

# Non-Vehicular Transportation Audit

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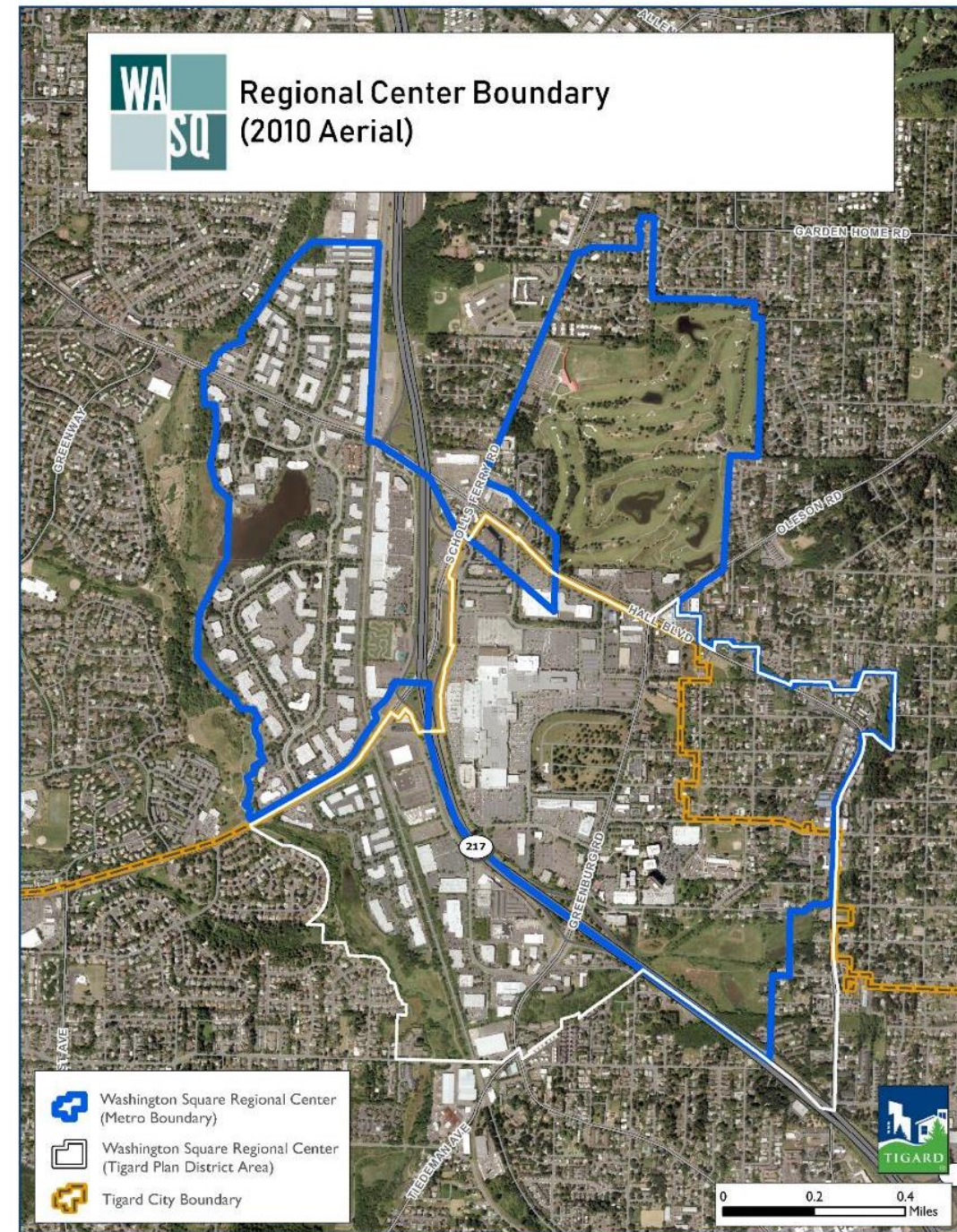
Washington Square Regional Center Update

*Task 4.6: Existing Conditions of Pedestrian, Bicycle, and Transit Networks  
+ Assessment of Planned Projects*

*August 2020*

# Audit Contents

1. Executive Summary
  2. Existing Conditions and Deficiencies
  3. Planned Projects Assessment
- Audit reviews entirety of WSRC area: Metro boundary plus Tigard Plan District Area



# Executive Summary

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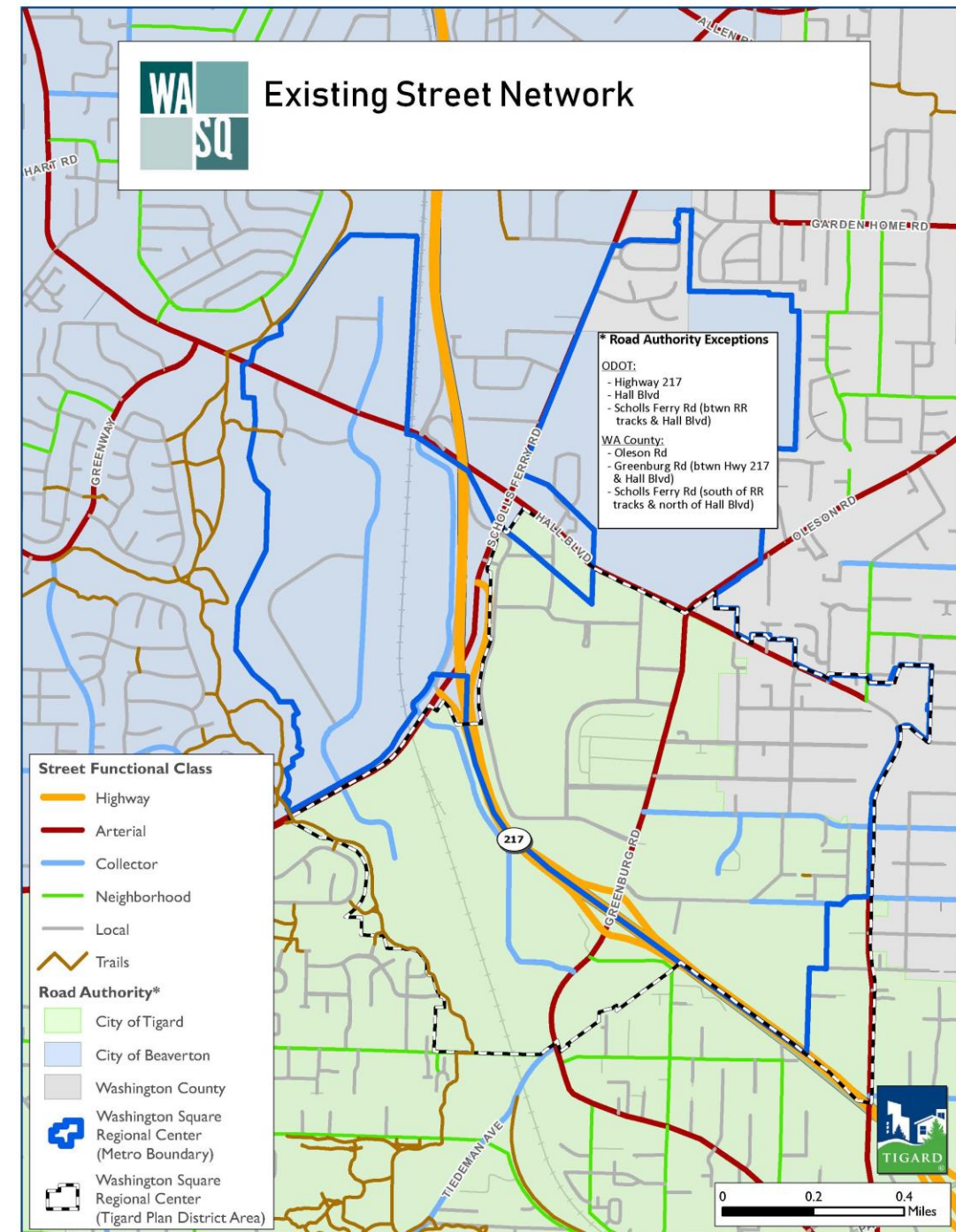
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# Project Background

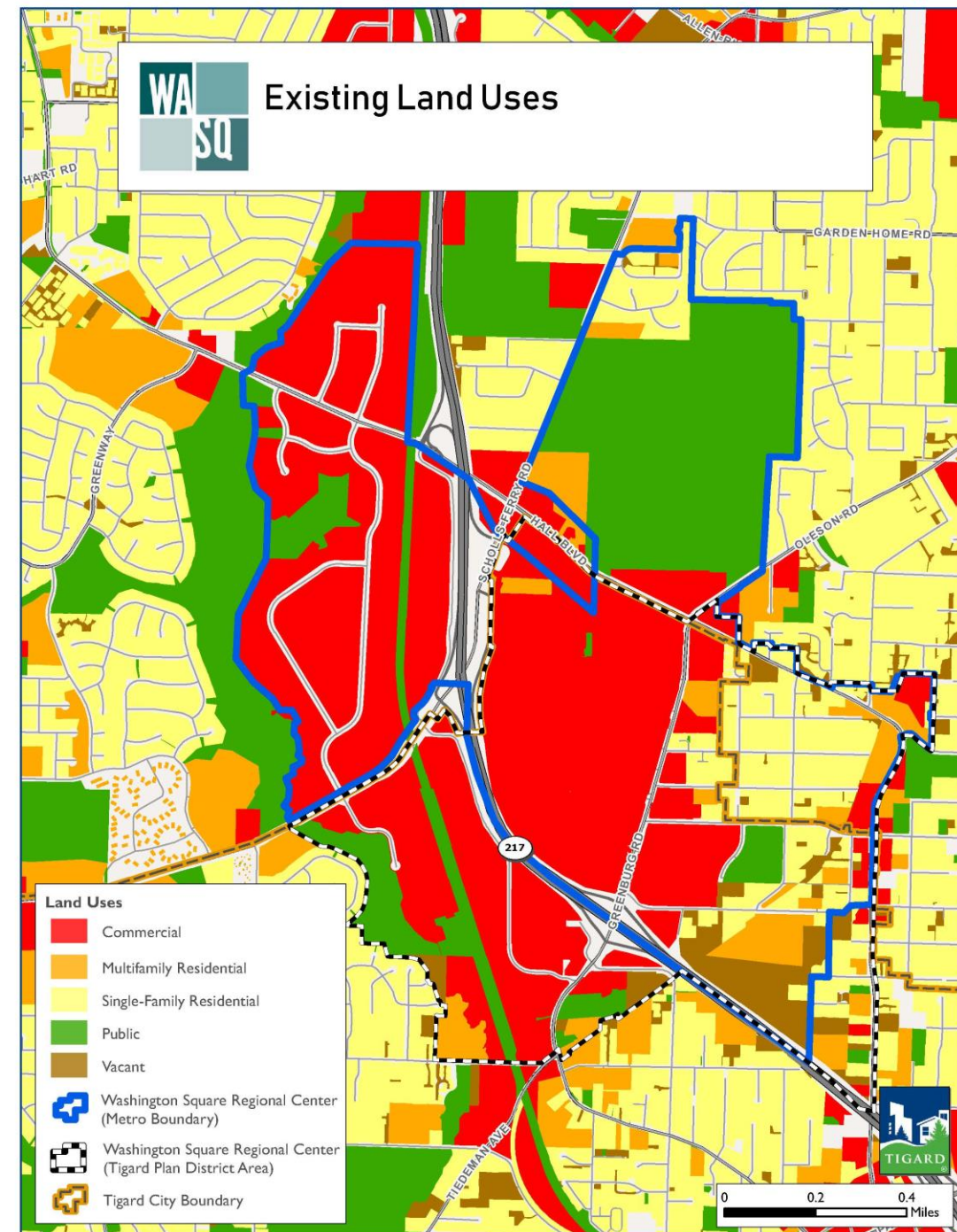
- Original WSRC Plan: 1999
- 2020 Update Goals:
  - Work with community to build on and refine land use & regulatory framework
  - Lay groundwork for updating all applicable plans, policies, programs, and regulations\*

*\*Within City of Tigard*



# Land Use Context

- The existing conditions and assessment of planned projects compiled here are in respect to the current land uses for the area.
- As the area develops, needs may change, and future needs will be considered as part of reviewing land use scenarios later in this project.



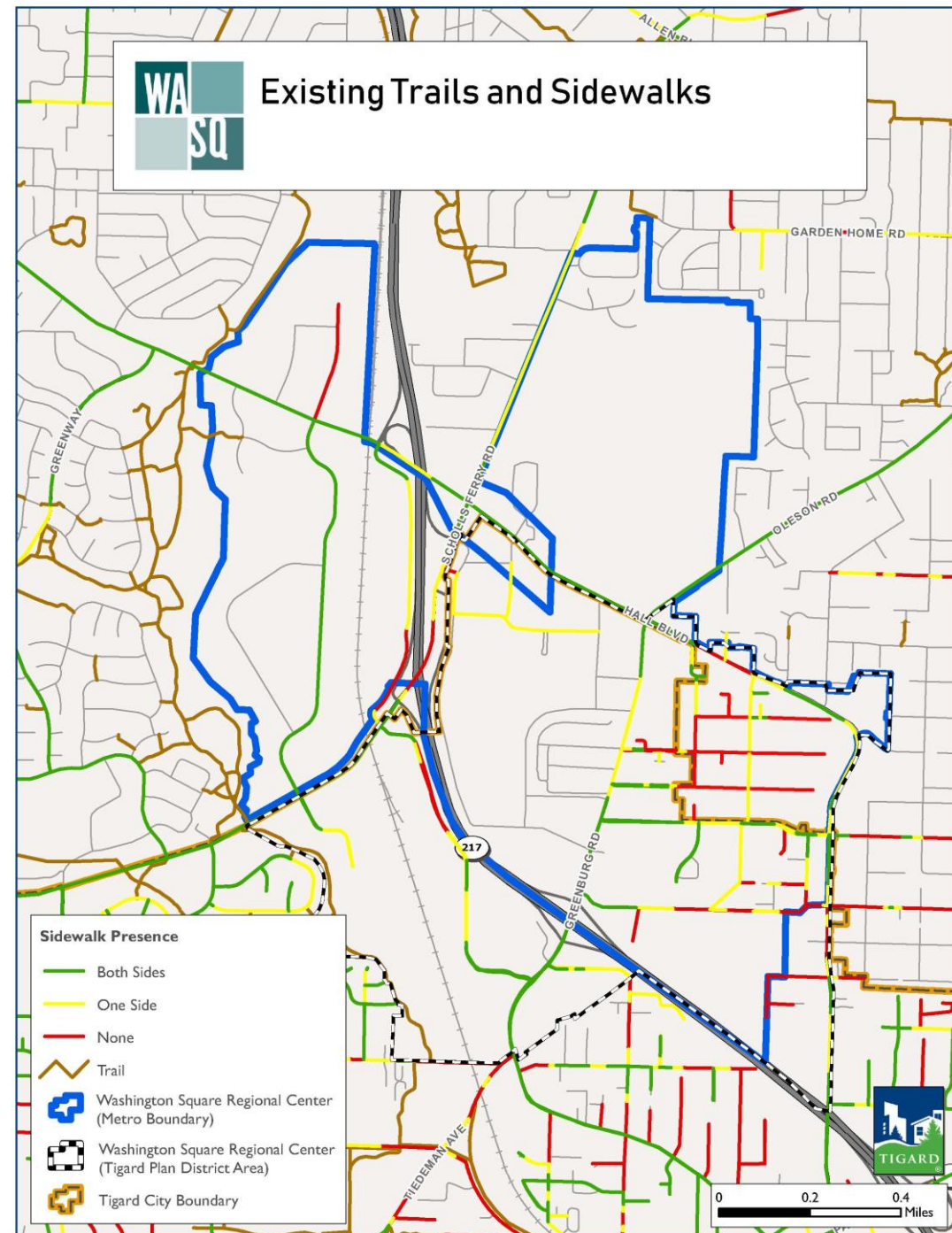
# Summary: Existing Conditions

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- Goals for people walking, bicycling, and taking transit grow out of Tigard's Complete Streets Policy:
  - **Connectivity**
  - **Safety**
  - **Comfort**
- Current system falls short of these goals:
  - Walking and bicycling trips within this area are not served by connected, comfortable facilities
  - Area is served by transit, but access for people walking or bicycling **to** transit is lacking

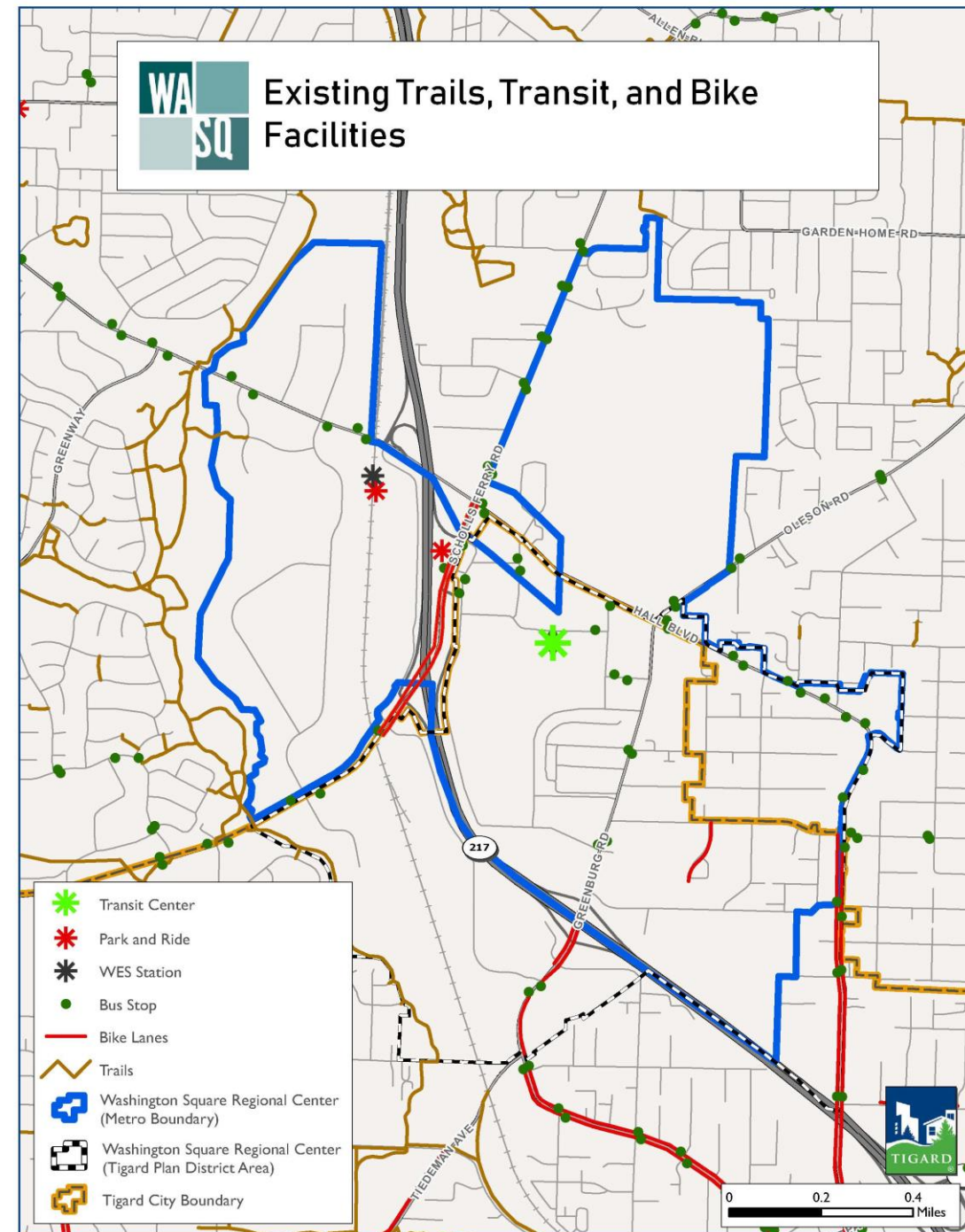
# Summary: Network Deficiencies

- Pedestrian network is disconnected, including sidewalk network incompleteness in several areas (see map at right)
- Most large streets have narrow sidewalks directly adjacent to multiple high-speed travel lanes
- Pedestrian facilities have ADA compliance issues



# Summary: Facility Deficiencies

- Many bike facilities are discontinuous, lack intersection treatments, and do not meet best practice design guidelines for comfort and safety
- North-south: Fanno Creek Trail is the only north-south route available for people walking and bicycling
- East-west: Travel is blocked by Hwy 217, railroad tracks, and the mall property; routes are widely spaced, lack adequate facilities, and likely require out of direction travel for people walking and biking





# Summary: Assessment of Planned Projects

- Planned projects address significant gaps and deficiencies within the network, however some would face implementation challenges due to coordination needs and complexity/cost
- Projects and designs should be further reviewed and potentially refined to ensure they adequately address the needs of non-vehicular travel, are feasible, and meet needs of potential future land uses



# Summary: Assessment of Planned Projects, cont.

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- Key network gaps to address, especially in light of desired redevelopment, include:
  - Crossings of Hwy 217
  - All ages and abilities bicycle and pedestrian infrastructure along Hall Blvd (including crossings)
  - All ages and abilities bicycle facilities on Greenburg Rd
  - Additional connection to the Fanno Creek Greenway

# Existing Conditions and Deficiencies

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# Overview

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- Deficiencies exist for all modes
- Major causes of deficiencies include:
  - Lack of street and trail connectivity
  - Barriers to network connectivity include Hwy 217, rail line, Fanno Creek, mall property
  - Lack of bicycle and pedestrian facilities
- Roadway design insensitive to pedestrian and bicycle comfort and safety
  - Multi-lane, high-volume, high-speed roadways
  - Intersection with long crossing distances, large corner radii, and lack of crossings



Example of intersection barrier: large corner radii / skewed intersections create uncomfortable crossings of side streets

*(Locations shown: Oak Street and 95<sup>th</sup> Ave; Locust Street at 90<sup>th</sup> Ave)*

# Barriers

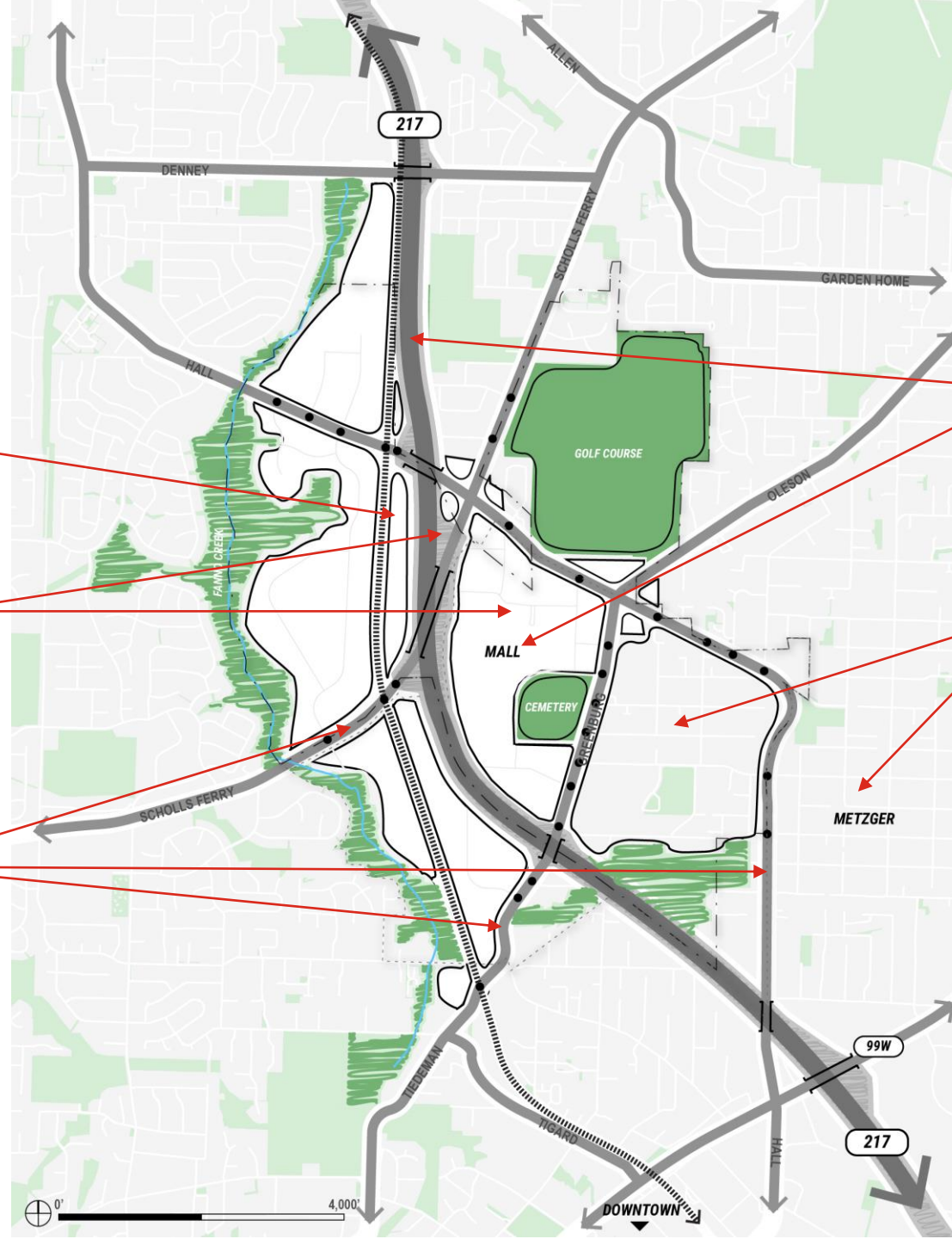
Difficult access to WES Station for people walking and biking

Limited access to and from Transit Center, Park & Ride for non-automobile users

Large roads with sidewalk gaps, minimal crossing opportunities, deficient bike lanes and intersection treatments

Highway 217 and Mall create large physical barriers

Minimal sidewalk network within Metzger neighborhood



# Conditions for People Walking

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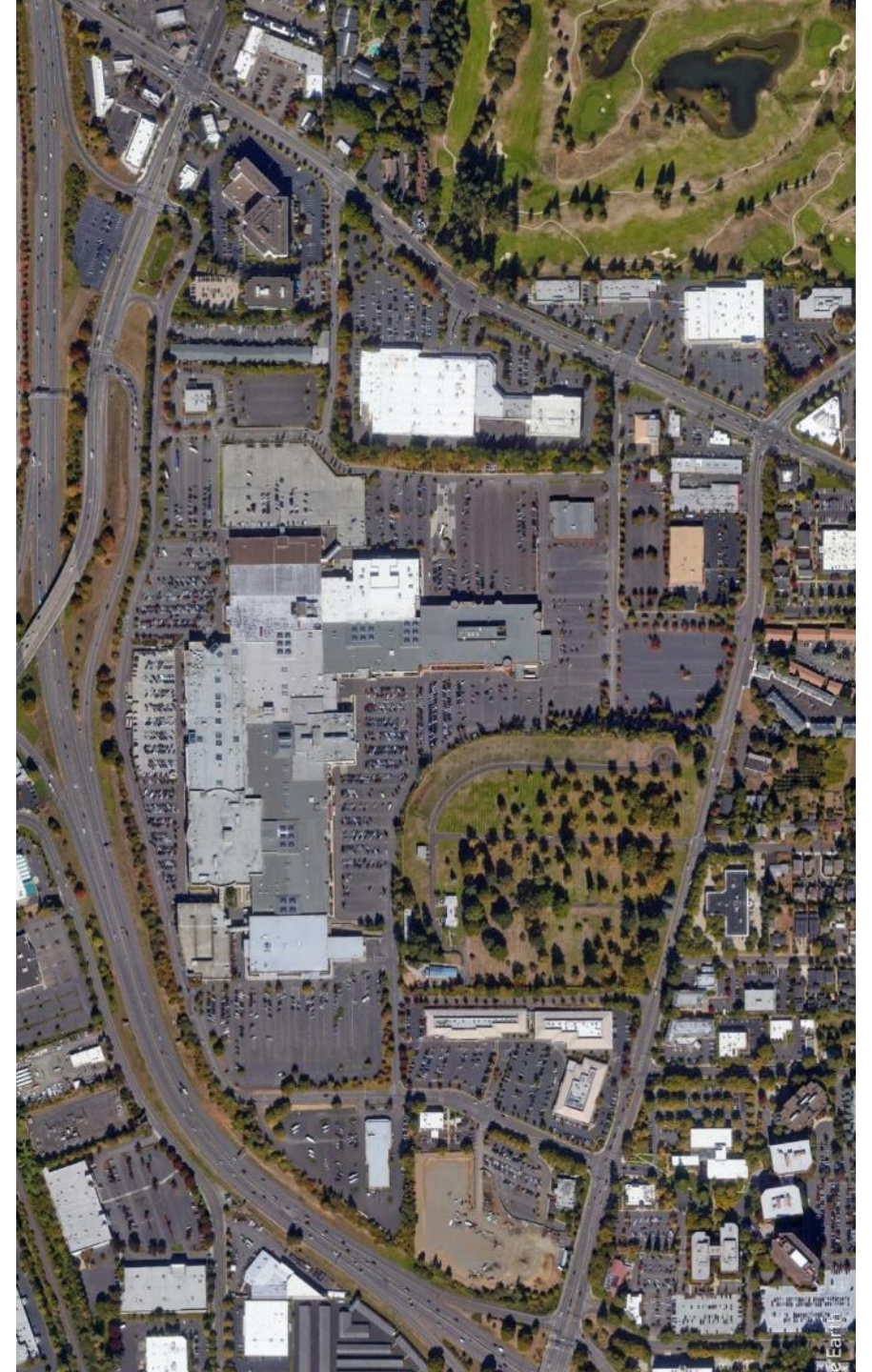


# PEOPLE WALKING

## *Washington Square Mall*

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- Few sidewalks within the Mall property
  - Only present along the buildings
  - No dedicated sidewalk or walking path within the parking lots



# PEOPLE WALKING

## *Washington Square Mall*

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- Internal streets are built to public street standards
- Internal road network lacks complete sidewalks:
  - No sidewalk on Washington Sq. Road and southern portion of Palmblad Road
  - Sidewalk on one side of Blum Road, northern portion of Palmblad Road, and Eliander Lane





# PEOPLE WALKING

## *Nimbus Ave*

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- Continuous sidewalks
- Limited stop control from Scholls Ferry Road to Hall Blvd
  - Lack of required stops creates an environment where drivers do not pay as much attention to potential crossing conflicts
  - One Rectangular Rapid Flashing Beacon at curve just south of Hall Blvd (pictured at right)



# PEOPLE WALKING

## Scholls Ferry Road



Two sidewalk gaps on the east side of the street:

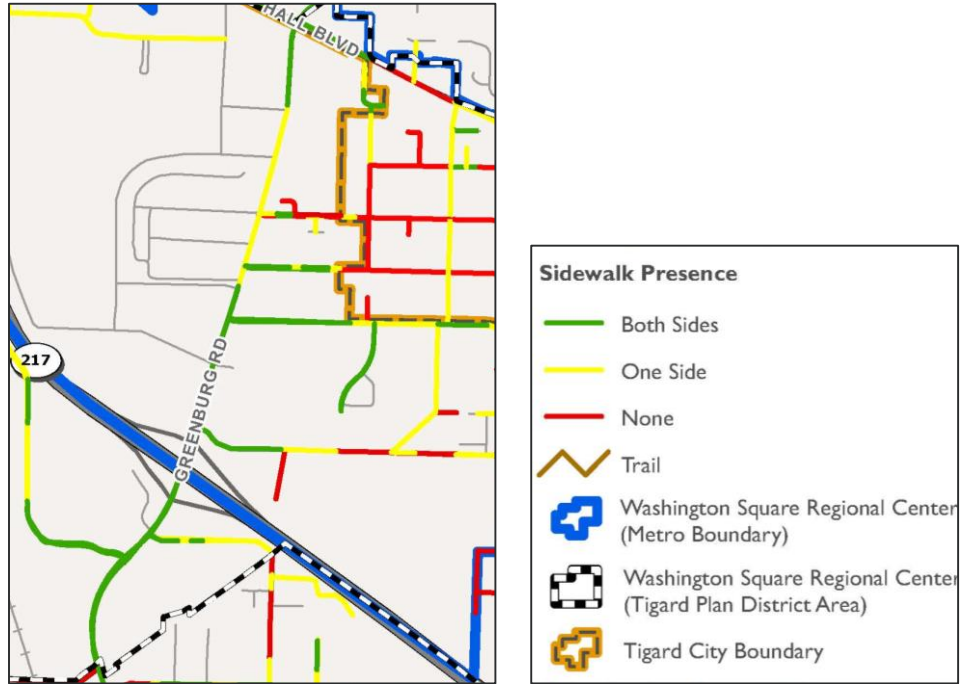
- At Crystal Street where the sidewalk transitions from west side to east side
- South of Homestead Lane in the otherwise continuous sidewalk



Parallel gaps exist in the sidewalk network on Scholls Ferry Rd and Cascade Ave

# PEOPLE WALKING

## *Greenburg Road*



Continuous sidewalk exists on at least one side of the street for entire length through WSRC. Marked crosswalks present where sidewalk transitions from one side to the other.



Interchange off-ramp from Hwy 217 is directly adjacent to Oak Street, creating several conflict points in a row, with Oak street featuring intersection geometry allowing high-speed turning movements hostile to pedestrian travel.

# PEOPLE WALKING

## *Hall Boulevard*

- Several sidewalk gaps and few crossing opportunities
- Project already planned and funded for improvements, including sidewalk infill
- Potential opportunity for connection to Metzger residential area via private bridge
  - Creates direct connection to bus stops on Hall Blvd, but needs upgrade for ADA compliance and discussion with current owner



# PEOPLE WALKING

## *Metzger Neighborhood – Locust Street*

- Some gaps with sidewalk on only one side, but generally, a continuous route is available and marked crosswalk facilitates transition between gaps
- Raised crosswalk and RRFB located at Locust and 90<sup>th</sup>
- Facilities not all designed to ADA standards
- Additional traffic calming present (speed humps)



# PEOPLE WALKING

## *Metzger Neighborhood – Oak Street*

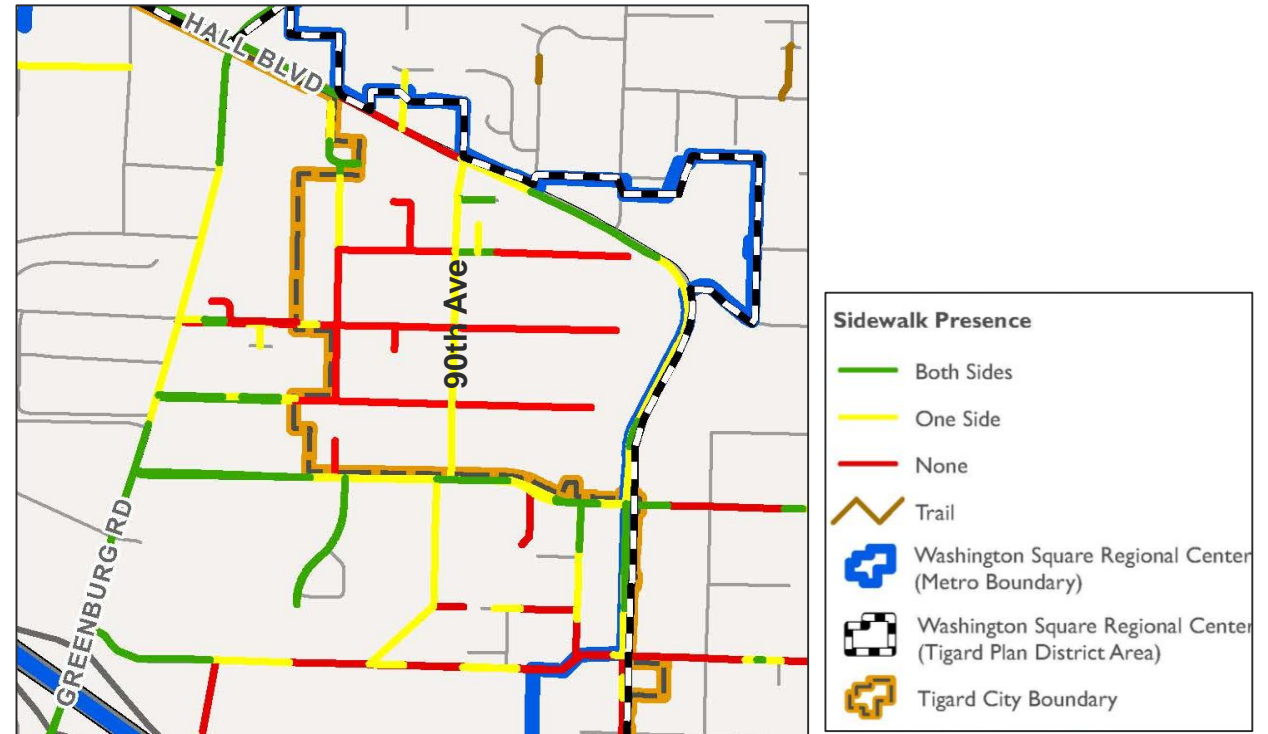
- No continuous route available for entire segment (some gaps result in no sidewalk on either side)
- Few crossing opportunities (one handmade "Children Cross Here" sign at 95th presumably for daycare/pre-K on the south side of Oak just west of 95th in office building)



# PEOPLE WALKING

## *Metzger Neighborhood – Residential Area*

- SW 90th provides a continuous sidewalk (it switches sides at one point, but curb ramps facilitate transition)
- Several "Drive like your kids live here" and "20 is Plenty" signs in this neighborhood



Nearly non-existent sidewalk network within the Metzger neighborhood

# Conditions for People Bicycling

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# PEOPLE BICYCLING

## *Major Roadways*

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- Standard Bike Lanes on:
  - Hall Boulevard
  - Scholls Ferry Road
  - Oleson Boulevard
  - Portion of Greenburg Road  
(intersections with signalized highway on/off-ramps)
- Not All Ages and Abilities infrastructure – primarily serving experienced riders



Existing conditions on Hall Blvd, approaching signalized intersection into Target parking lot

# PEOPLE BICYCLING

## *Major Roadways - Intersections*

- Bike lanes are striped up to intersections, but just denoted with a single stripe
- Where a dedicated right-turn lane is present, bike lane continues straight with a transition zone to position cars to the right of bicycles



Intersection of Hall Blvd and Greenburg Road showcasing typical intersection treatments

# PEOPLE BICYCLING

## *Minor Roadways*

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- Standard Bike Lanes on Locust Street
  - Eastbound lane drops approaching Hall Blvd intersection



Locust Street at 90<sup>th</sup>; nearly continuous bike lanes between Greenburg Road and Hall Blvd

# Conditions for People Bicycling + Walking: Fanno Creek Trail

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# PEOPLE WALKING & BICYCLING

## Fanno Creek Trail

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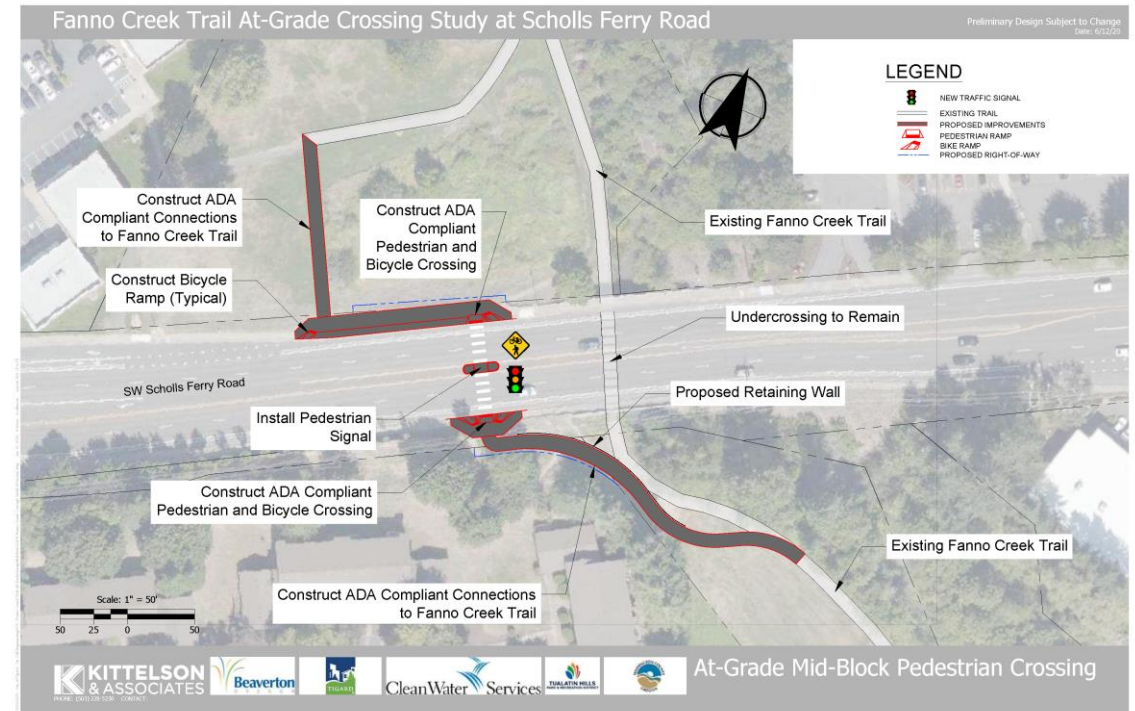
- Runs north-south along the western edge of the WSRC boundary.
- The FCT intersects with the roadway network at only one location, Hall Blvd, between SW Greenway Blvd and SW Creekside Place. This crossing is controlled by a Pedestrian Hybrid Beacon (aka HAWK). Crossing design is challenging for operating a bicycle.



# PEOPLE WALKING & BICYCLING

## Fanno Creek Trail

- Crosses WSRC boundary at the southern end via an under crossing of Scholls Ferry Rd west of Nimbus Ave and does not connect back to the street network until reaching N. Dakota Ave to the south
- N. Dakota Ave intersects with Tiedeman Road and then connects to Greenburg Ave providing a route back into the WSRC boundary.
- One-side sidewalk and no bicycle facilities on N. Dakota Ave



Planned/funded at-grade crossing of FCT at Scholls Ferry will reduce need for current out of direction travel to connect to street grid south of WSRC Boundary

# Conditions for People Taking Transit

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# PEOPLE TAKING TRANSIT

## Overview

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- Transit serving the study area provides extensive geographic reach throughout Washington County as well as to Portland and Wilsonville.
- However, pedestrian access to transit stops and centers is hampered by lack of facilities and street connectivity.

Area Bus Stops



Hall Blvd



Greenburg Road



Scholls Ferry Road



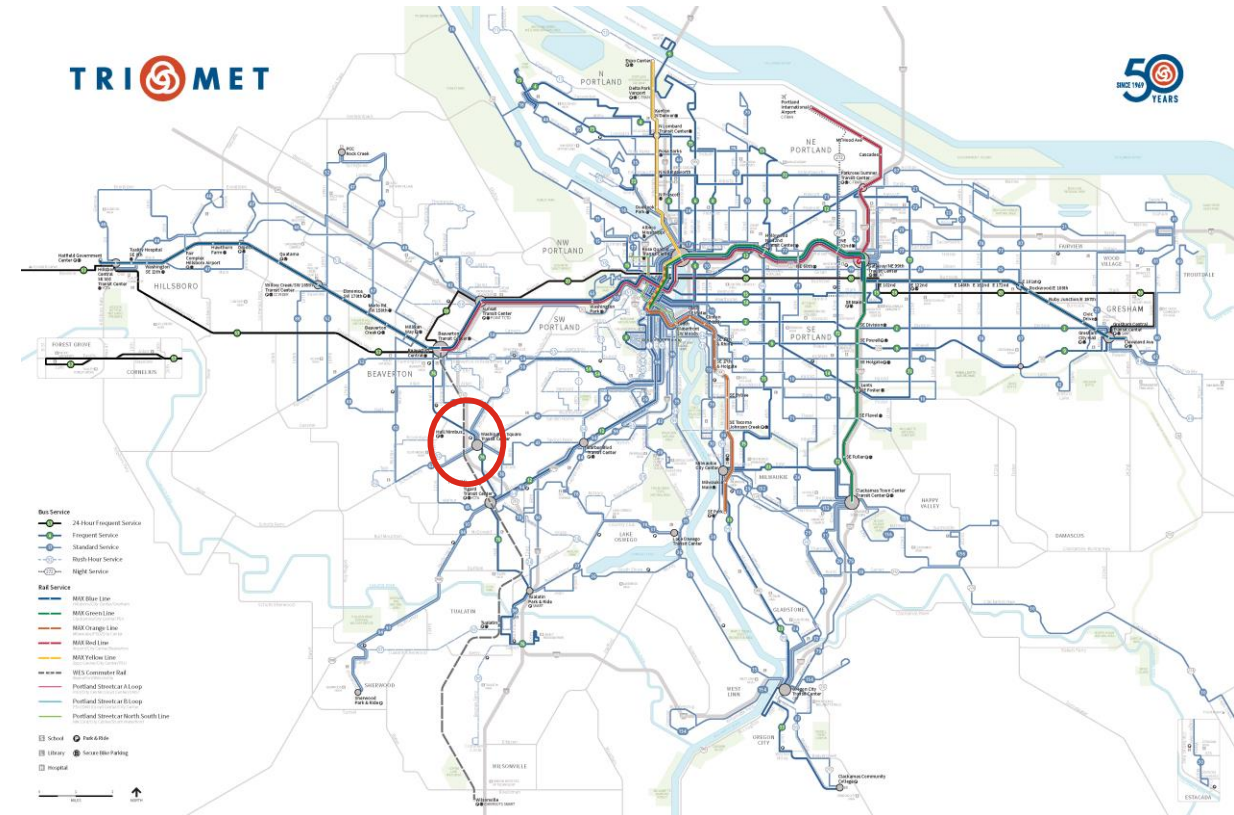
# PEOPLE TAKING TRANSIT

## *TriMet Lines Accessing WSRC*

- 43\* - Taylors Ferry Road, Portland to WS TC
- 45 - Garden Home, Portland City Center to Tigard TC
- 56\*\* - Scholls Ferry Road, Portland City Center to WS TC
- 62 - Murry Blvd, Sunset TC to WS TC
- 76\*\* - Hall/Greenburg - Beaverton TC to Tualatin
- 78 - Denney/Kerr Pkwy, Beaverton TC to Lake Oswego TC
- 92\* - South Beaverton Express, Portland City Center to Murrayhill
- WES Commuter Rail, Beaverton to Wilsonville

*\*Weekdays Service Only*

*\*\*Frequent Service Route*



*Circle indicates location of WSRC within TriMet system*

# PEOPLE TAKING TRANSIT

## *Transit Center and Park & Ride*

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- Not adjacent to each other and not a comfortable connection for people walking or biking to get to and from the two locations
- No true pedestrian facilities to/from the park and ride. No bike parking/storage access, which is often present at P&Rs



# PEOPLE TAKING TRANSIT

## *Transit Center and Park & Ride*

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- Transit Center is functionally just a set of bus stops within the Mall parking lot. Few amenities for drivers or users and no restrooms other than those within the Mall (not available 24/7, not adjacent)
- No bike or pedestrian infrastructure to access the TC. No dedicated walking path through the parking lot to/from any roadway connecting to the TC



Transit Center located within Washington Square Mall parking lot

# PEOPLE TAKING TRANSIT

## *WES Station*

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- Disconnected from the main TC and Park & Ride
- Poorly Accessible
- Minimal vehicle parking at station, thought adjacent to large surface lots
- Short and long term bike parking is at intersection with Hall Blvd, approx. 350' from WES Platform
- Two dedicated bike spaces/racks per train car. Up to 4 additional bikes can park in the priority seating zones (2 per zone) if they are not being used or needed by a priority user.



# Assessment of Planned Projects

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# Planned Projects

- The projects on the following pages come from the Tigard Transportation System Plan (TSP).
- The Tigard TSP is scheduled for an update and it is anticipated that in their current form, or with the recommendations provided here, these projects will be included in the update.
- Beaverton will include new active transportation plan recommendations in its upcoming TSP update.



# PLANNED PROJECTS

## Roadway Widening – Major Roads

*Note: Projects require coordination ODOT and application of Blueprint for Urban Design*

TIGARD PROJECT		PRELIMINARY RECOMMENDATIONS
45a (99W to Oleson)	Widen to 2/3 lanes; build sidewalks and bike lanes; safety improvements	Plans and concept designs should be reviewed to ensure they include: <ul style="list-style-type: none"><li>-<b>Additional crosswalks</b>, with particular focus on access to <b>Metzger Park</b> and TriMet <b>bus stops</b>.</li><li>-Concept for how bikes will <b>access the transit center</b> and WES beyond Oleson to the west.</li><li>-<b>Sidewalks</b> built to high standards, providing buffer from the roadway if feasible.</li></ul>
85 (west of Oleson)	Add an eastbound through lane on Hall Boulevard from Pamelad Road to Greenburg Road that removes the right-turn lane drop at Pamelad Road and ends as a right-turn lane at Greenburg Road. This completes the five-lane section on Hall Boulevard from Scholls Ferry Road to Greenburg Road	

# PLANNED PROJECTS

## Roadway Widening – Major Roads

*Note: Projects require coordination ODOT and application of Blueprint for Urban Design*

TIGARD PROJECT		PRELIMINARY RECOMMENDATIONS
47a (Hwy 217 to 121 <sup>st</sup> Avenue)	Widen to 7 lanes between Highway 217 and 121st Avenue; improve intersections.	Plans and concept designs should be reviewed to ensure they: <ul style="list-style-type: none"><li>- Do not inherently create additional issues for the pedestrian realm</li><li>-Include appropriate <b>intersection treatments</b> to minimize crash risk and severity.</li><li>-Include <b>appropriate bike facility</b> to maximize ridership</li></ul>
82 (Hwy 217 NB On-ramp/ Scholls Ferry Road/ Washington Square Road Interchange Improvement)	Intersection Improvements	



# PLANNED PROJECTS

## Greenburg Road Widening and Intersections

*Note: Projects require coordination with Washington County*

TIGARD PROJECT		RECOMMENDED CHANGES
<p>41 (Adjacent to cemetery)</p> <p>B13 (Hall Blvd to Cascade Ave)</p>	<p>Widen to 4 lanes</p> <p>Install bike lanes on both sides of the street from Hall Boulevard to Cascade Avenue</p>	<p>-Projects are currently noted as two distinct projects. It is recommended that they be combined and consider <b>sidewalk construction</b>.</p> <p>-Plans and concept designs should be reviewed to ensure they provide the <b>appropriate bike facility</b> based on expected ridership (i.e. protected, sidewalk level, etc.).</p>
<p>56 (Greenburg/Oleson/Hall)</p> <p>58 (Greenburg/Washington Sq. Rd)</p> <p>93 (Greenburg/Hwy 217)</p>	<p>Intersection Improvements</p> <p>Install Boulevard treatment at Greenburg/ Washington Square Road</p> <p>Add a right-turn lane from Greenburg to SB Highway 217</p>	<p>-Intersection concept design for Greenburg/Oleson at Hall should be <b>synced</b> with the respective widening projects to <b>ensure cohesive design</b>.</p> <p>-Plans and concept designs should be reviewed and designed in accordance with the planned <b>bike facilities</b></p>

# PLANNED PROJECTS

## Network Balancing

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TIGARD PROJECT	RECOMMENDED CHANGES
<p>24 Oak / Lincoln / Locust Street collector system (<i>Washington Square Connectivity Improvements</i>)</p>	<p>Improvements to distribute east/west traffic between Locust and Oak Streets and improve accessibility to Lincoln Center commercial district. Includes Lincoln Street extension to Oak Street. (Lincoln Street portion anticipated to be constructed by development)</p> <ul style="list-style-type: none"><li>- Consider project in light of <b>Complete Streets Policy</b> and appropriate infrastructure to meet those goals, including access into/out of neighborhood.</li><li>-The intersection of Oak/Greenburg is currently right-in/right-out and may need to stay that way given proximity to Hwy 217 interchange; that <b>will impact how the network can be distributed.</b></li><li>-A <b>crosswalk on Oak at 95<sup>th</sup></b> should be considered; there was a hand-written sign saying “Children cross here” despite no sidewalk and poor sight lines.</li></ul> <p><i>**See later slide discussing Washington Square Loop Trail</i></p>

# PLANNED PROJECTS

## Overcrossings

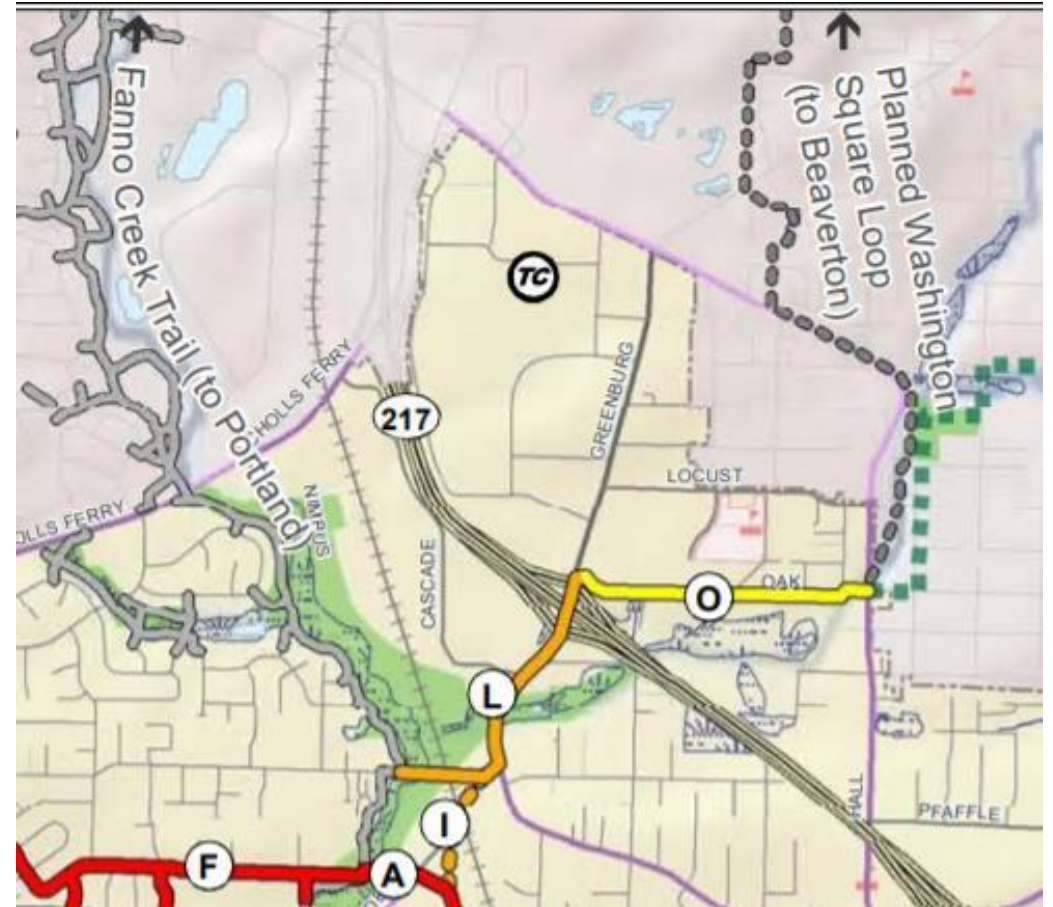
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TIGARD PROJECT		RECOMMENDED CHANGES
22 (Hwy 217 over-crossing at Washington Square Regional Center Cascade Plaza)	Provide a new all-modes overcrossing connection from Nimbus to Locust	<ul style="list-style-type: none"><li>- Continue evaluation of overcrossings holistically in context of overall vision for WSRC in light of:<ul style="list-style-type: none"><li>- Locations relative to potential street network recommendations for land use scenarios</li><li>- Locations relative to existing and planned active transportation infrastructure in adjacent jurisdictions</li><li>- Need for coordination with adjacent jurisdictions and ODOT</li></ul></li></ul>
M7 (Washington Square Regional Center Highway 217 Pedestrian/Bike over crossing)	New pedestrian and bicycle bridge over Hwy 217 from Nimbus Avenue to Scholls Ferry Road <i>Alignment updated based on Greenway Trails Plan</i>	

# PLANNED PROJECTS

## Washington Square Loop Trail

- **Note:** This project only appears in the Tigard TSP and not in other jurisdictions' plans who would likely need coordination (THPRD, Beaverton, Washington County)



Projects “L” and “O” in the Tigard Trail System Master Plan comprise the Loop Trail through WSRC in Tigard.

# PLANNED PROJECTS

## Washington Square Loop Trail

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PROJECT		RECOMMENDED CHANGES
M9 (Washington Square Regional Center Trail)	Complete system gap in Washington Square Loop Trail, from Hall Boulevard to Highway 217	<ul style="list-style-type: none"><li>- Current planned alignment uses bike lanes on Greenburg to cross Hwy 217 and <b>does not require a new overcrossing</b>; would require extensive improvement to make it friendly for all path users.</li><li>- <b>Alternate alignment</b> uses Oak until 95<sup>th</sup>, where it turns south and crosses Hwy 217 with a <b>new overcrossing</b> at the 95<sup>th</sup> Ave alignment and connects to N. Dakota Avenue which ties into the Fanno Creek Trail and other future bike/ped improvements.</li><li>- Alignment could also be continued further south along Grant Ave into the City of Tigard.</li></ul>

# PLANNED PROJECTS

## Transit Improvements

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### Potential Improvements Identified by TriMet

- A long-term lease for the transit center
- Bathroom and break room for operators laying over at the transit center.
- New concrete through the transit center.
- Dedicate up to 50 spaces for park and riders, eliminating need for Progress P&R, which ODOT owns, but doesn't maintain.
- Re-establishment of the eastbound bus stop on Blum Rd. at the end of the parking row just east of the transit center.
- Paint bus priority lanes on Washington Square Rd. in both directions to avoid traffic.
- Access management on Blum Rd.

*Note: These projects are not included in the TSP but should be considered and referenced as other projects come online*

- **TriMet's Southwest Service Enhancement Plan**

Will bring some service improvements to lines that have stops within the study area

### ASSESSMENT & RECOMMENDATIONS

- Transit improvements on and through the Washington Square Mall property should be considered and evaluated during the development of any new land use scenarios in close coordination with TriMet and the property owner.

# PLANNED PROJECTS

## Other Projects

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*Note: These projects are not included in the TSP but should be considered and referenced as other projects come online*

### Safe Routes to School: Locust and 90<sup>th</sup> Intersection

- The intersection is offset and sidewalk gaps and crossing improvements are needed to ensure access in all directions and improve sight lines
- Application for ODOT Grant to fund the design and construction of these improvements is in progress

# PLANNED PROJECTS

## Additional Considerations

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- Additional projects and coordination with developers of private property will be needed to adequately address multimodal deficiencies



Redevelopment of the Sears site is adding multimodal connections to the WSRC



# PLANNED PROJECTS

## Additional Considerations

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- Highway 217 is included in upcoming Metro Transportation Measure and will have bearing on the overall transportation system in the area
- Additional study of multimodal facilities parallel to Hwy 217 is also included in this proposed project



### Planning and design for future needs

- developing better, safer transportation options along Highway 217 and parallel or adjacent roadways
- community engagement to identify local needs and priorities



### Community stability

- strategies to prevent displacement of families and businesses