

## Tigard HCT Land Use Plan

# Existing Conditions Summary Report



City of Tigard | A Place to Call Home



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## INTRODUCTION

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In 2010, the region designated the Southwest Corridor from Portland to Sherwood as the next priority for the development of high capacity transit (HCT). In order to guide planning for high capacity transit the City of Tigard will determine future land use, HCT and other transportation mode relationships to promote development of high amenity and prosperous urban neighborhoods and job centers.

The Tigard HCT Corridor Land Use Plan will recommend 1) Locations and types of station area communities; and 2) Updates to Community Development Code regulations and standards needed to guide future transit supportive land uses and other transportation modes. Zoning map changes and the implementation of new Community Development Code regulations at those locations would occur at a later date, after the type of HCT and its alignment are decided. This project will set the stage for Tigard to support development of Transit supportive land uses and other public infrastructure. Later studies will determine the type of HCT and its alignment, but this planning effort will inform these processes.

Funding for this project comes from an Oregon Department of Transportation (ODOT) and Department of Land Conservation and Development Transportation Growth Management (TGM) Grant. This project is a partnership of the City of Tigard, Metro, and ODOT.

The following is a synopsis of existing conditions and plan opportunities in the Tigard HCT Corridor Land Use Plan area. The intent of this document is to provide a picture of the existing built environment and circumstances. The transition to the envisioned HCT supportive station communities will build upon the existing state of these areas. Six subject areas are summarized by the overarching themes: fiscal stewardship & policy coordination and implementation; community (land use); economic (market assessment); environment (parks and open space; natural resources); public facilities (water and sanitary sewer; storm water and water quality); and transportation. Complete reports for each of these subject matters are contained in the appendices of this document.

## FISCAL STEWARDSHIP & POLICY COORDINATION

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*The Tigard HCT Land Use Plan Objective states the intent to:* Leverage the policies and investments of Southwest Corridor Plan and other applicable studies or grant opportunities.

### Policy

Metro documented the policy analysis for the Tigard HCT Corridor Land Use Plan area. This plan is governed by the framework of overarching state, regional, and local policies.

State regulations guide the overall land use and transportation systems in the region and in the City of Tigard. These policies include:

- Oregon Statewide Planning Program (OAR 660-015-0000)
- Oregon Statewide Planning Goal 12 (Transportation) and the Transportation Planning Rule (Oregon Administrative Rule Section 660-015-0000 (12) and OAR 660-012)
- Oregon Transportation Plan (ODOT, 2006)
- Oregon Public Transportation Plan (ODOT, 1997)
- Oregon Highway Plan (ODOT, 1999)
- Oregon Bicycle and Pedestrian Plan (ODOT, June 1995)

Regional polices set the vision and direction for the region, including the City of Tigard. They include: Metro Urban Growth Management Functional Plan (Section 3.07 of the Metro Code)

- The Regional Transportation Functional Plan (Section 3.08 of the Metro Code)
- 2035 Regional Transportation Plan (Metro, 2010)
- 2035 Regional Transportation Plan: High Capacity Transit (HCT) System Plan (Metro, 2009)

Local policies outline the growth patterns and associate improvements for the community, and include:

- Comprehensive Plan (City of Tigard, 2007)
- 2035 Transportation System Plan (City of Tigard, 2010)

Additional relevant City of Tigard planning documents indicate the City of Tigard's vision for its several important areas. These communities will likely include potential station communities and so these plans will form the foundation for future planning efforts there. They include:

- Tigard 99W Corridor Urban Design Vision
- Tigard Downtown Improvement Plan (City of Tigard, 2005)
- Washington Square Regional Center Plan (City of Tigard, 1999)
- Tigard Triangle Specific Area Plan (City of Tigard, 1994)
- City Center Urban Renewal Plan (City of Tigard, 2005)
- Tigard Downtown Circulation Plan (City of Tigard, 2011)

Please see the Appendix for additional detail.

## TRANSPORTATION

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The *Tigard HCT Land Use Plan Objective states the intent to:* Provide safe, efficient, and affordable transportation options for accessing housing, jobs, services, shopping, educational, cultural and recreational opportunities, and facilitate competitive choices for goods movement.

### Transportation System

Parametrix reviewed and summarized transportation system analysis from the Tigard 2035 TSP and other recent transportation studies. The transportation system is of particular importance in identifying and conceptualizing potential future HCT station communities in the City of Tigard.

#### *Connectivity and Local Mobility*

Connectivity in the City of Tigard is constrained by both human made and natural barriers including: Highway 217, I-5 and the WES commuter/freight rail line, as well as Fanno Creek, steep topography, and other natural features. These challenges are exacerbated by a built environment that present connectivity challenges because of existing cul-de-sacs and other dead end streets. Opportunities for enhancing local connectivity of all travel modes should be fully considered in both locating and developing potential future HCT station communities.

#### *Land Use Patterns and the Development of Efficient Transportation*

The types, intensities, and locations of different land uses are closely correlated with travel demand and mode choice. Land use patterns in the City of Tigard and surrounding areas are suburban in character, with residential areas separated from commercial areas and a relatively low density of overall development. The majority of land in Tigard is zoned for residential uses, with commercial zoning primarily along Pacific Highway, Washington Square, Downtown, and in the Tigard Triangle, and industrial primarily along the WES commuter rail track south of Pacific Highway. This development pattern results in travel demand that is highly directional according to typical weekday peak periods. Land use strategies could be implemented to mitigate the strain on the roadways by shortening home-to-work trips, supporting transit service, and making walk/bike trips more viable for work, shopping, and other activities.

#### *Major Roadways – I-5, Highway 217, and Pacific Highway (99W)*

Tigard is at the juncture of three major state highways: Pacific Highway (99W), Highway 217, and I-5. While they serve as important access routes to and from Tigard, they also pose significant barriers and constraints. Highway 217 and I-5 are both limited access freeways under ODOT jurisdiction, and the City has no direct operational authority over them. Congestion on these facilities results in regional traffic cutting through Tigard as a detour route.

Pacific Highway is a statewide highway and freight route carrying more than 50,000 vehicles per day on some sections through Tigard. Given these designations, the highway plays a critical role in regional and statewide mobility. Traffic on the segment within Tigard is divided nearly evenly between local trips and through traffic. Heavy traffic results in traffic congestion that compromises the pedestrian and bicycle environment, creates challenges for transit service, and threatens to limit development opportunities in

Tigard. Strategies include direct improvements to the highway to improve traffic operations, connectivity improvements within Tigard to reduce reliance on the highway for local travel, and improvements to transit, bicycle and pedestrian travel options.

Continuous east/west travel on Tigard streets is primarily served by Durham Road and Bonita/McDonald/Gaarde, which are frequently constrained during weekday peak periods.

### *Multi-Modal Connections*

In order to meet the future travel needs of the community, increased travel by transit, walking, and biking is essential to the future transportation system in Tigard, as much as adding roadway capacity for increased demand. Several streets (Pacific Highway/99W, Gaarde, McDonald, Bull Mountain, Bonita, sections of Hall) were identified as locations with challenging roadway crossing conditions for pedestrians and bicyclists, due to a combination of high traffic volumes and long distances between crossing facilities. Many roads do not have continuous sidewalks and the quality of the sidewalk facilities vary greatly depending on the roadway. In addition, about the City of Tigard does not currently have a record of existing and planned curb ramps and pedestrian crossing facilities. Similarly, there are gaps in the bicycle lane system on arterials and collectors, or where bike lanes exist conditions are sometimes undesirable due to frequent vehicle conflicts at driveways or other intersections. Transit connections exist at the WES stations, downtown Tigard transit center, Washington Square, and at any intersections of bus lines, bicycle and pedestrian facilities. There were approximately 12,650 daily transit riders in Tigard in 2008.

### *Special Areas*

Three areas within Tigard – Tigard Triangle, Washington Square Regional Center (WSRC), and Downtown – represent considerable community growth opportunities, but also provide significant transportation challenges. For this reason, an emphasis on mixed-use development that supports transit, walking, and biking trips is a critical focus of transportation planning for these areas.

Within additional areas of Tigard, some potential land use planning and development strategies could help relieve congestion. These include supporting the development of commercial nodes in residential areas, and support non-auto dependent development. These neighborhood commercial (NC) nodes could include small restaurants, coffee shops, or neighborhood retail. Mixed-use developments combine housing, retail, employment, and other land uses together in a single development project and have been found to reduce automobile trips by supporting higher frequency transit service and promoting pedestrian and bicycle travel. Mixed-use development can be either horizontal or vertical in nature.

### *Plan Amendments and Mobility Standards*

Amending Tigard's existing zoning to allow higher density developments has presented challenges with respect to meeting ODOT performance standards for adjacent state highways. The Transportation Planning Rule (OAR 660-12-0600) requires that amendments to adopted plans must not cause an affected roadway to fail to meet performance standards, or if the forecasted roadway operations are already failing to meet performance standards, the plan amendment must not further degrade performance.

This is a known issue in downtown, Washington Square Regional Center, along Pacific Highway, and in the Tigard Triangle, and may also arise in other areas near state highways or freeway interchanges.

Common effective strategies to reduce trip generation from increased development include:

- Reduced parking requirements or parking maximums for new development;
- Improved facilities for pedestrian and bicycle access and circulation;
- Complementary mix of land uses to reduce trip length and promote walking and biking trips;
- Improved connectivity for motor vehicles as well as for bicycles and pedestrians; and,
- Transportation system management (TSM) measures to improve traffic operations without significant roadway expansions.
- Access management to improve general traffic operations on arterials and collectors; and,
- Mitigation of known safety and access deficiencies for motor vehicles, transit, pedestrians, and/or bicyclists.
- The use of local street for local trips; and intersection improvements.
- Improved transit service

Please see the Appendix for additional detail.

## COMMUNITY

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*The Tigard HCT Land Use Plan Objective states the intent to:* Link land use and transportation solutions to promote an efficient and compact urban form that fosters vibrant, healthy communities; optimizes public investments; serves as a catalyst for private investment; preserves and protects existing stable neighborhoods; and supports active transportation options, jobs, schools, shopping, services, recreational opportunities and housing proximity.

## LAND USE

The City of Tigard prepared the buildable land analysis and Parametrix provided the analysis of existing and planned land uses.

The city has grown from a population of 6,499 (1970) to 47,460 (2009) residents, with a citywide population density of 3,795 persons per square mile. The city was incorporated in 1961 and has undergone several annexations since that time, and now has a total land area of 10.9 square miles.

### *Land Uses and Zoning*

Tigard's predominant form of land use within city limits is residential, particularly single-family detached housing, accounting for over half (50.5 percent) of the city's total land area. Commercial development constitutes 17 percent of the total area; these uses are most prevalent along Pacific Highway-OR 99W, in the vicinity of Washington Square, Downtown, and within the Tigard Triangle. Industrial land use designations make up almost 5 percent of Tigard's total land use. A significant amount of area is made up of public and institutional and open space (13.2%), especially adjacent to Tualatin River and Fanno Creek.

Similar to the breakdown of existing land use types, the city is zoned primarily for residential, encompassing 69 percent of total area. Several mixed-use districts constitute 12 percent. Commercial zones make up 8 percent, while industrial zones occupy 11 percent.

In the comprehensive plan, mixed-use development areas include Downtown Tigard, Washington Square and much of Tigard Triangle. Much of the land directly adjacent to Pacific Highway-OR 99W is zoned for low-density commercial in the comprehensive plan, which are relatively prohibitive in terms of allowing other uses. These commercial zones are surrounded by low-density residential, especially south of downtown.

### ***Buildable Land Inventory***

The Tigard HCT Land Use Plan expanded on the *Tigard Economic Opportunities Analysis* Goal 9 evaluation of potential buildable lands and redevelopable lands. The Tigard HCT Land Use Plan included in its analysis multi-family residential zoned tax lots (R-25 and R-40) as well as existing apartment and condominium parcels. According to that revised analysis, Tigard has a total of 173.9 acres of buildable land that can accommodate business activity (existing vacant and partially vacant tax lots excluding single-family residential). The vast majority of land available is of parcels 5 acres or less in size, and over half is currently zoned mixed use.

In the analysis of redevelopment opportunities in Tigard, 165.1 acres were found to have high re-development potential with an Improvement (structure, etc.) to Land Value ratio less than 0.33, of which the majority of lands are located in mixed-use zones with some lands in commercial and industrial only zones.

### ***Foundation of Existing Policies and Plans***

Prior initiatives completed by the City such as the *Tigard Downtown Improvement Plan*, *99W Corridor Design Vision*, and *Downtown Future Vision* show that Tigard has serious interest in creating a vibrant downtown and revamping Pacific Highway-OR 99W to better accommodate transit, bicycle and pedestrian facility users. It has been long-standing Metro policy to focus transit investment (and accompanying growth) in 2040 centers, corridors and main streets and preserve existing single family neighborhoods.

### ***System Expansion Policy***

As part of Metro's *HCT System Plan*, the System Expansion Policy was established to prioritize corridors for implementation based on a series of performance metrics. Metro is still developing the metrics or targets for each of these policy areas. Following is an analysis of how Tigard meets the System Expansion Policy framework.

- **Density of People:** Higher instances of households and jobs per acre are located along major corridors within Tigard: Pacific Highway-OR 99W and Scholls Ferry Road-OR 210 as well as along SW 72<sup>nd</sup> Ave in SE Tigard. There is also a concentration of density in Washington Square, Downtown Tigard and portions of the Tigard Triangle.
- **Density of Urban Living Infrastructure (ULI) Businesses:** The ULI businesses considered to be community amenities derive from the study, *An Assessment of the Marginal Impact of Urban Amenities on Residential Pricing* (Johnson-Gardner, 2007). The results of the study indicate that the proximate availability of a range of urban amenities have a substantive impact on achievable residential pricing. Successful urban environments represent a marketable amenity, the value of which is reflected in higher effective pricing for residential units. Amenities include specialty grocery stores, theaters, restaurants, cafés, and bookstores among others. Amenities are most common in commercial areas along Pacific Highway- OR 99W as well as in Washington Square. Additional

concentrations can also be found along Scholls Ferry Road-OR 210, Cascade Avenue, and in Bridgeport Village. The majority of Tigard is zoned exclusively for single-family residential use where ULI Business density is consequently low.

- **Transit Oriented Zoning:** The Tigard HCT Land Use planning process will develop transit-oriented zoning.
- **Average Block Size:** With some exceptions, observation of Tigard's suburban-style street grid would suggest that it would not likely meet reasonable standards of block density.
- **Sidewalk Coverage:** The highest density of sidewalks in Tigard is in the vicinity of Downtown as well as in the Summerfield community in South Tigard and in areas of NW Tigard. The majority of the city has moderate concentrations of sidewalk coverage, with the lowest levels observed in industrial areas near Hunziker Road.
- **Bicycle Facility Coverage:** Tigard has a fairly high coverage of bikeways throughout its jurisdiction, but there are underserved areas such as Washington Square, industrial portions of SE Tigard and in SW Tigard adjacent to King City where the density of bikeways is not as high. Major bike routes are confined to Pacific Hwy-OR 99W, Hall Boulevard, Gaarde-McDonald Streets, Durham Road and the Fanno Creek Greenway Trail.
- **Transit Connectivity:** TriMet bus line 12 is a Frequent Service line that travels along Pacific Hwy-OR99W and may be supplanted in part by new HCT. Bus line 56 is a Frequent Service line that travels to Washington Square via Scholls Ferry Road-OR 210. Lines 76 and 78 travel through Tigard TC along Hall Boulevard and Greenburg Road at much lower frequencies (half-hour headways during peak, one-hour otherwise). Bus lines 43, 45, and 62 are additional lower-frequency lines that service Washington Square (Bus line 62 also serves Tigard TC). WES provides morning and afternoon/evening service (5:40 to 9:10 AM and 3:45 to 7:15 PM) to Downtown Tigard Monday through Friday with half-hour headways. WES travels between Beaverton and Wilsonville.
- **Housing & Transportation Affordability:** The Tigard HCT Land Use planning process will consider affordability of housing and transportation as it develops the alternatives for each station community.
- **Parking Requirements:** Currently, Tigard institutes minimum off-street parking standards of at least 1 parking space per residential dwelling unit in all zones. Almost all civic and commercial uses have minimum parking standards based on floor area. Tigard's parking maximum ratios conform to Metro defined maximum ratios.
- **Local Funding Mechanisms:** The Tigard HCT Land Use planning process will consider funding opportunities as it develops the alternatives for each station community.
- **Equity:** The Tigard HCT Land Use planning process will consider this policy as it develops the alternatives for each station community.

Please see the Appendix for additional detail.

## ENVIRONMENT & PUBLIC FACILITIES

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*The Tigard HCT Land Use Plan Objective states the intent to:* Create access to natural resources, open spaces, trails and parks; support active living that contributes to human health; minimize impacts to natural systems.

## NATURAL RESOURCES

Parametrix prepared the memo on natural resources. Riparian corridors are important in Tigard. In Tigard, 591 acres, or 8% of the City, is designated as open space, primarily adjacent to Fanno Creek, Red Rock Creek, Summer Creek, Ash Creek and Tualatin River as well as Summerfield Golf Course. The riparian corridors of the Tualatin River and Fanno Creek support the majority of 291 acres of wetlands within the City of Tigard. In addition to water quality benefits and aesthetics, preservation of these areas are important because of habitat needs for many species of fish and wildlife, including some that are federally listed as threatened.

The development of transit-supportive land uses, such as higher density residential development, mixed use and new infrastructure has the potential to affect existing natural resources. Wildlife species that occur within the project study area include 20 species of amphibians and reptiles, numerous birds, and some mammals. State-listed sensitive species associated with riparian areas existing in Tigard, include some fish species and others such as the western pond turtle and northern red-legged frog. Winter-run steelhead of the Lower Columbia River Evolutionarily Significant Unit (ESU) are documented in both the Tualatin River and Fanno Creek (Streamnet 2011) and are listed as threatened by the federal Endangered Species Act. Also it is important to consider that urban areas, which are usually characterized by fragmented noncontiguous habitats, generally limit movement of ambulatory wildlife (species that walk or run) to wildlife corridors in riparian corridors and power line corridors.

## PARKS AND OPEN SPACE

The City of Tigard compiled the study of the park and open spaces from the Tigard Park System Master Plan Update (2009) and the Greenway Trail System Master Plan (2011). The 2009 Park System Master Plan identifies a total of 462 acres of dedicated parks, open space, and undeveloped parkland. The City of Tigard has many areas with developed multi-use trails, which follow local creeks. Two existing regional trails have segments in Tigard: The Fanno Creek Greenway Trail and the Tualatin River Greenway Trail. In addition to formal, paved or soft-surfaced trails, the City of Tigard has identified informal “neighborhood connectors.” These could be added to the trail network through an easement or acquisition of land or be recognized and developed where they already exist on public lands.

### *Park & Trail Needs*

The 2009 Park Master Plan identified a need for 82 additional acres to serve the current population; a total of 245 additional acres will be needed to serve the community in 2028. The master plan also identifies a need for baseball fields, soccer fields, softball fields, and community centers for current population levels.

### *Planned Parks Expansions*

On November 2, 2010, Tigard voters approved a \$17 million parks bond. Most of the bond proceeds will be used to buy park land and open space, including Summer Creek, Sunrise and Potso Dog Park. The City will improve Fanno Creek Trail and might convert the abandoned railroad along Tigard Street to a trail which would connect downtown to Tiedeman Avenue.

### *Opportunities*

The perception of a park, open space, or trail as a special and unique feature builds pride and ownership of its surrounding community. Integrating parks, open spaces and trails with natural systems could

create a more sustainable and supportive community. This could include preserving the tree canopy, green streets or storm water swales, direct links to parks and trails, or connecting habitat areas.

Please see the Appendix for additional detail.

## **WATER SYSTEM**

The City of Tigard compiled information about the water system from the Tigard Water System Master Plan (2010).

The City of Tigard supplies potable water to approximately 57,500 people on the eastern boundary of Washington County, including areas outside of the City boundaries. The City's water infrastructure encompasses approximately 250 miles of pipelines, fourteen reservoirs with a combined capacity of 27.4 million gallons (MG), seven pump stations, and twenty-one Pressure Reducing Valve (PRV) stations. The City of Tigard supplies water and the remainder is supplied by the Tualatin Valley Water District.

### *Water System Planned Improvements*

Currently, the City has water purchasing arrangements with the Cities of Portland and Lake Oswego, and has emergency supplies other agencies and wells for periods of high water demand. By 2016, the City of Tigard will no longer purchase water from Portland and should be able to meet demands under the year 2030 forecast due to the planned Joint Water System (JWS) with the City of Lake Oswego.

Please see the Appendix for additional detail.

## **SANITARY SEWER**

The City of Tigard compiled information about the sanitary sewer from the Sanitary Sewer Master Plan (2010). The City of Tigard provides sanitary sewer service to over 47,000 residents. Wastewater is received, transmitted and treated by Clean Water Services (CWS). The City owns, maintains and operates collection system gravity sewers smaller than 24 inches in diameter. CWS is responsible for capacity improvements including treatment. The Durham Regional Treatment Facility is in Tigard and discharges to the Tualatin River.

### *Sanitary System Capacity*

The system has adequate capacity for the existing population, but will need improvements to handle peak wet weather flow in a few areas. Oregon Water Quality Standards requires that the system be large enough to carry all the peak flow so that no raw sewage is released from the system during severe storm events. Tigard has capacity limitations in nine locations in the system. Tigard has excessive ground and storm water leaking into the sewer system to two large areas of the city and further flow monitoring and study will be needed to find the specific locations of pipe replacement needs.

### *Sanitary Planned Improvements*

The City will be implementing five capacity related project in the next two to three years. CWS has already built one of the projects identified in the plan and is scheduling the other areas for improvement based on available funding and growth patterns. In addition to these capacity related projects, the City has identified some system reliability and preservation projects and will be identifying more projects as the system TV inspections are completed over the next four years.

Please see the Appendix for additional detail.

## **STORMWATER FACILITIES**

The City of Tigard evaluated the existing stormwater system using the last master plan, the Fanno Creek Watershed Management Plan (1997). Clean Water Services and the City of Tigard will examine hydrology, system hydraulics, and water quality in the Fanno Creek Basin Master Plan to be completed in 2013. Clean Water Services is responsible for regional water quality to ensure compliance with the Tualatin River Basin and Oregon DEQ Regulations.

### *Stormwater Overview*

Natural streams and channels provide the major conveyance for stormwater in Tigard. Fanno Creek flows from north to south through the center of the City. Summer Creek, Ash Creek, Red Rock Creek, Hiteon Creek, Derry Dell Creek, Ball Creek and other unnamed tributaries each provide drainage to their respective basins. All creeks eventually flow to the Tualatin River. The bulk of the system serves street curbs that collect water from the street surface and adjoining property and convey it through catch basins and pipes.

### *Stormwater Capacity/Deficiencies*

Erosion and stream bank stability is the most significant issue in Tigard's stormwater system. This results in unstable stream banks throughout the system that could collapse and cause property damage as well as degrade riparian and in-stream habitat. Flooding, aging storm water conveyance systems and undersized culverts and water quality are all a concern.

### *Development Requirements*

Tigard's Community Development Code and CWS Design and Construction Standards place an emphasis on protecting sensitive lands along streams and creeks. In these areas, one of the expected outcomes of the master plan is a requirement for Low Impact Development Approach (LIDA). As to storm water treatments, proprietary systems (i.e., storm water quality vaults) are allowed for commercial and industrial developments but not for residential subdivisions. For those, CWS approves methods such as water quality swales and LIDA. Detention is likewise required unless the development is immediately adjacent to Fanno Creek.

Please see the Appendix for additional detail.

## **ECONOMY**

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*The Tigard HCT Land Use Plan Objective states the intent to: Support a diverse and growing local economy through the movement of people, goods, and services and access to housing, jobs, services, shopping, educational, cultural and recreational opportunities.*

## **MARKET ASSESSMENT**

Johnson-Reid wrote the Market Assessment Report detailing market factors; estimated amounts of residential, commercial and civic uses; and developed strategy considerations for the City of Tigard.

### Demographics

The Primary Market Area had an estimated population of 47,595 residents in 2010, residing in 18,519 households. From 2000 to 2010, the population grew at an annual rate of 1.4%, basically equal to the growth rate of the Portland Metro region as a whole. The median household income, at \$63,500 in 2010, is a higher in the market area compared to a median of roughly \$50,000 statewide. There were just over 41,300 (2005) jobs in the City of Tigard, according to the City’s recently completed Economic Opportunities Analysis. This is roughly 17.5% of Washington County employment, despite having roughly 10% of the County population. By 2030, employment is expected to grow to 60,637.

### Employment

Tigard is an attractive place for employers to locate, especially Washington Square and Tigard Triangle areas, due to excellent regional access. Professional and Business Services, and Retail represent the largest shares of employment in the city.

### Residential Supply Summary

The amount of housing inventory is near healthy levels, demonstrating that Tigard does not suffer the large oversupply that some Metro-area jurisdictions are experiencing. In the past year, the city has experienced over 526 home sales, at a median sale price of roughly \$280,000. The current number of active listings amount to an estimated 7 month housing inventory.

### Summary of Land Use Demand Findings

Basic trends in household and employment growth in the general market area point to healthy continuing demand for residential, commercial and industrial uses into the future. These broad growth and demand projections create flexibility in the planning for different uses in the Tigard High-Capacity Transit Land Use Plan Area. The table below summarizes the findings of demand in the market area. Residential demand is presented in terms of housing units. Non-residential uses are presented in square feet of building space.

Table 1: Projected Space Need- Major Land Use Types, City of Tigard

Land Use Category	New Space Demanded - 2010 - 2030								
	Base Scenario		Acreage	High Growth		Acreage	Low Growth		Acreage
Ownership Residential	3,715	units	na	4,010	units	na	3,420	units	na
Rental Residential	1,180	units	na	1,270	units	na	1,090	units	na
Retail/Commercial	509,800	sf	39.0	551,000	sf	42.2	469,020	sf	35.9
Office	1,592,100	sf	73.1	1,719,000	sf	78.9	1,464,730	sf	67.3
Industrial Total	1,443,000	sf	108.9	1,804,000	sf	136.2	1,082,000	sf	81.7
Warehouse/Distribution	499,000	sf	38.2	624,000	sf	47.8	374,000	sf	28.6
General Industrial	342,000	sf	26.2	428,000	sf	32.8	257,000	sf	19.7
Tech/Flex Space	602,000	sf	44.6	752,000	sf	55.7	451,000	sf	33.4

<sup>1</sup> High and low growth scenarios represent base case +/- 8% growth respectively.

<sup>2</sup> Acreage based on the following FAR assumptions: Retail .3 FAR; Office .5 FAR; Industrial .3 FAR

SOURCE: Johnson Reid, LLC

### Likely Residential Forms

Currently, the prevalent multi-family development type in Tigard is a two-to-three story walk-up garden apartment, with surface parking. Such structures are wood frame construction, with apartment flats

and occasionally two-story units. Such properties generally feature an FAR of .75 or less, and commonly no more than 0.5 FAR. The achieved density may be anywhere from 14 to 30 dwelling units per acre.

*Figure 1: Garden apartments*



*Garden apartment or condominiums with surface parking are typically wood frame construction with surface parking, carports or stand-alone garages. Construction is usually two to three stories high, with a density approaching 30 units per acre.*

*Figure 2: Attached duplex/townhomes*



*Attached duplex/townhomes are typically wood frame construction and these units often have parking under the unit accessed from the street or back alley. Projects can be fee simple or with condominium ownership of the ground and have 15 to 20 units per acre.*

#### Likely Office Forms

There is a variety of office space in Tigard, offering a range of ages, conditions, and formats. In the Tigard Triangle and Washington Square areas, mid-rise construction has been viable during strong economic times. These areas can be expected to continue to support five or six story buildings in the future. This allows for significant employment density, and mixed-use opportunities on the ground floor near busy arterials.

Office development elsewhere in Tigard may be limited to three stories, low-rise construction. Such office construction typically relies on surface parking, which can limit the floor area ratio that the building itself can achieve (0.3 to 0.35 are typical market-driven FAR).

*Figure 3: Low-Rise Office, Examples*



### *Likely Retail Forms*

The sub-districts include three broad types of retail uses: the Washington Square mall and surrounding area, Highway 99W corridor, and small-scale local retail in the downtown area.

In Tigard, retail tends to be single-story, single-use, with surface parking. Typical FAR for suburban retail is 0.2 to 0.3 to allow for ample parking. Retail will be most successful if developed after residential density. Parking is essential to retail success, but can be formatted in different ways – for instance, shared parking for a district.

*Figure 4: Low-Rise Mixed Use, Example of Residential or Office over Retail*



*Central Point, Gresham: Mixed use residential over retail, using tuck-under parking. Utilized Metro TOD easement.*

*Lake Norman, NC: Example of low-rise residential over retail mixed use. Significant density added with low-rise development.*

### *Policy Tools for Transit Oriented Development*

Over the long term, Tigard is expected to realize development densities significantly higher than currently viable in the area. Financial viability under current market conditions is the primary obstacle

to achieving more urban development forms in the next five- to ten-year time frame. While these densities may prove viable over the longer planning period, in the short- to mid-term market intervention will likely be required to achieve the targeted development activity. A broad variety of policy tools, incentives, and programs are outlined in the Johnson Reid Tigard HCT Land Use memo. Some of the policy tools outlined in the memo have already been adopted by Tigard, while others could be considered to facilitate the development environment.

Please see the Appendix for additional detail.

## SNAPSHOTS OF TIGARD AREAS

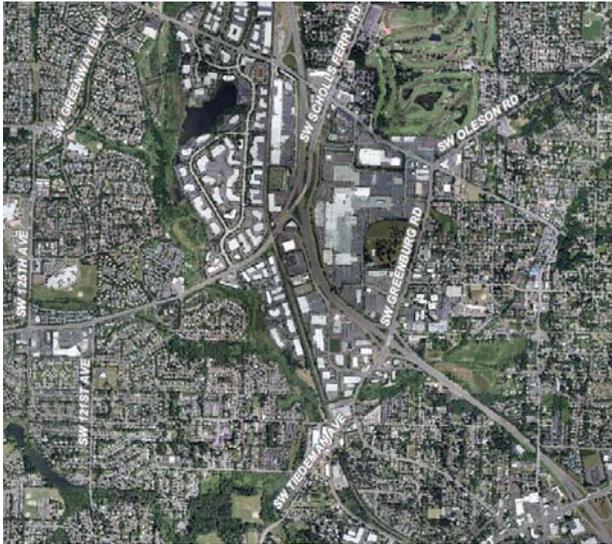
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The following “snapshots” of existing conditions focus on a particular area of Tigard. Data collected for the existing conditions report and memos is summarized in a broad manner. The intent of the divisions is to discern the different character of the various areas in Tigard to help inform the potential station communities and the typologies that might apply in each area.

Following are snapshots of these general areas:

1. Washington Square Area
2. Downtown Area
3. Tigard Triangle Area
4. Southwestern Tigard Area
5. Southeastern Tigard Area
6. Northern Tigard Area.

## WASHINGTON SQUARE AREA



### Policy

Washington Square Regional Center Plan  
Tigard Comprehensive Plan  
Tigard Transportation System Plan  
2040 Regional Center & 2040 Station Area

### Transportation

#### *Sidewalk Coverage*

Washington Square area has moderate to low concentration of sidewalks. Many of the arterial and collector streets have significant gaps in sidewalks, including Hall Boulevard, Greenburg Road, and Lincoln Street. East-west connections are limited by the barriers posed by Highway 217, Fanno Creek, and the railroad track. East-west routes on both sides of Highway 217 have no sidewalks, including North Dakota (west of Highway 217) and Oak Street (east of Highway 217). Within residential neighborhoods, sidewalks are limited, though traffic volume and speeds are low.

#### *Bicycle Facility Coverage*

In the Washington Square area, major bike routes are confined to Hall Boulevard and a couple of shared roadways with high or moderate traffic. The neighborhoods south of Washington Square are served by several shared roadways with low traffic. Greenburg is considered a difficult connection in its northern portions, but has a bike lane on its southern portion in this area. The multi-use trail along Fanno Creek also provides bicycle connections north and south.

#### *Transit Connectivity & Use*

Washington Square Transit Center is served by 45-Garden Home, 56-Scholls Ferry Rd, 76-Beaverton/Tualatin, 78-Beaverton/Lake Oswego, 62-Murray Blvd, 43-Taylor's Ferry Rd. WES Commuter Rail stops within a half mile of the mall at the Hall/Nimbus station with a park and ride lot of 50 spaces. Each week, approximately 16,363 transit riders get on and off the bus at Washington Square.

#### *Parking*

Washington Square is characterized by large retail and office developments, surrounded by single family residential neighborhoods. An aerial view shows that the office and retail uses are suburban in character, with freeway access and large surface and structured parking areas. There are currently no paid parking areas or time restricted parking areas. On street parking is limited in the commercial areas. Within residential neighborhoods, most properties have off-street parking, though parking on the street is not uncommon.

#### *Roadways*

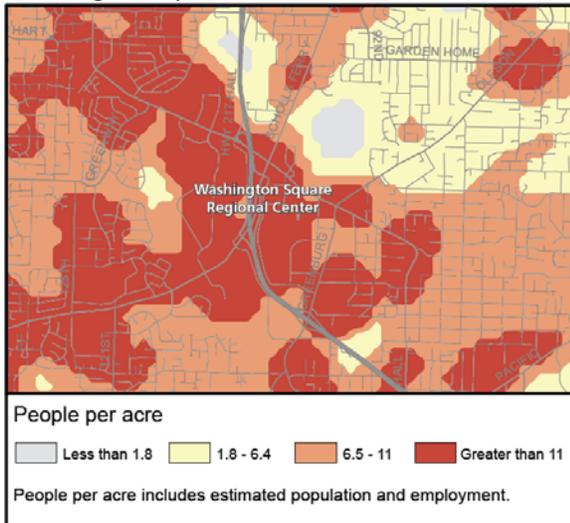
The Washington Square Regional Center area is criss-crossed by Highway 217, Scholls Ferry Road, Hall Boulevard and Greenburg Road.

These roadways provide local and regional access to the area, along with considerable through traffic. Potential for new roadways is constrained by the existing of the railroad track and Fanno Creek. The City’s 2035 TSP identifies several major roadway projects, including: general connectivity improvements to the Oak-Lincoln-Locust network; reconfiguration of the Greenburg/N Dakota/Tiedeman intersection; widening of Hall Boulevard; and an over-crossing of Highway 217 from Nimbus to Locust.

## Community

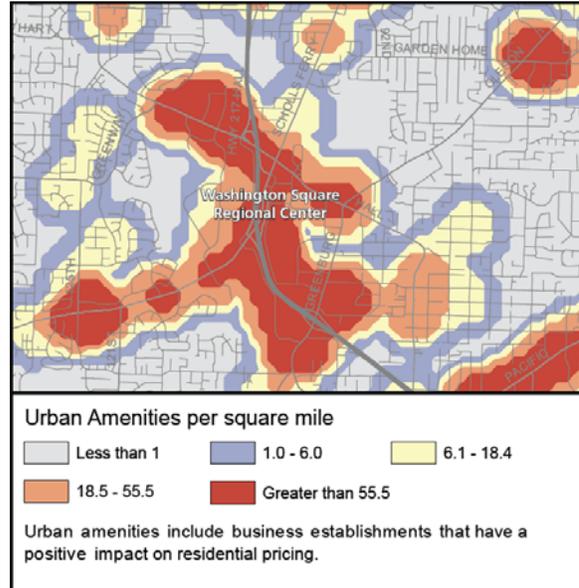
### Density of People

There is a significant concentration of employment and household density at Washington Square.



### Density of Urban Amenities

There is also a concentration of amenities, like cafes, retail stores, and restaurants, at Washington Square. Washington Square Regional Center has a significant concentration of amenities that attract shoppers.



### Average Block Size

Washington Square area is predominated by a suburban-style street grid and a large mall with large parking lots and large block size. Land within the Washington Square Regional Center Plan area has been developed in conjunction with a regional suburban mall.

## Economics

### Market

The area around the Washington Square mall is characterized by heavy commercial uses, both retail and office. Washington Square mall supports 1.4 million square feet of retail space, which draws customers from the entire region extending from the mid-Willamette Valley to SW Washington State, though most of its customer base is from the Portland Metro area.

Because of this wide draw, retail space within the mall and in surrounding properties can achieve higher rent levels, making the WS sub-district the strongest retail location in Tigard.

In addition, the area features many office developments. The Lincoln Center complex features one of the tallest buildings in

Washington County (Lincoln Tower). The achievable office rents in this sub-district are somewhat less than in the Tigard Triangle, but higher than in Downtown or the Highway 99W corridor.

Within a half-mile radius of Highway 217 there are few residential uses of any kind. To the west, Fanno Creek creates a barrier between residential neighborhoods and WS. To the east, residential neighborhoods begin roughly half a mile away.

Going forward, the area remains a strong location for retail and office uses. Future residential planned uses may require buffering from the highway, as well as the traffic and activity of the mall area itself.

Washington Square's, mid-rise development character has been viable during strong economic times. These areas can be expected to continue to support five or six story buildings in the future. This allows for significant employment density, and mixed-use opportunities on the ground floor near busy arterials.

The Washington Square area is also a significant hub of employment. It has excellent regional transportation connections from highway 217 and Interstate 5, which however suffers substantial periodic congestion. Washington Square has developed as a significant retail and office employment area

**Estimated Upper Pricing Levels**

Land Use	Wash. Square
<b>Retail:</b>	\$30 /sf/yr
<b>Office:</b>	\$22 /sf/yr
<b>Industrial:</b>	\$12 /sf/yr
<b>Res Rent:</b>	\$1.10 /sf/mo.
<b>Home Pricing:</b>	\$190 /sf

Source: Loopnet, RMLS, individual properties, Johnson Reid LLC

\* Retail and industrial rents are NNN. Office rents are full service.

**Summary of Development Forms**

The following table summarizes the development forms which are currently likely to appear in new development in the sub-districts, *absent public policy changes or incentives.*

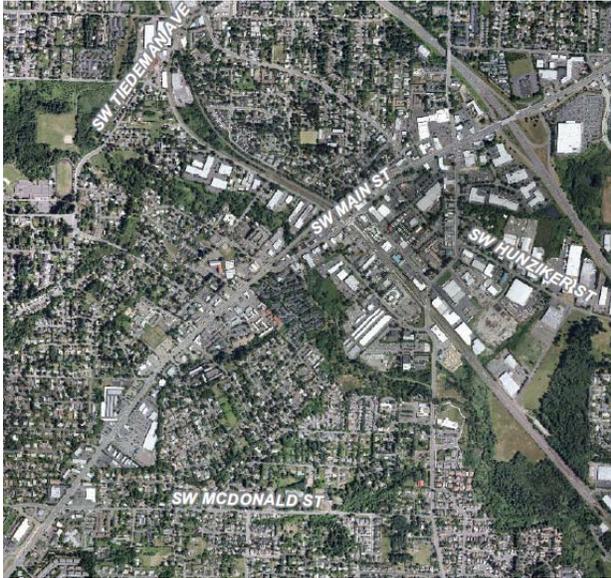
**Viable Near-to-Mid Term Development Forms**

Land Use	Wash. Square
<b>Retail:</b>	Single story
<b>Office:</b>	4-5 story
<b>Industrial:</b>	Single story
<b>Rental Housing:</b>	2-3 story
<b>For-sale Housing:*</b>	2-3 story

Source: Johnson Reid LLC

\* Assumes that new residential development s in station communities would be attached single family or multifamily.

## TIGARD DOWNTOWN AREA



### Policy

Tigard Downtown Improvement Plan  
Tigard Comprehensive Plan  
Tigard Transportation System Plan  
2040 Town Center & 2040 Station Area  
TSP  
Urban Renewal Plan

### Transportation

#### *Sidewalk Coverage*

Pedestrian conditions within the downtown core (around Main Street and the Transit Center) are generally good, with continuous sidewalks on most collectors or arterials. Burnham Street was recently reconstructed with sidewalks up to 18 feet wide and green street treatments. Main Street is now entering the design phases, including improved crossing treatments and wider sidewalks in some locations. Fanno Creek Parkway provides a good multi-use path connection through downtown Tigard, though there is a gap between Main Street and Woodward Park to the north.

Although pedestrian conditions within the downtown core are generally good or adequate, Pacific Highway and Hall Boulevard pose significant pedestrian challenges. Relatively narrow sidewalks are not buffered from heavy traffic volume, and crossing conditions are limited. On the northwest side of Pacific Highway, pedestrian conditions are generally poor.

#### *Bicycle Facility Coverage*

Tigard downtown has high coverage of bikeways. Major bike routes in the area include Pacific Hwy-OR 99W, Hall Boulevard, and the Fanno Creek Greenway Trail. Shared roadways are on Main Street, Scoffins, Commercial Street and Burnham Street in the downtown area. Walnut Street and a portion of Pacific Hwy-OR 99W in this area provides a difficult bicycle connection with high traffic volume and speed, narrow lane widths, no shoulders and/or poor visibility.

#### *Transit Connectivity, Frequency & Use*

Downtown Tigard is served by the WES commuter rail, a bus transit center with connections to the [12](#), [45](#), [64](#), [76](#) and [78](#) bus lines, and an associated park and ride of 103 spaces. Each week, approximately 17,815 transit riders get on and off the bus at the Tigard Transit Center.

#### *Parking*

All of the on-street parking on Main Street is time limited; however, there are no paid parking areas. Several of the older businesses on Main Street do not have their own parking areas and depend on the on-street parking. However, many businesses have significant private parking lots. A recent parking study showed that downtown parking in the vicinity of Main Street was nearly 50% vacant even during the peak period. Most other areas of

downtown have accessory parking on a typical suburban scale.

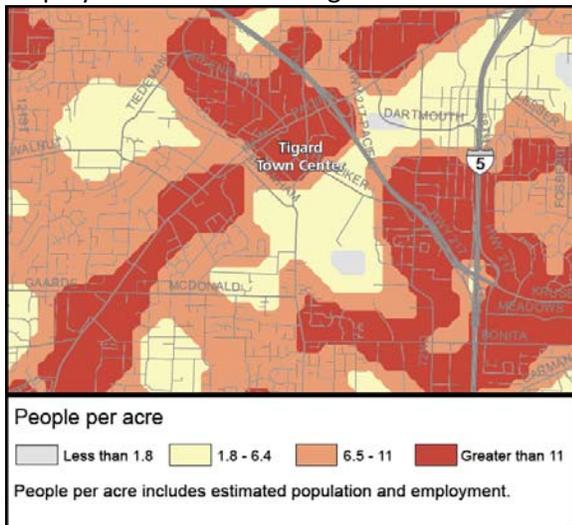
**Roadways**

The Tigard Downtown is generally centered on the Pacific Highway/Hall Boulevard intersection, though Main Street is considered its historic core. Major access roadways to Downtown include Pacific Highway, Greenburg Road, Hall Boulevard, and Walnut Street. Burnham, Scoffins, and Commercial provide circulation within Downtown. The City is nearly finished with a complete reconstruction of Burnham Street, including underground utilities and green street features. The City is beginning plans to install green street treatments and updated design features on the southern section of Main Street. Connectivity and circulation is considered a major deficiency of Downtown roadways. A future extension of Ash Avenue across the railroad is a high priority for the City.

**Community**

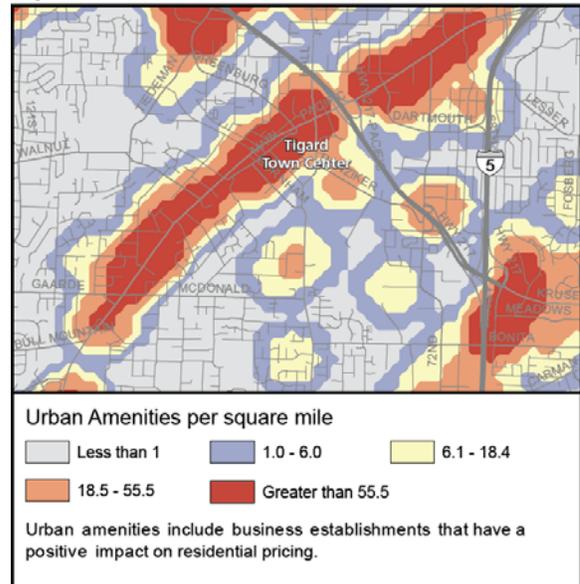
**Density of People**

Higher instances of households and jobs per acre are located along major corridors within Tigard including Pacific Highway-OR 99W. There is a concentration of density of residents and employees in Downtown Tigard.



**Density of Urban Amenities**

There is a high density of urban amenities, like cafes, retail stores, and restaurants, in the Tigard downtown area.



**Average Block Size**

Downtown Tigard has smaller block sizes than other areas in Tigard.

**Environment**

**Natural Resources**

- Fanno Creek, Pine Brook Creek, and the creek along McDonald Street
- Wetlands on the national and local wetland inventories near creeks
- Hydric soils
- Tigard Goal 5 inventoried tree groves
- Upland highest value habitat and riparian highest value habitat along creeks; Upland moderate value habitat between the railroad and Hunziker Street

**Public Infrastructure & Parks**

- Tigard Water Service Area
- Known flooding issues off Highway 217
- Planned Summer Creek Park
- More access to parks and open spaces
- Fanno Creek Trail, Pathfinder-Genesis Trail

- Trail opportunities along WES

## Economics

### Market

Currently, the downtown area is characterized by older, low-rise development of a wide mixture of uses. Retail and commercial services dominate Main Street, including auto-oriented shopping centers on the north end, and more traditional storefront buildings on the street itself.

Legacy industrial uses are prevalent to the southeast and near the rail line. The City owns significant land in the south end of the Downtown where the City Hall and public works departments are located.

Some multi-family residential uses exist in the form of smaller apartment complexes and a mobile home park near the center of the district, but the addition of residential density remains a key goal of the long term vision for the district.

Downtown Tigard is the focus of redevelopment efforts for the city. There is an Urban Renewal district in place which aims to generate new economic and development activity in the Downtown.

The Downtown area is a key location for retail and services which serve a more local customer base than the Washington Square or Tigard Triangle areas. As such, uses will tend to be smaller and employment density is likely to be less. However, as opposed to Washington

Square or Tigard Triangle, the Downtown seems to have greater potential to be a pleasant compact residential area, with ready access to retail, dining and services around Main Street.

### Estimated Upper Pricing Levels

Land Use	Downtown
<b>Retail:</b>	\$16 /sf/yr
<b>Office:</b>	\$16 /sf/yr
<b>Industrial:</b>	\$10 /sf/yr
<b>Res Rent:</b>	\$1.10 /sf/mo.
<b>Home Pricing:</b>	\$190 /sf

Source: Loopnet, RMLS, individual properties, Johnson Reid LLC

\* Retail and industrial rents are NNN. Office rents are full service.

### Summary of Development Forms

The following table summarizes the development forms which are currently likely to appear in new development in the sub-districts, *absent public policy changes or incentives*.

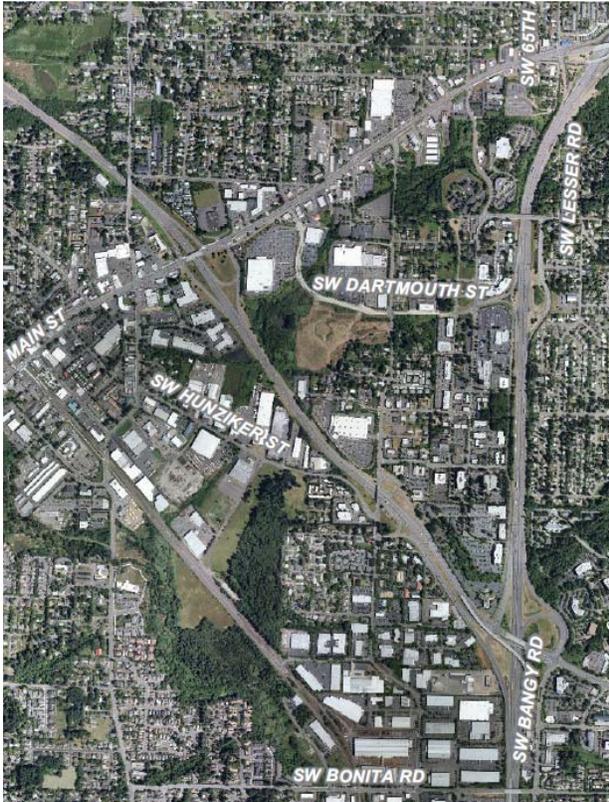
### Viable Near-to-Mid Term Development Forms

Land Use	Downtown
<b>Retail:</b>	Single story
<b>Office:</b>	1-2 story
<b>Industrial:</b>	Single story
<b>Rental Housing:</b>	2-3 story
<b>For-sale Housing:*</b>	2-3 story

Source: Johnson Reid LLC

\* Assumes that new residential development s in station communities would be attached single family or multifamily.

## TIGARD TRIANGLE AREA



### Policy

Tigard Comprehensive Plan  
 Tigard Transportation System Plan  
 Tigard Triangle Specific Area Plan  
 2040 Town Center & 2040 Employment Area

### Transportation

#### *Sidewalk Coverage*

The Tigard Triangle is bounded by Pacific Highway, Highway 217, and I-5. Each of these major facilities poses a pedestrian barrier. SW 72<sup>nd</sup> Avenue is a major north-south route that has no sidewalks and minimal shoulders in some areas. The lack of connectivity on the west side of SW 72<sup>nd</sup> Avenue creates a generally

poor pedestrian condition. East of SW 72<sup>nd</sup> Avenue, the streets form a near-grid pattern. While many of the older residential properties frequently do not have sidewalks, there are numerous newer commercial developments that have sidewalks and landscaping.

#### *Transit Connectivity & Use*

Line 12 is a Frequent Service bus line that travels along Pacific Hwy-OR99W and the Tigard Park & Ride at SW 74th Ave and Pacific Hwy-OR 99W offers 220 parking spaces. Each week, approximately 1,787 transit riders get on and off the bus at the Cinema Park-and-Ride in this area.

#### *Parking*

The Triangle is characteristic of many suburban commercial areas, with several large footprint retail stores utilizing large amounts of surface parking. Office, medical, and institutional properties on the eastern side of the Triangle also have large surface parking areas.

#### *Roadways*

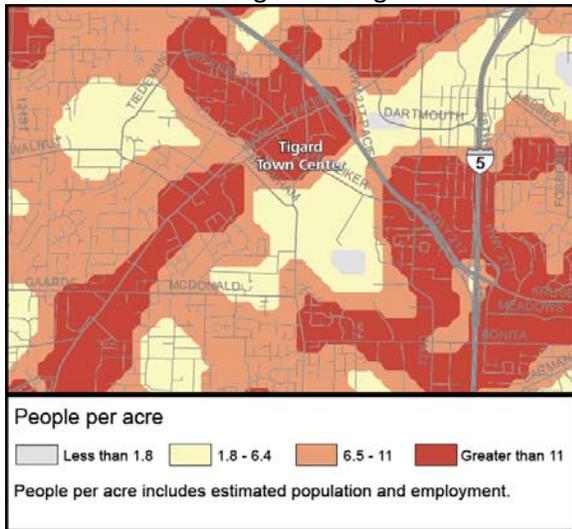
The Tigard Triangle is bounded by three major roadways: I-5, Highway 217; and Pacific Highway 99W. While these facilities provide major regional access to the Triangle, they can also present barriers for local connections. Within the Triangle, there are some areas characterized by large commercial parcels with surface parking. There are also some areas with the basic framework of a street grid pattern, albeit with numerous gaps and limited sidewalks and bike lanes. Triangle roadway projects identified in the 2035 TSP include: extension of Atlanta Street from 68<sup>th</sup> Parkway to Dartmouth; widening of Dartmouth and 72<sup>nd</sup> Avenue; and, improvements to the Highway 217/72<sup>nd</sup> interchange. In addition, the Tigard Transportation System Plan identifies the need

for Transportation System Management and Operations (TSMO) improvements at signalized intersections on Pacific Highway.

## Community

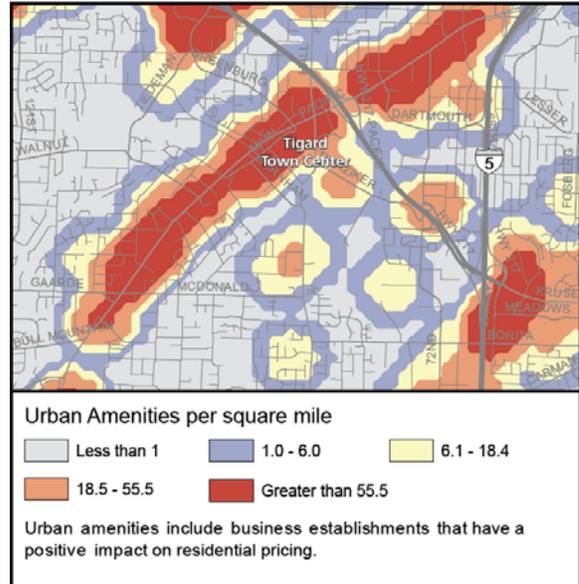
### Density of People

Higher instances of households and jobs per acre are located along major corridors within Tigard including Pacific Highway-OR 99W and SW 72<sup>nd</sup> Ave in the Tigard Triangle.



### Density of Urban Amenities

A high density of urban amenities, like cafes, retail stores, and restaurants, exists along Pacific Highway-OR 99W.



### Average Block Size

Tigard Triangle east of Dartmouth has smaller block sizes, but much of the area has larger blocks and a suburban style street grid

## Environment

### Natural Resources

- Red Rock Creek, Crystal Lake, creek adjacent to Dartmouth Street
- Wetlands on the national and local wetland inventories near creeks
- Hydric soils
- Less access to parks and open spaces
- Tigard Goal 5 inventoried tree groves
- Upland highest value habitat and riparian highest value habitat along creeks

### Public Infrastructure & Parks

- Tualatin Valley Water District Water Service Area
- No parks, trails or trail opportunities

## Economics

### Market

The Tigard Triangle area, bounded by Highway 99W to the north, Interstate 5 to the east, and

Highway 217 to the west is primarily commercial in nature. The northern portion is characterized by auto-oriented highway commercial forms such as small strip centers or shopping malls, and standalone businesses. There is also a significant presence of “big box” retail, taking advantage of the confluence of transportation routes in the area.

The southern portion of the Tigard Triangle is dominated by office uses. In terms of land use and character, this area blends into the Kruse Way office market which lies on the east side of I-5. It is a strong office location, achieving the highest office rents in the city. This is the heart of Tigard’s employment base.

In between these two areas (highway oriented retail, and freeway-oriented employment) is an older residential neighborhood, featuring many single-family homes. Situated between these commercial uses, and enjoying flexible mixed-use zoning, it is likely that this area will redevelop over time, both as additional commercial uses, and denser housing types.

The Tigard Triangle is likely to remain a strong location for retail and office uses in particular.

Tigard Triangle and Washington Square areas, mid-rise construction has been viable during strong economic times. These areas can be expected to continue to support five or six story buildings in the future. This allows for significant employment density, and mixed-use opportunities on the ground floor near busy arterials.

The greatest challenge to large-scale office development can be drawing the interest of large employers to an area. In Tigard, such employers have traditionally been attracted to the Tigard Triangle.

The Tigard Triangle/Kruse Way area has developed into one of the region’s top-end office employment centers. It is located nearby to desirable living communities, while also providing an accessible location for other employees from Portland to Salem due to convenient freeway access.

Employment is greatly concentrated in the Tigard Triangle area, extending south along the I-5 freeway.

**Estimated Upper Pricing Levels**

Land Use	Tigard Triangle
<b>Retail:</b>	\$24 /sf/yr
<b>Office:</b>	\$26 /sf/yr
<b>Industrial:</b>	\$12 /sf/yr
<b>Res Rent:</b>	\$0.95 /sf/mo.
<b>Home Pricing:</b>	\$160 /sf

Source: Loopnet, RMLS, individual properties, Johnson Reid LLC

\* Retail and industrial rents are NNN. Office rents are full service.

The area’s development potential is currently restricted by the lack of roadway capacity and the regulations set forth in the Transportation Planning Rule and the Oregon Highway Plan.

**Summary of Development Forms**

The following table summarizes the development forms which are currently likely to appear in new development in the Tigard Triangle, *absent public policy changes or incentives.*

**Viable Near-to-Mid Term Development Forms**

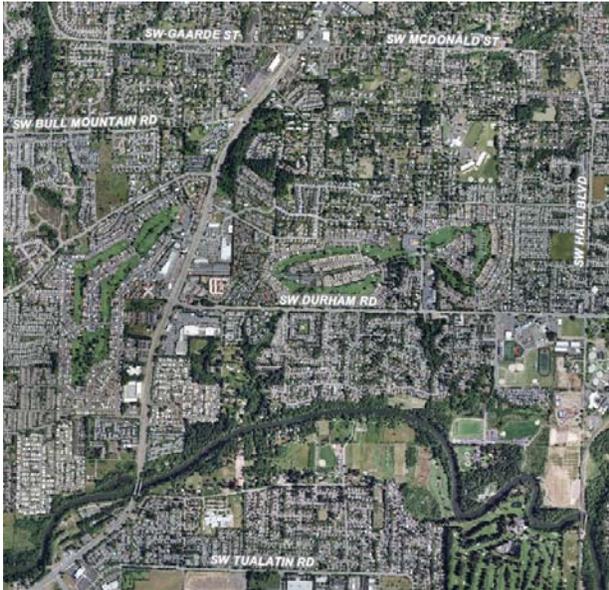
Land Use	Tigard Triangle
<b>Retail:</b>	Single story
<b>Office:</b>	4-5 story
<b>Industrial:</b>	Single story
<b>Rental Housing:</b>	2-3 story
<b>For-sale Housing:*</b>	2-3 story

Source: Johnson Reid LLC

multifamily.

\* Assumes that new residential development s in station communities would be attached single family or

## SOUTHWESTERN TIGARD



### Policy

Tigard Comprehensive Plan  
Tigard Transportation System Plan  
Pacific Highway/ 99W - 2040 Corridor & 2040  
Town Center at King City

### Transportation

#### *Sidewalk Coverage:*

Major streets serving Southwestern Tigard have significant gaps in sidewalks. These include Pacific Highway, McDonald Street, Bull Mountain Road, and Beef Bend Road. Some residential neighborhoods have comparatively high density of sidewalks, including the Summerfield community and areas along Durham Road and west of Hall Boulevard.

#### *Bicycle Facility Coverage:*

Tigard has a fairly high coverage of bikeways throughout its jurisdiction, but there are underserved areas in industrial portions of SW

Tigard adjacent to King City where the density of bikeways is not as high. Major bike routes are confined to Pacific Hwy-OR 99W and Durham with shared bikeways moderate and low traffic streets throughout the adjacent neighborhoods.

#### *Transit Connectivity, Frequency & Use:*

Line 12 is a Frequent Service bus line that travels along Pacific Hwy-99W. Approximately 6,000 daily riders board and depart buses along Pacific Highway in the City of Tigard. Of those, 700 riders board and depart buses along Pacific Highway between Durham and Gaarde.

#### *Parking*

Commercial activity in Southwest Tigard is generally limited to Pacific Highway and reflect development styles of the 1960's and 70's, with large parking areas sometimes, but not always, serving multiple businesses. The parking is unpriced for employees, customers, and visitors to specific properties.

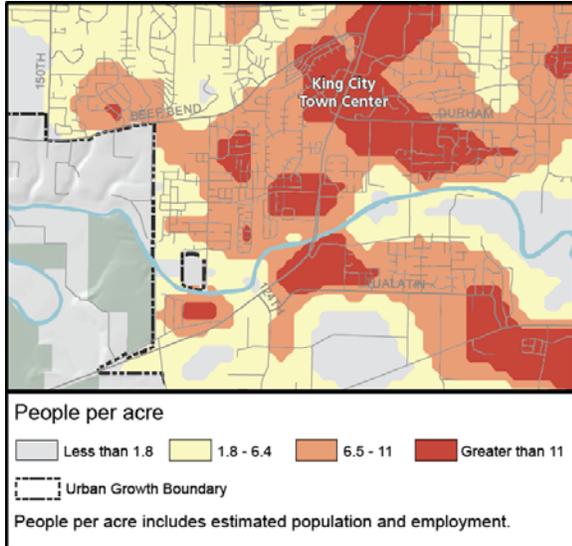
#### *Roadways*

Major roadways located in Southwestern Tigard are Pacific Highway, Gaarde Street, McDonald Street, Durham Road, and Beef Bend Road. These roads are among the most heavily used for east-west through traffic and they are characterized by peak period/peak direction traffic congestion. The Pacific Highway/Gaarde-McDonald intersection is a priority for the City in its plans for Pacific Highway improvements and conceptual design will soon be underway. However, funding for construction has not been committed. Widening projects for McDonald Street and Durham Road are identified in the 2035 TSP. The majority of other roadways within Southwestern Tigard are local or neighborhood collectors providing direct access to residential neighborhoods.

## Community

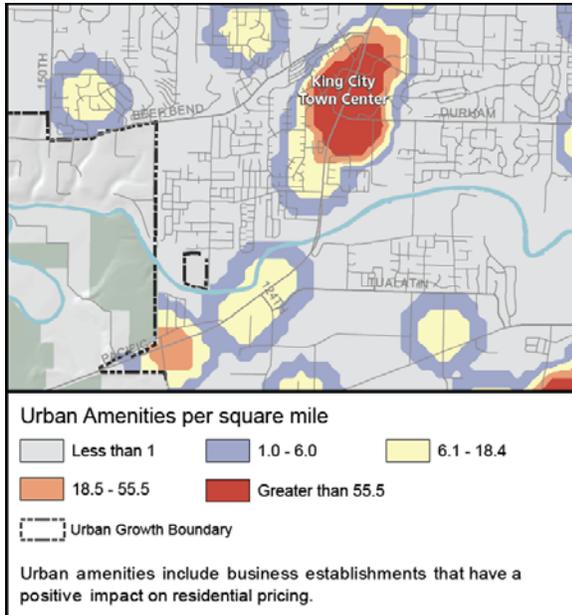
### Density of People:

Higher instances of households and jobs per acre are located along major corridors within Tigard including Pacific Highway-OR 99W.



### Density of Urban Amenities

Pacific Highway-OR 99W offers a high density of urban amenities, like cafes, retail stores, and restaurants.



### Average Block Size

Along Pacific Highway-OR 99W, blocks are of medium size. Within the adjacent neighborhoods, blocks are of medium or small size.

## Environment

### Natural Resources

- Tualatin River, Kruger Creek, creek parallel to 99W
- Wetlands on the national and local wetland inventories near creeks
- Mostly hydric soils with some non-hydric soils
- Tigard Goal 5 inventoried tree groves
- Upland moderate value habitat and riparian highest value habitat along creeks; Large riparian area near Tualatin River at Hall Boulevard

### Public Infrastructure & Parks

- Tigard Water Service Area
- Pioneer Cemetery
- More access to parks and open spaces
- Tualatin River Trail

## Economics

### Market

The Highway 99W Corridor is a high-traffic auto-oriented transportation corridor. As such, it is dominated by auto-oriented retail and service uses for nearly its entire length through the city. Uses range in age, condition, and achievable rent levels and nearly all rely on a drive-in customer base.

However, these commercial uses generally form a narrow band along the highway, with residential areas located behind the businesses. Because of this, potential station communities along this highway could feature commercial uses in the immediate area, while still featuring

significant residential development within a half-mile radius of the station.

Some of these residential neighborhoods are currently zoned for medium-density residential, while others are low-density residential. Due to the ownership pattern in low-density neighborhoods featuring detached homes on separate lots, redevelopment of these face significant market barriers.

Commercial parcels with highway frontage will likely maintain their strong auto-orientation. Newer, higher value developments and shopping centers are unlikely to redevelop even with rezoning or significant incentives. Therefore, older or under-developed properties are the best candidates for achieving new TOD in this corridor. Commercial users of new TOD would likely continue to insist on sufficient parking levels to support their businesses.

Station communities located along the Highway 99W corridor will face the competition from the heavy auto-oriented retail use currently located along this corridor. As with many high-traffic arterials, Highway 99W through Tigard features many existing shopping centers of various sizes and ages, as well as many single-use retail/commercial properties.

**Estimated Upper Pricing Levels**

Land Use	Highway 99W
<b>Retail:</b>	\$22 /sf/yr
<b>Office:</b>	\$18 /sf/yr
<b>Industrial:</b>	na
<b>Res Rent:</b>	\$1.00 /sf/mo.
<b>Home Pricing:</b>	\$170 /sf

Source: Loopnet, RMLS, individual properties, Johnson Reid LLC

\* Retail and industrial rents are NNN. Office rents are full service.

**Summary of Development Forms**

The following table summarizes the development forms which are currently likely to appear in new development along 99W *absent public policy changes or incentives*.

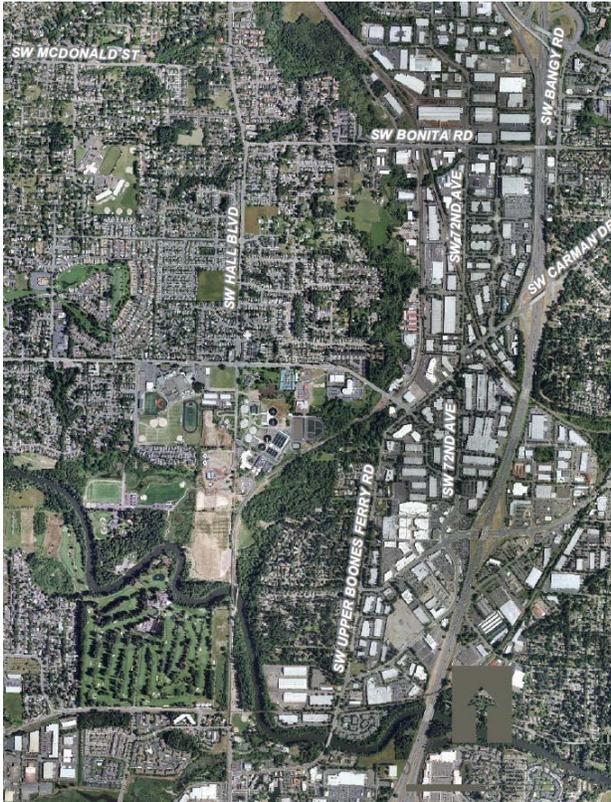
**Viable Near-to-Mid Term Development Forms**

Land Use	Highway 99W
<b>Retail:</b>	Single story
<b>Office:</b>	1-2 story
<b>Industrial:</b>	Single story
<b>Rental Housing:</b>	2-3 story
<b>For-sale Housing:*</b>	2-3 story

Source: Johnson Reid LLC

\* Assumes that new residential development s in station communities would be attached single family or multifamily.

## SOUTHEASTERN TIGARD



### Policy

Tigard Comprehensive Plan  
Tigard Transportation System Plan  
Hall Blvd – 2040 Corridor & 2040 Employment Area

### Transportation

#### *Sidewalk Coverage*

*Some of the major streets in SW Tigard have relatively good sidewalks. Bonita Road, Durham Road, and Sequoia Street have continuous sidewalks. SW 72<sup>nd</sup> has sidewalks for most of the area south of the Triangle, but with several gaps. Some of the newer residential neighborhoods west of SW 74<sup>th</sup>*

#### *Avenue also have sidewalks. Bicycle Facility Coverage*

Southeastern Tigard lacks bicycle connectivity, with one shared roadway on a high traffic street (72<sup>nd</sup>) and bike lands on Upper Boones Ferry Road and Durham Road.

#### *Transit Connectivity, Frequency & Use*

This area is served by the Tualatin park and ride with 466 parking spaces and the line 36, 37, 38, 76, and the express bus 96. Approximately 1,000 daily riders board and depart buses at Bridgeport Village and the Tualatin park and ride.

#### *Parking*

Southeastern Tigard is one of the largest employment areas in the City, with a relatively large number of light industrial businesses. This is generally true in the area east of SW 74<sup>th</sup> Avenue. The area also includes several commercial national chain restaurants and stores. Generally, much of the development is characterized by large surface lots for employee parking as well as large vehicle storage and deliveries.

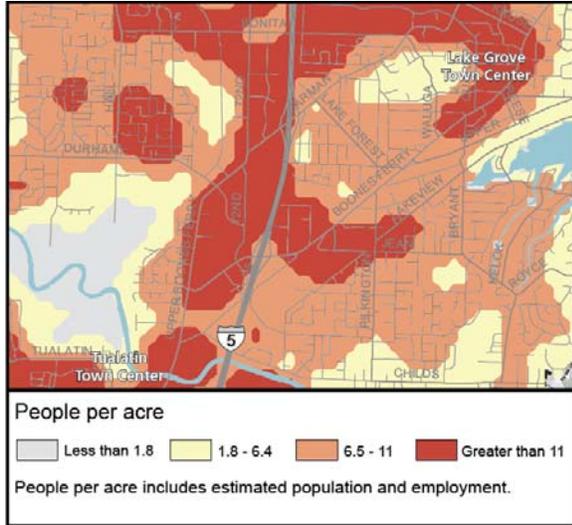
#### *Roadways*

The major roadway network in Southeastern Tigard is dominated by its proximity to I-5, the railroad track, and Fanno Creek. These features limit options for east-west connections. McDonald-Hall-Bonita is characterized by frequent peak period, peak direction traffic congestion. Residential areas west of the railroad tracks have relatively good access via neighborhood collectors, though the network does not have a complete grid system.

## Community

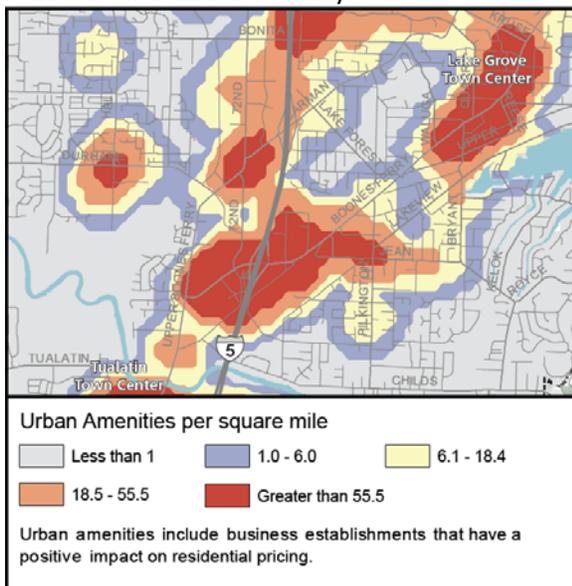
### Density of People

Higher instances of households and jobs per acre are located along the major corridors of I-5, with particular concentrations of employment.



### Density of Urban Amenities

High densities of amenities, like cafes, retail stores, and restaurants, exist at Hall and Durham, Bridgeport Village, Carmen and Upper Boones Ferry Road, and at the intersections of I-5 with Bonita and Kruse Way.



### Average Block Size

There is a mixture of areas with small and medium size blocks.

## Environment

### Natural Resources

- Fanno Creek, Ball Creek, Pinebrook Creek
- Wetlands on the national and local wetland inventories near creeks
- Mostly non-hydric soils with some hydric soils
- Tigard Goal 5 inventoried tree groves
- Upland moderate value habitat and riparian highest value habitat mostly along Fanno Creek

### Public Infrastructure & Parks

- Tigard Water Service Area
- Less access to parks and open spaces
- Tualatin River Trail
- Trail opportunities Fanno Creek Trail

## Economics

### Market

The following data is not specific to the Southeastern corner of the City of Tigard, but rather discusses the market of the whole of Tigard with an emphasis on the sub-market of I-5 and Highway 217.

### Office Market Conditions

The Tigard Triangle/Kruse Way area has developed into one of the region's top-end office employment centers. It is located near desirable living communities, while also providing an accessible location for other employees from Portland to Salem due to ready freeway access. Employment is greatly concentrated in the Tigard Triangle area, extending south along the I-5 freeway.

The "Tigard Triangle/South 217" submarket is experiencing office vacancy of 23%, the

suburban average. Central City had a lower vacancy rate of 12.1%. With vacancy rates as high as they are, sustained employment growth will have to return before significant new office development will be undertaken.

The current estimated employment is roughly 44,499 jobs. The new projected office employment translates to a need of over 1,590,000 square feet of new office space over the next 20 years in Tigard.

#### *Industrial Market Conditions*

Tigard is near to two submarkets; the 217 submarket is experiencing higher than average

industrial vacancy 25%, while the Southwest I-5 submarket is experiencing lower than average vacancy at 12%. Citywide there is an estimated need of almost 5 million square feet of new industrial space demanded over the next 20 years. Most of the space demanded is from the wholesale trade sector, which includes mostly warehousing and distribution facilities, and demands a large amount of space per employee.

## NORTHERN TIGARD



### Policy

Tigard Comprehensive Plan  
Tigard Transportation System Plan  
Scholl's Ferry- 2040 Corridor & 2040 town center at Murray Scholls

### Transportation

#### *Sidewalk Coverage*

There is a comparatively high density of sidewalks in areas of northwest Tigard around Scholls Ferry Road, SW 121<sup>st</sup> Avenue and SW 125<sup>th</sup> Avenue. Many of the local streets serving residential neighborhoods have sidewalks. Also, large sections of Barrows Road were recently improved with sidewalks and green street treatments. However, there remain some gaps on Barrows Road, as well as Walnut Street and SW 121<sup>st</sup> Avenue.

#### *Bicycle Facility Coverage*

Tigard has a fairly high coverage of bikeways throughout its jurisdiction. Scholls Ferry has a bike lane and the surrounding neighborhoods have several shared roadways on low traffic streets. The multi-use trail along Fanno Creek also provides bicycle connections north and south.

#### *Transit Connectivity, Frequency & Use*

Line 56 is a Frequent Service line that travels to Washington Square via Scholls Ferry Road-OR

210. Lines 76 and 78 travel across Scholls Ferry. Lines 45 and 62 are additional lower-frequency lines that service Washington Square along Scholls Ferry. Approximately 2,000 daily riders board and depart buses near the intersection of 121<sup>st</sup> & Scholls Ferry Road.

#### *Parking*

Most of this area of Tigard is residential, with several schools and churches. There is a retail center on the Tigard side of Scholls Ferry Road is at the Scholls Ferry Road/SW 121<sup>st</sup> Avenue intersection, which has surface parking. Within residential neighborhoods, virtually all properties have off-street parking though some on-street parking is not uncommon.

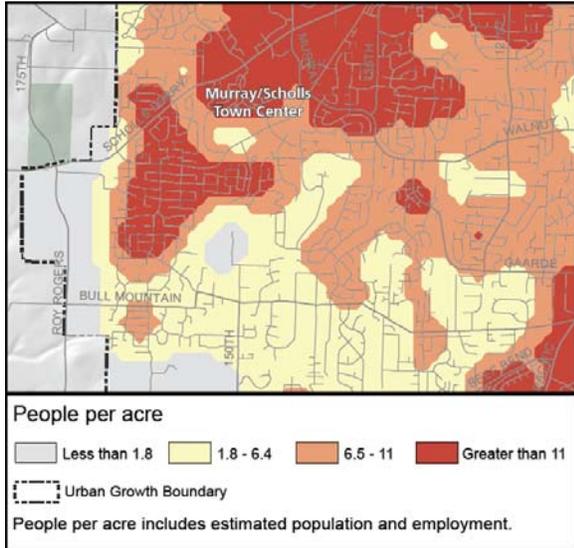
#### *Roadways*

Major roadways in Northwestern Tigard include Scholls Ferry Road, Walnut Street, 121<sup>st</sup> Avenue, and 135<sup>th</sup> Avenue. With the exception of properties along Scholls Ferry Road, most of the land uses in this area are residential. The street network provides relatively good access, though the circulation pattern is not intuitive and is largely known only by local residents. The TSP does not include any major roadway projects in this area except for the widening of Scholls Ferry Road which is a Washington County road.

### Community

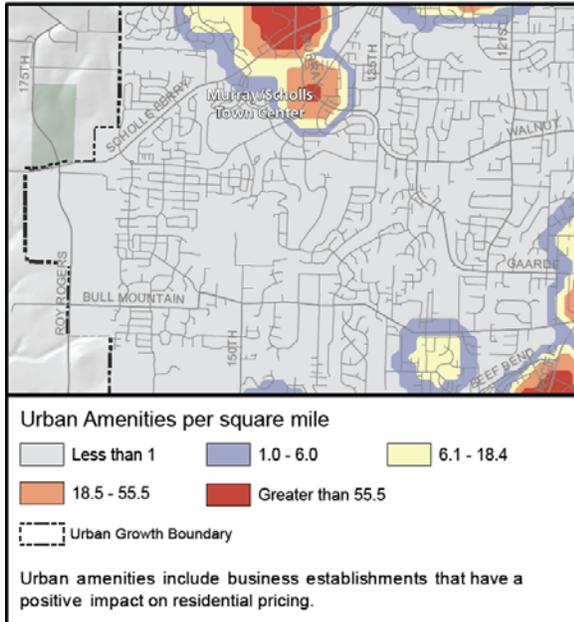
#### *Density of People*

Higher instances of households and jobs per acre are located along major corridors within Tigard, including Scholls Ferry Road (OR 210).



**Density of Urban Amenities**

Scholls Ferry contains pockets of high levels of urban amenities, like cafes, retail stores, and restaurants, near Washington Square, 121<sup>st</sup> and 125<sup>th</sup>.



**Average Block Size**

Pockets of areas with small block size are seen on Scholls Ferry around Washington Square, 121<sup>st</sup> and 125<sup>th</sup>. Other areas around Scholls Ferry are comprised of a suburban-style street grid.

**Environment**

**Natural Resources**

- Fanno Creek, Summer Creek
- Wetlands on the national and local wetland inventories near creeks
- Hydric soils
- Tigard Goal 5 inventoried tree groves
- Upland moderate value habitat (mostly) and riparian highest value habitat along creeks

**Public Infrastructure & Parks**

- Tigard Water Service Area
- Known flooding issues off of 135<sup>th</sup> Avenue
- There is more access to parks and open spaces
- Summer Creek Trail, Krueger Creek Trail

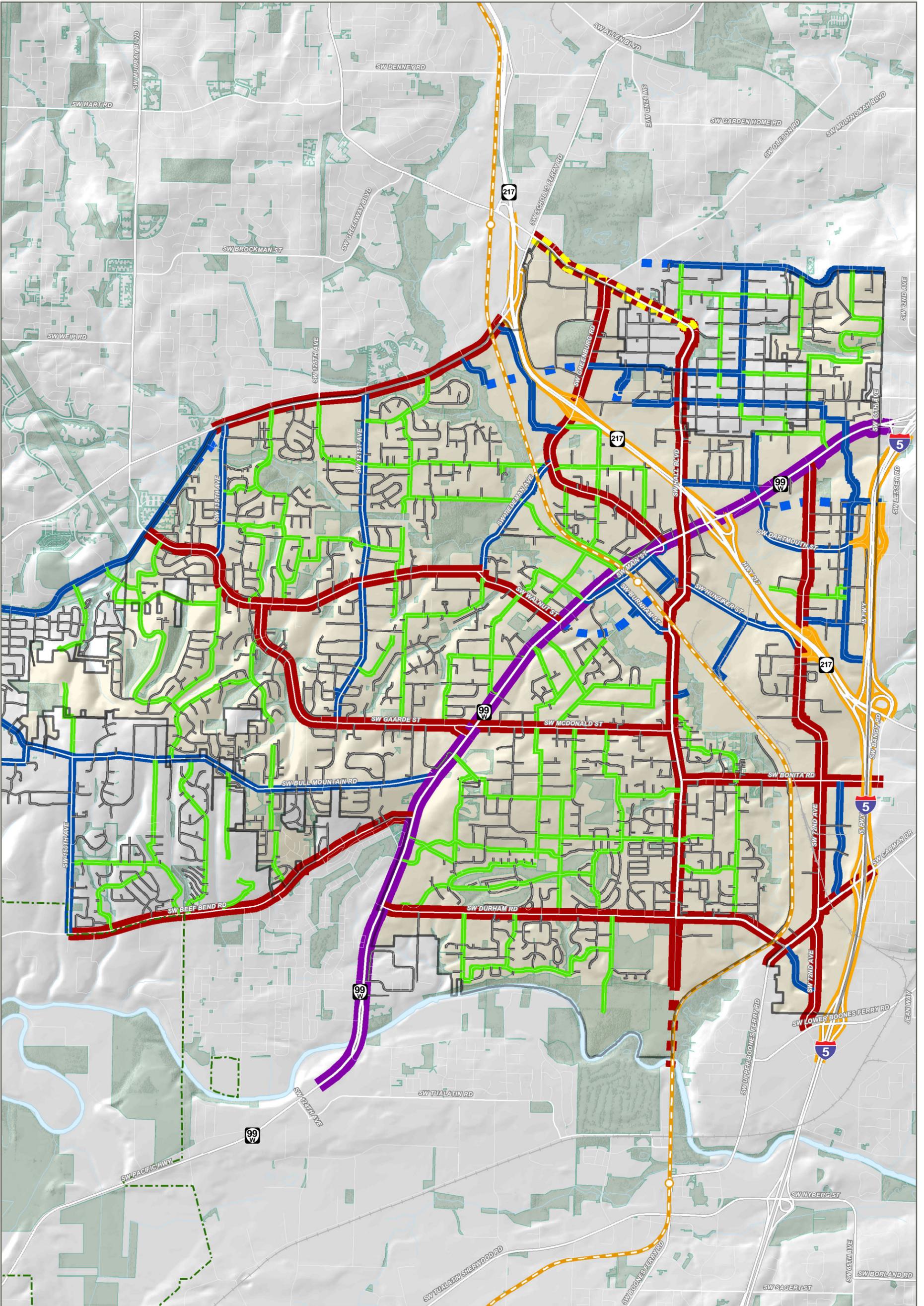
## ATLAS: TIGARD HCT CORRIDOR LAND USE PLAN

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The following series of maps are intending to give a quick overview of the existing conditions within the City of Tigard. Each of these maps is derived from the technical memos included in the appendix of this report. For additional information or context about these maps, please see the relevant technical memo in the appendix.

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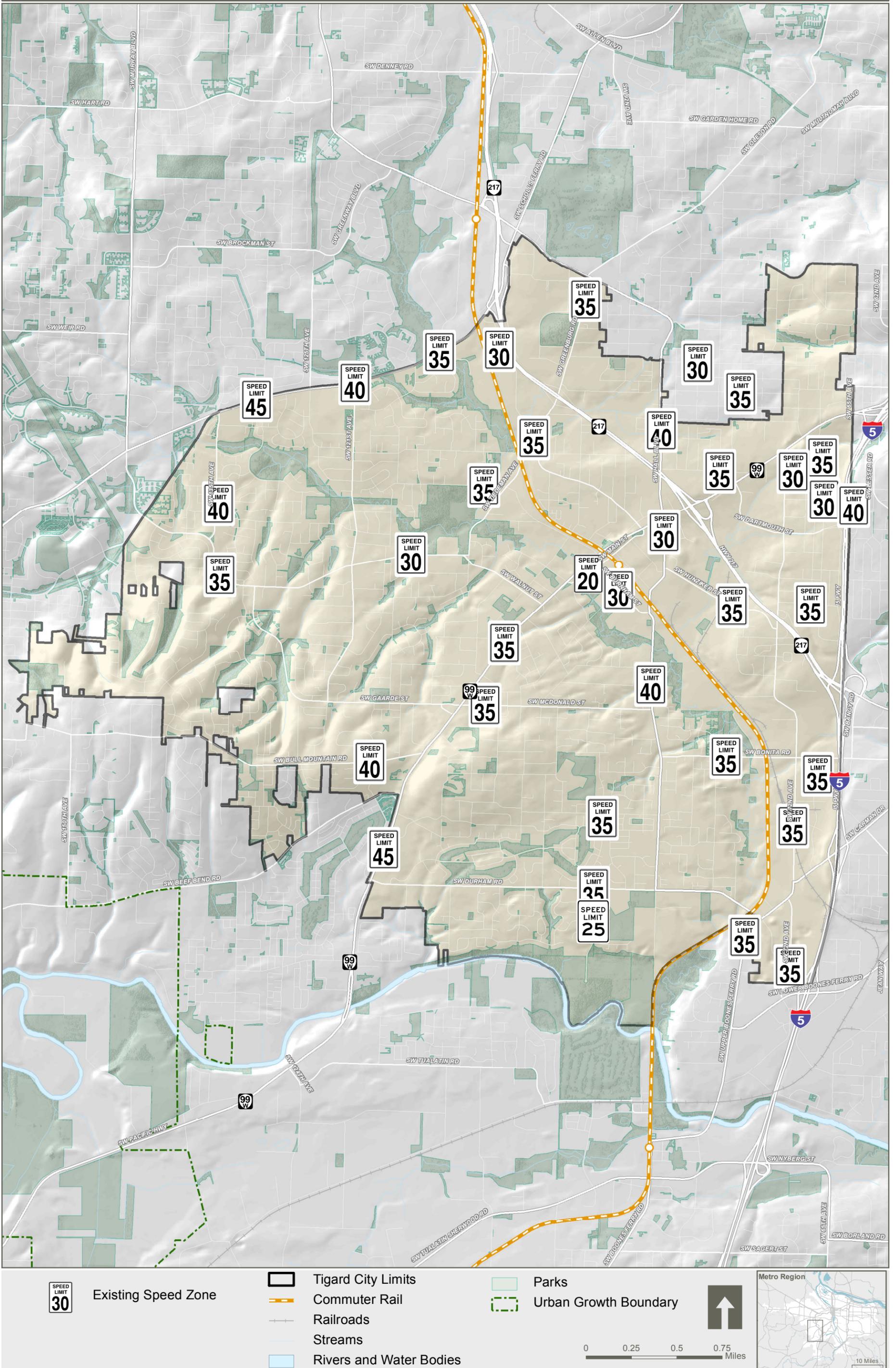
**Fig. 1: City of Tigard - Transportation - Roadway Functional Classification**



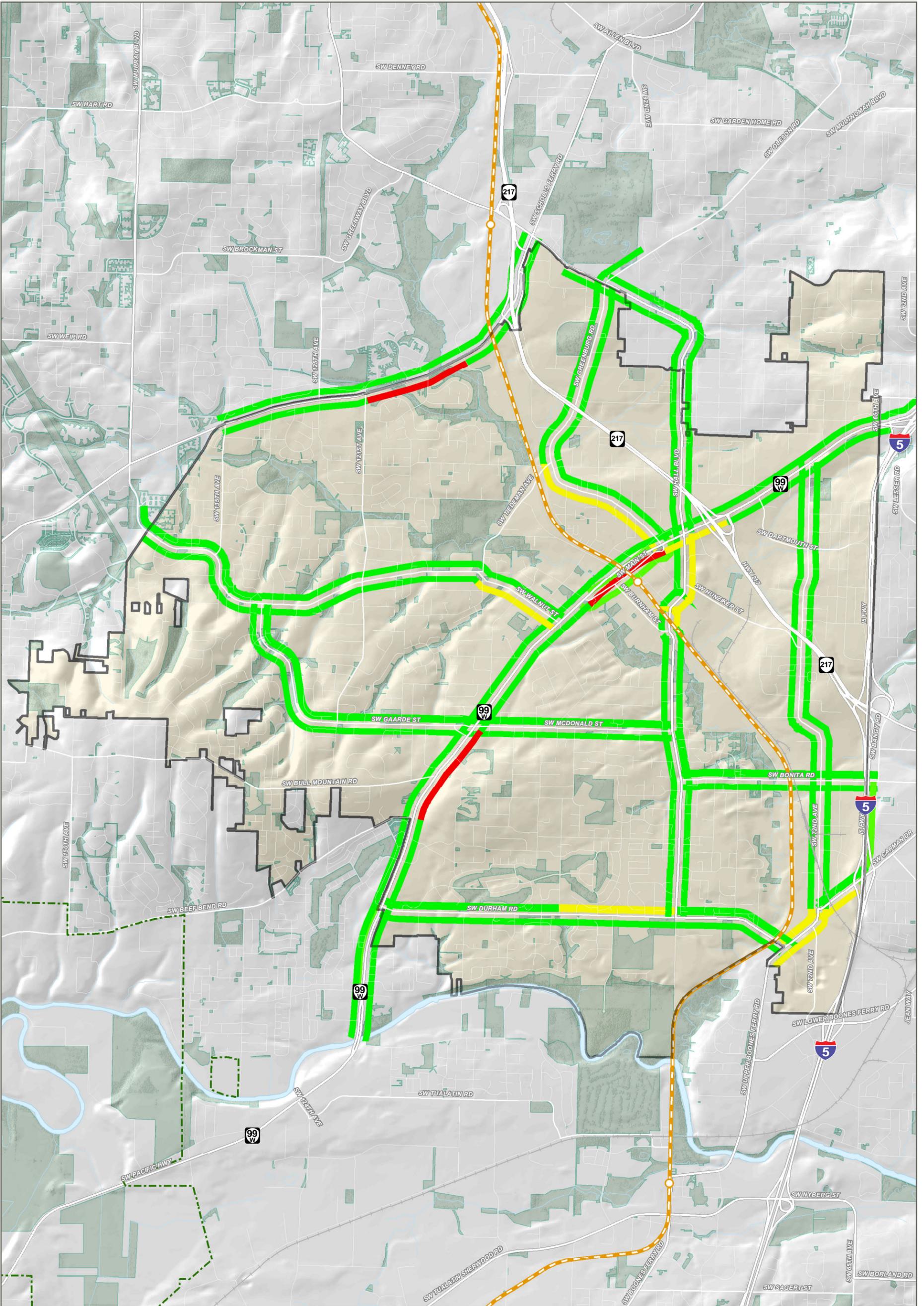
<b>Functional Classification</b>		Tigard City Limits	Parks
Freeway	Local	Commuter Rail	Urban Growth Boundary
Principal Arterial	Special Transportation Area (STA)	Railroads	
Arterial	Future Roadways	Streams	
Collector		Rivers and Water Bodies	 
Neighborhood			



**Fig. 3: City of Tigard - Transportation - Speed Zones**



**Fig. 4: City of Tigard - Transportation - Arterial Level of Service - Weekday AM Peak**



**Arterial LOS**

- █ LOS F
- █ LOS E
- █ LOS A to D

- Tigard City Limits
- Commuter Rail
- Railroads
- Streams
- Rivers and Water Bodies

- Parks
- Urban Growth Boundary

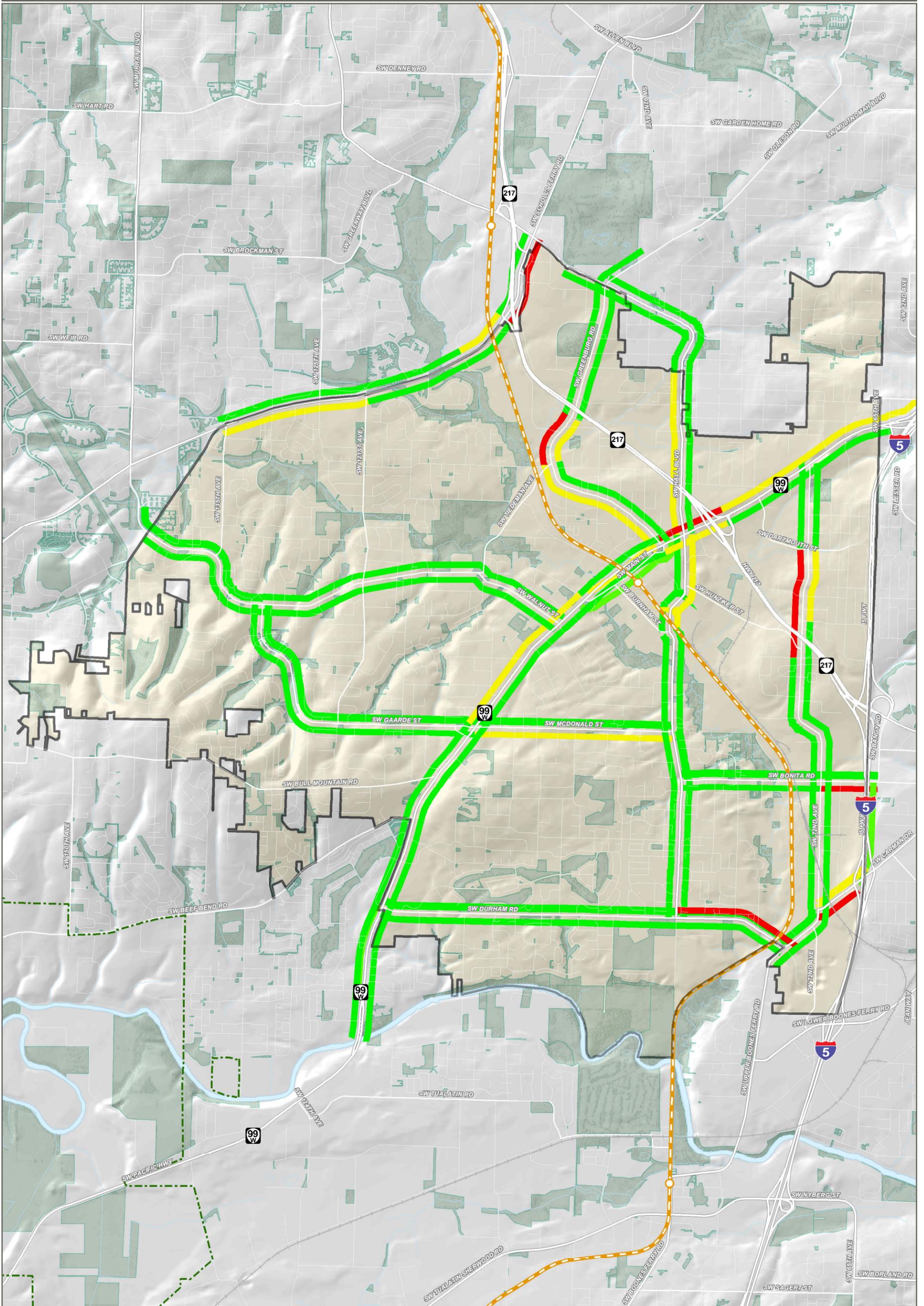
0    0.25    0.5    0.75    Miles

↑

Metro Region

10 Miles

**Fig. 5: City of Tigard - Transportation - Arterial Level of Service - Weekday PM Peak**



**Arterial LOS**

- █ LOS F
- █ LOS E
- █ LOS A to D

- Tigard City Limits
- Commuter Rail
- Railroads
- Streams
- Rivers and Water Bodies

- Parks
- Urban Growth Boundary

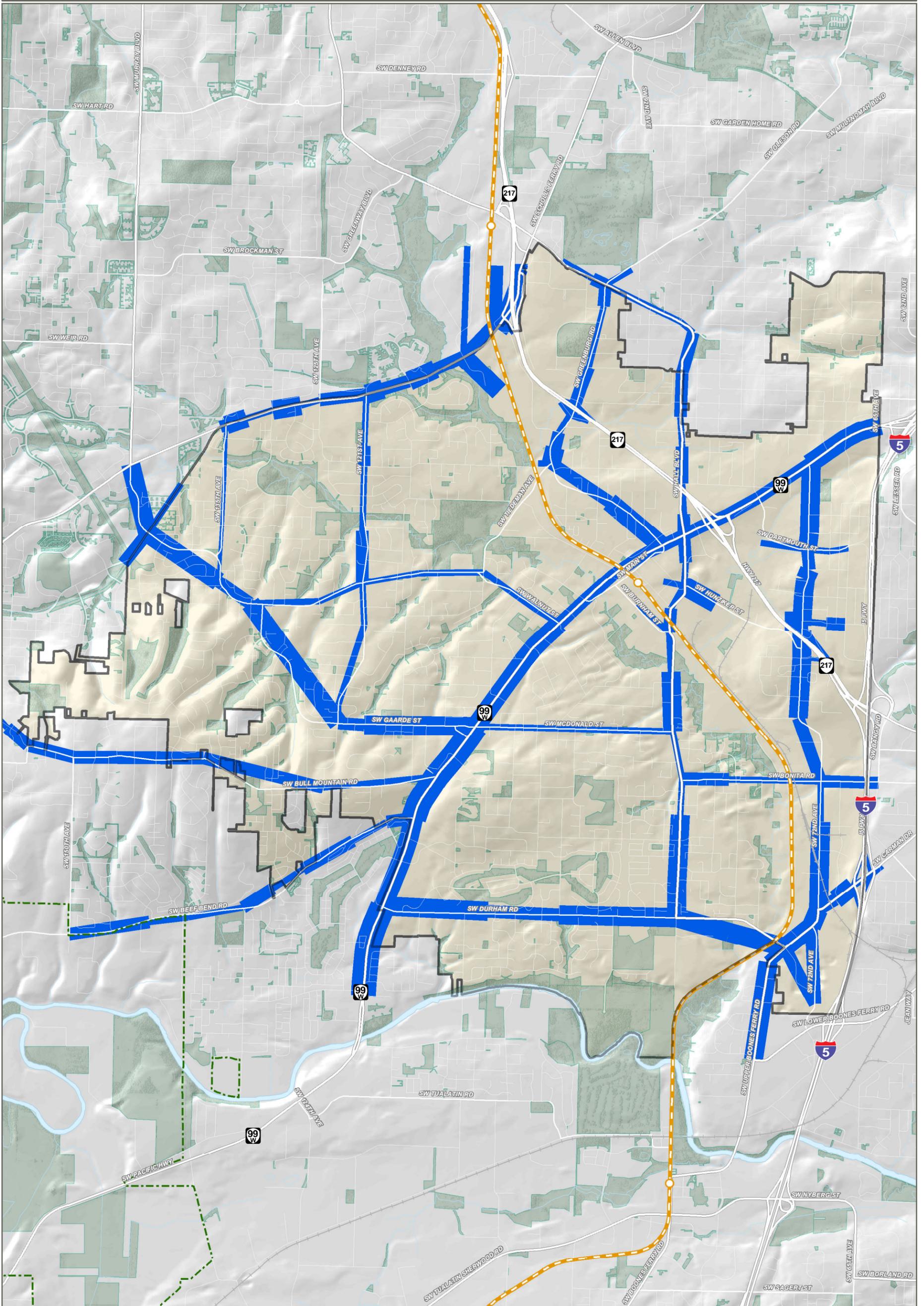
0    0.25    0.5    0.75    Miles

↑

Metro Region

10 Miles

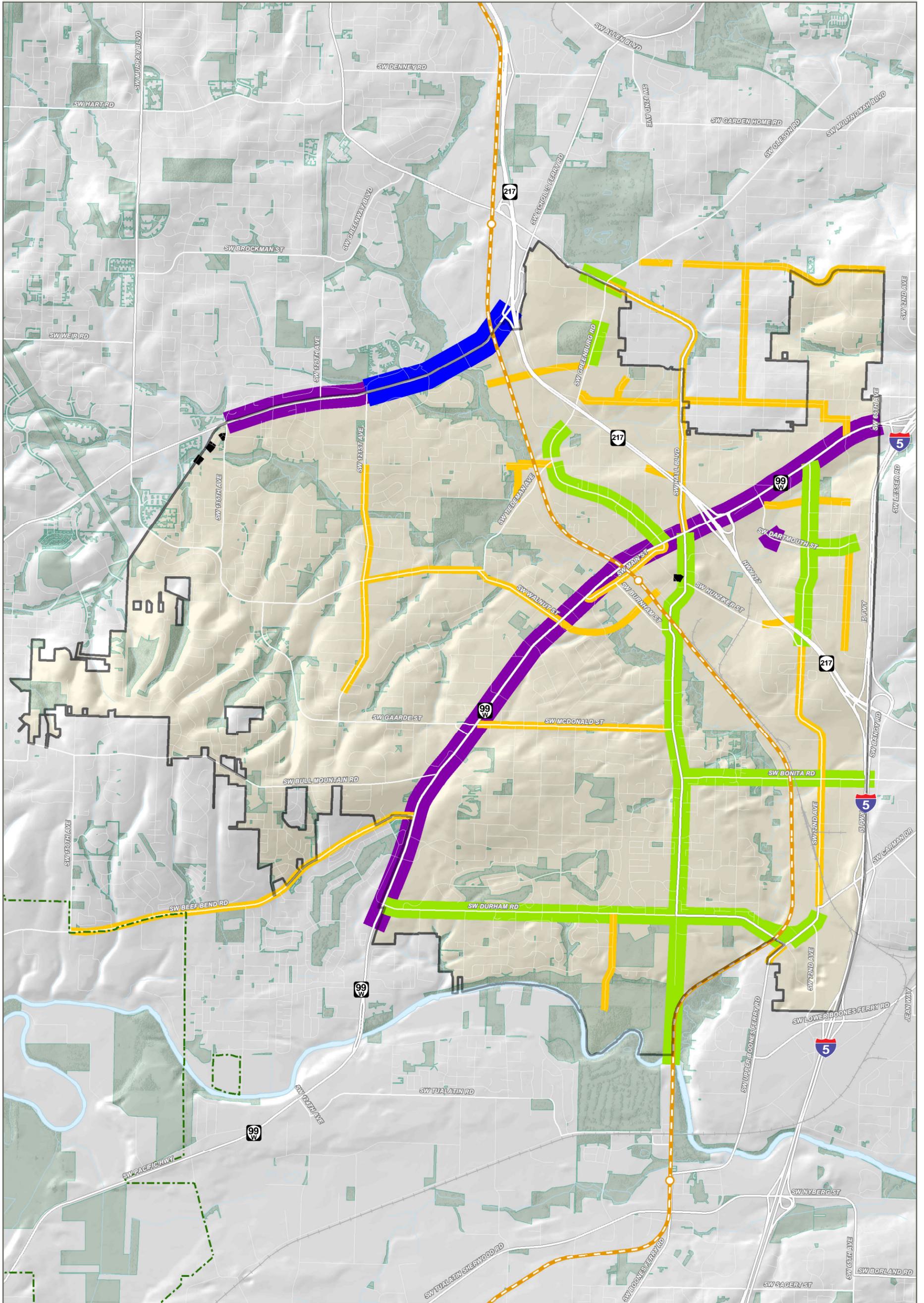
**Fig. 6: City of Tigard - Transportation - Forecast Travel Demand Growth 2005-2035**



<b>Traffic Growth - Weekday PM Peak</b>		Tigard City Limits	Parks
Decrease in Growth	1001 - 2500	Commuter Rail	Urban Growth Boundary
0 to 500	Over 2500	Railroads	
501 - 1000		Streams	
		Rivers and Water Bodies	



**Fig. 8: City of Tigard - Transportation - Right-of-Way Needs**



**Roadway Cross-Section**

- 2 to 3 Lanes
- 4 to 5 Lanes
- 5 Lanes + Aux. Lanes
- 7 Lanes

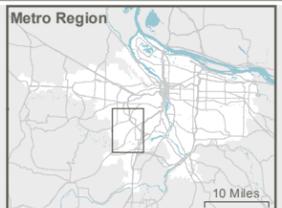
**Tigard City Limits**

- Tigard City Limits
- Commuter Rail
- Railroads
- Streams
- Rivers and Water Bodies

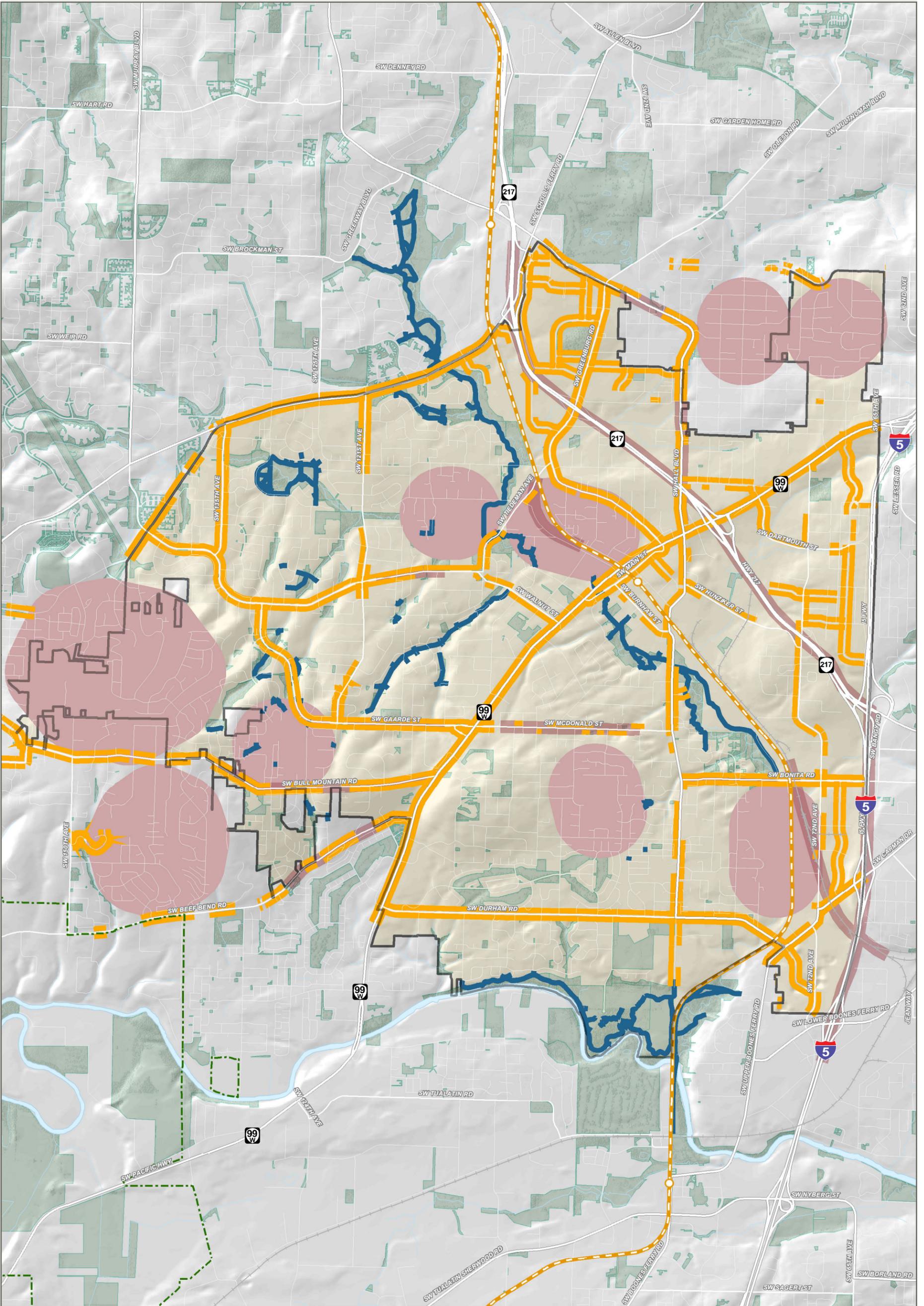
**Parks**

- Urban Growth Boundary

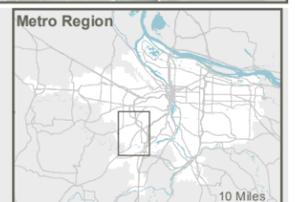
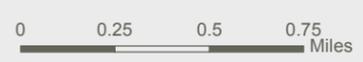
0 0.25 0.5 0.75 Miles



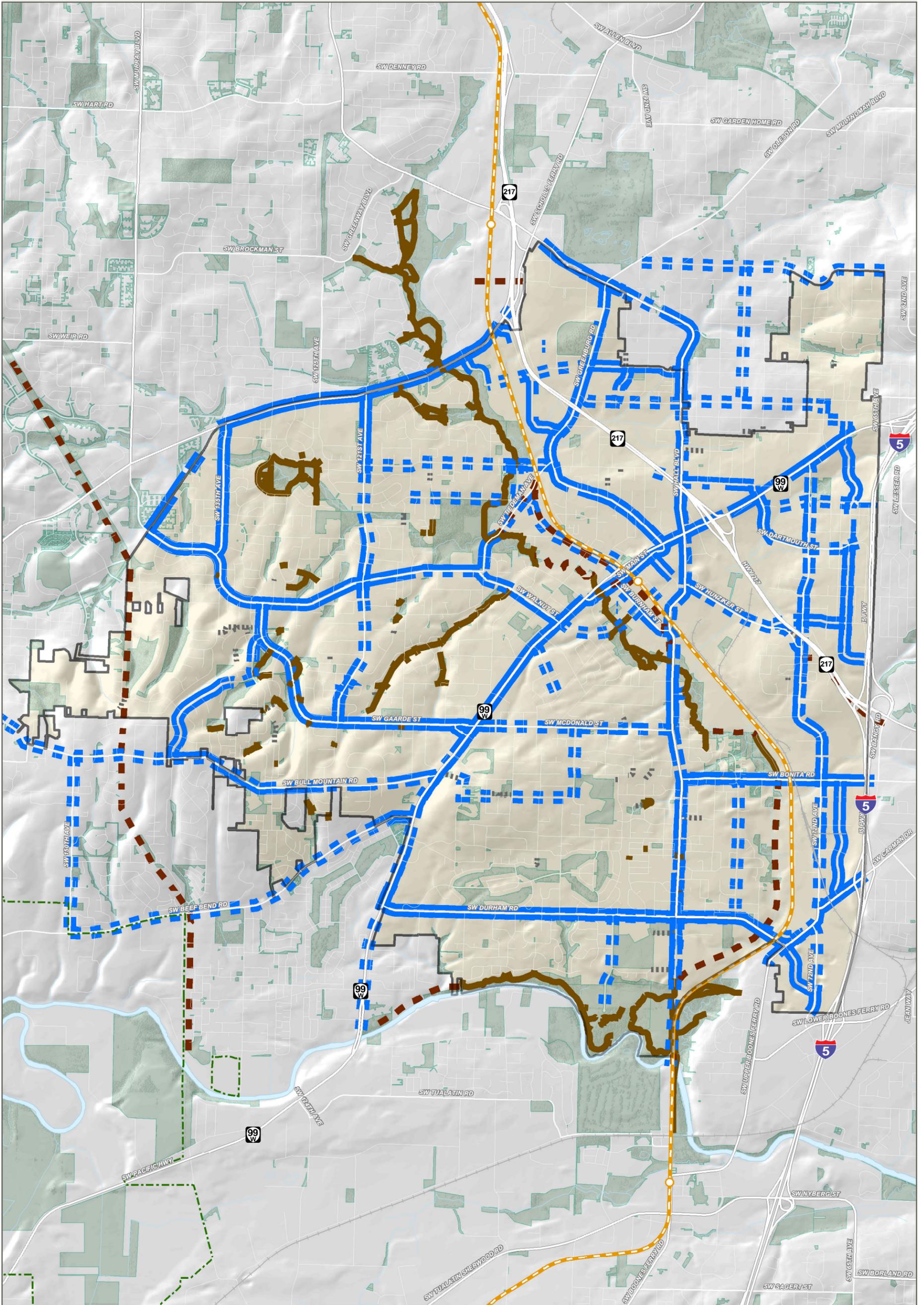
**Fig. 9: City of Tigard - Transportation - Pedestrian Facilities and Deficiencies**



<b>Pedestrian Facilities (Arterial/Corridor)</b>	Tigard City Limits	Parks
Sidewalks	Commuter Rail	Urban Growth Boundary
Off-Street Trails	Railroads	North Arrow
<b>Pedestrian Deficiencies</b>	Crossing Issues	Connectivity Issues
	Rivers and Water Bodies	

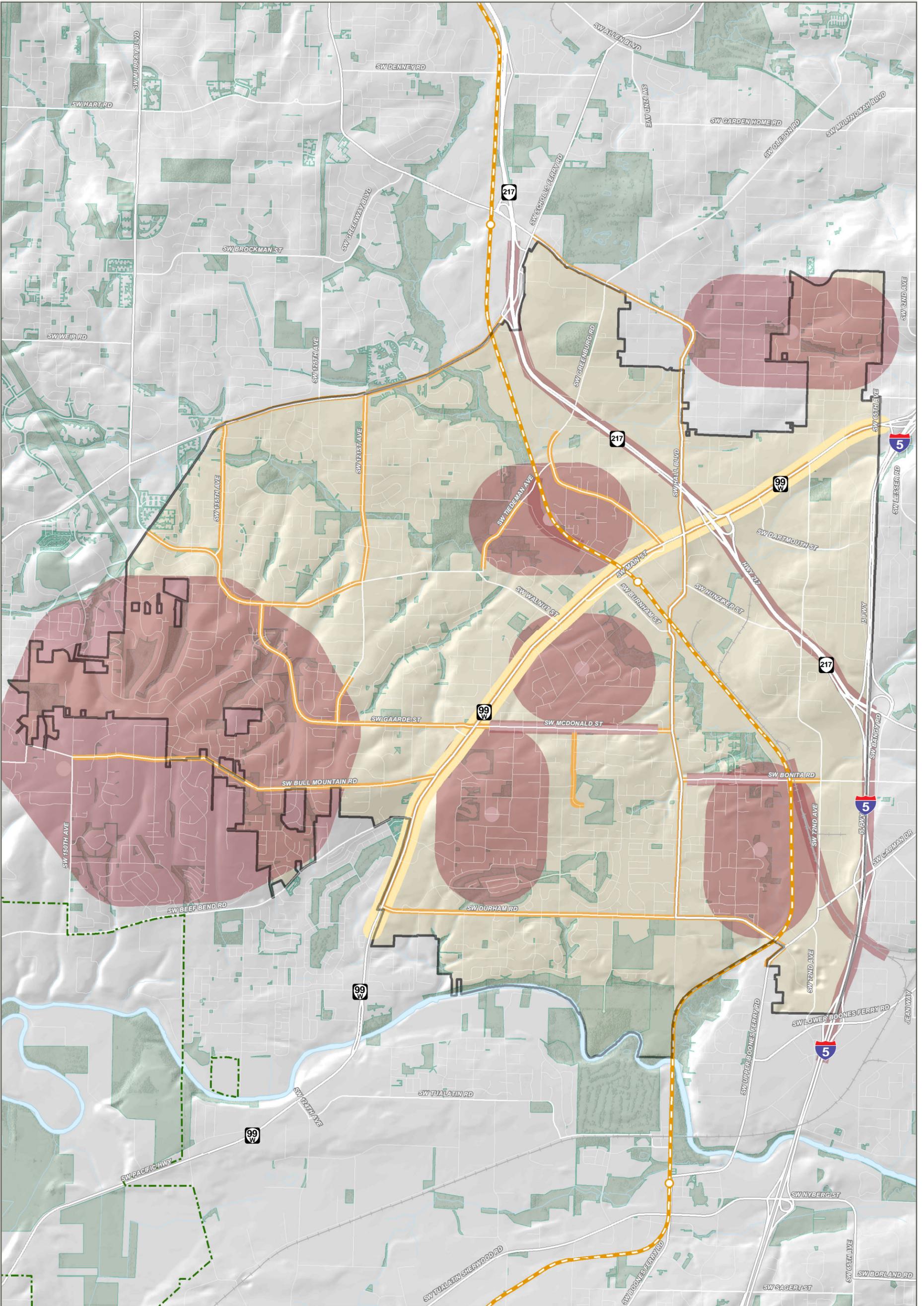


**Fig. 10: City of Tigard - Transportation - Planned Pedestrian Facilities**



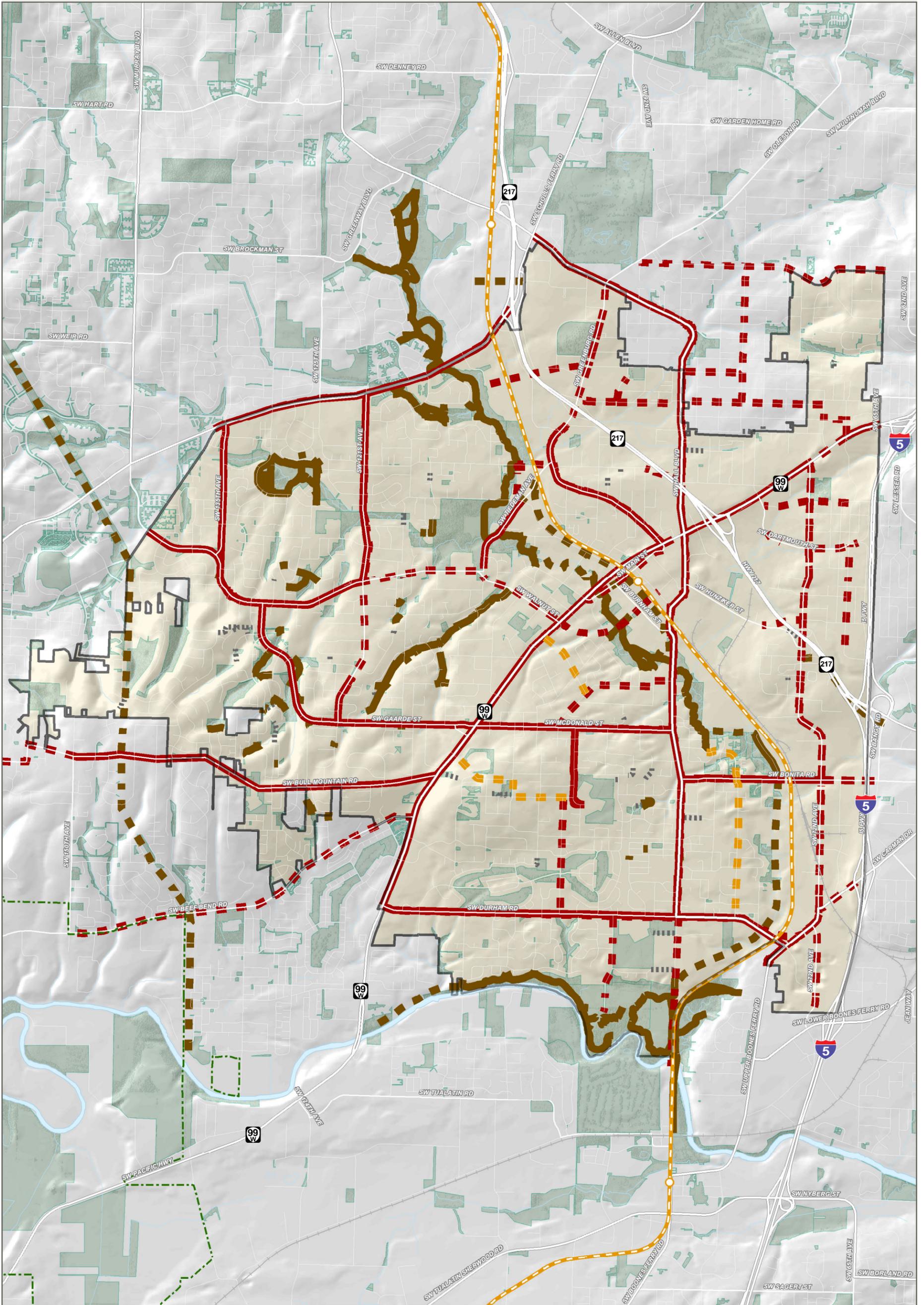
<b>Existing Facilities</b>	<b>Future Facilities</b>	Tigard City Limits	Parks
Sidewalk	Sidewalk	Commuter Rail	Urban Growth Boundary
Multi-Use Path	Multi-Use Path	Railroads	North
Neighborhood Path		Streams	Metro Region
		Rivers and Water Bodies	0 0.25 0.5 0.75 Miles

**Fig. 11: City of Tigard - Transportation - Bicycle Facilities and Deficiencies**



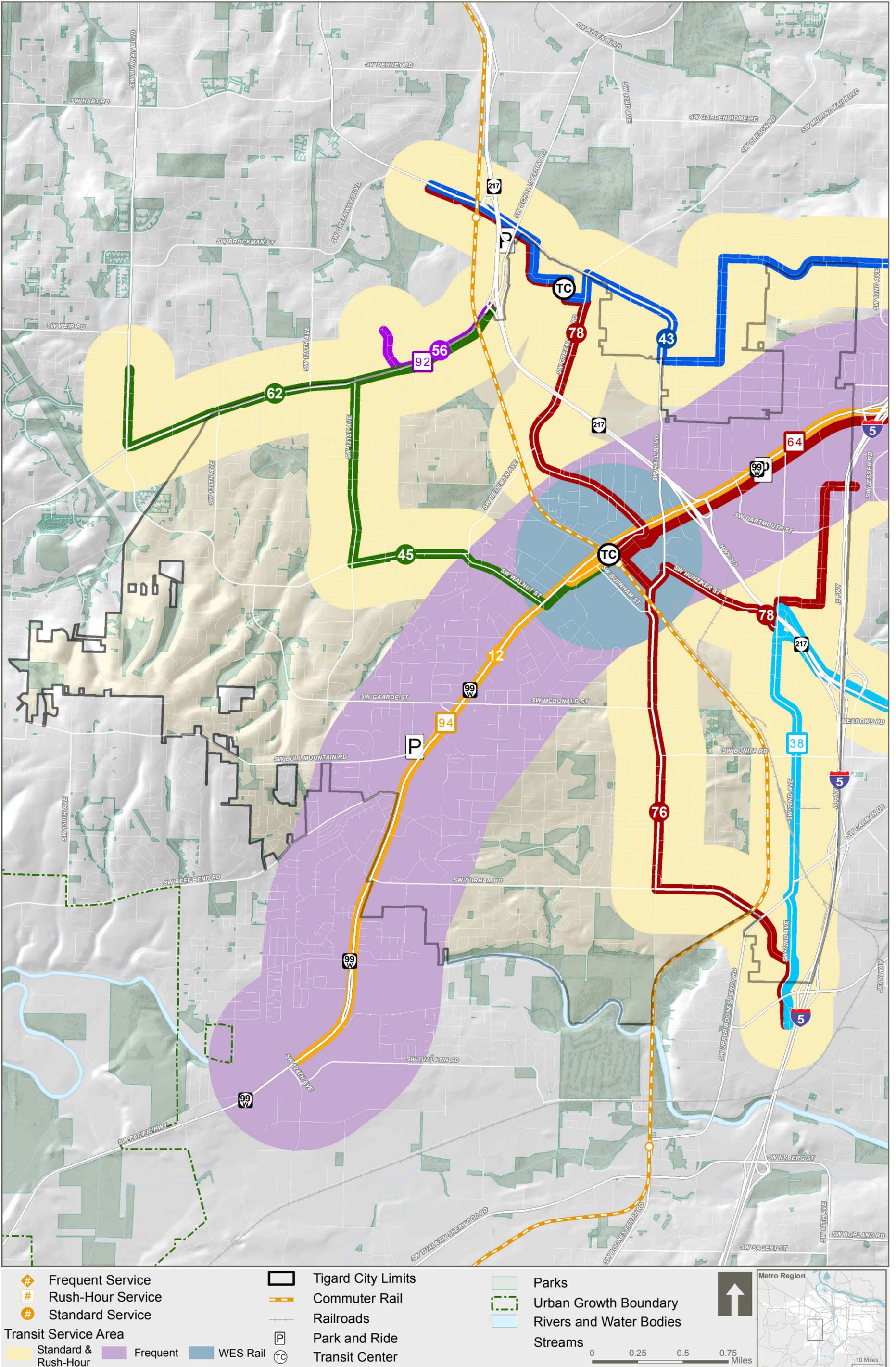
<b>Bicycle Facilities (Arterial/Collector)</b>	Tigard City Limits	Parks
Sidewalks	Commuter Rail	Urban Growth Boundary
Off-Street Trails	Railroads	
<b>Bicycle Deficiencies</b>	Streams	0 0.25 0.5 0.75 Miles
Crossing Issues	Rivers and Water Bodies	Metro Region
Uncomfortable Facility		10 Miles
Connectivity Issues		

**Fig. 12: City of Tigard - Transportation - Planned Bicycle Facilities**

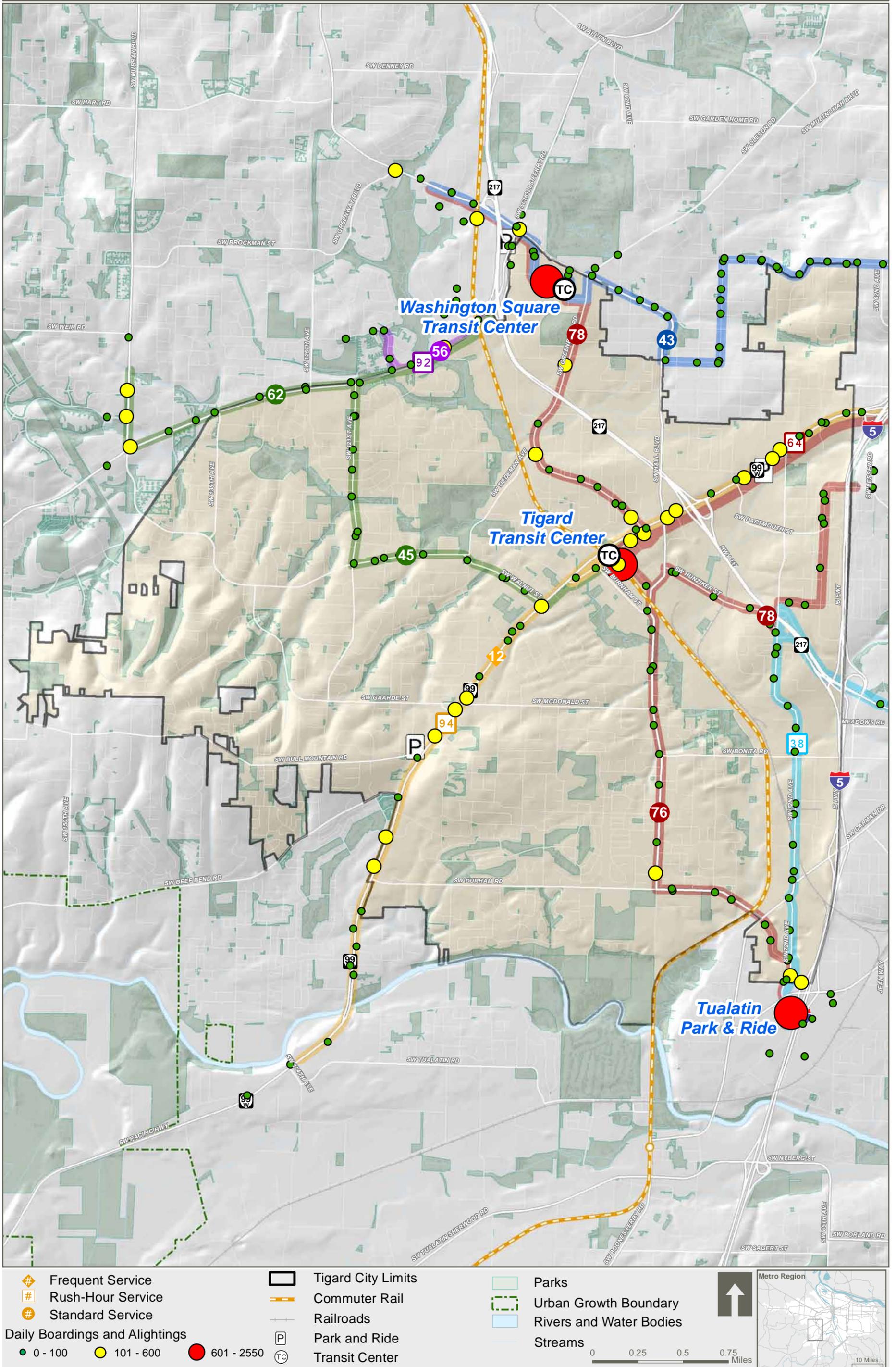


<b>Existing Facilities</b>	<b>Future Facilities</b>	Tigard City Limits	Parks
Bike Lane	Bike Lane	Commuter Rail	Urban Growth Boundary
Multi-Use Path	Bike Boulevard	Railroads	
	Multi-Use Path	Streams	
	Neighborhood Path	Rivers and Water Bodies	

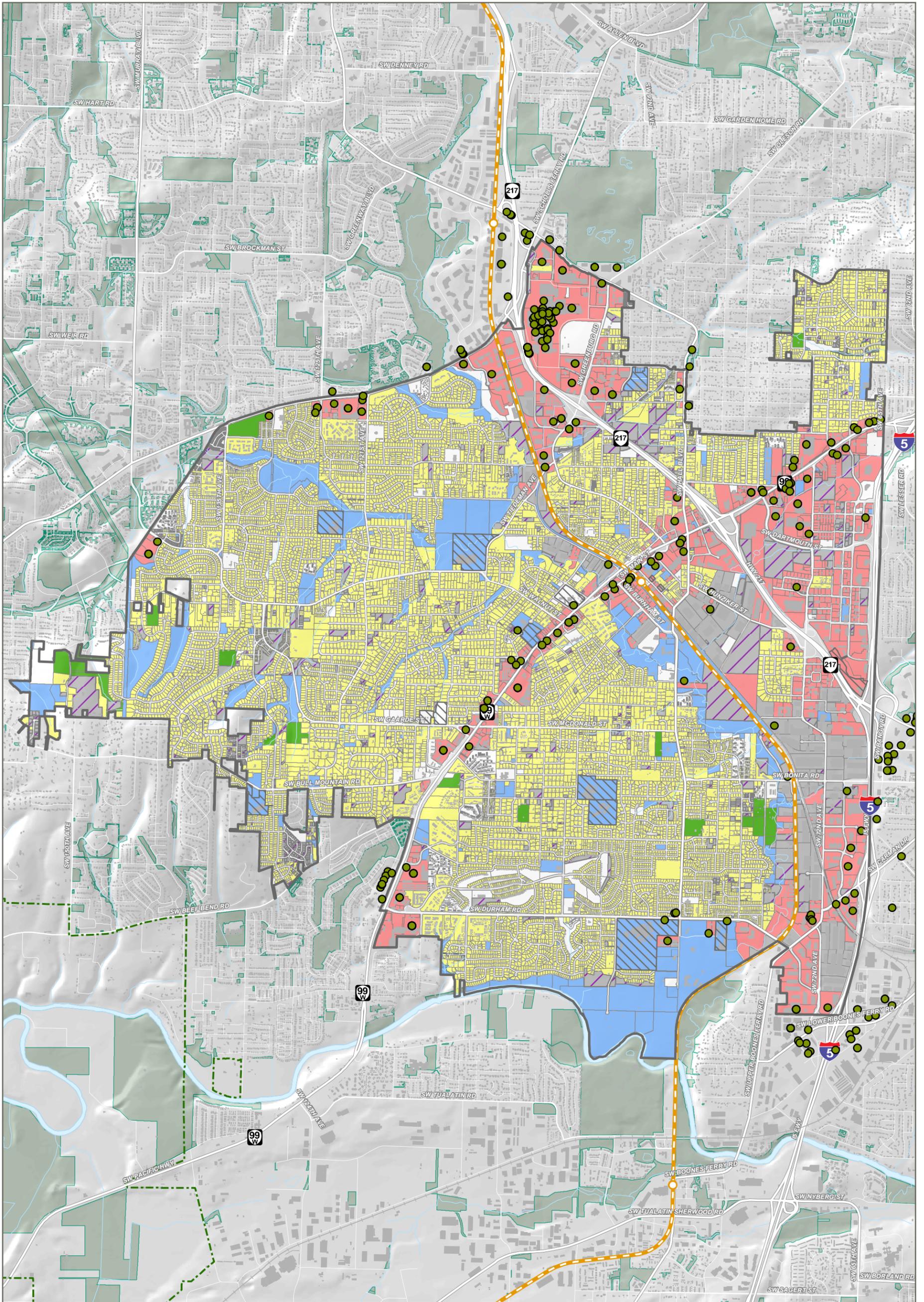
**Fig. 13: City of Tigard - Transportation - 2009 Transit Routes**



**Fig. 14: City of Tigard - Transportation - 2009 Daily Transit Boardings and Alightings**



**Figure 1-1: City of Tigard - Land Use - Existing**



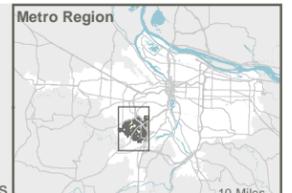
**Existing Land Uses**

- Commercial
- Industrial
- Other
- Residential
- Open Space
- Public/Institutional
- Vacant

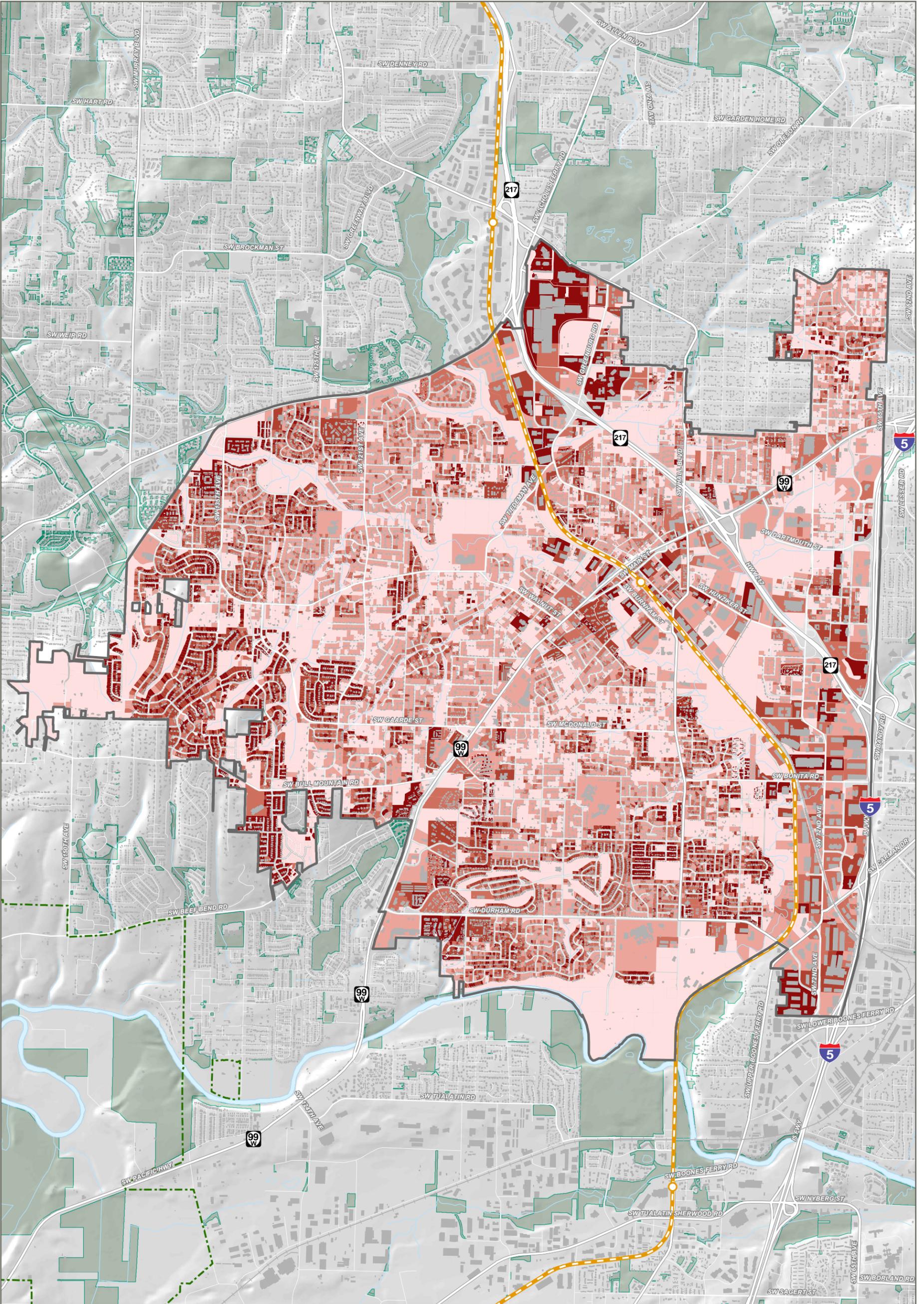
- Tigard City Limits
- Commuter Rail
- Railroads
- Streams
- Rivers and Water Bodies

- Parks
- Urban Growth Boundary
- Building Footprints
- ULI Amenities
- Schools

0 0.25 0.5 0.75 1 Miles



**Figure 1-2: City of Tigard - Land Use - Floor Area Ratios**



**Floor Area Ratios (FAR)**

	0.0 - .15		.45 - .60
	.15 - .30		.60+
	.30 - .45		

Tigard City Limits

Commuter Rail

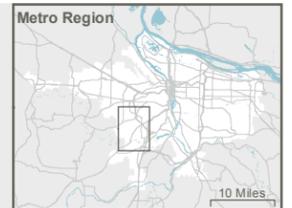
Railroads

Streams

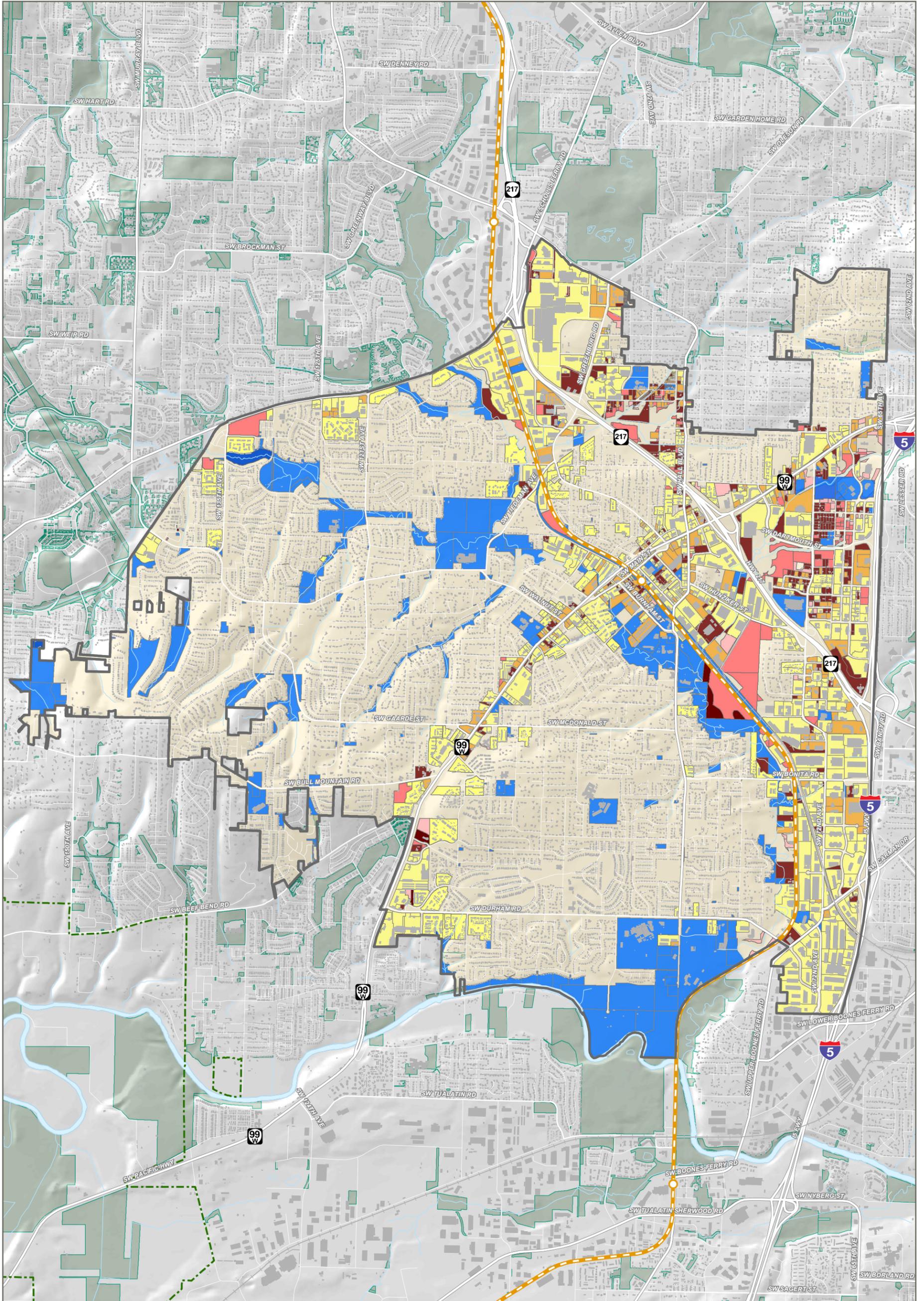
Rivers and Water Bodies

Parks

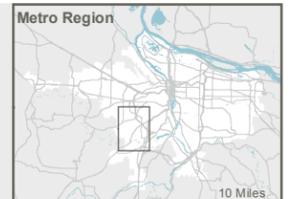
Urban Growth Boundary



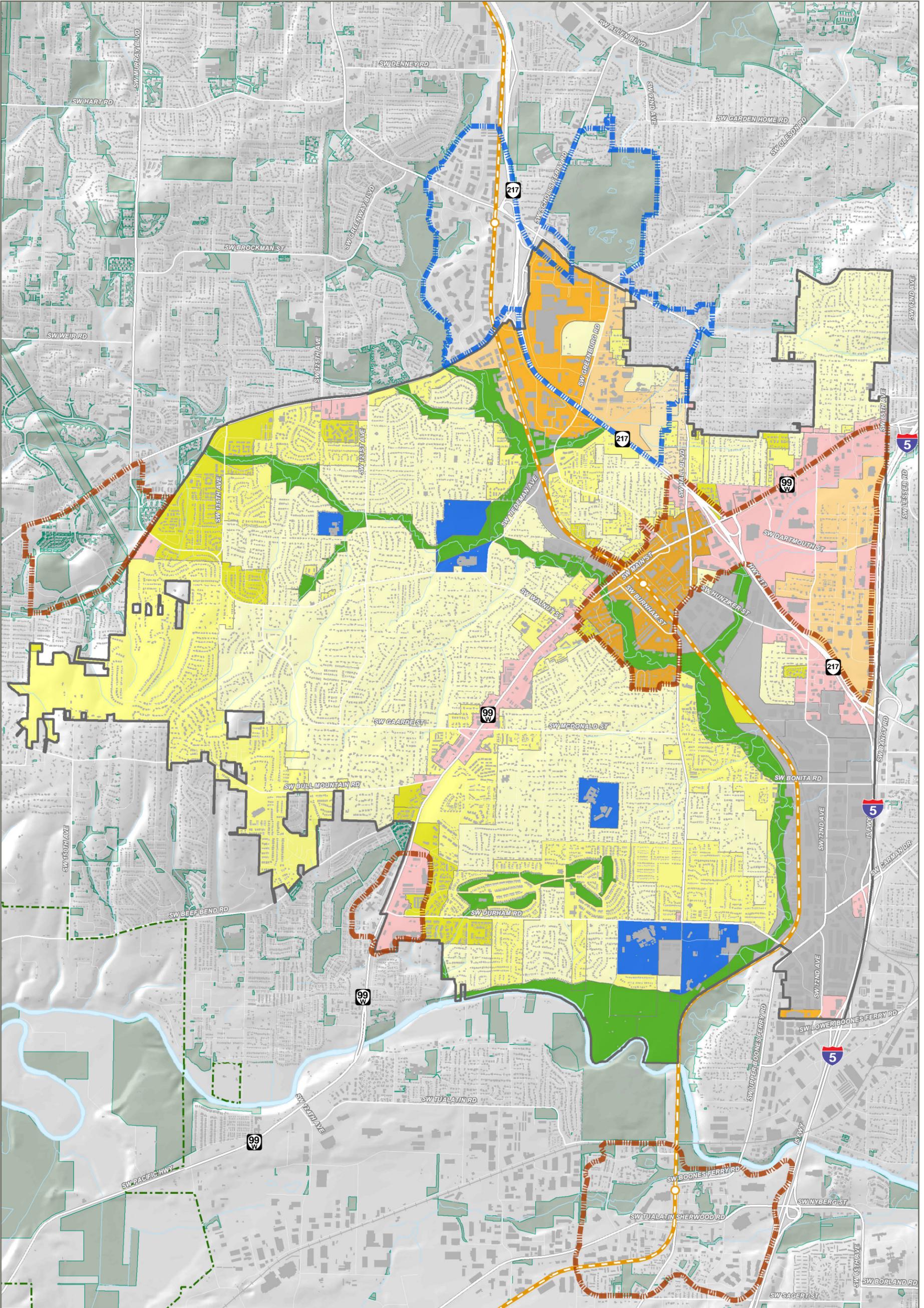
**Figure 1-3: City of Tigard - Land Use - Buildable Land Analysis**



<b>Redevelopment Potential</b>	<b>Government-Owned Land and Special Tax Status</b>	<b>Tigard City Limits</b>	<b>Parks</b>
High	<b>Buildable Land Inventory</b>	<b>Commuter Rail</b>	<b>Urban Growth Boundary</b>
Medium	Fully Vacant	<b>Railroads</b>	
Low	Partially Vacant	<b>Streams</b>	
		<b>Rivers and Water Bodies</b>	



**Figure 1-4: City of Tigard - Land Use - Comprehensive Plan**



**Comprehensive Plan Designations**

- |  |   |  |
|--|---|--|
| <span style="display:inline-block; width:15px; height:15px; background-color: #f08080; border:1px solid black;"></span> Commercial                 | <span style="display:inline-block; width:15px; height:15px; background-color: #ffa500; border:1px solid black;"></span> Mixed Use - Central Business District | <span style="display:inline-block; width:15px; height:15px; background-color: #cccccc; border:1px solid black;"></span> Industrial       |
| <span style="display:inline-block; width:15px; height:15px; background-color: #ffff00; border:1px solid black;"></span> High Density Residential   | <span style="display:inline-block; width:15px; height:15px; background-color: #ffcc99; border:1px solid black;"></span> Mixed Use Commercial                  | <span style="display:inline-block; width:15px; height:15px; background-color: #90ee90; border:1px solid black;"></span> Parks/Open Space |
| <span style="display:inline-block; width:15px; height:15px; background-color: #ffffcc; border:1px solid black;"></span> Medium Density Residential | <span style="display:inline-block; width:15px; height:15px; background-color: #ffcc99; border:1px solid black;"></span> Mixed Use Employment                  |  |
| <span style="display:inline-block; width:15px; height:15px; background-color: #ffffcc; border:1px solid black;"></span> Low Density Residential    | <span style="display:inline-block; width:15px; height:15px; background-color: #ffcc99; border:1px solid black;"></span> Mixed Use Residential                 |  |

- Tigard City Limits
- Regional Center
- Town Center
- Commuter Rail
- Railroads

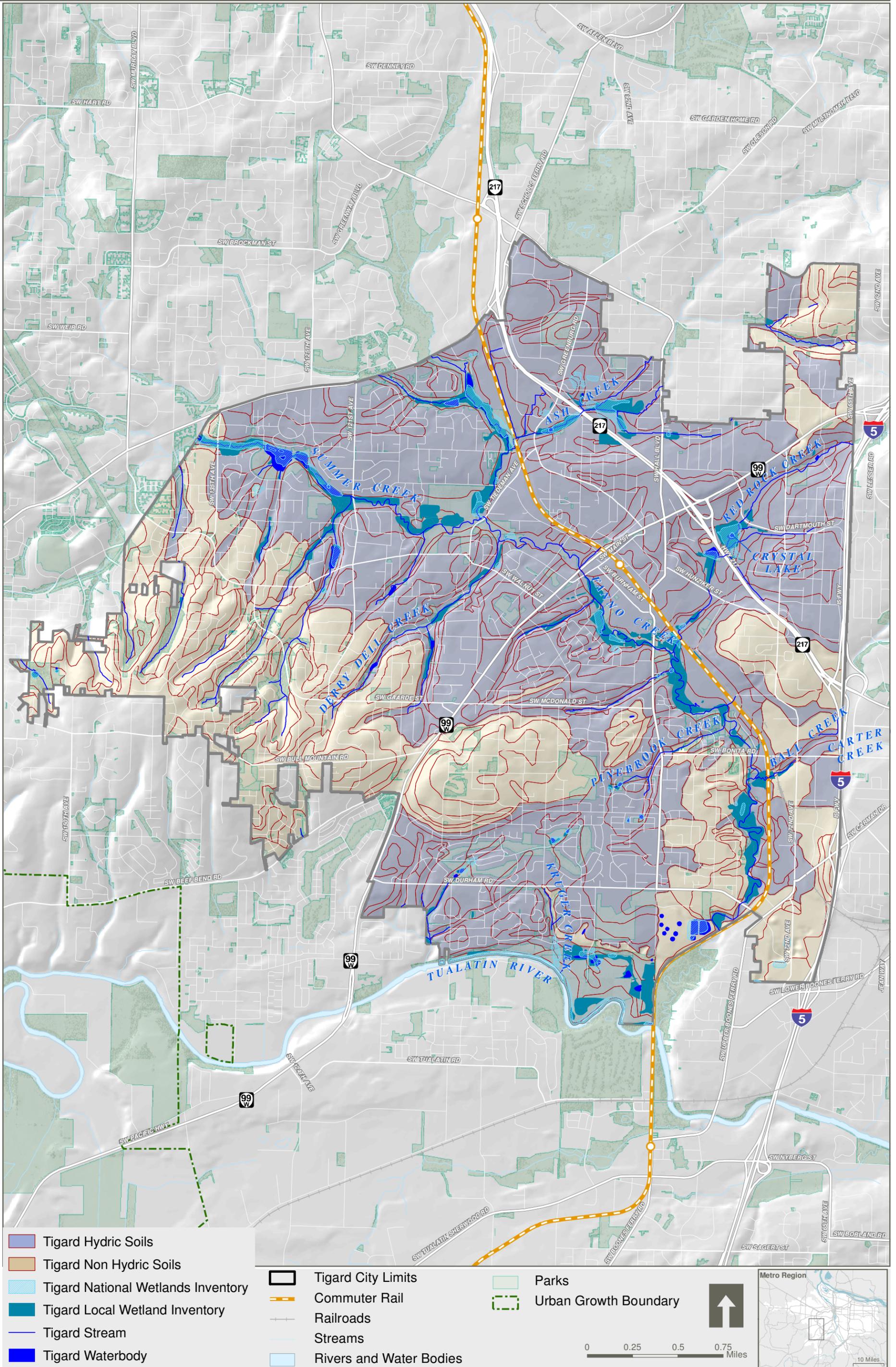
- Urban Growth Boundary
- Rivers and Water Bodies
- Parks
- Streams

Metro Region

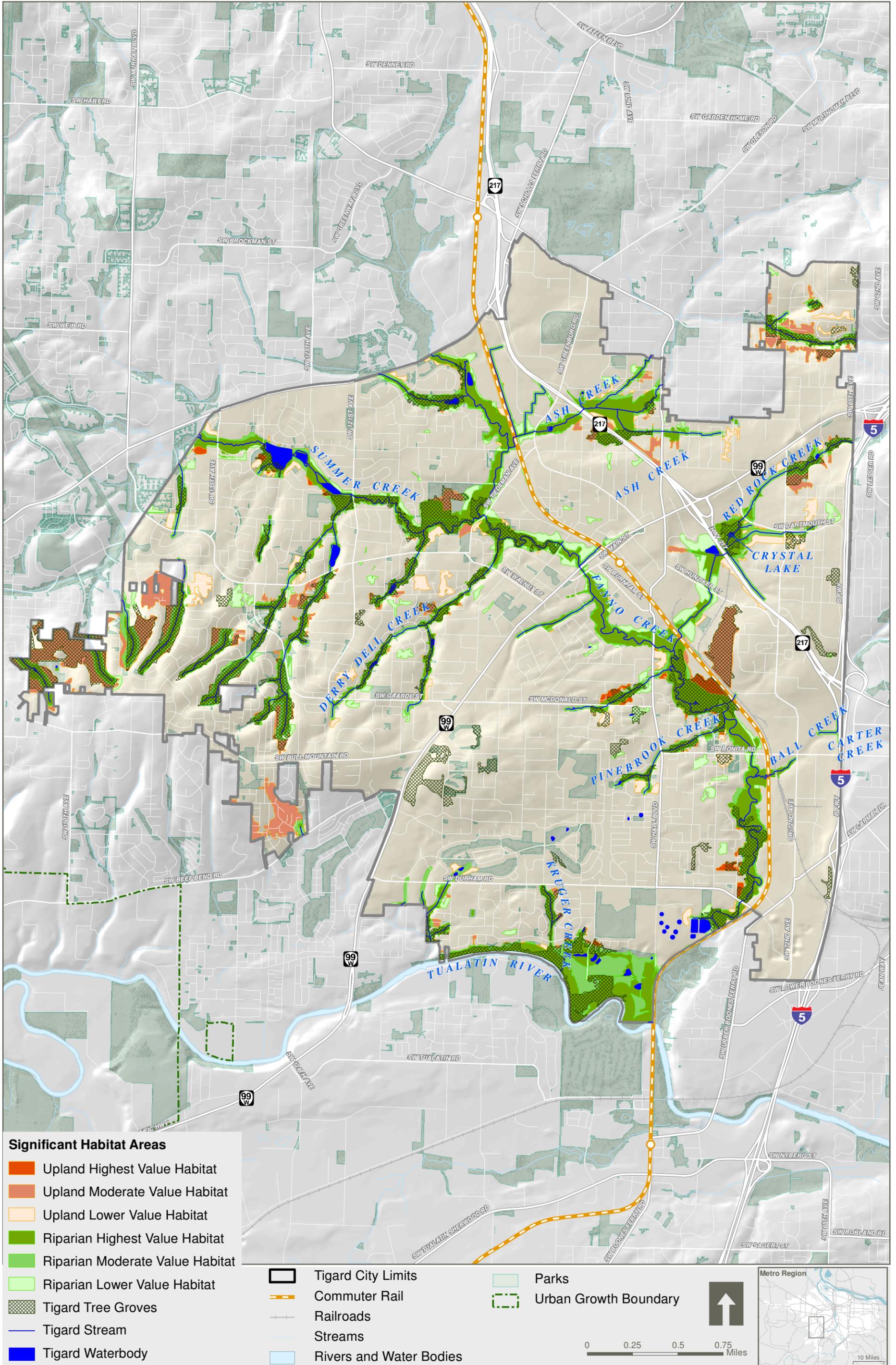
0 0.25 0.5 Miles

10 Miles

# Exhibit 1-1 City of Tigard - Soils and Wetland Areas



# Exhibit 1-2 City of Tigard - Significant Habitat Areas

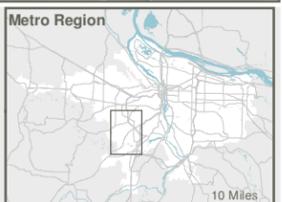


## Significant Habitat Areas

- Upland Highest Value Habitat
- Upland Moderate Value Habitat
- Upland Lower Value Habitat
- Riparian Highest Value Habitat
- Riparian Moderate Value Habitat
- Riparian Lower Value Habitat
- Tigard Tree Groves
- Tigard Waterbody

- Tigard City Limits
- Commuter Rail
- Railroads
- Streams
- Rivers and Water Bodies

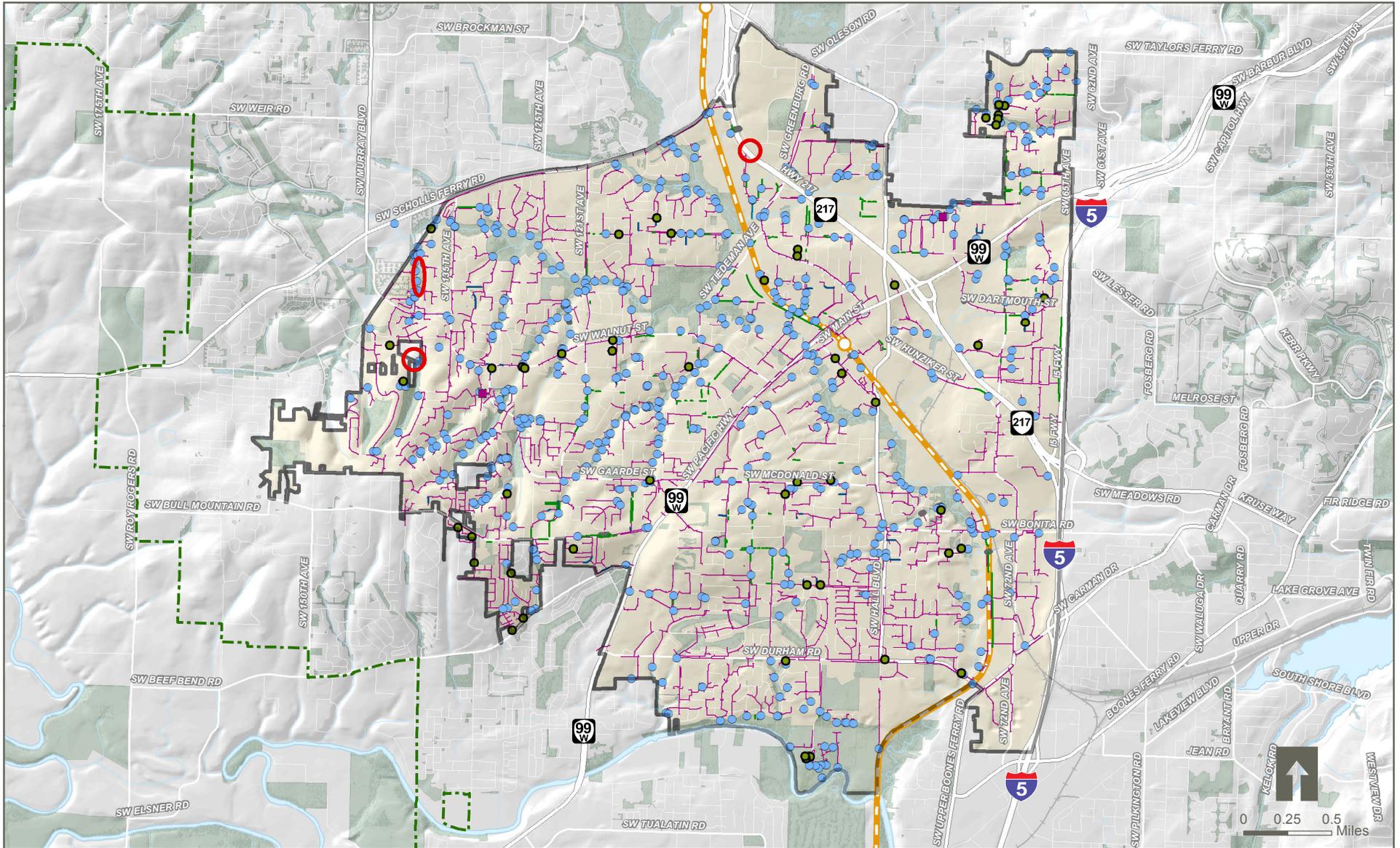
- Parks
- Urban Growth Boundary



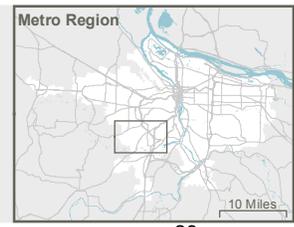




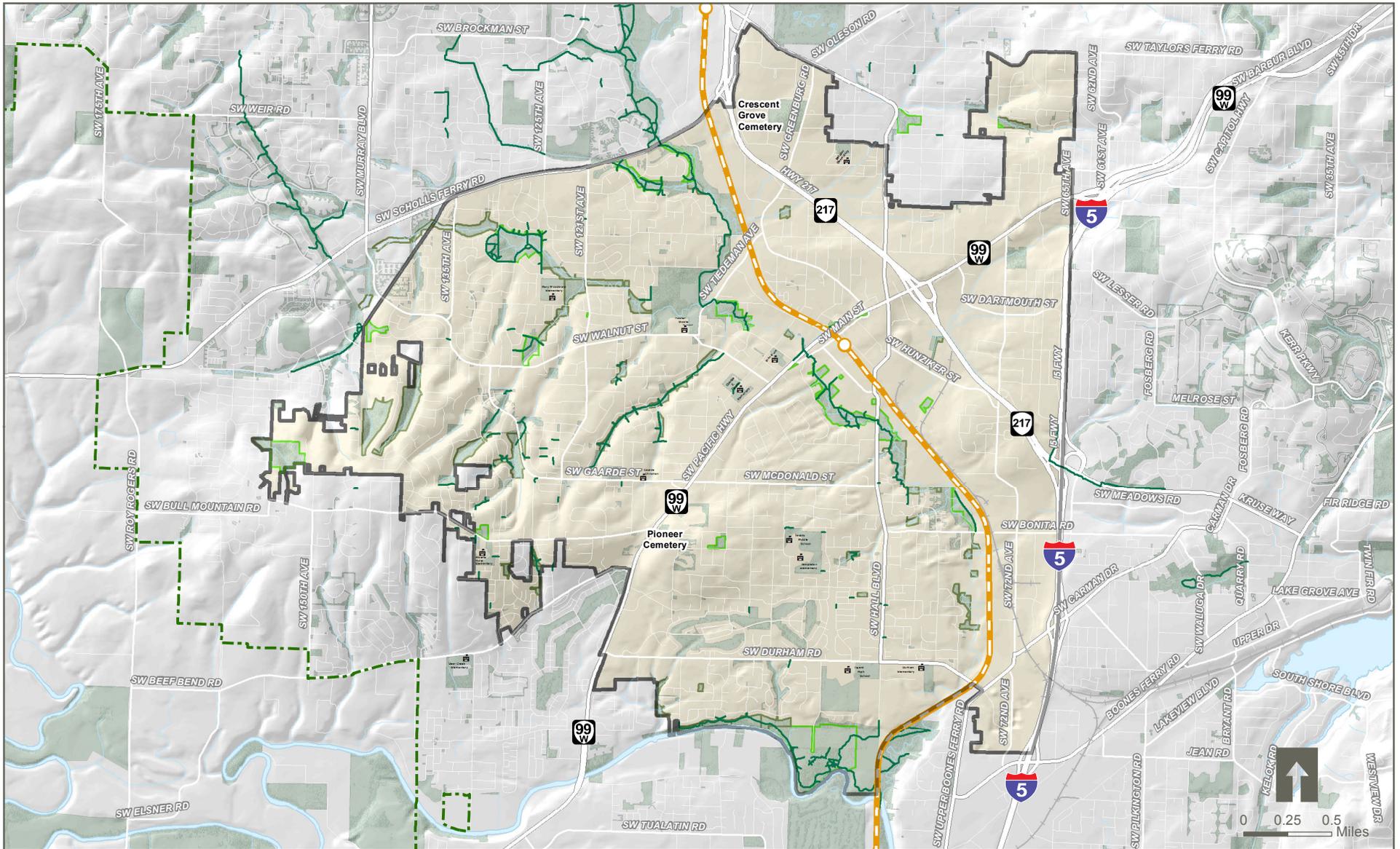
# Figure 3. City of Tigard Stormwater System



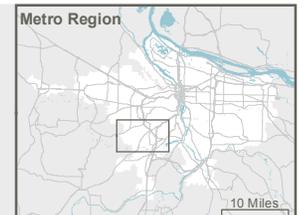
- Storm Water Mains
- Channel
- Culvert
- Detention Pipe
- Swale
- Vault
- Detention Tank
- Storm Water Outfalls
- Water Quality Pond
- Urban growth boundary
- Commuter rail
- Railroads
- Streams
- Rivers and water bodies
- Open Space
- Tigard city limits
- Known flooding issues in addition to typical stream floodplain storage



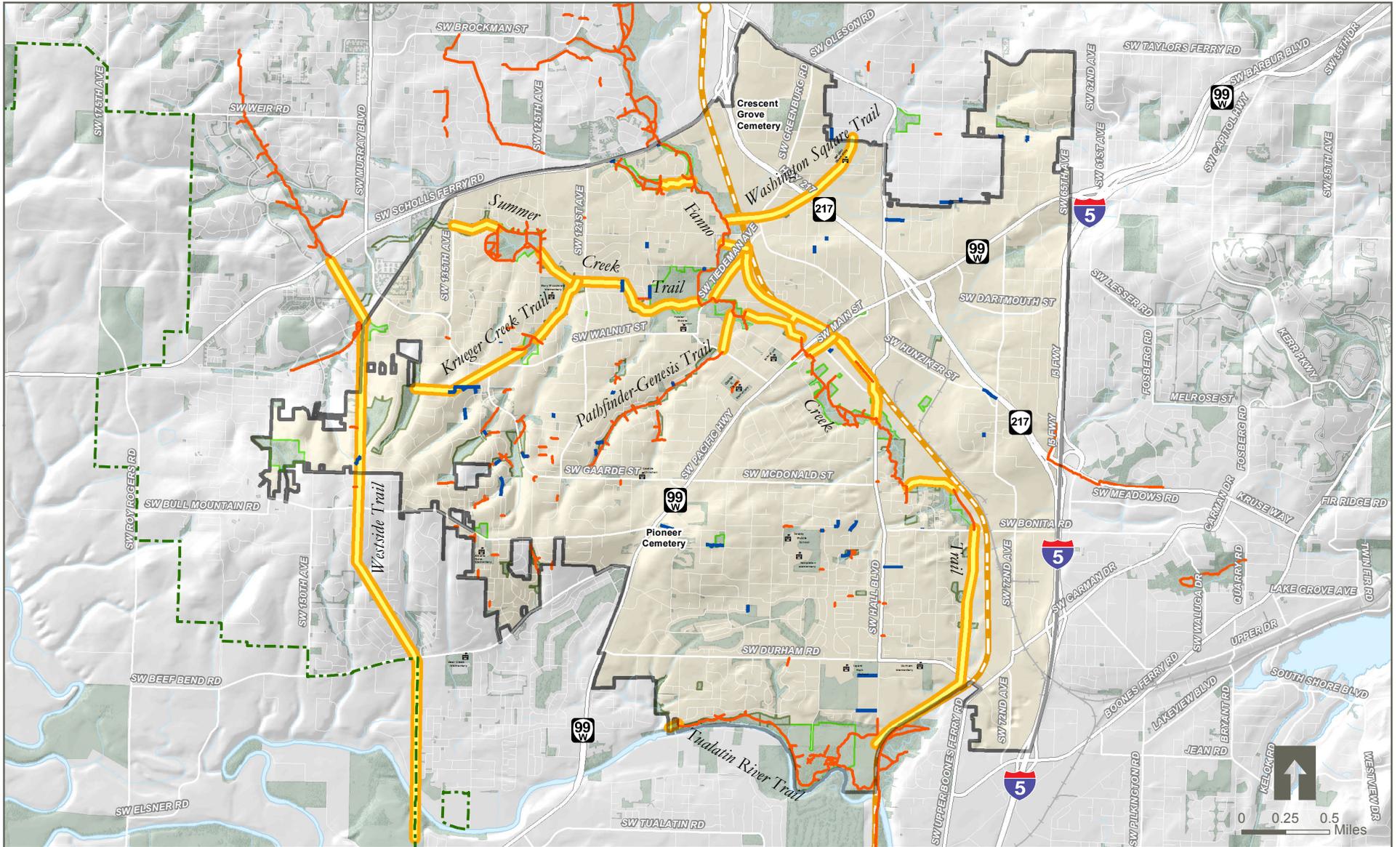
# Figure 4. City of Tigard Parks and Greenspaces



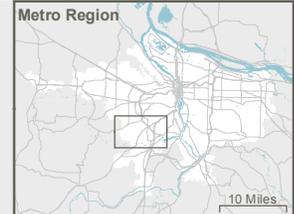
- |                                       |                         |                       |
|---------------------------------------|-------------------------|-----------------------|
| <b>Tigard Parks &amp; Greenspaces</b> | Commuter rail           | Open Space            |
| City Owned Greenspace                 | Railroads               | Urban growth boundary |
| City Owned Park                       | Streams                 |                       |
| Trails                                | Rivers and water bodies |                       |
| School                                |                         |                       |
| Tigard city limits                    |                         |                       |



# Figure 5. City of Tigard Existing and Planned Trail System



- |                             |                                       |                    |
|-----------------------------|---------------------------------------|--------------------|
| Urban growth boundary       | Commuter rail                         | Open Space         |
| School                      | Railroads                             | Tigard city limits |
| Future Neighborhood Pathway | Streams                               |                    |
| Existing Trail              | Rivers and water bodies               |                    |
| Trail Opportunity           |                                       |                    |
|                             | <b>Tigard Parks &amp; Greenspaces</b> |                    |
|                             | City Owned Greenspace                 |                    |
|                             | City Owned Park                       |                    |



## **APPENDICES: TIGARD HCT CORRIDOR LAND USE PLAN**

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- I. Policy
- II. Land Use and Buildable Lands Analysis
- III. Market Assessment Report
- IV. Natural Resource Inventory
- V. Infrastructure: Parks, Water and Sanitary Sewer, and Stormwater Infrastructure Needs
- VI. Existing Condition and Future No-build Transportation Analysis