
		monthly housing costs of:	average asking rent?	median home sales price?	
<i>Can people who work in Sandy afford to live in Sandy?</i>	Average Wage \$43,856	Single-Worker Household: \$43,856	\$1,100	✗	✗
		Two-Worker Household: \$87,713	\$2,200	✓	✗
<i>Average Asking Rent (from Costar) plus \$250 for utilities: \$1,840</i>	Food Service Average Wage (low wage) \$23,042	Single-Worker Household: \$23,042	\$580	✗	✗
		Two-Worker Household: \$46,084	\$1,200	✗	✗
<i>Median Home Sales Price: \$475,000</i>	Manufacturing Average Wage (high wage) \$64,470	Single-Worker Household: \$64,470	\$1,600	✗	✗
		Two-Worker Household: \$128,940	\$3,200	✓	✗
	Mixed (one high and one low-wage worker)	Two-Worker Household: \$87,512	\$2,200	✓	✗

# Financially attainable housing in Sandy

Item # 1.

## If your household earns....

**\$34,300**

(30% of MFI)

**\$57,200**

(50% of MFI)

**\$91,500**

(80% of MFI)

**\$114,400**

(100% of MFI)

**\$137,300**

(120% of MFI)

## Then you can afford....

**\$860**

monthly rent

**\$1,430**

monthly rent

**\$2,290**

monthly rent

OR

**\$252,000-  
\$297,000**

home sales price

**\$2,860**

monthly rent

OR

**\$315,000-  
\$372,000**

home sales price

**\$3,430**

monthly rent

OR

**\$378,000-  
\$446,000**

home sales price



Dishwashers  
\$32,800



Carpenter  
\$58,000



Police  
\$88,600



Electrical Engineer  
\$108,900



Pharmacist  
\$142,200



Nursing Assistant  
\$42,100



Paralegals  
\$70,400



Data Scientist  
\$97,000



Software Developer  
\$121,800

## Median Home Sale

Price: **\$475,000**

(Redfin, Dec 2022)

Requires \$146,000 income  
(128% of MFI) to afford

## Average Monthly Rent:

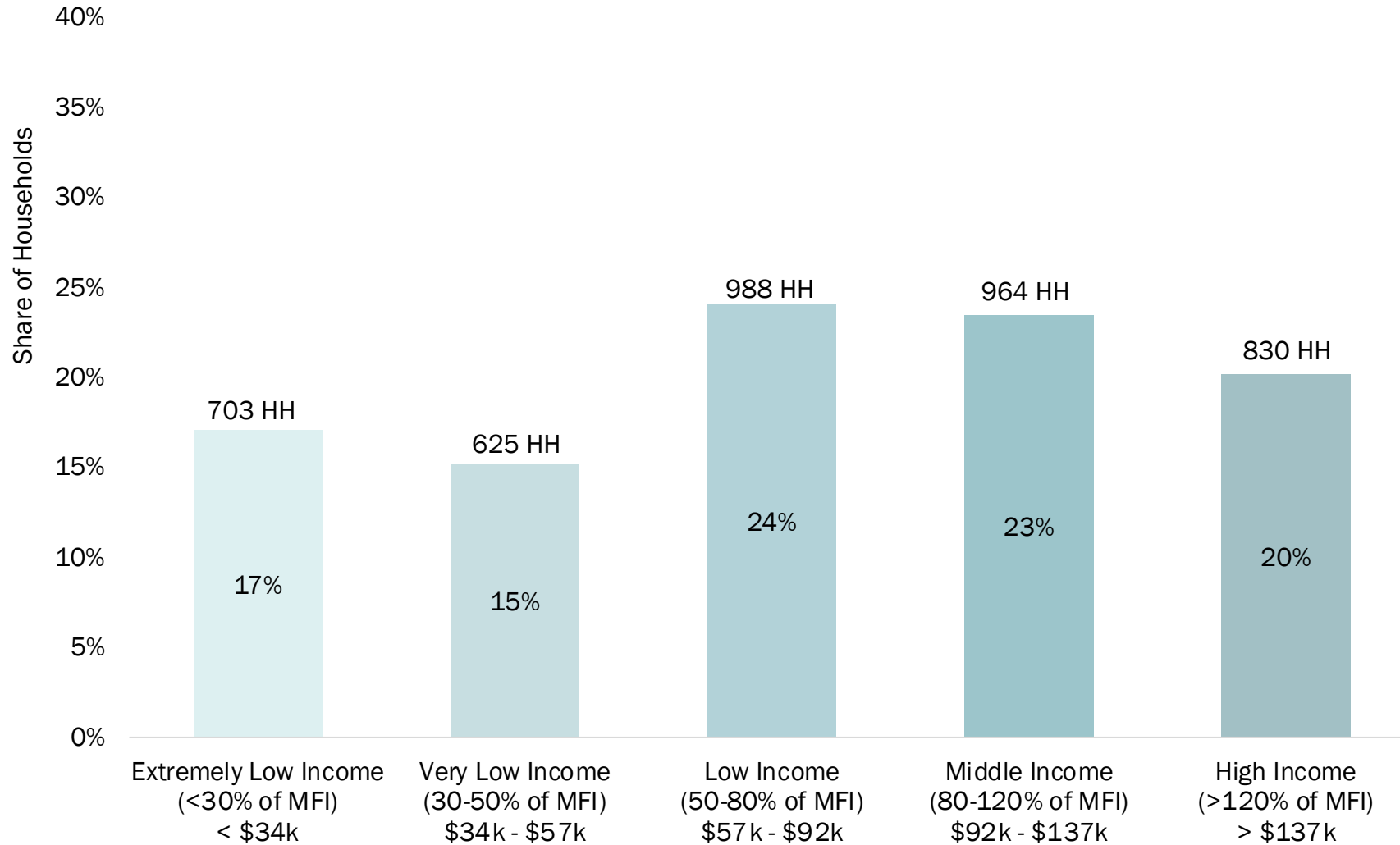
**\$1,840** (including utilities)

(CoStar, December 2022)

Requires \$73,600 income  
(64% of MFI) to afford

# Many existing residents cannot afford current housing prices

Item # 1.



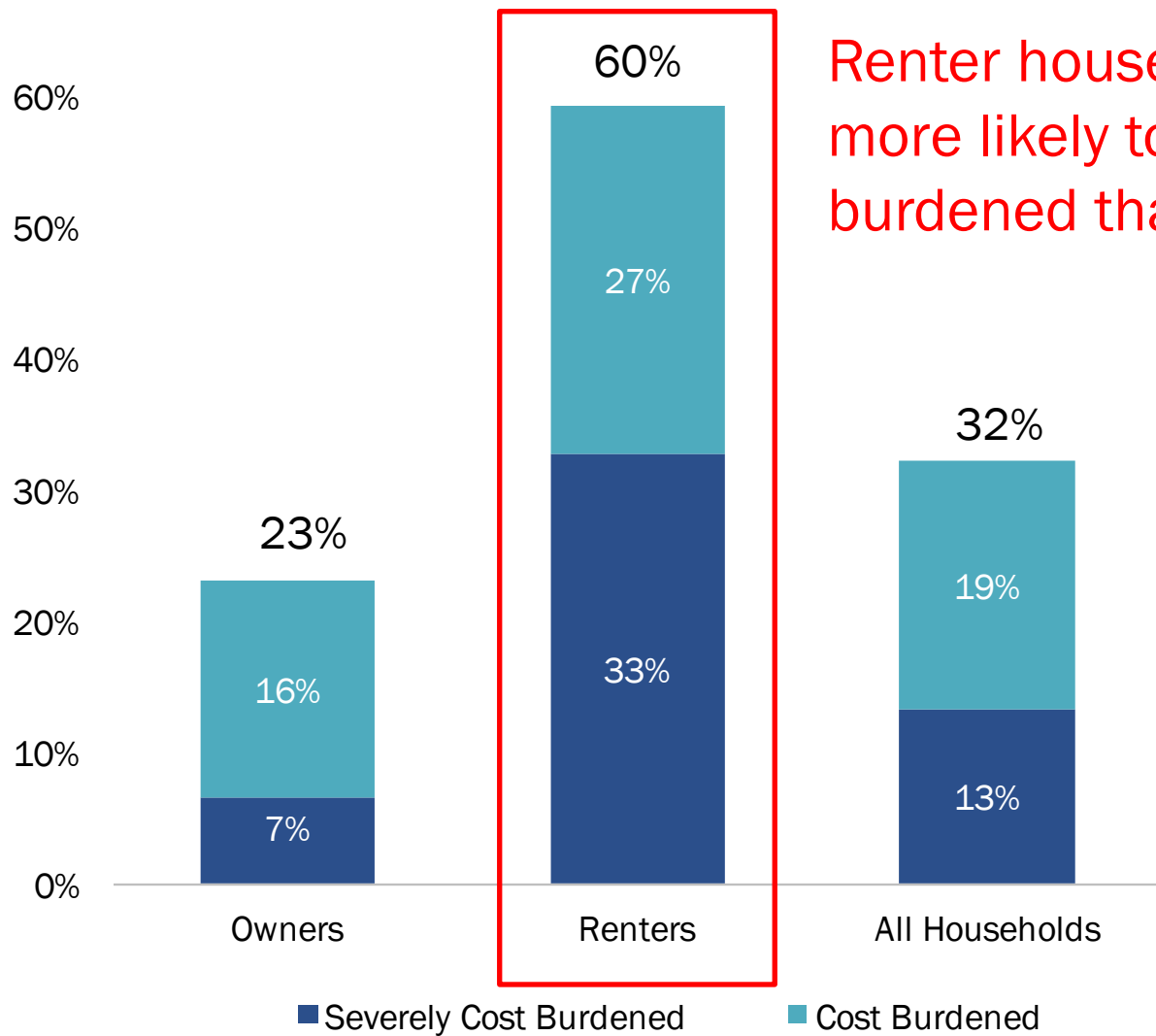
Many established homeowners could not afford current housing costs if they moved to Sandy today based on their MFI.

Many residents who grew up in Sandy and are now forming their own households cannot afford to stay in Sandy.

Source: US Department of HUD. US Census Bureau, 2016-2020 ACS Table 19001. Clackamas County 2023 MFI

# Over 30% of all households in Sandy are cost burdened

Item # 1.



Renter households are much more likely to be cost burdened than homeowners

Households paying more than 30% of their income on housing experience “**cost burden**”

Households paying more than 50% of their income on housing experience “**severe cost burden.**”

Source: US Census Bureau, 2016-2020 ACS

# Existing Housing Snapshot

Item # 1.

**Single Family Detached**  
**79%**



**Townhouses**  
**7%**



**Duplexes, Triplexes, Quadplexes**  
**4%**



**Multifamily (5+ units per structure)**  
**10%**





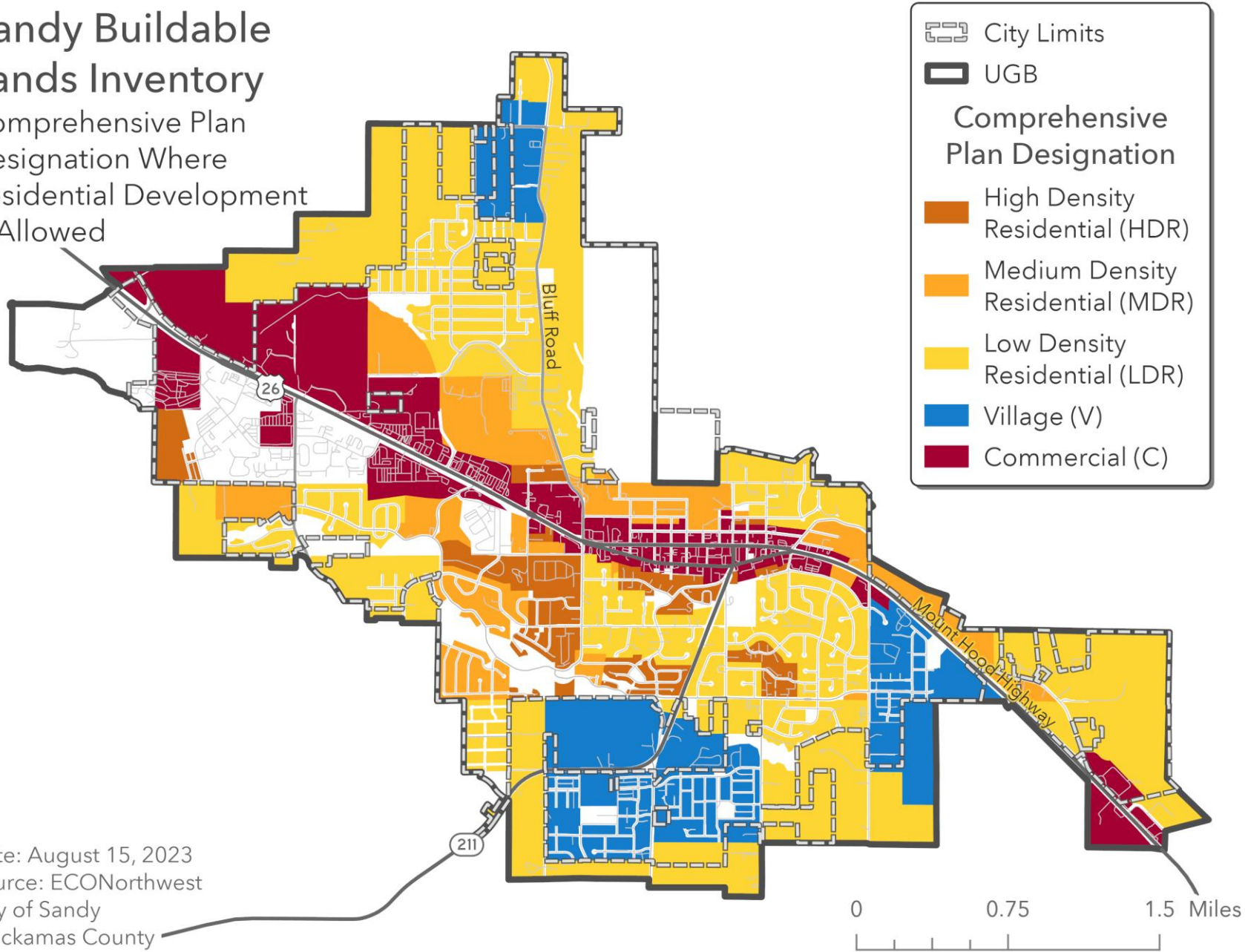
Item # 1.

# Buildable Lands Inventory



# Sandy Buildable Lands Inventory

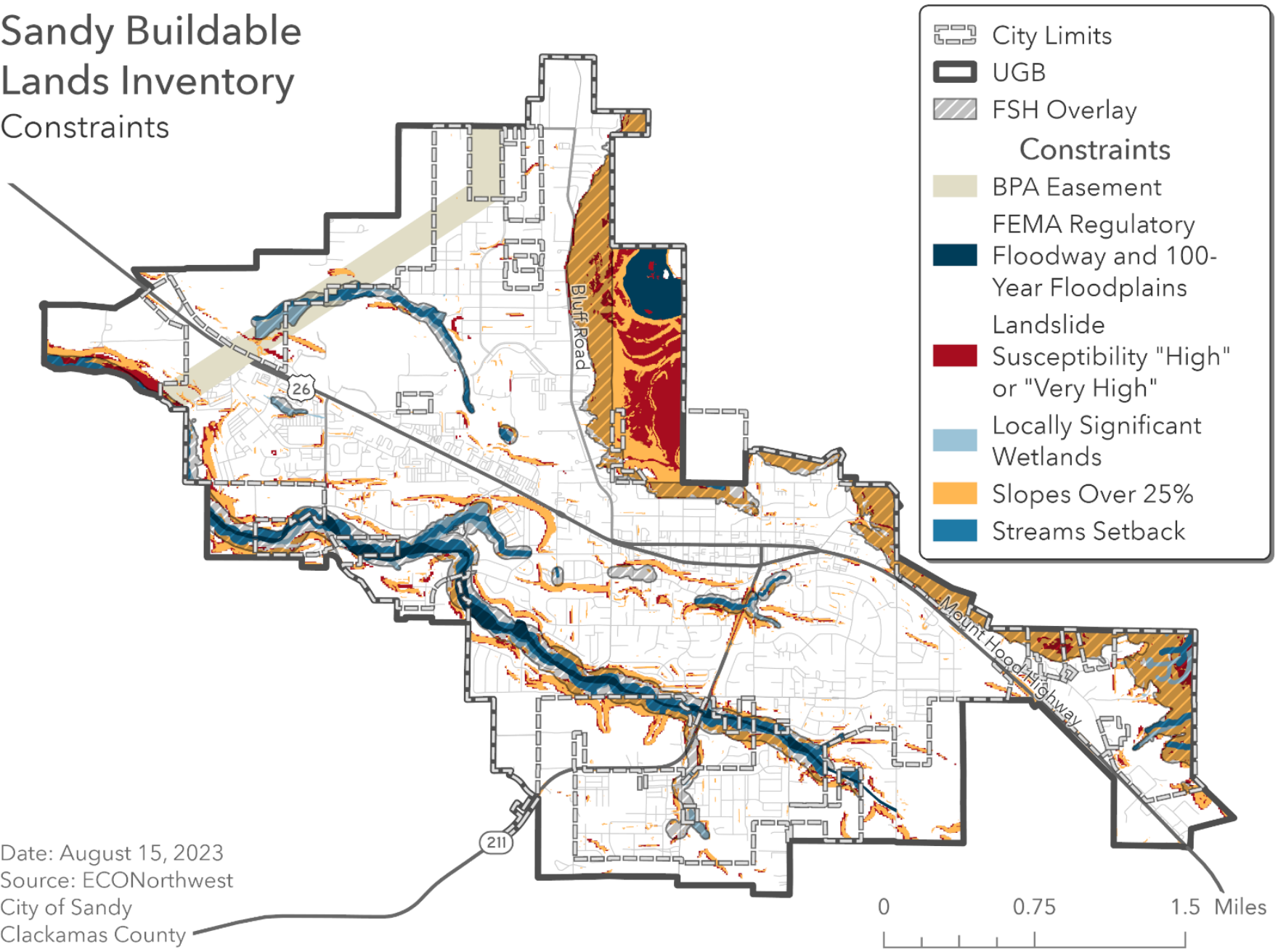
Comprehensive Plan Designation Where Residential Development is Allowed



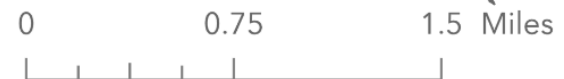
Sandy Comprehensive Plan Designations where housing is allowed with clear and objective standards

Date: August 15, 2023  
Source: ECONorthwest  
City of Sandy  
Clackamas County

# Sandy Buildable Lands Inventory Constraints

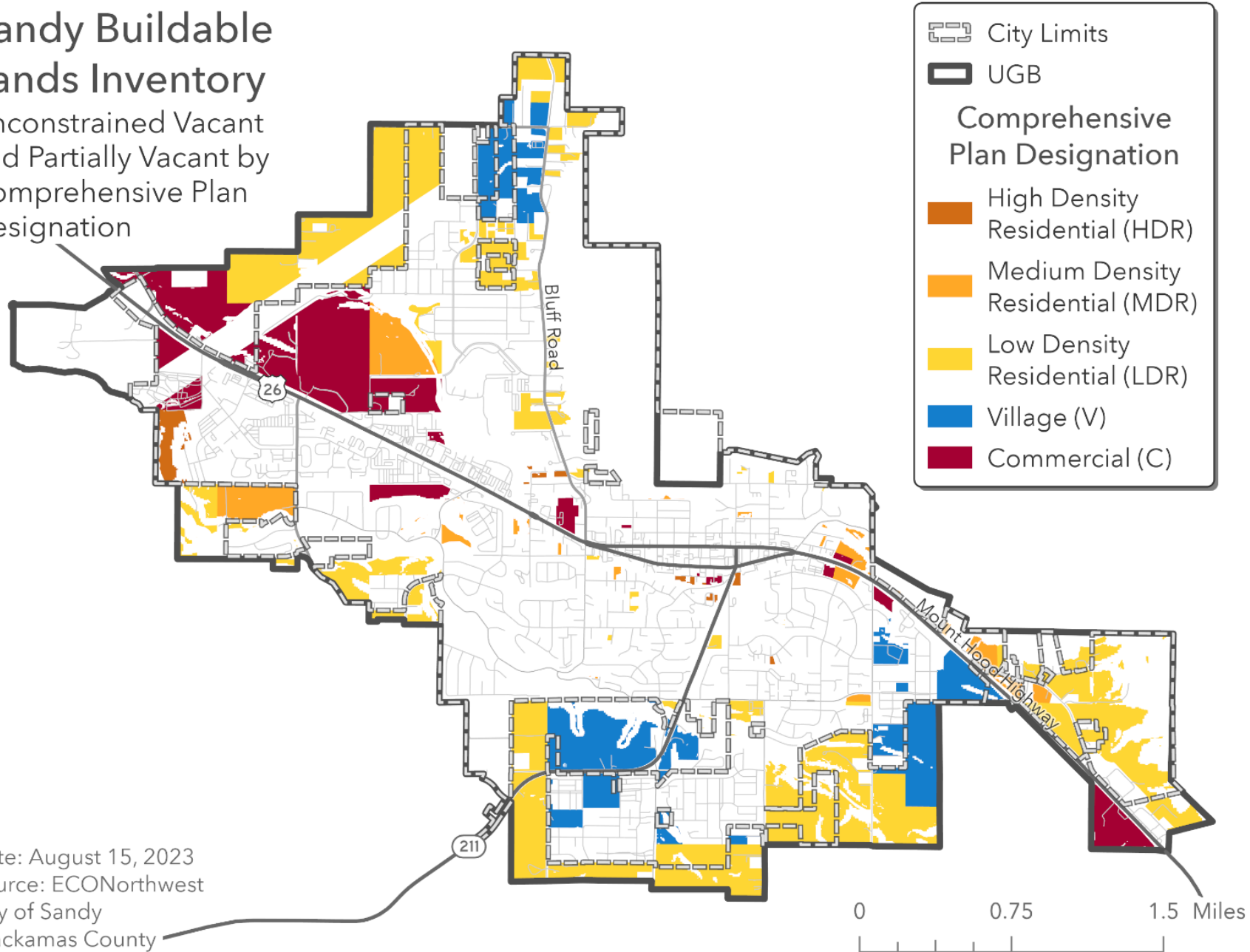


Date: August 15, 2023  
Source: ECONorthwest  
City of Sandy  
Clackamas County



# Sandy Buildable Lands Inventory

Unconstrained Vacant and Partially Vacant by Comprehensive Plan Designation



Date: August 15, 2023  
Source: ECONorthwest  
City of Sandy  
Clackamas County

Comprehensive Plan Designation/Zone	Total Buildable Acres
<b>Low Density Residential (LDR)</b>	<b>420</b>
Low Density Residential (R-1)	2
Single-Family Residential (SFR)	418
<b>Medium Density Residential (MDR)</b>	<b>60</b>
Medium Density Residential (R-2)	60
High Density Residential (R-3)	0.1
<b>High Density Residential (HDR)</b>	<b>12</b>
High Density Residential (R-3)	12
<b>Village (V)</b>	<b>151</b>
Low Density Residential (R-1)	91
Medium Density Residential (R-2)	8
High Density Residential (R-3)	16
Single-Family Residential (SFR)	31
Village Commercial (C-3)	4
<b>Commercial (C)</b>	<b>128</b>
Central Business District (C-1)	1
General Commercial (C-2)	128
<b>Total</b>	<b>771</b>

Vacant unconstrained residential land:

LDR: 420 acres

MDR: 60 acres

HDR: 12 acres

Village: 151 acres

Commercial: 128 acres

Not all commercial land will be used for residential development



# Does Sandy have enough land to accommodate population growth?

# What mix of housing will Sandy need?

Item # 1.

Sandy is forecast to add 2,424 new dwellings

Single-Family  
Detached



**1,454**

New Units  
(60%)

Townhouses



**170**

New Units  
(7%)

Duplex, Triplex,  
Quadplex



**121**

New Units  
(5%)

Multifamily  
(5+ units)



**679**

New Units  
(28%)

Plan Designation	Total Capacity (Dwelling Units)	Demand (Dwelling Units)	Capacity less Demand (Dwelling Units)
<b>Low Density Residential</b>			
SFR	1,545	672	873
R-1	9	-	9
<b>Medium Density Residential</b>			
R-2	582	569	13
R-3	1	-	1
<b>High Density Residential</b>			
R-3	172	169	3
<b>Village</b>			
SFR	109	66	43
R-1	465	339	126
R-2	74	144	(70)
R-3	214	127	87
<b>Commercial</b>			
C-2	333	333	0
<b>Total</b>	<b>3,504</b>	<b>2,419</b>	<b>1,085</b>

Sandy has a deficit of about 8 acres (70 units) in the Village R-2 zone.

- Sandy does **not** have sufficient land to accommodate population growth and will need to address its 8 acres deficit of Village R-2
- Housing costs have outpaced income growth
- Many people who work in Sandy cannot afford to live in Sandy
- Many existing Sandy residents cannot afford current housing prices
- Sandy needs a wider range of housing types to accommodate renters and homeowners across various income levels



### Community Visioning and Goal Setting

- Community engagement and outreach activities
- Comprehensive Plan Vision and Goals

### Comprehensive Plan Update

- Policy Formulation and Implementation Strategies
- Comprehensive Plan Document Development

### Adoption

- Planning Commission and City Council Hearings

### Assessment of Current and Future Conditions

- Data Collection and Analysis
- Economic Opportunities Analysis (EOA)
- Housing Needs Analysis (HNA)

Community Advisory Committee (CAC) Meetings

City Council and Planning Commission Briefings



# **ECON**Northwest

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ECONOMICS • FINANCE • PLANNING



Los Angeles



Portland



Seattle



Boise

# TRACKING CHANGES IN OREGON HOUSING POLICIES

Carrie Richter  
Bateman Seidel  
Portland, Oregon



# Goal 10: Housing (1974)

---

Local governments must:

Inventory and plan for residential use of buildable lands to “encourage the availability of adequate numbers of needed housing units at price ranges and rent levels which are commensurate with the financial capability of Oregon households.”

To do this local governments typically:

- Identify housing needs by type and density, considering financial concerns (HNA)
- Inventory supply of buildable lands (BLI)
- Alter comprehensive plan and zoning scheme to provide sufficient densities and housing types to meet projected future population

## “Needed Housing” Statutes – ORS 197.303 / 307 (1981)

Where a need has been identified for a particular type of housing, that needed housing “shall be permitted in zone or zones with sufficient buildable land to satisfy that need.”

“Needed housing” defined to include (among other things):

- Government assisted housing, mobile homes, farmworker housing
- Housing which is identified as needed within the adopted needed housing inventory.

All standards, conditions and approval procedures for “needed housing” must be “clear and objective.” If the standard is not clear and objective, it cannot be applied to the development.

# All housing is “needed housing” and requires a “clear and objective” path to approval (2017)

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- Clear and objective standards do not impose “subjective, value-laden analysis that are designed to balance or mitigate impacts from development” and cannot be construed to support “two diametrically opposed positions.”
- ORS 197.307 also requires clear and objective procedures and conditions of approval.
- In addition to a clear and objective track for review, a local government may also provide a discretionary track that may be pursued at the applicant’s election. ORS 197.307(6).
- However, even with the alternative track, city cannot discourage needed housing through unreasonable cost or delay. ORS 197.307(6)

## Recent needed housing cases:

- Requirement that stormwater runoff from a PUD will not “create negative impacts on natural drainage courses” such as erosion, turbidity or sediment transport” is clear and objective and not prohibited although it may be difficult to meet. *Homebuilders Ass’n of Lane County v. Eugene*
- Variable building setbacks determined by an average of the setback of existing buildings within 150 feet to the north and to the south of the proposed development lot is clear and objective. *Roberts v. Cannon Beach*
- Condition of approval attached to a master plan providing that “the building shall be set back...no less than 135 feet from south line” was not clear and objective. Did not matter that the master plan was adopted before ORS 197.307(4) was amended. *Group B LLC v. Corvallis*
- Annexation decision with condition requiring discretionary master plan does not allow the application of discretionary standards in the master plan review, even if the applicant at the time of annexation accepted the condition. *Icon Construction LLC v. Oregon City*

# Other Housing-Related Legislative Changes

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- HB 2001 (2019) and SB 458 (2021) – Mandates middle housing (duplex, triplex, fourplex, cottage cluster, townhouses) and land divisions in single family zones and LCDC adopted rules for the provision of middle housing
- SB 8 (2021) – Requires allowing affordable housing on land zoned commercial or that allows religious uses without a zone change or conditional use permit up to stated densities and provides for recovery of attorney fees to a prevailing housing provider.
- HB 3395 (2022) - Requires urban local governments to allow affordable housing on commercially zoned lands that are comparable in density to the allowed commercial uses; extends the emergency shelter siting obligations and exempts them from hearing requirements; requires allowing single room occupancies; and provides 7-days to adopt a final written decision for housing beyond the 120-day limit.



# Forthcoming housing-related legislation:

- HB 3414 (2023) and its progeny: Must approve deviations from existing land use regulations when an application proposes net new housing units including certain development standards (e.g., setbacks, landscaping, and parking minimums) or design standards (e.g., façade materials, roof forms, and building orientation requirements).
- Housing Production Advisory Council recommendations: Infrastructure financing, constrained local and LUBA review, expedited building permit review without appeal, addressing work force shortages, expanded project financing opportunities.

# Questions?

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Carrie A. Richter, Bateman Seidel

Telephone: (503) 972-9903

Email: [crichter@batemanseidel.com](mailto:crichter@batemanseidel.com)



# CITY COUNCIL MEETING

Monday, November 20, 2023 at 6:00 PM  
Sandy City Hall and via Zoom

## MINUTES

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### CITY COUNCIL WORK SESSION: 6:00 PM

#### 1. Feasibility Study Update for the Community Campus Annex Building

The Parks and Recreation Director summarized the staff report and introduced Sean Barnett with Polymath Studio Architecture. Mr. Barnett delivered a presentation showing several possible renovation options for the Community Campus Annex Building. Slides were included in the agenda packet.

Council discussion on this item related to the following topics:

- Structural integrity of the building, especially if a large number of windows are installed. It was noted that all renovation options include seismic upgrades
- Suggestions to include building entrance options on the north end of the building to emphasize integrations with the adjacent park
- Discussion on the importance of accounting for storage space
- Opportunities for ensuring flexibility of space usage
- Best usage of office space versus community center space within the concepts
- Discussion on the possibility of including Library space in the building along with Parks and Recreation, thus freeing up other City facilities for other uses.
- Emphasis on the importance of building for the future, rather than hitting capacity limits shortly after finishing construction
- Concern that discussion of the Library option is premature
- Concern about soundproofing with large open spaces within the building
- Concern about the layout and functionality of the front desk area
- Emphasis on the need to further consider how we plan to use the space
- Concern about the 'industrial' look of the design concepts
- Emphasis on the need for a gym in the community
- Suggestions regarding discussion topics for the upcoming urban renewal retreat, including the bonding capacity of the district and the need to set direction and project priorities
- Frustration that it is difficult to decide whether to pursue building renovations without knowing how it would be used
- Emphasis on the importance of determining whether all of the district's bonding capacity should be dedicated to this renovation project; if not, time would be better spent pursuing other opportunities
- Discussion on the potential for cost recovery of recreation programming

- Discussion on the City's facility space needs possibilities for renovating or expanding other buildings
- Concern that combining Library and Parks and Recreation could limit space for community center programming in the future

**CITY COUNCIL REGULAR MEETING: 7:00 PM**

**PLEDGE OF ALLEGIANCE**

**ROLL CALL**

**PRESENT**

Mayor Stan Pulliam  
Council President Laurie Smallwood  
Councilor Chris Mayton  
Councilor Rich Sheldon  
Councilor Kathleen Walker  
Councilor Carl Exner  
Councilor Don Hokanson

**CHANGES TO THE AGENDA**

(none)

**PUBLIC COMMENT (3-minute limit)**

(none)

**RESPONSE TO PREVIOUS PUBLIC COMMENTS**

(none)

**CONSENT AGENDA**

2. City Council Minutes: November 6, 2023
3. Appointment of Library District Advisory Committee (LDAC) Representative
4. Planning Commission Appointments
5. Resolution 2023-33: Business Oregon Funding for Alder Creek Water Treatment Plant Improvements and Assessment

**MOTION: Adopt the consent agenda.**

Motion made by Councilor Sheldon, Seconded by Councilor Exner.

Voting Yea: Mayor Pulliam, Council President Smallwood, Councilor Mayton, Councilor Sheldon, Councilor Walker, Councilor Exner

Voting Abstaining: Councilor Hokanson

**MOTION CARRIED: 6-0-1**

**PRESENTATIONS**

6. Mt. Hood Community College Strategic Plan

Mt. Hood Community College (MHCC) President Dr. Lisa Skari, along with Board of Education Directors Andrew Speer and Marie Teune, provided a presentation on MHCC's new strategic plan. Presentation slides were included in the agenda packet.

Following the presentation, discussion ensued on the following topics:

- The definition of 'east county' and whether Sandy is included in such references
- The number of students taking advantage of SAM transportation, and opportunities to better advertise the service
- Whether MHCC may be able to partner with the City to provide aquatic services for Sandy residents
- Technical training opportunities with SandyNet
- Whether MHCC could eventually open a satellite campus in Sandy
- Services provided by College Housing Northwest
- Coordination and scheduling of class timing to ensure broad access for students; increased usage of online learning

**NEW BUSINESS**

7. Public Hearing: Temporary Extension of Moratorium on New Wastewater Connections Resolution 2023-34

Abstentions

none

Conflicts of Interest

none

Staff Report

The City Attorney summarized the staff report, which was included in the agenda packet. Staff recommended approval of the resolution.

Public Testimony

none

**MOTION: Close the public hearing.**

Motion made by Councilor Walker, Seconded by Councilor Sheldon.

Voting Yea: Mayor Pulliam, Council President Smallwood, Councilor Mayton, Councilor Sheldon, Councilor Walker, Councilor Exner, Councilor Hokanson

**MOTION CARRIED: 7-0**

The Council noted a positive outlook with respect to the future capacity of the wastewater system. In response to a Council question, staff noted that annexation applications have been allowed since the modified moratorium was adopted in June 2023. The Council indicated that approval of any annexation applications would depend on specific circumstances. Staff stated that conclusion of proceedings with EPA and DEQ and formal establishment of the system's capacity for the Capacity Assurance Program is expected in the early months of 2024.

**MOTION: Adopt Resolution 2023-34.**

Motion made by Councilor Mayton, Seconded by Councilor Sheldon.

Voting Yea: Mayor Pulliam, Council President Smallwood, Councilor Mayton, Councilor Sheldon, Councilor Walker, Councilor Exner, Councilor Hokanson

**MOTION CARRIED: 7-0****REPORT FROM THE CITY MANAGER**

- Discussion on changing the date of the upcoming urban renewal retreat to December 9<sup>th</sup>
- A sneak peak at the lights in Meinig Park will be held on November 28<sup>th</sup>
- The holiday tree lighting will be hold on December 1<sup>st</sup>
- The December 18<sup>th</sup> Council meeting will include a work session discussion with AntFarm staff to discuss partnerships on responding to homelessness
- The City will be closed for Thanksgiving
- Recognition of the new map in the Council Chambers
- Cost increases have occurred for the planned bookmobile purchase; staff is exploring partnership options to close the funding gap

**COMMITTEE / COUNCIL REPORTS**Councilor Hokanson

- Inquiry on the signup process for santa volunteers
- Concern about the security of the Council's chromebook computers

Councilor Exner

- Clackamas Watershed Council programming opportunities for youth
- Suggestions regarding microphones in the Council Chambers
- Praise for the recently deployed speed trailer
- Heavy truck usage of Langensand seems to have decreased

Councilor Walker

- Thanks and appreciation for volunteers newly appointed to advisory boards
- Suggestion to recruit police officers from the MHCC program

- Concerns regarding density and HB 2001; questions regarding the application of local density regulations; concern that local infrastructure cannot support higher density; need for further discussion of how the City can exercise local control

Councilor Sheldon

- Concern regarding speeding on the new 362<sup>nd</sup> / Bell road extension
- Encouragement to move forward on a employee volunteer program

Council President Smallwood

- Reminder on the upcoming Tickle Trot event

Councilor Mayton

- Observations on Winterfest communications and advertisements

Mayor Pulliam

- Recognition of upcoming Tickle Trot and Winterfest events

**STAFF UPDATES**

Monthly Reports: <https://reports.cityofsandy.com/>

**ADJOURN**

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**Meeting Type:** City Council  
**Meeting Date:** December 4, 2023  
**From:** Jeff Aprati, Deputy City Manager  
**Subject:** Library Advisory Board Appointments

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**DECISION TO BE MADE:**

Whether to accept the interview panel's recommendations for appointments to the Library Advisory Board.

**BACKGROUND / CONTEXT:**

Three seats on the [Library Advisory Board](#) (Seats 5, 6, and 7) have terms that will expire at the end of 2023. Additionally, the board currently has one vacant seat (Seat 1) with a term that expires at the end of 2026.

A three week application opportunity was advertised through the City's usual communication channels. Applications were received from Lynne Pollard (incumbent), Liz Lopez-Aguado, and Salina Horsfall; all applicants met the eligibility requirements. The interview panel (including Mayor Pulliam, Councilors Walker and Sheldon, and Board Chair Heather Michet) reviewed the application materials and conducted interviews with Ms. Lopez-Aguado and Ms. Horsfall on November 28, 2023.

**RECOMMENDATION:**

The interview panel recommends reappointment of Lynne Pollard to Library Advisory Board Seat 5, and appointment of Liz Lopez-Aguado and Salina Horsfall to Library Advisory Board Seats 6 and 7, respectively (all three new terms expire on December 31, 2027).

Application forms from all three applicants are attached to this staff report for the Council's information.

**SUGGESTED MOTION LANGUAGE:**

"I move to appoint Lynne Pollard, Liz Lopez-Aguado, and Salina Horsfall to the Library Advisory Board as recommended in the staff report."

**LIST OF ATTACHMENTS / EXHIBITS:**

- Application forms



Published on *Sandy, OR* (<https://www.ci.sandy.or.us>)

[Home](#) > [Library Advisory Board Application](#) > [Webform results](#) > Submission #15

#### Submission information

Form: [Library Advisory Board Application](#) [1]

Submitted by Visitor (not verified)

Wed, 11/08/2023 - 4:31pm

#### First Name

Lynne

#### Last Name

Pollard

#### Email

[REDACTED]

#### Phone Number

[REDACTED]

#### Address

23795 E Farragut St

#### City

Welches

#### State

OR

#### Zip Code

97067

#### Mailing Address (if different)

PO Box 281

Welches

OR 97067

#### Please explain your interest in serving on the Library Advisory Board

I believe in the importance of libraries in providing equal access to all to vital community services, and I would like to continue to serve as a representative of the Hoodland area,

#### What knowledge, education, or skills would you bring to the Board?

I have experience working as a librarian in business settings, and have extensive experience at the executive level working in the field of digital communications .

#### Upload Current Resume

#### Interview Availability

I understand that applicants will be asked to participate in a 15 minute interview via Zoom (or by phone) on Tuesday November 28th. Interview appointments will be scheduled between 3:30 p.m. and 5:00 p.m.

**By checking this box, I agree to the following:**

I certify that the information contained in this application is correct to the best of my knowledge. I understand that to falsify information is grounds for refusing to appoint me, or for removal should I be appointed. I also affirm that I have read and understand the Sandy Code of Conduct for members of Boards and Commissions (available as a Supporting Document on this webpage), and I understand its application to my role and responsibilities while serving on a City Board. I pledge to conduct myself according to the Sandy Boards and Commissions Code of Conduct, and I understand that the City Council may remove me from my position if my conduct falls below these standards.

**Source URL:** <https://www.ci.sandy.or.us/node/15791/submission/20739>

**Links**

[1] <https://www.ci.sandy.or.us/bc-lab/webform/library-advisory-board-application>

Published on *Sandy, OR* (<https://www.ci.sandy.or.us>)

[Home](#) > [Library Advisory Board Application](#) > [Webform results](#) > Submission #14

#### Submission information

Form: [Library Advisory Board Application](#) [1]

Submitted by Visitor (not verified)

Wed, 11/08/2023 - 4:06pm

#### First Name

Liz

#### Last Name

Lopez-Aguado

#### Email

[REDACTED]

#### Phone Number

[REDACTED]

#### Address

37300 SE Blackberry Ln

#### City

Sandy

#### State

OR

#### Zip Code

97055

#### Mailing Address (if different)

#### Please explain your interest in serving on the Library Advisory Board

Promoting literacy is a passion of mine. I feel the key to success for any/everyone is literacy. It is critical that everyone has free access of information. Books should never be banned or burned, regardless of the content.

#### What knowledge, education, or skills would you bring to the Board?

I have good communication skills, and was a technical writer in the computer industry for 15 years. I have a love of learning and of sharing knowledge with whomever is interested. I strive to contribute in whatever manner possible to the community in which I live. I am a hard worker.

#### Upload Current Resume

[volunteerresume.doc](#) [2]

#### Interview Availability

I understand that applicants will be asked to participate in a 15 minute interview via Zoom (or by phone) on Tuesday November 28th. Interview appointments will be scheduled between 3:30 p.m. and 5:00 p.m.

**By checking this box, I agree to the following:**

I certify that the information contained in this application is correct to the best of my knowledge. I understand that to falsify information is grounds for refusing to appoint me, or for removal should I be appointed. I also affirm that I have read and understand the Sandy Code of Conduct for members of Boards and Commissions (available as a Supporting Document on this webpage), and I understand its application to my role and responsibilities while serving on a City Board. I pledge to conduct myself according to the Sandy Boards and Commissions Code of Conduct, and I understand that the City Council may remove me from my position if my conduct falls below these standards.

**Source URL:** <https://www.ci.sandy.or.us/node/15791/submission/20738>

**Links**

[1] <https://www.ci.sandy.or.us/bc-lab/webform/library-advisory-board-application> [2]  
[http://www.ci.sandy.or.us/system/files/webform/volunteer\\_ume.doc](http://www.ci.sandy.or.us/system/files/webform/volunteer_ume.doc)

Published on *Sandy, OR* (<https://www.ci.sandy.or.us>)

[Home](#) > [Library Advisory Board Application](#) > [Webform results](#) > Submission #16

#### Submission information

Form: [Library Advisory Board Application](#) [1]

Submitted by Visitor (not verified)

Fri, 11/10/2023 - 4:44pm

#### First Name

Salina

#### Last Name

Horsfall

#### Email

[REDACTED]

#### Phone Number

[REDACTED]

#### Address

39234 Cascadia Village Dr

#### City

Sandy

#### State

OR

#### Zip Code

97055

#### Mailing Address (if different)

#### Please explain your interest in serving on the Library Advisory Board

I am eager to contribute to the Library Advisory Board's mission. Drawing upon my experience in customer service and strong communication skills, I am committed to advising the Library Director and City Council on the development of library services, programs, and facilities that cater to the specific needs of the Sandy and Hoodland Library Service Areas.

Utilizing my bilingual abilities in Spanish, I aim to make library services more accessible to a diverse range of community members. Additionally, my passion for encouraging children to discover the joy of books, coupled with my self-driven and problem-solving nature, positions me to play an active role in enhancing library programs, especially for the younger audience. I am also dedicated to organizing community events for all ages, utilizing my experience in community engagement and event planning. By serving on the Library Advisory Board, I look forward to making a meaningful contribution to our community, fostering a love for reading among children, and organizing events that bring our community together.

#### What knowledge, education, or skills would you bring to the Board?

Proficient in Spanish, I leverage my language skills to make library services more accessible and inclusive. Additionally, I'm well-versed in the Microsoft Office Suite and iWork Suite, ensuring efficient administrative support.

I'm a self-motivated problem solver. My effective communication skills, combined with a strong sense of responsibility and task-oriented nature, make me adept at understanding and addressing community needs.

I graduated with Honors from Sandy High School, reflecting my commitment to academic excellence. Furthermore, I hold a degree from George Fox University with concentrations in Spanish and international studies, providing me with a strong foundation in multicultural perspectives and global awareness. My education equips me to contribute to the Library Advisory Board's mission by fostering community engagement and enhancing library programs.

### Upload Current Resume

[2023\\_resume.pdf](#) [2]

### Interview Availability

I understand that applicants will be asked to participate in a 15 minute interview via Zoom (or by phone) on Tuesday November 28th. Interview appointments will be scheduled between 3:30 p.m. and 5:00 p.m.

### By checking this box, I agree to the following:

I certify that the information contained in this application is correct to the best of my knowledge. I understand that to falsify information is grounds for refusing to appoint me, or for removal should I be appointed. I also affirm that I have read and understand the Sandy Code of Conduct for members of Boards and Commissions (available as a Supporting Document on this webpage), and I understand its application to my role and responsibilities while serving on a City Board. I pledge to conduct myself according to the Sandy Boards and Commissions Code of Conduct, and I understand that the City Council may remove me from my position if my conduct falls below these standards.

**Source URL:** <https://www.ci.sandy.or.us/node/15791/submission/20745>

### Links

[1] <https://www.ci.sandy.or.us/bc-lab/webform/library-advisory-board-application> [2]

[http://www.ci.sandy.or.us/attachment/file/webform/2023\\_resume\\_0.pdf](http://www.ci.sandy.or.us/attachment/file/webform/2023_resume_0.pdf)



# STAFF REPORT

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**Meeting Type:** City Council  
**Meeting Date:** December 4, 2023  
**From:** Jenny Coker, Public Works Director  
AJ Thorne, Assistant Public Works Director  
**Subject:** Contract Approval: Design for Portland to Sandy Water Filtration Plant Transmission System

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## DECISION TO BE MADE:

Whether to authorize the City Manager to execute a contract with Consor Engineers for engineering design services for the Portland to Sandy Water Filtration Plant Transmission System.

## BACKGROUND / CONTEXT:

The City of Sandy Water Master Plan was adopted by Council into the City Comprehensive Plan on April 3, 2023. Key next steps for delivering the Drinking Water Reinvestment Program include meeting the Bilateral Compliance Agreement for treatment of cryptosporidium by September 30, 2027, hiring a program manager, securing debt financing, and selecting a design engineering for the Pump Station and Pipeline Design. The City hired Stantec as the program manager at the February 6, 2023 Council Meeting. The City was awarded \$7M from the Business Oregon Special Public Works Fund in April of 2023, and the City executed this loan at the June 20, 2023 Council Meeting.

The purpose of this contract is to provide engineering design services to construct a new pump station and transmission pipeline to convey filtered, treated water from the Bull Run watershed/Portland Filtration Plant to the City of Sandy. Sandy has used the Bull Run water source from the Portland Water Bureau to provide key supplemental water to the City since 2013. The City is unable to meet our water demands with only the Alder Creek and Brownell Springs sources. In addition, this pipeline connection will provide access to the Columbia Wellfield groundwater source, which will be used in times of drought or other emergencies such as wildfire.

Additional work to be completed includes securing construction financing, completing Intergovernmental Agreements with Portland Water Bureau, and executing the new 30-year wholesale water agreement.

## KEY CONSIDERATIONS / ANALYSIS:

The City is working to make up time on the schedule established by the Environmental Protection Agency and Oregon Health Authority for the Bilateral Compliance Agreement for the treatment of cryptosporidium. Per the schedule, the City is to start construction by July 31, 2024 and the construction must be completed by September 30, 2027. The completion date is the most important.

City staff and the program team have been working to gain time by authorizing contracts to perform surveying, environmental, and geotechnical investigations of the pipeline route this summer for the design consulting team.

Negotiations are in process with Portland Water Bureau for some collaboration of infrastructure assets. The current understanding is that Portland will lease Sandy land at the filtration plant for the pump station. Portland will install, own and maintain all on site piping. This will include the connection from Portland's filtered water supply to our pump station, and the connection from Sandy's pump station to Bluff Road, where our transmission main will connect. The City will own and operate a pump station and then a shorter transmission main. Due to complexities of construction and land use, it is most likely that the project will be bid in two phases – phase 1 will be the pipeline, and phase 2 will be the pump station.

Due to the schedule driver to begin design, staff plans to return to Council for a future amendment to add services during construction, once the construction timing has been further developed for the pump station with Portland Water Bureau.

### **PROPOSALS RECEIVED:**

Because of the nature of the project, the City was required to use a qualification based selection process rather than a RFP process. Three engineering firms responded to the City's request for qualifications. Submissions were evaluated and ranked by City staff and by the program management team, Stantec. After conducting follow-up interviews, it was determined that Consor was the best fit for the project due to their knowledge of the City of Sandy system, superb references for similar projects, and their working relationships with the Portland Water Bureau and other water systems in Multnomah and Clackamas County. Consor completed the City's Water Master Plan, assisted with applying for Drinking Water State Revolving Fund financing, and has been retained as an advisor for the new 30-year Wholesale Water Agreement negotiations with Portland Water Bureau.

### **BUDGET IMPACT:**

This project was identified in the water utility capital appropriations for the BN 23-25 budget and is financed from a Business Oregon Special Public Works Fund loan at a below market interest rate of 1.54%. Repayment will be made from water rate revenues and is included in the water rate model.

Staff will seek a design amendment at a future date, once the consultant services during construction fees are determined.

### **RECOMMENDATION:**

Authorize the City Manager to execute a contract with Consor for the design of the Portland to Sandy Water Filtration Plant Transmission System in the amount of \$3,602,169.

### **SUGGESTED MOTION LANGUAGE:**

"I move to authorize the City Manager to execute a contract with Consor Engineers for engineering design services for the Portland to Sandy Water Filtration Plant Transmission System, in an amount not to exceed \$3,602,169."



**LIST OF ATTACHMENTS / EXHIBITS:**

- Scope of work
- Fee Schedule
- Example Contract
- Pipeline Map

# EXHIBIT A

## SCOPE OF WORK

### ENGINEERING SERVICES FOR

### PORTLAND TO SANDY WATER FILTRATION PLANT

### TRANSMISSION SYSTEM

### CITY OF SANDY, OREGON

This scope of work details proposed services to be provided to the City of Sandy (City) for the Portland to Sandy Water Filtration Plant Transmission System Project (Project) by Consor North America, Inc. (Consultant), including engineering design and bid period and construction phase services.

## Introduction & Background

The City of Sandy, Oregon (City), is executing a large Program to upgrade its water supply, transmission, distribution and treatment facilities. The Sandy Drinking Water Reinvestment Program (SDWRP) will stabilize the City's drinking water supply through a new connection to the Portland Water Bureau (PWB) Bull Run Supply at the proposed Bull Run Filtration Facility, construct a new pump station and transmission pipeline to convey filtered water from the Bull Run Filtration Facility to re-connect to the Hudson Transmission Main, as well as make various reliability upgrades and replacement components at the City's Alder Creek Water Treatment Plant.

This Project will provide engineering design, bidding and construction phase services necessary to construct certain elements of the new Portland to Sandy Water Filtration Plant Transmission System. The City is currently negotiating with PWB with the intent to have PWB design, construct, own and operate the proposed Bull Run Supply Pump Station (BRSPS) and piping from the pump station to a meter vault located within the Bluff Road right-of-way near its intersection with Proctor Road. Currently, it is anticipated that it will be the City's responsibility to design, construct, own and operate the BRSPS at the PWB Filter Plan site and the pipeline in SE Bluff Road from SE Proctor Road to SE Hudson Road, and it will be PWB's responsibility to design, construct, own and operate pipelines extending from the BRSPS to a meter vault at SE Bluff Road and Proctor Road. PWB will also be responsible for a pipeline extending from the BRSPS to the Pleasant Home Water District (PHWD) tank site.

Therefore, the scope of work for this project will be split into two separate City projects. Bid Package No. 1 work will include professional services needed for design and construction of approximately 5,500 linear feet (LF) of 16-inch diameter ductile iron (DI) transmission pipeline in SE Bluff Road from SE Proctor Road to SE Hudson Road, with parallel electrical conduit(s) and vaults for future SandyNet fiber, and proposed water treatment facilities (WTF), consisting of chloramine removal and disinfection facilities located at the City's Revenue Avenue Reservoir site. An alternative approach to dechloramination will be reviewed involving ammonia addition at the City's other water sources, Alder Creek and Brownell Springs, to convert the City's existing disinfection systems from free chlorine to chloramines. Bid Package No. 2 work will include the proposed 5 million gallons per day (MGD) capacity BRSPS.

## Project Understanding and Assumptions

The scope of work for this project will be split into Bid Package No. 1 and Bid Package No. 2 work as described below.

### Bid Package No. 1 - Transmission Pipeline and WTF Work:

1. Approximately 5,500 linear feet (LF) of 16-inch diameter ductile iron (DI) transmission pipeline in SE Bluff Road from SE Proctor Road to SE Hudson Road.
2. Parallel electrical conduit(s) in the transmission main trench and vaults for future SandyNet fiber.
3. Air release and blow-off facilities along the new pipeline and the existing pipeline between SE Hudson Road and the Revenue Avenue Reservoir, to accommodate surge pressure from the new pump station.
4. Chloramine removal and disinfection facilities located at the City's Revenue Avenue Reservoir site. Alternatively, optional work will include ammonia addition at Alder Creek and Brownell Springs.
5. Following completion of the transmission system, Skyview Acres Water Company (SAWC) will receive chloraminated water from PWB through the existing connection to the Sandy transmission main in SE Bluff Road. As part of the project, improvements for serving SAWC and multiple hydrants that are currently served with pressure from the Revenue Avenue Reservoir will be made to address potential backflow of non-chloraminated water into the SAWC system. In addition, the Consultant will evaluate the option to provide fire flow from the PWB supply to SAWC via the BRSPS.

### Bid Package No. 2 – BRSPS Work:

1. 5 MGD BRSP located at the PWB Filtration Plant. PWB wants the City to operate the pump station and to use it to provide water to PHWD. As such, the pumps will be dual purpose and pump through a single discharge main. The pumps will be upsized accordingly to meet PHWD flow demands.
2. It is PWB's responsibility to design, construct, own and operate a pipeline extending from the BRSPS to a meter vault at SE Bluff Road and Proctor Road, with a turnout to the Pleasant Home Water PHWD tank site, and related pressure reducing valve and metering vaults or other control valves necessary to serve PHWD.

## Project Design Assumptions

1. The new SE Bluff Road Transmission Main will be located in Clackamas County (County) ROW. This scope of work assumes no new ROW or easements will be needed for the new transmission main or appurtenances.
2. It is assumed that the City will make an operational change from the current continuous year-round use of the PWB supply connected at Lusted Road, to primarily a seasonal summer peak season use of the new PWB Filtration Plant supply with a minimum use of 100,000 gallons per day during off-peak demand months. However, it is assumed that City will take over year round operations to supply PHWD from the BRSPS for PWB, and the City will recoup costs through a wheeling water agreement with PHWD. The City's water will be measured at the meter located on Bluff Road.

3. Since the City is not yet committed to dechloramination, the Consultant will perform an evaluation of capital, operations and lifecycle costs of chloramine removal compared to installing ammonia facilities at Alder Creek and Brownell Springs, and document findings in a technical memorandum.
4. The WTF will be located entirely within the existing Revenue Avenue Reservoir site. Improvements may include new outdoor granular activated carbon filter tanks, and a small building and facilities for disinfecting the dechloraminated water before it flows to the Revenue Avenue Reservoir and distribution system.
  - a. Confirm assumptions for water treatment and develop design for a 5 MGD chloramine removal and disinfection treatment facility to treat finished water from the PWB Filtration Plant.
  - b. Evaluate space requirements for operational needs and water quality testing.
  - c. Develop WTF design to include elements identified in Preliminary Design Workshops. Specific configuration and contents of building will be defined during Preliminary Design based on input received during workshops.
  - d. Evaluate and develop design for water treatment filtration residuals management and disposal, including a backwash tank and residuals handling system for the granulated activated carbon (GAC) filters residuals. This scope of work assumes backwash effluent will be pumped to the City Sandy's sanitary sewer located in Revenue Avenue or other non-sewer option. Pump size and discharge rate will be determined during Preliminary Design based on input received during workshops.
  - e. This scope of work assumes the City's existing sewer has capacity to accommodate flows.
  - f. WTF building dimensions will be developed during Preliminary Design based on input received during workshops. It is assumed that the GAC tanks will be outdoors on a slab foundation.
  - g. Assume WTF building will be reinforced concrete masonry unit (CMU) block construction with light-framed roof using manufactured trusses with gable ends and standing seam metal roofing. Building will be founded on a reinforced concrete mat slab. Architectural finishes will be designed to meet Sandy's Municipal Code.
5. It is assumed that the BRSPS will be housed in a CMU building with metal architectural siding and roof, with similar dimensions to those provided in the Stantec Conceptual Design Report. It is assumed that the pump station will also provide water to PHWD. As such, the pumps will be dual purpose and pump through a single discharge main. The pumps will be upsized accordingly to meet PHWD flow demands. . No separate rooms for lavatory or storage space will be provided.
6. It is assumed that the BRSPS will be owned and operated by the City of Sandy, and designs will be based on City design preferences and review input. As such, it is assumed that PWB staff will not be part of the City's design review process, other than for coordination with the PWB Filtration Plant design and construction.
7. It is assumed that the transmission main and WTF will be bid as a separate project from the BRSPS and alternate ammonia facilities.

8. 30% design will include a 30% Design Technical Memorandum that will document design criteria, preliminary engineering analyses, findings and recommendations, comprised of the following:
- a. Pipe alignment evaluation along SE Bluff Road to identify the preferred location for the new pipeline within existing right of way, including coordination with the County.
  - b. Verification of surface restoration requirements along pipe alignment.
  - c. Review of soil resistivity test data to determine corrosivity of soil along pipeline and need for cathodic protection.
  - d. Analysis of locations for air valves and blow-off to avoid right of way and easement impacts.
  - e. Evaluation of the Bear Creek culvert crossing.
  - f. Vicinity map for overall project and site plan for Revenue Avenue site.
  - g. Preliminary layouts for the chloramine removal facilities at the Revenue Avenue Reservoir site, including review of the City's Development Code requirements.
  - h. Evaluation of existing sanitary sewer and non-sewer discharge alternatives to accommodate backwash discharge, including recommended approach for backwashing GAC filters.
  - i. Equipment list based on evaluation and recommendations.
  - j. Technical memo describing the electrical and control system modifications required at the site to support the new chloramine removal building and equipment.
  - k. Preliminary electrical site plan and single line diagram.
  - l. Preliminary P&ID for Chloramine Removal Facilities.
  - m. Hydraulic grade line and anticipated pump curves and system curves for the transmission system from the new pump station to the Revenue Avenue Reservoir, including available pressure for SAWC.
  - n. Transient analysis results and preliminary strategy for surge control in the new and existing transmission main.
  - o. Coordination with SAWC regarding their proposed switch to chloraminated water supply. Perform evaluation and develop recommendations for improvements for serving SAWC and multiple hydrants that are currently served with pressure from the Revenue Avenue Reservoir to address a potential backflow of non-chloraminated water into the SAWC system.
  - p. Coordination with PHWD regarding the proposed BRSPS design and operation. The Evaluations and recommendations related to potential impacts to PHWD's water quality if dechloramination facilities are located at the BRSPS site are not included in this scope of work.
  - q. Cost-loaded schedule.

- r. Opinion of Probable Construction Cost (OPCC Class 4) based on 30% design.
  - s. Permitting Plan including requirements for City Land Use permit, City and County Engineering permits, 1200C permit, OHA approval, and environmental permits.
9. Evaluate construction materials and equipment needed for project and provide recommendations for addressing potential schedule delays that could be caused by long lead-time items. This scope of work does not include preparing contract documents needed to procure materials outside of the single construction bid set. If procurement documents are needed to purchase certain materials ahead of the construction contract, the additional scope will be included in an amendment.
10. 60%, 90%, and 100% design will advance elements of 30% design to Final bid-ready construction documents including the following:
  - a. Draft Plans and Specifications for City review at 60% and 90% design levels.
  - b. A Class 3 OPCC at 60% Design, a Class 2 OPCC at 90% design, and an updated Class 2 OPCC at 100% design.
  - c. Final Plans and Specifications (stamped by an Engineer/Architect licensed in the State of Oregon) for bidding.
11. It is anticipated that permitting approvals may include engineering review and ROW permits from the City and the County, a 1200C (or CN) permit from DEQ or the County, and OHA approval.
12. Land Use Permit application and approvals for the WTF or ammonia facilities will be the responsibility of the Consultant. Land Use Permit application and approvals for the BRSPS will not be the responsibility of the Consultant. Consultant will provide technical support for the application and review processes including preparation of plans, building elevations, reports, specifications, and calculations.
13. It is assumed that environmental permitting will not be required for the pipeline in the road ROW, therefore environmental permitting services are not included in this scope of work. If environmental permitting services are needed, they can be provided by amendment.
14. Electrical, Plumbing, and other Construction Permitting will be obtained by the Contractor after bidding.
15. Bid Phase services will include attendance at a pre-bid meeting, responding to questions during bidding, providing up to four addenda, and assistance evaluating bids for this project.
16. Consultant shall coordinate with Oregon Energy Trust to appraise them of energy saving design selections that may qualify the City for grants.
17. Consultant shall provide "local" SCADA control only. Integration into the City's SCADA system will be performed by the City and its Program Manager.
18. Engineering Services during Construction (ESDCs) are not included in this scope of work but will be added by amendment after 30% design once the scope of the construction project is determined.

19. Public outreach services related to land use are not included but can be added if needed.
20. It is assumed that the power service at the City's reservoir site is adequate for small loads required for chloramine removal and disinfection facilities.
21. Topographic surveying and base mapping have been completed, and the City will provide survey files to the Consultant. If additional topographic surveying and base mapping are required, it is assumed that it will be provided by the City.
22. Geotechnical explorations have been completed for the proposed pipeline alignment and pump station at PWB Filtration Plant, and the City will provide Geotechnical Data Reports the Consultant. If additional geotechnical explorations are required it is assumed that those will be provided by the City. Geotechnical investigation and reporting for the proposed treatment facility located at the City's Revenue Avenue Reservoir site will be completed by the Consultant and are presented in this scope of work.
23. Wetlands inventories have been completed, and the City will provide Wetland Delineation Reports to the Consultant.

## Scope of Services

Consultant will perform the following services.

Bid Package No. 1 - Transmission Pipeline and WTF Work:

### Task 1 - Project Management

#### Objective

Provide overall leadership and team strategic guidance aligned with City staff objectives. Coordinate, monitor, and control the project resources to meet the technical, communication, and contractual obligations required for developing and implementing the project scope.

#### Subtask 1.1 - Project Management & Administration

1. Perform general administration and project management throughout the Project Design phase to provide successful completion of all tasks and elements of the Project within the established scope, schedule, and budget.
2. Prepare Project Management Plan (PMP) which includes the Consultant team structure, schedule, and quality assurance/quality control (QA/QC) Plan. The project schedule will be prepared and maintained under Subtask 1.5. The project QA/QC Plan will be prepared and maintained under Subtask 1.4.
3. Proactively track progress of project work completed against schedule & budget.
4. Prepare and maintain a project tracking log that includes a running list of project issues, key action items, key decisions and potential scope modifications during the progression of the design work.
5. Inform the City of any anticipated challenges during the Project Design phase as they may arise and develop solutions together.

6. Prepare a Health and Safety Plan to address staff safety for work in Consultant offices as well as site work on project sites during design.

### Subtask 1.2 - Invoices/Status Reporting

1. Consultant will prepare monthly invoices, including expenditures by task, hours worked by project personnel, and other direct expenses with the associated backup documentation.
2. Monthly status reports will accompany each invoice and include comparisons of monthly expenditures and cumulative charges to budget by Task.

### Subtask 1.3 - Project Design Meetings

1. Work under this subtask includes coordinating schedules, developing agendas, and preparing presentation materials for key project meetings during the project design phase, and includes the following meetings:
  - Project Kick-off
  - Design Workshop 1: Concepts Confirmation
  - Design Workshop 2: Site Planning & Operations Planning
  - Preliminary Design (30% Design) Review Meeting
  - 60% Design Review Meeting
  - 90% Design Review Meeting
  - Project update at City Council meeting, if requested
2. Agendas and supporting information to be distributed through the City's project manager in advance of any meeting.
3. Meeting notes to be distributed to meeting attendees and other interested parties within five (5) business days of the subject meeting date.

### Subtask 1.4 - Quality Assurance/Quality Control (QA/QC)

1. Consultant will prepare a QA/QC Plan as part of Subtask 1.1 and perform and document in-house QA/QC reviews of all deliverables prior to submitting to the City.

### Subtask 1.5 – Project Schedule

1. Consultant will prepare a project schedule for design, bidding, and construction activities for the duration of the project. The schedule will be updated approximately once each month during the design phase and at major deliverables. The construction schedule will be based on the Consultant's estimated construction timelines for similar projects.

### Task 1 Assumptions

- Total project duration will be approximately 32 months from NTP in December 2023 through construction completion in July 2026; therefore, it is assumed that there will be up to 32 progress payments/status reports.
- Design Review Meetings will include the Consultant Project Manager (PM) and the design lead. Meetings will have an approximate duration of two (2) hours each. Meetings will be virtual using MicroSoft Teams.



- Consultant's internal project team will hold weekly internal project meetings to coordinate and maintain progress on the project during design. Meetings will include up to 5 Consultant staff for a duration of approximately one hour. There will be approximately 12 internal design coordination meetings.

## Task 1 Deliverables

- Project Management Plan
- Consultant shall deliver to the City a monthly invoice and status report covering:
  - Work on the project performed during the previous month.
  - Meetings attended.
  - Issues encountered, and actions taken for their resolution.
  - Potential impacts to submittal dates, budget shortfalls or optional services.
  - Budget Analysis.
  - Issues requiring project team action.
- Invoices shall show employees hourly wage multiplied by 3.15 to get hourly billing rate, capped at \$300/hr.
- Project Design Schedule and updated project schedules, updated monthly during design and at major deliverables, in MicroSoft Project.
- Meeting agendas and summaries

## Task 2 - Data Review and Site Reconnaissance

Gather and review existing mapping, as-builts, design drawings, engineering reports, easements and other data related to the proposed project. Perform site reconnaissance with City staff and design team to confirm existing site conditions and that existing survey base mapping is accurately represented and private utilities are as listed on the locate ticket. Review existing system operations with City staff.

### Task 2 Assumptions

- It is assumed that City staff will provide available data and attend site visits.

### Task 2 Deliverables

- There are no specific deliverables associated with this task as the data will be used to complete subsequent tasks.

## Task 3 – 30% Preliminary Engineering

Conduct preliminary engineering and prepare a 30% Design Technical Memorandum that will constitute a 30% Design Submittal. Preliminary engineering work will include transmission main preliminary design, hydraulic analysis and transient analysis, water quality assessment, WTF preliminary design, treatment facility geotechnical investigation, and the 30% Design Technical Memorandum. Preliminary engineering will include adequate work to confirm project concepts and design criteria, and develop characterization and sizing of the treatment facilities to support the land use approval process. Anticipated subtasks are described as follows:

## Subtask 3.1 - Transmission Main Preliminary Design

Preliminary Design for the transmission main alignment will include:

1. Pipe alignment evaluation along SE Bluff Road to identify the preferred location for the new pipeline within existing ROW, including coordination with the County. Develop a preferred preliminary alignment based on topographic survey and utility research for the pipeline on SE Bluff Road.
2. Coordinate layout of fiber optic conduit and pull boxes.
3. Review Geotechnical Engineering Report provided by City to determine if subsurface conditions require special construction or long-term seismic mitigation considerations.
4. Review resistivity testing results from geotechnical investigation to determine the corrosivity of soils in the vicinity of transmission pipeline and evaluate the need for cathodic protection of the pipeline.
5. Perform an evaluation of the Bear Creek culvert crossing. Review alternatives for shallow open cut trenching pipe installation versus deep auger bored trenchless crossing and identified preferred alternative.
6. Determine road pavement restoration requirements. Pavement restoration design will be in accordance with County standards.
7. Identify permitting requirements.

### *Subtask 3.1 Assumptions*

- Baseline Work will include approximately 5,500 LF of 16-inch diameter DI transmission pipeline on SE Bluff Road from SE Proctor Road to SE Hudson Road.
- Further pipe sizing evaluation is not required.
- Basic design assumptions for the transmission main are provided above in Project Design Assumptions.

### *Subtask 3.1 Deliverables*

- Section in 30% Design Technical Memorandum (Subtask 3.6) documenting pipeline design criteria and recommendations.
- Preliminary Drawings (PDF format): Prepare 30-percent design plans to consist of up to fifteen (15) plan and profile and other drawings with existing utility information, proposed pipeline alignment, and locations of key appurtenances.

## Subtask 3.2 - Hydraulic Analysis and Transient Analysis

Hydraulic analysis will include:

1. Review and confirm design criteria provided in the Stantec Conceptual Design Report. Perform hydraulic analysis to identify hydraulic grade line and anticipated pump curves and system curves for the transmission system from the new pumpstation at the PWB Filtration Plant site to the

Revenue Avenue Reservoir, including available pressure for SAWC for domestic and fireflow conditions.

2. Additional analysis to review operating the pump station to provide water to PHWD. As such, the pumps will be dual purpose and pump through a single discharge main. The pumps will be upsized accordingly to meet PHWD flow demands.
3. Pumps will be identified based on the required flow and head conditions and available pump manufacturer data. Equipment will be identified and evaluated based on the required operating points and operational efficiencies of the equipment. Consultant staff will meet with City staff to identify equipment preferences based on functionality, operations and maintenance tasks and operator familiarity with equipment.
4. SAWC currently relies on the City's reservoir for daily domestic flow and fire flow, and there are flow reversals in the transmission main when PWB switches to groundwater and SAWC is served with Alder Creek supply. In the future, if the PWB supply is primarily used seasonally for supplementing summer demands, a pumping arrangement would be needed to ensure 24-hour delivery of water to SAWC. Operational strategies will be reviewed as part of this subtask.
5. Perform transient analysis and identify recommendations for control of adverse pressure surges from the BRSPS in the new and existing transmission main.
  - a. Perform pressure surge analysis simulations for the BRSPS when conveying water to the Revenue Avenue Reservoir. Simulations will include:
    - i. Pump power failure at the BRSPS,
    - ii. Pump start-up at the BRSPS, and
    - iii. Controlled pump shutdown at the BRSPS.

Test the sensitivity of the surge simulations to the potential effects of high and low Bull Run Filtration Facility clearwell water levels, high and low Revenue Avenue Reservoir water levels, the flow at the SAWC takeoff, and the flow at the PHWD takeoff.

- b. Evaluate the results of the simulations and determine whether surge control measures are necessary to protect the system, including the WTF, from adverse surge pressures created by the BRSPS.
- c. If surge protection is deemed necessary, Consultant will determine surge control measures (e.g., controlled venting vacuum relief valves for the proposed new transmission main, additional controlled venting vacuum relief valves for the existing transmission main, surge/pressure relief valves, pressurized surge tank(s), flywheels (if practicable), surge anticipating valves, slow closing check valves, pump station bypasses) for the new and existing transmission mains, 24-inch diameter suction header, and BRSPS.
- d. The pressure surge analyses simulations described above will be repeated with the recommended surge control measures in place to demonstrate the effectiveness of the surge protection improvements.

- e. Recommendations will be provided for safely starting and stopping the pumps at the BRSPS.
- f. Summarize the physical facilities, findings of the pressure surge simulations, hydraulic model results (i.e., plots of maximum and minimum HGL envelopes and pressure head traces), recommendations for safely starting and stopping the pumps at the BRSPS, and surge control recommendations for the system in a technical memorandum. Draft and final electronic technical memoranda will be provided.

### *Subtask 3.2 Assumptions*

- Hydraulic analysis and transient analysis will be completed using the preferred transmission main alignment identified in Subtask 3.1.
- Hydraulic analysis and transient analysis will include proposed and existing facilities from the BRSPS to the City's Revenue Avenue Reservoir site, and will include study of surge on the GAC and Zealite filters.
- It is assumed that pump type will be can-mounted vertical turbine pumps, and further pump type evaluation is not required.

### *Subtask 3.2 Deliverables*

- Preliminary hydraulic grade line, anticipated pump curves and system curves for the transmission system.
- Transient analysis technical memorandum (PDF format, in Appendix to 30% Preliminary Design Technical Memorandum).
- Section in 30% Design Technical Memorandum (Subtask 3.6) describing hydraulic analysis and transient analysis findings and recommendations.

## Subtask 3.3 - Water Quality Assessment

The Consultant will perform a water quality assessment of the proposed transmission system improvements to review City and SAWC water quality related to integrating the future PWB supply, including:

- Potential water quality impacts to the City and SAWC related to the future transition from the current PWB unfiltered and chlorinated water supply to the proposed PWB filtered, chloraminated and pH adjusted water supply, acknowledging the change in water chemistry from the existing and future PWB supplies.
- Potential water quality impacts to the City and SAWC related to the City's proposed operational change from the current continuous year-round use of the PWB supply to primarily a seasonal summer peak season use of the new PWB supply. This includes potential for disinfection residual degradation in the transmission main during the off-peak season when minimal flow will be supplied through the transmission main, and issues from seasonal changes to City water system blending.
- Comparison of potential water quality impacts related to locating the City's proposed WTF at the PWB Filtration Plant site compared to locating it at the City reservoir site.

- Potential water quality impacts related to integrating the future PWB supply into the SAWC system through their connection to the existing transmission main on SE Bluff Road at SE Hauglum Road, including normal operations, reversal of flow within the transmission system, and potential backfeed of water from the Revenue Avenue Reservoir during an emergency event in the SAWC distribution system (a line break or fire, for example), that may involve mixing or exposure to water with free chlorine and chloramine disinfection.

Work under this subtask will include:

1. Prepare a desk-top risk matrix for the confirmed water quality and operating conditions based upon the different issues within the transmission system. Currently, possible issues that impact the risk matrix are expected to include the following:
  - a. Achieve ammonia removal at Bull Run WTF.
  - b. Achieve ammonia removal at Revenue Reservoir
  - c. Remove ammonia by breakpoint chlorination.
  - d. Remove ammonia by GAC/Zeolite treatment.
  - e. Potential for blending other water sources or alternating sources in the transmission and distribution systems (pH/alkalinity issues, disinfectant residual type and magnitude, LCR and DBP compliance, and aesthetics issues)
  - f. Impacts on water quality from the transmission pipeline.
  - g. Achieving overall compliance at each receiving location (City of Sandy and SAWC).
2. Perform Bench-scale testing and analysis to fill data gaps including:
  - a. Conduct chlorine breakpoint curves on both waters (e.g., the GAC/Zeolite treatment process may have a small amount of residual ammonia requiring breakpoint) with a brief testing plan (approximately 2 pages) outlining testing and sampling to be conducted.
  - b. Conduct chlorine decay curves up to 30 days starting at a 1 mg/L residual level. Water will have chlorine boosted during the tests if residual chlorine levels drop to  $\leq 0.2$  mg/L.
  - c. Evaluate impacts of pH/alkalinity adjustment on DBP formation.
  - d. Measure initial/starting DBPs and DBP levels after 30 days, and DBP levels at intermittent sampling points as informed by the client.
3. Develop an action plan for mitigating risks that have been identified during the project. These may include risks to aesthetic water quality (such as taste, odor, discoloration), and/or impacts to regulatory compliance (DBPs, Lead and Copper Rule, Revised Total Coliform Rule, etc.). The action plan will identify key activities, sequencing, and responsible parties.
4. Culminate all the above water quality risk identification and mitigation recommendations into a technical memorandum summarizing assessment approach, key findings, and recommendations for future system operations and improvements to serving Sandy and SAWC.

### Subtask 3.3 Assumptions

- SAWC and Sandy provide responses to water quality, operations, and compliance data requests.
- It is assumed that once the new transmission system is operational, SAWC will switch from disinfection with free chlorine to PWB Filtration Plant chloraminated water if the City's WTF is located at the reservoir site.
- Consultant will coordinate with SAWC under Task 4 to review existing and future system operations and incorporate SAWC input into the water quality assessment.
- Sandy and SAWC attend a web-based risk matrix discussion meeting and provide comments on the draft risk matrix.
- The shipping, delivery, and analytical costs of all laboratory samples for the bench-scale DBP testing will be paid by the City.
- Sandy and SAWC attend a web-based meeting discussing action plan recommendations and provide comments on the draft action plan.

### Subtask 3.3 Deliverables

- Draft and Final Water Quality Action Plan Technical Memorandum. (PDF format, in Appendix to 30% Preliminary Design Technical Memorandum).
- Section in 30% Design Technical Memorandum (Subtask 3.6) water quality assessment findings and recommendations.

## Subtask 3.4 – Treatment Facility Preliminary Design

Since the City is not yet committed to dechloramination, the Consultant will perform an evaluation of capital, operations and lifecycle costs of chloramine removal compared to installing ammonia facilities at Alder Creek and Brownell Springs, and document findings in a technical memorandum. Cost comparison of chloramine removal versus ammonia addition, and Preliminary Design for the WTF located at the City's Revenue Avenue Reservoir will include:

1. Prepare Technical memorandum comparing budget-level capital, operations and lifecycle costs of installing dechloramination compared to installing ammonia facilities at Alder Creek and Brownell Springs. Work will include concept level capital, operating, and lifecycle costs for use in evaluating project alternatives. Costs will be budget-level, based on programmatic costs for similar facilities, scaled to this project using anticipated flows for each facility. Lifecycle cost will be developed using a present value Excel spreadsheet, projecting operating, maintenance, and replacement costs over a 30 year period for the purposes of comparing the lifecycle costs of the alternatives.
2. Confirm the feasibility of locating the proposed WTF at the City reservoir site versus at the PWB Filtration Plant site. Perform evaluation of treatment facility configuration and site layout at the Revenue Avenue Reservoir site. Develop preliminary design criteria and complete a siting analysis to confirm an economical orientation and configuration for the proposed GAC tanks and disinfection building, related facilities, and facility layout at the existing site. Document a preferred treatment facility configuration and site layout.

- a. Preliminary engineering activities include analysis to confirm feasibility of using the City reservoir site for the WTF, GAC tank sizing needs, transmission main sizing needs, chlorine system requirements, and sizing of other on-site improvements.
  - b. Review operational challenges related to locating the proposed WTF at the City reservoir site versus at the PWB Filtration Plant site and identify strategies to mitigate operational and water quality impacts.
  - c. Preliminary GAC tank layout plan, disinfection building mechanical floor plan and building elevation will be developed.
  - d. Provide conceptual site plans and renderings which will orient treatment facility configuration on the site with the surrounding landscaping and access to accommodate finished grade conditions.
  - e. Site plan and general facility configurations will be prepared, identifying key project features including chloramine removal (outdoor GAC tanks), disinfection building structure; valve vaults, if needed; access road; maintenance vehicle parking; and landscaping and screening.
  - f. Consultant will review development code requirements and incorporate requirements into the site improvements. Requirements may include setbacks, buffering and screening, lot coverage, access, landscaping, height limitations, and other typical requirements.
  - g. Stormwater analysis and report – Consultant will review City and DEQ requirements for addressing stormwater runoff from the new improvements at the reservoir site. The scope of work assumes stormwater may be discharged into the existing stormwater system and no expansion of the existing system will be required.
  - h. Consultant will consult with OHA regarding eliminating the disinfectant residual of finished water and then injecting a new disinfectant residual downstream without providing chlorine contact time. Preliminary design will include a discussion of OHA requirements for this project.
3. Structural designs and analysis: Perform preliminary structural assessment for GAC tank slab and disinfection building.
  4. Electrical and controls:
    - a. Technical memo describing the electrical and control system modifications required at the site to support the new chloramine removal building and equipment.
    - b. Preliminary electrical site plan and single line diagram.

### *Subtask 3.4 Assumptions*

- Up to nine iterations of the net present value will be prepared to compare the lifecycle costs of removing ammonia from the PWB supply at the Revenue reservoir site and adding ammonia at the Brownell Springs and Alder Creek sites.
- Work will include chloramine removal and disinfection facilities located at the City's Revenue Avenue Reservoir site.

- Basic design assumptions for the treatment facility are provided above in Project Design Assumptions.
- The City will provide topographic surveying to supplement existing base mapping from the original reservoir construction project. It is anticipated that survey will be limited to the western half of the site to document existing ground conditions, utilities, trees, and other site features relevant to the design of the proposed treatment facilities.
- If required by City land use permitting process, the City will provide services of a professional arborist to provide an Arborist Report and consultation regarding existing tree impacts.

#### *Subtask 3.4 Deliverables*

- Technical memorandum documenting Lifecycle cost comparison of dechloramination compared to installing ammonia facilities (PDF format).
- Section in 30% Design Technical Memorandum (Subtask 3.6) documenting chloramine removal (outdoor GAC tanks) and disinfection building design criteria and recommendations.
- Preliminary Structural Design reporting, covering structural design criteria and recommendations for Chloramine removal (outdoor GAC tanks) and disinfection building (PDF format, in Appendix to Preliminary Design Report).
- Preliminary electrical and I&C reporting, covering electrical and control system modifications required at the site to support the new chloramine removal building and equipment.
- Stormwater report and engineering calculations for land use permitting, development review, and preliminary design reporting (PDF format).
- Preliminary Drawings (PDF format):

#### Subtask 3.5 – Treatment Facilities Geotechnical Investigation

It is known that the existing reservoir and pump station construction included ground improvement using rammed aggregate piers to mitigate the potential liquefaction induced seismic settlement due to existing subsurface soil conditions. Therefore, a geotechnical investigation of the WTF location at the reservoir site is proposed and will include:

1. Review available geotechnical and geological information (existing geotechnical report for previous development, DOGAMI hazard mapping and nearby groundwater information).
2. Conduct one (1) geotechnical boring to 50 feet deep. The boring will provide soil resistance and samples for seismic hazards evaluation/mitigation and foundation design recommendation development.
3. Conduct cyclic direct simple shear test (Cyclic DSS) and other laboratory testing to assess the soil liquefaction potential at the site.
4. Assess soil seismic profile (site classification) and site response parameters in accordance with the 2022 Oregon Structure Specialty Code (OSSC).



5. Evaluate the liquefaction potential, and liquefaction induced effects such as seismic-induced settlements, lateral spreading, and potential reduction in soil bearing capacity.
6. Evaluate static and seismic soil bearing capacity, subgrade modulus, and total and differential settlements for the proposed foundation.
7. Provide recommendations and design criteria for the preferred foundation (i.e. shallow or deep foundation) or ground improvement to mitigation soil liquefaction hazard.
8. Provide lateral load resistance recommendations, including passive earth pressure and coefficient of friction.
9. Provide recommendations for site preparation, grading, drainage, and wet-weather earthwork procedures.
10. Provide engineered fill recommendations for the foundation or ground improvement and compaction criteria.
11. Develop a geotechnical engineering report to present our subsurface condition interpretation, seismic hazards and mitigation evaluations, geotechnical engineering analysis, and recommendations for foundation or ground improvement design/construction.
12. Input and review to the seismic hazard mitigation and earthwork related design and specifications.
13. Prepare geotechnical engineering report. (PDF format, in Appendix to 30% Preliminary Design Technical Memorandum).

#### *Subtask 3.5 Assumptions*

- City to locate buried utilities onsite that are unknown to the One-Call utility locating service.
- The explorations do not include environmental assessments, and the site is assumed to be “clean” regarding contaminated and hazardous materials.

#### *Subtask 3.5 Deliverables*

- Draft and Final Geotechnical Engineering Report. (PDF format, in Appendix to 30% Preliminary Design Technical Memorandum).
- Section in 30% Design Technical Memorandum (Subtask 3.6) geotechnical investigation findings and recommendations.

### Subtask 3.6 - 30% Design Technical Memorandum

Work under this subtask includes preparing a preliminary design technical memorandum that describes and illustrates key design criteria, schematic level designs and general facility configurations to the 30% completion level. Preliminary transmission pipeline plan and profiles drawings will be used to establish a preferred pipeline alignment. A plan and cross-sectional analysis of the treatment facilities layout will be used to establish the optimal orientation of the key project features.

Work also includes preparing a Class 4 Engineer's Opinion of Probable Construction Costs (OPCC), based on prior experience on similar projects and current data relative to construction pricing trends. The itemized construction cost estimate will be for a 30% design completion level. A cost-loaded schedule will be prepared using the OPCC data, and a permitting plan will be developed.

### *Subtask 3.6 Assumptions*

- It is assumed that 30% design drawings will contain up to thirty (30) including a vicinity map, transmission pipeline plan and profile sheets, treatment facility site layout, treatment facility floor plans and architectural sections, grading plan, and site piping plan.
- 30% OPCC to be completed in accordance with the Association for the Advancement of Cost Engineering International (AACE) Class 4 standards, with an expected accuracy range of +50 to -30 percent, as recommended for a preliminary design level of project definition.

### *Task 3.6 Deliverables*

- Draft and Final 30% preliminary design package to include the following element (PDF format):
  - 30% Design Technical Memorandum, (Final version will incorporate City comments)
  - 30% design drawings
  - Hydraulic Grade Line
  - Pump Station Pump and System Curves
  - Equipment Selection / Equipment List
  - Preliminary P&ID
  - Class 4 OPCC
  - Cost-Loaded Schedule
  - Permitting Plan
  - Transient Analysis Report
  - Water Quality Assessment Report
  - Treatment Facilities Geotechnical Engineering Report

### **Subtask 3.7 - Early Procurement Evaluation**

Early procurement evaluation will include:

1. Evaluate equipment and materials included in the 30% Design for each facility and estimate potential delivery times based on discussions with suppliers and specific experience from other recent projects.
2. Develop a draft project schedule that includes anticipated long-lead time materials and equipment to determine if early procurement of certain items would help improve the completion date for the Project.
3. Prepare Procurement Technical Memorandum documenting work and providing recommendations.

### *Subtask 3.7 Deliverables*

- Early Procurement Technical Memorandum

## Task 4 – Jurisdictional Agency and Utility Coordination

Coordinate with all jurisdictional agencies and utilities involved in the design, construction, and permitting for the Project. Perform subsurface utility explorations to estimate horizontal and vertical information for existing utilities.

### Subtask 4.1 – Jurisdictional Agency Coordination

Coordinate with jurisdictional agencies.

#### *Subtask 4.1 Assumptions*

AGENCY	ASSUMPTIONS
➤ Clackamas County Transportation & Development	Up to five meetings with two Consultants for one hour each
➤ City of Sandy Planning Department	Up to four meetings with two Consultants for one hour each
➤ City of Sandy Building Department	Up to two meetings with three Consultants for up to one hour each
➤ Portland Water Bureau	Up to five Design Review Meetings with three Consultants for two hours each
➤ Oregon Trail School District	Up to two meetings with two Consultants for one hour each
➤ Pleasant Home Water District	Up to three meetings with two Consultants for two hours each
➤ Skyview Acres Water Company	Up four meetings with three Consultants for two hours each
➤ Oregon Health Authority	Up to three meetings with two Consultants for one hour each
➤ Oregon DEQ	Up to two meetings with two Consultants for one hour each
➤ Assume meetings will be virtual meetings, except four in-person meetings that include travel time for up to three Consultant team members.	

#### *Subtask 4.1 Deliverables*

- Communication documents such as copies of email, telephone memos, and/or formal correspondence of significance to the project.

## Subtask 4.2 – Utility Coordination

Work under this task includes utility coordination to support preliminary and final design project work. Communicate and coordinate with utility providers within the project limits to review potential conflicts with proposed work. Utility coordination work is to include the following.

1. Develop a utility contact information list and prepare project information letters to all utility companies involved to explain proposed project work. Project information letters will be emailed to utility contacts and include 30% plans in PDF format.
2. Identify potential utility conflicts and develop a list of potholing needs. Coordinate with City staff for potholing needs.
3. Maintain a record of correspondence with utility companies.

### *Subtask 4.2 Assumptions*

- Coordination is anticipated with the following utilities:
  - Northwest Natural
  - Portland General Electric
  - Various Telecommunications Providers
- Transmission main alignment will be selected to avoid relocations of existing utilities. However, should relocations be necessary, additional utility coordination assistance may be provided by amendment to coordinate relocations and resolve conflicts with affected utilities.

### *Subtask 4.2 Deliverables*

- Utility contact information list and project information letters

## Subtask 4.3 - Subsurface Utility Explorations

Subsurface utility explorations will be performed by our subconsultant VacX to support final design project work. Vacuum excavation will be used to estimate horizontal and vertical information for existing utilities at critical transmission main crossing and connection locations along SE Bluff Road from SE Proctor Road to SE Hudson Road.. Information gathered on all utilities encountered during the excavation (including top, bottom, width, general soil conditions, and asphalt/concrete thickness, etc.) will be provided in an excel format along with accompanying sketches that locate each pothole relative to existing surface features and include details of the findings. Potholing will include backfilling all test holes with a material approved by the jurisdiction involved (Clackamas County). At each pothole location, a core of the existing pavement will be removed prior to potholing. Potholes will be patched with hot mix asphalt concrete, or other approved material, and finished neatly.

### *Subtask 4.3 Assumptions*

- VacX budget estimate includes up to 10 potholes to be performed during daytime hours.
- It is anticipated that utilities will be eight (8) feet or less in depth.
- Up to 80 inches of coring and hot mix asphalt restoration (8 inches per pothole location).
- A Street Opening Permit will be required for potholing within Clackamas County ROW.

- No hazardous materials will be encountered.
- Includes time for Consor staff to visit the site and mark limits for utility locates and pothole locations.

#### *Subtask 4.3 Deliverables*

- Up to 10 pothole data reports and sketches

### **Task 5 – Final Design (60%, 90%, 100%)**

Work under this task includes preparation of final construction drawings, technical specifications, and contract documents for bidding and construction of the proposed improvements. Consultant will submit plans and specifications for City review at the 60% and 90% completion levels, incorporating City review comments from each prior submittal.

Construction drawings and special technical specifications will be in accordance with City standards, policies, and procedures. Plan and profile drawings will be provided at a horizontal scale of 1-inch = 20 feet. Technical specifications will be developed using the Construction Specifications Institute (CSI) 48-division specification format. Contract documents will be developed based on the City's bidding requirements and the Engineers Joint Contract Documents Committee (EJCDC) format and Consultant's standard template. An Engineer's OPCC will be developed and included at each design submittal stage.

#### **Subtask 5.1 - 60% Design (Plans, Specifications, Bid Schedule, Estimate)**

Based on the City's input on preliminary designs, Consultant will develop 60% designs that depict recommended waterline improvements. Designs at this stage will establish appropriate project limits, identify connection locations to the existing water system, and include draft profiles. Specific work under this task include:

1. Prepare 60% construction drawings including draft profiles and draft details.
2. Prepare 60% technical specifications and bid schedule to cover conditions specific to the work.
3. Prepare 60% OPCC (Class 3).

#### *Subtask 5.1 Assumptions*

- Project schedule assumes up to two (2) weeks of City time for review and comments following design submittal.
- 60% OPCC will be completed in accordance with the AACE Class 3 standards, with an expected accuracy range of +30 to -20 percent, as recommended for a preliminary design level of project definition.

#### *Subtask 5.1 Deliverables*

- 60% design package to include water main plan and profile drawings, draft technical specifications, bid schedule, and cost estimate.
- Drawings: 11-inch by 17-inch plans in electronic PDF file
- Contract Documents/Specifications: electronic Word and PDF file formats

- 60% OPCC (Class 3): Electronic PDF file format

## Subtask 5.2 - 90% Design (Plans, Specifications, Contract Documents, Estimate)

Under this task, the 60% designs will be advanced to 90% completion, incorporating City review comments. Specific work under this task include:

1. Prepare 90% construction plan/profile drawings and details to clearly describe the work to be constructed.
2. Prepare draft front-end contract documents.
3. Prepare updated 90% technical specifications.
4. Prepare 90% OPCC (Class 2).

### *Subtask 5.2 Assumptions*

- Project schedule assumes up to two (2) weeks of City time for review and comments following design submittal.
- 90% OPCC will be completed in accordance with the AACE Class 2 standards, with an expected accuracy range of +20 to -15 percent, as recommended for a preliminary design level of project definition.

### *Subtask 5.2 Deliverables*

- 90% design package to include plans, draft technical specifications, draft contract documents, and cost estimate.
- Drawings: 11-inch by 17-inch plans in electronic PDF file
- Contract Documents/Specifications: electronic Word and PDF file formats
- 90% OPCC (Class 2): Electronic PDF file format

## Subtask 5.3 - 100% Design (Final Plans, Specifications, Contract Documents, Estimate)

The final 100% design submittal will be advanced from the 90% submittal, incorporating City's review comments. Work under this subtask includes preparing final contract documents, technical specifications and drawings required for bidding the project. Prepare 100% OPCC (Class 2).

### *Subtask 5.3 Assumptions*

- Consultant will prepare final contract documents for printing production.
- Project schedule includes one (1) week for City review if requested.
- 100% OPCC will be completed in accordance with the AACE Class 2 standards, with an expected accuracy range of +10 to -10 percent, as recommended for a final design level of project definition.

### Subtask 5.3 Deliverables

- 100% design package to include final plans, technical specifications, contract documents, and OPCC.
- 100% Signed Drawings and Contract Documents (Permit/Final Review Set): Three (3) hard copy sets of 11-inch by 17-inch plans and three (3) hard copies of contract documents/specifications; on set of documents in electronic Word and PDF file formats.
- Final Signed Drawings: Five (5) hardcopy sets of 22-inch by 34-inch plans and electronic AutoCAD and PDF file formats.
- 100% OPCC (Class 2): Electronic PDF file format.

## Task 6 – Permits and Approvals (Transmission Main and WTF)

Consultant will prepare applications for obtaining permits and approvals for the transmission main and WTF project construction. Work under this task includes coordination with agency jurisdictions to review requirements, completing permit applications, and providing design documentation. Anticipated permits and approvals include the following:

1. City of Sandy Land Use Review Approval
  - a. Consultant will schedule and attend a pre-application meeting with City of Sandy to confirm requirements for preparing the Land Use Application. Consultant will develop exhibits for the pre-application meeting.
  - b. Consultant will review prior Land Use Approvals and supporting documentation for the Reservoir Site, to determine if existing understand prior conditions that may apply to a land use application.
  - c. Consultant will prepare the application narrative based on the pre-application meeting and City of Sandy Development Code.
  - d. Consultant will prepare the following exhibits in support of the Land Use application. Plan exhibits will be based on surveyed base maps prepared in Task 3.6.
    - i. Architectural drawings
      1. Floor plan
      2. Roof plan
      3. Elevations (four sides)
      4. Perspective drawing
    - ii. Site Development drawings
      1. Site Analysis
      2. Site Plan
      3. Exterior lighting
      4. Grading and Erosion Control Plan
      5. Utility plan
      6. Stormwater plan
      7. Existing conditions and demo plan
      8. Landscaping plan

9. Stormwater Report
10. TIA Memo

2. Clackamas County Utility Permit. Consultant will prepare the following exhibits and the permit application for pipeline work proposed in County ROW.
  - a. Erosion control plan
  - b. Plan/profile
  - c. Traffic Control Plan
  - d. Application and pre-application
3. Oregon DEQ National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit #1200-C
4. State of Oregon, Oregon Health Authority, Drinking Water Program Plan Review
5. Determine if JPA is required for Bear Creek Culvert Crossing – its assumed not needed.

### Subtask 6 Assumptions

- For fee estimating purposes it is assumed that permitting processes are completed within reasonable time frames, and that the City will pay all required permit fees.
- This scope of work assumes one set of revisions may be needed during Land Use Completeness Review that will take up to 24 hours to prepare.
- This scope assumes the application will not be appealed. If the application is appealed, addition scope will be required.
- It is assumed that the construction contractor will be responsible for obtaining all other building, trade and construction permits.

### Subtask 6 Deliverables

- Design plans, building elevations, reports, specifications and calculations to support the City Land Use Review application and review process.
- A complete permit application package for review and approval for:
  - Clackamas County Utility Permit
  - Oregon DEQ National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit #1200-C
  - State of Oregon, Oregon Health Authority, Drinking Water Program Plan Review



## Task 7 – Bid Phase Services

Consultant shall provide bid phase support to the City as follows.

### Subtask 7.1 Bid & Award Support

1. Coordinate and lead the pre-bid meeting, including preparing agenda and minutes. Up to three Consultant staff will be in attendance.
2. Respond to bidder questions
3. Prepare Addenda
4. Attend opening of bids
5. Review bids and prepare Bid Tabulation
6. Prepare Recommendation of Award

### Subtask 7.2 Prepare Conformed Drawings

1. Consultant shall update individual plan sheets and specifications for a conformed set of documents that incorporate addendum changes.

### Task 7 Assumptions

- It is assumed that the transmission main and treatment facility will be bid as a single contract. If it is determined later that they will be bid as separate bid packages, additional bid phase services will be added by amendment.
- City will lead the bidding process, including advertisement, plan holders list, posting/distributing bid documents.
- Consultant will conduct Bid Opening, with up to three (3) Consultant staff attending.
- City will lead the administration of contract award, including Intent to Award and Notice of Award.
- Four (4) Addenda are budgeted to address and incorporate permitting review comments
- City will post/distribute addenda.
- Full set of drawings and specifications will be reissued as Conformed Set and provided to the City and construction contractor.

### Task 7 Deliverables

- Pre-bid meeting agenda and meeting notes in electronic Word and PDF file formats
- Addenda in electronic Word and PDF file formats
- Drawings for Addenda in electronic PDF file format
- Bid Tabulation in .xls and PDF file format.
- Recommendation of Award in PDF format
- Conformed Drawing Set in electronic PDF file format
- Conformed Specification Set in electronic PDF file format

## Task 8 – Construction Phase – deferred

## Bid Package No. 2 – BRSPS Work:

### Task 9 – Additional Project Management

#### Objective

Provide additional project management for pumpstation and additional transmission pipeline work, which will be prepared as a separate construction bid set.

#### Subtask 9.1 – Additional Project Management & Administration

- Similar services to Subtask 1.2

#### Subtask 9.2 – Additional Invoices/Status Reporting

- Similar services to Subtask 1.2

#### Subtask 9.3 – Additional Project Design Meetings

1. Work under this subtask includes coordinating schedules, developing agendas, and preparing presentation materials for key project meetings during the project design phase, and includes the following meetings:
  - Preliminary Design (30% Design) Review Meeting
  - 60% Design Review Meeting
  - 90% Design Review Meeting
  - Project update at City Council meeting, if requested
2. Agency coordination meetings will be conducted concurrently with the Transmission Pipeline Work and are included in Task 4.1.
3. Agendas and supporting information to be distributed through the City's project manager in advance of any meeting.
4. Meeting notes to be distributed to meeting attendees and other interested parties within five (5) business days of the subject meeting date.

#### Subtask 9.4 – Additional Quality Assurance/Quality Control

1. Consultant will perform in-house QA/QC reviews of all deliverables prior to submitting to the City.

#### Task 9 Assumptions

- Total project duration for the Pump Station work will be approximately 32 months from NTP in November 2023 through construction completion in June 2026; therefore, it is assumed that there will be up to 32 progress payments/status reports.
- Design Review Meetings will include the Consultant Project Manager (PM) and the design lead. Meetings will have an approximate duration of two (2) hours each. Meetings will be virtual using MicroSoft Teams.
- Consultant's internal project team will hold weekly internal project meetings to coordinate and maintain progress on the project during design. Meetings will include up to 3 Consultant staff for

a duration of approximately one hour. There will be approximately 12 internal design coordination meetings.

## Task 9 Deliverables

- Similar to Task 1.1 Deliverables

## Task 10 – Additional Data Review and Site Reconnaissance

Gather and review existing mapping, as-builts, design drawings, engineering reports, easements and other data related to the proposed project. Perform site reconnaissance with City staff, Portland staff, and design team to confirm existing site conditions and that existing survey base mapping is accurately represented and private utilities are as listed on the locate ticket. Review existing system operations with City staff.

### Task 10 Assumptions

- It is assumed that City staff will provide available data and attend site visits.

### Task 10 Deliverables

- There are no specific deliverables associated with this task as the data will be used to complete subsequent tasks.

## Task 11 – Additional 30% Preliminary Engineering

Conduct additional preliminary engineering and prepare additional sections and information in the 30% Design Technical Memorandum that will constitute a 30% Design Submittal. Additional preliminary engineering work will include BRSPS preliminary design and additions to the 30% Design Technical Memorandum. Additional preliminary engineering will include adequate work to confirm project concepts and design criteria and develop characterization and sizing of the BRSPS to support the land use approval process. Anticipated subtasks are described as follows:

### Subtask 11.1 – Pump Station Preliminary Design

Preliminary Design for the BRSPS located at the PWB Filtration Plant site will include:

1. Coordination with City staff on key design elements, design criteria, and development of preliminary plans to the approximately 30% design completion level as described below.
2. Preliminary pump station layout – Develop preliminary floor plan and elevation alternatives will be developed. Consultant staff will meet with City staff to review and select a preferred pump station layout.
3. Provide conceptual site plans and renderings which will orient pump station configuration on the site with the surrounding landscaping and access to accommodate finished grade conditions.
4. Site plan and general facility configurations will be prepared, identifying key project features including building structure; valve vaults, if needed; access road; maintenance vehicle parking; and landscaping and screening.
5. Stormwater analysis and report – Consultant will review PWB, Multnomah County and DEQ requirements for addressing stormwater runoff from the new improvements at the BRPS site. The

scope of work assumes stormwater may be discharged into the existing stormwater system and no expansion of the existing system will be required.

6. Identify permitting requirements. Consultant will review development code requirements and incorporate requirements into the site improvements. Requirements may include setbacks, buffering and screening, lot coverage, access, landscaping, height limitations, and other typical requirements.
7. Structural designs and analysis: Perform preliminary structural assessment for pump station.
8. Electrical and controls:
  - a. Technical memo describing the electrical and control system modifications required at the site to support the new pump station and equipment.
  - b. Preliminary electrical site plan and single line diagram.
  - c. Evaluate equipment load and approximate required power supply size to provide power to the new pump station and site. Begin coordination with PGE.

### *Subtask 11.2 Assumptions*

- Bid Package No. 2 Work will include 5 MGD BRSPS located at the PWB Filtration Plant site.
- Basic design assumptions for the pump station are provided above in Project Design Assumptions.
- It is assumed that pump type will be can-mounted vertical turbine pumps, and further pump type evaluation is not required.
- The City will provide topographic surveying to supplement existing base mapping from the PWB Filtration Plant project. Subtask 11.2 Deliverables
- Section in 30% Design Technical Memorandum (Subtask 3.6) documenting pump station design criteria and recommendations.
- Preliminary Structural Design reporting, covering structural design criteria and recommendations for pump station building (PDF format, in Appendix to Preliminary Design Report).
- Preliminary electrical and I&C reporting, covering electrical and control system modifications required at the site to support the new pump station and equipment. (PDF format, in Appendix to Preliminary Design Report).
- Preliminary Drawings (PDF format): Prepare Preliminary Design plans to consist of up to twenty (20) plan sheets for the pump station, site plan, yard piping, and other features.

### **Subtask 11.3 – Additional Early Procurement Evaluation**

Additional early procurement evaluation will include:

1. Evaluate equipment and materials included in the 30% Design for each facility and estimate potential delivery times based on discussions with suppliers and specific experience from other recent projects.

2. Develop a draft project schedule that include anticipated long-lead time materials and equipment to determine if early procurement of certain items would help improve the completion date for the project.
3. Prepare Procurement Technical Memorandum documenting work and providing recommendations.

### *Subtask 11.3 Deliverables*

- Early Procurement Technical Memorandum

## **Task 12 – Additional Final Design (60%, 90%, 100%)**

Work under this task includes preparation of additional final construction drawings, technical specifications, and contract documents for bidding and construction of the proposed improvements. Consultant will submit plans and specifications for City review at the 60% and 90% completion levels, incorporating City review comments from each prior submittal.

Construction drawings and special technical specifications will be in accordance with City standards, policies, and procedures. Plan and profile drawings will be provided at a horizontal scale of 1-inch = 20 feet. Technical specifications will be developed using the Construction Specifications Institute (CSI) 48-division specification format. Contract documents will be developed based on the City's bidding requirements and the Engineers Joint Contract Documents Committee (EJCDC) format and Consultant's standard template. An Engineer's OPCC will be developed and included at each design submittal stage.

### **Subtask 12.1 - 60% Design (Plans, Specifications, Bid Schedule, Estimate)**

Based on the City's input on preliminary designs, Consultant will develop 60% designs that depict recommended waterline improvements. Designs at this stage will establish appropriate project limits, identify connection locations to the existing water system, and include draft profiles. Specific work under this task include:

1. Prepare 60% construction drawings including draft profiles and draft details. Drawings will include draft plan and section views for the control valve vault, and draft electrical plans.
2. Prepare 60% technical specifications and bid schedule to cover conditions specific to the work.
3. Prepare 60% OPCC (Class 3).

### *Subtask 12.1 Assumptions*

- Project schedule assumes up to two (2) weeks of City time for review and comments following design submittal.
- 60% OPCC will be completed in accordance with the AACE Class 3 standards, with an expected accuracy range of +30 to -20 percent, as recommended for a preliminary design level of project definition.

### *Subtask 12.1 Deliverables*

- 60% design package to include water main plan and profile drawings, draft technical specifications, bid schedule, and cost estimate.

- Drawings: 11-inch by 17-inch plans in electronic PDF file
- Contract Documents/Specifications: electronic Word and PDF file formats
- 60% OPCC (Class 3): Electronic PDF file format

### Subtask 12.2 - 90% Design (Plans, Specifications, Contract Documents, Estimate)

Under this task, the 60% designs will be advanced to 90% completion, incorporating City review comments. Specific work under this task include:

1. Prepare 90% construction plan/profile drawings and details to clearly describe the work to be constructed.
2. Prepare draft front-end contract documents.
3. Prepare updated 90% technical specifications.
4. Prepare 90% OPCC (Class 2).

#### *Subtask 12.2 Assumptions*

- Project schedule assumes up to two (2) weeks of City time for review and comments following design submittal.
- 90% OPCC will be completed in accordance with the AACE Class 2 standards, with an expected accuracy range of +20 to -15 percent, as recommended for a preliminary design level of project definition.

#### *Subtask 12.2 Deliverables*

- 90% design package to include plans, draft technical specifications, draft contract documents, and cost estimate.
- Drawings: 11-inch by 17-inch plans in electronic PDF file
- Contract Documents/Specifications: electronic Word and PDF file formats
- 90% OPCC (Class 2): Electronic PDF file format

### Subtask 12.3 - 100% Design (Final Plans, Specifications, Contract Documents, Estimate)

The final 100% design submittal will be advanced from the 90% submittal, incorporating City's review comments. Work under this subtask includes preparing final contract documents, technical specifications and drawings required for bidding the project. Prepare 100% OPCC (Class 2).

#### *Subtask 12.3 Assumptions*

- Consultant will prepare final contract documents for printing production.
- Project schedule includes one (1) week for City review if requested.

- 100% OPCC will be completed in accordance with the AACE Class 2 standards, with an expected accuracy range of +10 to -10 percent, as recommended for a final design level of project definition.

### *Subtask 12.3 Deliverables*

- 100% design package to include final plans, technical specifications, contract documents, and OPCC.
- 100% Signed Drawings and Contract Documents (Permit/Final Review Set): Three (3) hard copy sets of 11-inch by 17-inch plans and three (3) hard copies of contract documents/specifications; 1 set of files in electronic Word and PDF file formats.
- Final Signed Drawings: Five (5) hardcopy sets of 22-inch by 34-inch plans and electronic AutoCAD and PDF file formats.
- 100% OPCC (Class 2): Electronic PDF file format.

## Task 13 – Additional Permits and Approvals

Consultant will assist with obtaining permits and approvals for the transmission main and treatment facility project construction. Work under this task includes coordination with agency jurisdictions to review requirements, completing permit applications, and providing design documentation. Anticipated permits and approvals include the following:

1. Multnomah County Land Use Review Approval (by others). The Consultant will provide the following exhibits in support of Sandy's application to Multnomah County for the pump station and pipeline located in Multnomah County. Exhibits will be based on base maps provided by City's Program Manager Stantec.
  - a. Preliminary Site Plan (Conсор)
  - b. Utility Plan (Conсор)
  - c. Grading plan (Conсор)
  - d. Circulation and access (Conсор)
  - e. Landscape plan (Conсор)
  - f. Stormwater Management Plan (Conсор)
  - g. Site Lighting Plan (Conсор)
  - h. Floor plan and roof plan (Conсор)
  - i. Building elevations and perspective (Conсор)
  - j. Utility plan (Conсор)
  - k. Pipeline plan (Conсор)
2. Oregon DEQ National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit #1200-C
3. State of Oregon, Oregon Health Authority, Drinking Water Program Plan Review

### Subtask 13 Assumptions

- For fee estimating purposes it is assumed that permitting processes are completed within standard anticipated time frames, and that the City will pay all required permit fees.

- It is assumed that the City will prepare application, apply for, and obtain Land Use Review Approval for the pump station located on the PWB Filtration Plant site and the transmission main extending from the pump station to SE Bluff Road and provide the following exhibits:
  - Vicinity map and zoning (Stantec)
  - Existing conditions (Stantec)
  - Pipeline overall site plan (Stantec)
- It is assumed that the construction contractor will be responsible for obtaining all other building, trade and construction permits.

### Subtask 13 Deliverables

- Design plans, building elevations, reports, specifications and calculations to support the City Land Use Review application and review process.
- A complete permit application package for review and approval for:
  - Clackamas County Utility Permit
  - Oregon DEQ National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge Permit #1200-C
  - State of Oregon, Oregon Health Authority, Drinking Water Program Plan Review

## Task 14 – Additional Bid Phase Services

Consultant shall provide bid phase support to the City as follows.

### Subtask 14.1 Bid & Award Support

1. Attend the pre-bid meeting (Pump Station Lead)
2. Respond to bidder questions
3. Prepare Addenda
4. Attend opening of bids
5. Review bids and prepare Bid Tabulation
6. Recommendation of Award?

### Subtask 14.2 Prepare Conformed Drawings

1. Consultant shall update individual plan sheets if needed for a conformed set of documents that incorporate addendum changes.

## Task 14 Assumptions

- Pump station will be bid as a separate contract. PWB will handle bidding of the pipeline on the PWB property and Carpenter Lane segments.
- City will lead the bidding process, including advertisement, planholders list, posting/distributing bid documents.
- Consultant will conduct Bid Opening, with up to three (3) Consultant staff attending.



- Four (4) Addenda are budgeted to address and incorporate permitting review comments
- City will post/distribute addenda.
- Full set of drawings and specifications will be reissued as Conformed Set and provided to the City and construction contractor.

## Task 14 Deliverables

- Pre-bid meeting agenda and meeting notes in electronic Word and PDF file formats
- Addenda in electronic Word and PDF file formats
- Drawings for Addenda in electronic PDF file format
- Bid Tabulation in .xls and PDF file format.
- Recommendation of Award in PDF format
- Conformed Drawing Set in electronic PDF file format
- Conformed Specification Set in electronic PDF file format

## Task 15 – Management Reserve for Optional Ammonia Facilities Design

### Subtask 15.1 Optional Ammonia Facilities Design

Work under this Optional Task includes preliminary design, design, permitting and bidding phase services for the alternative approach involving ammonia addition at the City's other water sources, Alder Creek and Brownell Springs, to convert the City's existing disinfection systems from free chlorine to chloramines. Fees for this task are in addition to fees estimated for the WTF related design, permitting and bidding phase services.

### Task 15 Assumptions

- The scope for Ammonia Facilities Design will be updated when the scope of the improvements are determined. The Management Reserve amount is intended to allow work to move forward within the Management Reserve Budget once the scope of the project is identified. A detailed scope of work will be included in an amendment once the scope is determined. The amendment may include additional budget if the scope of work exceeds the Management Reserve fund in this task.

### Task 15 Deliverables

- Task 15 Deliverables for Ammonia Facilities will be determined within the allocated Management Reserve Budget

## Proposed Subconsultants

- Peterson Structural Engineering, Inc. (PSE) - Structural Engineering;
- Strongwork Architecture, LLC (Strongwork) – Architectural;
- Industrial Systems, Inc (ISI) – Electrical and I&C Engineering;
- R&W Engineering, Inc. (R&W) – HVAC Mechanical Engineering
- Northwest Hydraulic Consultants (NHC) – Transient Analysis;
- Confluence Engineering Group, LLC (Confluence) - Water Quality;
- Delve Underground (Delve) - Geotechnical & Foundation Engineering;
- VacX – Utility Potholing;
- David Evans and Associates, Inc. (DEA) – Environmental Permitting, if required

## Budget

Consultant proposes to perform this work on a time and expenses basis with a total not to exceed amount of \$2,725,857, which includes design, permitting, and bid phase services for Bid Package No. 1 and No. 2. Optional work for design, permitting and bidding phase services for the alternative approach involving ammonia addition at the City's other water sources, Alder Creek and Brownell Springs sites will be performed on a time and expenses basis with an additional total not to exceed amount of \$935,064, in addition to fees estimated for the WTF related design, permitting and bidding phase services. The total for all work including optional work is \$3,660,921. Construction phase services are not included herein and will be negotiated at a later date. The proposed fee estimate is provided as "Attachment A", and is based on rates calculated using a 3.15 multiplier on direct labor rates of Consultant's staff direct labor rate.

## Project Schedule

Consultant anticipates Notice to Proceed by December 5, 2023. Project schedule will be distributed at the Project Kick-off Meeting.

## Preliminary Drawing List

### Bid Package No. 1 - Transmission Pipeline and WTF Work:

#### General

- G-1 Cover and Index Sheet
- G-2 Location and Vicinity Maps
- G-3 Symbols and Legend
- G-4 Abbreviations
- G-5 General Notes

#### Erosion and Sedimentation Control

- ESC-1 Erosion and Sedimentation Control Cover Sheet and Notes
- ESC-2 Erosion and Sedimentation Control Plan - Transmission Main (Typ)
- ESC-3 Erosion and Sedimentation Control Plan - WTF Site
- ESC-4 Erosion and Sedimentation Control Plan - Details

#### Traffic Control

- TC-1 Traffic Control Plan – General Notes and Sign Details
- TC-2 Traffic Control Plan - Typical Detour Map
- TC-3 Traffic Control Plan – Typical Road and Lane Closures
- TC-4 Traffic Control Plan Intersection Plan and Details

#### SCHEDULE A – TRANSMISSION MAIN

- TM-C-1 Transmission Main Plan & Profile STA 1+00 to STA 6+60
- TM-C-2 Transmission Main Plan & Profile STA 6+60 to STA 12+20
- TM-C-3 Transmission Main Plan & Profile STA 12+20 to STA 17+80
- TM-C-4 Transmission Main Plan & Profile STA 17+80 to STA 23+40
- TM-C-5 Transmission Main Plan & Profile STA 23+40 to STA 29+00
- TM-C-6 Transmission Main Plan & Profile STA 29+00 to STA 34+60
- TM-C-7 Transmission Main Plan & Profile STA 34+60 to STA 40+20
- TM-C-8 Transmission Main Plan & Profile STA 40+20 to STA 45+80

TM-C-9	Transmission Main Plan & Profile STA 45+80 to STA 51+40
TM-C-10	Transmission Main Plan & Profile STA 51+40 to STA 55+00
TM-C-11	Transmission Main Civil Details - 1
TM-C-12	Transmission Main Civil Details - 2
TM-C-13	Transmission Main Civil Details - 3
TM-C-14	Transmission Main Civil Details - Cathodic Protection
TM-C-15	Transmission Main Civil Details - Typical Roadway Resurfacing Sections

## **SCHEDULE B – WATER TREATMENT FACILITY**

### **Civil**

WTF-C-1	Existing Conditions Plan
WTF-C-2	Site Layout Plan
WTF-C-3	Tree Protection and Removal Plan
WTF-C-4	Grading Plan
WTF-C-5	Access Road Profiles and Details
WTF-C-6	On-Site Water Piping Plan
WTF-C-7	On-Site Water Piping Profiles
WTF-C-9	On-Site Drainage and Sanitary Sewer Piping Plan
WTF-C-10	On-Site Drainage and Sanitary Sewer Piping Profiles
WTF-C-11	Off-Site Drainage and Sanitary Sewer Piping Plan and Profiles
WTF-C-12	Miscellaneous Civil Details - 1
WTF-C-13	Miscellaneous Civil Details - 2
WTF-C-12	Miscellaneous Civil Details - 3
WTF-C-13	Miscellaneous Civil Details – 4

### **Landscaping**

WTF-L-1	Treatment Facility Planting Plan
WTF-L-2	Planting Plan Details - 1
WTF-L-3	Planting Plan Details - 2
WTF-L-4	Treatment Facility Site - Irrigation Plan
WTF-L-5	Irrigation Details

### **Architectural**

WTF-A-1	Architectural Legend and Code Information
WTF-A-2	Architectural Floor Plan
WTF-A-3	Architectural RCP, Roof Plan, and Millwork
WTF-A-4	Architectural Exterior Elevations and Building Sections
WTF-A-5	Architectural Sections
WTF-A-6	Architectural Schedules
WTF-A-7	Architectural Assemblies and Details
WTF-A-8	Architectural Details and Sections
WTF-A-9	Architectural Standard Details - 1
WTF-A-10	Architectural Standard Details - 2
WTF-A-11	Architectural Standard Details - 3
WTF-A-12	Site Egress Plan

**Structural**

WTF-S-1	General Structural Notes
WTF-S-2	Structural Quality Control Plan and Notes - 1
WTF-S-3	Structural Quality Control Plan and Notes - 2
WTF-S-4	GAC Tanks Floor Plan
WTF-S-5	GAC Tanks Elevations and Sections
WTF-S-6	Building Floor and Foundation Plan, Roof Framing Plan
WTF-S-7	Building Structural Sections
WTF-S-8	CMU Wall Typical Details
WTF-S-9	CMU Wall Connection Details
WTF-S-10	Structural Details - 1
WTF-S-11	Structural Details - 2

**Mechanical**

WTF-M-1	GAC Tanks Mechanical Floor Plan
WTF-M-2	GAC Tanks Mechanical Piping Plan
WTF-M-3	GAC Tanks Mechanical Sections
WTF-M-4	Building Mechanical Floor Plan
WTF-M-5	Building Mechanical Piping Sections
WTF-M-6	Building Mechanical Sections
WTF-M-7	Mechanical Details - 1
WTF-M-8	Mechanical Details - 2
WTF-M-9	Mechanical Details – 3
WTF-M-10	Water Quality Panel and Chemical Injection Piping
WTF-M-11	Plumbing Plan and Schedule
WTF-M-12	HVAC Floor Plan
WTF-M-13	Meter and Chemical Injection Vault Plan & Section
WTF-M-14	Miscellaneous Mechanical Details - 1
WTF-M-15	Miscellaneous Mechanical Details – 2

**Electrical**

WTF-E-1	Electrical Symbols and Legend and Abbreviations
WTF-E-2	Electrical One Line Diagram
WTF-E-3	Electrical Site Plan
WTF-E-4	Electrical Site Plan - conduit along piping for fiber
WTF-E-5	Electrical Site Plan - conduit along piping for fiber
WTF-E-6	Building Power and Instrumentation Plan
WTF-E-7	Building Lighting and Grounding
WTF-E-8	Electrical Panel Schedule & Circuit Schedule
WTF-E-9	Electrical Details

**Instrumentation and Controls**

WTF-I-1	P&ID
WTF-I-2	Control Panel Arrangement
WTF-I-3	Control Panel Power & Fusing
WTF-I-4	Terminal Arrangements
WTF-I-5	Interconnection Details
WTF-I-6	I/O Sheet 1

## Bid Package No. 2 – BRSPS Work:

### **General**

G-1	Cover and Index Sheet
G-2	Location and Vicinity Maps
G-3	Symbols and Legend
G-4	Abbreviations
G-5	General Notes

### **Erosion and Sedimentation Control**

ESC-1	Erosion and Sedimentation Control Cover Sheet and Notes
ESC-2	Erosion and Sedimentation Control Plan - BRSPS Site
ESC-3	Erosion and Sedimentation Control Plan – Details

PS-C-1	Existing Conditions Plan
PS-C-2	Site Layout Plan
PS-C-3	Grading Plan
PS-C-4	Access Road Profiles and Details
PS-C-5	On-Site Water Piping Plan
PS-C-6	On-Site Water Piping Profiles
PS-C-7	On-Site Drainage and Sanitary Sewer Piping Plan
PS-C-8	On-Site Drainage and Sanitary Sewer Piping Profiles
PS-C-9	Storm Water Facility Plan, Section and Details
PS-C-10	Miscellaneous Civil Details - 1
PS-C-11	Miscellaneous Civil Details - 2
PS-C-12	Miscellaneous Civil Details - 3
PS-C-13	Miscellaneous Civil Details - 4

### **Landscaping**

PS-L-1	BRSPS Planting Plan
PS-L-2	Off-site Restoration Plan
PS-L-3	Planting Plan Details - 1
PS-L-4	Planting Plan Details - 2
PS-L-5	BRSPS - Irrigation Plan
PS-L-6	Irrigation Details

### **Architectural**

PS-A-1	Architectural Legend and Code Information
PS-A-2	Pump Station Architectural Floor Plan
PS-A-3	Pump Station Architectural RCP and Roof Plan
PS-A-4	Pump Station Architectural Exterior Elevations and Building Sections
PS-A-5	Pump Station Architectural Sections
PS-A-6	Pump Station Architectural Details and Sections
PS-A-7	Architectural Standard Details - 1
PS-A-8	Site Egress Plan

**Structural**

PS-S-1	General Structural Notes
PS-S-2	Structural Quality Control Plan and Notes - 1
PS-S-3	Structural Quality Control Plan and Notes - 2
PS-S-4	Pump Station Floor and Foundation Plan, Roof Framing Plan
PS-S-5	Pump Station Structural Sections
PS-S-6	CMU Wall Typical Details
PS-S-7	CMU Wall Connection Details
PS-S-8	Structural Details - 1

**Mechanical**

PS-M-1	Pump Station Mechanical Floor Plan
PS-M-2	Pump Station Mechanical Piping Sections
PS-M-3	Pump Station Mechanical Sections
PS-M-4	Mechanical Details - 1
PS-M-5	Mechanical Details - 2
PS-M-6	Plumbing Plan and Schedule
PS-M-7	HVAC Floor Plan
PS-M-8	Miscellaneous Mechanical Details - 1
PS-M-9	Miscellaneous Mechanical Details – 2

**Electrical**

PS-E-1	Electrical Symbols and Legend and Abbreviations
PS-E-2	Electrical One Line Diagram
PS-E-3	Electrical Site Plan
PS-E-4	Pump Station Building Power and Instrumentation Plan
PS-E-5	Pump Station Building Lighting and Grounding
PS-E-6	Pump Station Electrical Panel Schedule & Circuit Schedule
PS-E-7	Electrical Details - 1
PS-E-8	Electrical Details – 2
PS-E-9	Motor Control Diagrams

**Instrumentation and Controls**

PS-I-1	SCADA Communication Network Diagram
PS-I-2	P&ID - 1
PS-I-3	P&ID - 2
PS-I-4	Control Panel Arrangement
PS-I-5	Control Panel Power & Fusing
PS-I-6	Terminal Arrangements
PS-I-7	Interconnection Details
PS-I-8	I/O - 1
PS-I-9	I/O - 2

PORTLAND TO SANDY WATER FILTRATION PLANT TRANSMISSION SYSTEM  
CITY OF SANDY  
PROPOSED FEE ESTIMATE - 11/21/2023

Item # 4.

Table with columns for Staff Name, Principal Engineer I-VI, Professional Engineer I-V, Engineering Designer I-IV, Cost Estimator I, Project Administrator I-III, Administrative II, Administrative III, Hours, Labor, Structural, Architectural, Electrical/MECH, Mechanical/HVAC, Transit/Analysis/PMC, Water Quality/Compliance, Geotechnical/Slope, Potting/Veget, Subcontractor Multiplier, Subcontractor Total with Markup, Expenses, and Total. Includes tasks such as Project Management, Data Review and Site Reconnaissance, 30% Preliminary Engineering, Final Design, and Construction Phase Services.





## PROFESSIONAL SERVICES AGREEMENT

### PREAMBLE

This Contract, made and entered into this \_\_\_ day of \_\_\_\_\_ by and between **Conzor Engineers, LLC**, hereinafter called "Contractor", and the **CITY OF SANDY**, a municipal corporation of the State of Oregon, hereinafter called "City".

WHEREAS, City has need for the services of a party with the particular training, ability, knowledge and experience possessed by Contractor.

### WITNESSETH:

The parties hereto mutually covenant and agree to and with each other as follows:

#### 1. SCOPE OF WORK

The scope of work, is contained in Exhibit A attached hereto and by this reference made a part hereof. All provisions and covenants contained in said exhibit are hereby incorporated by reference and shall become a part of this Contract as fully set forth. Any conflict between this Contract and Exhibit "A" shall be resolved first in favor of this written Contract. Contractor will, in the rendering of its services to City, use its best efforts and due diligence and provide such personnel as are necessary to successfully provide the services covered under this Contract (including Exhibit "A").

This Contract shall supersede any prior representation or contract, written or oral. This Contract shall not be subject to modification or amendment except in writing, executed by both parties.

#### 2. DURATION OF CONTRACT

Unless earlier terminated or extended, this Contract shall remain in force and effect from December 5, 2023, through December 30, 2027.

#### 3. PAYMENT

City agrees to pay, and Contractor agrees to accept, in full payment for the performance of this Contract, according to the fee schedule in Exhibit A attached hereto and by this reference made a part hereof.

#### 4. CONTRACTOR IDENTIFICATION

Contractor shall furnish to City Contractor's employer identification number as designated by the Internal Revenue Service or, if the Internal Revenue Service has designated no employer identification number, Contractor's Social Security number.

#### 5. CHANGES

This Contract and any substantive changes to the scope of work or changes to the Contract costs will not be effective until approved in writing by the City. Failure of Contractor to secure authorization for extra work shall constitute a waiver of all right to adjustment in the Contract price or Contract time due to such unauthorized extra work, and Contractor thereafter shall be entitled to no compensation whatsoever for the performance of such unauthorized extra work.

#### 6. INDEPENDENT CONTRACTOR STATUS

Contractor agrees and certifies that:

- A. Contractor is engaged as an independent contractor and will be responsible for any federal or state taxes applicable to payment under this Contract;
- B. Contractor will not, on account of any payments made under this Contract, be eligible for any benefit from federal social security, workers' compensation, unemployment insurance, or the Public Employee's Retirement System, except as a self-employed individual;
- C. Contractor is not currently an employee of the federal government or the state of Oregon;
- D. Contractor is not a contributing member of the Public Employees' Retirement System;
- E. Contractor certifies it meets the specific Independent Contractor Standards of ORS 670.600;
- F. Contractor is not an "officer, employee or agent" of City as those terms are used in ORS 30.265.

#### 7. SUBCONTRACTS AND ASSIGNMENT; SUCCESSORS IN INTEREST

Both City and Contractor bind themselves and any partner, successor, executor, administrator, or assign to this Contract. Contractor shall not enter into any subcontracts for any of the work required by this Contract, excepting those portions of the work specifically described in Exhibit A or assign or transfer any of its interest in this Contract without the prior written consent of City. The provisions of this Contract shall be binding upon and shall inure to the benefit of the parties hereto, and their respective successors and assigns, if any.

## 8. PROJECT INFORMATION

Contractor agrees to share all project information, to fully cooperate with all corporations, firms, contractors, governmental entities, and persons involved in or associated with the project. No information, news, or press releases related to the project shall be made to representatives of newspapers, magazines, television and radio stations, or any other news medium without the prior written authorization of City.

## 9. DUTY TO INFORM

Contractor shall give prompt written notice to City if, at any time during the performance of this Contract, Contractor becomes aware of actual or potential problems, faults or defects in the project, any nonconformity with the Contract, or with any federal, state, or local law, rule or regulation, or has any objection to any decision or order made by City. Any delay or failure on the part of City to provide a written response to Contractor shall constitute neither agreement with nor acquiescence in Contractor's statement or claim and shall not constitute a waiver of any of City's rights.

## 10. PAYMENT OF LABORERS

- A. Contractor shall, pursuant to ORS 279B.220:
- (1) Make payment promptly, as due, to all persons supplying to Contractor labor or material for the prosecution of the work provided for in this Contract;
  - (2) As applicable, pay all contributions or amounts due the Industrial Accident Fund incurred in the performance of this Contract;
  - (3) Not permit any lien or claim to be filed or prosecuted against City on account of any labor or material furnished; and
  - (4) Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.
- B. If Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to it by any person in connection with this Contract as such claim becomes due, City may pay such claim to the person furnishing the labor or services and charge the amount of the payment against funds due or to become due to Contractor by reason of such Contract.
- C. The payment of a claim in this manner shall not relieve Contractor or Contractor's surety from obligation with respect to any unpaid claims.

## **11. PAYMENT FOR MEDICAL CARE AND PROVIDING WORKERS' COMPENSATION**

Pursuant to ORS 279B.230, Contractor shall promptly, as due, make payment to any person, co-partnership, association or corporation furnishing medical, surgical and hospital care or other needed care and attention, incident to sickness or injury, to the employees of Contractor, of all sums which Contractor agrees to pay for such services and all moneys and sums which Contractor collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such service.

Contractor, its subcontractors, if any, and all employers working under this Contract are subject employers under the Oregon Workers' Compensation Law and shall comply with ORS 656.017, which requires them to provide workers' compensation coverage for all their subject workers. Contractor warrants that all persons engaged in contract work and subject to the Oregon Workers' Compensation law are covered by a workers' compensation plan or insurance policy that fully complies with Oregon law. Contractor shall indemnify City for any liability incurred by City as a result of Contractor's breach of the warranty under this paragraph.

## **12. OVERTIME AND HOLIDAYS**

Persons employed by Contractor under this Contract shall receive at least time and a half pay for work performed on the following legal holidays:

- A. New Year's Day on January 1
- B. Memorial Day on the last Monday in May
- C. Independence Day on July 4
- D. Labor Day on the first Monday in September
- E. Thanksgiving Day on the fourth Thursday in November
- F. Christmas Day on December 25

and for all overtime worked in excess of forty [40] hours in any one week, except for individuals who are excluded under ORS 653.101 to 653.261 or under 29 U.S.C., Sections 201 to 209, from receiving overtime.

## **13. ERRORS**

Contractor shall perform such additional work as may be necessary to correct errors or failures to meet the standard of work required under this Contract without undue delays and without additional cost to City.

## **14. DEFAULT**

City, by written notice of default (including breach of contract) to Contractor, may terminate the whole or any part of the Contract:

A. If Contractor fails to provide services called for by this Contract within the time or in the manner specified herein, or any extension thereof; or

B. If Contractor fails to perform any of the other provisions of this Contract, or so fails to pursue the work as to endanger performance of this Contract in accordance with its terms, and after receipt of written notice from City, fails to correct such failures within ten [10] days or such longer period as City may authorize.

Pending a decision to terminate all or part of this Contract, City unilaterally may order Contractor to suspend all or part of the services under this Contract. If City terminates all or part of the Contract pursuant to this paragraph, Contractor shall be entitled to compensation only for services rendered prior to the date of termination, but not for any services rendered after City ordered suspension of those services. If City suspends certain services under this Contract and later orders Contractor to resume those services, Contractor shall be entitled to reasonable damages actually incurred, if any, as a result of the suspension.

Upon termination, City will pay Contractor for only the value to City of work actually performed, may obtain substitute services in a reasonable manner, and may recover from Contractor the amount by which the price for those substitute services exceeds the price for the same services under this Contract. To recover amounts due under this paragraph, City may withhold from any amounts owed by City to Contractor, including but not limited to, amounts owed under this or any other Contract between Contractor and City. The rights and remedies of City provided in the above clause related to defaults (including breach of contracts) by Contractor shall not be exclusive, and are in addition to any other rights and remedies provided by law or under this Contract.

## **15. TERMINATION FOR CONVENIENCE**

City may terminate all or part of this Contract at any time for its own convenience by written notice to Contractor. Upon termination under this paragraph, Contractor shall be entitled to compensation for all services rendered prior to actual notice of the termination or the receipt of City's written notice of termination, whichever is earlier, plus Contractor's reasonable costs actually incurred in closing out the Contract.

## **16. OWNERSHIP OF WORK**

The interest in any intellectual property, including but not limited to copyrights and patents of any type, arising from the performance of this Contract, and all work products of Contractor, including background data, documentation and staff work that is preliminary to final reports, which result from this Contract, shall become the exclusive property of City upon payment of the compensation due to Contractor under this Contract, including as set forth in Section 15. Contractor shall execute any assignment or other documents necessary to affect this paragraph. Contractor may retain a nonexclusive right to use any intellectual property that is subject to this paragraph. Contractor shall transfer to City any data or other tangible property generated by Contractor under this Agreement and necessary for the beneficial use of intellectual property covered by this paragraph. If this Contract is terminated by either

party or by default, City, in addition to any other rights provided by this Contract, may require Contractor to transfer and deliver such partially completed reports or other documentation that Contractor has specifically developed or specifically acquired for the performance of this Contract.

#### **17. INDEMNITY AND HOLD HARMLESS**

Contractor shall indemnify, defend and hold City, its officers, agents, volunteers, elected officials, and employees, harmless against all liability, loss or expenses, including reasonable attorney's fees, and against all actions or judgments based upon or arising out of damage or injury (including death) to persons or property to the extent caused by Contractor's act, errors or omissions of an act sustained in connection with the performance of this Contract or based upon violation of any statute, ordinance or regulation.

#### **18. INSURANCE**

Contractor shall obtain, prior to the commencement of the Contract, and shall maintain in full force and effect for the term of this Contract, at Contractor's expense, occurrence form commercial general liability and automobile liability insurance for the protection of Contractor and City, its officers, boards, commissions and employees. This policy shall be issued by a company authorized to do business in the state of Oregon, protecting Contractor or anyone directly or indirectly employed by either of them against liability for the loss or damage of personal and bodily injury, death and property damage, and any other losses or damages above mentioned in the combined single limit of \$1,000,000 or the limit of public liability contained in ORS 30.260 to 30.300, whichever is greater. The insurance company shall provide City with an endorsement thereto naming City as an additional insured, providing that no acts on the part of the insured shall affect the coverage afforded to the above policy, and providing City will receive thirty [30] days' written notice of cancellation or material modification of the insurance contract.

Errors and Omissions: Contractor shall maintain during the term of this Contract, Professional Liability Insurance covering damages caused by any errors, omissions or any negligent acts. Combined single limit per occurrence shall not be less than \$1,000,000. Annual aggregate limit shall not be less than \$2,000,000. If such insurance is written on a claims-made basis, the Contractor agrees that such policy shall have an extended reporting or discovery "tail" period, or be renewed for a period of not less than (i) two years from substantial completion of the project or abandonment of for claims that are known or in the exercise of reasonable care should have been known, and (ii) ten years after substantial completion for latent defects. Such policy shall have a retroactive date effective before the commencement of any work by the Contractor.

Workers' Compensation Coverage: Contractor certifies that Contractor has qualified for State of Oregon Workers' Compensation coverage for all Contractor's employees who are subject to Oregon's Workers' Compensation statute, either as a carrier-insured employer as provided by ORS 656.407, or as a self-insured employer. Contractor shall provide to City, within ten (10) days after execution of this Contract by the parties, a certificate of insurance evidencing coverage of all subject workers under Oregon's Workers' Compensation statutes insured by an insurance company satisfactory to City, if any. The certificate and policy shall indicate that the policy shall not be terminated by the insurance carrier without thirty (30) days' advance written notice to City. A copy of the certificate of self-insurance issued by the State shall be provided to City if the Contractor is self-insured.

Contractor will not perform any work under this Contract until City has received copies of applicable insurance policies or acceptable evidence that appropriate insurance heretofore mentioned is in force.

The coverage provided by insurance required under this Contract shall be primary, and any other insurance carried by City shall be excess.

## **19. STANDARD OF WORK**

Contractor will accomplish the work using a standard of performance and care that is currently accepted by other professionals engaged in similar work in the Portland metropolitan area.

## **20. TERMINATION**

This Contract may be terminated by mutual consent of the parties, or by City at any time by giving written notice to Contractor no later than fifteen [15] days before the termination date. Contractor shall be entitled to compensation for services performed up to the date of termination.

## **21. CONFIDENTIALITY**

No reports, information and/or data given to or prepared or assembled by Contractor under this Contract shall be made available to any individual or organization by Contractor without the prior written approval of City. This section shall not apply to information in whatever form that comes into the public domain, nor shall it restrict the Contractor from giving notices required by law or complying with an order to provide information or data when such order is issued by a court, administrative agency or other authority with proper jurisdiction, or if it is reasonably necessary for the Contractor to defend itself from any suit or claim.

## **22. PUBLICATION RIGHTS / RIGHTS IN DATA**

All publication rights in the product produced by Contractor in connection with the work provided for under this Contract, whether in preliminary draft or final form, shall be vested in City.

Contractor shall not publish any of the results of the work without the prior written permission of City.

All original written material and other documentation, including background data, documentation and staff work that is preliminary to final reports, originated and prepared for City pursuant to this Contract, shall become exclusively the property of City. The ideas, concepts, know-how or techniques relating to data processing development during the course of this Contract by Contractor or City personnel, or jointly by Contractor and City personnel, can be used by either party in any way it may deem appropriate.

Material already in Contractor's possession, independently developed by Contractor outside the scope of this Contract or rightfully obtained by Contractor from third parties, shall belong to Contractor. However, Contractor grants to City a non-exclusive, irrevocable and royalty-free license to use such material as it sees fit.

This Contract shall not preclude Contractor from developing materials which are competitive, irrespective of their similarity to materials which might be delivered to City pursuant to this Contract in developing materials for others, except as provided in this section.

### **23. ACCESS TO RECORDS**

Contractor shall retain all books, documents, papers, and records that are directly pertinent to this Contract for at least three (3) years after City makes final payment on this Contract and all other pending matters are closed. Contractor agrees that City and its authorized representatives shall have access to the books, documents, papers and records of Contractor which are directly pertinent to the specific Contract for the purpose of making audit, examination, excerpts and transcripts for three (3) years following expiration or termination of this Contract.

### **24. ATTORNEY'S FEES**

If a suit or action is filed to enforce any of the terms of this Contract, the substantially prevailing party shall be entitled to recover from the other party, in addition to costs and disbursements provided by statute, any sum which a court, including any appellate court, may adjudge reasonable as attorney's fees.

### **25. COMPLIANCE WITH APPLICABLE LAW**

Contractor shall comply with all federal, state and local laws and ordinances applicable to the work under this Contract, including, without limitation, the applicable provisions of ORS 279A, 279B, 279C, 279.312, 279.314, 279.316, 279.320 and 279.555. Without limiting the generality of the foregoing, Contractor expressly agrees to comply with:

- A. Title VI of the Civil Rights Act of 1964;
- B. Section V of the Rehabilitation Act of 1973;
- C. The Americans with Disabilities Act of 1990 (Pub L No. 101-336), ORS 659.425, and all regulations and administrative rules established pursuant to those laws; and
- D. All other applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations.

### **26. FOREIGN CONTRACTOR**

If Contractor is not domiciled in or registered to do business in the state of Oregon, Contractor shall promptly provide to the Oregon Department of Revenue and the Secretary of State Corporation Division all information required by those agencies relative to this Contract. Contractor shall demonstrate its legal capacity to perform these services in the state of Oregon prior to entering into this Contract.

### **27. GOVERNING LAW; JURISDICTION; VENUE**

This Contract shall be governed and construed in accordance with the laws of the state of Oregon without resort to any jurisdiction's conflict of laws, rules or doctrines. Any claim, action, suit or proceeding (collectively, "the claim") between City (and/or any other agency or department of the state of Oregon) and



Contractor that arises from or relates to this Contract shall be brought and conducted solely and exclusively within the Circuit Court of Clackamas County for the state of Oregon. Provided, however, if the claim must be brought in a federal forum, then it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. Contractor, by the signature below of its authorized representative, hereby consents to the *in personam* jurisdiction of said courts. Any litigation arising under or as a result of this Contract shall be tried in court without a jury.

## **28. MERGER CLAUSE**

This Contract and attached Exhibit constitute the entire agreement between the Parties. No waiver, consent, modification or change of terms of this Contract shall bind either party unless in writing and signed by both parties. Such waiver, consent, modification or change, if made, shall be effective only in the specific instance and for the specific purpose given. There are no understandings, agreements, or representations, oral or written, not specified herein regarding this Contract. Contractor, by signature of its authorized representative, hereby acknowledges that he/she has read this Contract, understands it, and agrees to be bound by its terms and conditions.

## **EXECUTION AND COUNTERPARTS**

This Contract may be executed in several counterparts, each of which shall be an original, all of which shall constitute but one and the same instrument.

**CONTRACTOR**

By:	
Printed Name:	
Title:	
Date:	
Firm Name:	
Address:	
City, State, Zip	
Individual S.S.N or Employer ID#	

Check one:

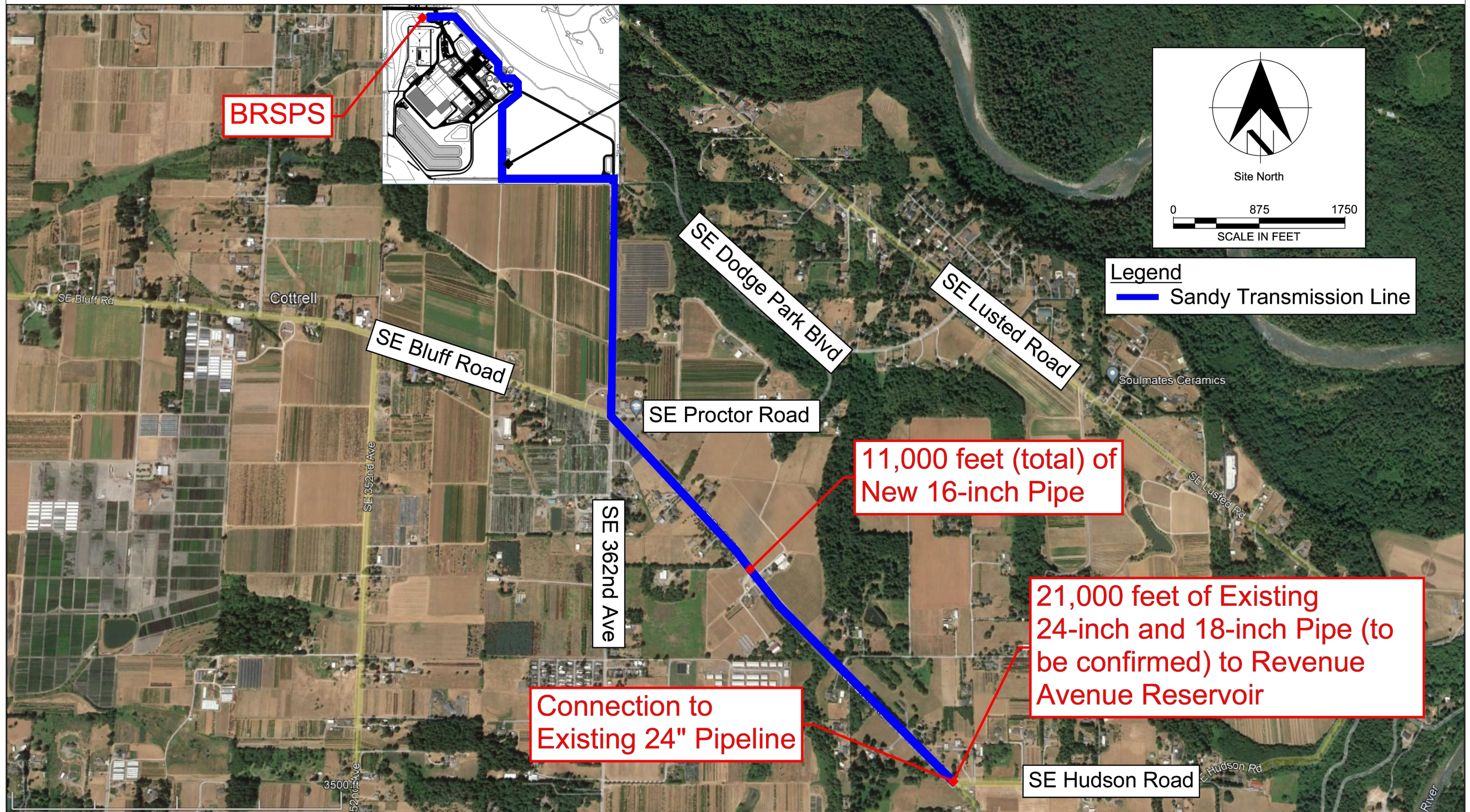
- Sole Proprietor
- Partnership
- Corporation
- Governmental
- Non-Profit

**CITY OF SANDY**

By: \_\_\_\_\_  
Tyler Deems, Interim City Manager

City of Sandy  
39250 Pioneer Blvd.  
Sandy, OR 97055

\_\_\_\_\_, 2023  
Date



Water treatment facility to be built at Revenue Reservoir site



Approximate Alignment of City of Sandy Transmission Main

Figure 3



# STAFF REPORT

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**Meeting Type:** City Council  
**Meeting Date:** December 4, 2023  
**From:** Tyler Deems, City Manager  
**Subject:** HB 2984 – SDC Charges for Commercial to Residential Use Conversions

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## DECISION TO BE MADE:

Whether or not to charge system development charges (SDCs) for conversions of buildings from commercial to residential uses.

## BACKGROUND / CONTEXT:

[House Bill \(HB\) 2984](#) was passed in early 2023 and will become effective January 1, 2024. HB 2984 amended [ORS 197.308](#) to allow the conversion of buildings from commercial to residential uses within the urban growth boundary of cities with a population greater than 10,000. Section 1(5)(c) of HB 2984 allows for cities to charge SDCs in connection with a commercial to residential use conversion under the following circumstances:

- a. The charge is calculated pursuant to a specific adopted policy for commercial to residential conversions adopted on or before December 31, 2023, or
- b. The charge is for water or wastewater and includes an offset for at least 100 percent of the water or wastewater system development charges paid when the building was originally constructed.

[Sandy Municipal Code 15.28.120](#) currently authorizes the City to charge SDCs in situations such as these, but in order to ensure compliance with HB 2984, staff felt it important to adopt a formal resolution prior to the December 31, 2023 deadline.

In an effort to ensure that development pays its fair share towards infrastructure, and in keeping with feedback from the Council to respond to changes in state law to preserve as much home rule authority for Sandy as possible, staff is recommending the adoption of the attached resolution prior to December 31, 2023, in accordance Section 1(5)(c), as noted above. By adopting the attached resolution, SDCs will be charged when commercial buildings are converted to residential uses.

## KEY CONSIDERATIONS / ANALYSIS:

Adopting Resolution 2023-35 will allow the City to charge and collect SDCs when buildings are converted from commercial to residential uses. Failure to adopt Resolution 2023-35 prior to December 31, 2023 could result in the City being unable to charge and collect SDCs when buildings are converted from commercial to residential uses.

**BUDGET IMPACT:**

Unknown. It is safe to assume that, if a commercial building is converted to residential, the adoption of this resolution would ensure the collection of additional SDC revenue for the applicable utility funds.

**RECOMMENDATION:**

Staff recommends adopting Resolution 2023-35.

**SUGGESTED MOTION LANGUAGE:**

“I move to adopt Resolution 2023-35, a Resolution Adopting System Development Charge Calculations in Connection with Commercial to Residential Conversations, as Required by House Bill 2984.”

**LIST OF ATTACHMENTS / EXHIBITS:**

- Resolution 2023-35



RESOLUTION NO. 2023-35

**A RESOLUTION ADOPTING SYSTEM DEVELOPMENT CHARGE CALCULATIONS IN CONNECTION WITH COMMERCIAL TO RESIDENTIAL CONVERSIONS AS REQUIRED BY HOUSE BILL 2984**

**WHEREAS**, House Bill 2984 (“HB 2984”) amended ORS 197.308 to allow the conversion of buildings from commercial to residential use within urban growth boundaries of cities with a population of 10,000 or greater, under certain conditions; and

**WHEREAS**, HB 2984, Section 1(5)(c) permits cities to charge system development charges (“SDCs”) in connection with a commercial to residential use conversion for a contemplated housing development if “(A) the charge is calculated pursuant to a specific adopted policy for commercial to residential conversions adopted on or before December 31, 2023; or (B) the charge is for water or wastewater and includes an offset for at least 100 percent of the water or wastewater system development charges paid when the building was originally constructed”; and

**WHEREAS**, Sandy Municipal Code (“SMC”) 15.28.120(D) sufficiently addresses the foregoing, but the City Manager has determined it is prudent to adopt a separate, specific policy directly responding to HB 2984.

**NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SANDY:**

**Section 1:** SMC 15.28.120(D), as currently in effect and as may be amended from time to time, is hereby adopted as the City’s specific policy for SDC calculations in connection with commercial to residential conversions pursuant to HB 2984.

This resolution is adopted by the City Council of the City of Sandy this 4 day of December, 2023.

\_\_\_\_\_  
Stan Pulliam, Mayor

ATTEST:

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Jeffrey Aprati, City Recorder