

Technical Memorandum

May 10, 2023

Project# 23021.043

To: Marlee Boxler
City of Troutdale
219 E Historic Columbia River Highway
Troutdale, OR 97060

From: Matt Bell, Polina Polikakhina, and Darren Hippenstiel, Kittelson & Associates, Inc.

CC: Lewis Kelley, Oregon Department of Transportation

RE: Main Streets on Halsey Cross Section and Street Design Plan

CROSS SECTION DEFICIENCIES AND NEEDS

This memorandum includes a review of street design standards and identifies deficiencies and needs to support a main street environment along NE Halsey Street that encourages pedestrian and bike travel, slows traffic and increases safety, supports storefront business activity, and allows for implementation of the streetscape design. This memorandum includes a summary of current Multnomah County design standards; current design standards of the three cities (Fairview, Wood Village, and Troutdale) applicable to NE Halsey Street; a summary of existing conditions in the right-of-way; a summary of community input on transportation issues along Halsey Street provided through past planning efforts; recommendations from Main Streets on Halsey Plan and subsequent implementation efforts; key issues to consider in revising the cross section. NE Halsey Street Cross Sections design objectives.

Street Design Standards

NE Halsey Street is a Multnomah County facility. Therefore, Multnomah County is responsible for determining its functional classification and defining its major design elements and multimodal features. Multnomah County coordinates with the three cities to ensure that the roadway is planned, operated, maintained, and improved to safely meet public needs. This section summarizes the street design standards of Multnomah County and the three cities that apply to NE Halsey Street.

Multnomah County

NE Halsey Street is classified as an arterial in the Multnomah County Transportation System Plan (Multnomah County TSP – Reference 1) and is further classified as a minor arterial in the Multnomah County Functional Classification of Trafficways, Findings and Recommendations Technical Report (Reference 2). As a minor arterial, the three cities should work with Multnomah County to establish a community boulevard overlay along NE Halsey Street, which would allow greater flexibility in the design of the roadway.

The Multnomah County Design and Construction Manual (manual – Reference 3) provides engineering standards and specifications to be followed in the design and construction of new and improved roadways in Multnomah County. Section 2 of the manual includes a set of typical cross sections for roadways of different functional classification, based on right-of-way availability, the degree of integration of pedestrian, bicycle, and transit modes, and relative placement of different facilities within the right-of-way. The following summarizes the cross sections standards from Section 2 of the manual.

Cross Section Standards

Section 2.2.1 of the manual presents the cross section standards for new or reconstructed Multnomah County facilities within the urban growth boundaries of the incorporated cities, as well as facilities in the rural portion of the County. The standards include minimum, preferred, and maximum cross section widths for each functional classification. Per section 2.2.1, the preferred cross section for a minor arterial includes three to five travel lanes with on-street bike lanes and sidewalks with planting strips on both sides of the roadway. Parking may be allowed beyond the preferred cross section in fully developed areas, such as central business districts and regional centers. Figure 1 illustrates the urban arterial cross section from Section 2.2.1 of the manual that specifies minimum, preferred, and maximum widths for each element of the roadway cross section. Table 1 presents the lane width values for Figure 1.

Figure 1: Urban Arterial Cross Section (Multnomah County Design and Construction Manual)

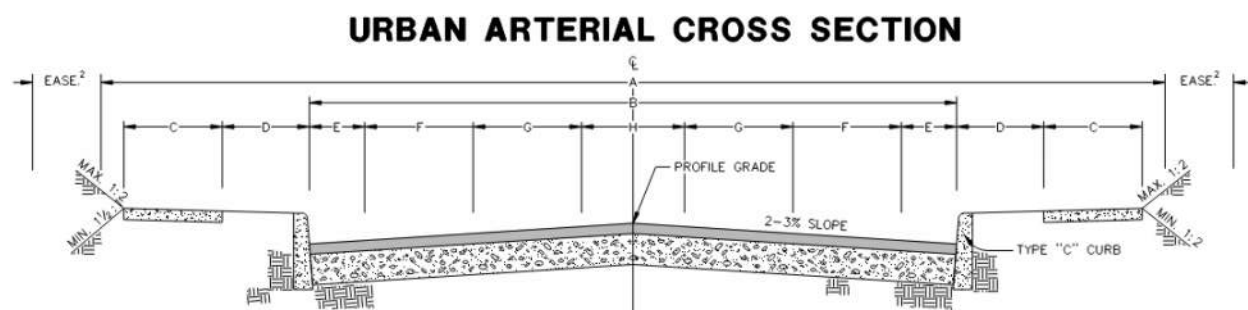


Table 1: Multnomah County Design and Construction Manual Standards in Feet (for minor arterial)

Criteria	Minimum	maximum	Preferred
A. Right-of-Way (feet)	80	105	90
B. Paved Width (feet)	43	73	45
Number of Lanes	3	5	3
C. Sidewalk (feet)	5	8	6
D. Planting Strip (feet)	0	8	6
E. Bike Lane (feet)	5	6	6
F. Curb Travel Lane (feet)	11	12	11
G. Travel Lane(s) (feet)	11	12	11
H. Median or Center Turn Lane (feet)	12	14	12

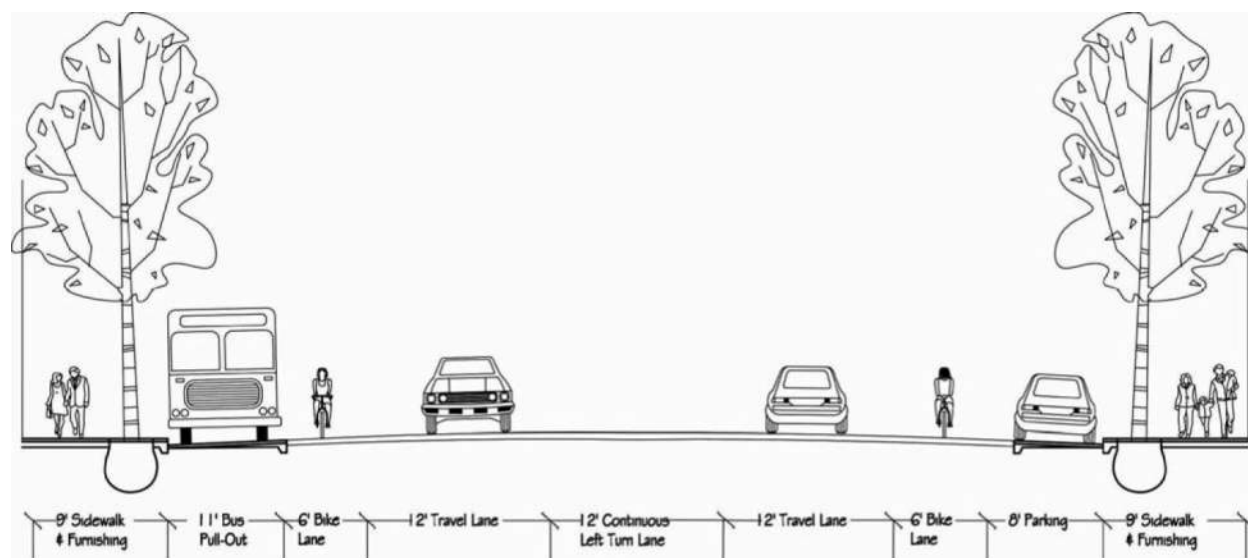
As shown in Figure 1, the preferred cross section for a minor arterial, such as NE Halsey Street, is a three-lane facility with a median or center turn lane and two travel lanes with bike lanes, sidewalks, and planting strips on both sides of the roadway. Per section 2.2.2, sidewalks should be detached from the curb on all urban street cross sections, and in fully developed areas such as central business districts and regional centers, the sidewalks may be extended into the planting strip with tree wells within the sidewalks.

Section 2.2.4 of the manual provides the criteria for the placement of non-traversable medians versus center left turn lanes. Per Section 2.2.4, non-traversable medians shall be used where the design speed is 70 km/h (~45 mph) or higher, and continuous two-way left-turn lanes may be considered where the design speed, or 85th percentile speed, is 65 km/h (~40 mph) or less or in fully developed areas. Non-traversable medians should be considered on existing two-lane roadways where average daily traffic exceeds 28,000 vehicles per day or in locations where high crash rates may be corrected by a non-traversable median.

Three Cities (Fairview, Wood Village, Troutdale)

The Transportation System Plans (TSP's) of the three cities (Fairview, Wood Village, and Troutdale) do not provide street design standards for arterial roadways. All three cities defer to Multnomah County design standards, which are outlined above. However, the Wood Village TSP includes a cross section for NE Halsey Street from the 2005 Halsey Street Conceptual Design Project. The cross section is generally consistent with Multnomah County's standard cross section; however, it identifies additional elements, such as bus pull-outs and pedestrian refuge islands, and it identifies wider travel lanes and narrower sidewalks. Figure 2 illustrates the NE Halsey Street cross section from the 2005 Halsey Street Conceptual Design Project.

Figure 2: NE Halsey Street Cross Section (2005 Halsey Street Conceptual Design Project)



Existing Conditions of the Right-of-Way

NE Halsey Street connects the three cities, provides access to their town centers, and connects residential neighborhoods to retail and commercial areas and other activity centers along the corridor. NE Halsey Street is also a gateway to the Columbia River Gorge and offers many of its own attractions that generate traffic. This section summarizes existing conditions along NE Halsey Street within the public right-of-way and identifies key issues to be considered in developing a preferred cross section for the project corridor. The information provided in this section is based on prior phases of the Main Streets on Halsey Plan as well as recent field observations and discussions with staff from Multnomah County and the three cities.

Natural Resources and Urban Design Elements

Several remnant natural resources and recreational opportunities along the project corridor provide residents and visitors connections to nature and outdoor activities. These include (listed from west to east):

- The east end of the Gresham Fairview Trail
- Sports fields at Reynolds Middle School
- Salish Pond City Trail crosses under Fairview Parkway and the power lines
- Fairview Creek has sections of open channel adjacent to the street, and crosses under west of 223rd
- Marilyn's Park, a pocket park on Fairview Creek
- A wetland just west of the Ukrainian Bible Church
- A strip of mature forest provides an informal trail connection from Halsey Street to Fairview Woods Wetland Park

- Donald L. Robertson Park has a playground, basketball, sports fields, and nature trails
- Arata Creek has sections of open channel adjacent to the street, and crosses under at 244th
- McMenamins Edgefield has open farmlands and woodlands adjacent to Halsey Street and hosts outdoor concerts, golf, food, drink and overnight accommodations

Halsey Street is enhanced by the following architectural landmarks and urban outdoor spaces:

- "The Fork", a large sculpture on the corner of 223rd and Halsey at the Fairview Food Plaza
- The Byway retail center at 238th and Halsey is marked by a tall wood tower, reminiscent of a fire lookout. It also features an open corner plaza around the tower. This commercial and residential development is one of the first to be completed under the Main Streets on Halsey vision.
- Troutdale Station Food Carts, accessed from 257th, a block north of Halsey
- The Troutdale gateway arch spans Halsey Street just east of the project corridor, marking the entry to downtown Troutdale

Figure 3 illustrates the location of natural resources and urban design elements along the project corridor.

Image 1: Arata Creek Crossing Under NE Halsey Street Near Donald L Robertson City Park



Image 2: Fairview Fork – The World's Largest Fork Near the Fairview Food Plaza



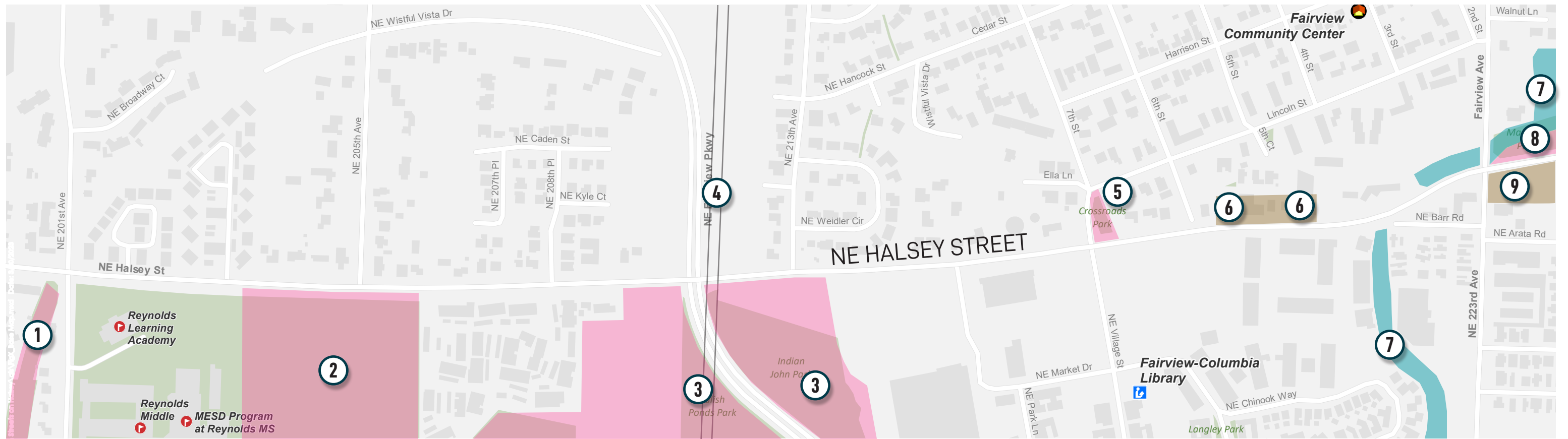
Roadway Characteristics

This section summarizes information on existing roadway characteristics, including motor vehicle, pedestrian, bicycle, and transit facilities, as well as intersection operations and traffic safety.

Motor Vehicle Facilities

NE Halsey Street has a three-lane cross section between NE 201st Avenue and NE 244th Avenue and between SW Edgefield Meadows Avenue (East) and SW 257th Drive. It has a two-lane cross section between 244th Avenue and SW Edgefield Meadows Avenue, which includes the segment adjacent to the McMenamins property. The travel lanes and center turn lanes appear to be in good condition and are approximately 11 to 13-foot wide, consistent with Multnomah County standards. NE Halsey Street has posted speed limit of 35 mph from NE 201st Avenue to NE 244th Avenue, 40 mph from NE 244th Avenue to SW Edgefield Meadows Avenue, and 20 mph from SW Edgefield Meadows Avenue to NE 257th Drive.

On-Street parking is allowed along two short segments of NE Halsey Street west of NE 238th Drive and along several long segments between NE 238th Drive and NE 244th Avenue. The parking is separated from the adjacent travel lane by the on-street bike lanes, it appears to be in good condition and is approximately 8-foot wide, consistent with County standards. Figure 4 illustrates the location and type of motor vehicle facilities along NE Halsey Street.



KEYNOTES

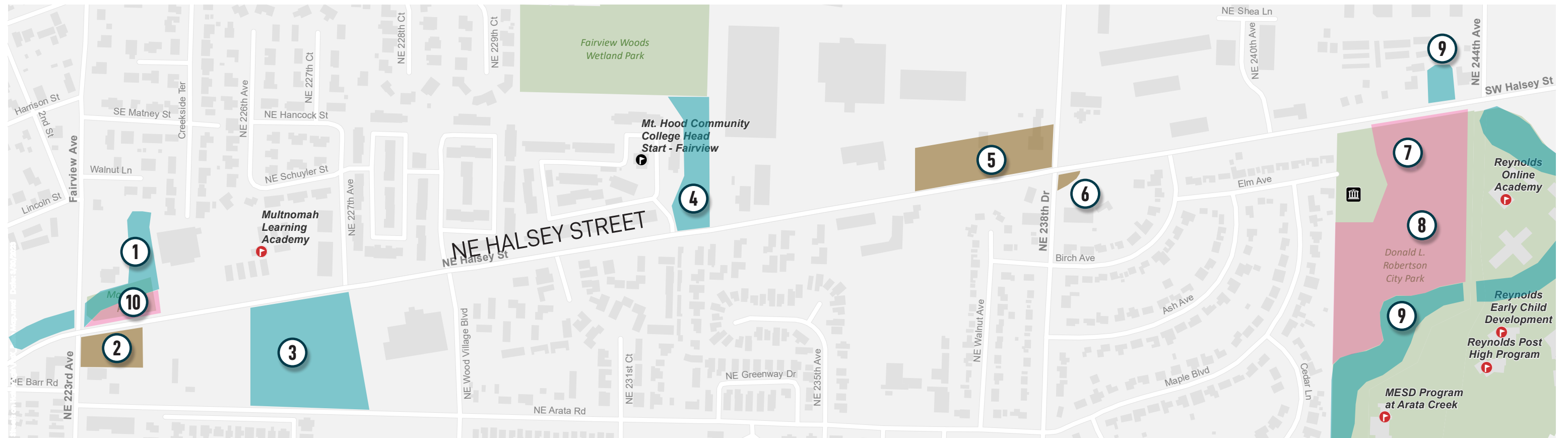
- ① Gresham Fairview Trail
- ② Reynolds School District Sports Fields
- ③ Salish Ponds City Trail
- ④ Power Lines
- ⑤ Pocket Park
- ⑥ Outdoor Dining Amenities
- ⑦ Fairview Creek
- ⑧ Marilyn's Park
- ⑨ Fairview Food Plaza and "The Fork"

LEGEND

- Natural Resources
- Urban Design Elements
- Recreational Opportunities



Figure 3 A
**Natural Resources and Urban Design Elements
 Main Streets on Halsey
 Fairview**



KEYNOTES

- ① Fairview Creek
- ② Fairview Food Plaza and "The Fork"
- ③ Wetland
- ④ Access to Fairview Wetlands City Park
- ⑤ The Byway Retail Center and Outdoor Dining Plaza
- ⑥ Pedestrian Amenities on Corner
- ⑦ Basketball Court and Playground
- ⑧ Donald L Robertson City Park
- ⑨ Arata Creek
- ⑩ Marilyn's Park

LEGEND

- Natural Resources
- Urban Design Elements
- Recreational Opportunities



Figure 3 B
**Natural Resources and Urban Design Elements
 Main Streets on Halsey
 Fairview/Wood Village**



KEYNOTES

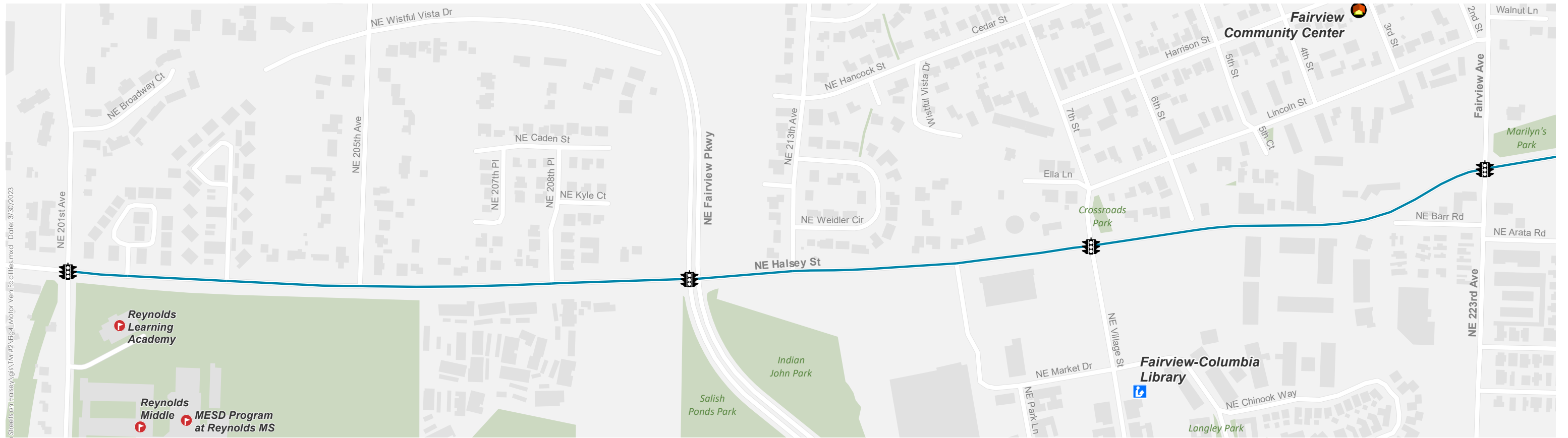
- ① Arata Creek
- ② Troutdale Station Food Carts
- ③ Troutdale Gateway Sign
- ④ McMenamins Edgefield Golf Course and Outdoor Concert Venue

LEGEND

- Natural Resources
- Urban Design Elements
- Recreational Opportunities



Figure 3 C
**Natural Resources and Urban Design Elements
 Main Streets on Halsey
 Troutdale**



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-  Traffic Signal
-  2 Travel Lanes
-  3 Travel Lanes
-  On-Street Parking
-  Partial On-Street Parking



Figure 4A
**Motor Vehicle Facilities
 NE Halsey Street
 Fairview**



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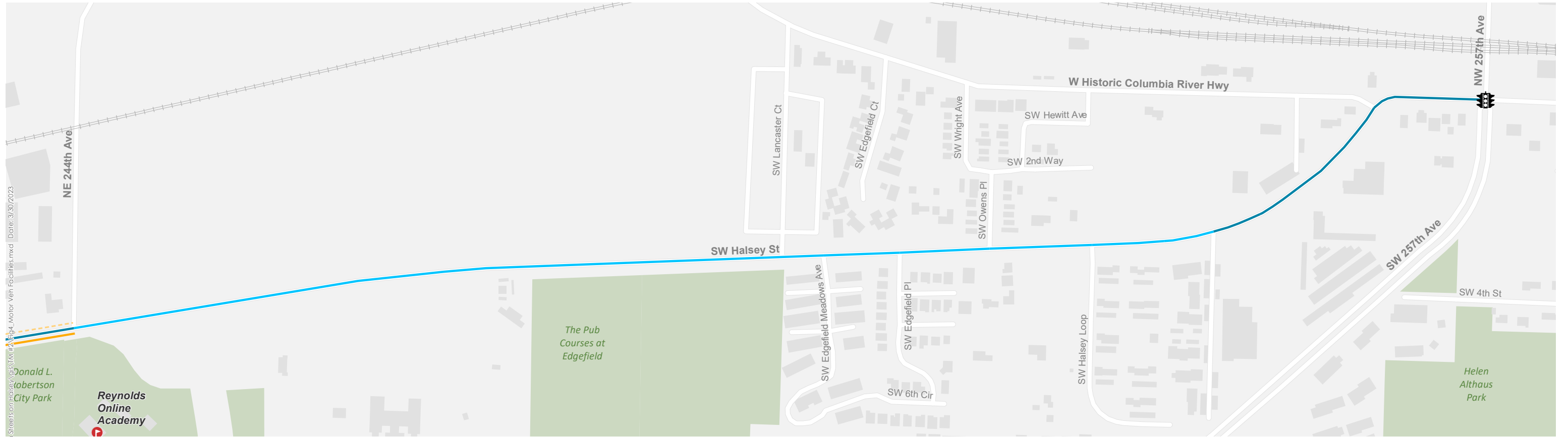
-  Traffic Signal
-  2 Travel Lanes
-  3 Travel Lanes
-  On-Street Parking
-  Partial On-Street Parking



Figure 4B
**Motor Vehicle Facilities
 NE Halsey Street
 Fairview/Wood Village**



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-  Traffic Signal
-  2 Travel Lanes
-  3 Travel Lanes
-  On-Street Parking
-  Partial On-Street Parking



Figure 4C
**Motor Vehicle Facilities
 NE Halsey Street
 Troutdale**

Pedestrian Facilities

Sidewalks are provided on both sides of NE Halsey Street from NE 201st Avenue to NE 244th Avenue and from SW Edgefield Meadows Avenue (east) to SW 257th Drive. There are no sidewalks along the segment from NE 244th Avenue to SW Lancaster Court and intermittent sidewalks from SW Lancaster Court to SW Edgefield Meadows Avenue (east). Many of the sidewalks are curb-tight, while others have planting strips that separate them from the adjacent travel lanes. The sidewalks appear to be in good condition and approximately 6-feet wide consistent with Multnomah County standards.

Marked crosswalks are provided at all signalized intersections, many of which have countdown signal heads that can be activated by pedestrians pressing an audible push button. There are also marked crosswalks at several minor street and mid-block crossing locations, many of which have raised median islands with pedestrian refuges and Rectangular Rapid Flashing Beacons (RRFBs). Figure 5 illustrates the location of pedestrian facilities along NE Halsey Street.

Image 3: Sidewalk Buffered by a Planting Strip and Parking Lane in Troutdale



Image 4: Sidewalk with Tree Wells Near Commercial Plaza in Wood Village



Bicycle Facilities

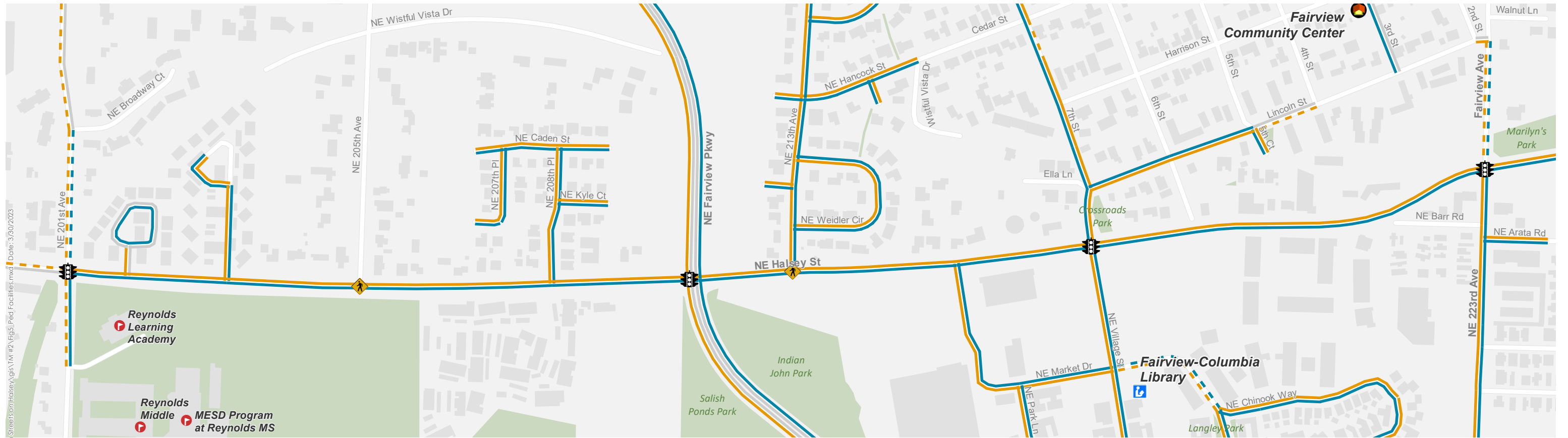
On-street bike lanes are provided along both sides of NE Halsey Street for the entire length of the corridor, including the segment adjacent to the McMenamens property. The bike lanes are located adjacent to the travel lanes and often between travel lanes and on-street parking. Many of the bike lanes have dashed white lane striping through potential conflict zones (right-turn lanes, on-street parking lanes, bus-pullouts, etc.). The bike lanes appear to be in good condition and approximately 6-feet wide. Figure 6 illustrates the location of bicycle facilities along NE Halsey Street.

Image 5: Curb-Tight Sidewalk with a Bike Lane



Image 6: Segment Without a Sidewalk in Troutdale



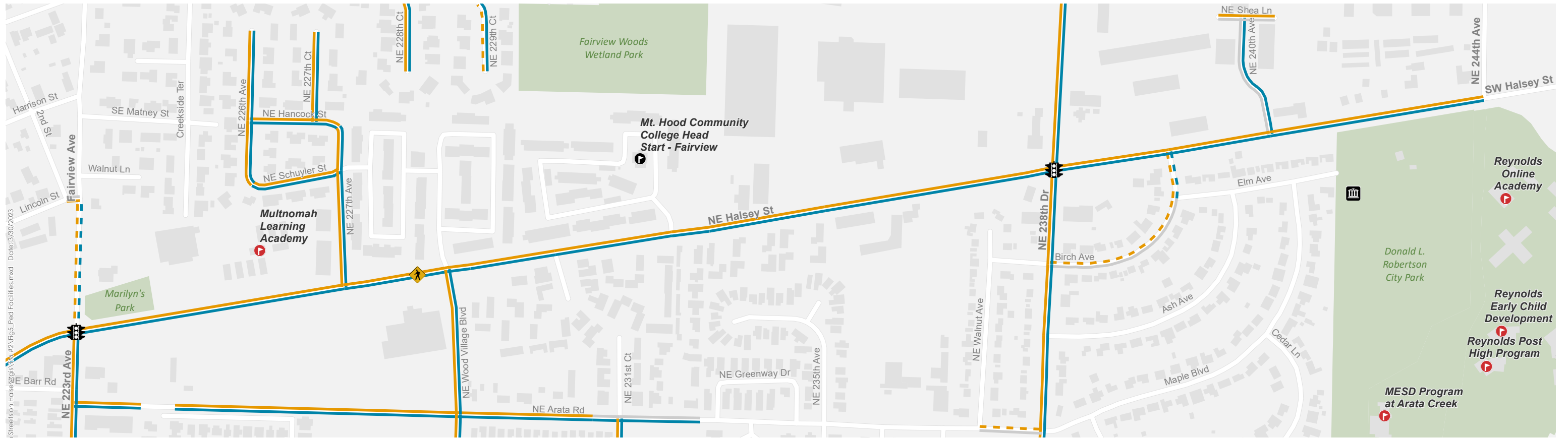


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- | | | | |
|--|---------------------------------------|--|--|
| | Traffic Signal | | Full Sidewalk Left, Partial Sidewalk Right |
| | Crosswalk | | Partial Sidewalk Left, Full Sidewalk Right |
| | Full Sidewalk Both Sides | | Partial Sidewalk Both Sides |
| | Full Sidewalk Left, No Sidewalk Right | | Partial Sidewalk Left, No Sidewalk Right |
| | No Sidewalk Left, Full Sidewalk Right | | No Sidewalk Left, Partial Sidewalk Right |



Figure 5A
Pedestrian Facilities
NE Halsey Street
Fairview



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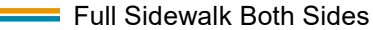


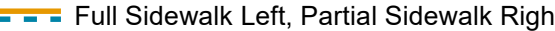

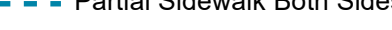
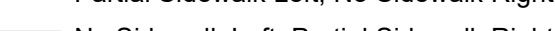

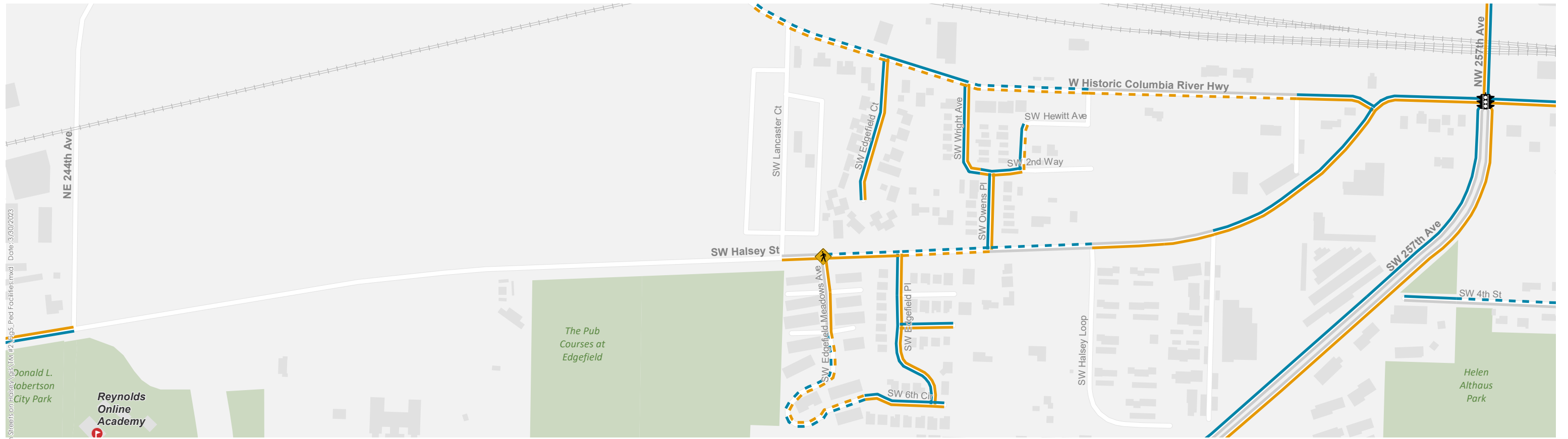
-  Traffic Signal
-  Crosswalk
-  Full Sidewalk Both Sides
-  Full Sidewalk Left, No Sidewalk Right
-  No Sidewalk Left, Full Sidewalk Right
-  Full Sidewalk Left, Partial Sidewalk Right
-  Partial Sidewalk Left, Full Sidewalk Right
-  Partial Sidewalk Both Sides
-  Partial Sidewalk Left, No Sidewalk Right
-  No Sidewalk Left, Partial Sidewalk Right



Figure 5B
Pedestrian Facilities
NE Halsey Street
Fairview/Wood Village



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- | | | | |
|--|---------------------------------------|--|--|
| | Traffic Signal | | Full Sidewalk Left, Partial Sidewalk Right |
| | Crosswalk | | Partial Sidewalk Left, Full Sidewalk Right |
| | Full Sidewalk Both Sides | | Partial Sidewalk Both Sides |
| | Full Sidewalk Left, No Sidewalk Right | | Partial Sidewalk Left, No Sidewalk Right |
| | No Sidewalk Left, Full Sidewalk Right | | No Sidewalk Left, Partial Sidewalk Right |

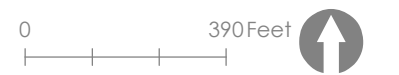
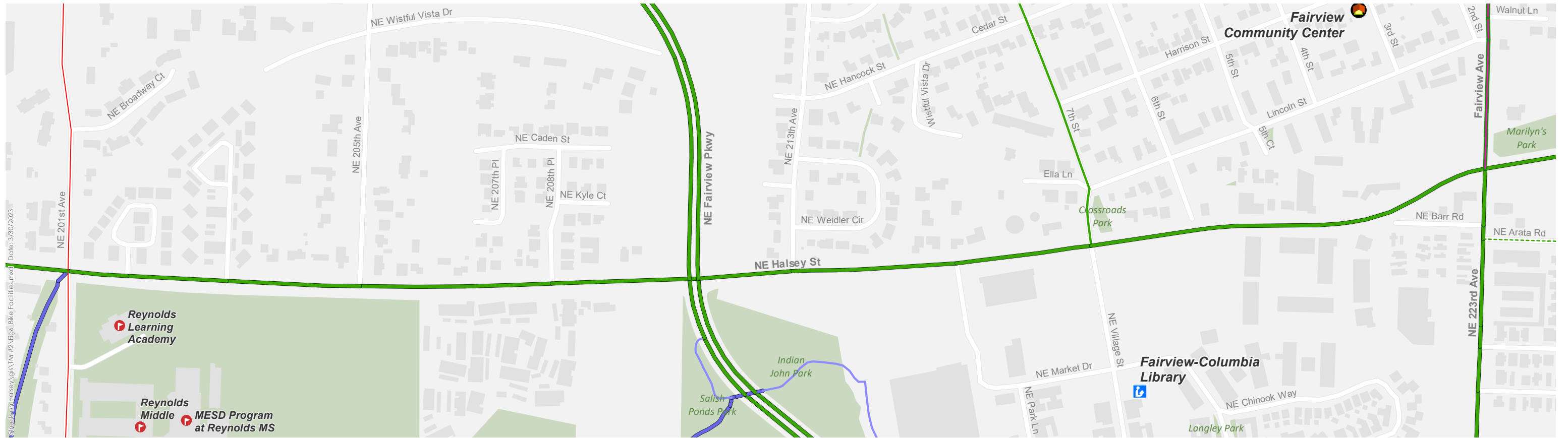


Figure 5C
**Pedestrian Facilities
 NE Halsey Street
 Troutdale**

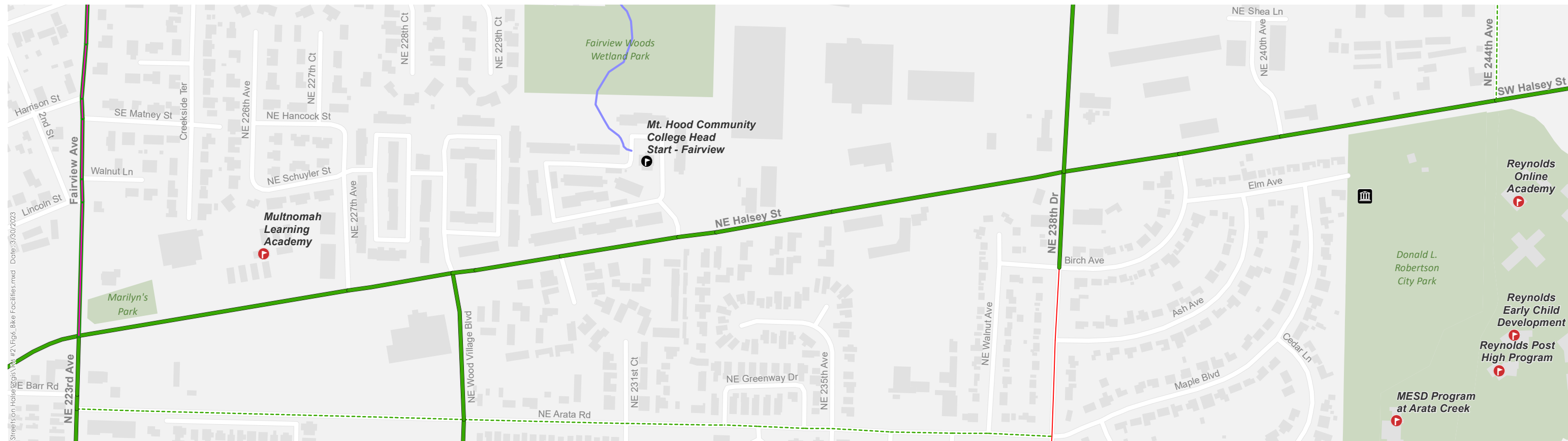


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- ▬ Established bikeway
- ▬ Local trail
- ▬ Dedicated bike lane
- ▬ Bike with caution
- ▬ Bike friendly street
- ▬ Bike with caution
- - - Helpful connection



Figure 6A
**Bicycle Facilities
 NE Halsey Street
 Fairview**

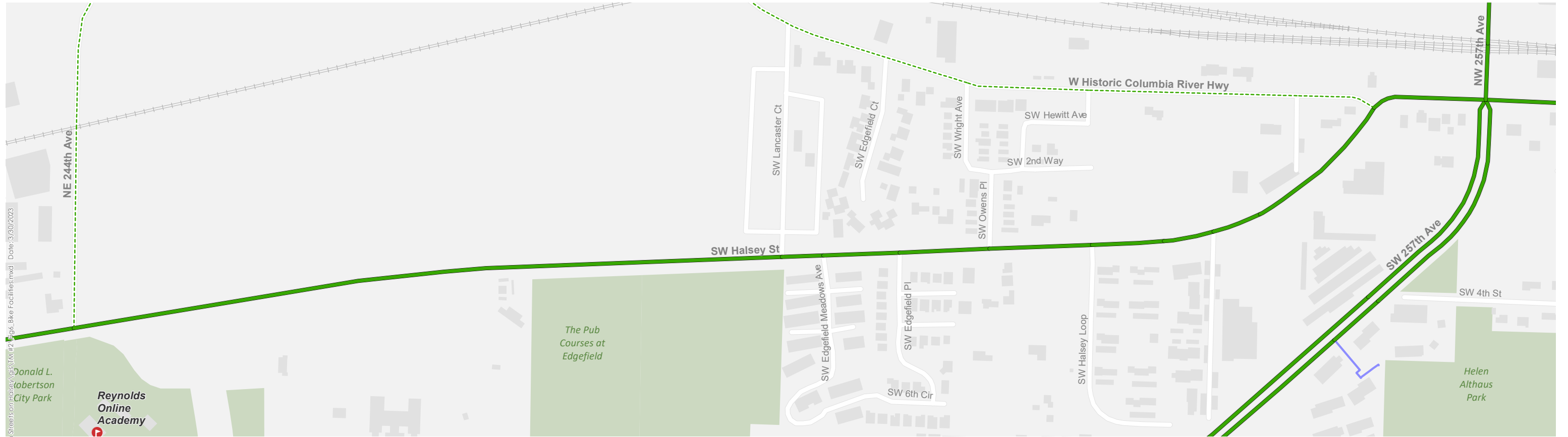


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- Established bikeway
- Dedicated bike lane
- Bike friendly street
- Helpful connection
- Local trail
- Bike with caution
- Bike with caution



Figure 6B
**Bicycle Facilities
 NE Halsey Street
 Fairview/Wood Village**



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- Established bikeway
- Dedicated bike lane
- Bike friendly street
- - - Helpful connection
- Local trail
- Bike with caution
- Bike with caution



Figure 6C
**Bicycle Facilities
 NE Halsey Street
 Troutdale**

Transit Facilities and Services

Local transit service is provided along NE Halsey Street by TriMet. TriMet Route 77 (Broadway/Halsey) connects the Portland City Center with Fairview, Wood Village, and Troutdale, via NE Halsey Street from 201st Avenue to 257th Drive. Service is provided Monday through Friday from 6:00 AM to 12:00 AM on 30-minute headways. Limited service is provided on Saturday and Sunday. TriMet Route 21 (Sandy Blvd/223rd) connects Fairview with Parkrose and Gresham via NE Halsey Street from 223rd Avenue to 238th Drive. Service is provided Monday through Friday on approximately 40-minute headways. Limited service is provided on Saturday and Sunday. TriMet has proposed upgrading Line 77 to Frequent Service as part of their next Annual Service Plan. This change would take effect either fall 2023 or spring 2024. Frequent Service would mean 15-min headways (or better) “most of the day, every day”. TriMet is also proposing routing some trips on Line 77 to serve Troutdale-Reynolds Industrial Park.¹

TriMet Route 77 and Route 21 serve stops on both sides of NE Halsey Street. Most stops have a sign pole with basic stop information, while others have shelters and benches, some of which are unique and reflect the character of adjacent land uses. Most stops are located near major intersections with marked (and signaled) crosswalks while others are located mid-block. Several of the stops in Fairview and Wood Village include bus pull-outs that separate stop activity from through traffic. Figure 7 illustrates the TriMet facilities and services along NE Halsey Street.

Image 7: TriMet Stop in Fairview



Image 8: TriMet Stop in Wood Village

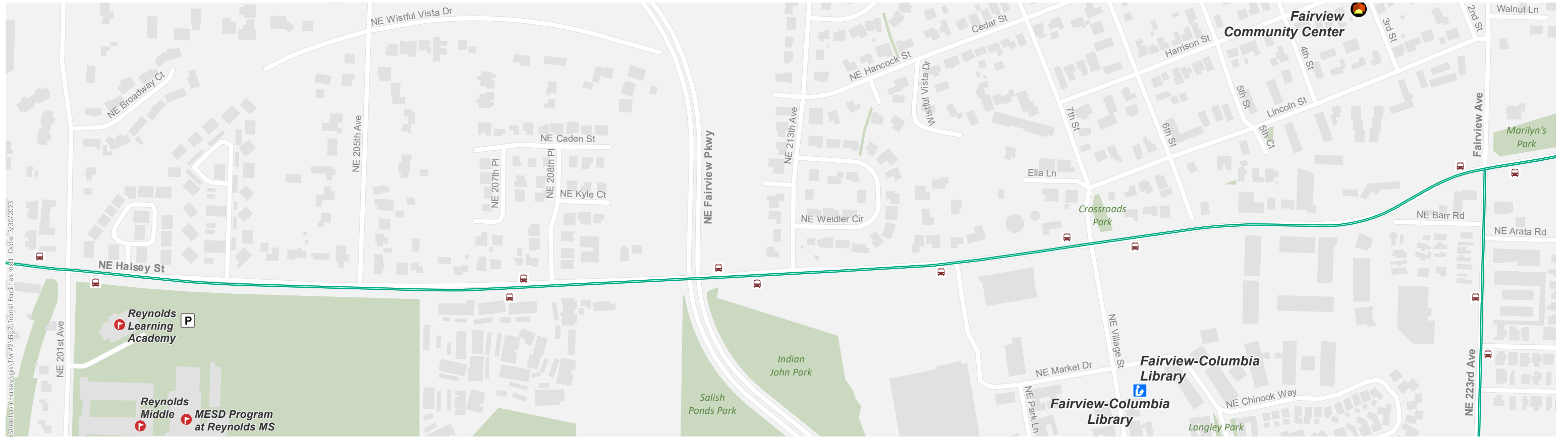


Intersection Operations

There are five signalized intersections along NE Halsey Street within the study area. The following summarizes key characteristics of the intersections and provides information from recent traffic studies about current and projected future intersection operations, as available.

- **NE 201st Avenue/NE Halsey Street** – This is a 4-legged intersection with separate left-turn lanes on each approach and a separate right-turn lane on the westbound approach. The traffic signal includes permitted left-turn phasing, which requires left-turning motorists to yield to oncoming motorists. *No recent traffic operations information is available for the intersection.*
- **Fairview Parkway/NE Halsey Street** – This is a 4-legged intersection with separate left-turn lanes on each approach and a separate right-turn lane on the eastbound approach. There is also an additional westbound through lane on the east and west legs of the intersection. The traffic signal includes protected left-turn phasing at each approach and is pedestrian actuated with pushbuttons and countdown signal heads. *The intersection currently meets Multnomah County performance standards which allow for relatively high levels of delay. In addition, the Fairview TSP includes a project to reconfigure this intersection as a multilane roundabout.*

¹ <https://trimet.org/betterbus/servicechanges-fy24.htm>

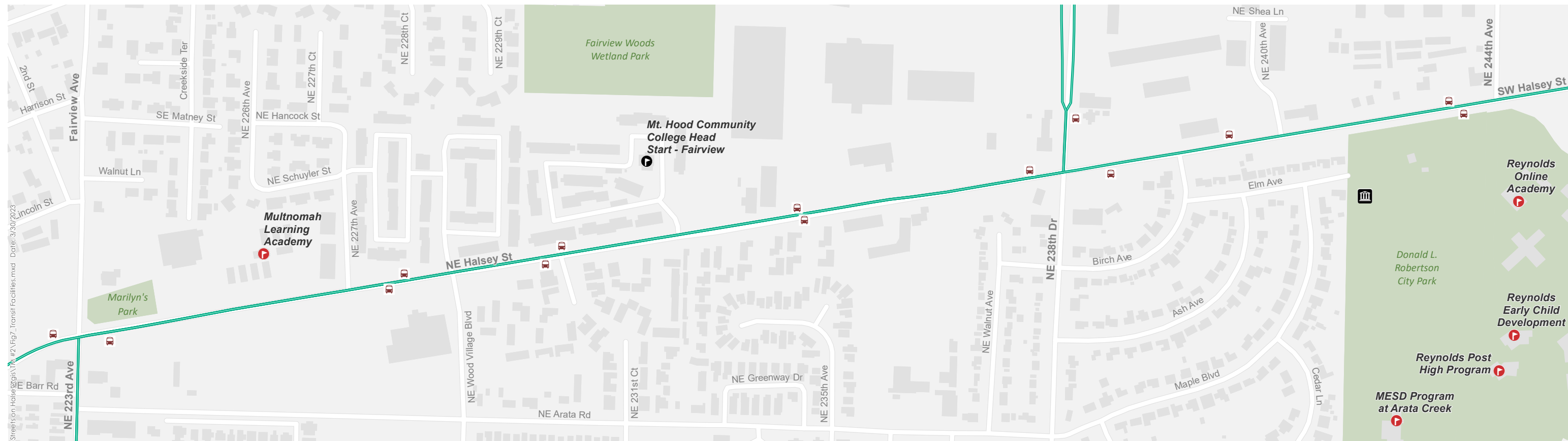


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- P Park and Ride lot
- Transit Stop
- Transit Line



Figure 7 A
**Transit Facilities and Services
 Main Streets on Halsey
 Fairview**

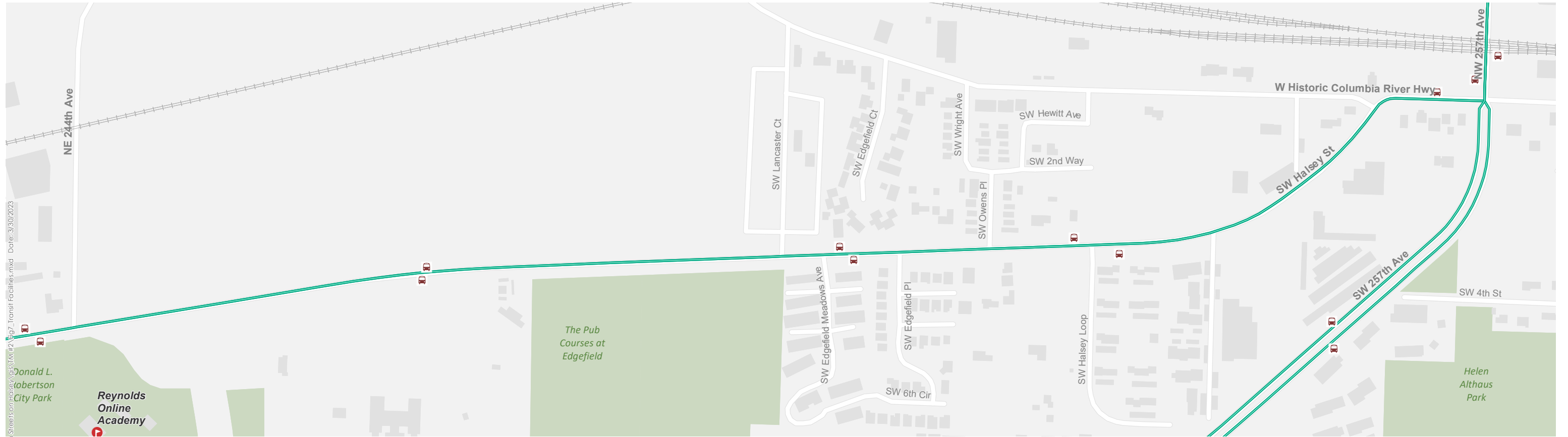


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- P Park and Ride lot
- Transit Stop
- Transit Line



Figure 7B
**Transit Facilities and Services
 Main Streets on Halsey
 Fairview/Wood Village**



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- P Park and Ride lot
- Transit Stop
- Transit Line



Figure 7C
**Transit Facilities and Services
 Main Streets on Halsey
 Troutdale**

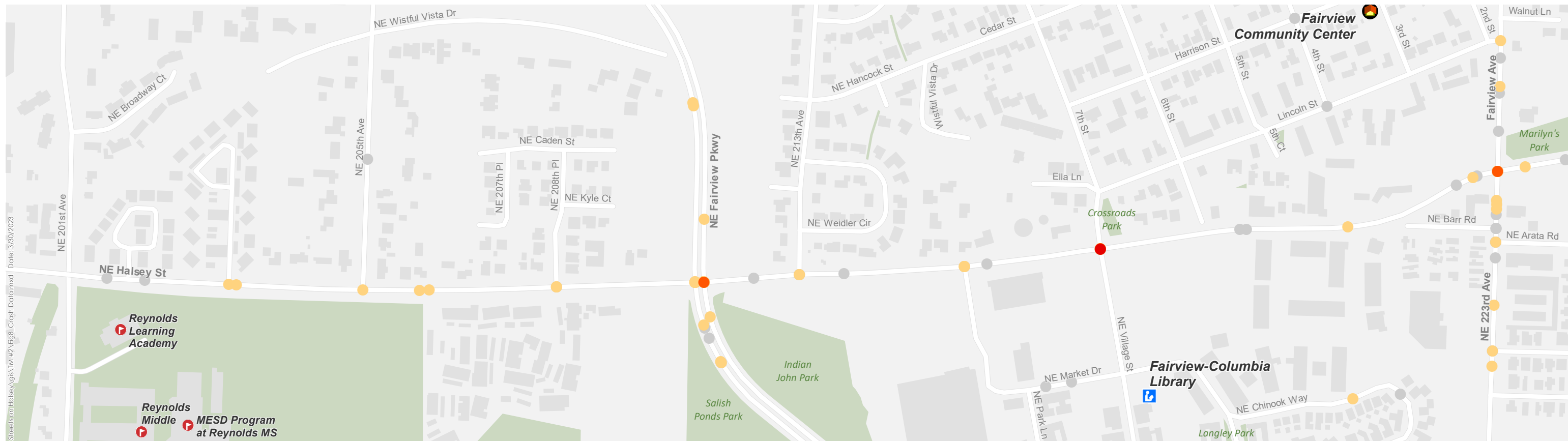
- **NE Village-7th Street/NE Halsey Street** – This is a 4-legged intersection with separate left-turn lanes on each approach and a separate right-turn lane on the eastbound approach. The traffic signal includes protected left-turn phasing at each approach and can be pedestrian actuated with pushbuttons and countdown signal heads. *No recent traffic operations information is available for the intersection.*
- **NE 223rd Avenue/NE Halsey Street** – This is a 4-legged intersection with separate left-turn lanes on each approach and a separate right-turn lane on the eastbound, westbound, and northbound approaches. The traffic signal includes protected left-turn phasing at each approach and can be pedestrian actuated with pushbuttons and countdown signal heads. *The intersection currently meets Multnomah County performance standards.*
- **NE 238th Drive/NE Halsey Street** – This is a 4-legged intersection with separate left-turn lanes on each approach and a separate right-turn lane on the westbound approach. The traffic signal includes protected left-turn phasing at each approach and can be pedestrian actuated with pushbuttons and countdown signal heads. *The intersection currently meets Multnomah County performance standards.*
- **NW Graham Road-SW 257th Drive/NE Halsey Street** – This is a 4-legged intersection with separate left-turn lanes on each approach and a separate right-turn lane on the eastbound and westbound approaches. The traffic signal includes protected left-turn phasing at each approach and can be pedestrian actuated with pushbuttons and countdown pedestrian signal heads. *The intersection currently meets Multnomah County performance standards.*

Traffic Safety

NE Halsey Street is identified as a high injury corridor in the 2018 Regional Transportation Plan (RTP). Per the RTP, high injury corridors are major travel routes with high occurrences of fatal and severe injury crashes. They are also where people tend to travel the most, where they run to catch the bus, cross the street to get to schools and shops, ride their bikes or drive. Furthermore, they also tend to be in RTP equity focus areas – areas with high concentrations of people of color, people with low incomes and low English. High injury corridors are identified in the RTP to help prioritize near-term investments. The RTP seeks to advance projects on high injury corridors to reduce the likelihood and severity of crashes for all modes, including projects that fill gaps for biking and walking or that provide connections to transit, schools, jobs, and 2040 Regional and Town Centers. An interactive map of the high injury corridors is located here:

<https://experience.arcgis.com/experience/6b5ae16aad814e6e81546bcc4ffdf964>.

Historical crash data was obtained from the Oregon Department of Transportation (ODOT) crash data portal for the five-year period from January 1, 2017 through December 31, 2021. The data includes the total number and severity of crashes that occurred along the project corridor over the five-year period. Based on the data, 228 crashes were reported along the project corridor over the five-year period, including one fatal, six severe injury, 126 moderate/minor injury, and 95 property damage only. Further review of the data shows that four crashes involved pedestrians and three involved bikes – all the pedestrian and bicycle-related crashes resulted in a minor to moderate injury. Figure 8 illustrates the location and type of crashes along the project corridor.

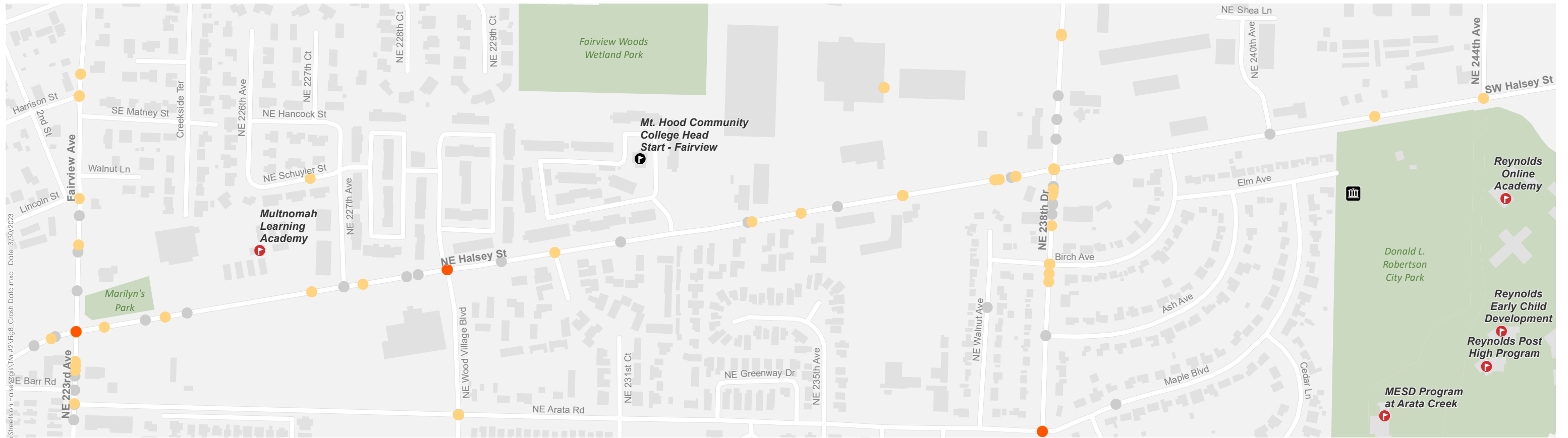


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- Fatal
- Severe Injury
- Moderate/Minor Injury
- Property Damage Only



Figure 8A
Crashes by Severity (Jan 1, 2017 thru Dec 31, 2021)
NE Halsey Street
Fairview



H:\23\23021 - Transportation and Land Use Planning\043 - Main Streets on Halsey\GIS\TM #2\Fig8_Crash Data.mxd Date:3/30/2023

- Fatal
- Severe Injury
- Moderate/Minor Injury
- Property Damage Only



Figure 8B
 Crashes by Severity (Jan 1, 2017 thru Dec 31, 2021)
 NE Halsey Street
 Fairview/Wood Village



H:\23\23021 - Transportation and Land Use Planning\043 - Main Streets on Halsey\GIS\Map\Fig8_Crash Data.mxd Date: 3/30/2023

- Fatal
- Severe Injury
- Moderate/Minor Injury
- Property Damage Only



Figure 8C
Crashes by Severity (Jan 1, 2017 thru Dec 31, 2021)
NE Halsey Street
Troutdale

Adjacent Land Uses

A wide variety of land uses occur along NE Halsey Street, with relatively even distribution throughout the study corridor. General uses include:

- Residential, including single- and multi-family homes
- Commercial, including retail, dining, offices, and lodging
- Light industrial
- Public services, parks, and infrastructure
- Schools
- Churches
- Vacant/undeveloped lots
- Farming
- Destination Resort

Notable individual users of the Halsey Street frontage are listed below (from west to east) Some of these, such as the schools and Edgefield, can generate a high level of pedestrian and bicycle activity.

- Reynolds Middle School
- Target
- VA Outpatient Clinic
- City of Fairview water reservoirs
- Fairview Food Plaza
- Multnomah Learning Academy
- PG&E substation
- Ukrainian Bible Church
- Fairview Oaks and Fairview Woods Apartments
- Wood Village City Hall
- McMenamins Edgefield

Image 9: McMenamins Edgefield



Image 10: The Byways



Figure 9 illustrates the location of land uses adjacent to the project corridor.



KEYNOTES

- | | | | |
|------------------------------|-------------------------------------|---------------------------------|---|
| ① Fairview Food Plaza | ⑤ Ukrainian Bible Church | ⑨ Restaurants/Commercial Center | ⑬ Village Manor Nursing Home |
| ② Motorcycle Dealer | ⑥ Bottle Drop and Commercial Center | ⑩ Chevron | ⑭ Office Building |
| ③ PG&E Facility | ⑦ Truck Repair | ⑪ The Byway Retail/Dining | ⑮ Wood Village City Hall and Civic Center |
| ④ Shopping/Commercial Center | ⑧ Best Western Hotel | ⑫ Shopping/Commercial Center | ⑯ Reynolds School District |

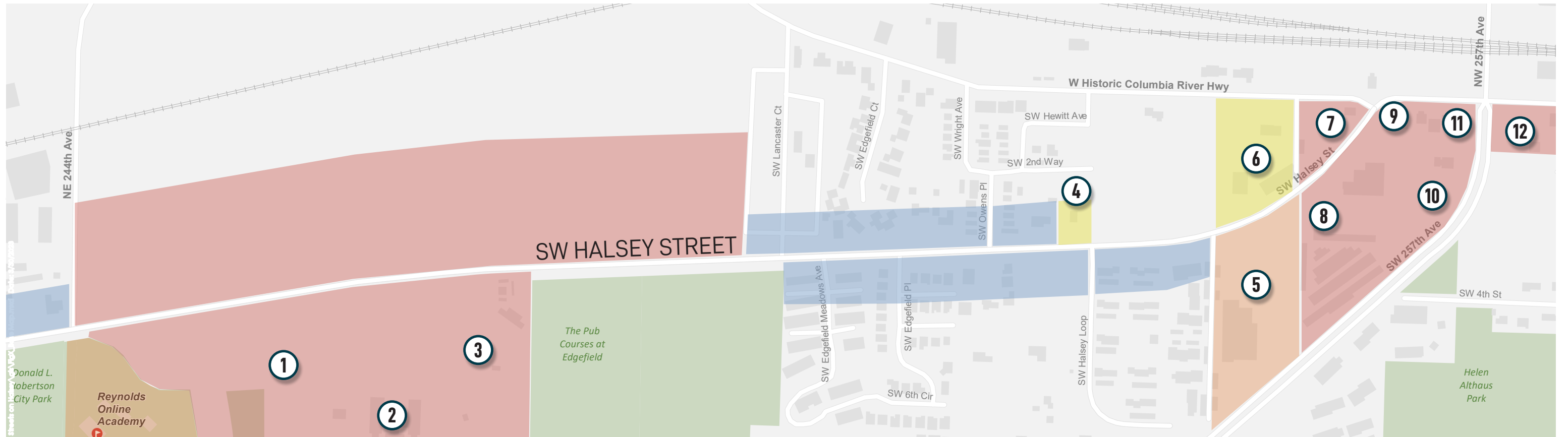
LEGEND

- | | |
|---|---|
| Residential | Residential Over Commercial |
| Commercial | Public/Infrastructure |
| Parks and Open Space | Schools/Churches |



Figure 9 B

**Adjacent Land Uses
Main Streets on Halsey
Fairview/Wood Village**



KEYNOTES

- | | | | |
|--|------------------------------------|--------------------------------|----------------|
| ① McMenamins Ruby's Spa | ④ Frontier Communications Facility | ⑧ Northwest Self Storage | ⑫ Plaid Pantry |
| ② McMenamins Edgefield Hotel | ⑤ Harvest Christian Church | ⑨ Auto Repair | |
| ③ McMenamins Edgefield Outdoor Concert venue | ⑥ Oregon State Highway Sign Crew | ⑩ Troutdale Station Food Carts | |
| | ⑦ Shell | ⑪ Office Buildings | |

LEGEND

- | | |
|--|--|
| Residential | Residential Over Commercial |
| Commercial | Public/Infrastructure |
| Parks and Open Space | Schools/Churches |



Figure 9 C

**Adjacent Land Uses
Main Streets on Halsey
Troutdale**

Zoning Requirements

There is a number of commercial, residential, and open space zones present along the corridor. All three cities define their zoning regulations through comprehensive plans and development codes. Table 2 presents zoning classifications along the NE Halsey Street corridor for each of the three jurisdictions, as published in zoning maps presented in Attachment A. Additional zoning requirements are discussed in the *Site Readiness and Code Amendment* section of the Tech Memo #1.

Table 2: Zoning Classifications Along the Corridor

Zoning Classification	Zoning Code	Description
Fairview ²		
Village Flex	FLX	No description in development code or the comp plan
Residential	R, R-7.5, R-10	Allows for single-unit detached housing on individual lots from 6,000 square feet to 10,000 square feet, along with middle housing types.
Residential Community Service Parks	R/CSP	Allows for a number of uses, such as government uses, public utilities, schools, libraries, parks and open space lands in public ownership.
Residential Multi-Family	R/MF	Promotes multi-family housing for 4 or more units on an individual lot such as multi-plexes, apartments, townhomes and condominiums.
Town Center Commercial	TCC	The town center commercial district is intended to support the strengthening of the town center commercial district as the "heart" of the community and as the logical place for people to gather and create a business center. It intends to do so through elements of design and appropriate mixed use development.
Village Commercial	VC	This zoning provides a mixture of commercial uses in a pedestrian-oriented environment.
Wood Village ³		
Light Residential 7,500	LR7.5	The light residential zones are intended to preserve land primarily for individual households in a low density residential neighborhood environment. While some non-household living uses are allowed, they are regulated such that the overall character of the zones is not sacrificed. Minimum lot area in this zone is 7,500sq ft.
Neighborhood Commercial	NC	This zone is intended for convenience retail and service establishments of limited scale to serve primarily the needs of local residents. Such uses shall be physically and visually compatible with adjacent residential development through appropriate use of landscaping, access, parking, signs and architectural design.
Open Space	O	The open space zone is intended to preserve land and provide for public institutions such as parks, government facilities, government offices, utility structures, and other similar public uses. All structures such as field houses, garages, park equipment and government office structures should add to the character of the open space.
Troutdale ⁴		
Downtown Mixed Use	MU-1	This district is intended to provide and promote a downtown business district that serves as the core of the Town Center district and is primarily oriented towards smaller-scale commercial development along a walkable "main street" setting. Residential uses may be considered in select circumstances. Lots are typically less than one-half acre in size and are dependent on public rights-of-way, publicly

² Sources: Fairview Comprehensive Plan, 2004 (revised 2022) & City of Fairview Municipal Development Code

³ Source: Wood Village Development Code

⁴ Sources: City of Troutdale Comprehensive Land Use Plan (2014) & Troutdale Development Code (2022)

		owned property, or alleys to handle parking and loading and provide for an attractive streetscape
General Commercial	GC	General commercial uses provide for a wide range of goods and services and may coexist with some light industrial uses. They are generally incompatible with residential uses and their trade areas may be quite extensive.
General Mixed Use	MU-2	This district is intended to provide a compatible mix of commercial uses and medium-density residential opportunities in certain areas across the city, including but not limited to areas adjacent to the MU-1 district. Smaller-scale high-density residential may be appropriate in select areas. This district is distinct from the MU-1 district in terms of having lots that are typically larger than a simple storefront, along with general expectations for maintaining on-site parking, landscaping, and screening
High Density Residential	HDR	This designation is intended primarily for high-density, multiple-family residential dwellings, including existing developments and vacant land suitable for development at higher densities. Density in this designation is intended to average 21 units per gross acre and 2,000 square feet per dwelling unit. Business and professional offices may be considered appropriate in areas designated HDR given conditional approval.
Low-Density Residential	LDR-2	This designation is intended primarily for low-density, single-family, detached residential dwellings, including existing single-family residential areas and vacant land with constraints to development at higher densities. Typical lot size for this use varies between 7,000 to 10,000 sq ft.
Medium Density Residential	MDR	This designation is intended primarily for medium-density, single-family, detached and attached residential dwellings, including existing developed areas and vacant land suitable for development at this density. Density in this designation is intended to average 8.5 dwelling units per net acre with lot sizes generally 4,000 square feet and larger. Commercial development, with the exception of home occupations and limited neighborhood retail, is not considered appropriate for this designation.

Community Input

The *Main Streets on Halsey Strategic Economic Action Plan* and subsequent implementation actions were guided by input from residents, business and property owners in Fairview, Wood Village, and Troutdale. The input was collected during community events and through surveys conducted by the three cities. The following summarizes input on transportation-related issues along NE Halsey Street from a 2016 workshop and a 2020 survey.

2016 Community Visioning Workshop

In 2016, over 50 people from Fairview, Wood Village and Troutdale participated in a community visioning workshop to provide input on how the Halsey Street corridor should look and function in the future. Attendees participated in a hands-on design exercise looking at potential development options, redevelopment/reinvestment areas, transportation, infrastructure, and public facilities. Attendees also participated in an instant polling exercise in which participants selected their answer to different questions using a polling device and the results were shown live. Key results from the polling are summarized below.

- 83% identified investments in sidewalks, bike routes, and more crossings to improve safety along the Halsey corridor as a priority; an additional 3% did not know.

- 78% agreed that the three cities should develop a coordinated identify for the Halsey corridor; an additional 5% were neutral.
- 88% indicated that it is important for the three cities to have coordinated regulations along Halsey; an additional 6% were neutral.
- 87% indicated that it is important for the three cities to pool resources to fund major projects that affect the whole corridor; an additional 8% were neutral.
- 47% of participants indicated that there is a need for improved public transit along the Halsey corridor; an additional 19% were neutral.
- When asked if they could do just one thing for the corridor what would be their top priority for infrastructure:
 - 3% identified bike connection to Portland and to the Columbia Gorge
 - 14% identified parking management
 - 17% identified parks and trails
 - 31% identified safety improvement for crossing Halsey

Halsey Main Street Survey

In 2020, the City of Fairview conducted community outreach activities with residents of Fairview, Wood Village and Troutdale to inform an update to the development code for key Halsey Street zoning districts. They received 500 total responses, including 161 from Latinx and 9 from Slavic residents. Key results from the survey are summarized below.

- **Biggest issues** – Unsafe pedestrian crossings were identified among the biggest issues on Halsey along with not enough places to eat, shop, hang out, and not enough parks and open space.
- **Key takeaways** – Street and storefront amenities, such as awnings, seating, street lighting and safer pedestrian crossings are very important to most participants, whereas on-street parking and features to slow traffic speeds had mixed results.

Main Streets on Halsey Plan Recommendations

The Main Streets on Halsey Strategic Economic Action Plan recommends transportation improvements at several locations along the project corridor. The improvements include intersection improvements and improvements to bicycle and pedestrian facilities and roadway striping along several segments. The following Table 3 summarizes the recommended improvements and indicates if they are complete, in-process, or no longer feasible.

Table 3: Main Streets on Halsey Plan Recommendations

Location	Description	Status
1. NE 201 st Avenue/ NE Halsey Street	Install a diagonal bicycle/pedestrian crossing from the 40-mile loop trail head in the southwest corner to the northeast corner of the intersection	Incomplete
2. NE Halsey Street from 202 nd Avenue to 205 th Avenue	Continue the landscape strip along the north side of the roadway and channelize the westbound right-turn lane at the NE 201 st Avenue/NE Halsey Street intersection	Incomplete
3. and 4. NE 208 th Place/ NE Halsey Street	Install an enhanced pedestrian crossing, continue the westbound striping, work with TriMet to relocate the transit stops near the crossing, eliminate the second eastbound through lane, install a raised median island that support the crossing and reconfiguration	Incomplete – some elements of this concept may be revised through this process

5. NE Fairview Parkway/ NE Halsey Street	Install gateway features at the southbound approach, such as additional landscaping, provide additional visual cues, such as pedestrian scale lighting, pole banners, decorative flower baskets, etc., and provide green paint within the transitional segments of the on-street bike lanes	Incomplete – Fairview recently amended their TSP to include a roundabout
6. Market Drive/ NE Halsey Street	Install an enhanced pedestrian crossing, work with TriMet to relocate the transit stops near the crossing, install a raised median island, and reconfigure the striping through the intersection	Incomplete – some elements of this concept may be revised through this process
7. Village Street/ NE Halsey Street	Install green paint within the transitional segments of the on-street bicycle lanes	Incomplete
8. NE Halsey Street from NE Village Street to NE Fairview Avenue	Install an enhanced pedestrian crossing, work with TriMet to relocate the transit stops near the crossing, and install a raised median island as feasible	Incomplete
9. NE Fairview Avenue-NE Arata Road	Install gateway features at the southbound approach, such as additional landscaping and a welcome sign, and provide green paint within the transitional segments of the on-street bike lanes	Incomplete
10. Wood Village Boulevard/ NE Halsey Street	Install a traffic signal when it is determined that a signal is warranted based on traffic volumes	Incomplete
11. NE Halsey Street from Wood Village Boulevard to NE 238 th Drive (Crossing #1)	Install an enhanced pedestrian crossing, work with TriMet to relocate the transit stops near the crossing, and install a raised median island as feasible	Incomplete ¹
12. NE Halsey Street from Wood Village Boulevard to NE 238 th Drive (Crossing #2)	Install an enhanced pedestrian crossing, work with TriMet to relocate the transit stops near the crossing, and install a raised median island as feasible	Incomplete ¹
13. NE 238 th Dive/ NE Halsey Street	Install gateway features at the southbound approach, such as additional landscaping and a welcome sign, install green paint within the transitional segments of the on-street bike lanes, install left-turn bike boxes OR bike boxes at the northbound and southbound approaches, increase the length of the westbound right-turn lane and install a splitter island, upgrade the signal, optimize the timing, and implement leading pedestrian interval.	Incomplete – some elements of this concept are no longer feasible
14. NE 244 th Avenue/ NE Halsey Street	Install separate left turn lanes at the northbound and southbound approaches and realign the intersection as feasible	Incomplete
15. NE Halsey Street from NE 244 th Avenue to Edgefield Meadows Avenue	Install paved pedestrian pathways on the north and south side of the roadway, install pedestrian scale lighting, consider widening the roadway to accommodate 12-foot travel lanes and 6-foot bike lanes, install channelized left-turn lanes to serve existing and proposed intersection and driveways, install two enhanced pedestrian crossings	Incomplete – some elements of this concept are no longer feasible
16. Edgefield Meadows Avenue/ NE Halsey Street	Install an enhanced pedestrian crossing at the west leg of the intersection	Complete
17. Halsey Loop Road/ NE Halsey Street	Install an enhanced pedestrian crossing and consider installing a raised median island as feasible	Incomplete
18. NE 257 th Drive/ NE Halsey Street	Install gateway features at the southbound approach, such as additional landscaping and a welcome sign	Incomplete

1. There are currently three crossings under construction in Wood Village that should be completed by the end of February, including one west of 238th, one between 238th and 240th, and one between 240th and 244th.

Key Issues

Key issues to consider in developing a cross section for NE Halsey Street are discussed throughout this memo and summarized below:

- NE Halsey Street is a Multnomah County facility classified as a minor arterial. Multnomah County is responsible for defining its major design elements and multimodal features. Multnomah County's Design and Construction Manual provides street design standards for the roadway that provide some flexibility in its design. These design standards should be considered in developing a preferred cross section. Multnomah County will likely update its Road Rules and Design and Construction Manual in the next few years. Therefore, these standards will be under review.
- NE Halsey Street has mostly been developed to Multnomah County's street design standards with consistent motor vehicle, pedestrian, bicycle, and transit facilities along most of the corridor. However, the facilities do not provide a comfortable environment for people walking, biking, or taking transit. In addition, the facilities tend to encourage high traffic volumes and travel speeds along the corridor, especially from through and heavy vehicle traffic.
- NE Halsey Street has many existing and well-established natural features and urban design elements that encourage crossing activity at key locations along the corridor. These features and elements should be considered and emphasized when developing a preferred cross section and when identifying potential crossing locations.
- The three cities have been actively planning for the redevelopment of NE Halsey Street for several years. As a result, the community has been engaged on several occasions on the form and function of NE Halsey Street. Their past input should be considered and incorporated into the planning process.
- Recommendations from prior planning efforts, such as previous phases of the Main Streets on Halsey Plan, should also be considered in developing the preferred cross section and in developing alternatives to enhance pedestrian crossings and intersection operations.
- Unless a significant source of funding is identified to implement the preferred cross section, it will likely be implemented in a piecemeal manner, or as development occurs. Therefore, it will be important to consider how the preferred cross section will be integrated with the existing cross section.

Cross Section Design Objectives

Cross section design objectives were developed for the project corridor based on the overall project goals and objectives as well as a discussion with the project team on desired outcomes. These objectives will be used to guide the development of alternative cross sections and to select a preferred alternative for each segment of the project corridor. These objectives will be refined based on input from the project team, the project advisory committees, and the public through the public involvement process.

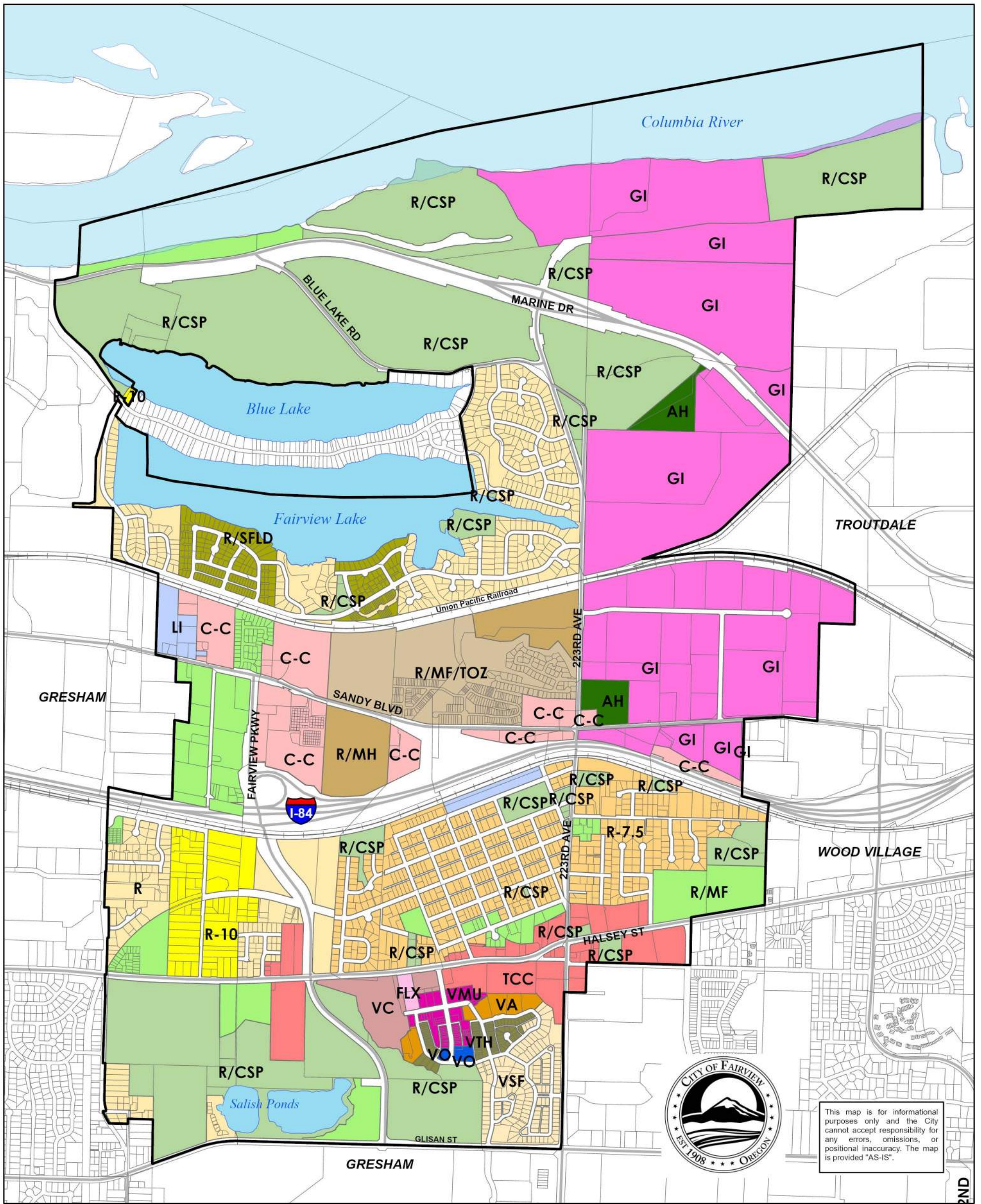
- Provide transportation facilities and services that engage with adjacent land uses and natural features along the corridor, such as schools, parks, creeks, and creek crossings.
- Provide pedestrian and bicycle facilities that are continuous, comfortable, and engage with adjacent land uses. Facilities should be separated from motor vehicle traffic and be of sufficient width and condition to promote multimodal trips.
- Provide safe and convenient pedestrian and bicycle crossings that enhance access to adjacent land uses. Crossings should be conveniently spaced and reflect the traffic volumes, travel speeds and context of the surrounding area. Crossings should not interfere with driveway operations.
- Create pedestrian places and plazas at appropriate places along the corridor.
- Provide planting strips, bioswales, tree wells, and/or other facilities that accommodate street trees and other plantings. Facilities should separate motor vehicle traffic from other traffic where feasible.
- Provide transit facilities that enhance access to local transit service. Facilities should engage with adjacent land uses and provide safe, comfortable, and convenient pedestrian access to transit.

- Provide amenities that reflect the context of the surrounding area and the needs of adjacent land uses, such as benches, trash cans, café tables, signage, streetlights, banners, etc.
- Continue to allow for safe motor vehicle traffic and provide facilities that accommodate heavy truck traffic for deliveries to adjacent land uses.
- Help to unify the corridor by reinforcing the proposed branding program of Halsey Parkway through the three cities.

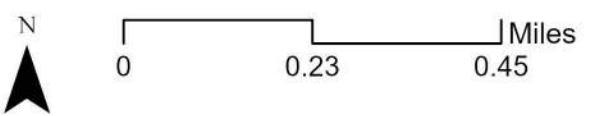
ATTACHMENTS

A. Zoning Maps

Attachment A Zoning Maps



This map is for informational purposes only and the City cannot accept responsibility for any errors, omissions, or positional inaccuracy. The map is provided "AS-IS".

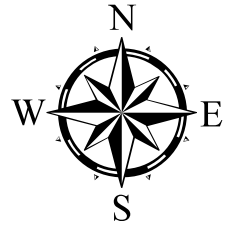





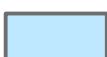






City of Fairview Zoning

- | | | |
|---|---|-----------------------------|
| Agricultural Holding (AH) | Residential (R-10) | Village Commercial (VC) |
| Corridor Commercial (C-C) | Residential (R-7.5) | Village Flex (FLX) |
| General Industrial (GI) | Residential Community Service Parks (R/CSP) | Village Mixed Use (VMU) |
| Light Industrial (LI) | Residential MultiFamily (R/MF) | Village Office (VO) |
| Res / South Fairview Lake Design Overlay (R/SFLD) | Residential / Manufactured Home (R/MH) | Village Single Family (VSF) |
| Res / MultiFamily Townhouse Overlay (R/MF/TOZ) | Town Center Commercial (TCC) | Village Townhouse (VTH) |
| Residential (R) | Village Apartments (VA) | |

City of Wood Village

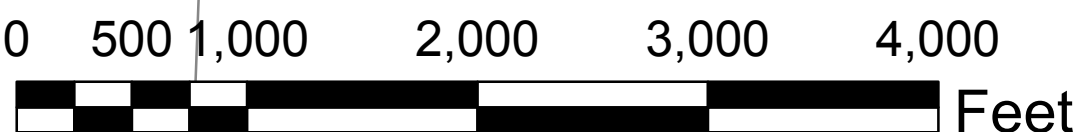
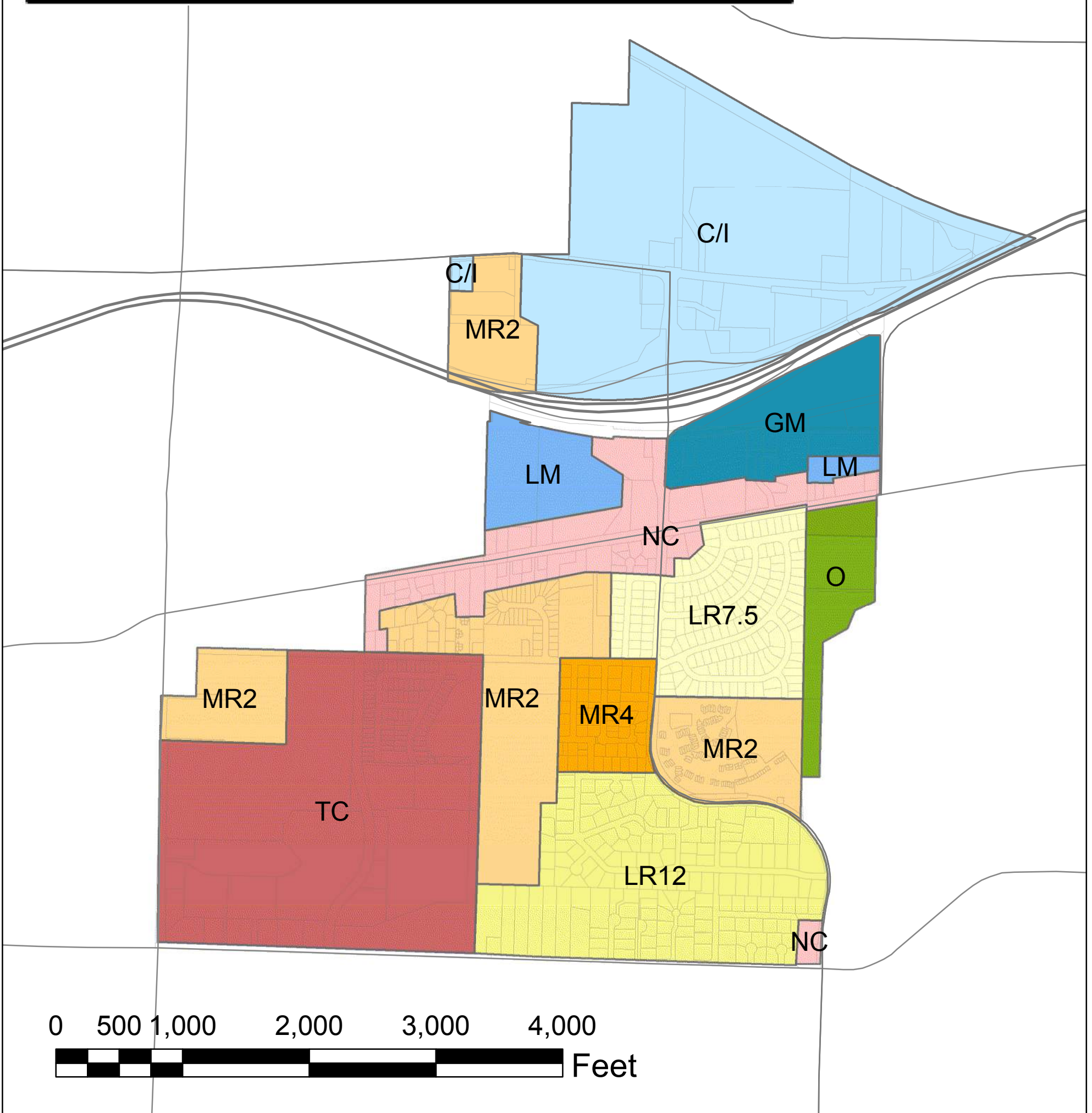
Zoning Map



-  Open Space (O)
-  General Manufacturing (GM)
-  Light Manufacturing (LM)
-  Commercial / Industrial (C/I)
-  Town Center (TC)
-  Neighborhood Commercial (NC)
-  Multi Residential 4,000 (MR4)
-  Multi Residential 2,000 (MR2)
-  Light Residential 12,000 (LR12)
-  Light Residential 7,500 (LR7.5)

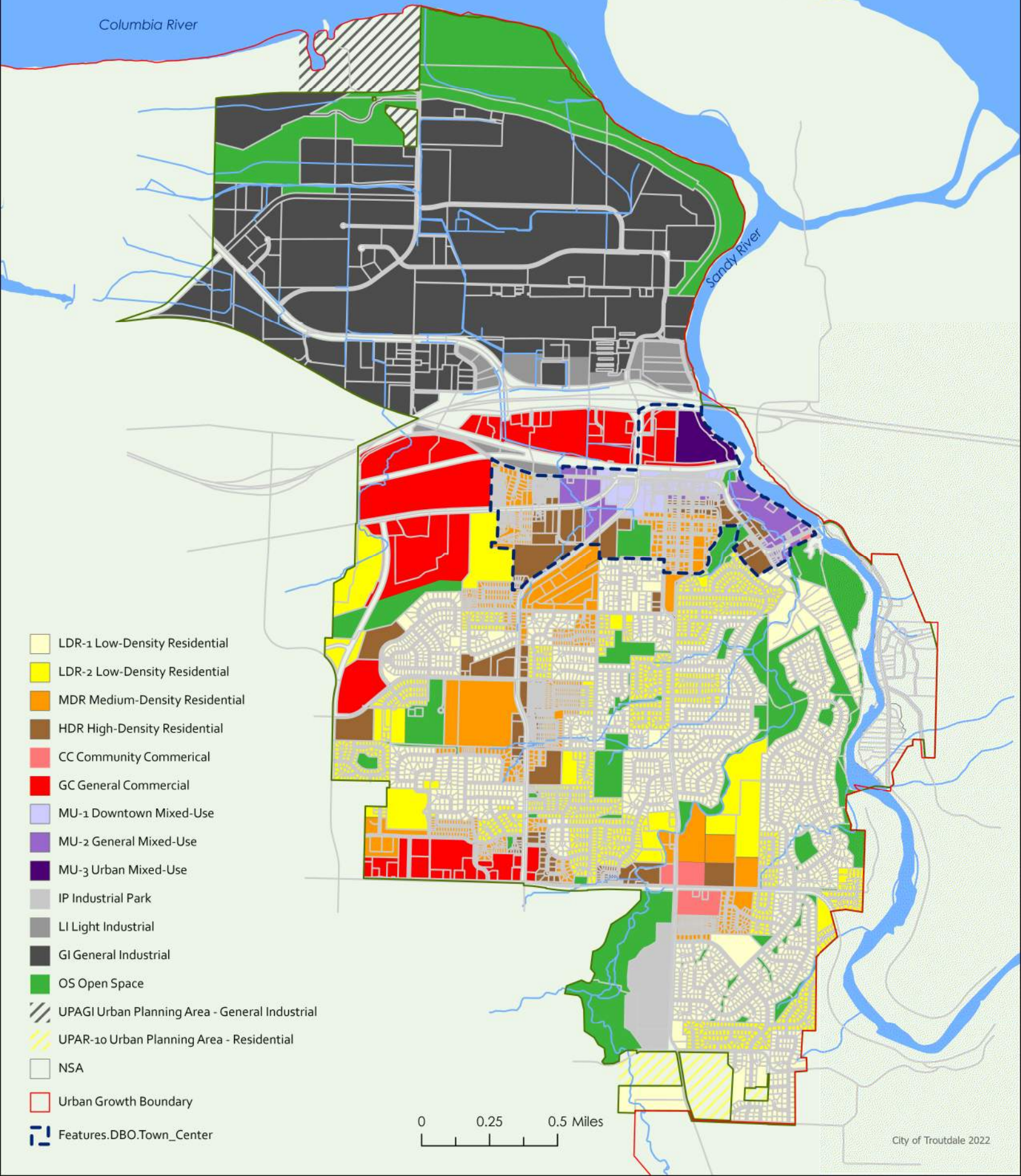


2055 NE 238th Drive
Wood Village, OR 97060



City of Troutdale

Zoning Districts



- LDR-1 Low-Density Residential
- LDR-2 Low-Density Residential
- MDR Medium-Density Residential
- HDR High-Density Residential
- CC Community Commerical
- GC General Commercial
- MU-1 Downtown Mixed-Use
- MU-2 General Mixed-Use
- MU-3 Urban Mixed-Use
- IP Industrial Park
- LI Light Industrial
- GI General Industrial
- OS Open Space
- UPAGI Urban Planning Area - General Industrial
- UPAR-10 Urban Planning Area - Residential
- NSA
- Urban Growth Boundary
- Features.DBO.Town_Center

