



CITY OF OREGON CITY PLANNING COMMISSION AGENDA

**Commission Chambers, Libke Public Safety Facility, 1234 Linn Ave, Oregon City
Monday, April 14, 2025 at 6:00 PM**

Ways to participate in this public meeting:

- *Attend in person, location listed above. Please see the public comment guidelines below.*
- *Attend the livestream of the meeting on the City's YouTube Channel:*

<https://www.youtube.com/user/CityofOregonCity>

- *Register to provide electronic testimony (email ocplanning@orc.org or call 503-722-3789 by 3:00 PM on the day of the meeting to register)*
- *Email ocplanning@orc.org (deadline to submit written testimony via email is 3:00 PM on the day of the meeting)*
- *Mail to City of Oregon City, Attn: City Recorder, P.O. Box 3040, Oregon City, OR 97045*

1. CONVENE MEETING AND ROLL CALL

2. PRESENTATIONS

- a. Thimble Creek Market Assessment and Development Scenarios – Update and Next Steps

3. COMMUNICATIONS

4. ADJOURNMENT

PUBLIC COMMENT GUIDELINES

Complete a Comment Card prior to the meeting and submit it to the clerk. When the Chair calls your name, proceed to the speaker table, and state your name and city of residence. Each speaker is given 3 minutes to speak. As a general practice, the committee does not engage in discussion with those making comments. Complaints shall be addressed at the department level prior to addressing the committee.

ADA NOTICE

The location is ADA accessible. Hearing devices may be requested from the City Recorder prior to the meeting. Individuals requiring other assistance must make their request known 48 hours preceding the meeting by contacting the City Recorder's Office at 503-657-0891.

Agenda Posted at City Hall, Pioneer Community Center, Library, City Website.

Video Streaming & Broadcasts: The meeting is streamed live on the [Oregon City's website](https://www.cityoforegoncity.org) and available on demand following the meeting. The meeting can be viewed on Willamette Falls Television channel 28 for Oregon City area residents as a rebroadcast. Please contact WFMC at 503-650-0275 for a programming schedule.



CITY OF OREGON CITY

625 Center Street
Oregon City, OR 97045
503-657-0891

Staff Report

To:	Planning Commission	Agenda Date:	April 14, 2025
From:	Ann Griffin, Economic Development Coordinator Christina Robertson-Gardiner, Senior Planner		

SUBJECT:

Thimble Creek Market Assessment and Development Scenarios – Update and Next Steps

STAFF RECOMMENDATION:

No action is required. Staff will provide a project update and can forward any feedback to the Commission champions.

Future implementation measures could involve targeted development code revisions, which will be brought back to the Planning Commission for review and eventual adoption through the Legislative process.

EXECUTIVE SUMMARY:

Oregon City was awarded a Metro Planning and Development grant to further examine the barriers to industrial development in areas both in the Thimble Creek Concept Plan area and adjacent land west of Beavercreek Road. This project is a joint effort between Community Development, Economic Development, and Public Works to further examine the obstacles to industrial development in this area and identify potential strategies to realizing the development of employment lands.

BACKGROUND:

The Thimble Creek Concept Plan was first adopted in 2008 and updated in 2020 to provide clear and objective standards for housing. The goal of the concept plan was to create a complete and sustainable community that includes housing, retail, and a mixture of employment uses in roughly 450 acres. Although we have witnessed residential and institutional development in the Concept Plan area, potential industrial and other commercial projects that could support employment goals have not been realized. This project is intended to complete a market assessment and industrial readiness study for the employment focused subareas.

In March 2024, the City of Oregon City issued a Request for Proposals to conduct a market assessment and outline potential development scenarios that would ultimately result in new private sector investment and family-wage jobs in the Thimble Creek concept plan area. The City hired the team of Johnson Economics and Harper Hough Peterson and Righellis to complete the work. The funds to hire this consultant team were secured through a grant from the Metro regional government.

Together, city staff and the Johnson Economics team have conducted stakeholder engagement, completed an existing condition report and market analysis, conducted a code and process review, and finally completed a market assessment and recommendations for implementation.

Stakeholder Engagement

The consultant team interviewed city staff from Planning, Public Works, and Economic Development. Stakeholder interviews included property owners in the area, an industrial land broker, and the city's transportation consultant from DKS. The themes that emerged from these interviews include transportation and utility challenges, zoning impediments to marketability, development constraints like restrictive allowed uses and high parcelization.

Existing Conditions

The existing condition report looked at available buildable lands in 60 separate tax lots with 42 distinct owners. Those lands are constrained by powerline easements and environmental constraints. Transportation forecasts indicate the current roadway and intersection capacity is insufficient to handle the influx of vehicles of future growth. Water and sewer services are currently fragmented by service providers either the City or Clackamas River Water. Environmental constraints were studied including creeks, floodways, wetlands, and steep slopes.

A market analysis indicates that employment growth has been healthy and strong among industrial-space users on the local, regional, and state level over the past decade. Industrial space in the Portland-Salem region has seen demand outpace new production over the last decade.

Code and Process Review

This review found constraints for industrial development in the current zoning code. Such as strict outdoor storage limitations, sustainability requirements and associated costs, road network and freight movement, buffer zone and height restrictions, and limited flexibility in conditional uses.

The recommendations included clarifying conditional use requirements for industrial activities, allowing more flexible landscaping standards, reducing buffer zone requirements for non-residential adjacencies and providing flexible parking standards. Additional recommendations include streamlining approval for low-impact industrial developments and ensuring future code language is clear and objective.

Market Assessment and Recommendations for Implementation

The Thimble Creek Market Assessment report emphasizes the importance of employment-ready land to a community's prosperity. It provides the City of Oregon City with a critical roadmap to a more economically secure future, with increased investment in our community and the creation of family-wage jobs.

This report identifies why employment is important to a city, such as more jobs for local residents, greater opportunity for sustainable wage jobs, and helping to reduce lengthy commutes for local residents. Employment land can improve the tax base and fiscal health which improves city services for residents and businesses.

Policy considerations for the Commission to consider include financing public infrastructure, reviewing allowed uses and code standards, and providing development incentives.

Next Steps:

It is important that the Thimble Creek Concept Plan fulfill, as closely as possible, its intended vision, that is to establish greater sharing of housing and employment opportunities with adjoining cities thereby creating an interconnected metro area. For its part, Oregon City needs to strive for more local diversification in jobs, housing and commerce that would allow more local residents to live and work in Oregon City.

At the March 5, 2025, City Commission meeting- the City Commission supported :

1. Adopting via resolution the Thimble Creek Industrial Land Readiness Strategic Plan at a future Stping 2025 City Commission Meeting
2. Appointing two fellow City Commissioners (Mayor McGriff, Commission Mitchell) to serve as “Commission Champions” to do the following:
 - a. enhance communication with the full City Commission on the Champions’ progress with becoming more acquainted with challenges impeding the Thimble Creek Concept Plan from fulling its intended mission.
 - b. work alongside staff in developing strategies to help mitigate the various obstacles impacting the successful implementation of the plan.
 - c. engage, along with staff, other institutional property owners and individual property owners of larger tracts of land on property disposition.
 - d. work with staff to draft policy options, identify funding sources, and explore the potential of establishing public/partnerships to mitigate challenges impacting the plan; and
 - e. provide recommendations to the full City Commission on further action steps.

NEXT STEPS:

OPTIONS:

MEMORANDUM

Thimble Creek Market Assessment and Development Scenarios



Date: October 17, 2024
To: Ann Griffin
Economic Development Coordinator
City of Oregon City
From: Brendan Buckley, Johnson Economics
Thuy Cao, HHPR
Subject: Task 1 - Stakeholder Outreach Summary

Stakeholder Engagement Summary

Introduction

This memo provides a summary of stakeholder engagement activities conducted as the first task of the Thimble Creek Market Assessment project. The outreach was conducted by the project consultant team and by City staff. The members of the consulting team participating in outreach were:

- Brendan Buckley – Johnson Economics
- Thuy Cao – Harper Houf Peterson Righellis (HHPR)

This overview provided here is followed by notes from the engagement meetings (attached). The engagement activities were conducted in August and September of 2024 and included the following contacts:

Oregon City Staff

- Christina Robertson-Gardner – Senior Planning
- Josh Wheeler – City Engineer
- Danya Webb – Public Works Director
- Pete Walter – Planning Manager
- John Lewis – Director of Public Works (former)
- Ann Griffin – Economic Development Coordinator
- James Graham – Economic Development Manager

DKS Associates, Transportation Contractors

- Reah Flisakowski, Senior Project Manager, DKS Associates
- Josh Wheeler – City Engineer

Property Owners

Industrial Land Real Estate Broker

Themes in Stakeholder Input

In discussing the Thimble Creek area and experience of individual property owners and City staff, some following themes were identified. An overview is provided here, and additional detail is included in the attached meeting summaries. These themes will be further detailed in Task 2 of this project.

1. Transportation

- Providing transportation infrastructure to the Concept Plan area while mitigating traffic impacts may be one of the greater challenges in this area. Beaver Creek Road is currently a Clackamas County facility and the intersection with State Highway 213 already faces some strain at peak PM hours, though currently allowed under an alternative mobility process that approved additional capacity projects such as a new northbound slip lane on 213 Northbound. Any deviation of the major street network on these roads and intersections will include County and ODOT input. Traffic modeling of the eventual build-out of the study area has been included in the city's transportation system plan (TSP) and is already incorporated in the Metro growth estimates for employment in the area's Travel Analysis Zone (TAZ), a central component of the regional transportation model. Clackamas County ownership and design control of Beaver Creek Road also creates a fair amount of complexity in development coordination between the city and potential developers.
- Mitigation of traffic impacts from future growth will rely on a future street pattern in the Concept Plan area that will help divert some traffic, including providing an access road parallel to Beaver Creek Rd. and a new access road from the north of the study area. The alignment of these roads as planned will likely cause further parcelization of tax lots in the area if individual tax lots are proposed for development rather than a lot consolidation approach. At this point, the exact alignment would be determined by individual developments in the area building segments of these roads.

2. Utilities

- Public utility capacity (water/sewer/storm) are not expected to be a major barrier to build out of the study area with employment uses. Utilities with sufficient capacity are located in the immediate area, and the future build out of this area is reflected in master plans. Parts of the area are served by the Clackamas River Water district, which the City would seek to add to the City water system as annexation and development occur.
- Private utility capacity (power/natural gas/telecom) are similarly not expected to be a major barrier to build out. This infrastructure is located in the immediate area with capacity to serve the study area. Private utility providers are Portland General Electric, NW Natural Gas, and multiple telecom services offering broadband data connections.
- The presence of multiple wide powerline easements through the study area is a complication that may further limit developable parcel sizes and development patterns. The use of land

under these easements is increasingly restricted and they may dictate the alignment of roads passing beneath them as well.

3. Property Owners

- The owners contacted are interested in selling and generally express a frustration with lack of progress in the build out of the Campus Industrial (CI) employment area envisioned in the Concept Plan. Many would like to sell their properties, but the small size of some of their holdings and continued access challenges make it difficult to attract buyers.
- Owners have been approached by investors about selling their properties, but the perception is that these offers are priced very low, and these buyers are not end users. Owners are interested in finding end users to purchase their land.
- There is a perception that the CI zoning is an impediment to development in the area and property owners being able to sell their properties. Owners feel like amending the zoning would be beneficial but have difficulty articulating what changes they would like to see. Some believe that residential zoning would be best but understand that this area is not planned for that.
- Some property owners are expectant that this project will bring some sort of quick resolution in the new year and perhaps even bring a developer to the table. Expectations may need to be tempered somewhat. However, if a path forward is not identified, multiple owners expressed that they would likely seek to sell quickly to whatever buyer is available.

4. Development Constraints

- In recent years, the most common industrial development type has been warehouse/logistics/distribution uses based on market demand. These uses are restricted in the study area. Other types of industrial users, such as high-tech manufacturers, are rarer and infrequent recruitments. This is one factor that has made buildout of the area a slow proposition.
- Parcelization of the area will remain a challenge. The future street plan will complicate this issue, in particular the planned access road parallel to Beavercreek Rd. This road will not follow tax lot lines and further divide parcels into smaller and irregular parcels. The powerline easements further exacerbate this problem by cutting across taxlots and creating broad corridors of unbuildable space.
- For these reasons, and fractured ownership, assembling large development parcels may remain a challenge.
- The cost of extending infrastructure into the area to development sites will remain a major challenge. Industrial zoning and development tends to command a lower land value relative to many commercial and residential uses. The cost of private infrastructure build-out and traffic mitigation for relatively small industrial developments will make many projects infeasible. It may be necessary for the public to help mitigate the costs of infrastructure build out to ready this employment area for development.

Oregon City -Thimble Creek Market Assessment Stakeholder Outreach Summary

Outreach

Comprehensive Meeting with Oregon City Staff

8/7/2024

Attendance

- Christina Robertson-Gardner – Senior Planning
- Josh Wheeler – City Engineer
- Danya Webb – Public Works Director
- Pete Walter – Planning Manager
- John Lewis – Director of Public Works (former)
- Ann Griffin – Economic Development Coordinator
- James Graham – Economic Development Manager
- Brendan Buckley – Johnson Economics
- Thuy Cao – Harper Houf Peterson Righellis (HHPR)

Contact

Ann Griffin, City of Oregon City

503-974-5517

agriffin@orc.org

Summary

The project Consultant Team and City's project manager met with a group of City Staff from the Public Works and Community Development department for a comprehensive discussion of the history of the study area, with focus on conditions that have prevented the development of the area as envisioned in the Thimble Creek Concept Plan. Staff provided information on factors including transportation, utilities, zoning, and market factors.

Meeting Notes

- Project management team reviewed the project and goals for the meeting.
- There is a history of studies in the area including original planning for the Concept Area, on-going traffic impact studies, recent infrastructure studies, and third-person site planning of parcels west of S. Beavercreek Road.

Transportation/Traffic

- Beavercreek Road is under the jurisdiction of Clackamas County, and county standards apply. The facility is planned for five lanes between Highway 213 to Meyers Rd., and three lanes south of Meyers Rd.

- There are four signalized intersections on Beavercreek Rd. through the study area. These signals are existing signals at Clairmont Dr. and Meyers Rd., and future signals at Loder Rd. and Glen Oak Rd. There may be additional unsignalized access points.
- City would like to explore control of Beavercreek Rd. in order to do own cross sections and apply own standards.
- The Concept Plan includes a new road network through the industrial area, including new local roads and access roads. The exact alignment of these roads is undecided and may depend on sequence of development of the area parcels.
- A parallel road to Beavercreek Rd. is planned that will serve as an access road due to limited access points to and from the highway. This parallel road will likely not follow parcel lines, and create irregular parcels and necessitate land assembly to create large sites. The parallel access road is also assumed to relieve some traffic congestion on the highway.
- The potential rerouting of Loder Rd. which exists to the east of Beavercreek Rd. with a possible extension on the west side and connection to High School Ave. creates difficult alignment problems and will likely conflict with powerline easements in the area.
- An extension of Loder Rd. west of Beavercreek is likely to carve up the parcels in the area, and along with the powerline easement, limit developability. Also, this extension might have limited utility. Loder Road is also a county road.
- Property owners may also be resistant to facilitating the Loder realignment to intersect with Beavercreek Rd. at a right angle. This realignment might leave “orphaned” portions of parcel or parcels on the east side of the highway. Part of Loder Rd. to the east will remain a county road.
- A new intergovernmental agreement with the County on roads in the study area may be advisable.
- Beavercreek Rd. is currently over capacity at certain times of day, and the intersection with 213 is stressed, with backups at certain times of the day. Studies estimate that the additional traffic from build out of the study area with employment and residential uses will be manageable if the new road network is built.
- Besides the parallel access road, a future road (Holly Land Rd.) that exits the study area to the north and connects to Maplelane Rd. will be necessary to mitigate traffic impacts. The eventual alignment of this road is currently unknown. Eminent domain can be used but must get closer to the need and must offer fair market value. This extension would also include acquiring right of way (ROW) in unincorporated county land.
- Currently any individual developments would create segments of the future road system and thus dictate to future developers the alignment. This would be piecemeal approach giving advantage to first movers.
- The intersection of Beavercreek with 213 NW of the study area will be a sticking point. These are highways out of City jurisdiction and ODOT dictates limits on this intersection. The intersection is already stressed, failing at PM peak hours. A traffic study will be required for any new development. If this intersection doesn’t work, a full-flow interchange would be required which would likely be prohibitively expensive.

- Solutions have been identified for AM peak traffic which includes commuters from south of the Metro area traveling into Metro area. Forecasted PM peak traffic is still an unresolved issue that will require new developers to pay into future improvements. There is CIP funding planned for some of these improvements.
- The City needs collaboration with the County. The County is reticent to make moves. There should be more collaboration on TSPs, and future planning. The City is trying to identify sticking points before they become crises.
- The City may want to spend money to take a fresh look at the traffic numbers in the study area, not just rely on developments that look at their specific trip generation. DKS is currently conducting traffic studies in the area, near the highway intersection and Maplelane Rd. A broader future transportation study may be necessary to be successful in this area. Could lane redesign/different cross-sections through the study area help alleviate some congestion?
- Currently the Metro model of build-out by TAZ zone provides the underlying assumptions of future employment in the Thimble Creek area. The 2023 RTP is the latest version.

Utilities (Water, Sewer, Power)

- In general, utilities are not expected to be a major deterrent for new development. Sufficient water, sewer, electricity, and communications are available to the study area.
 - *SEWER*
 - Claremont Drive down to Old Acres Lane, extended a sanitary sewer down to mid-road and then new development further extended sanitary sewer, and then golf course will extend the rest of the sanitary sewer down to the City Limits
 - Permits for the sewer extension will come in the next couple of months
 - If the golf course doesn't move forward, then they will not be extended the sewer
 - Sewer is planned to be at capacity to handle industrial use (sized appropriately)
 - There are other sewers stubbed out, many opportunities for sewer
 - Developers will just have to extend their main lines and connections
 - *WATER*
 - Water is more of a challenge. Some of the area has City water service but some properties are served by Clackamas River Water (CRW). The City's goal is to serve all properties within the city limits.
 - Lower capacity from CRW will be challenge to development until the City can assume service. Currently, there is some concern over demand during the hot season.
 - The City has complete Water Master Plan for the area.
 - The built-out water and sanitary network will follow the road network

Land Use (Zoning, Development Standards)

- In 2002, the study area was brought into the UGB and it was extended to include the golf course. The Concept Plan area is intended to be an integrated community of residential and employment uses.
- In 2019 clear and objective standards were adopted for residential and industrial use. The code needed to enable the Metro employment and housing targets.
- Non-industrial uses are limited in the area, including office and warehousing, with an emphasis on manufacturing users.
- There has been a lot of focus on the Thimble Creek area and the Campus Industrial (CI) zone. City needs to identify if anything in the code is putting barriers up to development.
- Green requirements may be creating an issue, and the code requirements on sustainability features should be reviewed.
- Rather than removing sections, potential ways to revise code while maintaining the spirit will be more palatable. Need to identify non-starters for developers.
- There used to be much more flexibility about what could be put under electric lines but now BPA has gotten much more strict. Perpendicular vehicle crossing is required under lines. Parking lots are becoming an issue because of a clearance height. Stormwater management tends to be allowed. PGE restrictions are somewhat less strict.
- Site design and review (in terms of time and process) are not seen as a major impediment to campus industrial projects. Type II process can get a developer through review if there is a real barrier and no other alternatives.
- The future road network is seen as a major issue. Future streets do not follow tax lot lines and will create irregular remnant parcels.
- Staff judges parking min/max requirements to be pretty standard for industrial. The City is working with DLCD to implement Climate Friendly Equitable Communities (CFEC) requirements by 2025, but they shouldn't impact Thimble Creek area.
- Thimble Creek does have an outdoor storage limit of 25%. Should it go back to 50%? Will it impact some types of companies such as construction companies with high equipment storage needs?

Economic and Market Considerations

- Property owners are interested in selling. Next generation is inheriting property from long-time owners and interested in selling. Property owners have a perception that the City has prevented them from selling due to zoning and other requirements that make property unmarketable.
- Developers have complained that the City is trying to “overplan” and not letting buyers and sellers determine the best uses for property. The study area is an untested market with fringe location and should be more flexible on things like warehousing. Developer opinion that this is a tough location for high-tech industry or manufacturing.

- There is fractured ownership in the area with few large parcels. Land assembly would be required to create large parcels. Developers would have to be involved in assembly.
- Developers do not recognize all of the potential obstacles, such as traffic.
- Market-driven infrastructure has very high costs and is likely to make projects infeasible. Other industrial areas, such as in Tualatin, have used tools like tax increment financing to fund infrastructure improvements and ready the area for development. If TIF is not viable locally, the City needs to be clear eyed about what they are giving up.
- Potential City pursuits include extending roads/water/sewer, acquiring ROW, and potentially land assembly.
- The reason why this area is getting more attention now is because the whole Metro area is running out of industrial areas for development.
- Property owners want to know what the City is doing. There is still confusion over the Concept Plan and zoning and what is allowed or disallowed.
- Owners feel the City is responsible for lack of movement on employment lands and needs to fix it. There is the perception that employment lands are harder to sell and capitalize on than residentially zoned areas.
- There is a perception that in the past, investors or developers have given owners estimates of value that may be unrealistic. Also there is some history among owners that may create conflict to coordinated action.

MEMORANDUM

Thimble Creek Industrial Readiness Study



**Harper
Houf Peterson
Righellis Inc.**

ENGINEERS ♦ PLANNERS
LANDSCAPE ARCHITECTS ♦ SURVEYORS

205 SE Spokane Street, Suite 200, Portland, OR 97202
PHONE: 503.221.1131 www.hhpr.com FAX: 503.221.1171

Date: September 27, 2024

To: Brendan Buckley, Johnson Economics

From: Thuy Cao, HHPR

Subject: DKS Expert Interview Notes

General Questions

1. Can you provide any significant traffic concerns for the Thimble Creek area plan that we should be aware of?
2. Are there specific traffic issues that will impact development or that developers will need to consider or mitigate?

Meeting Notes

- City's adopted TSP has completed the long-range work assuming that the area is built out based on the designated zones, these assumptions in place should help provide more information
 - Issues and projects are already identified within the TSP
 - Developers would just need to pay the SDCs
- There are pretty robust infrastructure costs, a bulk of construction costs will be street frontage
- AM and PM peaks both break, look at ITE and different potential users
- Metro model has been updated several times since the TZE assumptions
- Look at zoning, MUC2 and Industrial (subsections under the underlying zone)
 - i.e. warehousing is only 50% above, etc.
- Jobs assumption with Metro (City Council does not want trips they want jobs)
- This study will help determine if they need code changes
- No parks requirements only in residential area
- HHPR can figure out costs for transportation, high level trip estimate and figure out SDCs
 - Proportionate share for 213 and Beaver Creek
- Ask the City for the 2022-11-29, Loder Rd Alt Analysis
 - This report is for guidance only, going through property 34
 - Not necessary to connect Loder Rd to High School based on traffic related issues
 - Small industrial business area and joint common driveway
 - Not an actual roadway

- Christina feels that so many of the constraints are the parallel alignments through individual lots
 - Up end their trip distribution analysis, this is a big issue
 - Felt like they are left with the street configuration they have without any engagement with other organizations
 - Connectivity and connector choices should not affect 213 and Beavercreek as long as they always have Thayer Road as a future connection
 - Alternative mobility standards would stay
 - Concerned ODOT, Oregon City is allowed to make their own local decisions
- All the parcelization and the diagonal road that isn't following any tax lots is going to be extremely challenging
- Is it helpful for the City to spend money on local street networks OR just wait for applicants to come in?
- When a developer comes in, they are required to show circulation (shadow plat)
 - They are only required to show how they connect to neighbors
 - Some City's require developers to look at overall connections
- Assumptions are still part of this plan, that connections up to Thayer Road will make this area work (Reah said that it will help a little bit, 213 and Beavercreek will still have issues)
- Concept Plan and TSP are still preferred development as long as the zones are developed as assumed (freight for industrial uses are handled by these designations)

Oregon City -Thimble Creek Market Assessment Stakeholder Outreach Summary

Outreach

Thimble Creek Area - Property Owners

8/10/2024 – 9/20/2024

Participants

- Multiple study area property owners
- Brendan Buckley – Johnson Economics

Summary

The Consultant held phone conversations with multiple property owners in the study area to discuss their experience and perceptions in trying to sell their land in the study area. Owners expressed some frustration and uncertainty with how to proceed. All the properties under discussion have Campus Industrial zoning. City staff had previously contacted these owners to discuss these matters and inform them that the consultant would be contacting them.

The summary of comments from these property owners are comingled below in order to give some anonymity to the respondents. Many of the comments were voiced by multiple property owners.

Meeting Notes

- All of these owners are actively interested in selling their properties. At this stage, none of them has contacted a broker to advise and help sell their properties.
- Owners have been approached by investors and realtors about their properties, but not any developers with specific plans. The perception is that people want to broker or flip the properties but are not end users, and this is who they would like to hear from.
- There is the perception that investors and cash buyers are making very low offers. Some owners or family members with influence believe that offers are too low and that sellers can get a higher price. Some of these buyers may be looking to flip the home for continue residential use.
- The City needs to have more incentives for developers and do more to attract them to the area.
- The City has a reputation for being slow to work with. It used to be easier to work with the City, but there are more rules and things take a long time. Staff often times do not have ready answers and do not get back to them. This is the individual experience of owners and have also heard from others.
- Owner doesn't really agree with the Campus Industrial zoning. They believe that the zone should have more flexibility and open it up to more types of users. They appreciate that the

City would like more tax base and high-end employment, but this makes it difficult on the sellers because it is a waiting game. If residential zoning is not appropriate, maybe something else would be: warehousing, retail, wholesale, more commercial options.

- There is the impression that the City has the ability to veto any proposal on a property.
- The location and access aren't great for an employment center. It is not an easy place to get to. Owners had trouble envisioning the study area as an employment center.
- Realtors have stated that it could take a couple of years to sell the property. Some of these owners have neighbors that could be interested in selling at the same time, allowing for some larger land assembly.
- Owners expressed that the powerlines and wetland delineations complicate use of property in the area if not their specific property.
- There is hope that the current study of the Thimble Creek area will bring clarity and perhaps a developer to the area. The City needs to decide what it wants to do before owners can decide. There is hope for answers in the new year but if not owners will seek to sell quickly.
- The zoning is complex and hard to understand. Feel willing to go along with City's plan but worried it isn't working.
- Selling to neighbors or other active investors in the immediate area may make sense, but they are also perceived as making very low offers. Some neighbors and the history of the area may complicate coordination among property owners who have had conflict in the past. The circumstances around the land sale and development of the County facility were noted by multiple owners.
- Owners voice reticence to work with brokers at this point, but this may be hampering their ability to correctly assess and value their properties.
- Some owners expressed hope that this study would present a ready solution in the new year, including bringing a developer to the table. Consultant made an effort to help adjust expectations, but owners may soon seek to sell quickly rather than wait for collaborative solutions.

Oregon City -Thimble Creek Market Assessment Stakeholder Outreach Summary

Outreach

Commercial Real Estate Broker

8/26/2024

Participants

- Associate Broker, Commercial Real Estate Brokerage Firm
- Brendan Buckley – Johnson Economics

Summary

The Consultant held a phone call conversation with a broker who has been representing a property owner selling roughly 20 acres in the study area. The parcel is encumbered by power line easements on the western side. The conversation covered context the broker has garnered from working with the seller, thoughts on the location and area for industrial development.

Meeting Notes

- The property has been inherited by second generation who are interested in selling.
- They have not done extensive pre-development studies, such as wetland evaluation or site planning. Buyer will have to do due diligence. They know the site is flat and has powerline easements, but that is about it.
- Very rough site planning done prior show two buildings of roughly 50k s.f. each with parking.
- Broker reached out to every developer active in the regional industrial market (ProLogis, Trammell Crow, Pannatoni). Most were looking for opportunities to do built-to-suit logistics/distribution development (i.e. warehousing). This is where the market is right now. The City discouraged pure distribution.
- Some reservations voiced about the property were that the City discourages pure distribution, the site would likely only allow a right-in, right-out access, uncertainty regarding the future possible extension of Loder Rd. through the parcel. However, developers were happy enough with the general location, and distance to freeway network was not an objection.
- Some buyers were interested in the usable parts of the parcel, but not the whole site (e.g. the easements). Possibly for investment/resale. Sellers are unwilling to do the front-end studies and want to sell the whole property.
- However, at the time of conversation, there was a purchase and sale agreement moving forward with a buyer. The buyer is described as a “logical buyer for that area”, but it is implied that it is not an industrial user.

- There is demand for usable industrial sites across the region. Opportunities are in short supply and land is just not available.
- General thoughts on the Thimble Creek study area: the highway (Beavercreek Road) has gotten pretty high-traffic. Zoning continues to be a challenge. The market is strong on warehousing and distribution at this time.
- High-tech manufacturing is not clustered in this area, and these companies can be few and far between. Manufacturers do not tend to do a lot of build-to-suit development.
- Manufacturers and particularly high-tech will assess the local workforce and skillsets.
- These users may need public incentives lined up and infrastructure in place. The industrial area needs to be more ready for them.
- Greater zoning flexibility would help this area.

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Executive Summary

Introduction

- The Thimble Creek Concept Plan includes a number of goals related to creating a “Complete and Sustainable Community” within the plan area, including housing, employment, and daily services in close proximity. The employment subareas serve an important function both for meeting the goals of a complete Plan area, and also for the city and regionally. The Plan emphasizes the need to attract sustainable industries that offer living wage jobs, capable of supporting households to live in the area and afford the local cost of living.
- The North Employment Campus subarea emphasizes light industrial, R&D, and corporate headquarters. Connections to Clackamas Community College (CCC) are encouraged. There is an emphasis on businesses making sustainable products and using sustainable services.
- The Mixed Employment Village is intended to be transit supportive and allow a mix of office, retail, civic and residential uses. Pedestrian amenities and green development are encouraged, along with possible connections to CCC and Oregon City High School.
- The Main Street area is smaller and expected to house small-scale commercial in a main street design that might include mixed uses.
- The Concept Plan finds that the study area has the capacity to house over 5,000 new jobs at build-out, with nearly $\frac{3}{4}$ being located in the North Employment Campus and most of the remainder in the Mixed Employment Village subarea.

Existing Conditions

- **Buildable Lands:** The study area has a number of factors that divide the available land into smaller buildable parcels. These include 60 separate taxlots with 42 distinct owners. The area is divided by powerline easements which restrict development and will greatly reduce the available land. In addition, environmental constraints and some parcels that are already developed, further constrict future development potential.
- The Plan includes a framework for a future road network that will divide further the area. The exact alignment of these future streets will depend on the sequence of development and perhaps the availability of public and/or private infrastructure funding. However, as planned this road network will mostly be oriented parallel to Beaver Creek Road, which runs NW/SE through the area and doesn't follow NSEW taxlot boundary lines. This road network will further complicate the process of assembling and configuring larger development sites by cutting across taxlots.
- There is an estimated total of roughly 181 acres estimated in 15 different buildable areas. Nearly all these buildable areas would entail assemblage of multiple taxlots to achieve the acreage estimated here. The assembly of larger development sites, often involving multiple owners who may have differing goals and timelines, will present an ongoing challenge to development in the study area.

- The largest contiguous potential site is 21.5 acres, with the remainder being less than 20 acres. There are no contiguous large-lot industrial sites available in the study area. However, the small-to-mid sized sites that are available can still be attractive to employers of the right size and type.
- **Transportation:** According to the Metro travel demand model, Beavercreek Road is expected to see significant traffic increases due to connections with major residential and/or employment growth areas in the City to the regional roadway network. Forecasts indicate that the current roadway and intersection capacity is insufficient to handle the influx of vehicles and will require improvements.
- The TSP identifies a significant number of planned transportation system projects that are likely to be funded through 2035, many of which include improvements within the Thimble Creek Sub-Area. There are a total of 22 roadway improvements proposed in the area, 11 of those projects being likely to be funded.
- Many studies regarding traffic management have assumed that constructing a parallel road will alleviate congestion; however, there remains significant contention surrounding this assumption, particularly regarding the northern connection to Holly Lane. The primary challenge lies in finding a viable route through Wacheno Road, which may necessitate property acquisitions to facilitate this connection.
- The Thimble Creek Concept Plan outlines a comprehensive transportation strategy designed to support a mixed-use community that prioritizes internal trip-making, multimodal transportation, and sustainable infrastructure.
- The framework aims to create transit-attractive destinations that support future transit service extensions, and integrates existing trails, such as Thimble Creek Trail and the Metro's Beaver Lake Regional Trail, along with new trails and multi-use paths that are designed to enhance connectivity and promote recreational opportunities within the community.
- Developers are likely to face challenges related to the high costs of street and traffic management improvements required to accommodate additional demand and increased traffic. If the full burden of infrastructure improvements falls on developers, which could impact the economic viability of industrial uses in the area.
- **Stormwater:** The Thimble Creek stormwater infrastructure plan is centered around the principles of low-impact development (LID) to manage stormwater in a way that closely mimics natural hydrological processes. Challenges include soils with low infiltration rates, capacity of green streets to handle extreme storm events, funding for implementation and maintenance. However, a significant portion of the study area under powerline easements may offer an opportunity for stormwater mitigation in these easements where little other development is allowed.
- **Water/Sewer:** The current water supply system is fragmented, with some properties served by the city and others by Clackamas River Water (CRW). New infrastructure will be needed to serve the study area as it builds out. The City's Water Master Plan outlines planned

improvements including increased pump station capacity, and pipeline project between Thayer Rd. and Beavercreek Rd.

- The water infrastructure lacks completeness in certain areas, which is critical for future growth. The city's water mains do not yet provide comprehensive coverage to all parcels in the area. While the Water Master Plan outlines a clear path forward, current conditions show that a lack of infrastructure and reliance on CRW create constraints for growth. Addressing these issues will require investments in pipeline projects, pressure zones, and booster stations to ensure all properties within city limits can be served by the City's water system.
- As with the extension of street infrastructure, the extension of public utilities will carry great costs, and the division of the cost burden will impact the viability of private development in the area.
- **Environmental Constraints:** The Thimble Creek Concept Plan included an assessment of environmental constraints in the plan area. These include creeks and floodways, wetlands, and steep slopes. The greatest challenges are the presence of creeks and their accompanying riparian corridors. There is also potential for wetlands across the area that might require remediation.
- Wetland remediation can be accomplished on site and may be a good use for easements that otherwise preclude development. Off-site mitigation is usually very expensive, with diminishing credits available from regional wetland banks. If off-site remediation is required, it could render the development of some parcels economically infeasible.

Employment Trends

- Employment growth has been healthy among industrial-space users on the local, regional, and state level over the past decade. Despite setbacks from the 2008-09 recession, and the 2020 economic downturn caused by the COVID pandemic, employment is at record highs and all sectors have returned to positive growth. Clackamas County added 30,000 jobs over the past decade.
- The Oregon Employment Department anticipates that the Tri-County Portland metro region will add over 127,000 new jobs over the coming decade. The industries with the fastest growth rates are projected to be information (tech), leisure and hospitality (tourism related), professional services, and health care.
- These metro-area forecasted growth rates by sector, applied to Clackamas County imply an estimated growth of 45,000 new jobs over the coming 20-years. This includes roughly 14,500 new jobs (32%) in the main industrial land using sectors.

Industrial Market Analysis

- In the Portland-Salem region, net absorption of industrial space exceeded new deliveries over the last decade, meaning demand has outpaced new production. A combination of absorption of vacancies following the 2008-09 recession and strong growth in demand for warehousing and distribution space has contributed to strong demand for remaining industrial sites in the region.

- Regionally, the industrial vacancy rate trended higher over the 2017-20 period, then fell in 2021-22, before climbing again since mid-2023. The current rate is 5%, which remains low in a long-term historical context.
- Vacancy rates have generally been higher for large buildings than for small buildings over the past 10 years. Buildings with more than 200,000 square feet are 6.8% vacant, while buildings with less than 10,000 square feet are 2.4% vacant.
- Industrial lease rates in the Portland-Salem region have nearly doubled over the past 10 years, averaging 6.8% annual growth. The rent growth was very strong in the last half of the last decade, before slowing in 2020-21. As the economy re-opened and adjusted to the post-COVID world, pent-up demand led to a resurgence of strong rent growth.
- There is a strong forecasted demand for industrial space of a range of types and sizes in the region. This is the well of demand from which the Thimble Creek Plan Area can draw for economic development.

I. Thimble Creek Concept Plan Overview

A. Plan Area Introduction and Land Use Subareas

The Thimble Creek Concept Plan (Plan) was first adopted in 2008 (as the Beaver Creek Road Concept Plan) and updated in 2020 to provide clear and objective standards for housing, and update some of the transportation elements.

The goal of the concept planning effort was to create a complete and sustainable mixed-use community in southeast Oregon City, along Beaver Creek Road. The roughly 450-acre area is planned to include housing, retail, and a mixture of employment uses.

FIGURE 1.1: THIMBLE CREEK CONCEPT PLAN AREA, AND LAND USE SUBDISTRICTS

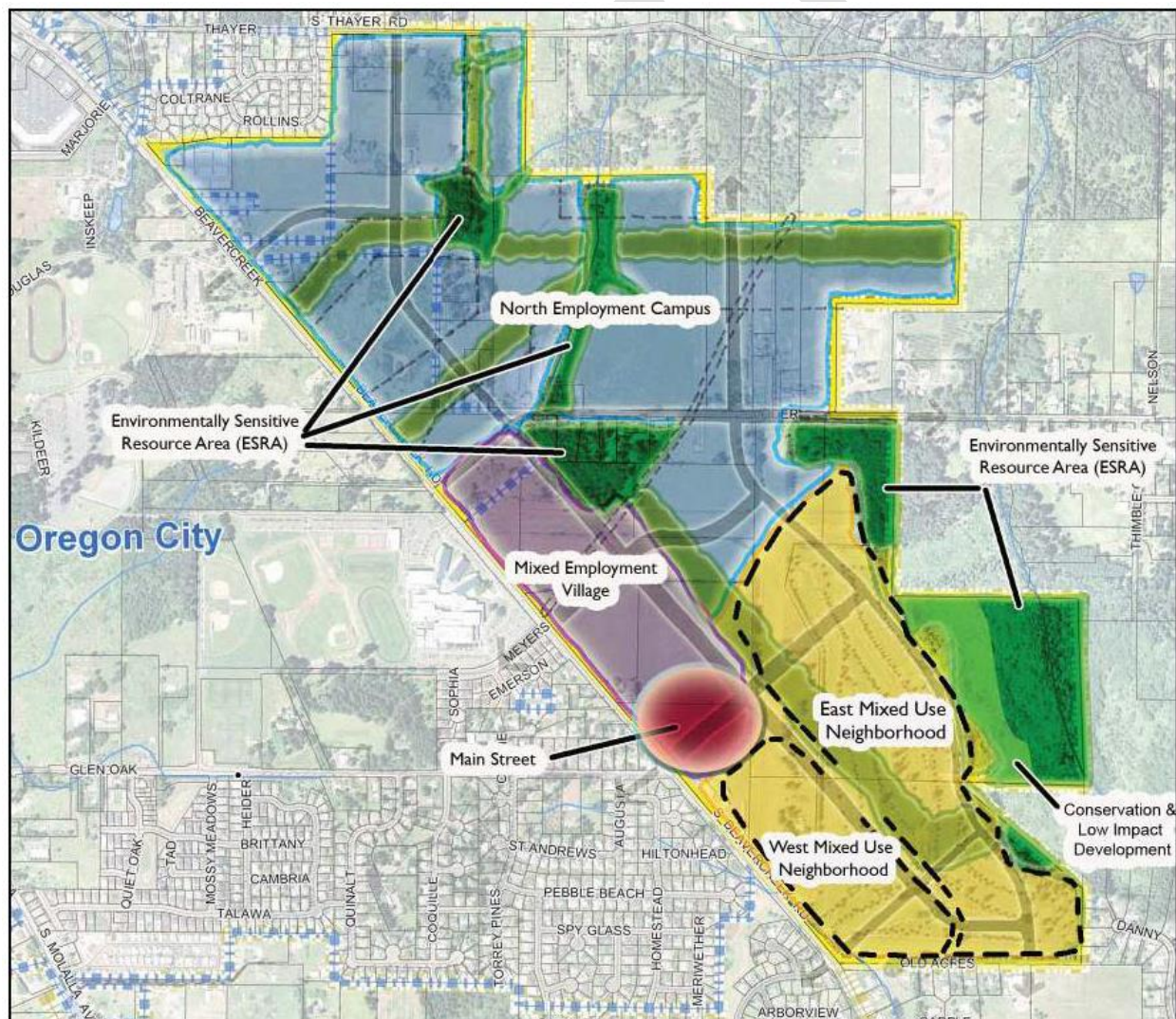


Figure 8 - Land Use Sub-districts

Source: Thimble Creek Concept Plan, City of Oregon City, 2020

As of 2024, the Plan Area has seen new development in some of the land use sub-areas (Figure 1.1), while others have failed to realize new investment as envisioned in the Plan. In particular, the residential areas at the southern end of the plan area have begun to see success, while the employment-focused district envisioned at the north end of the plan area has not yet seen new investment and job growth as envisioned in the Plan.

This employment area, and the future employment uses that might locate there, is the focus of this project and the analysis presented in this memo.

B. Concept Plan Goals

The Plan includes a number of goals related to creating a “Complete and Sustainable Community” within the plan area.¹ A major focus is encouraging sustainability as broadly defined to include goals for economic, ecological, transportation, integrated systems and land uses that will “...meets the needs of the present without sacrificing the ability of future generations to meet their own needs”.

The goals most related to the economy and development of the employment subarea are:

- Create a complete and sustainable community, in conjunction with the adjacent land uses, that integrates a diverse mix of uses, including housing, services, and public spaces that are necessary to support a thriving employment center;
- Be a model of sustainable design, development practices, planning, and innovative thinking;
- Attract “green” jobs that pay a living wage;
- Maximize opportunities for sustainable industries that serve markets beyond the Portland region and are compatible with the site’s unique characteristics; ...
- Promote connections and relationships with Oregon City High School and Clackamas Community College.

C. Employment Subareas

During the planning process, discussion around the employment subareas factored employment goals of Oregon City, Metro and the Citizen Advisory Committee (CAC). The Plan was responsive to a prior goal of the City’s Comprehensive Plan (since removed):

“The majority of these lands should be designated in a manner that encourages family wage jobs in order to generate new jobs and move towards meeting the City’s employment goals.”
Oregon City Comprehensive Plan, Policy 2.6.8.

¹ Thimble Creek Concept Plan, City of Oregon City, 2020, Pg. 7-8.

Metro also contributed goals established at the time the Thimble Creek area was brought into the Urban Growth Boundary (UGB) in the early 2000's. The agency emphasized the need to include sufficient employment in the Concept Plan to meet those goals. Based on these considerations:

After evaluating alternatives, the CAC ultimately chose a hybrid employment strategy. The recommended Concept Plan includes: (1) about 127 net acres of land as North Employment Campus, which is consistent with Metro's intent and similar to Oregon City's Campus Industrial designation; (2) about 29 acres as Mixed Employment Village and Main Street, which allows a variety of uses in a village-oriented transit hub; and, (3) mixed use neighborhoods to the south that also provide for jobs tailored to their neighborhood setting.²

The Concept Plan described the envisioned roles of the three employment subareas: North Employment Campus, Mixed Employment Village, and Main Street. These areas are described below:³

North Employment Campus – NEC

The purpose of the North Employment Campus is to provide for the location of family wage employment that strengthens and diversifies the economy. The NEC allows a mix of clean industries, offices serving industrial needs, light industrial uses, research and development and large corporate headquarters. The uses permitted are intended to improve the region's economic climate, promote sustainable and traded sector businesses, and protect the supply of sites for employment by limiting incompatible uses. The sub-district is intended to comply with Metro's Title 4 regulations. Site and building design will create pedestrian-friendly areas and utilize cost effective green development practices. Business and program connections to Clackamas Community College (CCC) are encouraged to help establish a positive identity for the area and support synergistic activity between CCC and NEC properties. Businesses making sustainable products and utilizing sustainable materials and practices are encouraged to reinforce the identity of the area and promote the overall vision for the Beavercreek Road area.

Mixed Employment Village – MEV

The purpose of the Mixed Employment Village is to provide employment opportunities in an urban, pedestrian friendly, and mixed use setting. The MEV is intended to be transit supportive in its use mix, density, and design so that transit remains an attractive and feasible option. The MEV allows a mix of retail, office, civic and residential uses that make up an active urban district and serve the daily needs of adjacent neighborhoods and Beavercreek Road sub-districts. Site and building design will create pedestrian-friendly areas and utilize cost effective green development practices. Business and program connections to Clackamas Community College and Oregon City High School are encouraged. Businesses making sustainable products and utilizing sustainable materials and

² Thimble Creek Concept Plan, City of Oregon City, 2020, Pg. 14

³ Thimble Creek Concept Plan, City of Oregon City, 2020, Pg. 43

practices are encouraged to reinforce the identity of the area and promote the overall vision for the Beaver Creek Road area.

Main Street – MS

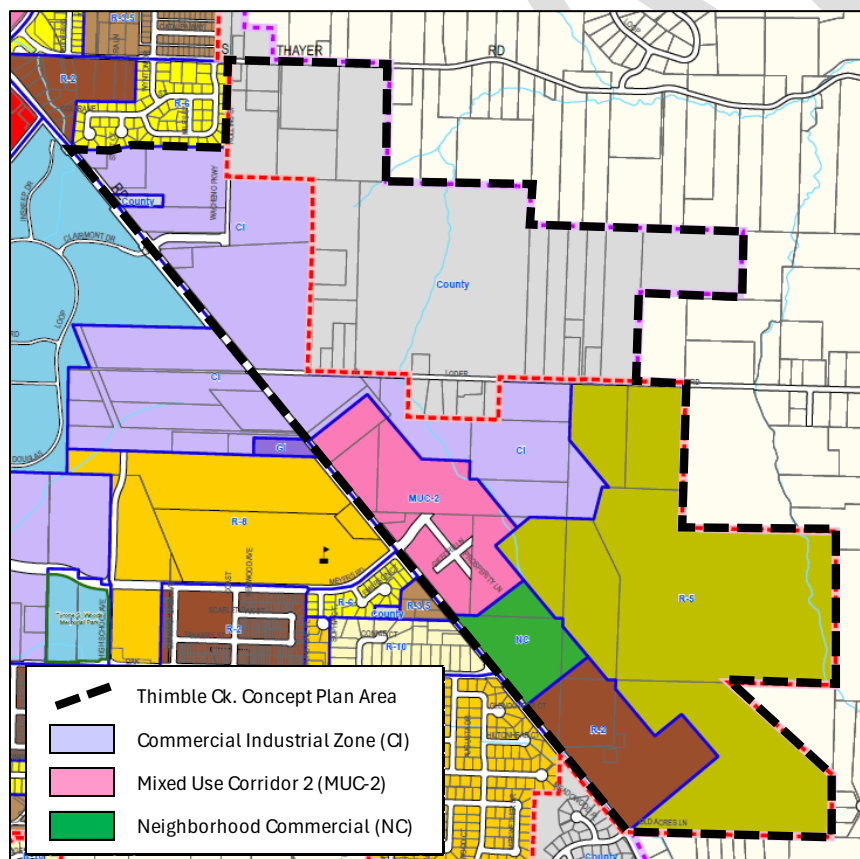
The purpose of this small mixed-use center is to provide a focal point of pedestrian activity. The MS allows small scale commercial, mixed use and services that serve the daily needs of the surrounding area. “Main Street” design will include buildings oriented to the street, and minimum of 2-story building scale, attractive streetscape, active ground floor uses and other elements that reinforce pedestrian oriented character and vitality of the area.

Zoning Designations: Following the planning process, the three subareas were assigned zoning designations as follows:

- North Employment Campus: Commercial Industrial Zone (CI)
- Mixed Employment Village: Mixed Use Commercial Zone (MUC-2)
- Main Street: Neighborhood Commercial Zone (NC)

The main focus of this analysis is on potential employers that fall into industrial categories, so the Commercial Industrial Zone (CI) receives greater focus in this report.

FIGURE 1.2: THIMBLE CREEK CONCEPT PLAN AREA, ZONING DESIGNATIONS



Source: City of Oregon City, Johnson Economics

The study area for this market assessment project does not include the entire Thimble Creek Concept Plan area but focuses on the employment areas. It also includes a number of parcels on the west side of Beaver Creek Road that fall outside of the Concept Plan area but share the CI zoning. The parcels included in this study are shown on the following map.

[illegible]

Thimble Creek Sub-Area Market Assessment – Existing Conditions

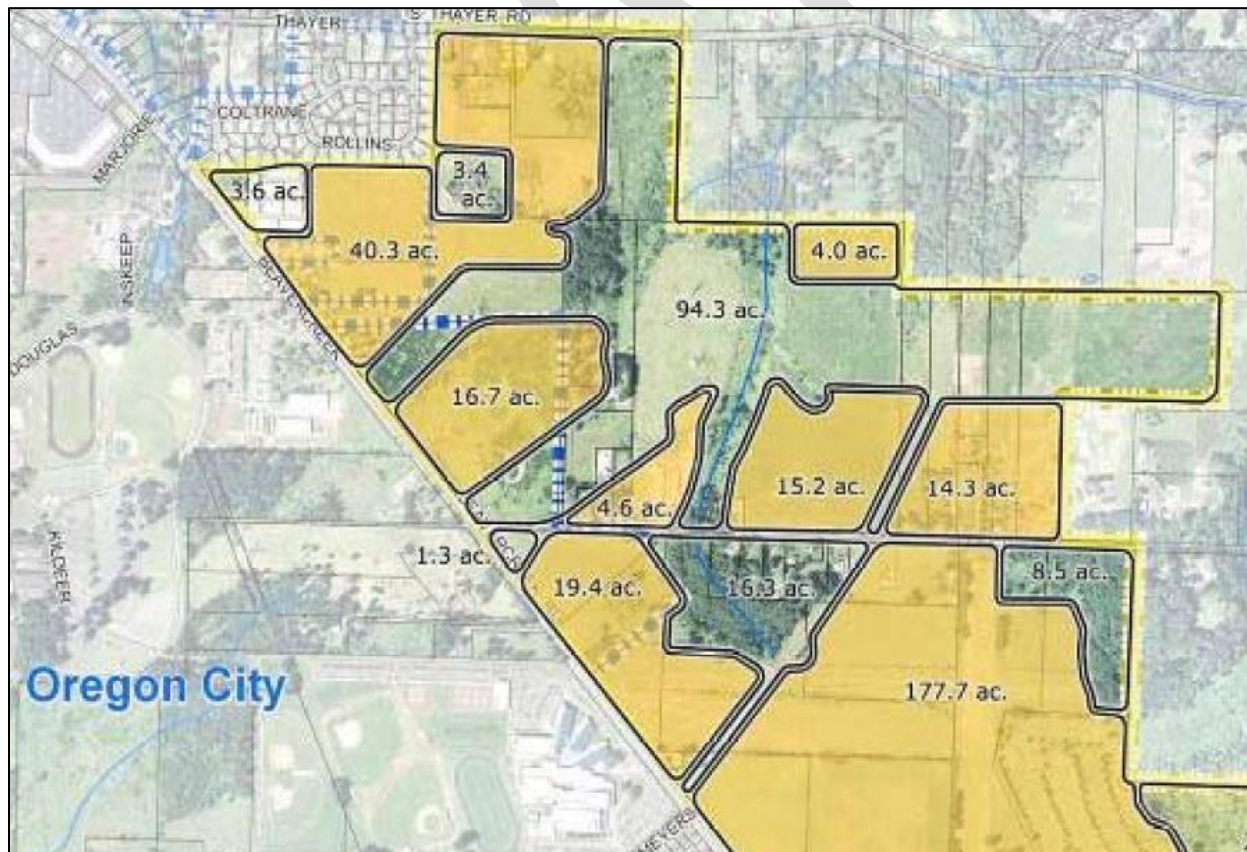
II. Existing Conditions

A. Buildable Lands and Parcelization

The study area is highly parcelized, including 60 separate taxlots with 42 distinct owners. With a few exceptions, the taxlot boundary lines are oriented north/south, east/west, while Beaver Creek Road bisects the area at an angle. This creates triangular or wedge-shaped taxlots along the highway, and also has implications for the parcels that will be created by the planned future street system (discussed more below).

The following figure is drawn from the Concept Plan and is an estimate of the buildable area within the northern employment portion (shown in orange). The areas are summed together across taxlot boundaries and ownerships. The significant areas excluded (not in orange), reflect either the broad powerline easements that divide the area, environmental constraints, and the rough contours of a proposed open space network that is included in the Plan.

FIGURE 2.1: THIMBLE CREEK CONCEPT PLAN, ESTIMATED BUILDABLE AREAS, ACROSS TAXLOT BOUNDARIES AND OWNERSHIPS

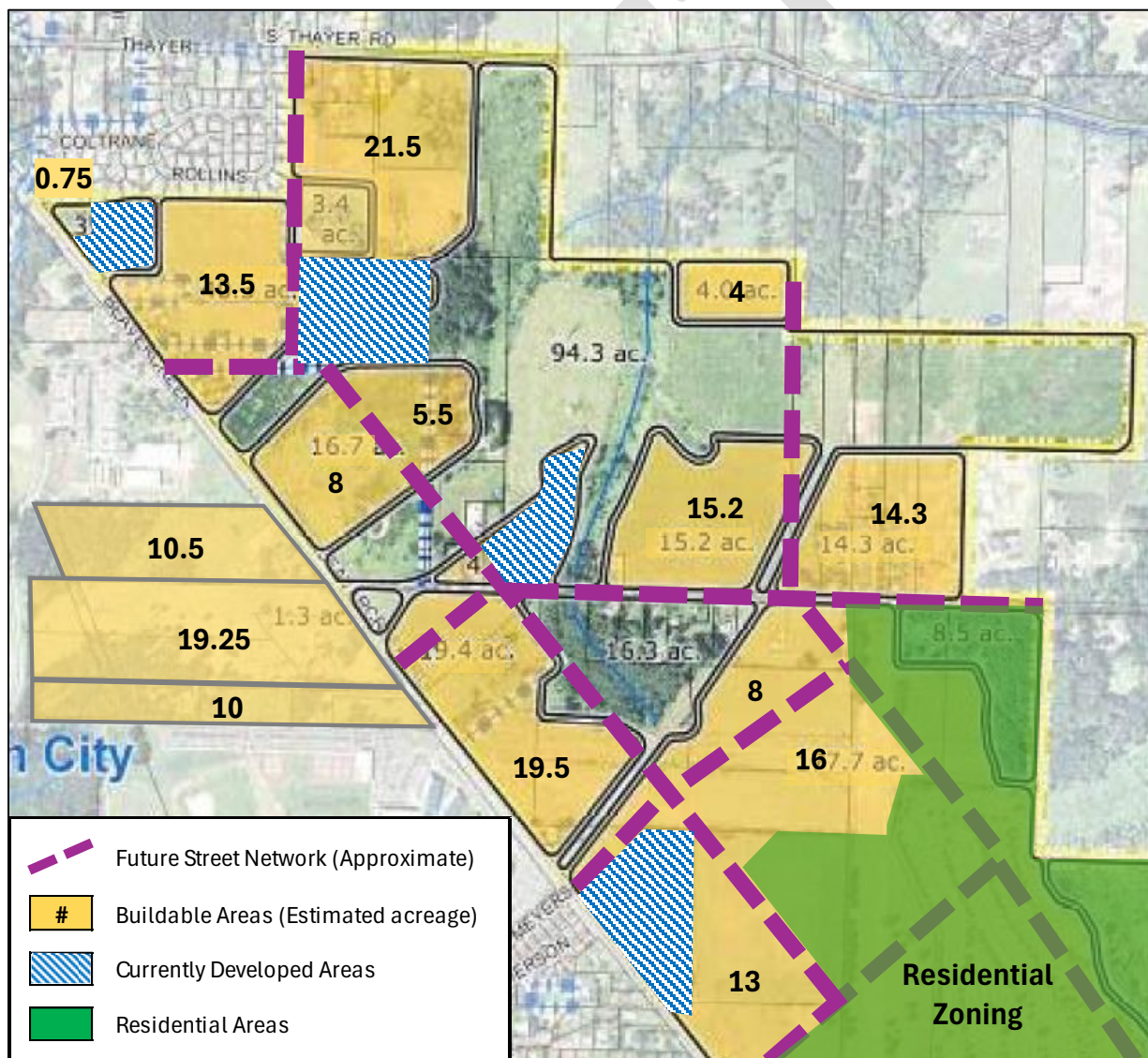


Source: Thimble Creek Concept Plan, pg. 13, City of Oregon City

A system of powerlines under two separate ownerships converges in the center of the area and exits to the north, west and southeast. These powerlines, operated by multiple entities, include easements which will greatly reduce the development land area within the study area, and also dictate the shape and size of remaining usable parcels.

Using the map of buildable lands presented in Figure 2.1, this analysis sought to further refine the number and size of potential individual development sites in the employment area. The refined map (Figure 2.2) includes the rough estimation of a future street grid included in the Concept Plan. The exact alignment of these future streets will depend on the sequence of development and perhaps the availability of public and/or private infrastructure funding.

FIGURE 2.2: THIMBLE CREEK MARKET ASSESSMENT, REFINED ESTIMATED BUILDABLE AREAS



Source: Thimble Creek Concept Plan, Johnson Economics

The acreages presented in Figure 2.2 are approximate, and the alignment of the street grid will impact the configuration of these sites, but this provides a guide to potential development sites for future economic development.

Figure 2.3 summarizes the site sizes represented in Figure 1.5.

FIGURE 2.3: REFINED BUILDABLE AREA, BY ESTIMATED SITE SIZE, STUDY AREA

Site Size (Acres)	No. of Sites	Total Acres	Avg. Site Size
1 to 4.9	3	7.0	2.3
5 to 9.9	3	21.5	7.2
10 to 14.9	4	61.3	15.3
15 to 19.9	4	70.0	17.5
20 to 21.5	1	21.5	21.5
21.5+	0	0.0	0.0
<i>TOTAL:</i>	<i>15</i>	<i>181.2</i>	<i>12.1</i>

Source: Thimble Creek Concept Plan, Johnson Economics

There is an estimated total of roughly 181 acres estimated in 15 different buildable areas. Nearly all these buildable areas would entail assemblage of multiple taxlots in order to achieve the acreage estimated here. The total acreage of 181 is very similar to that found in the concept plan (185 gross acres total in the three employment-focused subareas).⁴

The largest potential site (notwithstanding exact taxlot boundaries or ownerships) is roughly 21.5 acres. There are four sites between 15 and 20 acres, and a total of nine potential sites over 10 acres. There is a potential site to the west of Beavercreek Road that theoretically could be combined 40 acres, however the center portion of this site has recently been purchased by a single user.

With the largest potential site of roughly 21.5 acres, there are no contiguous large-lot industrial sites available in the study area. However, the small-to-mid sized sites that are available can still be attractive to employers of the right size and type.

^{4 4} Thimble Creek Concept Plan, City of Oregon City, 2020, Pg. 41

B. Transportation

1. Classifications and Current Traffic Assessment

The 2013 Transportation System Plan (TSP) classifies several key roads in the region according to their functional classifications and identifies which specific jurisdiction manages the facility. Beavercreek Road serves as a Major Arterial under the jurisdiction of Clackamas County, facilitating significant traffic flow. Meyers Road is designated as a Minor Arterial managed by Oregon City, while Loder Road and Thayer Road are both classified as Collectors under Clackamas County jurisdiction, serving to distribute traffic between local streets and major roads. Glen Oak Road is also classified as a Collector, but it falls under Oregon City's jurisdiction. Additionally, Wacheno Parkway, Prosperity Lane, and S Old Acres Lane are all designated as Local roads, primarily serving residential areas and providing access to adjacent properties.

FIGURE 2.4: FUNCTIONAL STREET CLASSIFICATION, THIMBLE CREEK STUDY AREA

Functional Class (2013 TSP)			
Road	Classification	Jurisdiction	TSP Improvements
Beavercreek Rd	Major Arterial	Clackamas County	D39, D44, D47, D54, D55, D56, D81, D82, W25, B23, S20
Meyers Rd	Minor Arterial	Oregon City	D47, D58, D59, D60, D61, D81, D82, S19
Loder Rd	Collector	Clackamas County	D44, D61, W25, W26, B23, B24, S16, S18
Thayer Rd	Collector	Clackamas County	D57, D58
Glen Oak Rd	Collector	Oregon City	D39, D55, D60, S18
Wacheno Pkwy	Local	TBD	None
Prosperity Ln	Local	TBD	None
S Old Acres Ln	Local	TBD	D60, S21

Source: City of Oregon City, Transportation System Plan, Johnson Economics

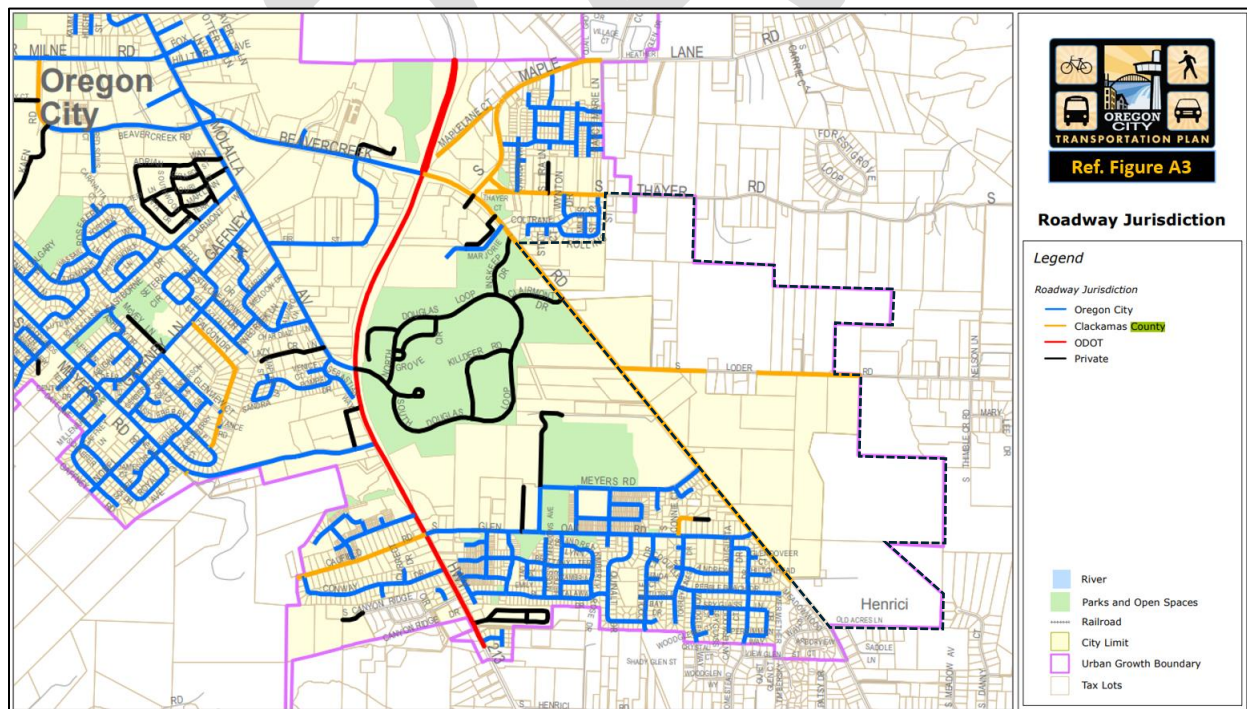
Assessment

- **Increased traffic volumes.** According to the Metro travel demand model, Beavercreek Road is expected to see significant traffic increases due to connections with major residential and/or employment growth areas in the City to the regional roadway network.
- **Congestion levels.** Expected to experience average travel speeds well below the posted limits during the evening. Historic traffic backups at key junctions (e.g. Beavercreek and OR213) suggest existing capacity issues that could worsen with new developments. This scenario indicates that the current roadway capacity is insufficient to handle the influx of vehicles and will require improvements.
 - **Assessment of critical intersections.** Specific intersections such as Beavercreek Road and Glen Oak Road are projected to operate below acceptable levels of service by 2035.

These conditions necessitate immediate attention to enhance traffic flow and safety measures.

- **Planned transportation improvements.** The TSP identifies a significant number of planned transportation system projects that are likely to be funded through 2035, many of which include improvements within the Thimble Creek Sub-Area. There are a total of 22 roadway improvements proposed in the area, 11 of those projects being likely to be funded, including:
 - **Traffic signals.** Installation of signals at key intersections, such as Beavercreek and Loder Roads, and modifications to existing signals on Meyers Road.
 - **Road extensions.** Several road extensions (e.g. Meyers Road, Clairmont Drive, Glen Oak Road, Timbersky Way, Holly Lane South) aim to enhance connectivity and access throughout the area, with pre-inflation costs ranging from \$500,000 to over \$2 million for each project.
- **Jurisdictional challenges.** Beavercreek Road and Loder Road fall under Clackamas County jurisdiction, complicating the planning and implementation of improvements, especially without any potential of transferring ownership to the city in the near future. When and if the City assumes control of County infrastructure in the study area, additional improvements and maintenance costs will fall upon the City.

FIGURE 2.5: ROADWAY JURISDICTION, THIMBLE CREEK STUDY AREA



Source: City of Oregon City, Transportation System Plan, Johnson Economics

- **Traffic growth projections.** Beaver Creek Road is expected to see an increase of over 500 vehicles during the evening peak hour between 2010 and 2035. The traffic growth projections are based on the Metro travel demand model, which incorporates factors such as existing traffic patterns, land use changes, and anticipated population or employment growth. This model serves as a critical tool for forecasting traffic impacts and information transportation planning considerations.
 - **Assumptions on road network.** Many studies regarding traffic management have assumed that constructing a parallel road will alleviate congestion; however, there remains significant contention surrounding this assumption, particularly regarding the northern connection to Holly Lane. The primary challenge lies in finding a viable route through Wacheno Road, which may necessitate property acquisitions to facilitate this connection. While segments of the proposed road have been established, the next critical step is determining how these segments can be effectively linked. Ultimately, the resolution of this issue may depend on the timing and interests of the developers involved, as the benefits of the connection will likely favor those who are able to establish their developments first.
- **Economic implications for development.** Developers are likely to face challenges related to the high costs of street and traffic management improvements required to accommodate additional demand and increased traffic. If the full burden of infrastructure improvements falls on developers, which could impact the economic viability of industrial uses in the area.

2. Transportation Planning Framework

The Thimble Creek Concept Plan outlines a comprehensive transportation strategy designed to support a mixed-use community that prioritizes internal trip-making, multimodal transportation, and sustainable infrastructure. This framework emphasizes connectivity, green street design, and an integrated approach to transportation planning that aligns with the broader objectives of providing multimodal improvements throughout Oregon City.

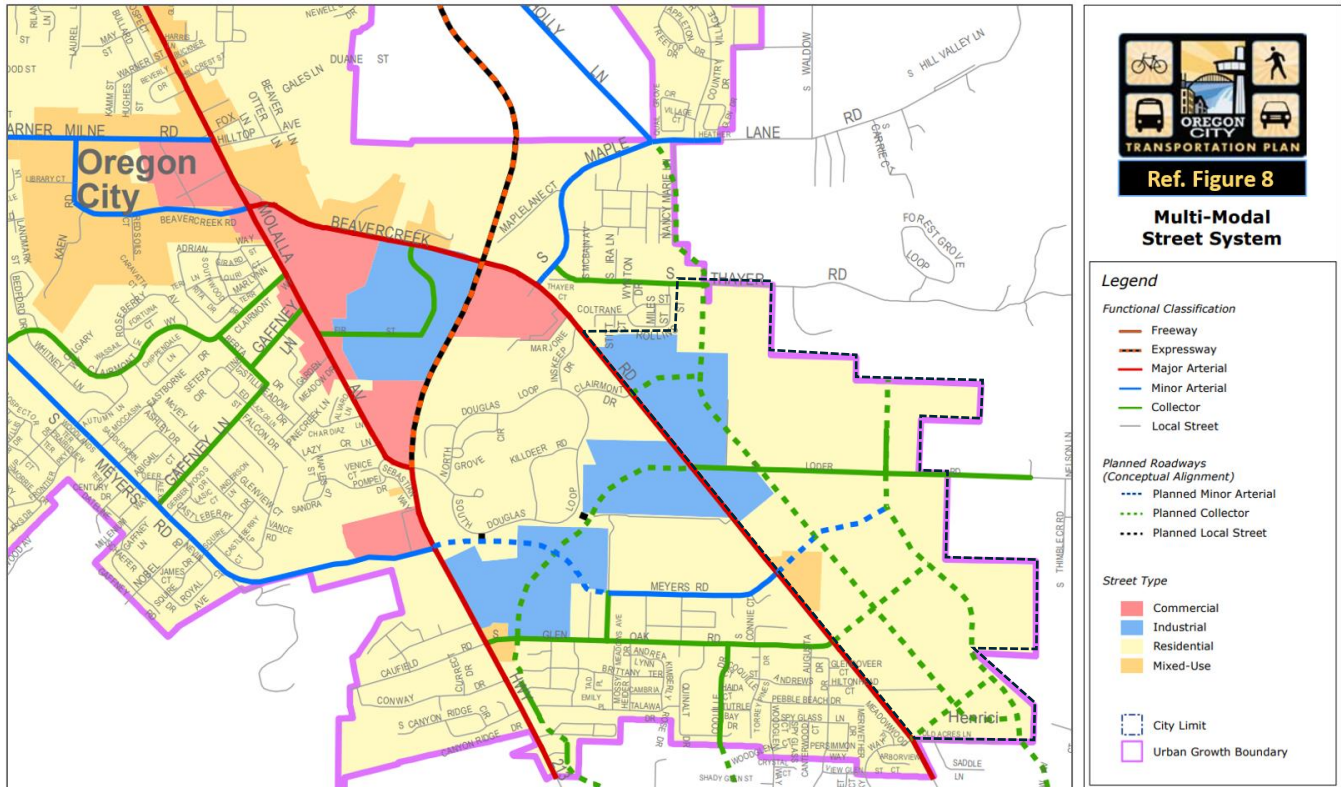
Key elements of the concept plan's transportation strategy include:

- **Mixed-use development.** This plan encourages the development of a community where daily needs can be met locally, and housing, employment and shopping are located withing close proximity. This reduces the reliance on external trips and maximizes walking and biking opportunities within the area.
- **Green street design and enhancements.** Beaver Creek Road is envisioned as a green street boulevard. Based on the updated TSP, this green street boulevards feature a five-lane arterial design transitional to a three-lane design south of Meyers Road. Green street designs utilize a

combination of sustainable design methods including vegetated swales, planter islands, curb extensions, and porous pavement that are all integral to the storm water planning of the area.

- **Collector street framework.** This strategy includes creating a network of collector streets that facilitate efficient internal circulation while managing traffic flow within the area.

FIGURE 2.6: MULTI-MODAL STREET SYSTEM AND PLANNED ROADWAYS, THIMBLE CREEK STUDY AREA

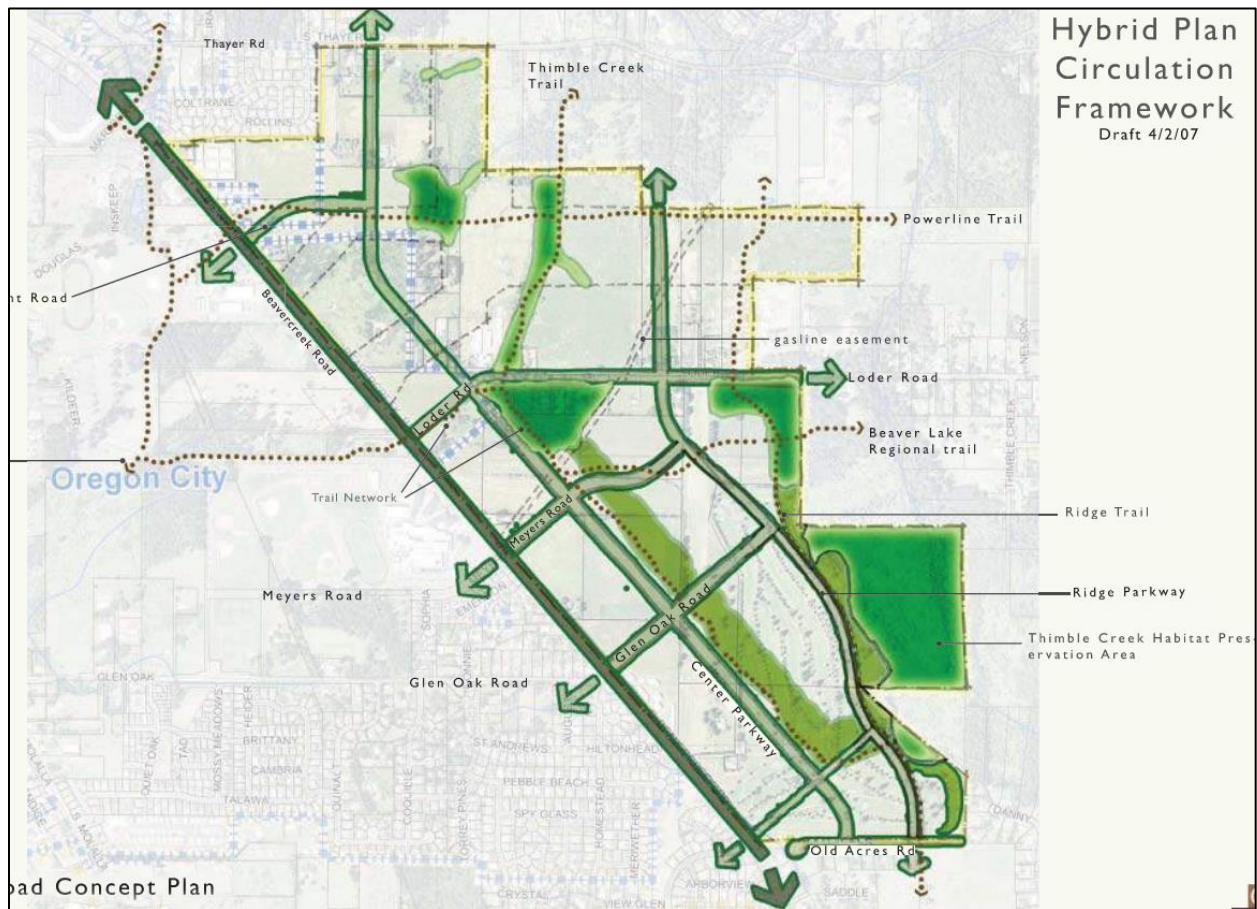


Source: City of Oregon City, Transportation System Plan, Johnson Economics

- **Connectivity requirements.** TBD
- **Multimodal network.** TBD
- **Transit-oriented development.** The framework aims to create transit-attractive destinations that support future transit service extensions. Specifics of transit service will depend on the actual rate and type of development built, Tri-Met resources and policies, and consideration of other local options. The City has recognized the need to work with Tri-Met, CCC, Oregon City High School, and developers within the plan area to facilitate transit use. Planned roadways should also be designed to facilitate the introduction of additional transit options. Transit planning considerations include:
 - Modification of existing bus routes to better serve the Thimble Creek Sub-Area.
 - Introduction of a local loop route connecting residential areas with key destinations.

- Development of an express route linking major regional destinations.
- **Updates to the Transportation System Plan.** The Oregon City TSP has been updated to include the identified projects from the Thimble Creek Concept Plan. This update ensures compliance with Oregon's Transportation Planning Rule and provides necessary off-site improvements to support development of the area.

FIGURE 2.7: THIMBLE CREEK CONCEPT PLAN CIRCULATION FRAMEWORK



Source: Thimble Creek Concept Plan, City of Oregon City

- **Specific Roadway Proposals.** As shown in Figure 2.7, highlights of the plan include several proposed improvements:
 - **Center Parkway.** A new north-south route designed to provide an alternative parallel route to Beaver Creek Road, enhancing local trip separation for trips between Old Acres and Thayer Road, and promoting active transportation through walking and biking on the proposed multi-use path. Center Parkway is shown as a three-lane facility; however, it may function well with a two-lane section and left turn pockets at selected locations.
 - **Ridge Parkway.** This route will serve as a green edge to the neighborhood, facilitating access to natural areas and provide the community with a public walkway adjacent to the

underdeveloped natural areas east of the parkway. Ridge Parkway is intended to be two lanes except where left turn pockets are needed. Major intersections south of Loder may require stop controls of the side street if configured as “tee” intersections, however, mini roundabout could serve as a suitable option.

- **Extensions and realignments.** Various road extensions and realignments including Clairmont, Meyers, and Glen Oak Roads, are proposed to complete the transportation network, ensuring connections to adjacent streets and neighborhoods.
- **Trail network integration.** The plan integrates existing trails, such as Thimble Creek Trail and the Metro’s Beaver Lake Regional Trail, along with new trails and multi-use paths that are designed to enhance connectivity and promote recreational opportunities within the community.

C. Utilities

1. Stormwater

The Thimble Creek stormwater infrastructure plan is centered around the principles of low-impact development (LID) to manage stormwater in a way that closely mimics natural hydrological processes in order to minimize disruption to the environment and protect natural resources.

- **Tier system.** The plan outlines a three-tiered hierarchy to manage stormwater at multiple scales—site, street, and neighborhood—promoting sustainable solutions for stormwater management:
 - **Tier 1: Site-Specific Stormwater Management Facilities (Site Level).** Properties must use on-site best management practices (BMPs), like rain gardens and pervious surfaces, to reduce runoff and treat stormwater at its source.
 - **Tier 2: Green Street Stormwater Management (Street Level).** Green Streets use vegetated swales and bioretention systems alongside roads to capture and filter stormwater runoff, with conveyance systems for larger storms.
 - **Tier 3: Regional Stormwater Management (Neighborhood Level).** Regional detention ponds manage stormwater from larger events, integrated into open spaces and designed to work alongside site and street-level systems.

This approach to stormwater infrastructure planning provides a comprehensive, layered approach to managing stormwater using natural and sustainable methods. By focusing on site-specific BMPs, Green Streets, and regional stormwater facilities, the plan addresses immediate water management needs but also enhances the community’s aesthetic and recreational goals. This multi-tiered

FIGURE 2.8: EXISTING STORMWATER INFRASTRUCTURE, THIMBLE CREEK STUDY AREA



- **Soil infiltration limitations.** The local soils (Hydrologic Soil Group C) have slow infiltration rates, which may limit the effectiveness of low-impact systems like swales and bioretention facilities. This could lead to inadequate stormwater absorption during heavy rain events.
- **Capacity of Green Streets.** While Green Streets are a key feature, they may not be able to handle large storm events independently. The reliance on bioretention and swales, combined with limited space in urban areas, means additional infrastructure (pipes and culverts) will still be needed, increasing complexity and costs.
- **Maintenance responsibilities.** The plan places a significant maintenance burden on private property owners for site-specific BMPs. If not properly maintained, these systems could fail, reducing their effectiveness in managing stormwater.
- **Funding and implementation costs.** The costs associated with installing and maintaining these stormwater systems, especially the regional detention ponds and green streets, could

be significant. Securing funding and balancing public versus private investment may present challenges.

- **Long-term effectiveness of low-impact solutions.** While low-impact BMPs are environmentally friendly, they may require more frequent maintenance and monitoring compared to traditional systems. The systems must be properly managed to keep optimal performance.
- **Space constraints.** In densely developed areas, there may not be enough space for effective green infrastructure, like swales or rain gardens. This could limit stormwater management options.

FIGURE 2.9: THIMBLE CREEK CONCEPT PLAN STORMWATER SYSTEM



Source: Thimble Creek Concept Plan

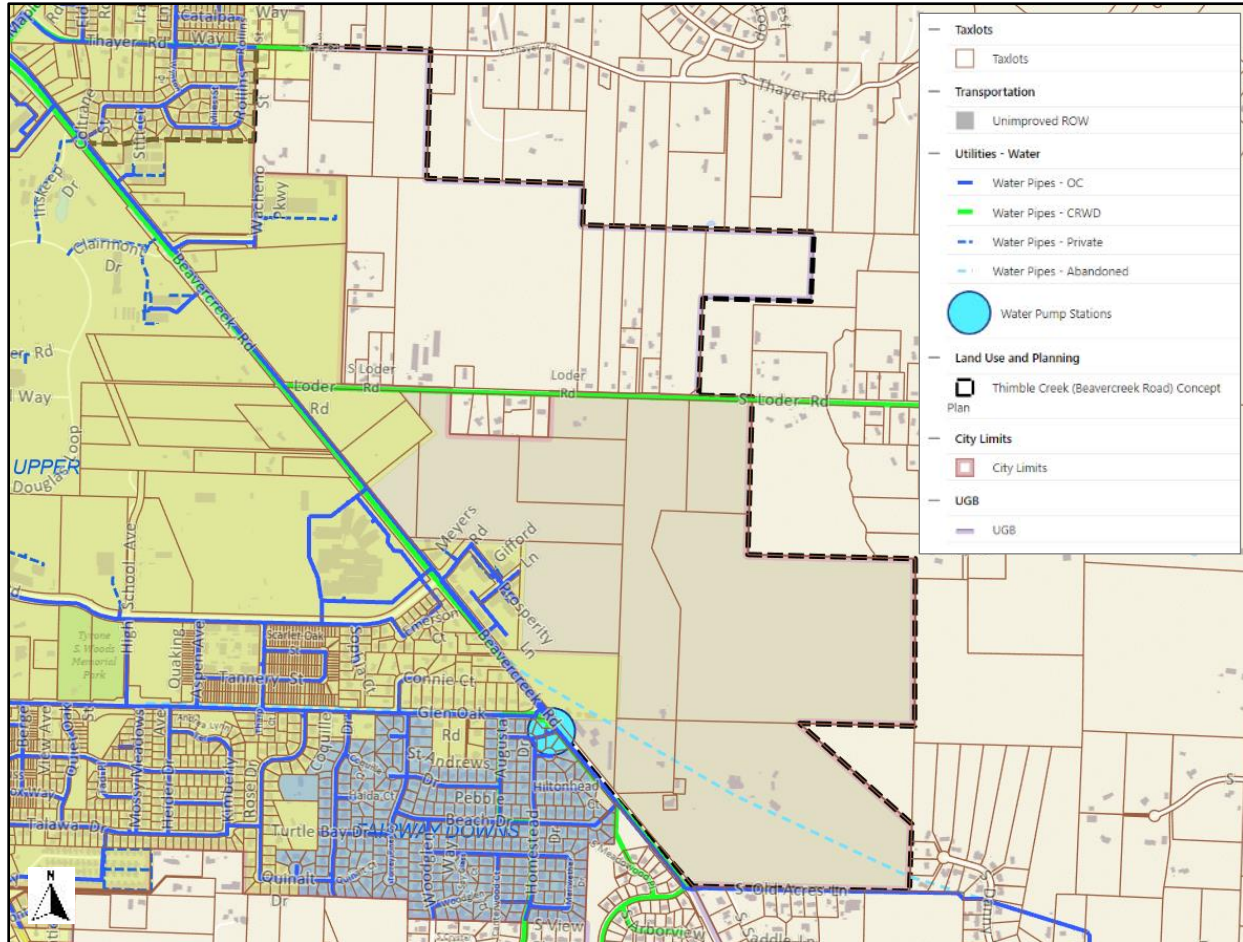
2. Water Utility

The current water supply system is fragmented, with some properties served by the city and others by Clackamas River Water (CRW). The City aims to serve all properties within city limits directly and move away from relying on external water sources. CRW faces capacity issues and cannot accommodate all water needs within the City's growing area. Although the City has a Water Master Plan, limited water infrastructure creates challenges for new development, especially at higher elevations.

- **Pump station capacity.** The existing Fairway Downs Pump Station supplies a closed zone. Development of the upper Thimble Creek Concept Sub-Area will require a new reservoir and pump station, where a new open system will replace the existing closed system. The reservoir will be sized to supply the fire flow needs to the expanded pressure zone. The Water Master Plan states that storage requirements in the intermediate Zone and limitation in storage at Henrici/Boynton should be considered in sizing the Fairway Downs Reservoir and associated pump station.
- **Water pressure zones.** There are two pressure zones proposed in the concept plan for water distribution:
 - **Fairway Downs Pressure Zone** will serve the southern one-third of the area. Due to higher elevations, water pressure is insufficient from the reservoirs, requiring a booster pump station located at Glen Oak Road and Beavercreek Road. Most of the water mains in this zone are planned along public right-of-way. Some areas may require strip easements in the southeast corner, but the final layout will depend on future internal street developments. The system design is preliminary and subject to modifications based on development patterns.
 - **Upper Pressure Zone** will serve the northern two-thirds of the area. Water is supplied via a “backbone” network of mains from the Henrici and Boynton reservoirs. A 12-inch water main parallel to Beavercreek Road will act as the primary distribution line, with an 8-inch secondary network delivering water to parcels. The system will be looped to avoid dead-end pipes, ensuring consistent water pressure and availability throughout the zone.
- **Water infrastructure.** The water infrastructure lacks completeness in certain areas, which is critical for future growth. The city's water mains do not yet provide comprehensive coverage to all parcels in the area. The sanitary sewer and stormwater management systems are planned alongside the water network, and in some cases, utilities such as gravity sewers and pressure sewers will share easements with water mains. Stormwater facilities may also be co-located in this alignment.

- **Pipeline Project P-201** is a crucial part of the system that aims to establish a connection between Thayer Road and Beaver Creek Road. This project will ensure that a new 12-inch main stays within public streets for easier access and maintenance.

FIGURE 2.10: EXISTING WATER INFRASTRUCTURE, THIMBLE CREEK STUDY AREA



Source: City of Oregon City, HHPR

Assessment

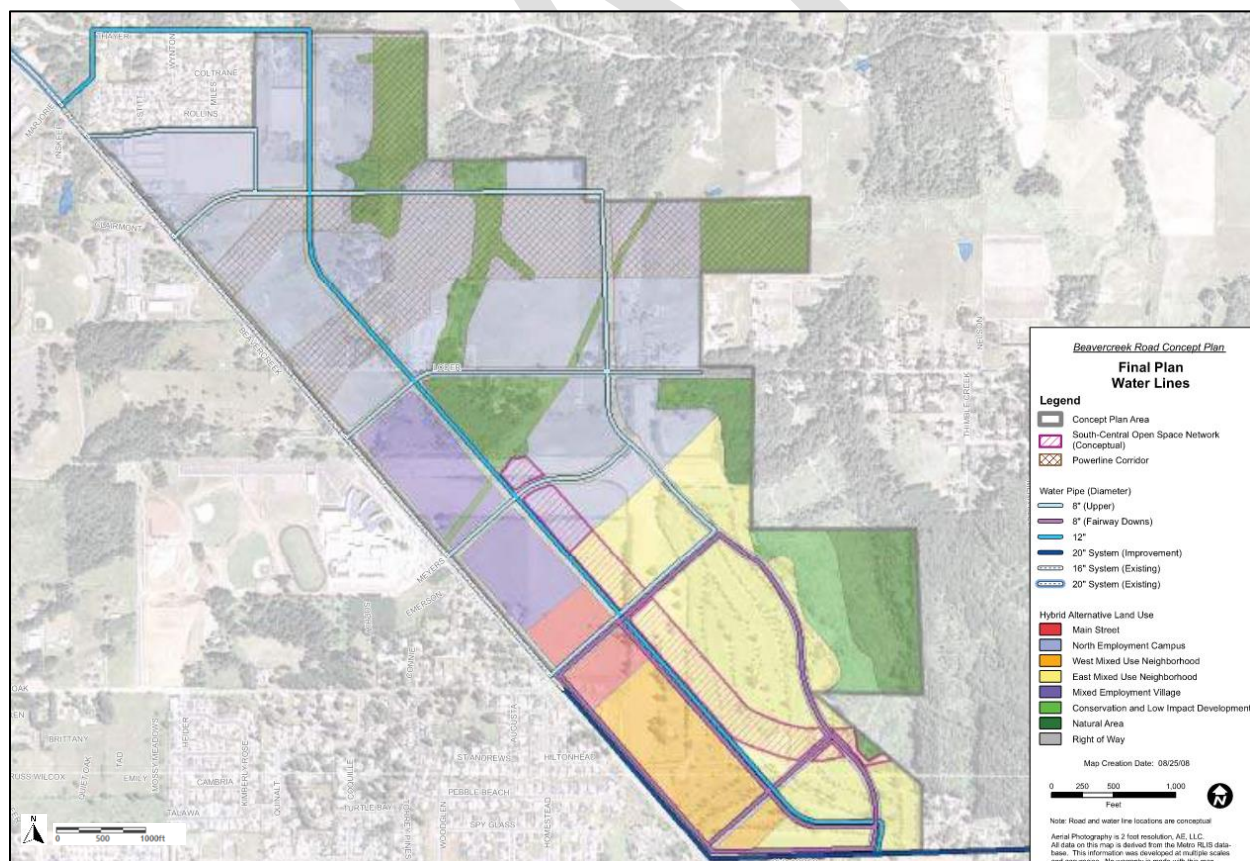
- **Pressure and capacity issues.** High elevations require booster stations to maintain adequate water pressure.
- **Water demand.** Increased demand during the hot season presents challenges, requiring additional planning and capacity to ensure consistent water delivery.
- **Reliance on external water provider.** The reliance on CRW is unsustainable in the long-term due to their own capacity constraints.
- **Infrastructure limitations.** Lack of complete water and sanitary networks in some areas limits the ability to fully develop these parcels. Largely dependent on future development and the

final system of internal local streets. Additional mains may be needed or some of the water mains shown may need to be removed.

- **Cost and timeline.** Planned infrastructure is estimated to cost \$5.4 million, with additional capital improvement projects costing \$6.9 million to extend the water system to the concept plan area. Estimates are based on 2003 dollars and need to be adjusted for inflation before SDCs can be established.
- **Water distribution networks.** Water and sanitary networks follow the road system; however, these systems are not yet fully developed in the City's expansion areas.

There are significant challenges in expanding the City's water infrastructure to meet future development needs. While the Water Master Plan outlines a clear path forward, current conditions show that a lack of infrastructure and reliance on CRW create constraints for growth. Addressing these issues will require investments in pipeline projects, pressure zones, and booster stations to ensure all properties within city limits can be served by the City's water system. A comprehensive strategy to upgrade both water and sewer systems, improve pressure, and handle seasonal demand surges is necessary to support long-term development in the area.

FIGURE 2.11: THIMBLE CREEK CONCEPT PLAN WATER SYSTEM PLAN



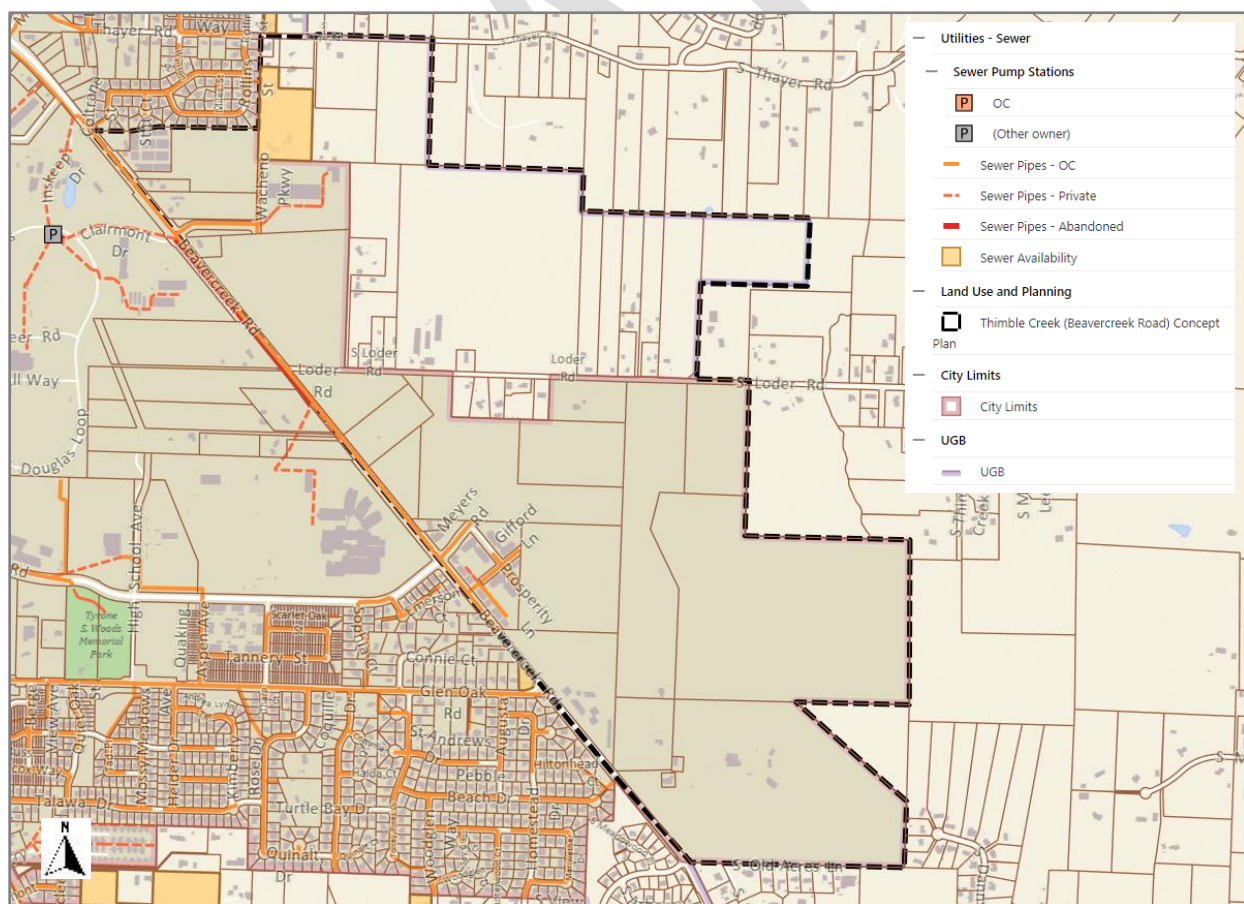
Source: Thimble Creek Concept Plan

3. Sewer

The sanitary sewer infrastructure plan for the concept area focuses on effective drainage and wastewater management, with the northern half draining northward through a proposed sewer system that uses street rights-of-way and culminates in a wetwell. A lift station will pump wastewater west into a gravity sewer, connecting to the trunk sewer on Beaver Creek Road. The southern half will feature a gravity sanitary sewer system leading to the existing trunk sewer. The system is designed to accommodate industrial use, offering opportunities for developers to connect to existing sewer lines.

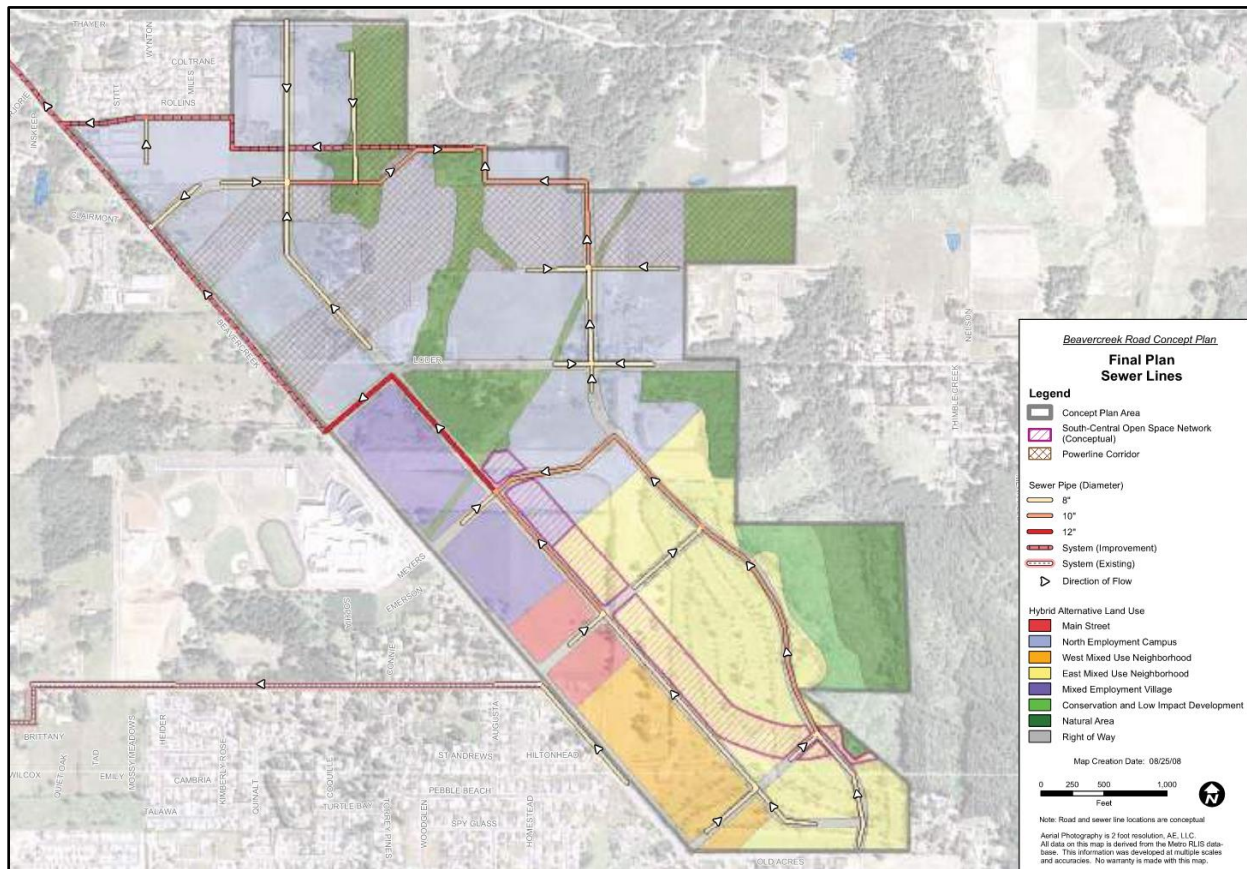
- **System overview.** There is existing infrastructure from Clairmont Drive to Old Acres Lane that has been extended from both City improvements and new development. The golf course will further extend the rest of the sanitary sewer line south to the city limit (permits for the sewer extension are expected to come in the coming months).
 - The sewer is sized to be at capacity to handle industrial uses.
 - There are other sewers stubbed out with many opportunities for connections.
 - Developers will be able to extend their main lines and connections.

FIGURE 2.12: EXISTING SEWER INFRASTRUCTURE, THIMBLE CREEK STUDY AREA



Source: City of Oregon City, HHPR

FIGURE 2.13: THIMBLE CREEK CONCEPT PLAN SEWER SYSTEM PLAN



Source: Thimble Creek Concept Plan

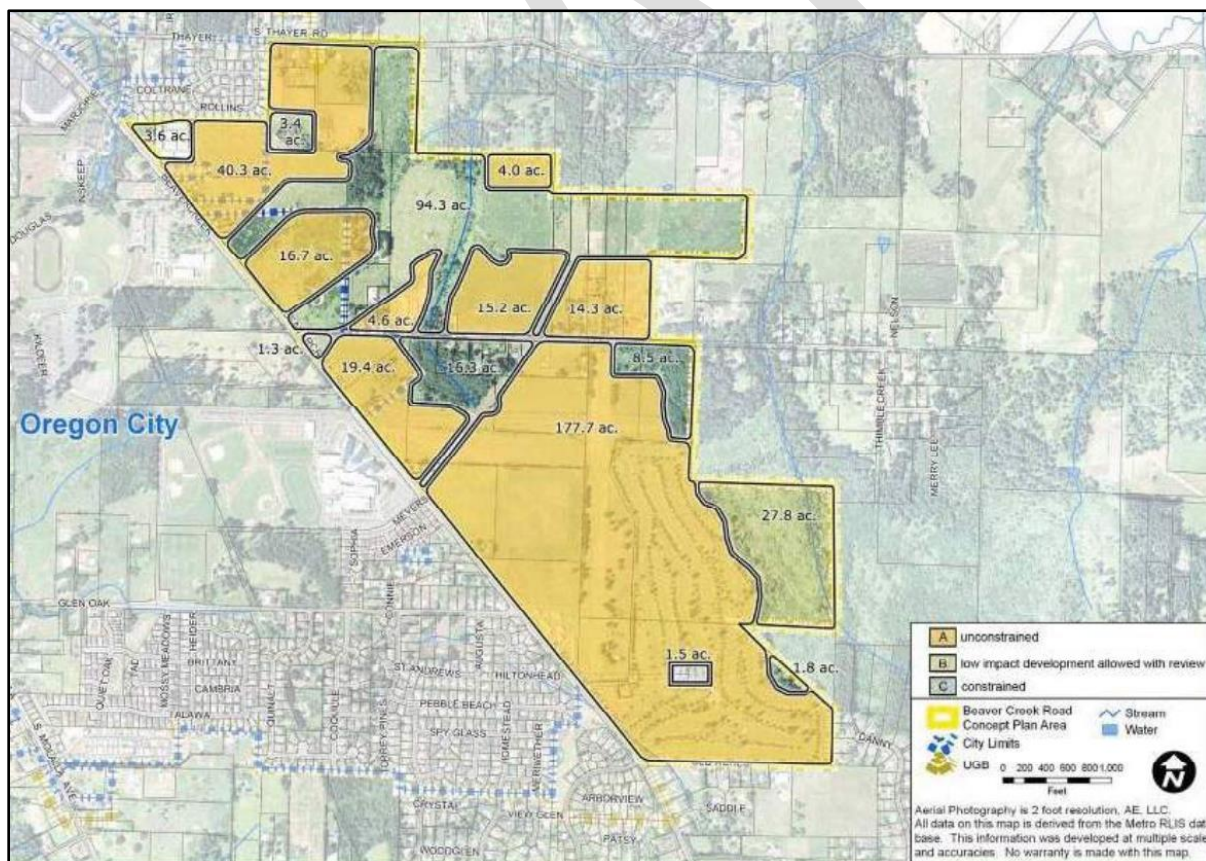
- **Lift station and sewer pumping.** A sanitary lift station will be constructed over the wet well to pump wastewater into a westerly direction. Wastewater will be discharged into a gravity sewer that flows west to the trunk sewer located on Beavercreek Road.
- **Infrastructure features.** A utility bridge is anticipated to carry both the pressure pipe and gravity sewer pipe over Thimble Creek. Road access to the pump station will run parallel to Thimble Creek for maintenance and operational access.
- **Southern half of the sewer system.** The majority of the southern half will utilize a gravity sanitary sewer system. This gravity sewer will convey wastewater to the existing 2,400-foot trunk sewer in Beavercreek Road. The trunk sewer currently extends from OR213 to approximately 800 feet south of Marjorie Lane.
- **Construction locations.** The sewer system can be constructed within planned roadways and existing right-of-way on Beavercreek Road. Approximately 900 feet of the system will be built along the current alignment of Loder Road for connection to the trunk sewer. The circulation plan includes a realignment of Loder Road, which would require a sewer easement across the future parcel containing the current alignment.

- **Elevation considerations.** An important elevation benchmark is set at 490 feet (Mean Sea Level) within the southern half of the concept area. Developments and roadways constructed above this elevation are expected to allow for gravity sewer service. Land uses requiring sanitary sewer service located below 490 feet may need individual pump stations and pressurized services.
- **Financial estimates.** The estimated total capital cost for sewer infrastructure is approximately \$4,400,000, in addition it \$2.3 million in capital costs to extend the sanitary sewers to the concept plan area. All estimates are based on 2003 dollars and will need adjustments for the actual year of construction.

C. Environmental Constraints

The Thimble Creek Concept Plan included an assessment of environmental constraints in the plan area. These include creeks and floodways, wetlands, and steep slopes. This assessment informed the Plan's recommendations on where open space corridors and natural areas might be preserved in the study area (Figure 2.14). The other major factor contributing to this pattern was the location of the power line easements.

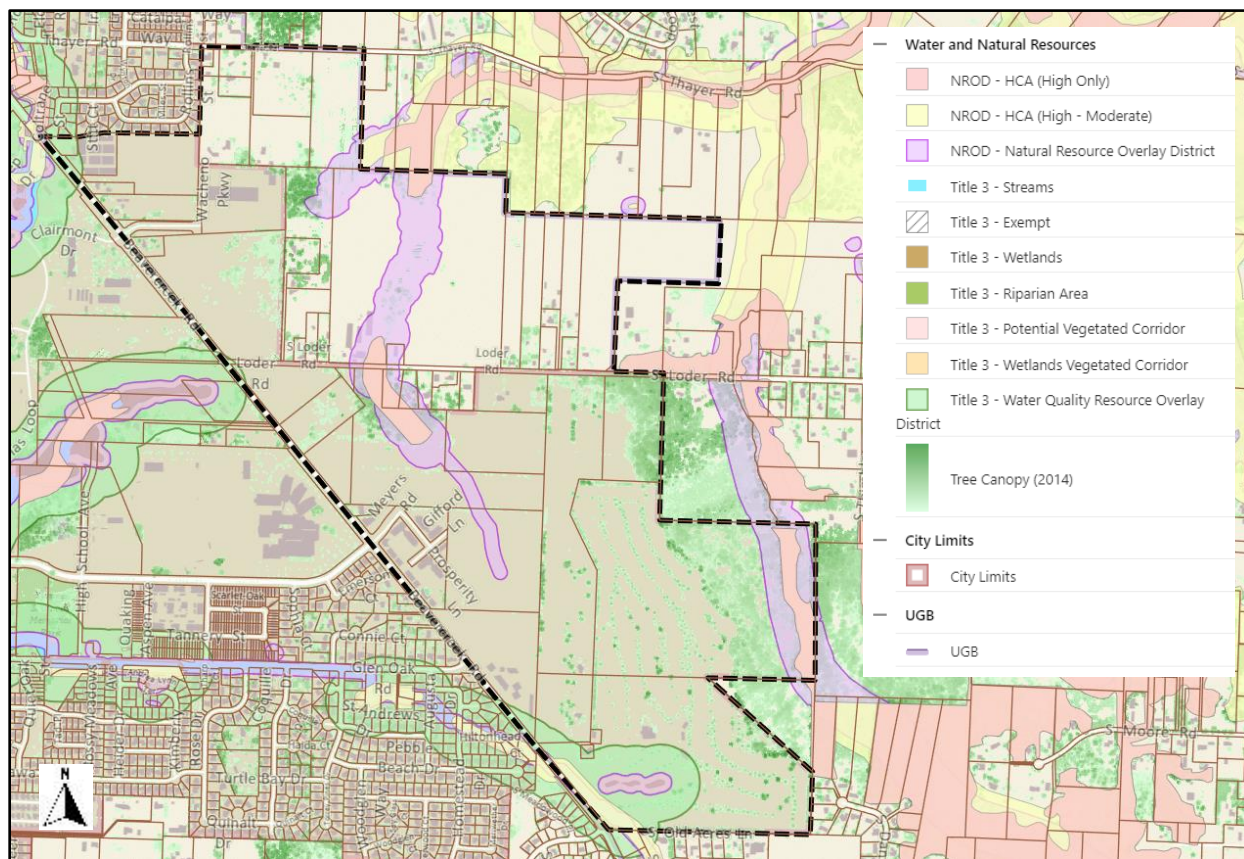
FIGURE 2.14: CONSTRAINED AND BUILDABLE LANDS, THIMBLE CREEK CONCEPT PLAN AREA



Source: Thimble Creek Concept Plan

The greatest challenges are the presence of creeks and their accompanying riparian corridors. There is also potential for wetlands across the area that might require remediation. Remediation can be accomplished on site and may be a good use for easements that otherwise preclude development. Off-site mitigation is usually very expensive, with diminishing credits available from regional wetland banks. If off-site remediation is required, it could render the development of some parcels economically infeasible.

FIGURE 2.15: WATER AND NATURAL RESOURCES, STUDY AREA



Source: City of Oregon City, HHPR

III. Employment Trends

A. Thimble Creek Concept Plan Area Employment Capacity

The following table summarizes the findings of the Concept Plan regarding the employment capacity of the Thimble Creek Plan Area. The employment forecast is in keeping with Metro findings at the time the area was included in the UGB and estimates in the Metro Urban Growth Report for the relevant Transportation Analysis Zones (TAZ).

FIGURE 3.1: THIMBLE CREEK CONCEPT PLAN EMPLOYMENT FORECAST (2020)

Land Use Category	Gross Acres	Net Acres	FAR/ Acre	SF/ Job	# of Jobs	% of Jobs
North Employment Campus	149	127	0.3	450	3,678	73%
Mixed Employment Village	26	21	0.44	350	1,139	22%
Main Street	10	8	0.44	350	219	4%
Employment Areas Totals:	185	156			5,036	99%
Mixed Use Neighborhoods	77	62			36	1%
All Areas Totals:	262	218			5,072	100%

Source: Thimble Creek Concept Plan, pg. 42. See Plan for methodology and assumptions.

The forecast calls for an estimated 5,000 new jobs created in the area upon build-out, with nearly 75% of these jobs to be found in the North Employment Campus subarea. An additional 22% are forecast for the mixed employment village.

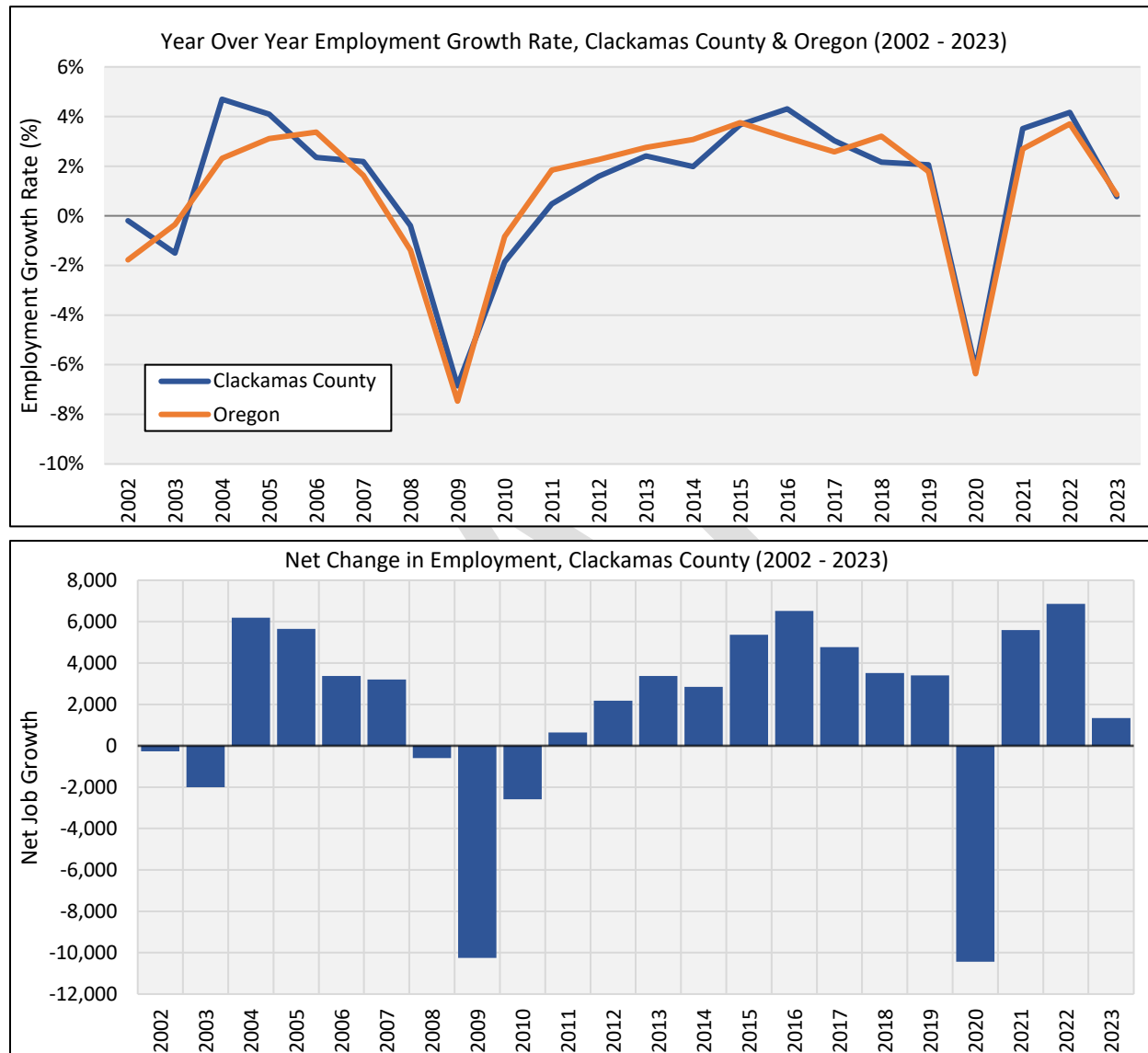
This is an estimate of employment capacity based on the carrying capacity of the land with the proper zoning designations. It is not a demand-side projection of jobs growth, nor does it reflect other market conditions that may help, or hamper development as discussed in this report.

B. Clackamas County Employment Trends

Clackamas County experienced slower employment growth relative to the state for most of the 2010's. Since 2010, Clackamas County has added a net of roughly 30,000 jobs. Following the '08 – '09 recession, the county experienced mounting job losses until 2011 while the state saw positive employment growth in 2010. During the following decade of economic expansion, the county's annual employment growth peaked at over 4% in 2016 before decelerating up until the COVID-19 downturn.

During the downturn, Clackamas County experienced a negative shock to employment similar in magnitude to the state, losing about 6% of its employment base between 2019 and 2020 (Figure 3.2). In 2020, the county lost roughly 10,400 jobs but recovered that employment over the next two years.

FIGURE 3.2: EMPLOYMENT GROWTH TRENDS, CLACKAMAS COUNTY & OREGON (2002 – 2023)

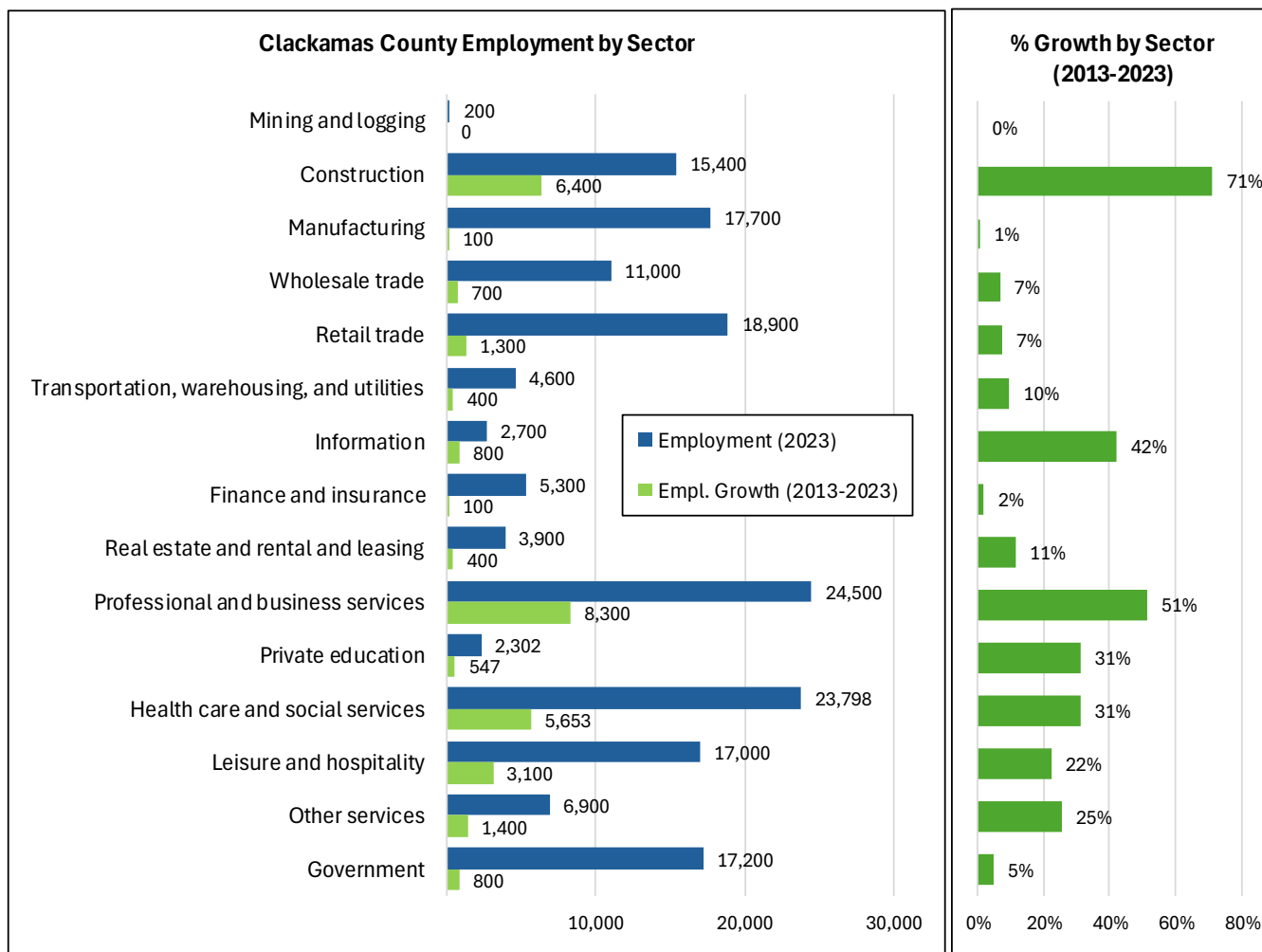


Source: Oregon Employment Department, JOHNSON ECONOMICS

Figure 3.3 presents the estimated employment levels in Clackamas County by industry sector, and growth experienced between 2013-2023 (the most recent annual data available.) As of 2023, the county had an estimated 171,000 total jobs, growth of roughly 30,000 jobs (+21%) over the prior decade.

The largest sectors in the county by employment are professional and business services, health care and social services, and retail trade. Other well represented sectors are manufacturing, government, leisure and hospitality (tourism-related), and government.

FIGURE 3.3: EMPLOYMENT PROFILE BY SECTOR, CLACKAMAS COUNTY (2013 – 2023)



Source: Oregon Employment Department, JOHNSON ECONOMICS

The sectors that experienced the greatest growth in terms of job numbers were professional services, construction, health care, and tourism related.

C. State and National Industrial Employment Trends

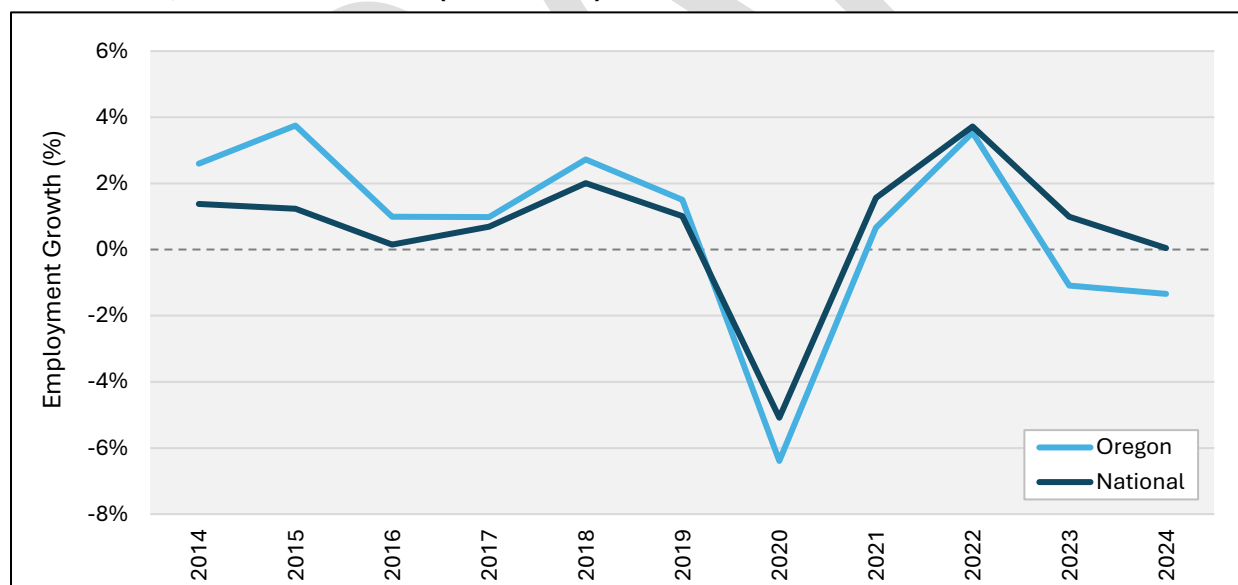
Employment in the manufacturing and “transportation, warehousing, and utilities” (TWU) sectors are closely associated with demand for industrial real estate. This section compares employment trends in these sectors on a national and statewide level.

In the manufacturing sector, employment growth in the country and in Oregon has followed a similar trend in the last decade. From 2014 to 2019, Oregon's manufacturing sector outpaced the country in terms of employment growth, growing at an average of 2.1% annually as compared to the country's 1.1% annually.

During this period, Oregon's annual manufacturing employment growth peaked in 2015 when it grew by roughly 6,750 employees (+3.75%), while the country's growth peaked in 2018 with growth of 2%. However, this trend took a turn in 2020 when Oregon's manufacturing employment base took a larger proportional hit (-6.4%) as compared to the country (-5.1%) due to the COVID-19 economic downturn.

Since then, the manufacturing sector has performed much better nationally than in Oregon. As of 2024, the country has regained the estimated 652,000 manufacturing jobs lost during the pandemic while the state has only regained roughly a quarter of the roughly 12,700 manufacturing jobs lost. From 2021 to 2024 the country has averaged a manufacturing employment growth of roughly 1.6% annually compared to Oregon's 0.5% annually.

**FIGURE 3.4: MANUFACTURING SECTOR EMPLOYMENT GROWTH
ANNUAL RATE, OREGON & NATIONAL (2014 – 2024)**



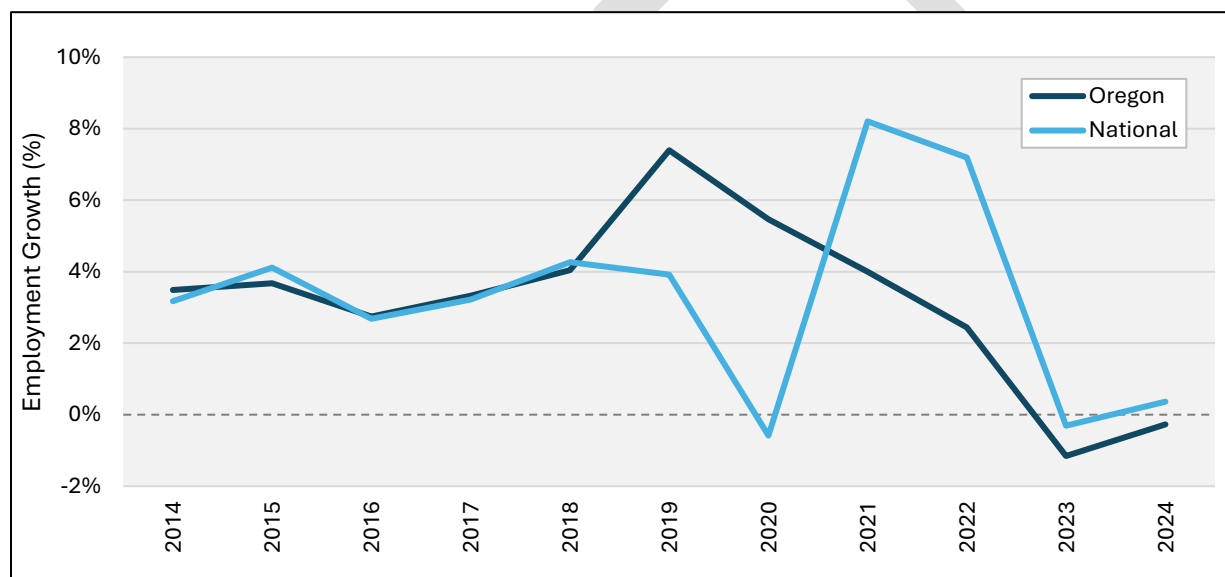
Source: Current Employment Estimates, BLS, Johnson Economics

As for employment in the “transportation, warehousing, and utilities” (TWU) sector, the national and state trends have diverged from each other in recent years. From 2014 to 2018, employment growth in the TWU sector was similar nationally and in Oregon growing at an average of 3.5% annually. This comes out to roughly a gain of 5,700 TWU jobs in Oregon. Going into 2019, Oregon's TWU employment growth accelerated considerably (+7.5%) while TWU employment nationally

accelerated only mildly (+4%). Oregon's TWU employment showed resilience during the 2020 COVID-19 downturn, continuing to grow by roughly 3,850 jobs (+5.5%) while the nation lost roughly 36,000 TWU jobs (-0.6%).

After the downturn, Oregon's TWU employment growth decelerated. Based on the data available for 2023 and 2024, Oregon experienced a net loss of TWU jobs both years, losing an estimated 1,100 jobs over those two years. Nevertheless, warehousing and distribution is widely understood to be in a secular growth trend due to the continued growth of on-line commerce and just-in-time supply chains. Warehousing and distribution have been a major user of industrial space and source of demand for industrial land over the past decade.

FIGURE 3.5: TRANSPORTATION, WAREHOUSING, AND UTILITIES SECTOR EMPLOYMENT GROWTH ANNUAL RATE OREGON & NATIONAL (2014 – 2024)



Source: Current Employment Estimates, BLS, Johnson Economics

Overall, despite recent weakening trends Oregon's industrial employment base has displayed resilience in the last decade. With continued industrial development in the state, employment in the relevant sectors is projected to continue to grow.

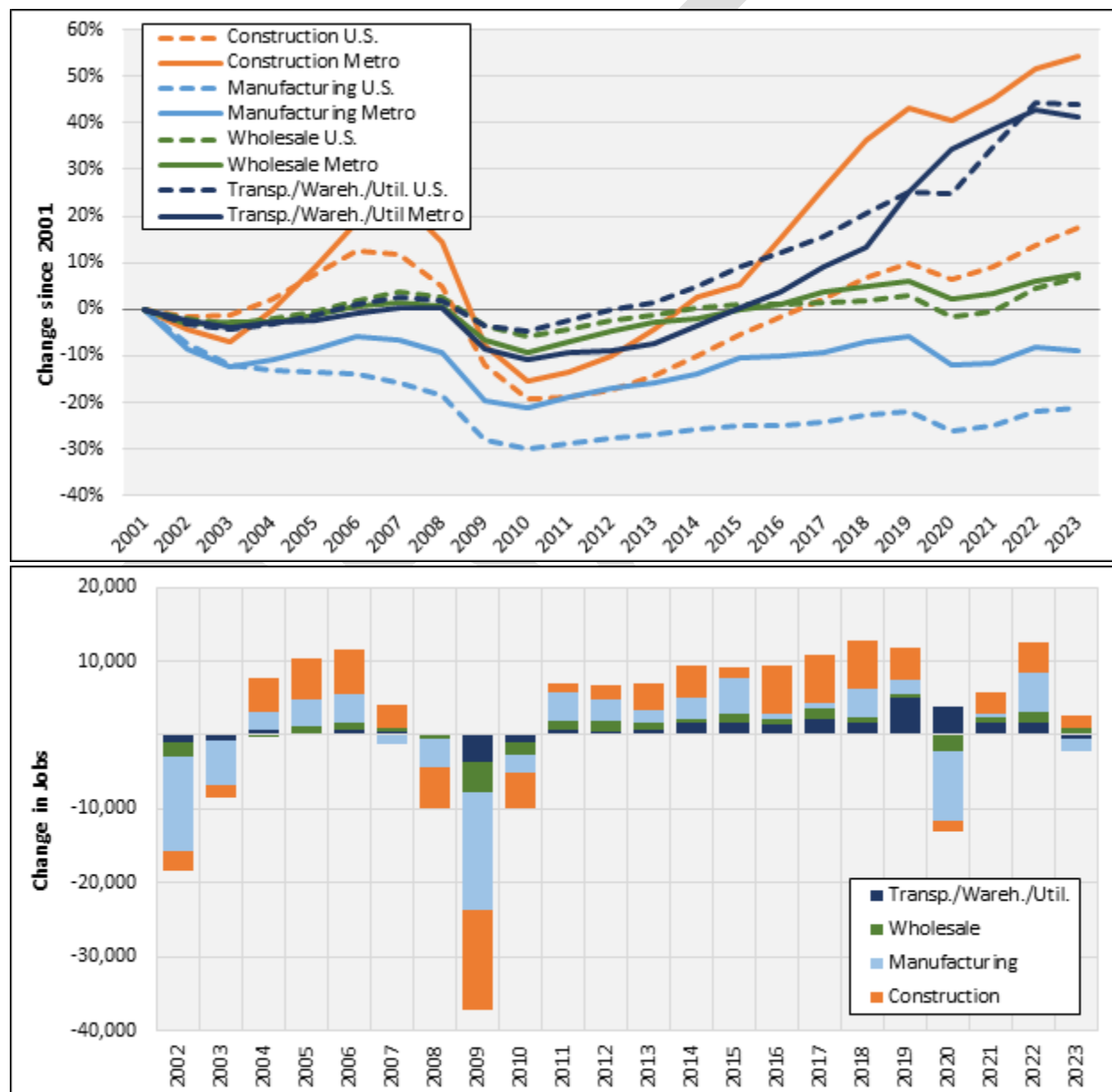
D. Regional Industrial Employment Trends

Given the size of the Thimble Creek employment area, and the shortage of competitive industrial lands available in the region, the study area should have the potential to attract regional demand for economic development. For this analysis, a market area that includes the combined Portland metro area and Salem/Keizer metro area was used as a representation for regional trends.

Among the four industrial sectors that dominate the market for industrial space, construction has seen the strongest job growth in the Portland-Salem region in recent years – considerably stronger than on the national level. Transportation and warehousing – which includes distribution and fulfillment centers – has also seen strong growth.

Over the past 10 years, construction has added 3,600 jobs (4.9%) per year on average in the region, followed by 2,000 jobs (4.3%) per year in transportation and warehousing, 1,000 jobs (0.8%) per year in manufacturing, and 600 jobs (1.1%) per year in wholesale.

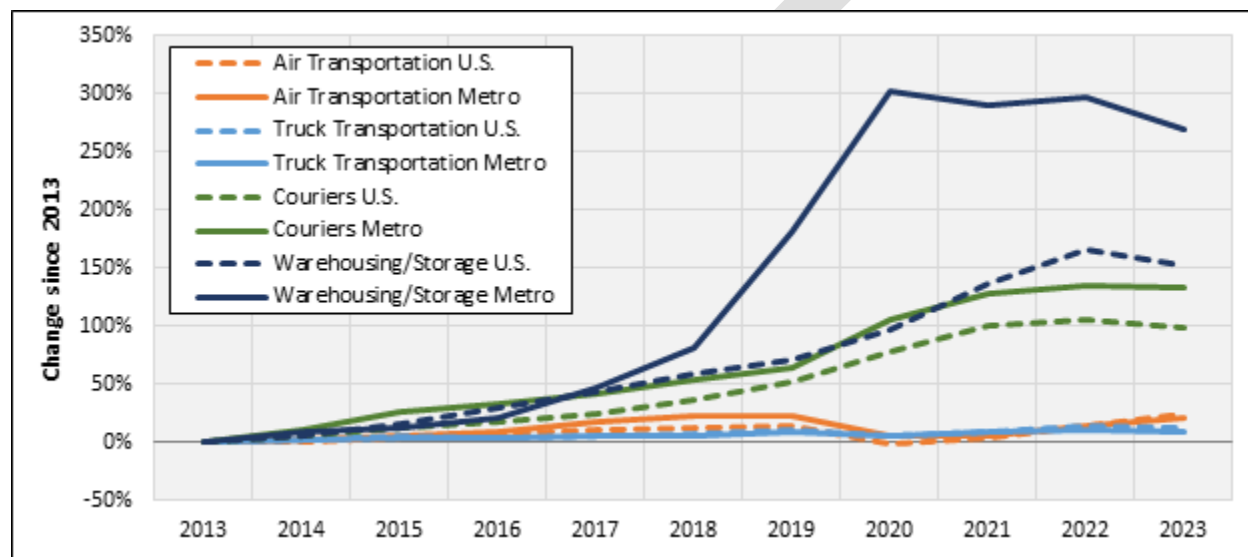
FIGURE 3.6: EMPLOYMENT GROWTH BY INDUSTRIAL SECTOR, PORTLAND -SALEM METRO VS. U.S. (2001-23)



Source: Oregon Employment Department, U.S. Bureau of Labor Statistics, Johnson Economics

If we drill down into sub-industries within the transportation and warehousing sector (data not available for Salem metro), air and truck transportation have seen only modest growth over the past 10 years. Warehousing/storage has seen the strongest growth, nearly quadrupling in size between 2013 and 2020, adding 8,600 jobs. The growth, which was largely due to Amazon's new facilities in the region, was almost twice the national growth over this period. The industry lost 900 jobs in 2023, possibly due to automation. Couriers, most prominently UPS and FedEx, have also seen strong expansion, more than doubling the employment over the past 10 years.

FIGURE 3.7: EMP. GROWTH BY TRANSPORT./WAREHOUSING SECTOR, PORTLAND METRO (2013-23)



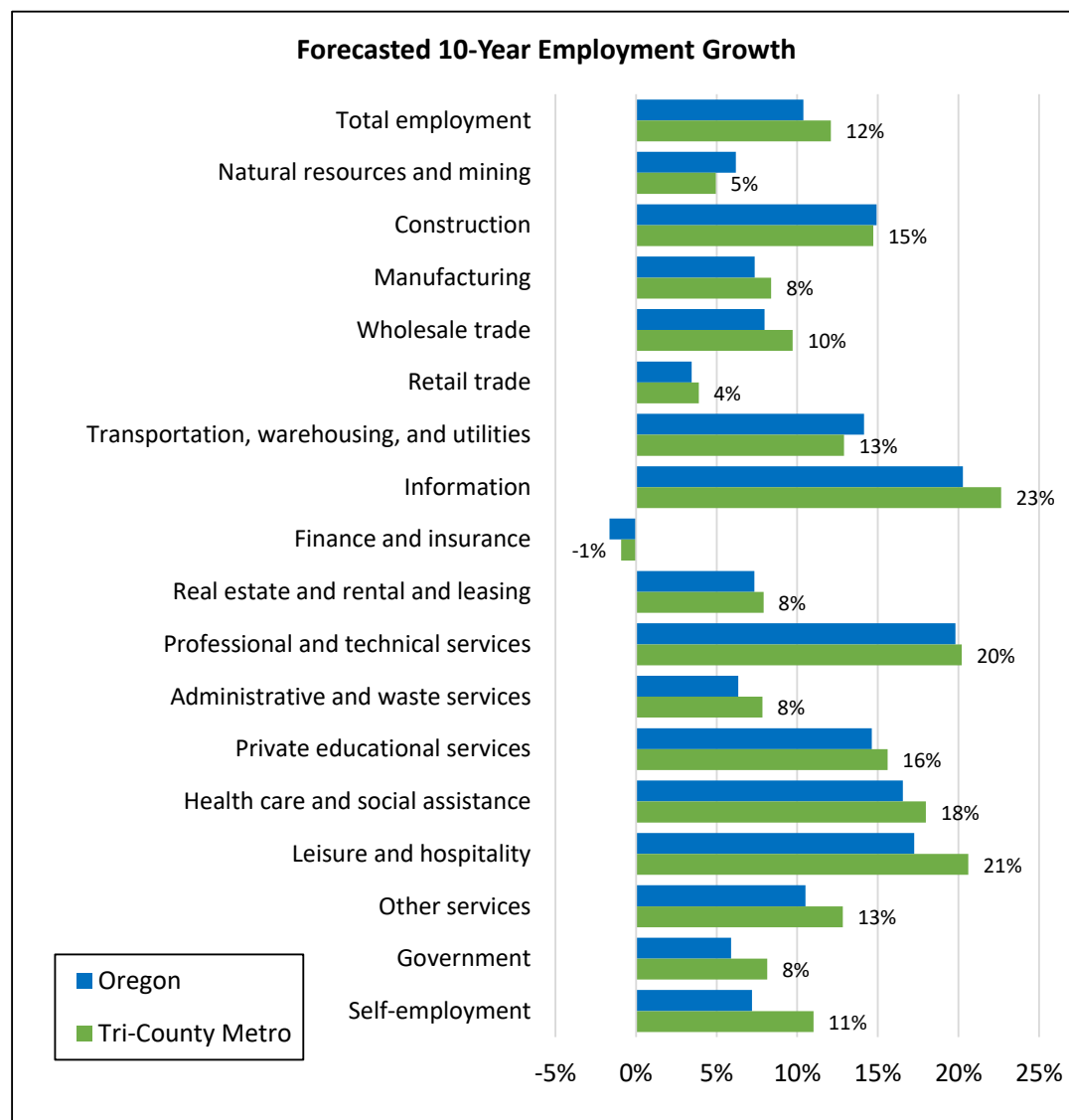
Source: Oregon Employment Department, U.S. Bureau of Labor Statistics, Johnson Economics

D. Regional Employment Growth Forecast

The State of Oregon produces employment forecasts by sector at the broader regional level, which groups Clackamas, Multnomah, and Washington Counties together into one Portland Tri-County region. The most recent forecast anticipates a gain of 127,500 jobs from 2022 through 2032, reflecting growth of 12%, or an average annual rate of about 1.1% during the period. This region has historically seen strong growth, and the employment level has fully recovered from the COVID pandemic.

In this region, the industries with the fastest growth rates are projected to be information (tech), leisure and hospitality (tourism related), professional services, and health care. Only the financial and insurance sector is projected to lose employment in the coming decade.

FIGURE 3.8: PROJECTED EMPLOYMENT GROWTH BY SECTOR
TRI-COUNTY METRO AREA & OREGON (2022 – 2032)

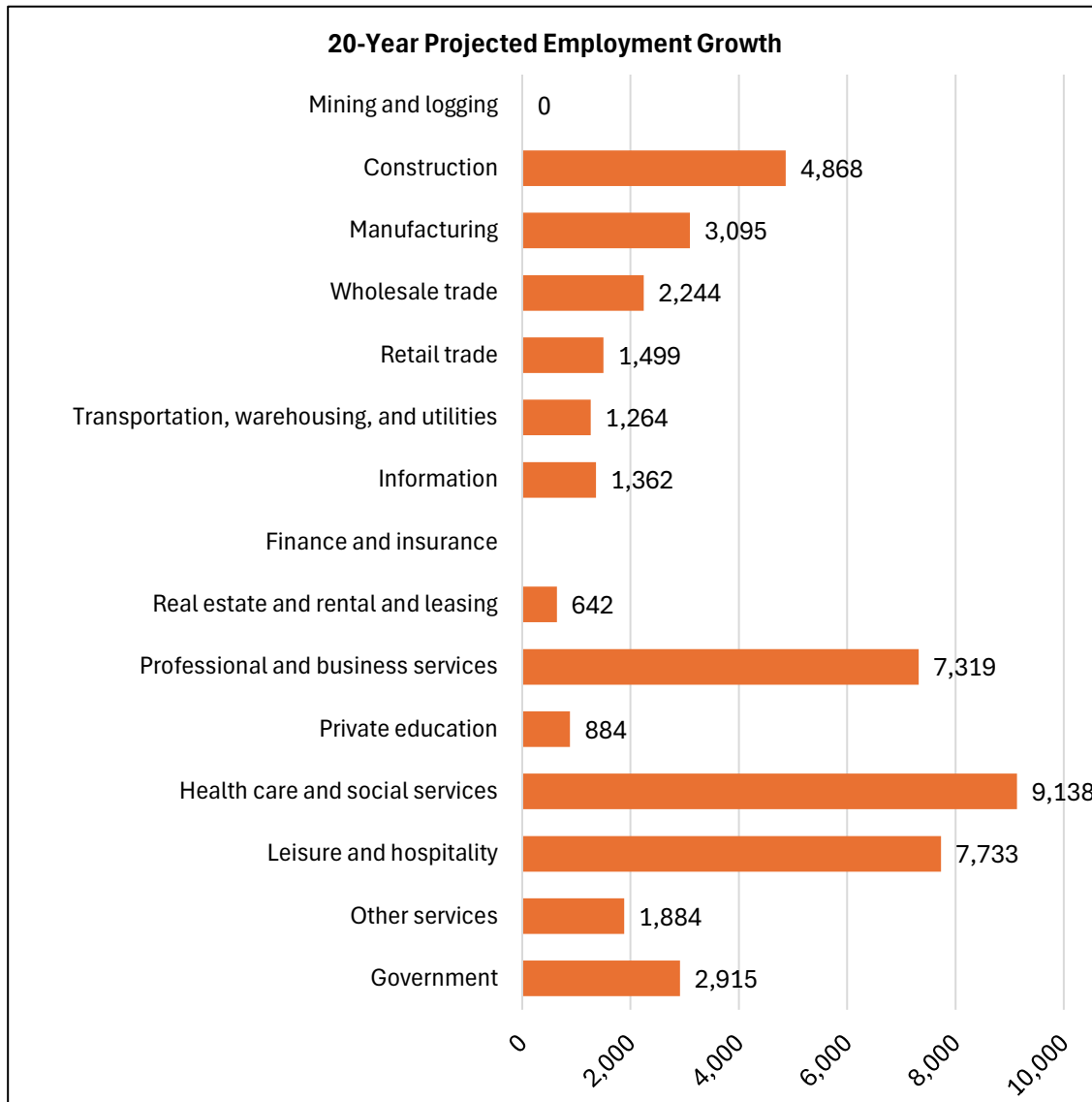


Source: Oregon Employment Department, Workforce and Economic Research Division

Industrial land use sectors include manufacturing (8%), TWU (13%), construction (15%), natural resources (5%), and some types of information and technical services which can take place in a flex space, or mixed office and industrial environment.

Figure 3.9 presents a projection of Clackamas County employment growth, applying the projected growth rates for the tri-county metro area, as presented above (Figure 3.5). If the county experiences similar sectoral growth rates, applied to current employment levels by sector, it amounts to a forecast of roughly 45,000 new jobs countywide, or 26% growth. This would amount to 1.2% annual growth which is in keeping with the population growth rate forecasted over this same period (PSU).

FIGURE 3.9: PROJECTED 20-YEAR EMPLOYMENT GROWTH BY SECTOR
CLACKAMAS COUNTY (2023 – 2043)



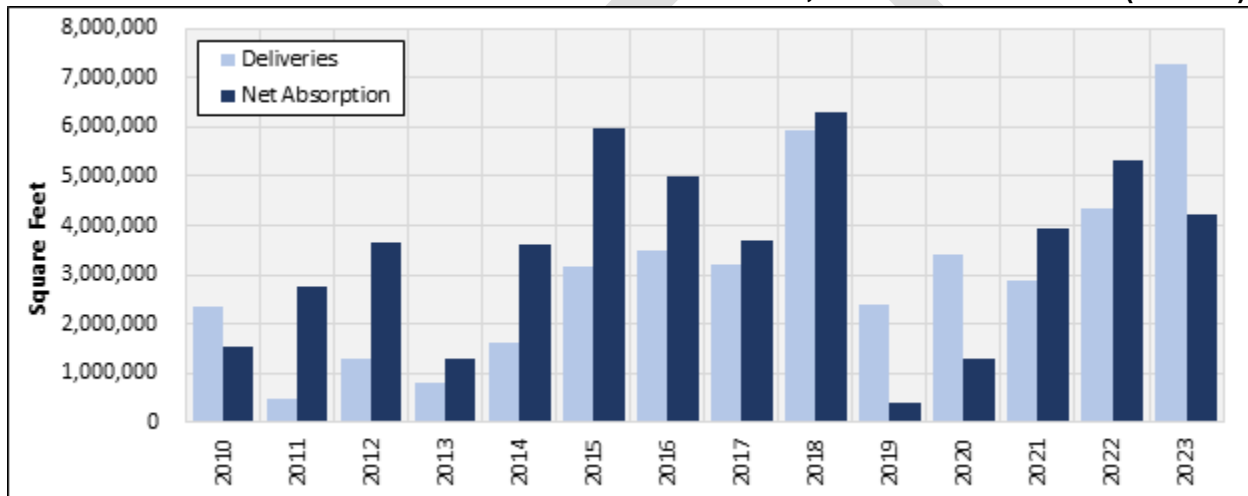
Source: Oregon Employment Department, Johnson Economics

IV. Industrial Real Estate Market Trends

A. Absorption and New Supply

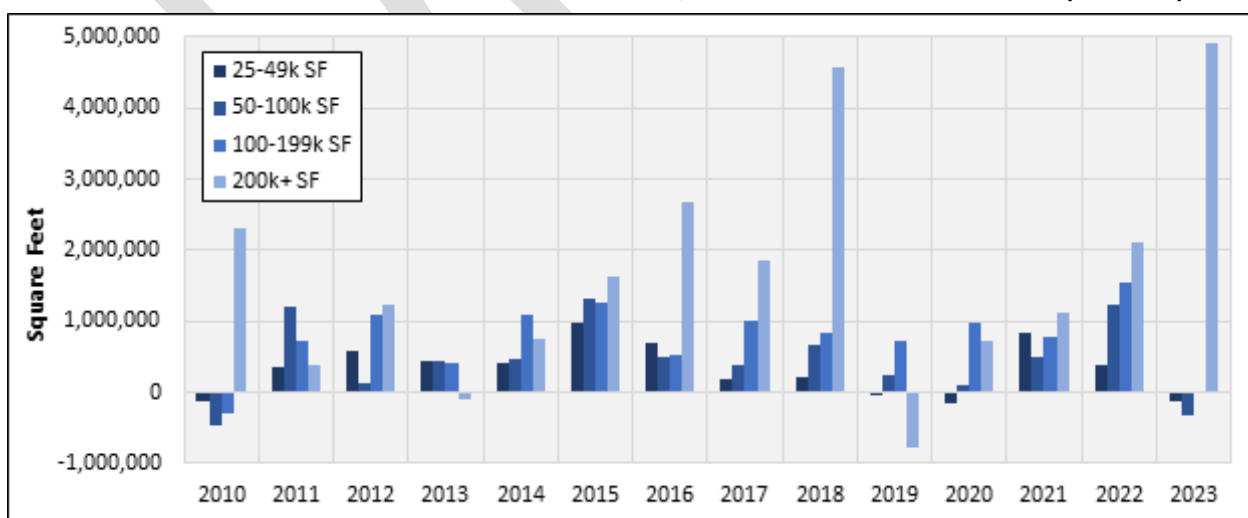
In the Portland-Salem region, net absorption of industrial space exceeded new deliveries over the last decade, as vacancies from the 2008-09 recession were absorbed. Over the decade, 34 million square feet were absorbed, while 25 million square feet of new space was delivered. This dynamic changed temporarily in 2019 and 2020, due to a shift to owner-user buildings (esp. Daimler headquarters) and COVID. Absorption exceeded deliveries again in 2021 and 2022, with a total of 9.3 million square feet absorbed compared to 7.2 million delivered. In 2023, a record 7.3 million square feet were delivered, while 4.2 million were absorbed.

FIGURE 4.1: NET ABSORPTION VS. NEW SUPPLY OF INDUSTRIAL SPACE, PORTLAND-SALEM METRO (2010-23)



Source: CoStar, Johnson Economics

FIGURE 4.2: NET ABSORPTION BY BUILDING SIZE AND YEAR, PORTLAND-SALEM METRO AREA (2010-23)

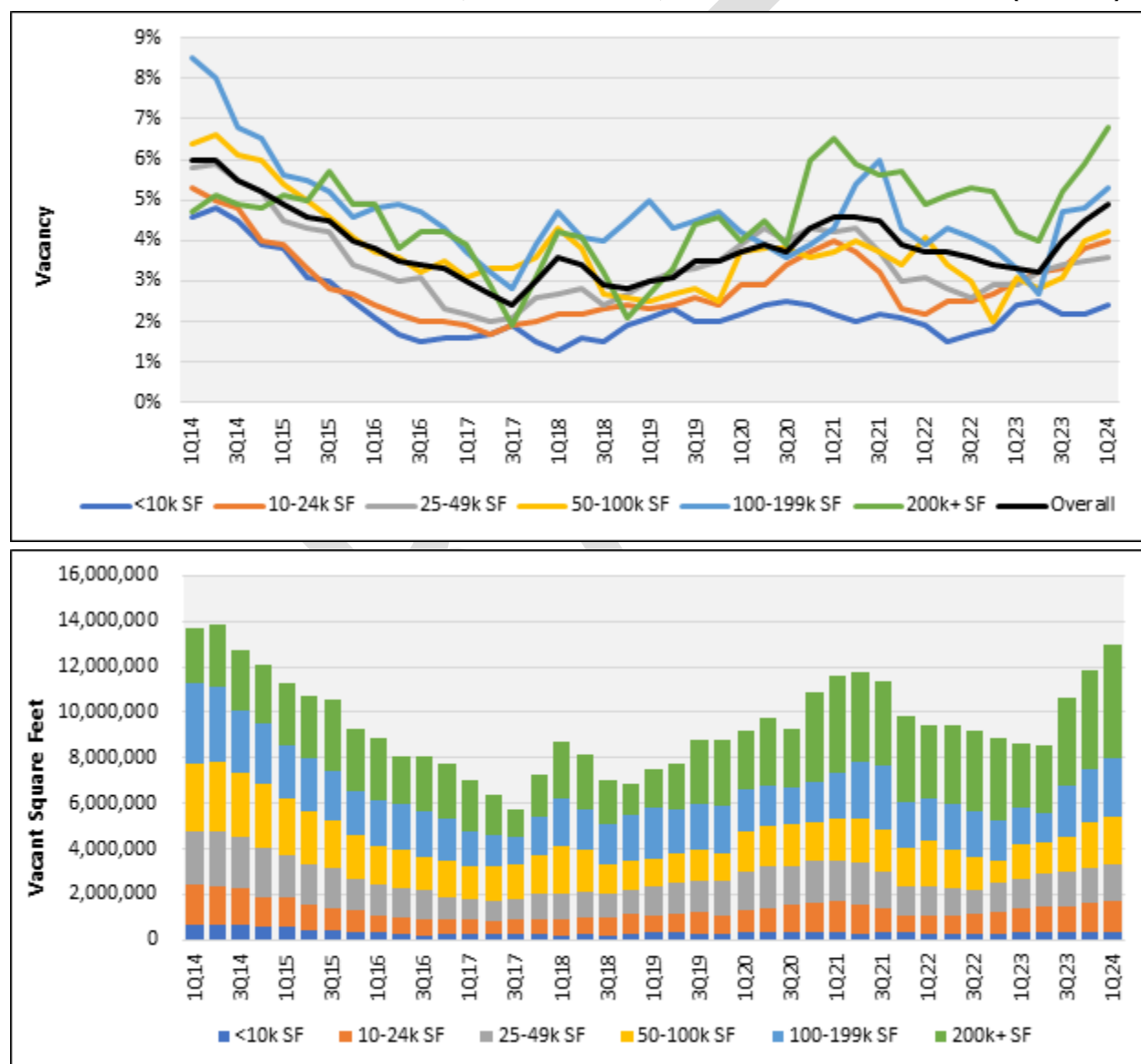


Source: CoStar, Johnson Economics

B. Vacancy Trends

Regionally, the industrial vacancy rate trended higher over the 2017-20 period, then fell in 2021-22, before climbing again since mid-2023. The current rate is 5%, which remains low in a long-term historical context. The post-COVID decline was likely a result of the accelerated shift to online retail during COVID, which increased the demand for fulfillment and distribution space. However, the large increase in deliveries in 2023 caused the vacancy rate to climb. The average vacancy rate over the past 10 years is 3.9%.

FIGURE 4.3: INDUSTRIAL VACANCY TRENDS, BY BUILDING SIZE, PORTLAND-SALEM METRO AREA (2013-23)



Source: CoStar, Johnson Economics

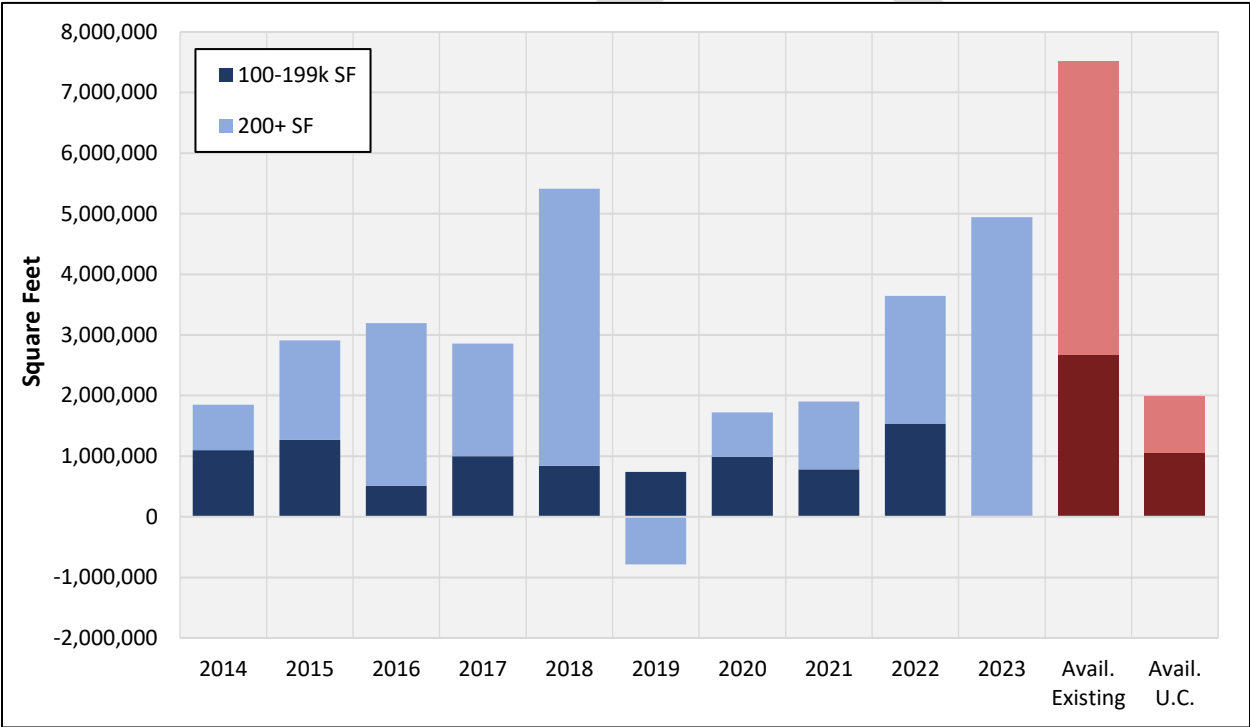
Reflecting that most of the new supply has come within larger developments, vacancy rates have generally been higher for large buildings than for small buildings over the past 10 years. This is also

the case currently. Buildings with more than 200,000 square feet are 6.8% vacant, while buildings with less than 10,000 square feet are 2.4% vacant. Buildings with more than 100,000 square feet currently have 7.6 million square feet of vacant space, representing 59% of all vacant space. In comparison, the average over the past 10 years is 52%.

C. Modern Space Availability

Among buildings built over the past 10 years with more than 100,000 square feet, the annual net absorption has averaged 2.4 million square feet regionally over the past five years. Currently, only 7.5 million square feet are available in existing buildings, while another 2.0 million are available in buildings under construction. Together, the available space represents nearly four years of absorption at the five-year average rate.

FIGURE 4.4: NET ABSORPTION AND AVAILABILITY BY BLDG. SIZE, BUILT 2014+, PORTLAND-SALEM AREA



Source: CoStar, Johnson Economics

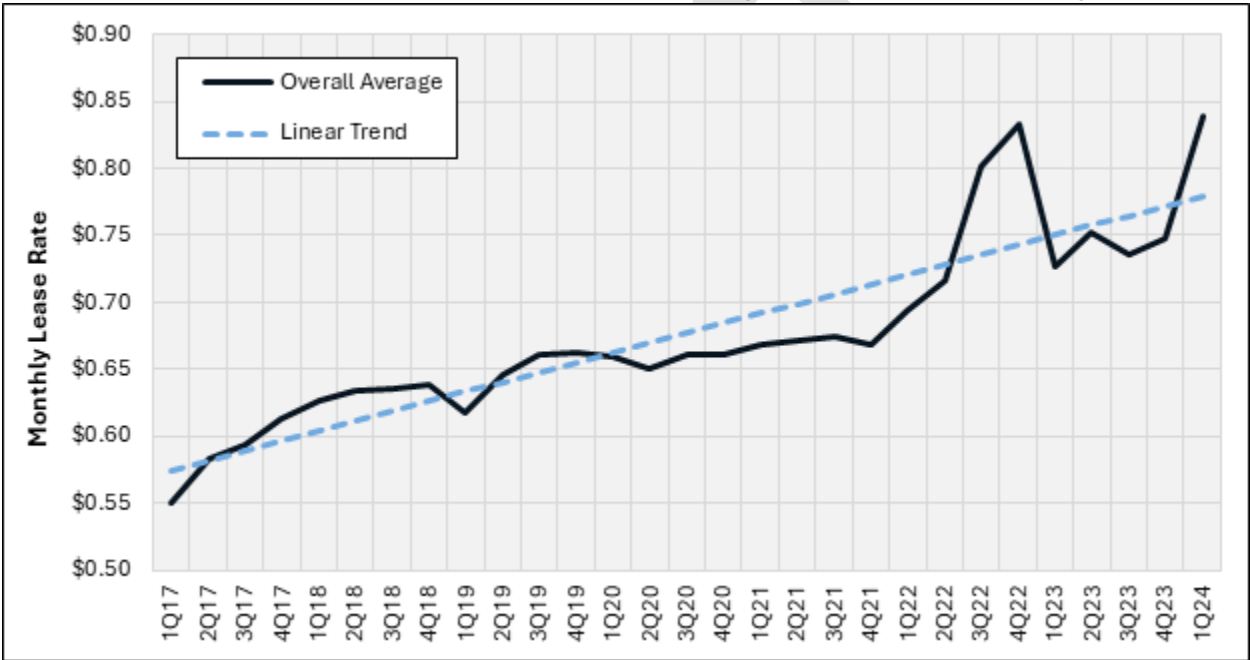
D. Lease Rates

Lease rates in the Portland-Salem region have nearly doubled over the past 10 years, averaging 6.8% annual growth. The rent growth was very strong in the last half of the last decade, before slowing during the early phase of COVID. As the economy re-opened and adjusted to the post-COVID world, pent-up demand led to strong rent growth again in 2021-22, before levelling off in 2023.

There is significant fluctuation in the average lease rate from quarter to quarter, depending on the amount and character of available space. The year-over-year rent growth in 1Q24 is 15%. However, in 4Q23, the year-over-year growth was -10%. Similarly, estimates of historical rent growth over longer periods can vary significantly depending on the average rate at the beginning and end of the period.

The following chart includes a linear trendline since 2017, which smooths out short-term fluctuations as well as the slump early in COVID and the spike later in the pandemic. The trendline indicates a current average rent level of \$0.78 and annual rent growth of 3.9%. Lease rates fell below the trend during the first part of COVID, then surged above trend in 2022.

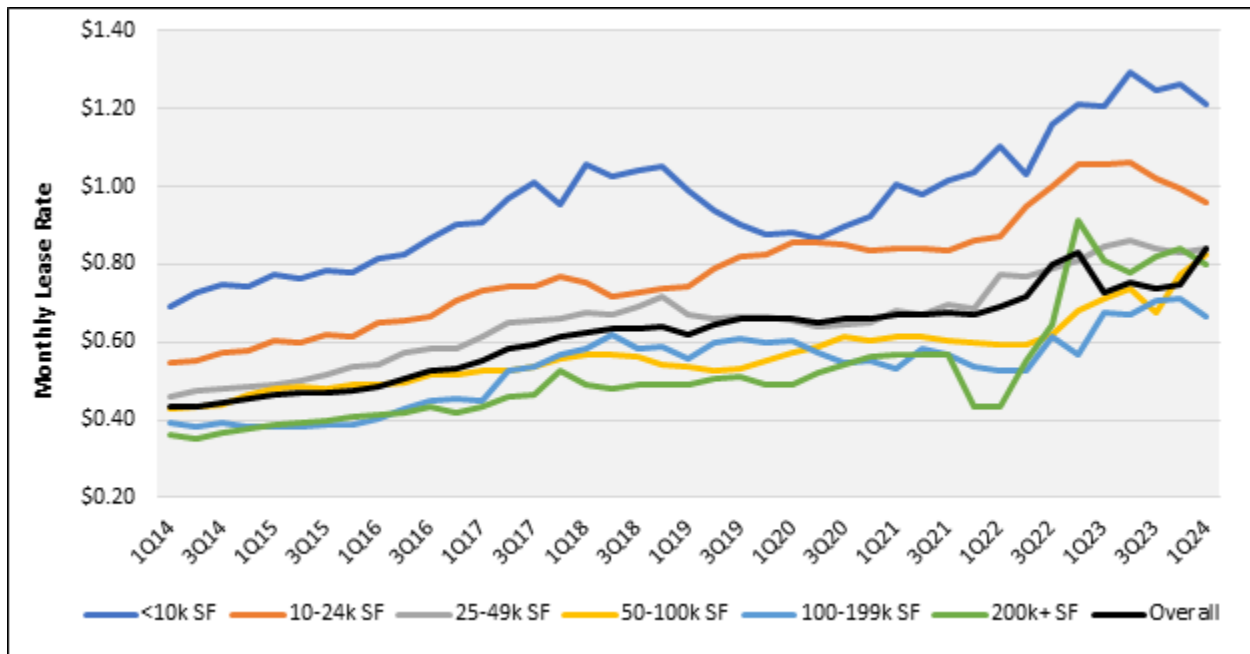
FIGURE 4.5: AVERAGE MONTHLY LEASE RATE AND LINEAR TREND (NNN EQUIVALENT, 2017-24)



Source: CoStar, Johnson Economics

The following chart compares average rent levels across different building sizes. There are only minor differences between size categories in terms of rent growth over the past 10 years. However, the largest buildings (200,000+ SF) have seen the strongest gains over this period, averaging 8.3% annual growth. Buildings larger than 200,000 square feet currently average a monthly rate of \$0.80 (NNN), compared to an overall average of \$0.84. Again, there is significant fluctuation in the average lease rate from quarter to quarter, and the 1Q24 average is above trend.

FIGURE 4.6: AVERAGE MONTHLY LEASE RATE (NNN EQUIVALENT), BY BUILDING SIZE (2014-24)



Source: CoStar, Johnson Economics

V. Industrial Space Demand Analysis

In this section we develop demand projections for industrial space in the Portland-Salem Metro Area over the coming five years, on a total basis and by size segment.

A. Methodology

New demand for industrial space is largely a function of employment growth in sectors that occupy industrial space. Our demand projections are therefore largely based on employment forecasts.

The methodology for forecasting new demand for industrial space consists of the following steps: As the starting point, we begin with recent employment estimates by industry regionwide. To this employment base, we apply industry-specific growth rates for the region. We rely in part on official forecasts by the Oregon Employment Department (OED) for the 2022-32 period. However, OED forecasts tend to be conservative in nature and have a history of underestimating job growth. We therefore adjust these forecasts in light of historical trends in the region.

After applying the assumed growth rates to 2024 employment levels, we estimate the employment growth in sectors that utilize industrial space based on typical percentages of sectoral employment taking place in industrial buildings. The anticipated employment growth is then converted to space demand based on typical rates of square footage per employee in each industry. These assumptions are based on estimates developed by a technical panel for the 2014 Metro Urban Growth Report. Utilization and density rates differ across geographic areas, as different areas attract different users (e.g., distribution, manufacturing, e-commerce fulfillment).

B. Industrial Employment Growth and Space Demand

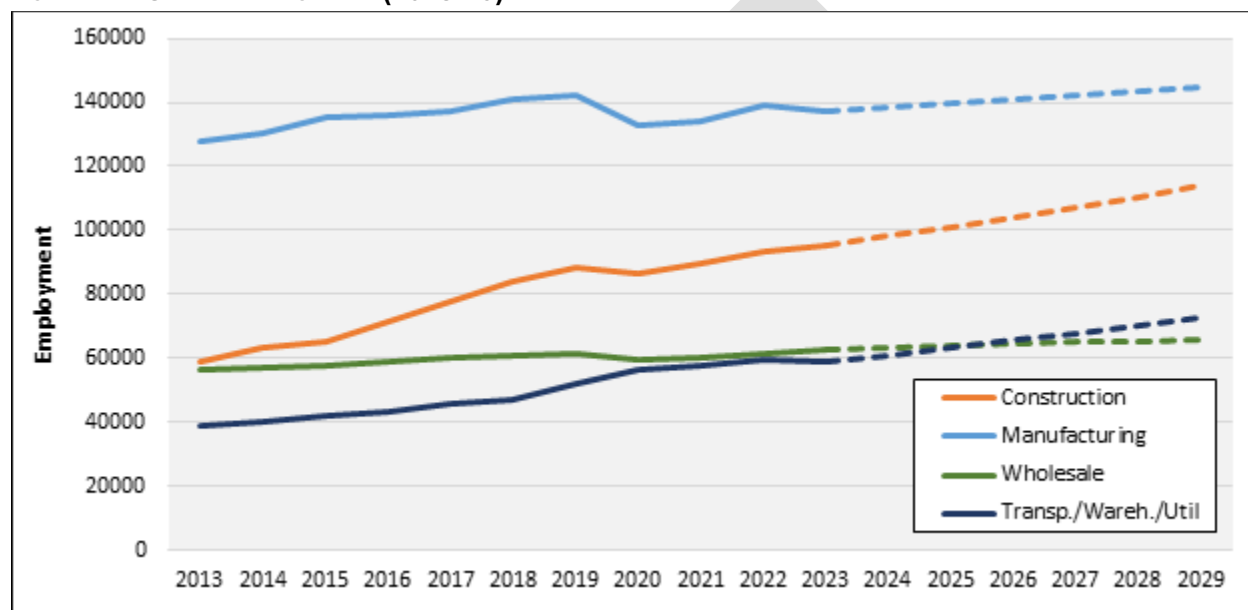
The following figure displays historical average growth rates as well as OED projections and our assumptions for the coming five years in the Portland-Salem region, in a low- and high-growth scenario as well as in the baseline scenario. The assumed growth rates are generally higher than OED projections but lower than the recent historical growth. Applying the assumed rates to 2024 employment indicates a total increase of 35,000 industrial jobs over a five-year period under the baseline scenario. The low-growth scenario indicates an increase of 20,000 jobs, while the high-growth scenario indicates growth of 50,000 jobs.

FIGURE 5.1: PROJECTED EMPLOYMENT GROWTH, PORTLAND -SALEM METRO AREA (2024-29)

INDUSTRY		GROWTH ASSUMPTIONS						PROJECTIONS			
		Historical & Projected AAGR						Base	Jan 2029 Projections		
Industry	NAICS	2013-23	2018-23	OED Proj.	Low	Baseline	High	Jan 2024	Low	Baseline	High
Construction	23	4.9%	2.6%	1.4%	1.9%	3.0%	4.1%	89,200	97,798	103,407	109,271
Manufacturing	31-33	0.8%	-0.5%	0.8%	0.4%	0.9%	1.4%	134,900	137,824	141,081	144,399
Wholesale Trade	42	1.1%	0.5%	0.9%	0.6%	0.9%	1.2%	60,500	62,400	63,368	64,347
Transp., Wareh., Util.	22,48-49	4.3%	4.5%	1.3%	2.1%	3.6%	5.1%	58,300	64,767	69,577	74,669
Total Industrial Employment		2.3%	1.2%	1.0%	1.1%	1.9%	2.7%	342,900	362,789	377,433	392,686

Source: Oregon Employment Department, Johnson Economics

**FIGURE 5.2: PAST AND PROJECTED EMPLOYMENT, BASELINE SCENARIO
PORTLAND-SALEM METRO AREA (2013-29)**



Source: Oregon Employment Department, Johnson Economics

Figure 5.2 displays projected employment in the four industrial sectors in the baseline scenario. Construction is expected to see the strongest growth, followed by Transportation/Warehousing/Utilities. The latter, which includes e-commerce fulfillment centers, is expected to continue to benefit from the ongoing shift from brick-and-mortar retail to e-commerce. Manufacturing and wholesale are projected to see more modest growth.

Space Demand Growth

To these employment projections we apply typical industry ratios for employment within industrial buildings and square feet per employee. The result is projected demand growth of 21 million square feet of industrial space, or 4.1 million square feet per year, in the baseline scenario, and 12 and 30 million square feet in the low and high scenarios.

FIGURE 5.3: PROJECTED GROWTH IN IND. SPACE DEMAND, PORTLAND-SALEM METRO AREA (2024-29)

LOW GROWTH SCENARIO		5-YEAR JOB GROWTH			INDUSTRIAL SHARE		SPACE DEMAND	
Industry	NAICS	Jan '24	Jan '29	Growth	Share*	Growth	SF/Emp*	Growth (SF)
Construction	23	89,200	97,798	8,598	15%	1,290	700	902,803
Manufacturing	31-33	134,900	137,824	2,924	92%	2,690	600	1,614,146
Wholesale Trade	42	60,500	62,400	1,900	82%	1,558	700	1,090,547
Transp., Warehousing, Utilities	22,48-49	58,300	64,767	6,467	80%	5,174	1,550	8,019,037
Total Industrial Employment		342,900	362,789	19,889	54%	10,711	1,085	11,626,532

BASELINE SCENARIO		5-YEAR JOB GROWTH			INDUSTRIAL SHARE		SPACE DEMAND	
Industry	NAICS	Jan '24	Jan '29	Growth	Share*	Growth	SF/Emp*	Growth (SF)
Construction	23	89,200	103,407	14,207	15%	2,131	700	1,491,761
Manufacturing	31-33	134,900	141,081	6,181	92%	5,686	600	3,411,778
Wholesale Trade	42	60,500	63,368	2,868	82%	2,351	700	1,645,999
Transp., Warehousing, Utilities	22,48-49	58,300	69,577	11,277	80%	9,022	1,550	13,983,804
Total Industrial Employment		342,900	377,433	34,533	56%	19,191	1,070	20,533,342

HIGH GROWTH SCENARIO		5-YEAR JOB GROWTH			INDUSTRIAL SHARE		SPACE DEMAND	
Industry	NAICS	Jan '24	Jan '29	Growth	Share*	Growth	SF/Emp*	Growth (SF)
Construction	23	89,200	109,271	20,071	15%	3,011	700	2,107,438
Manufacturing	31-33	134,900	144,399	9,499	92%	8,739	600	5,243,231
Wholesale Trade	42	60,500	64,347	3,847	82%	3,155	700	2,208,320
Transp., Warehousing, Utilities	22,48-49	58,300	74,669	16,369	80%	13,095	1,550	20,297,828
Total Industrial Employment		342,900	392,686	49,786	56%	27,999	1,066	29,856,817

¹ Based on assumptions developed by technical panel for the Metro 2014 Urban Growth Report and surveys by JOHNSON ECONOMICS.

Source: Oregon Employment Department, Metro, Johnson Economics

Space Demand Growth by User Size

The following table provides estimates of five-year and annual demand growth by space size, assuming the leasing distribution from the past five years. In the baseline scenario, the table indicates annual demand growth of 1.4 million square feet in spaces larger than 100,000 square feet, and 0.7 million in spaces larger than 200,000 square feet.

FIGURE 5. 4: NET NEW DEMAND (SF) BY USER SIZE, PORTLAND-SALEM METRO AREA (2024-29)

DEMAND BY SIZE (SF)	< 10k	10-24k	25-49k	50-99k	100-199k	200k+	Total
Historical leasing, last 5 yrs	14%	15%	16%	20%	18%	16%	100%
5-YEAR DEMAND GROWTH							
Low-Growth Scenario	1,680,000	1,760,000	1,870,000	2,300,000	2,150,000	1,860,000	11,630,000
Baseline Scenario	2,970,000	3,110,000	3,300,000	4,070,000	3,800,000	3,290,000	20,530,000
High-Growth Scenario	4,320,000	4,520,000	4,800,000	5,910,000	5,520,000	4,780,000	29,860,000
ANNUAL DEMAND GROWTH							
Low-Growth Scenario	340,000	350,000	370,000	460,000	430,000	370,000	2,330,000
Baseline Scenario	590,000	620,000	660,000	810,000	760,000	660,000	4,110,000
High-Growth Scenario	860,000	900,000	960,000	1,180,000	1,100,000	960,000	5,970,000

Source: Johnson Economics

MEMORANDUM

Thimble Creek Industrial Readiness Study

Job No.: JOE-01

Date: November 6, 2024

To: Brenden Buckley, Johnson Economics

From: Thuy Cao, HHPR

Subject: Task 2.2: Code and Process Review



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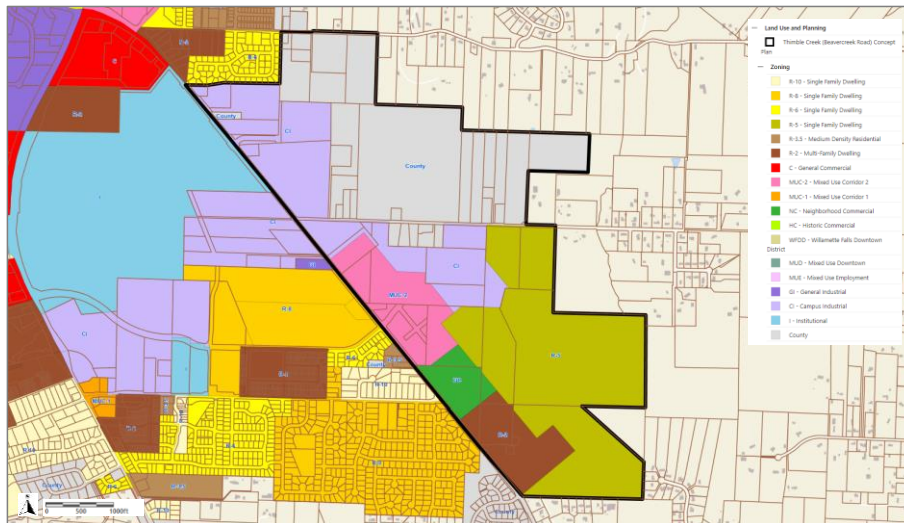
PURPOSE

Oregon City is working with Johnson Economics and Harper Houf Peterson Righellis (HHPR) to complete a market analysis and industrial readiness study for the Thimble Creek Sub-Area. The purpose of Task 2 is to establish existing conditions, determine buildable lands, and identify zoning and infrastructure barriers to development within the sub-area. As part of Task 2.2, HHPR will review the Oregon City Development Code and its relevant planning processes to identify any potential barriers or outliers that deviate from regional norms. This memorandum summarizes HHPR's analysis of the existing development code for any barriers to development.

DEVELOPMENT CODE AND PROCESS REVIEW

1.0 ZONING AND USE REGULATION

In 2002, the Thimble Creek Concept Plan area was brought into the UGB and was ultimately extended with the golf course to create an integrated community. Worried about meeting Metro housing targets, the City created clear and objective standards for the area. Within this area, the CI (Campus Industrial) zoning district imposes specific use limitations and development standards. The zoning map below shows the location of properties zoned CI and their relationships with adjacent zones.



The map suggests that the CI zoning district in the Thimble Creek Concept Plan area is well-positioned to support large, employee-intensive industrial developments due to its proximity to the MUC (Mixed Use Corridor) zones and positioning to support traffic flow for employees and freight. However, its proximity to residential and mixed-use zones may also raise concerns around traffic and compatibility with new industrial developments. In consideration, there may be opportunities with educational and commercial facilities to develop a campus-style environment. The Thimble Creek Concept Plan area is designed to foster a diverse and sustainable community, integrating industrial development with residential and commercial uses.

1.1 PERMITTED USES

- **Light Industrial uses.** The CI zoning district allows for a range of uses suitable for light industrial, office, and research-oriented developments, including light manufacturing, testing labs, data centers, and corporate offices.
- **Retail and professional services restrictions.** Retail and professional services (e.g. cafes, financial institutions) are restricted to small areas, typically limited to a maximum of 5,000 square feet for a single outlet and 20,000 square feet across a development project. These uses must primarily serve the employees and businesses within the development.
- **Warehousing and distribution restrictions.** Additional standard for the Thimble Creek Concept Plan area states that distribution and warehouses uses are only allowed if they are accessory to a primary use. Standalone or large-scale warehousing is generally prohibited to ensure the area encourages higher employment-density uses, aligning with the concept plan's economic development goals.

1.2 CONDITIONAL USES

- Conditional uses, such as limited distribution and warehousing, require careful review to avoid impacts on surrounding properties. Specific standards must be met, including minimized noise, traffic, and environmental impacts.

2.0 DEVELOPMENT AND DIMENSIONAL STANDARDS

2.1 PARKING REQUIREMENTS

The following requirements may significantly reduce the area available for parking:

- **Front setback parking restrictions.** The code prohibits parking areas and driveways located in the front setback of any building site, unless they are properly screened and landscaped.
- **Buffer zones near residential areas.** Industrial developments that border residential zones must include a 25-foot buffer with landscaping.
- **Sustainability requirements.** Developments within the Thimble Creek Concept Plan area are required to incorporate sustainability features, such as eco-roofs, permeable paving, and EV (electric vehicle) charging stations. These types of requirements typically increase the costs of development.
- **Vehicle and pedestrian compatibility.** For conditional uses like distribution and warehousing, additional requirements that ensure parking and loading areas are



compatible with surrounding properties may create additional design constraints. It can be difficult, but not impossible, to screen the activity on these sites due to truck traffic and noise.

2.2 LANDSCAPING AND TREE PLANTING REQUIREMENTS

- **Minimum landscaping area.** All developed sites must have a minimum of 15% of the total area dedicated to landscaping, which could reduce the buildable area for industrial developments and their facilities. Given the modest estimated size of many of the buildable areas remaining in the Plan Area, loss of 15% of developable area may impact the size of employment uses that can locate on some parcels.
- **Buffer zone landscaping.** Specific to the Thimble Creek Concept Plan area, buffer zone treatments may be required to shield parking and outdoor storage areas.
 - **Adjacent residential zones.** Where industrial uses in the CI district abut or face residential areas, a 25-foot buffer zone is required along the shared boundary and must include landscaping.
 - **Additional buffer for taller buildings.** Buildings that exceed 45 feet in height are required to provide an additional 25-foot buffer for each story that is above this height.

Landscaping buffers are required to provide visual screening and mitigate potential impacts of developments such as noise and light. This requirement can significantly impact overall site layout and require dense vegetation, fencing, or berms to comply.

- **Street trees.** Developers must include street trees and landscaping that comply with specific spacing guidelines. Trees are typically required along street frontages and throughout parking areas. Developers will need to factor in the cost of purchasing, planting, and maintaining any trees required for the development.
- **Limitation under power line corridors.** Landscaping under power line corridors may be restricted to low-growing vegetation or limited stormwater management options due to PGE and BPA requirements under transmission lines. These easements greatly impact the amount of buildable acreage in the study area.
- **Native planting and sustainability goals.** The Thimble Creek Concept Plan encourages the use of native plant species for landscaping to meet sustainability objectives for the area. The intent is to reduce water usage and support local biodiversity. However, compliance with these standards may require additional upfront costs and sustainability landscaping techniques to meet maintenance and growth requirements.

2.3 OUTDOOR STORAGE REQUIREMENTS

In the CI (Campus Industrial) District within the Thimble Creek Concept Plan area, outdoor storage is subject to specific requirements and limitations to maintain the area's aesthetic and functional standards focused on light industrial use.

- **Screening and visibility.** All outdoor storage areas must be screened from view, including supplies, equipment, and company-owned vehicles. Screening may require enclosing outdoor storage areas within a building or behind a visual barrier that conceals them from both neighboring properties and public streets. Additionally, no storage areas are permitted between a street and the front of the nearest structure.



- **Storage area limitation.** Outdoor storage is limited to a maximum of 25% of the net developable area of the property. Outdoor storage limitations may restrict some uses that commonly locate in industrial zones, including construction companies, construction and agricultural suppliers, vehicle and equipment sales and repair, recycling or waste management.
- **Landscaping buffer.** If a use abuts or faces a residential use, a yard of at least 25 feet is required on the side abutting or facing the residential or commercial zone to provide a buffer area and any landscaping will be subject to site plan review.

3.0 SUSTAINABILITY AND INFRASTRUCTURE REQUIREMENTS

The CI (Campus Industrial) District provides specific codes under Section 17.37.060.G that promote sustainable practices in new developments. These sustainability features are clear and objective but may create additional barriers to development including cost or limitations on developable space. Developments in this area must incorporate at least six of the following sustainability features:

1. **Vegetated eco-roof for stormwater management.** Using vegetated rooftops to manage stormwater by absorbing rainwater, reducing runoff, and providing insulation. Can be costly to install and maintain, especially for industrial buildings with large roof areas. These roofs may also require additional structural reinforcement, increasing complexity for development.
2. **White roof with high Solar Reflectance Index (SRI).** White roofs reflect sunlight and reduces the building's heat absorption, effectively reducing cooling costs and lowering the urban heat island effect. Still adds additional costs and may require ongoing maintenance on surfaces.
3. **Rainwater collection system for reuse on-site.** Captures and stores rainwater for uses like irrigation, reducing demand on municipal water supply and provide sustainable water sources for landscaping. Requires additional costs for the installation of storage tanks and plumbing, and also requiring additional maintenance to prevent issues.
4. **Solar panel system (roof-mounted or on-site).** Install solar panels on the building's roof or on-site to generate renewable energy and offset energy costs within the industrial district. The initial investment is significant despite providing long-term savings, and panels installed on-site may reduce open ground area for other uses.
5. **Native plant landscaping.** Planting native landscaping to reduce water usage and support local biodiversity. Limited plant variety and availability may create additional challenges and costs.
6. **Electric vehicle (EV) charging stations.** Provide Level 2 EV chargers or similar alternatives to encourage electric vehicle use amount employees and visitors to reduce emissions. Installation costs and ongoing electricity costs can create additional barriers, and may not be as relevant for facilities with limited employee vehicles on-site.
7. **Permeable paving.** Permeable surfaces like porous concrete or pavers that allow water to pass through and reduce runoff, helping to manage stormwater and reduce strain on municipal stormwater infrastructure. Permeable paving is generally more expensive, require more frequent maintenance, and may not be feasible for heavy-load zones like areas used for truck maneuvering or outdoor storage.



8. **LEED certification.** LEED-certified buildings demonstrates commitment to sustainability (energy, water, materials, indoor environmental quality), however, pursuing LEED certification may be costly and time-consuming.

In general, when given a menu of options to meet approval requirements, developers can be expected to select the least costly alternatives to meet the standard. This means that the costliest options will seldom if ever be selected. Requiring the inclusion of six of eight options is a high bar that will add costs to a development and negatively impact the feasibility of some developments.

4.0 ADMINISTRATIVE REVIEW AND APPROVAL PROCESS

- **Permitted uses.** If the proposed use is permitted under OCMC 17.37.020 (e.g., light manufacturing, research and development, or corporate offices) the project will typically undergo a Type II process, which will allow the project to be reviewed if there are any apparent barriers and **no other alternatives to development**. This administrative review process requires public notification and a comment period, but no public hearing. This type of process is not out of the ordinary for industrial or commercial development in many comparable jurisdictions.
- **Conditional uses.** For uses not explicitly permitted or those that require special consideration due to their potential impacts (e.g. distribution or warehousing facilities), the project must undergo a Type III Conditional Use Review, which requires a public hearing before the Planning Commission.

In development, time is of the essence and sites are often secured with options or financing meaning that “time is money.” A timely review and approval process and communication that provides certainty to a developer over standards, requirements, and timelines reduces costs to development helping to make it more feasible.

Commented [BB1]: Not sure I know what this means

5.0 CLIMATE-FRIENDLY AND EQUITABLE COMMUNITIES (CFEC)

The City has been working with DLCD to implement CFEC requirements by 2025. CFEC aims to reduce greenhouse gas emission and promote equitable, sustainable urban growth. Despite this, the Thimble Creek Concept Plan area is not currently affected by CFEC because it is outside of the ½-mile radius from transit, however, the City will be working to approve these requirements city-wide which will create additional tree and parking standards. Key considerations for the area include:

- **Tree standards.** CFEC promotes urban tree canopy goals to mitigate heat, improve air quality, and provide environmental benefits in developed areas. In the Thimble Creek Concept Plan area, CFEC’s emphasis on increasing tree coverage will amplify existing landscaping requirements. These standards may further encourage or require the use of native and drought-tolerant tree species and dedicate more landscaping areas to meet tree canopy targets. This may limit buildable area or require creative design solutions to integrate these tree coverage requirements. In general, increased tree coverage requirements are not likely to impact the types of employment uses envisioned for the Plan Area, given the reduced outdoor storage and current landscaping and buffering requirements.
- **Parking standards.** CFEC’s approach to parking is to reduce the overall reliance on cars, minimize excessive parking areas, and encourage sustainable modes of transportation. Under CFEC, parking minimums could be reduced or even removed in certain areas to promote less vehicle-dependent development, which may translate into lower parking requirements for industrial developments in



the Thimble Creek Concept Plan area. CFEC may also require that parking areas incorporate green infrastructure, such as permeable paving, to manage stormwater which could add additional costs or complexities to development projects. The green infrastructure requirements may have some overlap with the sustainability requirements of the zone. In general, reduced parking requirements may improve the feasibility of development and increase the lot coverage of built space and employment density. However, note that commercial developers will tend to include the amount of parking they deem to be demanded by the market.

6.0 UTILITIES AND INFRASTRUCTURE

6.1 UTILITY LINES

Navigating development restrictions under Portland General Electric (PGE) and Bonneville Power Administration (BPA) transmission lines presents several challenges, especially when considering stormwater management solutions. Both utilities enforce strict guidelines to ensure safety and maintain infrastructure access. This may add complexity and time to development project as engagement with utility companies will be required to propose creative design solutions under these lines. The City has mentioned that they have primarily seen perpendicular crossing permitted under lines as there has been pushback to allow for parking lots due to clearance issues, or even stormwater management facilities. It is best to assume that active uses and even most passive uses will be prohibited in these easements. Thus these easements have little to no value to a land seller or developer, and may even be a net liability as the land in the easement remains taxable while providing no utility.

6.2 ROAD NETWORK

The Transportation System Plan (TSP) significantly influences industrial development within the Thimble Creek Concept Plan area during the review process. Key considerations include:

- **Traffic Impact Analysis (TIA) requirements.** For projects that exceed a certain traffic threshold, the code requires a Traffic Impact Analysis (TIA) as part of the review process. The TSP provides the baseline standards and criteria for these analyses, and the TIA must demonstrate that development's impacts align with the TSP's goals. Additional requirements or mitigations may be imposed on the developer.
- **Multimodal access.** The TSP includes goals for multimodal access such as supporting public transit, bike routes, and pedestrian infrastructure. The code integrates these goals by requiring developments to provide infrastructure that facilitates multimodal travel such as bike parking, safe pedestrian pathways, or connections to nearby transit stops, even within an industrial setting. During the review process, proposed developments will be evaluated for how well they are able to meet these multimodal goals, potentially adding additional conditions to improve access.
- **Alignment with roadway classifications and capacity.** Roadway classifications (e.g., arterial, collector, local) outline expected capacities for each type of road which influences design standards, permissible access points, and required improvements for developments. Industrial developments located on or near major arterials in the Thimble Creek Concept Plan area may face stricter standards for access and roadway improvements. The review process considers this when evaluating a development's access points and circulation plan, which may also require additional conditions of approval to maintain safety and access.

Commented [BB2]: Is there anyway to throw in a ballpark cost estimate or range for TIAs?



- **Impact on industrial development.** Improved roadways and connectivity facilitate efficient movement of employees and goods for industrial businesses. Developers must adhere to specific street design standards and right-of-way requirements, which are reviewed during the application process. The TSP provides a framework of these standards that guides the approval process, especially for conditional uses such as larger industrial developments. This may require adhering to transportation infrastructure requirements, accommodating multimodal goals, and funding improvements that are required to support additional transportation load on the system. These requirements add complexity, cost, and compliance for developers.

6.3 FREIGHT ACCESS

While the road network in the Thimble Creek Concept Plan area generally supports access and mobility, it may present some challenges for heavy freight due to lane configurations and integration of mixed-uses. Potential issues related to freight include:

- **Reduced roadway capacity on key routes.** Beaver Creek Road transitions from a five-lane to a three-lane section and may create limitations for freight movement, especially during peak hours. Narrower and fewer lanes could increase congestion and impact industrial uses in the area.
- **Right-of-way and turning radius constraints.** Specific street design standards within the Thimble Creek Concept Plan could limit the turning radius or lane widths that could impact the maneuverability of large freight vehicles. Industrial areas are typically required to provide generous turning areas to accommodate large trucks.

7.0 OPPORTUNITIES AND CONSTRAINTS

Based on the development code in the CI (Campus Industrial) District and the Thimble Creek Concept Plan, the following are key opportunities and constraints for industrial development within this area:

7.1 Opportunities for Industrial Development

1. **Zoning for high-employment uses.** The CI District within the Thimble Creek Concept Plan area is specifically zoned to encourage employee-intensive industries and opportunities.
This includes uses such as research and development, light manufacturing, and corporate offices within the area.
2. **Mixed-use integration.** Integration of nearby residential and commercial areas may create a well-rounded mixed-use environment for businesses and their employees. This may include cafes, parks, and green spaces that existing within or near the industrial area to support work-life balance or provide on-site amenities.
3. **Flexibility in sustainability features.** The code allows developments to comply with their selection of various sustainability features to meet requirements, offering flexibility to adapt green initiatives to specific industrial needs.
4. **Potential benefits of increasing outdoor storage.** The City may consider increasing outdoor storage requirements beyond the current threshold to better support larger-scale industrial operations through a conditional use permit to allow up to 50% storage, evaluated on a case-by-case basis to ensure compatibility with neighboring areas.



Increasing this standard may prompt the City to require additional screening, buffering, and landscape requirements or advanced stormwater management solutions to address potential increased stormwater runoff.

7.2 Constraints for Industrial Development

1. **Strict outdoor storage limitations.** Outdoor storage is limited to 25% of the net developable area, which can pose significant constraints for industries requiring large storage spaces, such as warehousing, manufacturing, or distribution. This restriction could make the area less viable for industries with substantial storage needs.
2. **Sustainability requirements and associated costs.** Mandatory requirements to meet sustainability features could increase upfront development costs and complexity of projects that create financial challenges for industrial businesses.
3. **Road network and freight movement.** Lack of designated freight lanes and concerns about turning radius accommodations may create challenges for large truck operations.
4. **Buffer zone and height restrictions.** The CI District enforces strict buffer zones for industrial uses abutting residential or commercial zones, as well as additional buffers for buildings over 45 feet. These setbacks may create restrictions on land use for industries that could benefit from vertical expansion or require more site coverage.
5. **Limited flexibility in conditional uses.** Large-scale distribution and warehousing are conditional uses that require additional review and approvals. Minimizing distribution activities and limiting warehousing size aligns with the Thimble Creek Concept Plan's goals, but limits the CI District's attractiveness to logistic-focused companies which may serve as significant employment providers in industrial zones.

7.3 Recommendations

1. **Clarify Conditional Use Requirements for Industrial Activities.** Subjective language and ambiguity in terms like "minimal adverse impact" and "compatibility" leaves conditional use criteria open to subjective interpretation, adding uncertainty for developers. Create clear and objective criteria or standards for conditional uses, specifying measurable standards (e.g., noise levels, hours of operation, traffic generation) that industrial developers or businesses can meet with certainty and make the process more predictable.
2. **Allow for more flexible landscaping standards.** Although the City has expressed they are able to work with developers on meeting landscaping requirements, it may be beneficial to update code language that defines terms of flexibility such as requirements based on lot size or proximity to residential uses. Clearly define if landscaping requirements can be met through other green infrastructure and sustainability features.
3. **Reduce buffer zone requirements for non-residential adjacencies.** Consider limiting buffer requirements to industrial sites directly adjacent to residential zones and reduce the buffer requirement for industrial sites neighboring commercial properties. Fencing or wall barriers could be used in place of full buffer width to maintain privacy without taking up as much land.
4. **Provide flexible parking standards.** Parking restrictions limiting layout can be accommodated for by allowing parking within front setbacks on larger industrial lots (i.e.



over 10 acres), or implement shared parking standards, reduced parking ratios for sites with low number of employees, or developers that incorporate transportation demand management (TDM) measures.

5. **Streamline approval for low-impact industrial developments.** Industrial projects with documented minimal environmental or traffic impacts may still face lengthy review processes. Consider creating a streamlined approval track for low-impact industrial uses, such as light manufacturing or research and development facilities that meet a pre-defined criteria (e.g., low noise, low traffic impacts, no outdoor storage).
6. **Ensure any future code language is clear and objective.** Specifically with new CFEC requirements, incorporate clear and objective code language that provides clarity and predictability in development requirements to ensure consistency with compliance and make the review process faster.



MEMORANDUM

Thimble Creek Market Assessment and Development Scenarios

Date: January 27, 2025

To: Ann Griffin
Economic Development Coordinator
City of Oregon City

From: Brendan Buckley, Johnson Economics
Thuy Cao, HHPR



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Thimble Creek Market Assessment Project Recommendations for Implementation

I. Introduction

Oregon City is working with Johnson Economics and Harper Houf Peterson Righellis (HHPR) to complete a market assessment and industrial readiness study for the employment-focused subareas within the Thimble Creek Concept Plan Area (plan area). The project included an assessment of existing conditions in the plan area from both the market and planning perspectives, and a review of the Concept Plan, applicable zoning, and development code.

Since its original adoption in 2008, the Thimble Creek plan area has experienced residential development, but very little commercial or industrial development as envisioned in the plan. The aim of this project is to identify the likely factors that may be hindering the pace of development in the employment subareas of the Concept Plan.

The purpose of this report is to provide an overview of key findings from this analysis, and to make recommendations on potential next steps for policy makers to consider that will lead to increased investment in the area and the generation of more jobs in the long-term

II. Executive Summary

The following is a summary of key findings and recommendations of the project. These points are outlined in more detail in the following report.

- The goal of the Thimble Creek concept planning effort was to create a complete and sustainable mixed-use community in southeast Oregon City, along Beavercreek Road. The roughly 450-acre area is planned to include housing, retail, and a mixture of employment uses. The Plan was adopted in 2008 and updated in 2020.
- The employment-focused subareas of the Concept Plan area include a North Employment Campus focused on light industrial and research and development, and an office- and retail-focused Mixed Employment Village.
- The approach of the Concept Plan is to largely let private developers or employers driven by market forces build out the employment areas as envisioned, but this has not happened in the ensuing 16 years.
- Having a supply of development-ready employment land is important to a City for several reasons:
 - More jobs for local residents;
 - Greater opportunities for industries offering sustainable wage jobs;
 - Provide a complete community with mix of uses in the Concept Plan area and the City;
 - Support a healthy jobs-to-household balance in the city;
 - Improve the tax base and the city's fiscal balance;
 - Provide improved city services for residents and businesses.
- This analysis identified several factors that have impacted the pace of development in the Thimble Creek employment areas. These include:
 - **Public Infrastructure Costs:** Most of the area has not been provided with new infrastructure of relevant capacity since plan adoption. The high cost of building future street, water, and sewer infrastructure is identified as one of the key barriers to development of employment uses.
 - **Buildable Land and Land Assembly:** The study area includes an estimated 60 separate tax lots with 42 distinct owners. The area is also divided by wide powerline easements which restrict development. Most development sites will involve assembling multiple tax lots.
 - **No Large-Lot Employment Sites:** If sites are assembled from multiple tax lots it is estimated that the largest possible site would be roughly 21 acres, with the remainder being smaller sites. (However, land recently consolidated by Clackamas Community College does present the opportunity for nearly 40 acres of development.)

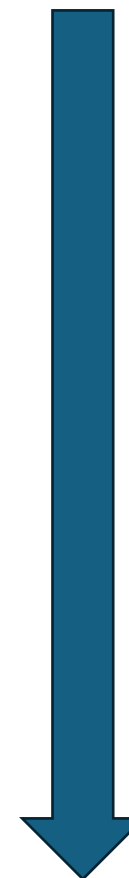
- **Transportation and Traffic:** Current plans are designed to accommodate the projected employment growth in Thimble Creek, but current facilities and intersections are under stress, and continued improvements will be costly.
- **Future Street Network:** The future street framework described in the Plan will further divide developable parcels. The need for an access road running parallel to Beavercreek Road at a diagonal through the Plan area will create more irregular sites and tax lot divisions.
- **Public and Private Utilities:** In general, the area is well served by sufficient utility capacity that can be extended into the area. This build-out does entail high costs as mentioned above. Areas under powerline easements may provide some opportunities for stormwater retention and wetland mitigation.
- **Permitted and Conditional Land Uses:** In keeping with the vision of an employment campus-like environment in the CI Zone, permitted uses include light manufacturing, research and development, laboratories, corporate headquarters, high tech development, and related uses. Many of these uses, such as high-tech manufacturing or corporate HQs are rarer and less frequent business recruitments. Common industrial development types in recent years such as multi-tenant flex space and warehouse and distribution are limited in the CI zone.
- **Development Code Standards:** The project included a review of zoning and development code standards that apply in the Thimble Creek area and CI zone. A few recommended changes to development standards are outlined in this report.
- **Development Incentives and Funding:** The Concept Plan area is included in the Oregon City Enterprise Zone program which offers incentives that are competitive with other industrial areas in the region. The plan area is not included in the Oregon City Urban Renewal Area (or TIF district). In recent years, TIF has become a more common tool for other cities in the region to fund infrastructure improvements to new industrial areas, to make sites accessible and development ready.
- More discussion of each of these factors is included in this report.

The final section of this report outlines some policy considerations to help address the development factors identified. The types of tools available to a local government range from continuing the status quo, to revising the Concept Plan and/or zoning code, to seeking sources of infrastructure funding and increased development incentives.

The following table presents a matrix of potential public action and the likely level of impact from each on the pace and character of development in the Thimble Creek plan area.

Policy Considerations: Level of Action and Level of Impact

Level of Effort and Investment	Description	Estimated Level of Impact
None	Market-driven change alone. Current zoning stays in effect. Higher costs of infrastructure fall on private developers.	Future development and investment will be largely residential. Little to no job generation. Minimum increase to tax base. Employment subareas will mostly remain in current state for indefinite period.
Minor/Incremental	Clarifications/modifications to development code. Address BPA restrictions.	Greater clarification for development community. Greater flexibility in land use and site design.
Moderate/High	Partner with CCC to attract research partners, future training opportunities.	Ability to influence and support CCC planning for newly acquired properties. ~ 40 acres west of Beaver Creek Road. Need to understand how skills training available on campus and future OSU Extension “Center of Excellence” connects with employer needs. Some uses envisioned in the Concept Plan may be a good fit for CCC priorities, such as skills training, research and development, and business incubation.
High	Public-private partnership to support infrastructure, land purchase, and assembly. Make the area “development ready” for private campus/job investment. Requires new funding sources.	City better able to attract new investment. Increases pace of infrastructure development that may never happen otherwise. Sets up work in conjunction with Business Oregon, other public sector partners to support recruitment efforts.



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III. Thimble Creek & Employment Lands: Overview

A. History of the Thimble Creek Concept Plan Area & Goals

The Thimble Creek Concept Plan (Plan) was first adopted in 2008 (as the Beaver Creek Road Concept Plan) and updated in 2020 to provide clear and objective standards for housing, and update some of the transportation elements.

The goal of the concept planning effort was to create a complete and sustainable mixed-use community in southeast Oregon City, along Beaver Creek Road. The roughly 450-acre area is planned to include housing, retail, and a mixture of employment uses.

Figure 1.1: Thimble Creek Concept Plan Area, and Land Use Subdistricts

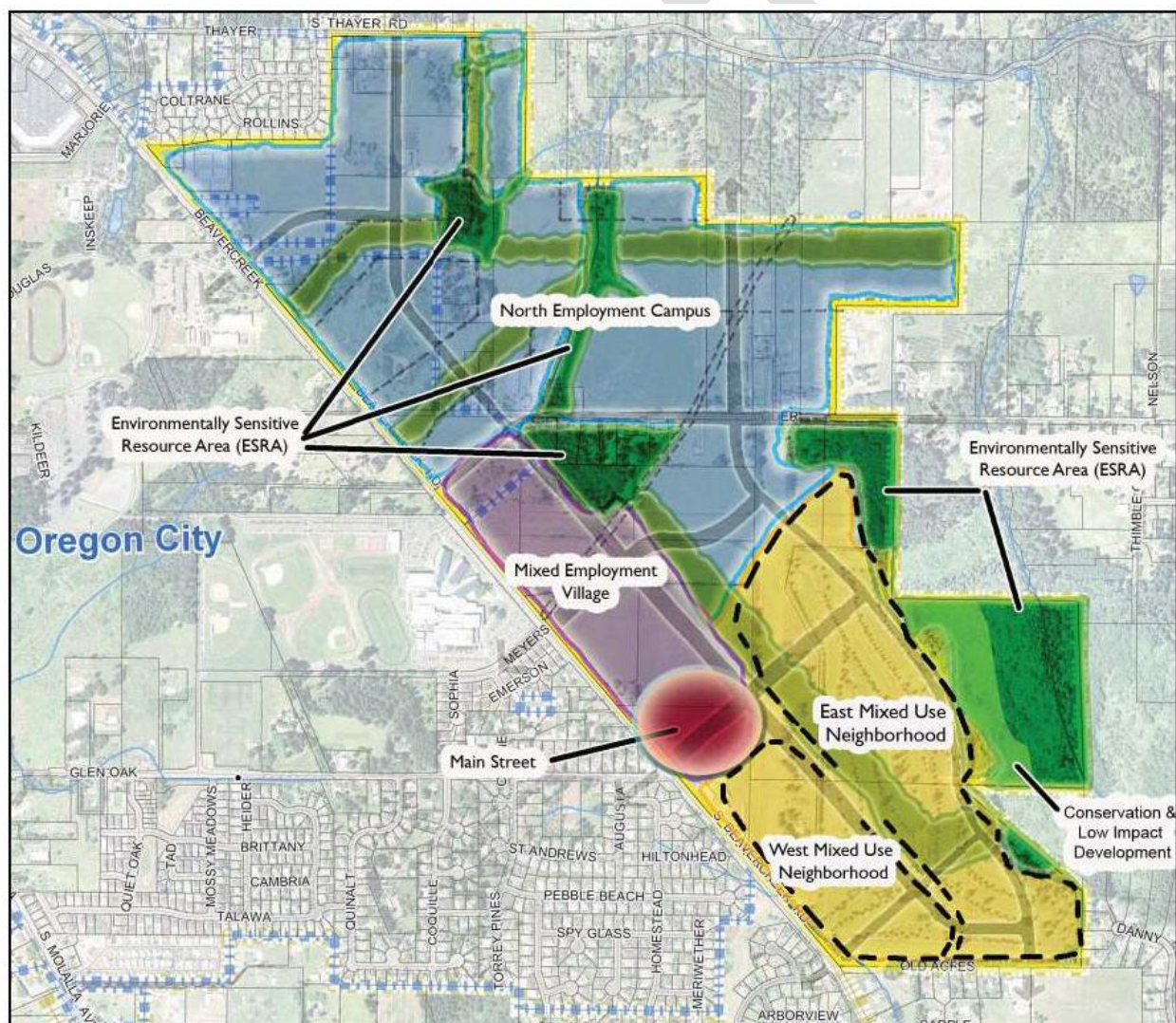


Figure 8 - Land Use Sub-districts

Source: Thimble Creek Concept Plan, City of Oregon City, 2020

The Thimble Creek Concept Plan includes a number of goals related to creating a “Complete and Sustainable Community” within the plan area, including housing, employment, and daily services in close proximity. The employment subareas serve an important function both within the plan area, and for the city and regionally. The Plan emphasizes the need to attract sustainable industries that offer living wage jobs, capable of supporting households to live in the area and afford the local cost of living.

The Concept Plan goals most related to the economy and development of the employment subarea are:

- Create a complete and sustainable community, in conjunction with the adjacent land uses, which integrates a diverse mix of uses, including housing, services, and public spaces that are necessary to support a thriving employment center;
- Be a model of sustainable design, development practices, planning, and innovative thinking;
- Attract “green” jobs that pay a living wage;
- Maximize opportunities for sustainable industries that serve markets beyond the Portland region and are compatible with the site’s unique characteristics; ...
- Promote connections and relationships with Oregon City High School and Clackamas Community College.¹

The **North Employment Campus** subarea emphasizes light industrial, R&D, and corporate headquarters. Connections to Clackamas Community College (CCC) are encouraged. There is an emphasis on businesses making sustainable products and using sustainable services.

The **Mixed Employment Village** is intended to be transit supportive and allow a mix of office, retail, civic and residential uses. Pedestrian amenities and green development are encouraged, along with possible connections to CCC and Oregon City High School.

B. Slow development of the Thimble Creek Employment Zones

As of 2024, the Plan Area has seen some new, mostly residential development in some of the land use sub-areas (Figure 1.1), particularly the residential areas at the southern end of the plan area, while the employment-focused district at the north end of the plan area has not yet seen new investment and job growth as envisioned in the Plan, other than the development of a County facility.

The approach of the Concept Plan is to largely let private developers or employers driven by market forces build out the employment areas as envisioned, but this has not happened in the ensuing 16 years. The focus of this project is to study the Thimble Creek employment area to help identify barriers, challenges, and opportunities that have impacted the pace of industrial and commercial development.

¹ Thimble Creek Concept Plan, City of Oregon City, 2020, Pg. 7-8.

C. Why is Successful Employment Land Important to a City?

Cities are generally zoned for a mix of land uses that include housing, retail, office, industry, institutions (colleges or hospitals), public space, and many other uses. A complete city allows residents to meet a wide range of their needs locally, including employment.

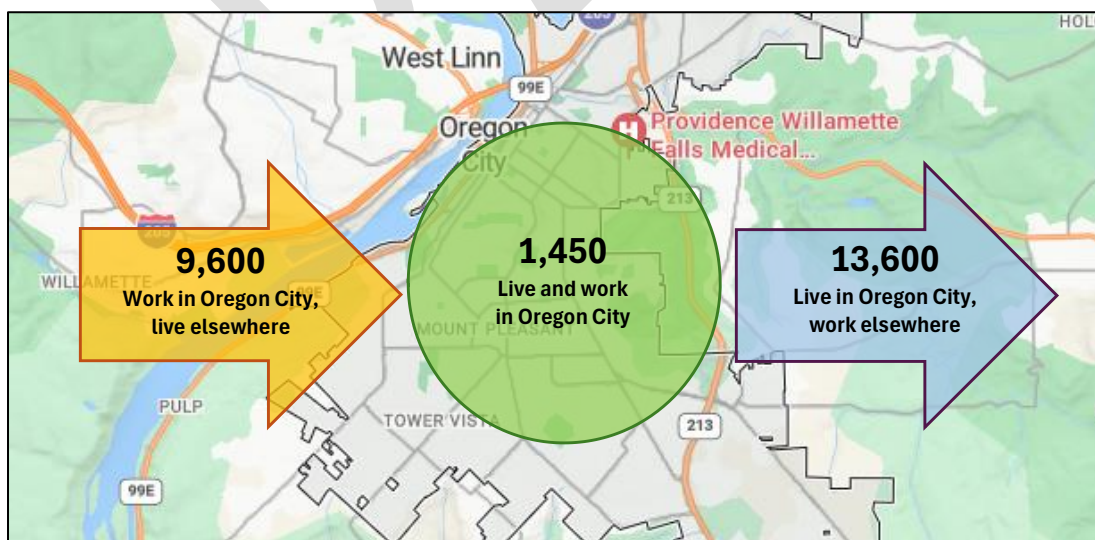
Though being in an interconnected metro area with adjoining cities may allow for some greater sharing of housing and employment, it is still generally considered important for a city to strive for local diversification and to be as “complete” as possible.

Some benefits of planned employment areas such as Thimble Creek include:

- **More jobs for local residents** at a full range of skill and income levels. A diversified employment market allows residents to live and work in town through different stages of their career cycle. Part-time or lower-skilled jobs are appropriate for some workers and essential to the local service sector and other parts of the economy. However, more skilled or educated workers may see limited opportunities locally causing residents to leave or not settle in the community in the first place. A full range of employment allows residents and their children to remain in the community.

As Figure 1.2 shows, the Census estimates that roughly 90% of employed Oregon City residents work outside of the community.

Figure 1.2: Commuting Trends, Oregon City



Source: Census Longitudinal Employer-Household Dynamics, 2022 data

- **Greater opportunities for sustainable wage jobs** that support a household’s cost of living and match local housing prices. On average, the types of jobs located at an industrial employment campus environment, as opposed to retail development, are more likely to provide higher wages.

- The mixed-use concept plan area is designed to **provide a complete community within the plan area itself, with housing, jobs, and shopping** all within walking or biking distance from each other. This reduces car trips and congestion and meets the sustainability goals of the area.
- Beyond the plan area, a city where residents can live and work in close proximity also **helps reduce traffic congestion and lengthy commutes for local residents**. The average commute time for an employed Oregon City resident is 27 minutes according to the Census.
- The **jobs-to-household balance** is an imprecise measure but can help a community visualize the availability of local jobs for local residents. In the Metro area this can be a gauge of how much a community functions largely as a “bedroom community” for those working elsewhere. Figure 1.2 shows the local jobs to local household ratio in Oregon City vs. other Metro area cities, based on the most recent Metro estimates prepared for the 2024 Urban Growth Report.

Figure 1.3: Jobs-to-Household Ratio, Metro Cities (2020)

City	Jobs/HH Ratio	City	Jobs/HH Ratio
Oregon City	1.3	Tigard	2.1
West Linn	0.5	Beaverton	1.6
Happy Valley	1.1	Hillsboro	2.0
Tualatin	3.1	Portland	1.7
Wilsonville	2.1	Metro Average	1.6

Source: Metro 2045 Distributed Forecast

Oregon City has a ratio of 1.3 jobs for each local household. This compares to a ratio of 1.6 Metro-wide. Employment centers such as Tualatin, Wilsonville, and Tigard have ratios above 2.0 jobs per household. Nearby bedroom communities which as West Linn, Happy Valley, and Lake Oswego have a lower ratio, but also have a higher property tax base due to higher average housing prices and property values.

The data shown in Figure 1.2 indicates that the number of available local jobs is roughly 70% the number of employed residents.

- **Improved tax base and fiscal health.** In any community, additional housing and residents tend to consume more in local government services than they contribute to residential property taxes, while non-residential land users are net contributors to local revenues, consuming less local government services than they pay in local taxes. A community with an imbalance of too much housing and not enough taxable commercial uses, can face fiscal challenges in providing the necessary services its residents and businesses expect. To compound this issue, Oregon City also features some major land users that are non-taxable such as college, government, and faith-based organizations. These types of uses are valuable

to the community but can often use large tracts of available non-residential land without contributing to the tax base.

- Improved fiscal health supports **improved city services for residents and businesses**. Employment land users in a city help build the tax base and fund services for the whole community, while improving the economy overall through increased income, local spending, and civic involvement.

IV. Factors Impacting Development

A. The Thimble Creek Concept Plan Area – Competitive Position in the Region

The Thimble Creek Concept Plan Area (plan area) is one of many comparable master planned communities and employment areas planned around the Metro area over the last two decades. Each area is unique, with its own advantages and competitive disadvantages.

This study identified some factors that may challenge the development of employment uses in Thimble Creek (outlined below). However, none of these factors are unique to Thimble Creek. In other words, there is no inherent disadvantage that prevents the plan area from building out that hasn't been faced by other employment areas in the region.

Commercial and industrial real estate brokers have expressed interest in this area, and do not see location or distance from the freeway as major barriers to viability. There is a high demand for buildable industrial sites across the region. Opportunities are in short supply and where land is available and serviced by infrastructure, there will likely be interest.

So, what remaining factors might be responsible for the slow rate of development in the concept plan area?

B. Factors Impacting Development of Thimble Creek Employment Area

The following is a summary of some factors that have and will continue to impact the viability and pace of development of the employment zones in the plan area. Not all of these factors carry equal weight, and not all are things that can be impacted through City policy.

1. **Public Infrastructure Costs:** The high cost of building future street, water, and sewer infrastructure is identified as one of the key barriers to the development of employment uses in the plan area. The area will require future streets to access and utilities to serve new users, particularly on “interior” sites without access to Beaver Creek Road.

Industrial real estate is generally one of the lower-value land classifications, relative to residential or retail land. While residential land may be able to incorporate the costs of building off-site public improvements to serve the development, it is more difficult for

industrial users to pay for extensive public improvements without making the project financially infeasible.

The Concept Plan included estimates of the cost of building the future infrastructure in the plan area at the time the plan was written. Those costs have risen an estimated 120% in the meantime, based on inflation (Figure 2.1). There are a variety of options available to pay for public infrastructure, but this will likely remain a barrier to market viability until a more detailed funding plan is identified (see following section of this report).

Figure 2.1: Thimble Creek Concept Plan, Estimated Infrastructure Costs

Category	Concept Plan Estimates	Construction Costs Inflation	2025 Cost Estimate	% of Total
Street Improvements	\$61,000,000 (2008 dollars)	107.1%	\$126,300,000	55%
Intersecton Improvements	\$5,250,000 (2008 dollars)	107.1%	\$10,900,000	5%
Stormwater Improvements	\$19,000,000 (2008 dollars)	107.1%	\$39,300,000	17%
Water Network (backbone)	\$5,400,000 (2003 dollars)	176.6%	\$14,900,000	7%
Cap improve extensions:	\$6,900,000 (2003 dollars)	176.6%	\$19,100,000	8%
Sanitary Sewer Improvements	\$4,400,000 (2003 dollars)	176.6%	\$12,200,000	5%
Cap improve extensions:	\$2,300,000 (2003 dollars)	176.6%	\$6,400,000	3%
TOTAL:	\$104,250,000	119.8%	\$229,100,000	100%

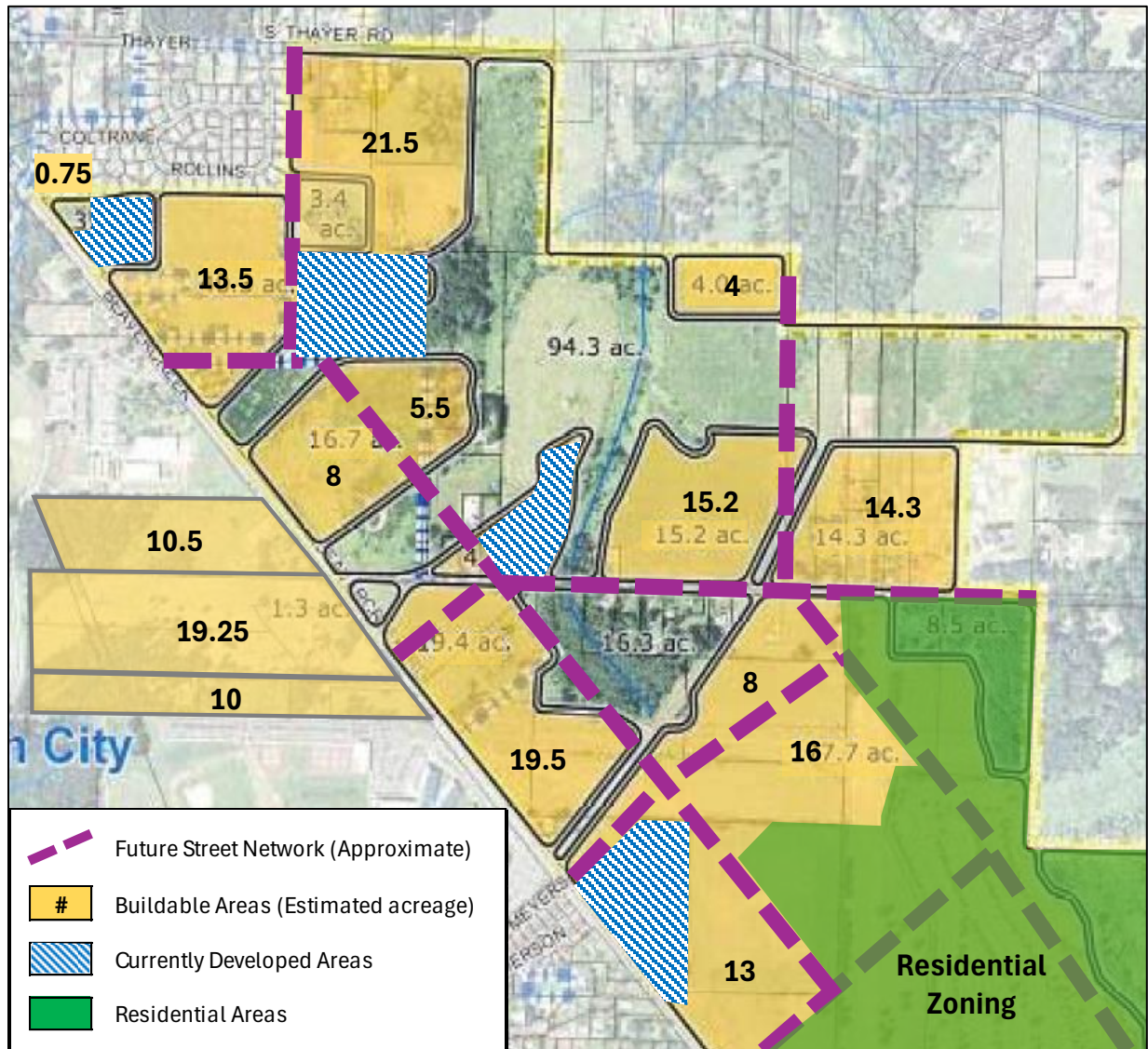
Source: Thimble Creek Concept Plan, RLB, Johnson Economics

2. **Buildable Land:** The plan area has a number of aspects that divide the available land into smaller buildable parcels. These include 60 separate tax lots with 42 distinct owners. The area is divided by powerline easements which restrict development and will greatly reduce the available land. In addition, environmental constraints and some parcels that are already developed, further constrict future development potential.

There is an estimated total of roughly 181 acres estimated in 15 different buildable areas (Figure 2.2, next page). Nearly all these buildable areas would entail assemblage of multiple tax lots to achieve the acreage estimated here. The assembly of larger development sites, often involving multiple owners who may have differing goals and timelines, will present an ongoing challenge to development in the study area.

3. **No Large-Lot Employment Sites:** The largest contiguous potential site is 21.5 acres, with the remainder being less than 20 acres. There are no contiguous large-lot industrial sites available in the study area. Large industrial sites have been identified as a need statewide and can be in higher demand due to scarcity. However, the small-to-mid sized sites that are available can still be attractive to employers of the right size and type.

Figure 2.2: Thimble Creek Concept Plan Area, Rough Buildable Areas & Acreage



Source: Thimble Creek Concept Plan, Johnson Economics

4. **Transportation and Traffic:** According to the Metro travel demand model, Beavercreek Road is expected to see significant traffic increases due to connections with major residential and/or employment growth areas in the City to the regional roadway network. Forecasts indicate that the current roadway and intersection capacity is insufficient to handle the influx of vehicles and will require improvements.

Developers are likely to face challenges related to the high costs of street and traffic management improvements required to accommodate additional demand and increased traffic. If the full burden of infrastructure improvements falls on developers, this could impact the economic viability of industrial uses in the area.

5. **Future Street Network:** The Plan outlines a comprehensive transportation strategy designed to support a mixed-use community that prioritizes internal trip-making, multimodal transportation, and sustainable infrastructure. The future street framework described in the Plan is expected to help accommodate some of the future traffic volume and alleviate congestion caused by additional growth.

The exact alignment of the future streets is flexible and currently depends on the sequence of development, with initial projects able to propose future street alignments that will bind subsequent developments. The future street plan calls for a street that runs parallel to Beaver Creek Road to serve as an access road and alleviate traffic on the main arterial. This street will create some irregular tax lot and buildable site shapes as currently found along Beaver Creek Road.

6. **Water/Sewer:** The current water supply system is fragmented, with some properties served by the city and others by Clackamas River Water (CRW). New infrastructure will be needed to serve the study area as it builds out. The City's Water Master Plan outlines planned improvements including increased pump station capacity, and pipeline project between Thayer Rd. and Beaver Creek Rd.

As with the extension of street infrastructure, the extension of public utilities has high estimated costs, and the division of the cost burden will impact the viability of private development in the area.

7. **Stormwater:** The Thimble Creek stormwater infrastructure plan is centered around the principles of low-impact development to manage stormwater in a way that closely mimics natural hydrological processes. Challenges include soils with low infiltration rates, capacity of green streets to handle extreme storm events, funding for implementation and maintenance. However, a significant portion of the study area under powerline easements may offer an opportunity for stormwater mitigation in these easements where little other development is allowed.

8. **Private Utilities:** The immediate vicinity of the plan area is served by ample power, gas, and internet service to meet the needs of the plan area as it develops. No significant hurdles were identified in building out the internal network of these services.

9. **Employment & Job Density Targets:** During the planning process, discussion around the employment subareas factored employment goals of Oregon City, Metro and the Citizen Advisory Committee (CAC). The goals call for the plan area to house thousands of new jobs providing sustainable wages (alternatively referred to as "family" or "living" wages.)

The employment forecast is in keeping with Metro findings at the time the area was included in the UGB and estimates in the Metro Urban Growth Report for the relevant Transportation Analysis Zones (TAZ).

The forecast calls for an estimated 5,000 new jobs created in the area upon build-out, with nearly 75% of these jobs to be found in the North Employment Campus subarea. An additional 22% are forecast for the mixed employment village (Figure 2.3).

Figure 2.3: Thimble Creek Concept Plan Employment Forecast (2020)

Land Use Category	Gross Acres	Net Acres	FAR/ Acre	SF/ Job	# of Jobs	% of Jobs
North Employment Campus	149	127	0.3	450	3,678	73%
Mixed Employment Village	26	21	0.44	350	1,139	22%
Main Street	10	8	0.44	350	219	4%
Employment Areas Totals:	185	156			5,036	99%
Mixed Use Neighborhoods	77	62			36	1%
All Areas Totals:	262	218			5,072	100%

Source: Thimble Creek Concept Plan, pg. 42. See Plan for methodology and assumptions.

This is an estimate of employment capacity based on the carrying capacity of the land with the proper zoning designations. It is not a demand-side projection of likely jobs growth, nor does it reflect other market conditions that may help, or hamper development as discussed in this report.

These employment targets are the result of fairly aggressive job density assumptions applied to the study area. The assumed floor area ratio (i.e. FAR or building coverage) is somewhat high for a suburban employment campus location, the average square footage per employee reflects more urban job densities.

While the City is not officially bound by these employment targets, they are reflected in the Concept Plan, both in the general vision adopted for the North Employment Campus subarea, and in the adopted Thimble Creek Campus Industrial (CI) zoning and development standards (see next section).

10. Permitted & Conditional Land Uses: The Plan's vision for the employment areas, and the job creation expectations discussed above, informed the allowed land uses in the CI zone. In keeping with the vision of an employment campus-like environment, permitted uses include light manufacturing, research and development, laboratories, corporate headquarters, high tech development, and related uses. Retail, professional office, and warehousing/distribution are limited in size and meant to be accessory uses to one of the main permitted uses.

Many of the permitted employer types, such as high-tech manufacturers, or corporate headquarters, are rarer and less frequent recruitments. While in recent years, the most common industrial development type based on market demand has been multi-tenant flex industrial developments and warehouse/logistics/distribution uses, which are limited in size in the CI zone and must be associated with a different primary use.

The CI zone is designed to limit the permitted types of users in the area to those that closely match the vision of a high-tech industrial campus. This approach has created a waiting game for the arrival of higher-value but lower-probability employers, while it may

be preventing some types of typical industrial development that have stronger market demand. Greater flexibility in permitted and conditional uses may improve the pace of development in the plan area (see next section).

11. Development Code Standards: This project included the review of zoning and development code standards that apply in the Thimble Creek area and CI zone. In addition to the permitted land use discussed above, several issues were identified that might impact development viability:

- a. **Strict outdoor storage limitations.** Outdoor storage is limited to 25% of the net developable area, which can pose significant constraints for industries requiring large storage spaces, such as manufacturing, construction, or distribution. This restriction could make the area less viable for industries with substantial storage needs.
- b. **Buffer zone and height restrictions.** The CI District enforces strict buffer zones for industrial uses abutting residential or commercial zones, as well as additional buffers for buildings over 45 feet. These setbacks may create restrictions on land use for industries that could benefit from vertical expansion or require more site coverage.
- c. **Sustainability requirements and associated costs.** Developments within the Thimble Creek Concept Plan area are required to incorporate six out of eight options for sustainability features, such as eco-roofs, permeable paving, and EV (electric vehicle) charging stations. Mandatory requirements to meet sustainability features could increase upfront development costs and complexity of projects that create financial challenges for industrial businesses.

12. Development Incentives: The Concept Plan area is currently included in the Oregon City Enterprise Zone program which offers tax incentives to new businesses that meet the criteria for job creation and wage levels. This incentive is competitive with other industrial areas in the region.

The plan area is not currently included in Oregon City's Tax Increment Finance (TIF, or Urban Renewal) district. This is one form of funding that other cities have used to help build the public infrastructure in employment areas, to serve properties and make them development ready. TIF funds can also be used for other types of development incentives on a project-by-project basis.

V. Policy Considerations

A. Levers of Public Policy to Influence Development

Not all of the factors discussed above can be impacted by public policy. Most notably, real estate and industrial market cycles, land costs and interest rates, fragmented property ownership, owner willingness to sell, and constraints like the extensive power line easements and some environmental features will be mostly beyond the ability of the City to influence.

In considering how to positively impact the pace and character of development of the employment subareas, policy makers have some levers of control. These levers are summarized here for reference, though not all of these are recommended based on the findings of this project:

- **The Concept Plan:** Public policy can impact the elements of the Concept Plan itself, for instance via updating or amending the Plan's major elements such as the vision, goals, transportation, utilities, or open space frameworks. Updating the plan is not strictly necessary to make changes that can be made directly in the Municipal Code.
- **The Zoning Code:** Policy makers can adopt new standards or land use permissions in the zoning code to address some of the factors identified in the prior section. Similarly, policy makers can consider adjusting the boundaries of the zones themselves, rezoning some properties or areas.
- **Public Infrastructure:** The City can prioritize the provision of public infrastructure such as transportation, water, sewer, open space, and other public goods to help make the area development ready.
- **Development Incentives:** The City can create or modify development incentives and/or funding sources to help build infrastructure or incentivize projects that meet public goals. The City can also ensure that the planning and permitting process is time and cost efficient, with good communication of expectations to provide certainty to developers.

This is a brief overview of public policy levers that exist for facilitating development in general. The following section provides recommended policy priorities for the employment subareas of the Thimble Creek plan area based on the findings of this project. These have been identified as the most important factors impacting the pace of development that are subject to changes of public policy.

B. Public Infrastructure

The high cost of building future street, water, and sewer infrastructure is identified as one of the greatest barriers to the development of employment uses in the plan area. The area will require future streets to access and utilities to serve new users, particularly on “interior” sites without access to Beaver Creek Road.

As noted, the cost estimates included in the Concept Plan for the whole infrastructure framework are estimated to have grown by at least 120% due to inflation to well over \$200M.

Developers are likely to be challenged by the high costs of public infrastructure improvements required to accommodate additional demand and increased traffic. If the full burden of infrastructure improvements falls on developers, this will likely render some industrial development in the area financially infeasible.

There are examples of other employment areas in the region that have faced this challenge. The most proactive approach is to seek sources of funding to help build infrastructure improvements early in the build out of the plan area. The infrastructure helps enable the successful development of the remainder of the employment area.

Given the high estimated cost of full build-out, an infrastructure strategy will prioritize, and sequence build out for the greatest impact. Potential funding sources include:

- 1. Tax Increment Financing (TIF, or Urban Renewal):** A TIF district is able to borrow against future property tax revenues in the district, in order to carry out projects in the adopted Plan. The tax revenues for the taxing jurisdictions remain at current levels, while the revenue from any property value appreciation after adoption (the new “tax increment”) goes to repaying bonds. Once the borrowed funds are repaid, the growth in property tax revenue from the new industrial development would flow back to the taxing jurisdictions. The idea is that without the public projects undertaken through the TIF district to help enable the property development and investment would, the growth would not otherwise happen, and tax revenue would remain little changed.

There are multiple examples of communities in the region using TIF districts to help fund infrastructure specifically in employment areas, which have responded with new development and investment. These include the North Hillsboro Industrial Renewal Area (2015, 2023), the Tualatin Leveton Tax Increment District (2021), and the Wilsonville Coffee Creek Urban Renewal Area (2016), and the Sherwood 2021 Urban Renewal Plan which covers the Tonquin Employment Area. All of these TIF plans were adopted with the goal of paying for infrastructure improvements within an underdeveloped employment area to make sites development ready. The property value of the new growth helps to pay for the public investment over time.

The adoption of a new TIF district is a planning process that typically includes the preparation of a district feasibility study, followed by the preparation of a TIF Plan and supporting Report that are adopted by the City Council. Statute allows a city the size of Oregon City to include a total of up to 25% of its land area, and 25% of its total assessed value in its combined TIF districts.

- 2. Local Improvement District:** Improvement districts assign all or a portion of the cost of infrastructure improvements to the properties that will directly benefit from them. These costs to property owners are in addition to the standard assessed property taxes but typically

substitute for SDCs. A local improvement district (LID) is a method for a group of property owners to pay for improvements that will provide collective benefits to them all. Oregon law authorizes local governments to establish LID's, and they are common in Oregon.

The South Hillsboro neighborhood is an example of a large, mostly residential, expansion area that used an LID to help finance improvements to open the area for development (2016). Property owners, including large land developers, were given the option to join the LID, paying an assessment at once, or over a set number of years. Property owners who opted not to join the LID would pay transportation SDCs at the eventual time of development of their property.

One challenge in utilizing a LID is that the cost of system development is ultimately borne by the property owners in addition to standard assessed property taxes. While it may be logical for the property owners to pay for improvements that will directly benefit them, it can nonetheless hamper future development in an area by adding burdensome costs prior to achieving the proposed development.

The cost of the LID is typically assessed immediately, and a lien placed on the impacted properties, though payments may be city-financed and paid off over time. This mechanism is likely to be burdensome to current landowners if they do not have an immediate buyer/future developer identified.

This funding method is unlikely to be a good approach to the Thimble Creek area and is not recommended here. The high-cost burden of the future infrastructure, combined with the lower relative value of industrial land, and the large areas of unbuildable land due to easements and environmental constraints, mean that the LID assessments would likely not be economically viable for property owners or new buyers. The South Hillsboro plan area included more high-value land uses and fewer unbuildable lands.

3. **State Loans and Grants:** The State, via Business Oregon offers some grant programs meant to help communities finance infrastructure projects that facilitate business expansion and job growth. The main tool is the Special Public Works Fund which provides cities with loans of up to \$10M with favorable terms for “capital improvement (acquisition, preliminary and final design, & engineering) or planning projects (technical and financial feasibility studies) that assist in developing industrial lands, supporting an immediate job creation/retention/expansion opportunity, or replacement of essential community facilities.” Though modest in size compared to the total project list in Thimble Creek, this loan could be used to complete one or more key first projects to help unlock some development. The State also offers other programs to assist with industrial site readiness, technical and planning assistance, brownfield clean up, and water projects.

Metro administers various transportation funds for the region, including Federal funding sources such as the Surface Transportation Block Grant and Congestion Mitigation/Air Quality programs. Metro offers this funding through its Regional Flexible Funds three-year grant cycle.

C. Permitted Land Uses

Another obstacle to rapid development in the study area has been the rigidity of the land uses permitted outright, conditionally, or prohibited by the development code. The code is designed to encourage the type of high-tech employment campus envisioned in the plan by largely restricting uses that aren't seen as compatible with that development pattern. Uses permitted outright in the CI zone include:

- A. Experimental or testing laboratories;
- B. Industrial uses limited to the design, light manufacturing, processing, assembly, packaging, fabrication and treatment of products made from previously prepared or semi-finished materials;
- C. Public and/or private educational or training facilities;
- D. Corporate or government headquarters or regional offices with fifty or more employees;
- E. Computer component assembly plants;
- F. Information and data processing centers;
- G. Software and hardware development;
- H. Engineering, architectural and surveying services;
- I. Non-commercial, educational, scientific and research organizations;
- J. Research and development activities;
- K. Industrial and professional equipment and supply stores, which may include service and repair of the same...;

- Chapter 17.37.020

Retail and office uses are generally restricted to accessory or secondary uses to one of the permitted units listed above. Warehousing and distribution uses are allowed in the general CI zone, but in Thimble Creek must be an accessory use, and may be no more than 50% of the total floor area. Independent standalone warehousing and distribution businesses are not allowed in Thimble Creek. Outdoor storage is limited to 25% of the net buildable area, which further limits the viability of some common users of industrial space such as construction companies.

Two examples of industrial zones that faced similar challenges of slow pace of development were the Employment Industrial zone in Sherwood, and the Manufacturing Park zone in Tualatin. In both cases, these zones were envisioned as similar high-tech, high wage employment areas with a campus-like feel that limited some traditional industrial users. The envisioned users were things like advanced manufacturing, software and hardware developers, clean technology, outdoor and active gear. In both cases, the zones have been reassessed based on slow development and perceived barriers to interested businesses.

After the initial adoption of the Tonquin Employment Area (TEA) and the accompanying Employment Industrial (EI) zone in Sherwood, there was little development activity or interest in the ensuing years. The perception and feedback were that the zone as written was too limited in allowed uses and development standards. In response, the zone was amended in 2016 to encourage more mid-sized

manufacturing and flex space. The amendment was intended to make the zone more flexible, including more such uses as warehousing and distribution and reducing restrictions on others. At the same time new restrictions were introduced to help limit the size of some uses such as distribution.

The changes are viewed as a success in attracting new development in the employment area including flex space and distribution users that would not have been allowed under the prior rules. Results have shown that many of the tenants in multi-tenant flex space are classic industrial users such as light manufacturers or small technology businesses.

In 2023, Tualatin followed suit in reassessing its Manufacturing Park (MP) zone and creating the new Basalt Creek Employment (BCE) zone in this employment area. Similarly, the area was planned for more high-tech and advanced industry that is slow in materializing. The BCE zone was updated from the MP zone, to allow more distribution as an accessory use (50% similar to Oregon City), but also allowing it to be a primary use *if 30% of the site is used by other types of industrial users*. This enables the development of flex space, where distribution is allowed, but requiring that other types of users also be on site. By not requiring that these be the same company, independent distribution and logistics buildings are allowed.

Oregon City might consider making the CI zone generally, and in Thimble Creek specifically, more flexible to allow for more of the typical industrial land uses that feature stronger demand today, rather than waiting for rarer or low-probability recruitments. This can be done by allowing what are currently conditional uses such as distribution, or small commercial uses, to be primary or accessory uses if they are part of a multi-tenant development (see below). An increase in outdoor storage allowance might also facilitate some types of businesses that are currently effectively limited.

Coordinate with Clackamas Community College (CCC) expansion: CCC has recently secured land on the west side of Beaver Creek Road to the east of the existing college campus. This roughly 40-acre consolidated site offers the opportunity to attract some of the types of employment uses envisioned in the original Thimble Creek Plan. For instance, employment skills training, research and development, software and high-tech development, engineering and scientific work related to the college and its programs. The city should seek to engage with CCC to discuss the vision of the Thimble Creek Plan and its employment areas and see how the city might partner to help work towards the vision as CCC expands.

D. Amendments to Code Standards

As noted, this project included the review of zoning and development code standards that apply in the CI zone and Thimble Creek specifically. The review found a few minor issues for consideration that might impact development viability:

- 1. Make “Warehousing and Distribution” an accessory use in the CI zone.** Changing "Warehousing and Distribution" from a conditional use to a permitted accessory use within the CI Zone would provide flexibility to industrial developers and streamline the approval process. This use could also be allowed as one component of a multi-tenant or “flex”

development, which would allow for flexible tenanting, but discourage large single-use distribution developments.

2. **Strict outdoor storage limitations.** Outdoor storage is limited to 25% of the net developable area, which can pose significant constraints for industries requiring large storage spaces, such as manufacturing, construction, or distribution. The City can consider increasing the permitted outdoor storage area to 50% to create more flexibility in the types of industrial businesses that can locate in Thimble Creek.
3. **Buffer zone and height restrictions.** The CI District enforces buffer zones for industrial uses abutting residential or commercial zones, as well as additional buffers for buildings over 45 feet. These setbacks may create restrictions on land use for industries that could benefit from vertical expansion or require more site coverage. These standards are more restrictive than in comparable industrial zones. The City can consider reducing the buffer from neighboring uses from 25 to 20 feet, and applying this buffer only to neighboring residential zones, not to commercial neighbors which typically require less buffering from other commercial or industrial uses.
4. **Sustainability requirements and associated costs.** Developments within the Thimble Creek Concept Plan area are required to incorporate six out of eight options for sustainability features, such as eco-roofs, permeable paving, and EV (electric vehicle) charging stations. While sustainability is a foundational element of the Concept Plan since it was written, mandatory requirements to meet sustainability features increase upfront development costs and complexity of projects that create financial challenges for industrial businesses, especially if the requirements are numerous.

The Code states:

- G. Sustainability Features. Each development must incorporate at least six of the following sustainability features:
 1. A vegetated eco-roof for stormwater management. An eco-roof covering twenty to forty percent of the total roof area shall count as one feature, and a roof covering more than forty percent of the total roof area shall count as two features;
 2. A white roof with a Solar Reflectance Index (SRI) of seventy-eight or higher if the roof has a 3/12 roof pitch or less, or SRI of twenty-nine or higher if the roof has a roof pitch greater than 3/12 covering a minimum of seventy-five percent of the total roof area;
 3. A system that collects rainwater for reuse on-site (e.g., site irrigation) designed to capture an amount of rainwater equivalent to the amount of stormwater anticipated to be generated by fifty percent of the total roof surface;
 4. An integrated solar panel system mounted on the roof or anywhere on site. A solar system with surface area equivalent to a minimum of twenty to forty percent of the total roof area shall count as one feature, and a solar system with surface area equivalent to forty percent or more of the total roof area shall count as two features;
 5. Use of native plant species selected from the Oregon City Native Plant List. Native plantings that cover twenty to thirty percent of the total landscaped area shall count as one feature, and plantings that cover thirty percent or greater of the total landscaped area shall count as two features;

6. Provision of pedestal or wall-mounted Level 2, two hundred forty-volt electric vehicle chargers, or similar alternative fueling stations as approved by the community development director, at a minimum ratio of one station per fifty vehicle parking spaces up to a maximum of five such stations;
7. Permeable paving, which may include porous concrete, permeable pavers, or other pervious materials as approved by the city engineer. Permeable paving totaling twenty to forty percent of all paved surfaces shall count as one feature, and permeable paving of forty percent or more of all paved surfaces shall count as two features; or
8. Buildings LEED-certified by the U.S. Green Building Council at any level shall be counted as three features.

- Chapter 17.37.060(G)

Requiring the inclusion of six of eight options is a high bar that will add costs to a development and negatively impact the feasibility of some developments. The City can consider reducing this requirement to four or fewer of the options. Some of these requirements may also be appropriate for inclusion in the landscaping or other code.

In general, when given a menu of options to meet approval requirements, developers can be expected to select the least costly alternatives to meet the standard. This means that the costliest options will seldom if ever be selected.

MEMORANDUM

Thimble Creek Industrial Readiness Study



**Harper
Houf Peterson
Righellis Inc.**

ENGINEERS ♦ PLANNERS
LANDSCAPE ARCHITECTS ♦ SURVEYORS

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Job No.: JOE-01

Date: January 29, 2025

To: City of Oregon City

Brendan Buckley, Johnson Economics

From: Thuy Cao AICP, Planner, HHPR

Subject: Task 3: Development Scenarios & Industry Needs

PURPOSE

Oregon City is working with Johnson Economics and Harper Houf Peterson Righellis (HHPR) to complete a market analysis and industrial readiness study for the Thimble Creek Sub-Area. The purpose of Task 3 is to provide strategies and recommendations for implementation, funding sources, and development scenarios for the Thimble Creek study area. Task 3.2 specifically focuses on potential development scenarios including general information on recommended property and the infrastructure requirements for certain industries. In addition, this memorandum discusses which development obstacles are greatest and provides additional strategies and recommendations to consider.

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I. ZONING COMPARISON

In order to evaluate how Oregon City's Campus Industrial (CI) zone compares to similar zones in nearby cities within the Portland Metropolitan Area, the following table focuses on the purpose, standards, and restrictions of similar employment-focused campus industrial zones. By examining development standards and notable barriers—such as infrastructure requirements and compatibility restrictions—this analysis highlights strategies used by different jurisdictions to attract industrial growth while addressing local priorities including environmental protections, community livability, neighborhood character, and long-term planning goals.

Table 1. Zone Comparison – Portland Metropolitan Area

City	Industrial Zones(s)	Allowed Uses (Industrial)	Development Standards	Barriers/Restrictions
Oregon City	Campus Industrial (CI)	Manufacturing, research facilities, office uses, warehousing (limited)	Setbacks: Front: 20 ft, Corner side: 20 ft, Rear: 10 ft Landscaping: 15% Building height: 45 ft	Limited outdoor storage allowed, stringent environmental review due to proximity to natural areas. Sustainability features required. Buffering from neighboring zones.

Tualatin	Manufacturing Park (MP)	Specialized manufacturing, and related uses and research facilities	Setbacks: Varies Landscaping: 25% Building height: 70 ft	Required buffering and height restrictions from residential zones.
Lake Oswego	Industrial Park (IP)	Industrial service and storage, light manufacturing, wholesale distribution, research and development, office uses	Setbacks: Front: 20 ft, Side: 10 ft, Rear: 10 ft FAR: 1.0:1 Landscaping: 15% Building Height: 45 ft	Limited industrial zones, strict design standards, limited outdoor storage and loading docks, requirements to maintain aesthetic standards.
Milwaukie	Business Industrial (BI)	Research and laboratories, manufacturing, warehousing and distribution, contractors and related businesses	Setbacks: Front: 20 ft, Corner side: 10 ft Landscaping: 15% Building Height: 45 ft	Outdoor storage prohibited if located adjacent to specified areas in the zone.
Happy Valley	Industrial Campus (IC)	Research and development, technology, professional services, processing, logistics, distribution, wholesale activities, manufacturing and production, offices	Setbacks: Front: 10 ft, Rear: 20 ft, Side: varies Landscaping: 15% Building Height: 45 ft	Compatibility with nearby residential zones, buffer requirements, and strict development standards.
Sherwood	Employment Industrial (EI)	Manufacturing and technology, distribution, warehousing, search and development, laboratories	Setbacks: Front: 20 ft, Corner side: 20 ft Landscaping: Based on point system Building Height: 50 ft	Minimum lot area for industrial uses: 3 acres, additional industrial design standards for new development.
Hillsboro	Station Community Industrial (SCI)	Industrial service, manufacturing and production, warehouse and freight, wholesale	Setbacks: Front: 30 ft FAR: 0.35 Landscaping: Variable Building Height: 60 ft	Additional site design requirements.
Beaverton	Office Industrial (OI)	Manufacturing, fabricating, processing, laboratory, warehousing, wholesale and distribution	Setbacks: Front: 35 ft, Abutting residential: 75 ft, Side: 10 ft Landscaping: N/A Building Height: 80 ft	Buffer requirements for adjacent residential zoning districts.

Portland	General Employment 1 (EG1)	Manufacturing, research and development, warehouse and freight movement, industrial service	Setbacks: Front: 5 ft FAR: 3:1 Landscaping: 15% Building Height: 45 ft	Exterior storage limited to 20%, exterior work activities are prohibited.
	General Employment 2 (EG2)	Manufacturing, research and development, warehouse and freight movement, industrial service	Setbacks: Front: 25 ft FAR: 3:1 Landscaping: 15% Building Height: No limit	Exterior work activities are prohibited.

Oregon City's Campus Industrial (CI) zone focuses on merging employment-focused industrial uses such as manufacturing, warehousing, and office spaces within a campus-like environment that integrates with surrounding uses. Similarly, other cities designate employment industrial zones to provide opportunities for light industrial development in carefully planned environments. These zones prioritize compatibility with surrounding residential or commercial uses by utilizing standards such as setbacks, landscaping, and height limitations to reduce visual impacts.

Development standards for these employment industrial zones generally aim to balance functionality, aesthetics, and compatibility with surrounding uses, but certain requirements can create barriers that go beyond typical expectations. Examples include environmental standards that require additional compliance steps and costs, enhanced landscaping or buffer requirements that reduce usable site area, and stringent design standards that limit flexibility in site layout and building design.

These types of restrictions can increase the complexity, expense, and time required for industrial developments, making some locations less marketable or attractive to certain industries. In addition to these standards, infrastructure readiness appears to be a consistent barrier to development with cities requiring industrial development to provide significant infrastructure improvements including upgrades to utilities, roadways, and transit systems.

II. DEVELOPMENT SCENARIOS

The Thimble Creek Concept Plan, formerly known as the Beaver Creek Road Concept Plan, is a comprehensive guide for the development of a 453-acre area in southeast Oregon City, Oregon. Adopted in 2008 and updated in 2020, this plan envisions a complete and sustainable community with a diverse mix of uses, including employment centers, mixed-use districts, residential neighborhoods, open spaces, and trails. The plan area was added to the regional urban growth boundary by Metro in 2002 and 2004, with the goal of creating a multi-use community that complements adjacent areas like Clackamas Community College and Oregon City High School.

Key features of the Concept Plan include:

- A North Employment Campus for tech flex and campus industrial uses
- A Mixed Employment Village along Beaver Creek Road
- A 10-acre Main Street area for local shops and services
- West and East Mixed-Use Neighborhoods with varying residential densities
- Sustainability strategies, including green building practices and stormwater management

- An extensive open space and trail network
- A connected street framework with emphasis on multi-modal transportation

The plan aims to balance regional employment needs with local community development, providing a transition between urban and rural areas while creating opportunities for future growth and connectivity. Despite the plan's vision for employment centers, there has been little interest in development. To address this issue, Oregon City is working with the consultant team to explore potential opportunities and locations in the Thimble Creek area to attract new employers, with the goal of identifying barriers to development and increasing the potential for regionally significant industry clusters. Adjusting dimensional and development standards can enhance the appeal of the Thimble Creek Concept Plan area by addressing current development needs and removing barriers. These recommended code amendments can be initiated by the City as a straightforward and simple solution to make development in the area more flexible and attractive to developers looking for industrial lands.

Proposed Changes to Use Table

To encourage industrial development in the Thimble Creek Concept Plan area, changing "Warehousing and Distribution" from a conditional use to a permitted accessory use within the CI Zone would provide several key benefits and would represent a significant shift in land use. This modification aims to enhance the flexibility and attractiveness of the CI Zone for industrial development while maintaining its primary focus on employment-intensive uses. The change could potentially attract new growth of diverse industrial activities into the area. These benefits include:

- **Increased flexibility.** Allowing warehousing and distribution as an accessory use would give industrial developers and businesses more flexibility in their operations. These functions could be incorporated into their facilities without going through an additional conditional use process, which could limit appeal in this area.
- **Streamlined approval process.** As a permitted accessory use, warehousing and distribution activities would face fewer regulatory challenges. This could speed up the development process and make the area more attractive to potential industrial businesses who are seeking a flexible industrial space that is desired by the Thimble Creek Concept Plan.
- **Support for primary industrial uses.** Warehousing and distribution often complement manufacturing and other industrial activities. Permitting these as accessory uses would allow companies to more easily integrate their production and logistics operations.
- **Alignment with employment goals.** The Thimble Creek Concept Plan emphasizes creating family-wage jobs and strengthening the local economy. Allowing warehousing and distribution as accessory uses could support the growth of industrial businesses that provide such employment opportunities.

It is important to note that the Thimble Creek Concept Plan also emphasizes creating a pedestrian-friendly environment and promoting sustainable development practices. Any change to permitted uses should be carefully balanced with these goals to ensure they do not conflict with the overall vision for the area. This can be considered when determining the maximum allowable area for warehousing and distribution on a given site. The following are recommendations for limitations on warehousing and distribution as an accessory use in the CI Zone:

- **Maximum square footage.** Warehousing and distribution facilities should be limited to no more than 50% of the floor area of the primary use. This ensures that these activities remain accessory to the primary use.

- **Use limitations.** The warehousing and distribution facilities not associated with an on-site industrial use should remain prohibited.
- **Design standards.** Locate warehousing and distribution areas to the rear of buildings or sites, away from street frontages. Provide adequate screening and landscaping to minimize visual impacts from public roads and adjacent properties.
- **Traffic considerations.** Limit the number and size of truck bays based on the scale of the primary industrial use. Require a traffic impact analysis to ensure the accessory use does not overwhelm local roads as planned for in the original plan.
- **Sustainable features.** Require green building practices for warehousing and distribution facilities, such as energy-efficient lighting and HVAC systems.

Proposed Dimensional Standards

In order to further promote industrial development in the Thimble Creek Concept Plan area, the proposed Campus Industrial (CI) Zone Standards introduce two key modifications while maintaining most existing standards:

- **Reduced buffer requirements.** The buffer requirements have been relaxed in two significant ways:
 - The buffer zone width has been reduced from 25 feet to 20 feet.
 - The buffer requirement now only applies to residential zones, removing the requirement for commercial zone buffers.
- **Expanded outdoor storage capacity.** The proposed standards double the allowable outdoor storage capacity from 25% to 50% maximum, providing more flexibility for industrial operations.
- **Maintained flexibility.** The proposed standards preserve several development-friendly aspects:
 - No minimum-lot area requirements.
 - No minimum interior side yard setback.
 - Allowable increase in maximum building height with additional buffer provided.

Table 2. Existing and Proposed CI Zone Standards.

Campus Industrial (CI) Zone Standards		
	Existing	Proposed
17.37.040 Dimensional Standards		
Maximum lot area	No minimum	No change
Maximum building height	45 feet	No change
Minimum required setbacks:		
Front yard	20 feet	No change
Interior side yard	No minimum	No change
Corner side yard	20 feet	No change
Rear yard	10 feet	No change
Buffer zone	If a use in this zone abuts or faces a residential use, a yard of at least 25-feet shall be required on the side abutting or facing the adjacent residential or commercial zone to provide buffer area	If a use in this zone abuts a residential use, a yard of at least 20-feet shall be required on the side abutting the adjacent residential zone to provide buffer area

Height of building > 45 ft. buffer	Every additional story built above 45 ft. requires an additional 25 ft. buffer	No change
17.37.050 Development Standards		
Landscaping	15% minimum	No change
Parking	No parking in front setback or within buffer areas without approved screening and landscaping	No change
Fences	Periphery fences not allowed	No change
Outdoor Storage	25% maximum	50% maximum

These changes collectively reduce development constraints while maintaining essential protections for adjacent residential areas, making the Thimble Creek Concept Plan area attractive for new industrial investment and expansion. Increasing the outdoor storage capacity from 25% to 50% maximum allows businesses to store more raw materials on-site, maintain larger inventory levels, and accommodate more equipment and product staging areas.

The proposed 5-foot reduction in buffer requirements (from 25 to 20 feet) provides more usable land for development, and eliminating buffer requirements for commercial zones allows for more efficient land use. These changes also translate to financial benefits as less land dedicated to buffers creates more productive use of available land and reduced landscaping requirements along commercial boundaries, along with greater site utilization potential through increased storage allowances.

Examples of Potential Development Scenarios

Providing visual examples of potential development scenarios helps to evaluate the impact that regulations have on industrial development opportunities. These scenarios provide a tangible and visual representation of how adjustments, such as modified buffer requirements, increased outdoor storage capacities, or streamlined accessory uses, can influence land utilization and operational flexibility. This includes visualizing trade-offs, such as balancing the need for increased industrial capability while maintaining community compatibility. The following conceptual scenarios serve several key purposes:

- **Demonstrating the impact of standards on land utilization:** The development scenarios show how dimensional standards, such as outdoor storage capacity and buffer requirements, influence the functional use of land. By comparing existing and proposed standards, the scenarios highlight the increased flexibility for industrial operations, such as expanding outdoor storage allowances and reducing buffers for non-residential uses.
- **Identifying opportunities for streamlined development:** The scenarios provide insights into how streamlined standards, such as relaxing certain buffer and storage limitations, can attract industrial investment by reducing constraints on site design and development costs. For example, allowing warehousing and distribution as accessory uses simplifies the approval process, making the area more attractive to prospective developers.
- **Supporting decision-making on policy amendments:** The scenarios provide concrete examples of how amendments to development standards, such as reducing buffer widths from 25 feet to 20 feet or doubling outdoor storage capacity, can address barriers to development. These visuals and analyses support informed policymaking to enhance industrial readiness in the area.

- **Illustrating flexibility for market needs:** The development scenarios emphasize adaptability to market needs by allowing industrial uses to maximize outdoor storage or streamline accessory uses without compromising the area's long-term goals. This flexibility is critical to balancing regulatory goals with attracting diverse industries.

These conceptual examples serve as a tool for assessing whether the proposed standards are both practical and effective in creating a more competitive and sustainable industrial landscape.

Recommended Site Characteristics

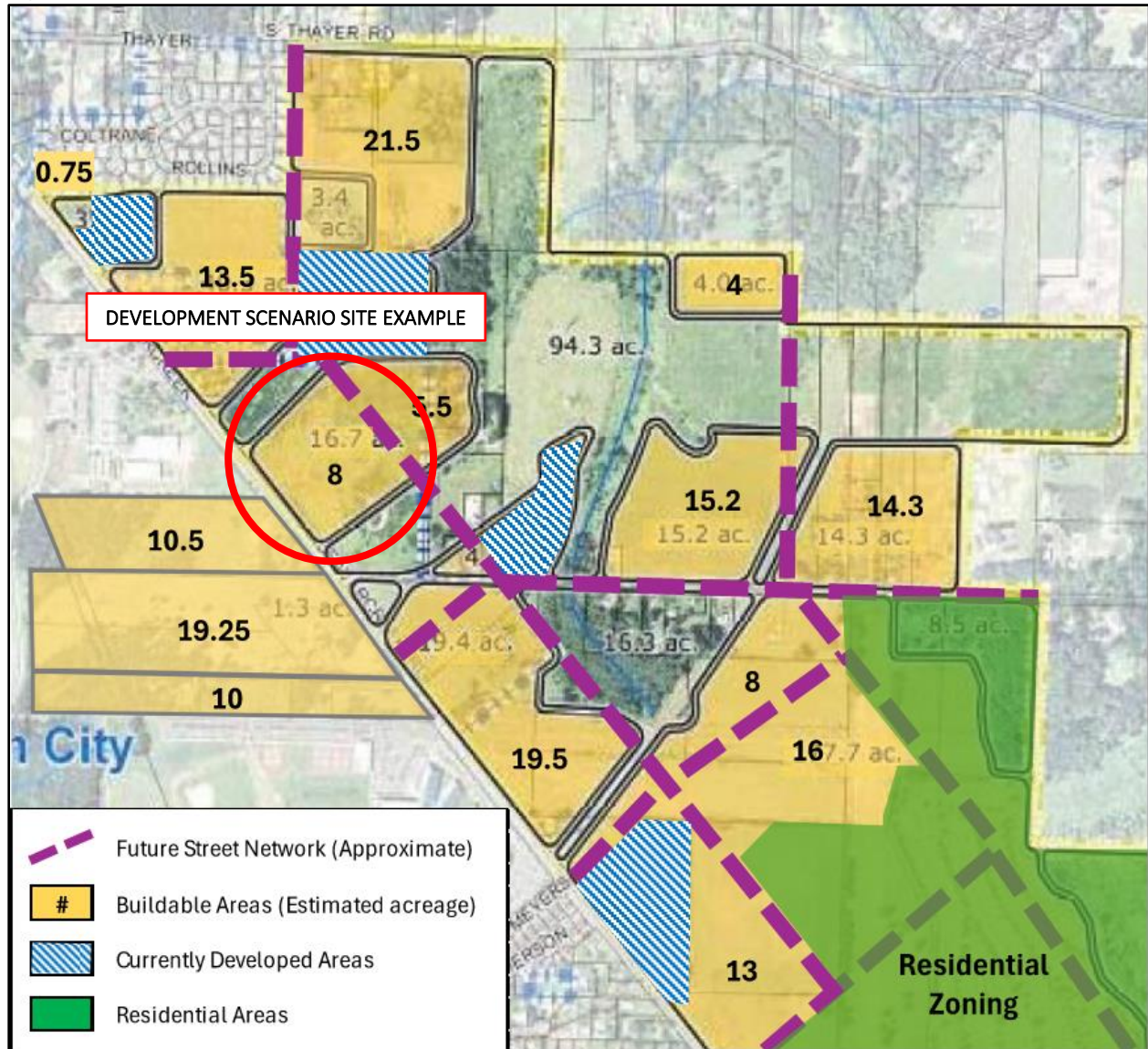
The criteria for recommended industrial development sites within the Thimble Creek Concept Plan Area focus on factors that support industrial development while aligning with the plan's broader goals of sustainability, economic growth, and land-use efficiency.

- **Property size.** Properties should generally be 5+ acres to accommodate a range of industrial uses, from smaller tech-flex developments to larger multi-tenant flex campuses that include manufacturing or warehousing facilities. Properties with rectilinear shapes (e.g. rectangular) are preferred to optimize the site layout and maximize usable area for building footprints, parking, and outdoor storage.
- **Utilities.** Sites must have adequate access to utilities to meet the needs of industries such as manufacturing, warehousing, or technology-based businesses. This includes being able to easily connect to water or sanitary sewer lines, having areas to accommodate on-site stormwater management systems such as detention ponds or green infrastructure, and having access to sufficient electrical capacity for energy-intensive industries.
- **Developable land.** Properties with relatively flat or gently sloping terrain are ideal as steep slopes can increase grading costs and reduce developable area. Properties should also have minimal encroachments on natural features (e.g. wetlands, riparian corridors, or other sensitive lands) to ensure maximum utilization of the property. Adequate buffering from adjacent residential areas is necessary but should not overly constrain developable land.
- **Transportation.** Sites within 10 miles of interstate highways (e.g., I-205) are highly desirable to support freight mobility. Properties should be located near major arterials or collectors, such as Beaver Creek Road, to ensure efficient movement of goods and employees.
- **Operational flexibility.** Zoning flexibility allows for diverse industrial uses, while development standards such as outdoor storage maximums may further accommodate additional industries. Properties that are close to residential areas or educational institutions, such as Clackamas Community College, also provide access to skilled and local labor force.
- **Financial feasibility.** Sites with existing or planned utility infrastructure reduce upfront development costs. Properties with minimal environmental remediation (e.g., no contamination or extensive wetland restoration) are preferred to reduce costs and timeframes for development.

Some example recommendations include parcels within the North Employment Campus designated for campus industrial use that benefit from its proximity existing infrastructure, transit options, and workforce access from nearby educational institutions, or along Beaver Creek Road as parcels with frontage or near intersections with planned extensions could benefit from direct access to transportation and utilities. Land located west of Beaver Creek Road and east of Clackamas Community College could also benefit from existing utility connections.

The hypothetical development site shown in **Figure 1** was selected due to its strategic location within the North Employment Campus, offering excellent access to major transportation routes like Beavercreek Road and proximity to workforce training resources at Clackamas Community College. The site's size and configuration allow for efficient industrial layouts, with minimal environmental constraints ensuring a high percentage of developable land. Existing and planned infrastructure, such as utility networks and roadway upgrades, further supports its viability for industrial use. This development scenario site example considers alignment with the above criteria for industrial development, while the scenarios themselves demonstrates how proposed changes to development standards (e.g. reduced buffers and increased outdoor storage), can enhance land utilization while aligning with the Thimble Creek Concept Plan goals of fostering sustainable, employment-driven growth.

Figure 1. Thimble Creek Market Assessment, Refined Estimated Buildable Areas



The following development scenarios are strictly conceptual and are intended to provide a high-level understanding of how the proposed changes to the development code standards could impact the design and functionality of industrial development within the CI Zone. These scenarios assume that new industrial

development would use the maximum percentage of outdoor storage allowed rather than prioritizing buildable area for an associated building on-site. The scenarios demonstrate how adjustments, such as increasing the allowable percentage of outdoor storage or reducing buffer requirements, could influence site layout, land utilization, and the feasibility of industrial operations.

By assuming that new industrial development would maximize the use of outdoor storage rather than focusing primarily on expanding building footprints, the scenarios highlight the potential trade-offs between operational flexibility and building density. This approach allows stakeholders to visualize how the proposed standards prioritize accommodating industries with large outdoor storage needs, such as manufacturing or logistics, while still aligning with the broader goals of the Thimble Creek Concept Plan.

Figure 2. Development Scenario – Existing Standards



Figure 3. Development Scenario – Proposed Standards



Figure 4. Development Scenario – Existing Standards (Abutting Residential)



Figure 5. Development Scenario – Proposed Standards (Abutting Residential)



Table 3. Technical Analysis for Development Scenarios

Scenario	Pros	Cons
Figure 2: Development Scenario with Existing Standards	– Limits outdoor storage to 25% to preserve aesthetic compatibility. – Preserves green space and buffers, enhancing visual appeal. – Clear restrictions create predictable land use outcomes, preventing over-intensive development in visible areas.	– Limited outdoor storage capacity restricts operational flexibility for industries requiring outdoor storage (e.g. warehousing or logistics). – Inflexible standards may lead industries to favor alternative locations with more flexible zoning.
Figure 3: Development Scenario with Proposed Standards	– Doubles outdoor storage capacity (50%), increasing operational flexibility for industries. – Reduced buffer to 20 feet, increasing usable land area for industrial operations, improving site layouts and increasing potential building footprints. – Streamlines approval processes for accessory uses like warehousing and distribution, allowing for faster project timelines and reduced permitting costs.	– Increased outdoor storage could impact visual and pedestrian-friendly character (will still have to meet landscaping and screening requirements). – Reduced buffers could lead to visual or noise impacts on residential areas. – Substitution of built space for outdoor yard space is likely to decrease employment density somewhat.
Figure 4: Development Scenario with Existing Standards (Abutting Residential)	– Limits outdoor storage to minimize potential conflicts with nearby residential uses and prevents overutilization of open spaces. – Maintains a 25-foot buffer, ensuring clear separation between industrial and residential or commercial uses, reducing conflicts from noise, visual impacts, and truck activity.	– Outdoor storage restrictions may discourage industries requiring flexibility. – Larger buffer and restricted storage reduce industrial readiness, constraining opportunities for potential industries looking to develop.
Figure 5: Development Scenario with Proposed Standards (Abutting Residential)	– Expands outdoor storage capacity (50%), enhancing flexibility for industrial operations. – Permits warehousing and distribution as accessory uses, which provides flexibility for potential multi-tenant developments that can accommodate e-commerce, manufacturing, or logistics. – Reduces residential buffer to 20-foot, offering strong noise and visual separation while allowing for more usable land.	– Reduced buffers and increase outdoor storage could negatively impact adjacent residential properties if not adequately screened. – Reliance on mitigation measures as effective buffering (e.g. landscaping, berms) will be necessary to reduce any impacts.

Critical Observations

- **Trade-offs between land use efficiency and compatibility.** The *existing standards* (Figures 2 and 4) prioritize compatibility by enforcing larger buffers and limiting storage but result in underutilized land and discourage industries with high outdoor space demands or that are in need of flexibility. The *proposed standards* (Figures 3 and 5) directly address industrial needs by increasing flexibility and potential utilization of land, but may introduce risks of impacts (noise, traffic, aesthetics) that may require additional mitigation.
- **Economic feasibility and attractiveness.** The proposed changes maximizes the developable area to accommodate industries with varying operational needs, potential improving economic feasibility for new developments. However, this may come at the cost of reduced appeal unless mitigated or designed effectively.
- **Mitigation is a key factor.** In both proposed scenarios, mitigation measures such as screening, enhanced landscaping, noise barriers, and stormwater management will be essential to balance industrial readiness with compatibility with the community.
- **Flexibility vs. the long-term vision.** While the proposed standards offer flexibility to attract a broader range of industries, careful planning must occur to ensure they align with the Thimble Creek Concept Plan's long-term goals of sustainability, employment density, and compatibility with surrounding uses.

Flexibility in development and land use standards is critical in meeting the diverse needs of modern industrial tenants. Developments such as “industrial multi-tenant flex” offer adaptable spaces that can accommodate varying uses, making them ideal for industries with evolving operational demands. Multi-tenant flex developments combine various uses, such as office, light industrial, R&D (research and development) within one facility or property. The “flex” refers to the adaptability of the space, which can support different uses depending on the tenant’s needs and current scale.

Industries like e-commerce, manufacturing, or logistics often require warehouse or distribution space for storage and shipping. Warehousing as an accessory use provides a key component for companies handling inventory, and having warehousing or distribution integrated with office or R&D spaces allows tenants to streamline operations, reduce their transportation costs, and improve their overall efficiency.

In areas where light industrial uses dominate, multi-tenant flex spaces provide a solution for tenants needing both office and storage needs. The proposed standards, which increase outdoor storage capacity and reduce buffer zones, enhance the feasibility of these developments by providing the flexibility needed to support these growing industries. Balancing this flexibility with mitigation measures ensures compatibility with community goals.

Ultimately, multi-tenant flex developments that prioritize this level of adaptability can drive economic growth, attract diverse tenants, and optimize land use in industrial zones like the Thimble Creek Concept Plan Area that has been eager for industrial growth.

III. INDUSTRIAL SITE NEEDS

The Thimble Creek Concept Plan outlines key industry needs to support industrial development in the Campus Industrial (CI) Zone. This includes robust utility infrastructure improvements, such as high-capacity water lines, sewer systems, and stormwater management facilities, to accommodate these industries. These infrastructure requirements aim to attract clean, employee-intensive industries while promoting economic growth in the region. To attract these industries into the Thimble Creek Concept Plan area, infrastructure improvements should be considered as they can create a significant barrier to development.

Table 4. Infrastructure Requirements for Industrial Industries.

Profile	Acreage (competitive)	Water (min. line)	Sewer (min. line)	Power (min. demand)	Transportation (miles to interstate)
Production Manufacturing					
Heavy Industrial / Manufacturing	10 - 100+	8" to 12"	6" to 8"	2 MW	Within 10 miles
High-Tech / Clean-Tech Manufacturing	5 - 100+	12" to 16"	12" to 18"	4-6 MW	Within 10 miles
Value-Added Manufacturing and Assembly					
Food Processing	5 - 25+	12" to 16"	10" to 12"	2-6 MW	Within 30 miles
Advanced Manufacturing & Assembly	5 - 25+	8" to 12"	10" to 12"	1 MW	Within 15 miles
Flight / Flex Industrial					
General Manufacturing	5 - 15+	6" to 10"	6" to 8"	0.5 MW	Within 20 miles
Industrial Business Park and R&D Campus	20 - 100+	8" to 12"	10" to 12"	0.5 MW	N/A
Business / Admin Services	5 - 15+	4" to 6"	6" to 8"	0.5 MW	N/A
Warehousing & Distribution					
Regional Warehouse / Distribution	20 - 100+	4" to 8"	4"	1 MW	Within 5 miles
Local Warehouse / Distribution	10 - 25+	4" to 6"	4"	1 MW	Within 5 miles
Specialized					
UVA Manufacturing / Research	10 - 25+	4" to 8"	6"	0.5 MW	N/A
Data Center	10 - 25+	16"	8" to 10"	5-25 MW	Within 20 miles
Rural Industrial	5 - 25+	4" to 8"	4" to 6"	1 MW	N/A

Source: State of Oregon – Infrastructure Finance Authority, Industrial Development Competitive Matrix 2015

Larger, more intensive industrial operations generally require more substantial infrastructure across all categories - from larger land parcels to more robust utility connections and better transportation access. Transportation access to major highways is a critical factor for many industrial uses. Water and sewer infrastructure needs are also substantial across all categories, reflecting the importance of reliable utility service for industrial operations. Power demands vary significantly based on the type of operation, with high-tech and data centers having particularly high requirements. The table demonstrates that successful industrial development requires careful infrastructure planning and significant upfront investment to create sites that can support modern industrial users.

The employment subareas of the Thimble Creek Concept Plan have adequate characteristics to meet the needs of many industrial sectors. The main limitation will be the availability of larger development sites and the cost of serving them. Smaller development projects will be practicable in the area, but medium and large industrial development of over 20 acres will be limited.

Utility and transportation infrastructure will be available in the immediate area but must be extended into the interior of the plan area at significant cost. Very high-capacity power users such as data centers may require additional power allocations to meet their needs.

IV. INFRASTRUCTURE IMPROVEMENT NEEDS

Key infrastructure improvements required for industrial development in the Campus Industrial (CI) Zone within the Thimble Creek Concept Plan area are summarized below. These improvements address transportation, utilities, sustainability, and site-specific needs to support the area's economic growth and employment objectives.

Transportation Enhancements

The Thimble Creek Concept Plan area currently lacks adequate transportation infrastructure to support new industrial developments. The existing road network is insufficient to handle increased traffic volumes and freight movement that would come with industrial growth. Key issues include a lack of arterial and collector road connections, inadequate road capacity on existing streets, and missing pedestrian and bicycle facilities.

These transportation deficiencies should be resolved to provide safe and efficient access to new industrial sites, accommodate higher traffic volumes and truck traffic, and offer multi-modal transportation options for employees. Addressing these issues through targeted transportation investments is critical to unlocking the economic development potential of this industrial concept plan area. Based on Oregon City's TSP and the existing conditions within the Thimble Creek Concept Plan area, several transportation improvements would need to occur for new industrial developments:

- **Roadway extensions and upgrades.**
 - Extend Meyers Road from Beavercreek Road to the Meadow Lane Extension as an Industrial Minor Arterial.
 - Extend Holly Lane South from Thayer Road to the Meyers Road extension as an Industrial Collector.
 - Extend Meadow Lane from the Meyers Road Extension to the UGB (north of Loder Road) as an Industrial Collector.
 - Upgrade Beavercreek Road from Clairmont Drive to Meyers Road to an Industrial Major Arterial cross-section with a 5-lane configuration.
- **Intersection improvements.**
 - Install a traffic signal at the Beavercreek Road/Loder Road Extension intersection.
 - Install a roundabout at the Holly Lane/Maple Lane Road intersection.
- **Pedestrian and bicycle facilities.**
 - Add a shared-use path on the north side of the Meyers Road extension between the Holly Lane extension and the UGB.
 - Add a shared-use path on the south/east side of the Loder Road extension between Glen Oak Road and the Holly Lane extension.
 - Add bike lanes to both sides of Loder Road between the Holly Lane Extension and the UGB.

These transportation improvements are necessary to support industrial development for several reasons:

- **Increased capacity.** The roadway extensions and upgrades, such as extending Meyers Road and upgrading Beavercreek Road to a 5-lane configuration, will provide the increased road capacity needed to handle additional traffic generated by new industrial developments.
- **Improved connectivity.** The new road extensions like Holly Lane South and Meadow Lane will create better connections between the industrial areas and the existing road network, allowing for more efficient movement of goods and employees.

- **Enhanced safety.** Intersection improvements like new traffic signals and roundabouts will help manage increased traffic volumes safely as industrial development occurs.
- **Multi-modal access.** The addition of shared-use paths and bike lanes will provide transportation options for employees to access the new industrial areas besides just driving.
- **Freight mobility.** Upgrading roads like Beaver Creek Road to industrial arterial standards will better accommodate truck traffic associated with industrial uses.
- **Access to developable land.** The new road extensions will open access to previously undeveloped land designated for industrial use in the concept plan area.
- **Development requirements.** These improvements are necessary to satisfy transportation impact requirements and ensure adequate public facilities to support new industrial development.

By providing the transportation infrastructure to move people and goods efficiently and safely, these improvements create the conditions needed for industrial development to occur in the Thimble Creek area as envisioned in the concept plan.

Utility Infrastructure

Based on the Thimble Creek Concept Plan and existing conditions, the following utility infrastructure upgrades would be necessary to support new industrial development in the area:

- **Water Supply.**
 - Construction of a "backbone" network of water supply pipelines, including:
 - 8-inch and 12-inch water mains in the Upper Pressure Zone.
 - 8-inch water mains in the Fairway Downs Pressure Zone.
 - A 12-inch "spine" water main running parallel to Beaver Creek Road.
 - Additional local service water mains to serve individual lots as parcels are developed.
- **Sanitary Sewer.**
 - Construction of gravity sewer lines in planned roadways.
 - Installation of a sanitary lift station and pressure sewer in the northern half of the area.
 - A utility bridge to carry sewer pipes over Thimble Creek.
 - Retention of a sewer easement across the current Loder Road alignment.
- **Stormwater Management.**
 - Implementation of a three-tiered stormwater management approach:
 - Site-specific best management practices like rain gardens and pervious surfaces.
 - Green street facilities with vegetated swales or bioretention areas.
 - Seven regional stormwater detention ponds.
 - Construction of a combination of open channels, pipes, and culverts for stormwater conveyance.
- **Electrical.**
 - Enhance existing electrical infrastructure, including transformers and substations, to meet increased demand from industrial development.
 - Install new distribution lines to connect industrial sites to the power grid, incorporating both overhead and underground options as needed.
 - Implement smart grid technologies for improved energy efficiency and reliability, including advanced metering infrastructure.

- Engage local utility providers to assess current capabilities and plan for future power needs aligned with regional energy policies.

The plan emphasizes using low-impact development practices and integrating stormwater facilities within open spaces where possible. Implementation of these utility upgrades would be necessary to support new industrial and other development in the Thimble Creek Concept Plan area.

Additional Considerations

- **Power Line Corridors.** Dedication of a minimum 30-foot-wide public access easement along power line corridors for open space uses such as trails, urban agriculture, or solar farms.
- **Site-Specific Considerations.** Development within the CI Zone must comply with dimensional standards (e.g., setbacks, building height limits) and design requirements outlined in the Oregon City Municipal Code.
- **Coordination with Clackamas Community College and Oregon City High School.** Collaborative land use planning that supports workforce development and local employment opportunities.

These infrastructure improvements aim to create a well-connected, sustainable industrial zone that attracts clean industries while supporting Oregon City's broader economic development goals.

CI Zoning in Oregon City

Some of these barriers become apparent when comparing the Campus Industrial (CI) zones within the Thimble Creek Concept Plan Area to those outside it. Additional CI-zoned properties are located west of the plan area, including near the intersection of Beaver Creek Road and Loder Road, as well as around Meyers Road. Parcels zoned CI that are west of Beaver Creek Road and surrounding Meyers Road are more competitive than those in the Thimble Creek Concept Plan Area due to existing infrastructure, better land configurations, and access for regional connectivity. While proposed changes to development standards aim to increase flexibility, the Thimble Creek area is still faced with high infrastructure costs, fragmented parcels, and delayed site readiness.

Table 5. Key Difference between CI Zones

Aspect	Thimble Creek Concept Plan	West of Beaver Creek Road/Meyers Road
Infrastructure	Requires significant investments in roads and utilities.	Established infrastructure with lower costs or ready connections.
Parcels	Fragmented, irregular, and environmentally constrained parcels.	Larger, contiguous parcels with fewer environmental constraints.
Market Competitiveness	High costs and delayed industrial readiness make development challenging.	Ready for immediate development with higher market appeal.
Regional Connectivity	Limited access to major transportation corridors and in need of additional improvements.	Direct access to Highway 213 and proximity to I-205.

Infrastructure Strategies and Recommendations

To attract industrial and commercial development, several strategies and recommendations have been identified. These strategies aim to create a competitive environment for growth while considering sustainability and economic diversity:

- **Infrastructure improvements.** Ensure efficient access through arterial and collector roads, with adequate bike lanes, pedestrian pathways, and freight routes. Extend water, sewer, and stormwater systems to meet industrial needs. Find ways to utilize areas under power line corridors and make those potential uses be known (i.e. wide easements around powerlines could provide opportunities for district stormwater facilities to maximize the amount of developable land).
- **Capitalize on existing infrastructure improvements.** Developers can strategically align new projects with existing infrastructure improvements from other private developments and leverage these investments. Developments can extend or connect to utility systems (e.g. water, sewer, and stormwater) or transportation networks already upgraded by neighboring projects, reducing costs and accelerating readiness for industrial and commercial uses.
- **Phased development approach.** Implement a phased development strategy that aligns infrastructure improvements with market demands to ensure financial feasibility.
- **Update traffic analysis.** An updated traffic analysis for the Thimble Creek Concept Plan area would allow the City to assess whether the previously proposed transportation improvements are still appropriate or if adjustments are needed based on changing traffic patterns and development trends. This analysis would help identify any new infrastructure requirements or capacity upgrades necessary to support industrial growth, ensuring that the area can accommodate increased freight and employee traffic. An update would also provide developers with greater certainty about the transportation infrastructure they can expect, potentially reducing perceived risks and making the area more attractive for investment. By demonstrating a proactive approach to transportation planning, the City would signal its commitment to supporting industrial development in the Thimble Creek area, which could be a key factor in developers' site selection decisions.