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Memorandum

November 6, 2023 Project# 23021.047

To: Glen Bolen, AICP; Oregon Department of Transportation (ODOT)
Sean Farrelly, City of Tigard

From: Nick Gross, Susan Wright, PE, PMP

RE: Tigard Downtown Reimagined
Multimodal Transportation Gap Summary & Highway Impact Summary DRAFT

PROJECT OVERVIEW

The Tigard Downtown Reimagined Project (Project) aims to integrate Downtown Tigard's historic roots with contemporary development patterns and respond to community needs for more housing and multimodal travel options. Building upon previous and concurrent planning efforts, this Project aims to modernize the City's approach to development, transportation, and equity by providing recommendations for policies, financial investment, and code changes that:

- Support Transit Oriented Development ("TOD")
- Set new equity and climate policy and implementation goals
- Provide quality walking, cycling and transit choices
- Create a vibrant community through strategic investments

The Project area is primarily zoned Mixed Use-Central Business District (MU-CBD), with small areas zoned General Commercial, Light Industrial, Industrial Park and Parks and Recreation at the edges of the project area. There is no residential zoning within the project area.

The MU-CBD zone is regulated by the Tigard Downtown Plan District, which includes development standards that encourage density and mixed uses, including minimum residential densities, taller ground floor height requirements, reduced parking requirements, small maximum setbacks, and urban-feeling lot coverage and landscape requirements.

Issue

The City's development standards are intended to encourage density and mixed uses; however, these patterns have not come to fruition. The Project is looking at refining building heights by downtown subareas[1] and eliminating maximum residential densities.

To achieve these objectives and vision of the Project, comprehensive plan, development code, and Metro 2040 Center boundary amendments are proposed to allow for and realize the desired development in the downtown core that contributes to a vibrant, active, welcoming, and accessible mixed-use area with increased residential densities and commercial businesses.

[1] Refined building heights are generally consistent with existing development code

STUDY AREA

The Project is located within an existing Metro Region 2040 Center, which is subject to Climate Friendly Areas (CFA) transportation review per OAR 660-012-0325(1). As part of the Project, amendments to the existing Metro Region 2040 Center boundary are proposed.

According to the latest round of draft amendments to Chapter 660 – Division 12 Transportation Planning documented as part of the Climate-Friendly and Equitable Communities Corrections & Clarifications Rulemaking, Rulemaking Advisory Committee Meeting 4,Cities and counties considering amendments to comprehensive plans or land use regulations to adopt or expand a 50 climate-friendly area as provided in OAR 660-012-0310 through OAR 660-012-0320, or a Metro Region 2040 51 center, must make findings, including:

> (a) A multimodal transportation study as provided in section (4); and
>
> (b) The multimodal transportation study must include a highway impacts summary as provided in section (5) if the designated climate-friendly area as provided in OAR 660-012-0315 or Region 2040 center contains a ramp terminal intersection, state highway, interstate highway, or adopted ODOT Facility Plan."

The Multimodal Transportation Gap summarizes the existing facility gaps for the automobile, truck/freight, pedestrian, bicycle, Americans with Disability (ADA), and transit networks.

This Highway Impact Summary is intended to address the potential effects on ODOT facilities within the Metro Regional Center or nearby that may occur from proposed changes to the current Comprehensive Plan policies and zoning for the project area.

Figure 1 illustrates the Project study area, the proposed Metro Region 2040 boundary, and proximity to the OR217 ramp terminal.

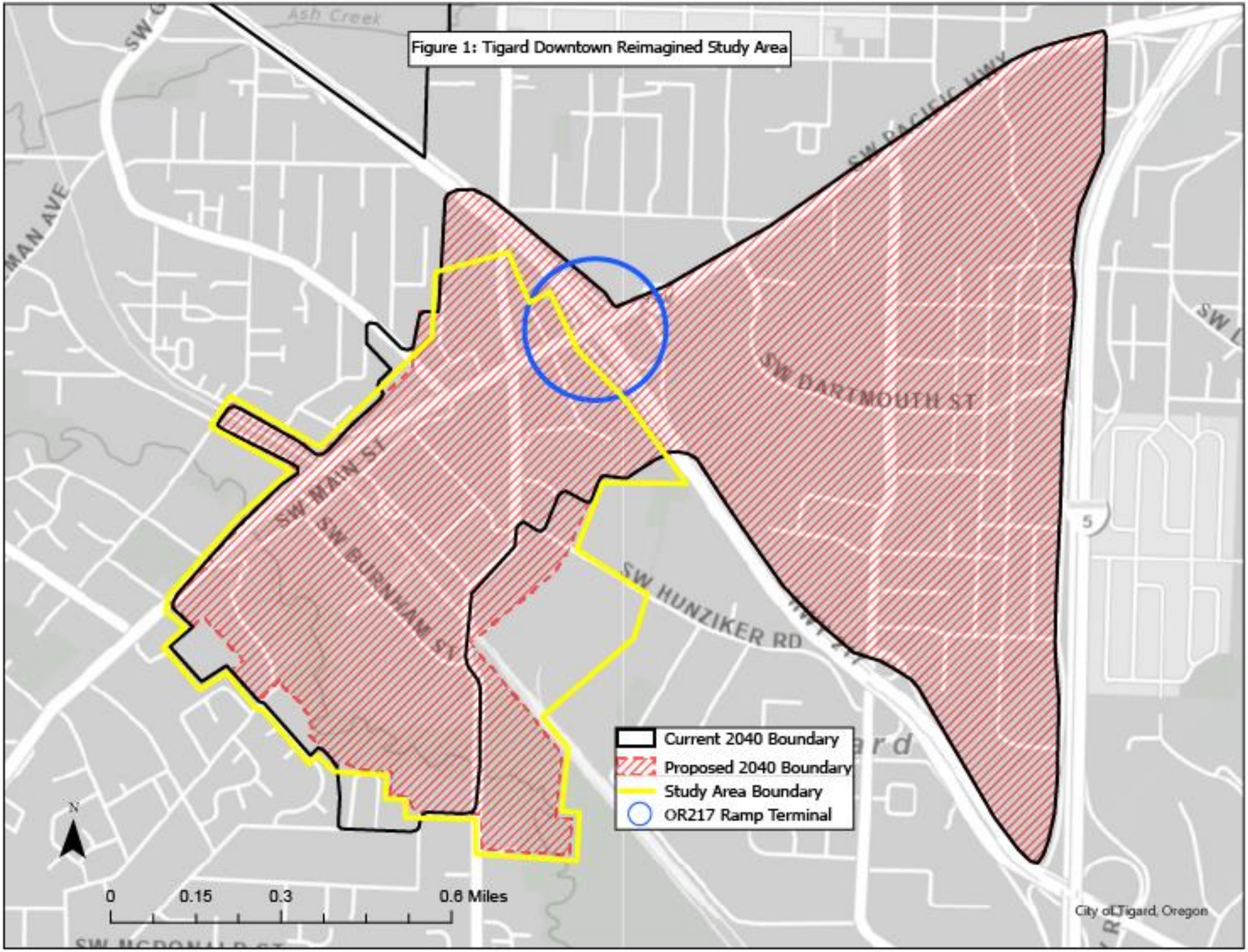
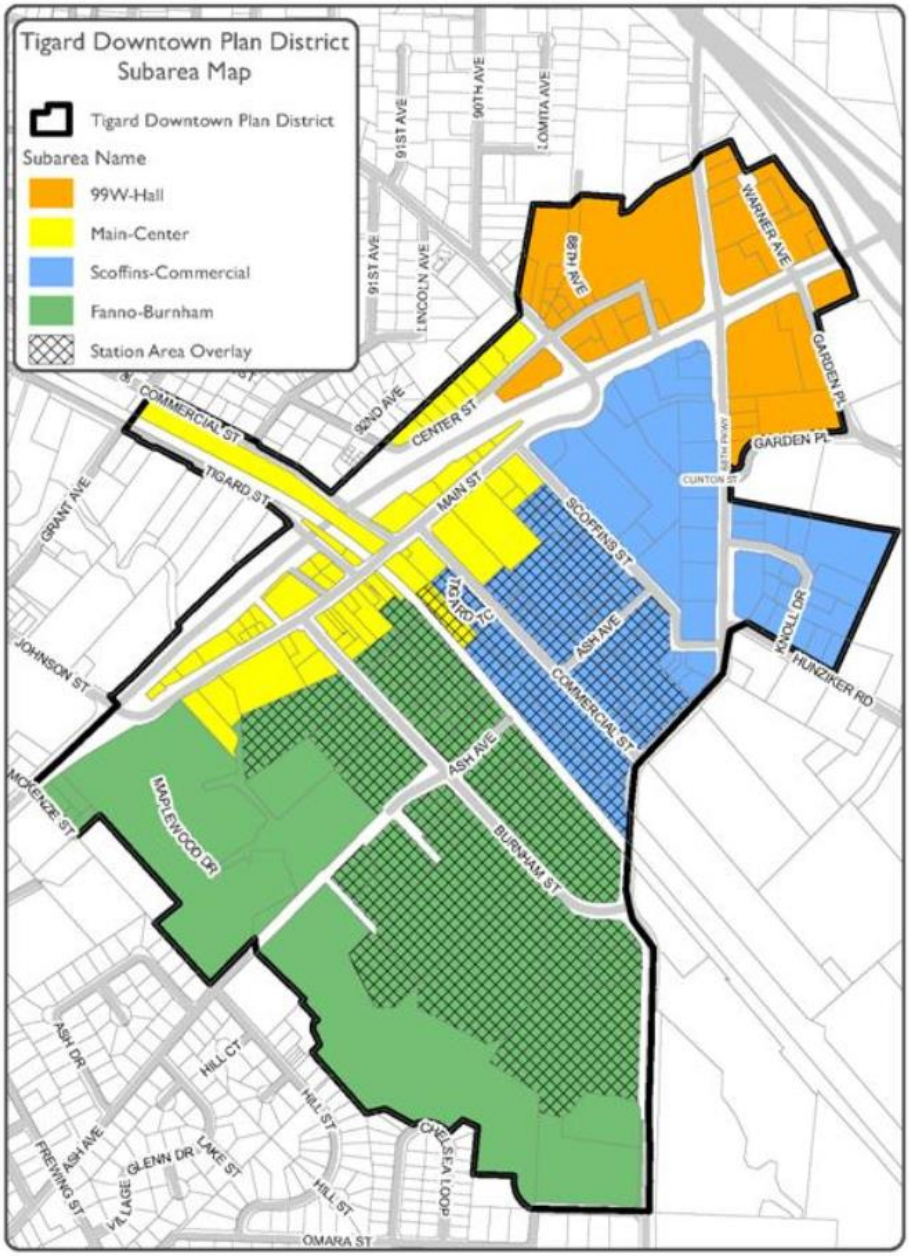


Figure 1: Tigard Downtown Reimagined Study Area
Ash Creek
SW MAIN ST
SW BURNHAM ST
SW DARTMOUTH ST
SW HUNZIKER RD
Current 2040 Boundary
Proposed 2040 Boundary
Study Area Boundary
OR217 Ramp Terminal
N
0
0.15
0.3
0.6 Miles
City of Tigard, Oregon

Existing Downtown Tigard Subarea Map

Most of the project area lies within Downtown Tigard and is zoned MU-CBD[2]. As identified in the City's Development Code, Downtown Tigard is further divided into four (4) unique subareas as well as a Station Area Overlay. Figure 2 illustrates the Subarea Map for Downtown Tigard.

Figure 2: Tigard Downtown Plan District Sub-Areas Map



As part of the Project, modifications to the Subarea Map are proposed as well as changes to expand the Downtown mixed-use zone (MU-CBD) to additional parcels east of Hall Blvd.

[2] https://www.tigard-or.gov/your-government/departments/community-development/planning/zoning

PLANNED TRANSPORTATION IMPROVEMENTS

There are several planned transportation facilities and investments within the Project study area that support vehicular capacity improvements, mode shift from single occupancy vehicles (SOV) to active transportation modes, and safety improvements. These improvement projects are documented in the plans and projects summarized below with further detail of their respective benefits described in Appendix A.

- Southwest Corridor Light Rail Project
- City of Tigard Transportation Safety Action Plan 2019
- City of Tigard Transportation System Plan 2022
- Washington County Transportation System Plan 2019
- Statewide Transportation Improvement Program 2021-2024
- Metro Regional Transportation Plan 2018
- Metro Regional Transportation Plan 2023
- TriMet Pedestrian Plan, 2020

EXISTING TRANSPORTATION NETWORK

The following sections describe specific modal infrastructure for the pedestrian, bicycle, and transit networks, and identifies gaps in those networks. These summaries rely on the information published in the City's recently adopted 2020 Transportation System Plan (TSP) as well as ODOT's TransGIS website.

Automobile Network

The general characteristic of the Project area is that of a Traditional Downtown/Central Business District. The Project area is generally bounded by OR99W (Pacific Highway West) to the north-northwest, OR217 to the east, and Fanno Creek to the south-southwest, with OR141 (SW Hall Boulevard/Beaverton-Tualatin Highway) running north-south through the center.

State Facilities

OR99W (Pacific Highway West)

OR99W (Pacific Highway West) is an Urban Other Principal Arterial with a posted speed of 35mph within the Project area (OR217 southbound ramps [MP 8.69] to SW McKenzie Street [MP 9.56]). West of SW Greenburg/Main Street(MP 8.93), OR99W has a 4-lane section. East of SW Greenburg Road/Main Street, OR99W widens to a 5-lane section approaching the OR217 interchange. Shoulders are provided along OR99W within the Project area with the exception of the segment on and approaching the OR99W viaduct over the Portland & Western Railroad/Westside Express Service Light Rail (MP 9.18 to MP 9.38). OR 99W is classified as a Statewide Highway.

According to ODOT's TransGIS, the Average Annual Daily Traffic (AADT) within the Project area on OR99W is approximately 35,500 with a range of 30,001 to 50,000.

OR141 (SW Hall Boulevard/Beaverton-Tualatin Highway)

OR141 (SW Hall Boulevard/Beaverton-Tualatin Highway) is a 2-lane Urban Minor Arterial with paved shoulders and a posted speed of 30mph between OR99W (MP 4.97) and Tigard City Hall (MP 5.62). Two-way left turn (TWLT) lanes and dedicated left-turn lanes are located intermittently. South of Tigard City Hall, the posted speed increases to 35mph.

According to ODOT's TransGIS, the AADT on OR141 within the Project area is approximately 9,400 with a range of 5,001-10,000 between OR99W and SW Burnham Street and approximately 11,200 with a range of 10,001 – 15,000 south of SW Burnham Street.

Interchange

The OR99W/OR217 southbound ramp terminal is located approximately 100 feet east, and the OR99W/OR217 northbound ramp terminal is located approximately 730 feet east of the Project study area.

Primary Local Streets

The primary local streets within the Project area are SW Main Street, SW Burnham Street, SW Commercial Street, SW Hunziker Street, and SW Scoffins Street. A summary of the roadway characteristics including functional classification, number of lanes, posted speed, and on-street parking is summarized in Table 1.

Table 1: Primary Local Street Characteristics

Roadway	Functional Classification	Number of Travel Lanes	Posted Speed (MPH)	On-Street Parking
SW Main St	Collector	2	20	Yes
SW Burnham St	Collector	2-3	30	Yes
SW Commercial St	Local	2	30	Yes
SW Hunziker St	Collector	2	35	No
SW Scoffins Rd	Collector	2-3	Not Posted	No

In addition to the network described above, the Project has identified a Recommended Connectivity Concept that includes the new local multimodal streets, proposed paths, and shared street connections to facilitate the movement of people in and around the Downtown Tigard area. Appendix B illustrates the Recommended Connectivity Concept.

Study Intersections

The Downtown Tigard Reimagined Plan area includes 11 study intersections analyzed for existing and future motor vehicle traffic operations. These intersections include a mix of Oregon Department of Transportation (ODOT) facilities and City of Tigard facilities. Table 2 describes the intersection jurisdiction and intersection control.

Table 2. Study Intersections and Intersection Control Type

#	Intersection	Jurisdiction	Intersection Control
1	OR 99W/SW Hall Boulevard	ODOT	Signalized
2	OR 99W/OR 217 (southbound ramps)	ODOT	Signalized
3	OR 99W/OR 217 (northbound ramps)	ODOT	Signalized
4	OR 99W/SW Main Street/SW Greenburg Road	ODOT	Signalized
5	OR 99W/SW Main Street/SW Johnson Street	ODOT	Signalized
6	SW Hall Boulevard/SW Hunziker Street/SW Scoffins Street	ODOT	Signalized
7	SW Hall Boulevard/SW Commercial Street	ODOT	Two-Way Stop Control
8	SW Hall Boulevard/SW Burnham Street	ODOT	Signalized
9	SW Main Street/SW Commercial Street	Tigard	One-Way Stop Control[1]
10	SW Main Street/SW Scoffins Street	Tigard	All-Way Stop Control
11	SW Main Street/SW Tigard Street	Tigard	One-Way Stop Control[2]

1. SW Commercial Street northbound stop controlled.
2. SW Tigard Street southbound stop controlled

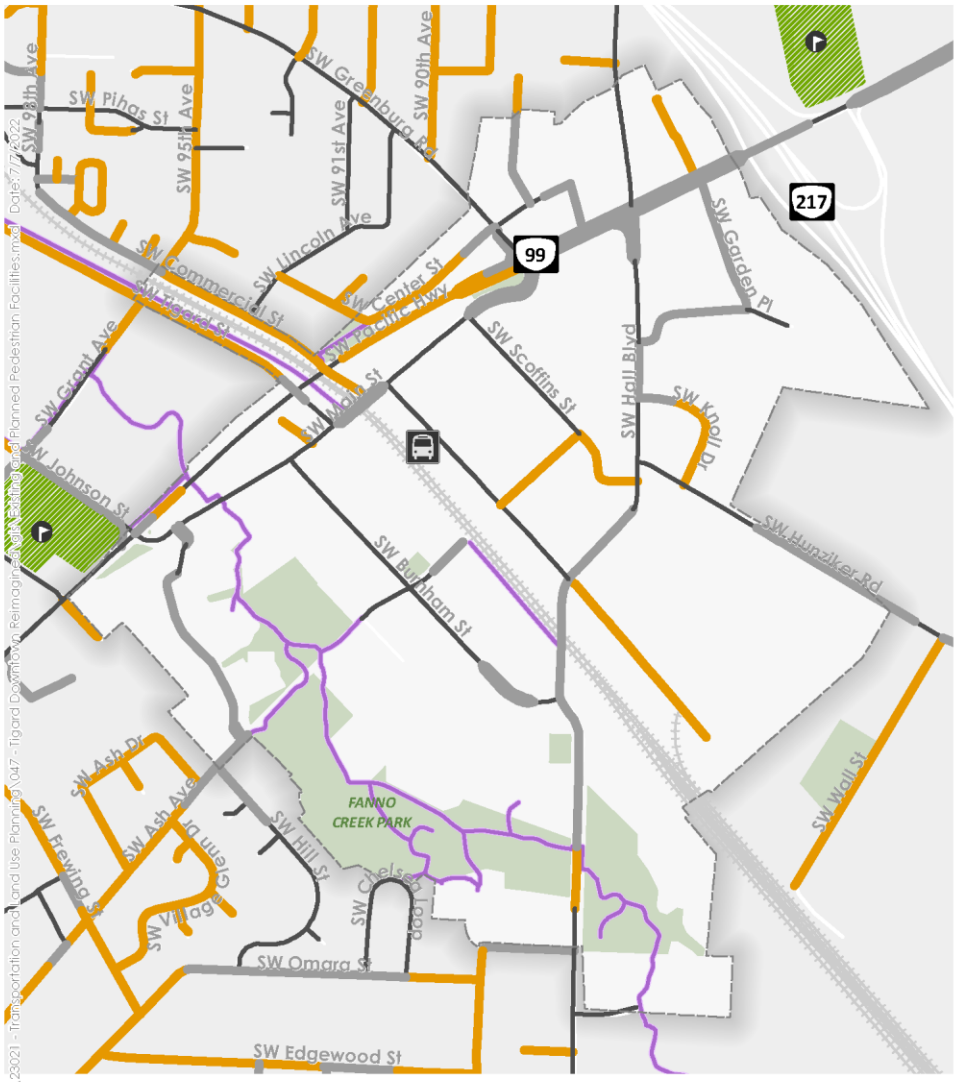
Truck/Freight Network

OR99W is classified as a freight route in the Oregon Highway Plan and is part of the National Freight network. OR99W within the Project area is identified as a Reduction Review (ORS 366.215) Route; however, it is not identified as a High Clearance Route. Trucks compose approximately 3.8 percent of traffic on OR99W within the Project area. None of the local streets within the Project are part of the National or OHP Freight network.

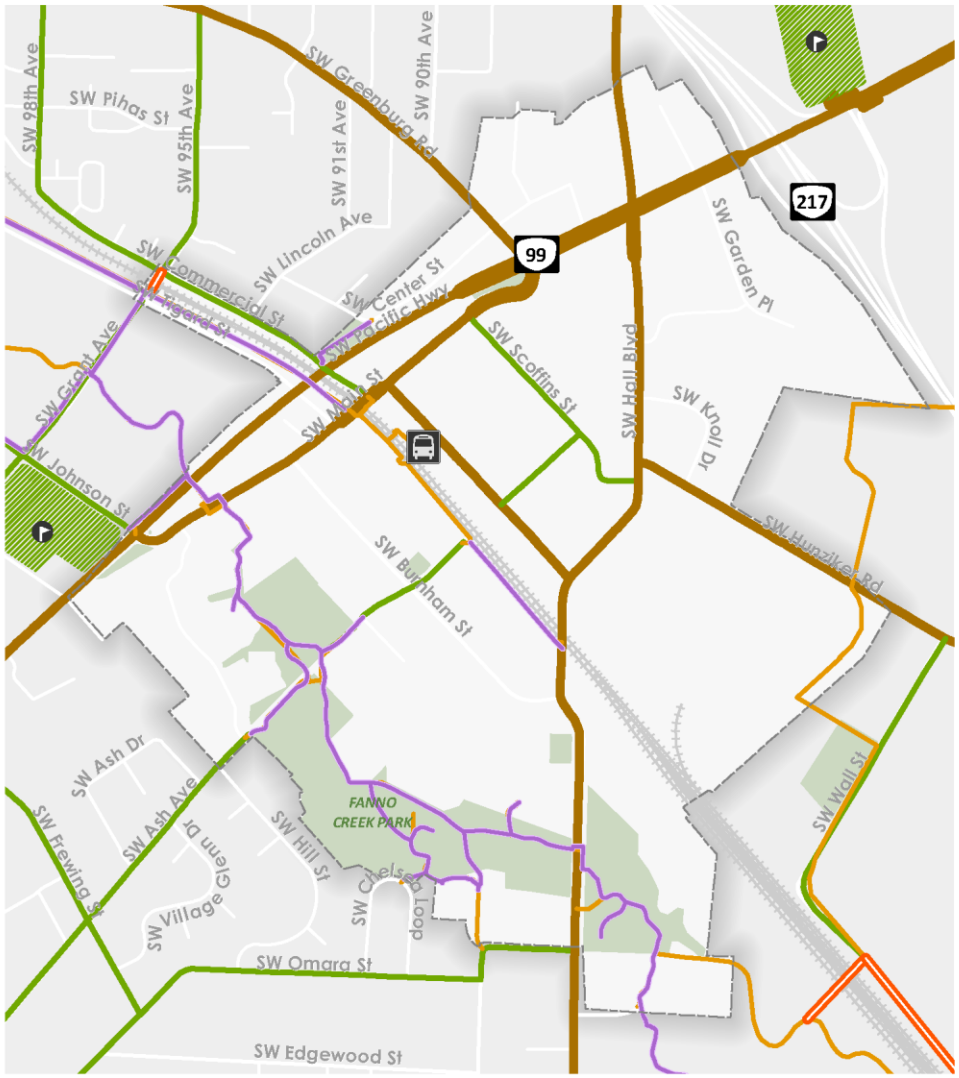
Pedestrian Network and Network Gaps

The City of Tigard's TSP documents the pedestrian network and network gaps within the Project area. Figure 3 illustrates the existing pedestrian and planned pedestrian network for the Project area[3].

[3] ODOT's TransGIS website incorrectly identifies the presence of sidewalks on OR99W.



Existing Pedestrian Network



Planned Pedestrian Network

- Existing Sidewalk on One Side
- Existing Sidewalk on Both Sides
- No Existing Sidewalks
- Existing Trails
- Transit Center
- School
- Parks
- Planned Pedestrian Corridor
- Planned Neighborhood Greenway
- Planned Trail
- Proposed Active Transportation Connection

0 1,000 Feet

Figure 3

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Pedestrian Facilities
Tigard, Oregon

Within the Downtown Tigard Reimagined study area, there are streets with complete sidewalks on both sides, streets with a complete sidewalk on one side, and streets with no complete sidewalks. There is also the Tigard Heritage Trail and the Fanno Creek Trail, the latter of which has overhead flashing beacons at its crossing at SW Hall Boulevard and a rectangular rapid flashing beacon at its crossing with SW Main Street.

Streets with complete sidewalks provide a mixture of curb-tight sidewalks as well as sidewalks that are set back from the curb with street trees or stormwater retention facilities. SW Burnham Street has four midblock crosswalks, three of which include brick pavers on an asphalt street, as well as curb extensions to shorten the pedestrian crossing distance. Similarly, all of the crosswalks on SW Main Street on the west side of the railroad tracks use brick pavers to denote crossings at either intersections or at midblock locations.

Streets with complete sidewalks on one side of the street are somewhat common within the study area. Among the study area streets, SW Hall Boulevard has a complete sidewalk on the west side of the street, but a limited amount of sidewalk on the east side of the street south of SW Hunziker Street. On SW Hunziker Street, there is a complete sidewalk on the north side of the street and a partially complete sidewalk on the south side of the street. SW Tigard Street has a complete sidewalk on the north side of the street, but the south side of the street only has a complete sidewalk near the SW Main Street intersection.

Streets that do not have complete sidewalks vary in where these facilities are lacking. Highway 99W through downtown Tigard has no sidewalks on the bridge over the railroad tracks, but there are sidewalks on either side of the bridge. SW Ash Avenue east of the railroad tracks has no sidewalks at all. And SW Scoffins Street has complete sidewalks north of SW Ash Avenue but no sidewalks south of Ash Avenue.

Bicycle Network and Network Gaps

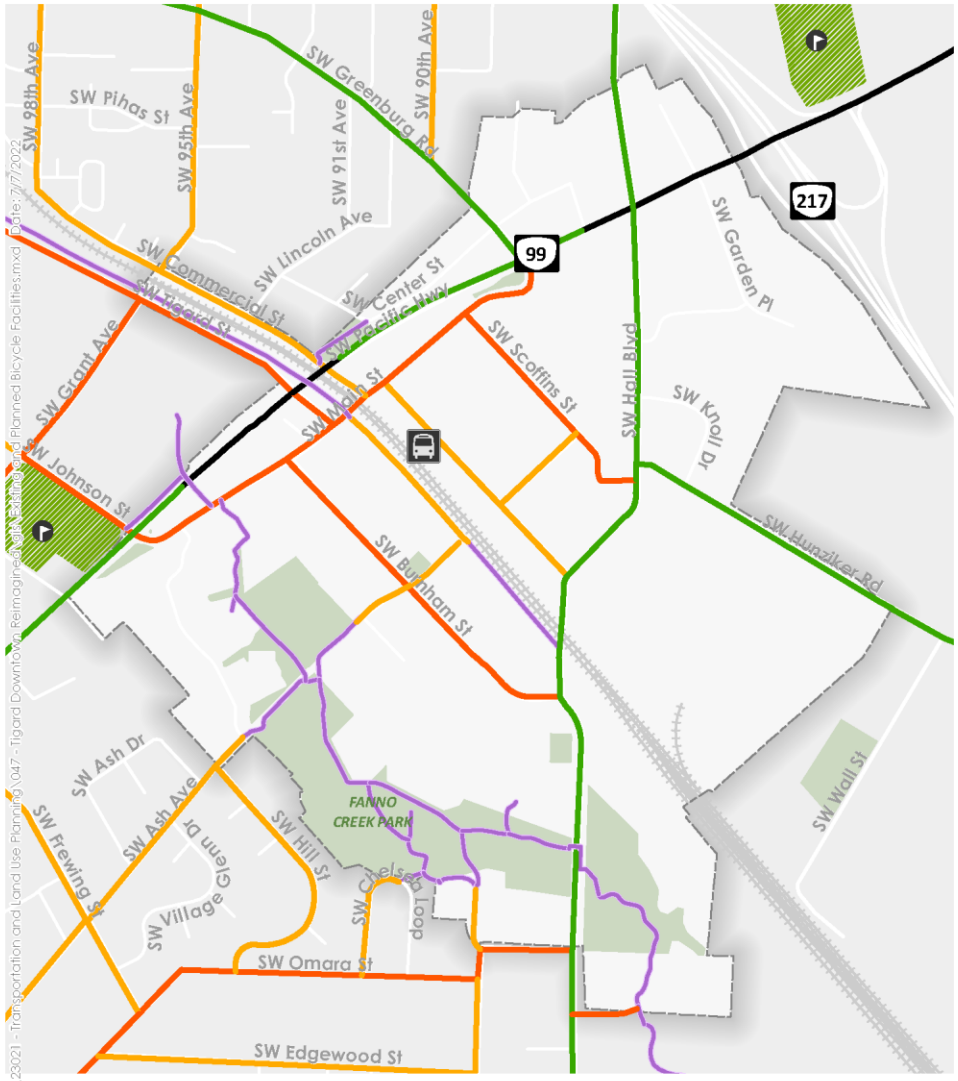
The City of Tigard's TSP documents the bicycle network and network gaps within the Project area. Figure 4 illustrates the existing bicycle and planned bicycle network for the Project area.

On-street bicycle lanes are located on Highway 99W, SW Hall Boulevard, and SW Greenburg Road. Highway 99W is classified as a principal arterial, and SW Hall Boulevard and SW Greenburg Road are both classified as arterials. The Highway 99W bridge over the railroad does not include bicycle lanes.

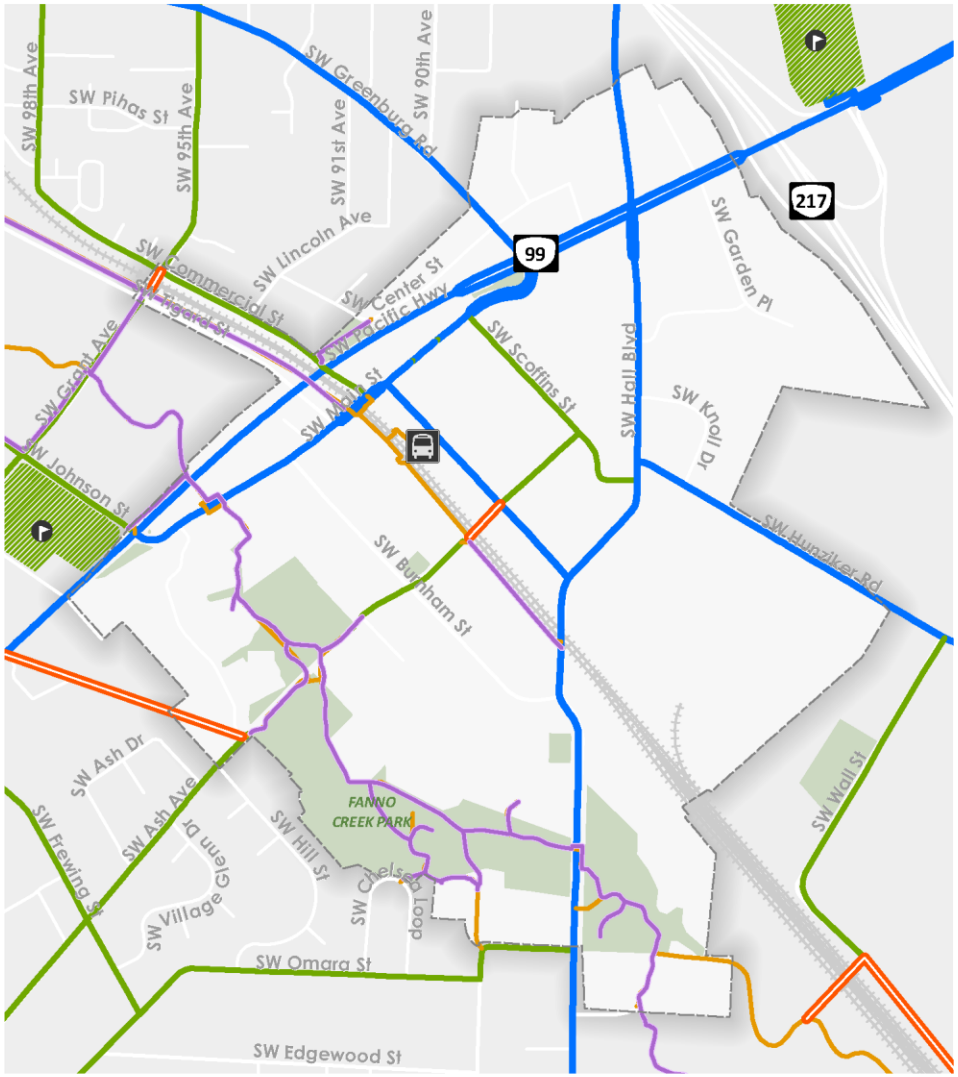
For the remaining street network within the study area, bicyclists must share the roadway with vehicles. SW Main Street, SW Hunziker Street, SW Burnham Street, and SW Scoffins Street are all classified as collector roadways with shared bicycle and vehicular facilities. The remaining streets in the study area are neighborhood roadways.

As shown in Figure 4, two key active transportation connections are proposed to address existing gaps in the active transportation network across the railroad. These proposed active transportation connections include the SW Grant Avenue/SW 9th Avenue railroad undercrossing and the SW Ash Avenue railroad overcrossing.

Addressing these active transportation gaps will increase active transportation access in the study area and improve larger active transportation connectivity by providing lower stress, higher comfortable connections accessible to a broader range of populations. Today, the only grade separated railroad crossing within the study area is OR99W which as described previously, does not include sidewalks or bike lanes.



Existing Bicycle Network



Planned Bicycle Network

- Existing Multi-Use Path
- Existing Bike Lane
- Existing Difficult Connection
- Existing Shared Lane on Moderate Traffic Through Street
- Existing Shared Lane on Low Traffic Though Street
- Transit Center
- School
- Parks
- Planned Major Street Bikeway
- Planned Neighborhood Greenway
- Planned Trail
- Proposed Active Transportation Connection

0 1,000 Feet

Figure 4

Bicycle Facilities
Tigard, Oregon

American with Disability Act (ADA) Gaps

The following section summarizes the presence and compliance of ADA facilities located along the state highways located in the Project area. The majority of intersections are equipped with ADA infrastructure (ramps, push buttons, detectable warning systems), but based on further review, do not meet ADA compliance.

Pedestrian Ramps

The following intersections do not meet ADA ramp compliance for all corners of the intersection.

- OR99W/SW McKenzie Street
- OR99W/SW Johnson Street/SW Main Street
- OR99W/OR141 (Hall Boulevard/Beaverton-Tualatin Highway)
- OR99W/OR217 southbound ramps
- OR141 (Hall Boulevard/Beaverton-Tualatin Highway)/SW Commercial Street

The following intersections do not meet ADA ramp compliance for most corners of the intersection.

- OR99W/SW Greenburg Road/Main Street – the northwest corner ramp meets ADA compliance; all other corners do not.
- OR141 (Hall Boulevard/Beaverton-Tualatin Highway)/SW Hunziker Road – the northeast corner ramp meets ADA compliance; all other corners do not.
- OR141 (Hall Boulevard/Beaverton-Tualatin Highway)/SW Scoffins Street – the southwest corner ramp meets ADA compliance; all other corners do not.
- OR141 (Hall Boulevard/Beaverton-Tualatin Highway)/SW Burnham Street – the northeast corner of ramp meets ADA compliance; all other corners do not.

Push Buttons

Push buttons are located at all state highway intersections within the Project area; however, all push buttons are flagged as "poor" for functional condition and lack audible signal, making them not compliance to ADA standards.

ADA information including ramp compliance, push button information is provided on ODOT's TransGIS website: ODOT TransGIS (state.or.us).

Sidewalks

Sidewalk conditions on OR99W and OR141 were evaluated as part of the Multimodal Transportation Summary. As previously state and shown in Figure 3, sidewalk gaps are present along OR99W. Where sidewalks exist, they often do not meet ADA compliance for facility widths due to clearance requirements or pinch points (mailboxes, utility poles, signage, railings, etc.)

There remains a need to close sidewalk and ADA infrastructure gaps, consistent with the projects and priorities expressed in the City's TSP.

Transit Network and Network Gaps

Transit service in Downtown Tigard is provided by TriMet and Yamhill County Transit.

There are seven bus lines and one commuter rail line across two transit agencies that serve the Project area. These include two frequent service TriMet bus routes (Line 12 and Line 76), as well as one-seat service to downtown Portland, Beaverton, Tualatin, Lake Oswego, Wilsonville, and McMinnville. Table 3 includes service details for each transit route within the downtown Tigard study area.

Each of these transit routes serves the Tigard Transit Center, which is located on SW Commercial Street to the south of SW Main Street. Tigard Transit Center includes a park and ride, and bike lockers/bike racks. Figure 5 illustrates the existing and planned transit network.

Table 3. Transit Routes Serving Downtown Tigard

Route	Operator	Service Days	Hours	Frequency
WES Commuter Rail	TriMet	Weekdays	5:15 AM – 9:30 AM 3:30 PM – 7:45 PM	45 minutes
12	TriMet	All Days	5:00 AM – 2:00 AM	15 minutes
45	TriMet	All Days	5:45 AM – 8:30 PM (weekdays) 10:30 AM – 7:45 PM (weekends)	60 minutes (weekdays) 75 minutes (weekends)
64	TriMet	Weekdays	2:45 PM – 7:30 PM	30 minutes
76	TriMet	All Days	6:00 AM – 11:50 PM	15 minutes
78	TriMet	All Days	6:00 AM – 11:30 PM (weekdays) 6:00 AM – 8:20 PM (weekends)	30 minutes
94	TriMet	All Days	4:30 AM – 1:10 AM	15 minutes (PM peak) 30 minutes (all other times)
44/44X	Yamhill County Transit	Monday – Saturday	5:10 AM – 8:50 PM (weekdays) 7:45 AM – 7:45 PM (Saturday)	45 minutes (weekday peak) 90 minutes (weekday off-peak) 3 hours (Saturday)

Southwest Corridor Light Rail Project

Metro, TriMet, and the Federal Transit Administration completed the Final Environmental Impact Statement (FEIS) for the Southwest Corridor Light Rail Project in January 2022. The FEIS identified a preferred route through downtown Tigard, beginning with an at-grade crossing of SW Hunziker Street at SW Knoll Drive, then running adjacent to SW Hall Boulevard to SW Commercial Street, where the alignment turns to the south and runs along the eastside of the existing railroad tracks. Figure 5 includes the routing for the proposed Southwest Corridor project.

The Southwest Corridor Light Rail Project was part of a larger transportation funding measure on the November 2020 ballot across the entire Metro region. That measure failed to pass, so design work on the Southwest Corridor Light Rail Project has been paused.

Transit Bottlenecks

During the summer of 2023, TriMet and Metro launched the "Better Bus" program designed to make bus travel more effective and more attractive using a data-driven approach. Preliminary analysis identified in the Better Bus: Simplified Systemwide Review web-based tool provides a detailed look at six evaluation metrics related to transit operations on the entire TriMet bus system. This data was derived from an initial screening of the entire TriMet bus system with exclusion of some geographic locations (e.g., transit mall, Tilikum Crossing, transit centers). High & medium delay locations were identified through the application of a scoring approach using 20 values: four delay and travel time metrics and five time periods. The analysis divided the TriMet service area into 14 subareas and the top 20% of segments within each subarea were selected and incorporated into the Better Bus: Simplified Systemwide Review web-based tool.

Exhibit 1 shows Passenger Delay (passenger hours) per mile per day and Exhibit 2 shows travel time variability (ratio of run times) in Downtown Tigard where transit service is provided.

Exhibit 1: Passenger Delay (passenger hours) per mile per day

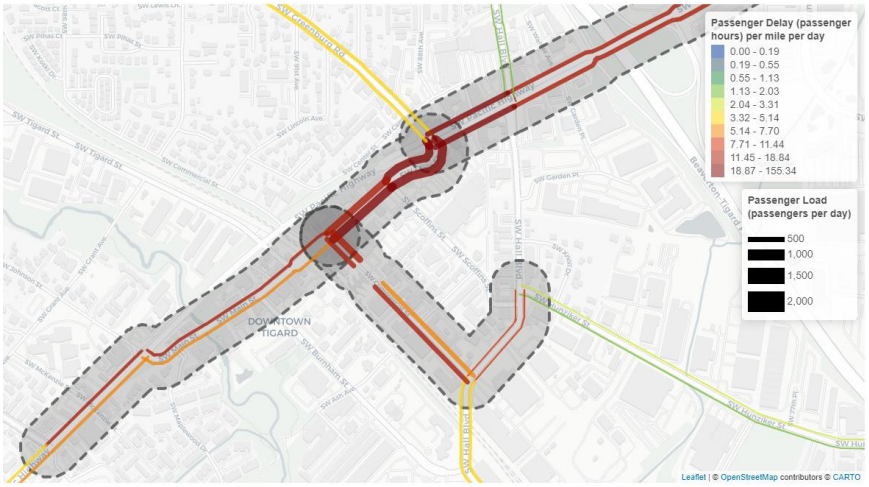
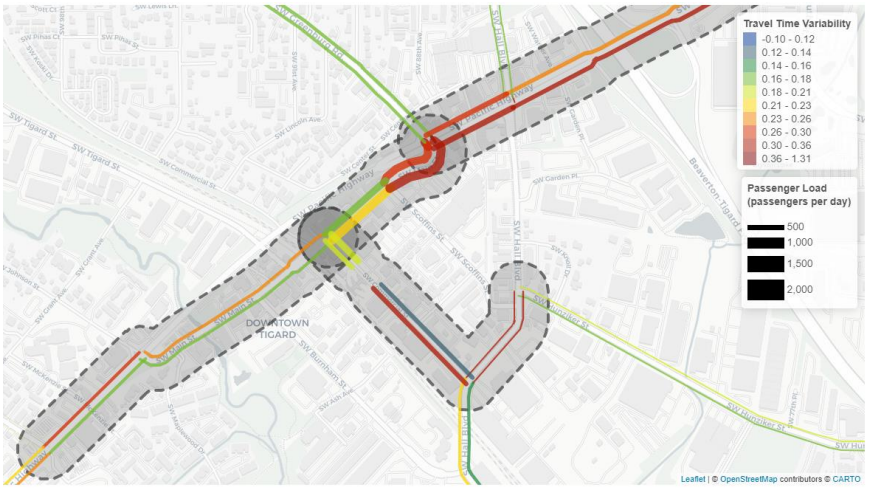
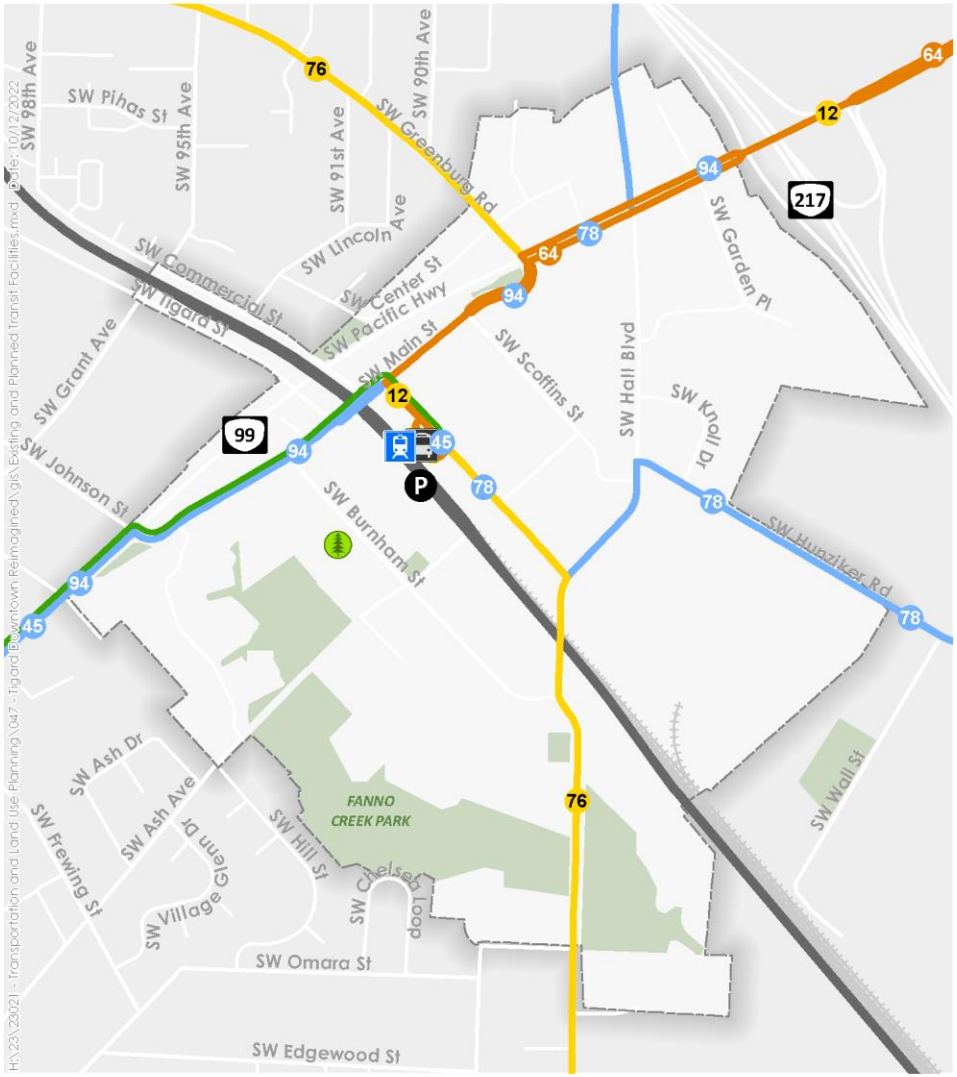


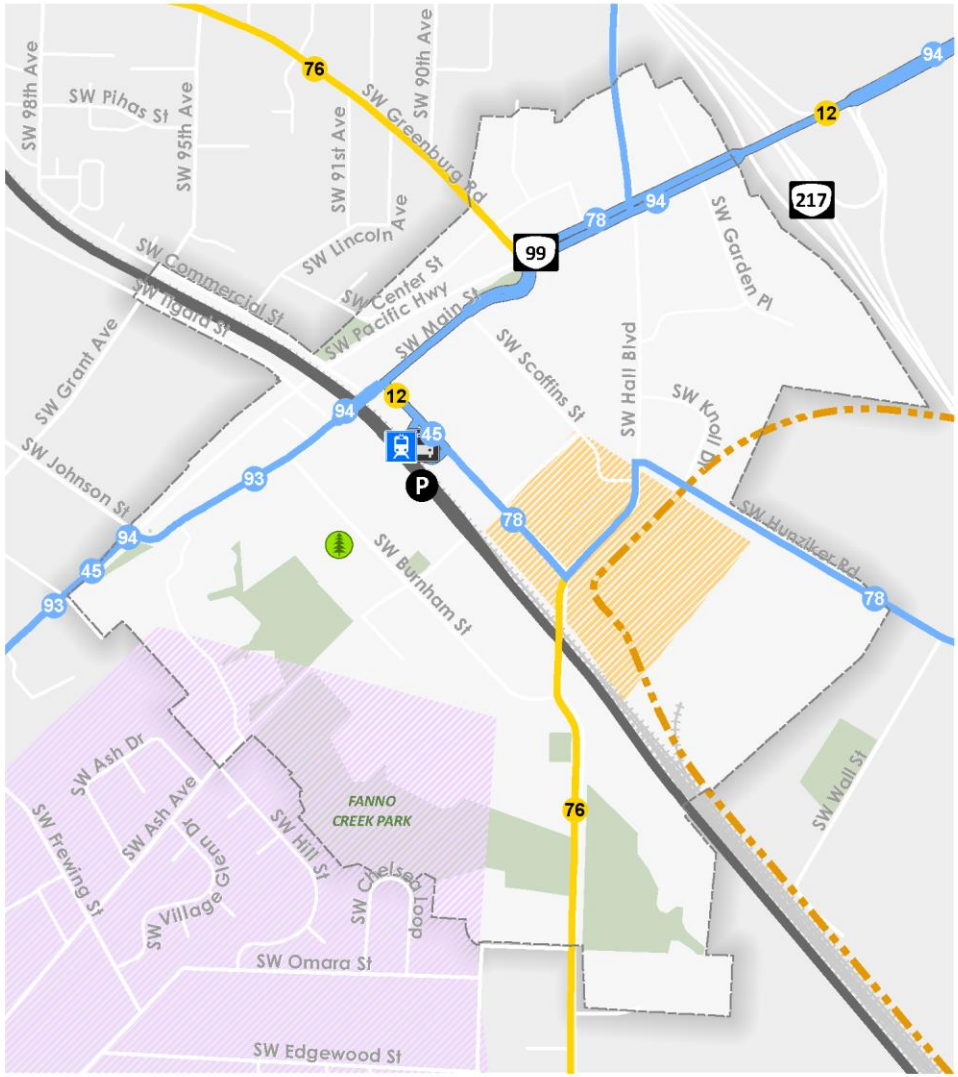
Exhibit 2: Travel Time Variability (ratio of run times)



As shown in Exhibit 1, greater than 5 hours of passenger delay is reported along OR99W as well as SW Commercial Street in Downtown Tigard. Exhibit 2 shows high levels of travel time variability at the SW Greenburg Road/OR99W intersection.

Opportunities to address existing transit service bottlenecks including passenger delay and travel time variability should be explored as part of a follow-up transit service and operations study. The City should evaluate grant funding opportunities in partnership with ODOT to address transit bottlenecks and operations.





Existing Transit Network

Planned Transit Network

- Existing Peak Hour Transit
- Existing Frequent Transit
- Existing Regular Transit
- Existing Yamhill County Transit
- Existing TriMet WES Commuter Rail
- Transit Center
- Park-and-Ride
- WES Station
- Future Universal Plaza
- Study Area Boundary
- Planned Frequent Transit Route
- Planned Regular Transit Route
- Planned Southwest Corridor
- TriMet WES Commuter Rail
- TOD Priority Area
- On Demand Service Need

0 1,000 Feet

Figure 5

Transit Facilities
Tigard, Oregon

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EXISTING DEVELOPMENT CAPACITY OF THE CFA

Section 18.650.050 Development Standards of the City's Development Code set the standards for the existing maximum development capacity. The building height maximums and residential density maximums are the most significant development standards impacting development capacity. These standards are summarized below for each of the four (4) subareas within Downtown Tigard.

18.650.050 Development Standards

A. Development standards. Development standards are provided in Table 18.650.1

Table 18.650.1 Development Standards				
Standard	**Sub-Areas**			
	Main Street (MS)	***99W/Hall Corridor (99H)***	***Scoffins/Commercial (SC)***	***Fanno/Burnham (FB)***
Minimum Lot Size	None	None	None	None
Minimum Lot Width	None	None	None	None
Minimum Setbacks				
- *Front*	0 ft.	0/5 ft. (5 ft. for frontage on 99W)	0 ft.	0 ft.
- *Street side*	0 ft.	0 ft.	0 ft.	0 ft.
- *Side*	0 ft.	0 ft.	0 ft.	0 ft.
- *Rear*	0 ft.	5 ft.	5 ft.	5 ft.
Maximum Setbacks				
- *Front*	10 ft.	25 ft.	20 ft.	20 ft.
- *Street side*	10 ft.	None	None	None
Building Height				
- *Minimum*	20 ft.	20 ft.	20 ft.	20 ft.
- *Maximum* [1]	80 ft.	45 ft.	80 ft.	80 ft. [2]
- *First story minimum*	15 ft.	15 ft.	None	None
Maximum Lot Coverage	100%	90%	90%	80%
Minimum Landscape Area [3]	0%	10%	10%	20%
Minimum Building Frontage	50%	50%	50%	50%
Residential Density (units per acre)				
- *Minimum* [4]	25	25	25	15
- *Maximum* [1]	50	50	50 [5]	50 [5]

Today, the maximum units per acre within the subareas in Downtown Tigard is 50 units per acre, with densities of up to 80 units per acre permitted in the Station Overlay as shown above.

One of the primary proposed changes as part of the Project is to eliminate the maximum residential density and rely on maximum building heights and setbacks.

PROPOSED DEVELOPMENT CAPACITY OF CFA

The Project study area has a very small supply of buildable (i.e., vacant) land. Much of what is identified as having a high level of redevelopment potential is in the Fanno Creek vegetated corridor and is not developable.

The two primary changes resulting from the adoption of the Project and updates to the comprehensive plan that could affect development capacity, in addition to other changes affecting the character of future development, are:

- Modifications to the City's Development Code to eliminate residential density maximums.
- Modifications to the subarea boundaries within the Downtown Tigard area and expansion of the downtown zoning to adjacent parcels within the Project area east of SW Hall Boulevard to reflect the preferred land use concept more closely. For example, the sites near the future light rail station are shown with industrial zoning but the preferred concept includes 6-12 story development.

Modifications to the City's Development Code

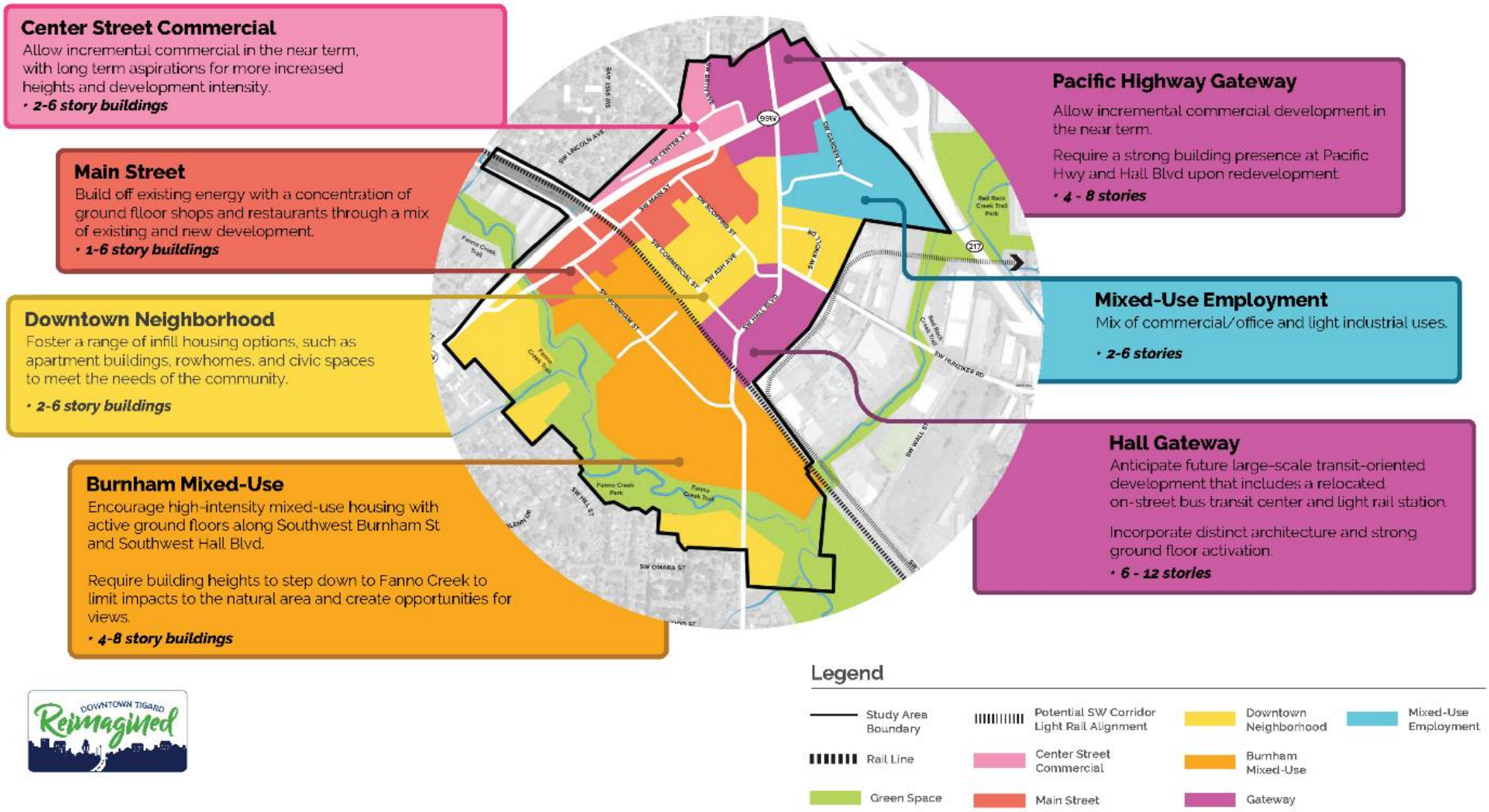
As described earlier, the Project proposes to eliminate maximum residential densities currently set for the downtown subareas and identified within Table 18.650.050 Development Standards in the City's Development Code

Building height maximums are currently set at 80 feet (~7 stories) for the Main Street, Scoffins/Commercial, and Fanno/Burnham subareas and 45 feet (~4 stories) for the 99W/Hall Corridor subarea and any areas within 200 feet of Fanno Creek Park. Building heights by subarea are proposed to be refined as shown in Figure 6. The maximum proposed building heights are primarily 6 stories with some areas up to 8 stories and 12 stories near the future Light Rail Station.

Modifications to Subarea Boundaries

The proposed modifications to the subarea boundaries within Downtown Tigard and expansion of the MU-CBD zoning district boundary are identified as part of the Preferred Land Use Concept. This overlay, illustrated in Figure 6 identifies typologies, general land use types, district areas, and building story recommendations.

Figure 6: Preferred Downtown Tigard Land Use Map



SUMMARY OF ADDITIONAL MOTOR VEHICLE TRAFFIC

As described earlier, **the land use changes associated with the Project will be almost exclusively focused on modifying the subarea boundaries within the existing Downtown zone (MU-CBD), which covers nearly the entire Project Area, and changing the zoning for the properties east of SW Hall Boulevard from industrial to urban mixed-use allowing buildings between 6 – 12 stories in height.**

As a result, the additional motor vehicle traffic generated by the adoption of the Project is primary focused on two changes:

- Refinement of building height maximums and boundary expansion in the Hall Gateway District to accommodate future transit-oriented development.
- Boundary expansion of the Burnham Mixed-Use District to include the Tigard City Library.

Hall Gateway District

The Hall Gateway District is anticipated to include future large-scale transit-oriented development that includes a relocated on-street bus transit center and the addition of a light rail station at Hall Boulevard. The Project also proposes expanding the boundary of the Hall Gateway District southwest of SW Hall Boulevard.

The feasibility of the Hall Gateway District being built out to 6 to 12 story buildings relies on the development of these non-motorized transportation facilities to attract this level of development and make feasible from a market standpoint. If investment like the relocated on-street bus transit center and light rail station do not come to fruition, it is unlikely that development consistent with this plan in the proposed Hall Gateway District would be catalyzed. Because the development associated with the proposed Hall Gateway District is heavily dependent on the investment in these active transportation facilities, **the increase in motor vehicle trips is negligible**. For the negligible amount of increased motor vehicle trips generated by the proposed changes to the Hall Gateway District, the currently planned mitigation and transportation improvement projects identified in Appendix A are anticipated to address the additional vehicular trip impacts.

Burnham Mixed-Use District

The primary change to the Burnham Mixed-Use District is the expansion easterly across SW Hall Boulevard. In this location, high-intensity mixed-use housing with active ground floor is encouraged. Because the Tigard Downtown Plan District Sub-Areas Map already includes most of the Burnham Mixed-use District area, additional trips are only associated with the newly added boundary east of SW Hall Boulevard. Because of the proximity to the planned transit and light-rail station improvements, **the increase in motor vehicle trips is negligible**. For the negligible amount of increased motor vehicle trips generated by the proposed changes to the Burnham Mixed-Use District, the currently planned mitigation and transportation improvement projects identified in Appendix A are anticipated to address the additional vehicular trip impacts.

Existing Transportation Analysis Zones Assumptions

Metro maintains the travel demand model that estimates current and future housing and employment in the region. The estimates are based on the coordinated population forecast, economic forecasts, land use plans, assumptions and desires about how areas will develop or redevelop. Model development and refinement is completed in coordination with local jurisdictions.

The Project study area is primarily covered by four different transportation analysis zones (TAZ) in the model. The table below shows the location of these four TAZs in downtown Tigard and summarizes the projected increase in number of households and in employment between 2015 and 2040. Table 4 below provides further details on household and employment growth.

Table 4: Transportation Analysis Zones – Downtown Tigard

TAZ	2015 Households	2040 Households	Household Increase	2015 Employment	2040 Employment	Employment Increase
1,039	95	95	*0*	3,252	3,555	*303*
1,041	241	904	*663*	674	1,335	*661*
1,042	264	1,141	*877*	505	1,038	*533*
1,043	117	341	*224*	522	735	*213*
Total	***717***	***2,481***	***1,764***	***4,953***	***6,663***	***1,710***

As shown above, growth of approximately 1,764 households and 1,710 employment is projected for the study area. For context, approximately 28 six-story buildings with 10 units per floor is equivalent to 1,700 households.

The proposed changes associated with the Project (subarea boundary and development code modifications) are <u>not anticipated to create new vehicular trips beyond what's anticipated in the 2040 travel demand model</u>. Instead, these changes are proposed to right-size the development code standards that currently limit the reality of the forecasted development from occurring.

The maximum development capacity is unclear at this time; however, these proposed changes are not anticipated to result in 20-year growth exceeding what is currently allocated in the Metro Travel Demand Model. The maximum development capacity is based on full utilization within downtown. Current market conditions and ownerships are not expected to deliver such a level of development within the next 20 years.

Note: An Existing and Future Traffic Conditions Report and Multimodal Transportation and Safety Report (Reference 1) was produced by the Project team. The report documents the Existing Year 2022 and Future Year 2040 traffic conditions.

SUMMARY OF FATAL AND SERIOUS INJURY CRASHES

A summary of fatal and serious injury (Injury A) crashes within the CFA in the five most recent years where data is available is provided below.

There were 306 reported crashes within the Project study area between January 1, 2016 and December 31, 2020. Only crashes that were reported to the police are included below; crashes that resulted in minimal to no vehicular damage with no injury or possible injury may not be reported. The 306 documented crashes are broken down by injury severity below.

- 1 fatal crash
- 8 serious injury crashes
- 29 minor injury crashes
- 126 possible injury crashes
- 142 non-injury crashes

Of these 306 crashes reported within the study area, 197 crashes were reported along Highway 99W, and 93 crashes were reported along SW Hall Boulevard. With 36 reported crashes at the SW Hall Boulevard/Highway 99W intersection, there were a total of 254 crashes on these two corridors alone, representing 83 percent of all crashes within the downtown Tigard study area from 2016 to 2020.

Fatal and Severe Injury A Crashes

One fatal crash was reported in the Project study area during the most recent five-year analysis period. The fatal crash occurred on March 13th, 2018, at 5 PM under clear and dry conditions on SW Hall Boulevard south of SW Scoffins Street. The crash, which involved three vehicles, occurred when a southbound vehicle rear-ended another southbound vehicle. A horizontal curve in the road is present at this location, which the police report indicates to be a factor in the crash. In addition to the crash fatality, one driver suffered a possible injury, and another driver was not injured.

The eight serious injury crashes are detailed in Table 5 below. Of these eight crashes, six occurred on an ODOT facility. There were no reported serious injury crashes in 2019 or 2020. Three of the serious injury crashes involved a motorcycle, one involved a bicyclist, and one involved a pedestrian. There was only one serious injury crash that involved two or more vehicles. Three of the crashes occurred at the Highway 99W/SW Hall Boulevard intersection.

Table 5: Severe Injury A Crashes with Downtown Tigard Study Area – January 1, 2016, to December 31, 2020

Date	Time	Location	Weather Conditions	Crash Type	Description
2/9/2016	2 PM	SW Hall Boulevard/SW Garden Place	Clear and Dry	Rollover – single car collision	A southbound motorcyclist drove over some gravel in the roadway, which led to the collision.
11/23/2016	2 AM	SW Hall Boulevard (south of SW Burnham Street)	Rainy and Dark	Fixed object collision – telephone pole	A southbound driver was driving recklessly in excess of the posted speed limit and crashed into a telephone pole. A bicyclist was also injured subsequent to the collision.
5/14/2017	5 AM	Highway 99W (east of SW Johnson Street)	Cloudy and Wet, Twilight	Fixed-object collision – guard rail	Eastbound driver was driving carelessly and was drowsy and crashed into the guard rail on Highway 99W
5/25/2017	2 PM	Highway 99W/ SW Hall Boulevard	Clear and Dry	Single car collision	Westbound motorcyclist fell off their vehicle
10/30/2017	4 PM	Highway 99W/ SW Hall Boulevard	Clear and Dry	Angle collision	Eastbound driver disregarded the traffic signal, striking a vehicle on SW Hall Boulevard
1/6/2018	12 PM	SW Garden Place (south of Highway 99W)	Cloudy and Dry	Single car collision	Eastbound motorcyclist turning right from driveway to roadway fell off their vehicle
7/26/2018	12 PM	SW Burnham Street (south of SW Ash Avenue)	Clear and Dry	Angle collision involving a bicyclist	Southbound driver did not yield the right-of-way to a northbound bicyclist and struck the bicyclist
12/19/2018	4 PM	Highway 99W/ SW Hall Boulevard	Cloudy and Dry	Collision involving a pedestrian	Southbound driver struck a pedestrian crossing the street outside of the crosswalk

ODOT Safety Priority Index System

The Safety Priority Index System (SPIS) is a method originally developed in 1986 by the Oregon Department of Transportation (ODOT) for identifying potential safety problems on state highways. The Federal Highway Administration (FHWA) accepted SPIS as fulfilling the requirements of the Highway Safety Improvement Program (HSIP).

ODOT's TransGIS website provides SPIS data from 2016 to 2020. Based on a review, the following locations within the Project study area are identified as SPIS sites:

- SW Main Street/SW Johnson Street/OR99W
- SW Main Street/SW Greenburg Road/OR99W
- SW Hall Boulevard (Beaverton-Tualatin Highway No. 141)/OR99W
- SW Hall Boulevard (Beaverton-Tualatin Highway No. 141)/SW Scoffins Street/SW Hunziker Road

Appendix A
Planned Transportation Improvements

APPENDIX A

Southwest Corridor Light Rail Project

Metro, TriMet, and the Federal Transit Administration completed the Final Environmental Impact Statement (FEIS) for the Southwest Corridor Light Rail Project in January 2022. The FEIS identified a preferred route through downtown Tigard, beginning with an at-grade crossing of SW Hunziker Street at SW Knoll Drive, then running adjacent to SW Hall Boulevard to SW Commercial Street, where the alignment turns to the south and runs along the eastside of the existing railroad tracks.

The Southwest Corridor Light Rail Project was part of a larger transportation funding measure on the November 2020 ballot across the entire Metro region. That measure failed to pass, so design work on the Southwest Corridor Light Rail Project has been paused.

City of Tigard Transportation Safety Action Plan 2019

The Tigard Transportation Safety Action Plan (TSAP), completed in September 2019, examined historic crash data across the city to identify future roadway investments to address safety concerns. Of the six locations with site-specific treatments, the segment of Highway 99W from SW Main Street/SW Greenburg Road to SW Hall Boulevard falls within the Project study area.

The TSAP recognizes that there are limited opportunities for safety-focused improvements along this segment because Highway 99W is a seven-lane facility and the Highway 99W/SW Hall Boulevard and Highway 99W/SW Main Street/SW Greenburg Road intersections each have more than 40,000 vehicles that enter each day. However, the TSAP identifies two opportunities for safety-focused improvements – an access management evaluation along Highway 99W in this corridor, and an improvement pedestrian crossing at the SW Greenburg Road/SW Center Street intersection, including curb extensions and a median refuge island.

City of Tigard Transportation System Plan 2022

Tigard on the Move, the city's Transportation System Plan (TSP) was completed in January 2022 and creates a list of transportation projects and programs for the city to implement with available funding over the next 20 years. Projects are grouped into six categories: stronger streets network, urban upgrades and active transportation, connectivity, transit, transportation systems management and operations (TSMO), and special study areas.

TSP Chapter 6. Recommended Investments contains the list of projects.

TriMet Pedestrian Plan, 2020

TriMet's Pedestrian Plan focuses on three primary objectives: Removing barriers to riding transit, improving partnership between cities, counties, and the State, as well as equipping partnering agencies with an access-to-transit lens to help inform their decision-making and support future funding request.

TriMet's Pedestrian Plan identifies needs in and around Downtown Tigard including previously identified projects (sidewalk infill, new roadways and new trails identified in existing plans) and identified gaps (sidewalk gaps identified through the TriMet Pedestrian Plan). These projects are identified in Appendix E, Appendix F, and Appendix G.

Washington County Transportation System Plan 2019

The Washington County Transportation System Plan (TSP) Update provides direct guidance on how to build, operate, and maintain Washington County's major roadway network, while addressing complementary elements of the larger transportation system – including transit, multi-use trails, state highways and freight railroads – maintained by other entities.

No projects are identified within the Project study area based on a review of the Washington Count TSP Update.

Statewide Transportation Improvement Program 2021-2024

OR 217 Auxiliary Lanes Project | Project #: 18841

Construction for the OR 217 Auxiliary Lanes Project began in December 2021 and continues through 2025.

On OR217, add a southbound auxiliary lane from OR10 to OR99W and a northbound auxiliary lane from OR99W to SW Scholl's Ferry Rd (OR210) to improve safety and traffic reliability. Pave road, add protective screening, and bridge updates on Allen Blvd and Denny Rd structures. Pave road, replace joints, and repair deteriorating concrete columns on OR210 over OR217 structure. Add sidewalks and bike lanes to the Hall Blvd (OR141) over OR217 overcrossing to improve bicycle and pedestrian connectivity. Add bridge rail that meets the current standards to the Fanno Creek Bridge. Install signs and technology to capture traffic statistics and improve operations. Add a signal pole base and conduit to the design of the Hall Blvd Bridge replacement.

OR99: I-5 – McDonald St | Project #: 20435

Repave roadway, fill in sidewalk and bike lane gaps, upgrade curb ramps to current standards, improve access management, and address drainage as needed. Includes full signal upgrade at Johnson/Main. This project will repair rutting and surface damage from vehicles and allow safer travel for motor vehicle operators, bicycle riders and pedestrians.

OR141/OR217 curb ramps | Project #: 22431

Construct curb ramps to meet compliance with the Americans with Disabilities Act (ADA) standards.

Metro Regional Transportation Plan 2018

As the metropolitan planning organization for the Portland metropolitan area, Metro is authorized by Congress and the State of Oregon to coordinate and plan investments in the transportation system for Clackamas, Multnomah and Washington counties. This is done through periodic updates to the Regional Transportation Plan – now every 5 years. The projects listed below are located within the Project study area.

Tigard Bikeway Improvements | RTP # 11221

Description	Make spot improvements on key low-volume, low speed through-routes to facilitate bike & pedestrian travel; identify them as bike/pedestrian routes.
To	Multiple locations
From	Various
Agency	Tigard
Primary Purpose	Increase travel options/alt. to driving alone
RTP Category	Active Transportation
Estimated Cost (2016 $)	4,300,000
Time Period	2028-2040

Tigard Town Center Pedestrian Improvements | RTP # 10760

Description	Improve sidewalks, lighting, crossings, bus shelters and benches throughout the Town Center including: Highway 99W, Hall Blvd, Main Street, and neighborhood streets.
To	Tigard Town Center
From	Throughout TC area
Agency	Tigard
Primary Purpose	Increase travel options/alt. to driving alone
RTP Category	Active Transportation
Estimated Cost (2016 $)	2,000,000
Time Period	2018-2027

Hall/Hunziker/Scoffins Intersection Realignment | RTP # 11223

Description	Realign offset intersection to cross intersection to alleviate congestion and safety issues.
To	Hall Blvd.
From	Intersection with Hunziker & Scoffins
Agency	Tigard
Primary Purpose	Improve system efficiency
RTP Category	Roads and Bridges
Estimated Cost (2016 $)	10,000,000
Time Period	2018-2027

Ash Avenue Extension | RTP # 11407*

Description	Extend Ash Avenue across the railroad tracks from Burnham to Commercial Street.

To	Burnham Street
From	Commercial Street
Agency	Tigard
Primary Purpose	Improve system efficiency
RTP Category	Roads and Bridges
Estimated Cost (2016 $)	10,000,000
Time Period	2018-2027

Note: the Ash Avenue Extension project is proposed for removal in the draft 2023 Metro Regional Transportation Plan (RTP).

Metro Regional Transportation Plan 2023

The 2023 Regional Transportation Plan and High Capacity Transit Strategy include regional policies and planned projects recommended by transportation agencies to address the region's significant and growing transportation needs.

Public input will help guide decision-makers as they work together to finalize the policies, strategies and projects that will shape greater Portland's transportation system through 2045.

The Joint Policy Advisory Committee on Transportation and Metro Council will take action on approving the 2023 Regional Transportation Plan and High Capacity Transit Strategy in November 2023.

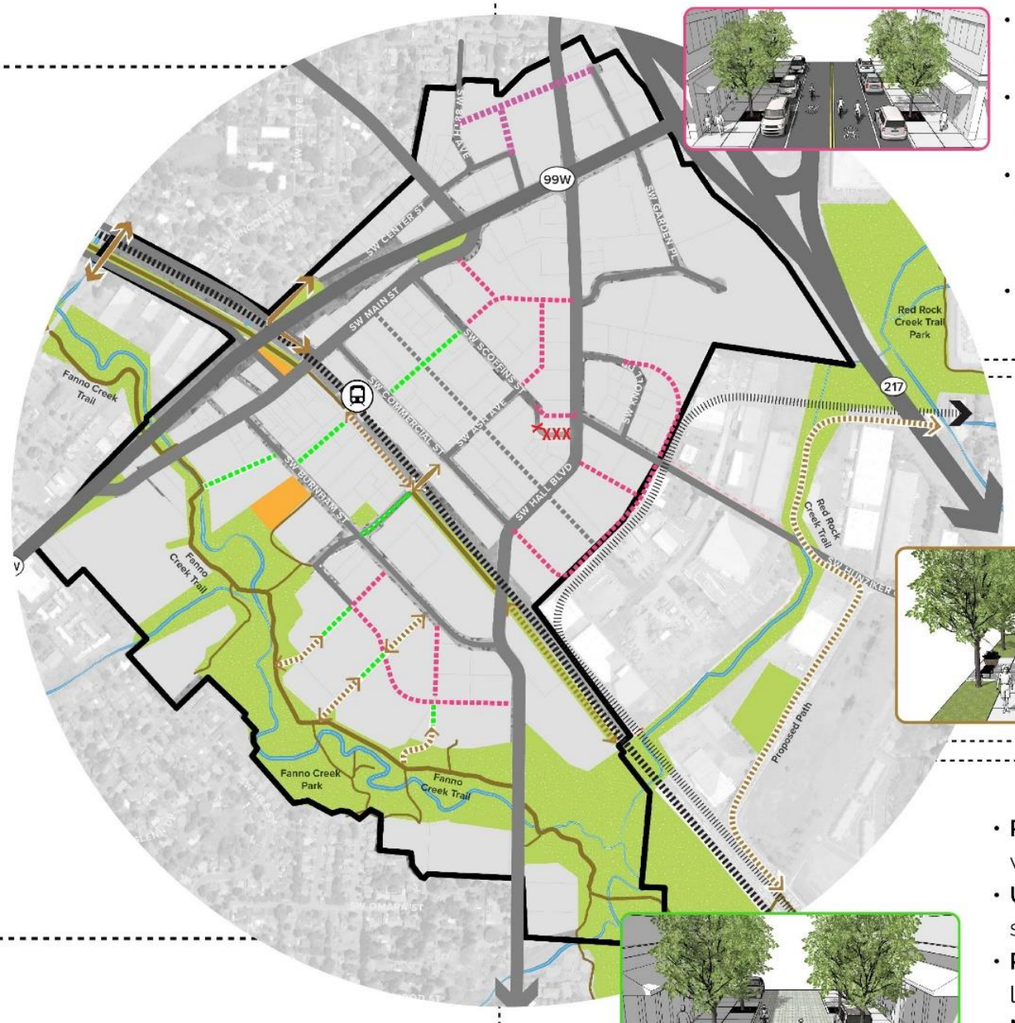
Appendix B
Recommended Connectivity Concept

RECOMMENDED CONNECTIVITY CONCEPT

The connectivity concept will create a well-connected and walkable block structure that supports new development. This concept includes added opportunities for active street frontages in Downtown through a mix of new multi-modal streets, shared streets, and bike and pedestrian pathways.

Main Connectivity Priorities

- **Provide new connections in the Burnham area** to support higher intensity development.
- **Allow flexibility in connectivity** alignment and type in Downtown.
- **Increase access to Fanno Creek Trail/Park** with new connections and limit vehicular impacts.
- **Complete Ash Ave pedestrian/bike crossing** and Tigard Heritage Trail crossing of Main St.
- **Reduce size of the Burnham St and Ash Ave intersection.**
- Add crosswalks to Hal l Blvd.



Street Types

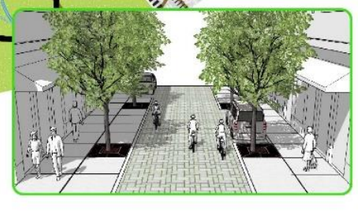
Multimodal Streets

- **Balance the needs of all transportation modes** to enable safe use, mobility for all, and active street frontages.
- **Keep speeds at 25 miles per hour** via signage, narrow travel lane widths, parking, and intersection control devices.
- **Use parking as a physical buffer** between the pedestrian realm and the travel way, while encouraging patronage of local businesses.
- **Approximate right-of-way (ROW) widths range from 36 to 60 feet** depending on sidewalk widths and presence of parking.

Proposed Paths

- **Provide non-vehicular access** for walking, biking, and rolling.
- **Keep minimum path widths at 10 feet**, but widen based on surrounding context, land uses, and anticipated user volumes.
- Integrate **landscaping, placemaking, and path amenities**.
- Approximate ROW widths range from 10 to 24 feet.

Shared Streets



- **Provide a comfortable environment** with little modal division while maintaining vehicular access.
- **Use pavers and changes to surface material** to define modal space.
- **Provide parking** on a block-by-block basis or at individual locations.
- **Manage speeds** via traffic calming elements.
- **Approximate ROW widths range from 30 to 42 feet** depending on sidewalk widths.

Legend

- Study Area Boundary
- Green Space
- Plaza
- Rail Line
- Proposed Multimodal Street
- Existing Street
- XXXXX Street Removal
- Proposed Shared Street
- Proposed Path
- At Grade Rail Crossing
- Trail
- Train Station