




PAC Meeting #4

January 26, 2021


Meeting Purpose and Agenda Review


ITEM	LEAD PRESENTER
Welcome, Meeting Purpose, Agenda Review	Brett Setterfield, Clackamas County
Future Service Network and Priorities	Krista Purser, Kittelson
Infrastructure Plan and Land Use Strategies	Susie Wright, Kittelson
Funding, Implementation, and Monitoring Program	Susie
Next Steps, Final Questions, and Adjourn	Brett


2020


 1 - Project Management | **Throughout**


 2 – Public Engagement Plan and Existing Conditions **Winter**

 3 – Need Analysis | **Summer**

 4 - Future Service Opportunities and Evaluation | **Fall**

 5 – Draft Clackamas County TDP | **Winter**

 6 – Final Clackamas County TDP | **Winter**

 7 – TDP Adoption | **Winter**

2021

Project Tasks and Schedule

Since our Last Meeting...

- Your feedback on the recommended routing and timeframes was incorporated
- The second online survey closed and feedback was reviewed and incorporated
- The Project Management Team finished their last round on CPO outreach on transit routing
- The Draft TDP document was compiled
- The Project Management Team presented in front of C4 on the TDP

TDP Contents

- Summarizes project process and public involvement
- Presents key findings from previous memos:
 - Background Information
 - Needs Summary
 - Service Opportunities
 - Network and Prioritization
- New content includes:
 - Funding opportunities for each recommendation
 - Implementation steps and parties to include in discussion
 - Monitoring program establishing timeline for evaluating previously-established performance measures

Future Service Network and Prioritization (Recap)

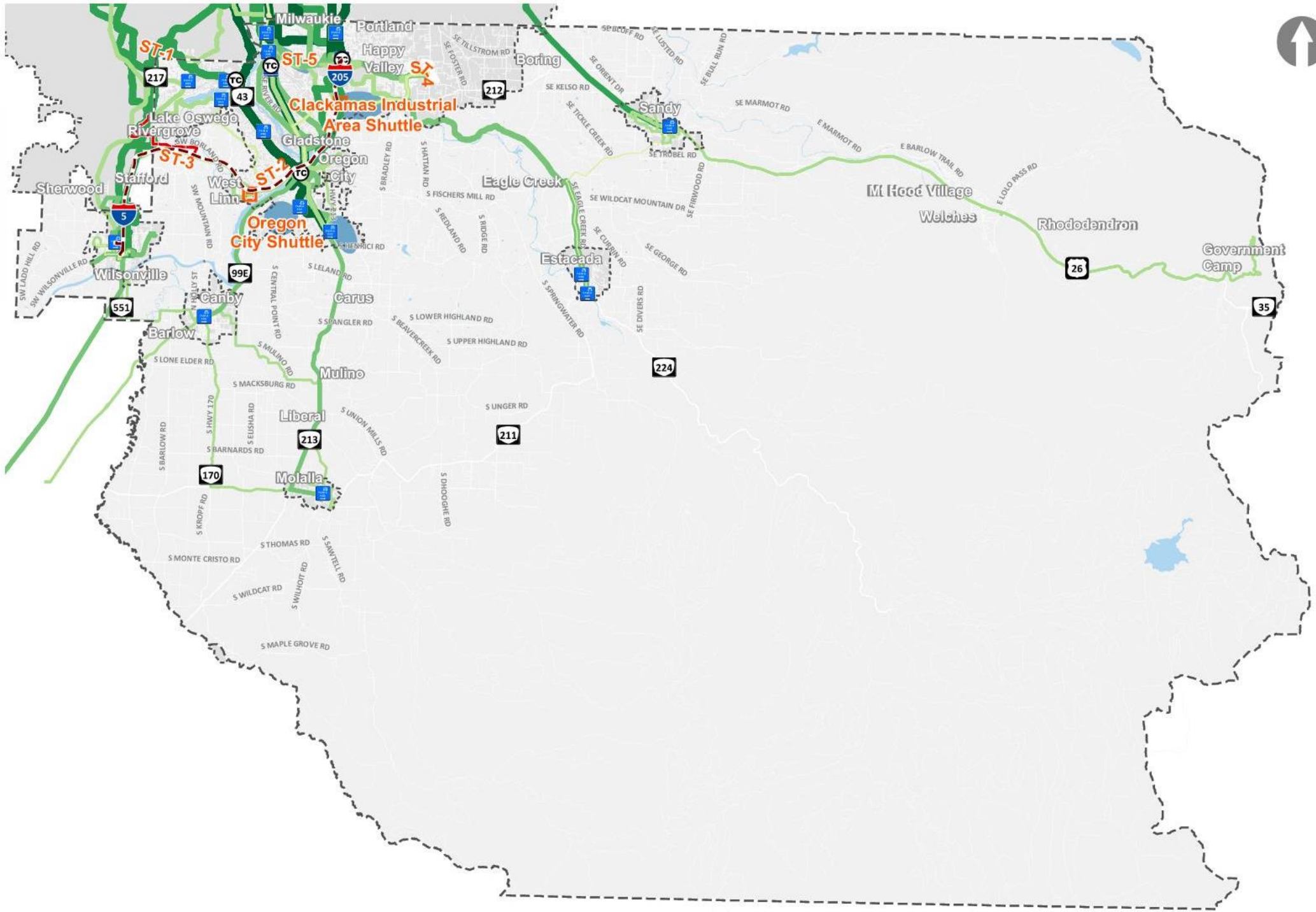


Short-Term Recommendations

Changes

- The Clackamas Industrial Area and Oregon City shuttles have been removed

ID	Corridor or Area	Runs per Day	Additional Runs	Recommendation
ST-1	Highway 43: Oregon City to Portland	47	48	Implement 15-minute service on Line 35, new service on Rosemont Road
ST-2	I-205: Oregon City to I-5 Interchange	0	47	Implement hourly service on Borland Road and hourly express service on I-105 (about 28 runs per day combined)
ST-3	East Tualatin	0	8	Hourly service provided by Borland Road route
ST-4	Jennings Lodge-Oak Grove-Oatfield	0	16	Jennings Lodge served by new Happy Valley-Oregon City service (about 8 runs per day)
ST-5	Milwaukie Industrial Area	33	31	Implement hourly shuttle service Expand Line 152 service hours (about 12 runs per day)



Short-Term Recommendations: Routes

- 8 or Fewer Runs per Day
- 9 - 16 Runs per Day
- 17 - 32 Runs per Day
- 33 - 64 Runs per Day
- 65 or More Runs per Day

Short-Term Recommendations: Areas

- 9 - 16 Runs per Day

Planned Services

- - - Wilsonville to Clackamas Town Center
- - - Tualatin Shuttle (New)
- Mobility Hub
- TC Transit Centers
- PR Park and ride lots
- Urban Growth Boundaries
- County Boundary





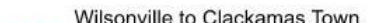






**Short-Term Recommendations:
Routes**

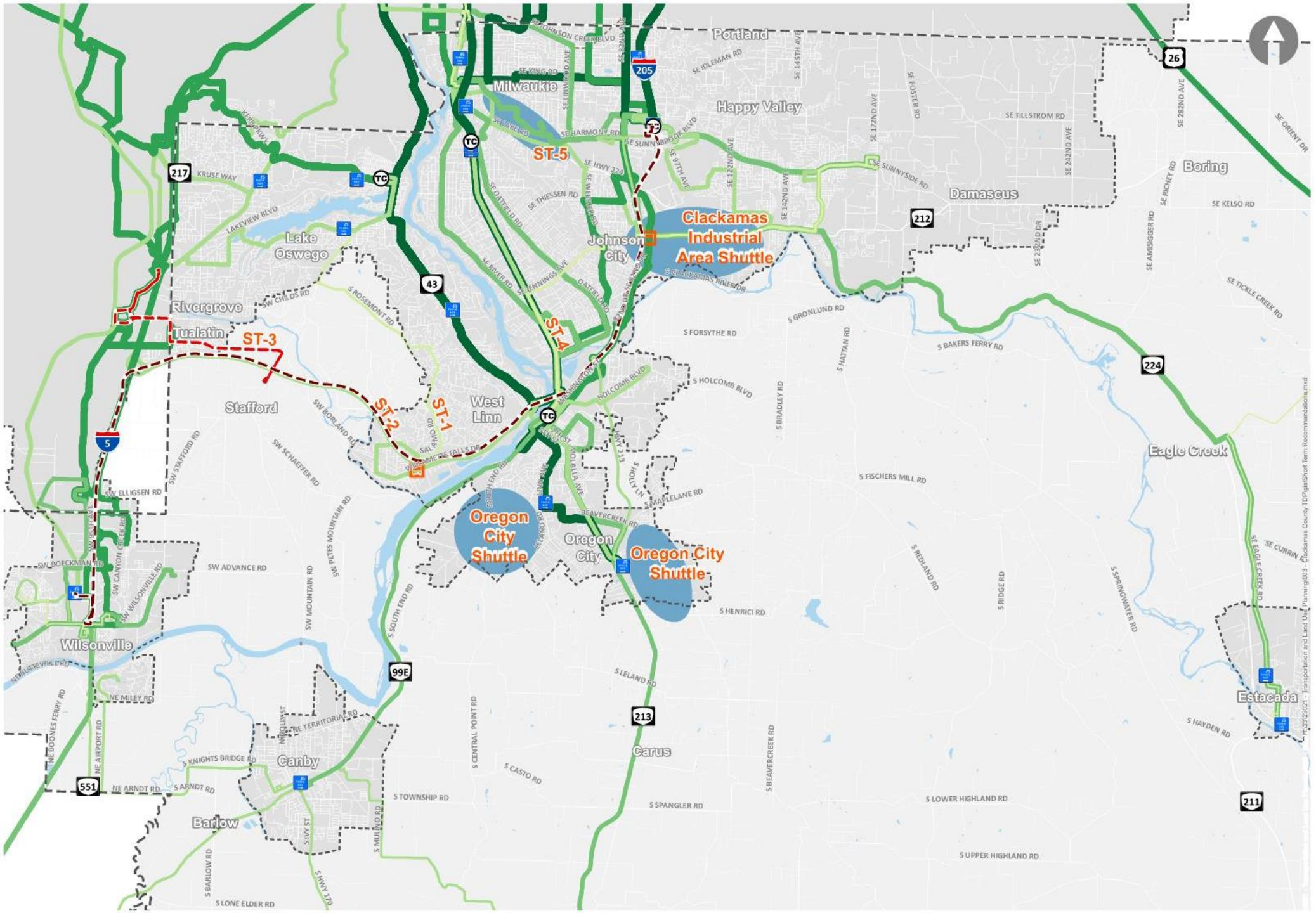
-  8 or Fewer Runs per Day
-  9 - 16 Runs per Day
-  17 - 32 Runs per Day
-  33 - 64 Runs per Day
-  65 or More Runs per Day

**Short-Term Recommendations:
Areas**

-  9 - 16 Runs per Day

Planned Services

-  Wilsonville to Clackamas Town Center
-  Tualatin Shuttle (New)
-  Mobility Hub
-  Transit Centers
-  Park and ride lots
-  Urban Growth Boundaries
-  County Boundary



Clackamas County TDP/Map/Short Term Recommendations.mxd
11/23/2021 1:11:38 PM
Transportation and Land Use Planning

**Short-Term Recommendations:
Routes**

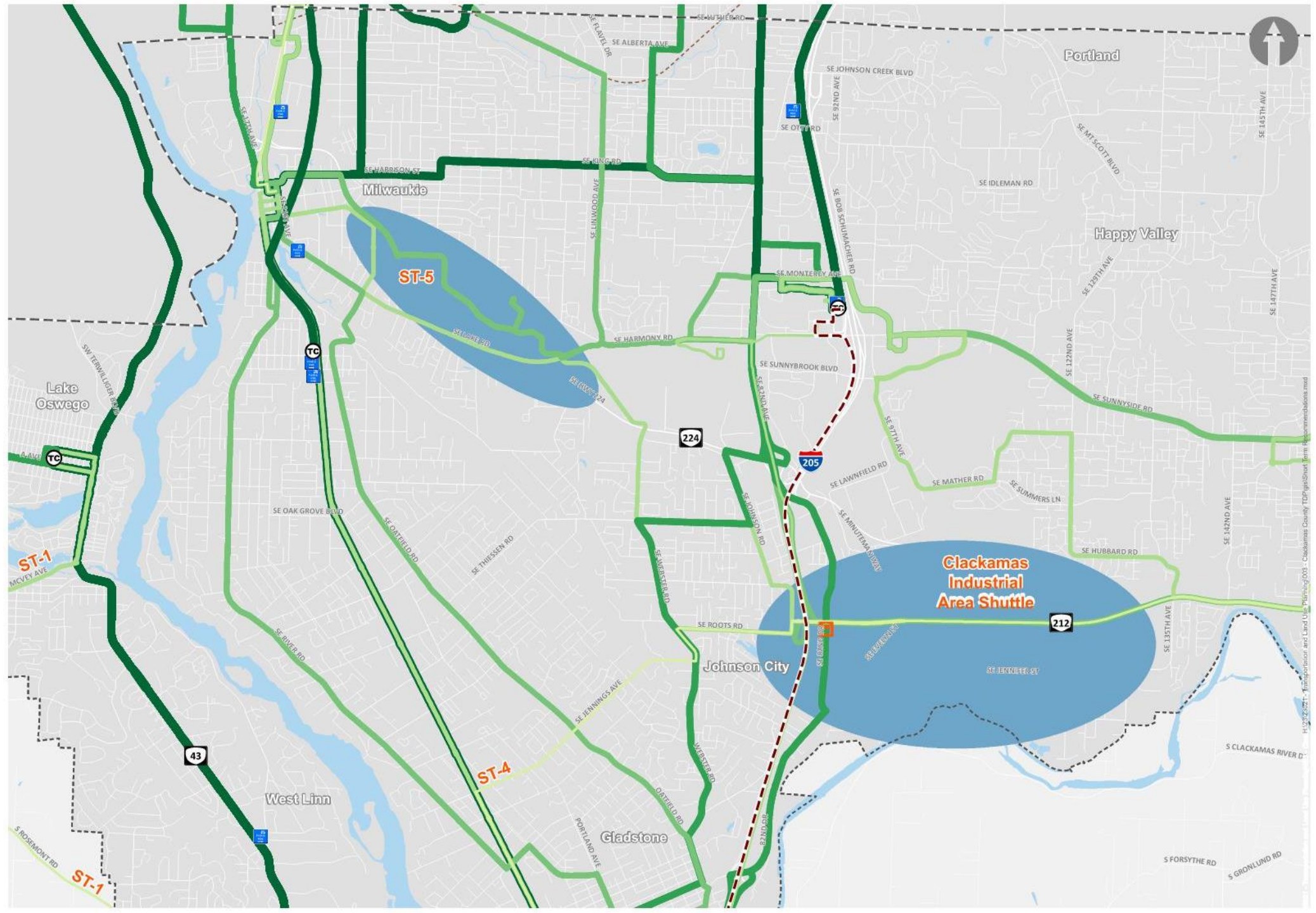
- 8 or Fewer Runs per Day
- 9 - 16 Runs per Day
- 17 - 32 Runs per Day
- 33 - 64 Runs per Day
- 65 or More Runs per Day

**Short-Term Recommendations:
Areas**

- + 9 - 16 Runs per Day

Planned Services

- - - Wilsonville to Clackamas Town Center
- - - Tualatin Shuttle (New)
- Mobility Hub
- TC Transit Centers
- Park and ride lots
- Urban Growth Boundaries
- County Boundary



H:\2024\GIS\Transit\GIS\Transit\005 - Clackamas County TC\Project\Short Term Recommendations.mxd

Medium-Term Recommendations

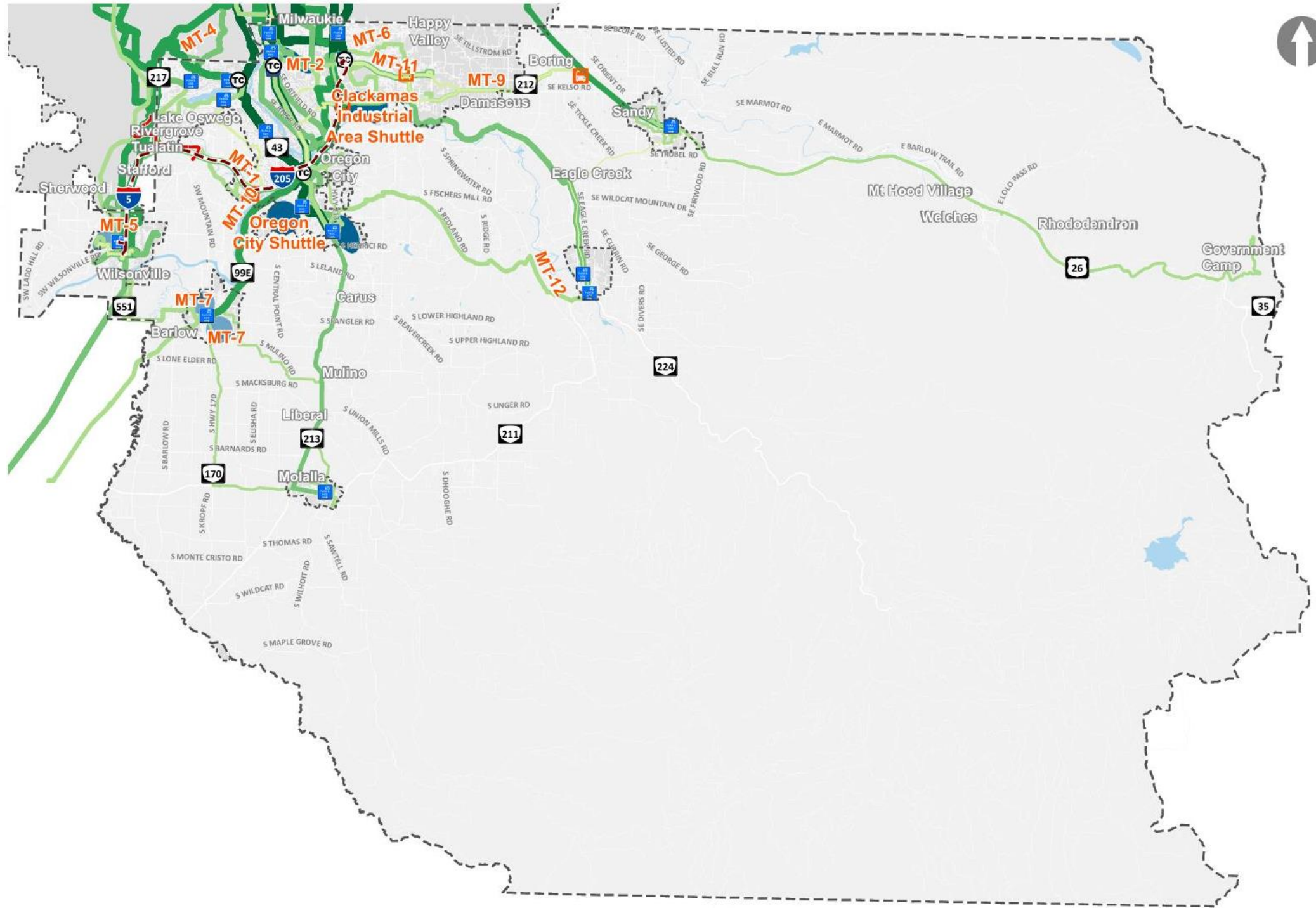
Changes

- The Estacada-Redland-Oregon City route was upgraded to a medium-term recommendation
- Nominal changes in number of runs to I-205: Oregon City to I-5, Wilsonville, Happy Valley, Canby, and Damascus

ID	Corridor or Area	Runs per Day Prior to Mid-Term	Additional Runs	Recommendation
MT-1	I-205: Oregon City to I-5 Interchange	14	33	Evaluate service Consider increased service span and frequency to add runs to service
MT-2	Milwaukie Industrial Area	45	19	
MT-3	I-205: Oregon City to Clackamas Town Center	69	18	Implement 20-minute headways on Line 79 (about 50 runs per day)
MT-4	West Lake Oswego/Kruse Way	12	20	Increase frequency to 30 minutes during AM peak hour (about 10 runs per day)

Medium-Term Recommendations

ID	Corridor or Area	Runs per Day	Additional Runs	Recommendation
MT-5	Wilsonville (West Wilsonville)	16	19	Expand service hours beyond peak periods (about 10 runs per day)
MT-6	Happy Valley	16	19	Establish hourly service (about 10 runs per day)
MT-7	Canby (North and South)	16	19	Implement local service as established in CAT's Master Plan (about 10 runs per day)
MT-8	Jennings Lodge-Oak Grove-Oatfield	8	8	Establish hourly service from Oak Grove (about 8 runs per day)
MT-9	Damascus	0	19	Establish hourly service (about 10 runs per day)
	Boring	0	8	Hourly service provided by Damascus deviated fixed-route
MT-10	Highway 99E: Oregon City to Canby	26	14	Establish 30-minute headways during the entire day (about 8 runs per day)
MT-11	Highway 212: I-205 to US 26	0	14	Establish hourly service (8 runs per day)
MT-12	Estacada-Redland-Oregon City	0	11	Establish hourly service focused on CCC schedule (about 11 runs per day)



Medium-Term Recommendations: Routes

- 8 or Fewer Runs per Day
- 9 - 16 Runs per Day
- 17 - 32 Runs per Day
- 33 - 64 Runs per Day
- 65 or More Runs per Day

Medium-Term Recommendations: Areas

- + 9 - 16 Runs per Day
- + 17 - 32 Runs per Day

Planned Services

- - - Wilsonville to Clackamas Town Center
- - - Tualatin Shuttle (New)
- Mobility Hub
- Transit Centers
- Park and ride lots
- Urban Growth Boundaries
- County Boundary





**Medium-Term Recommendations:
Routes**

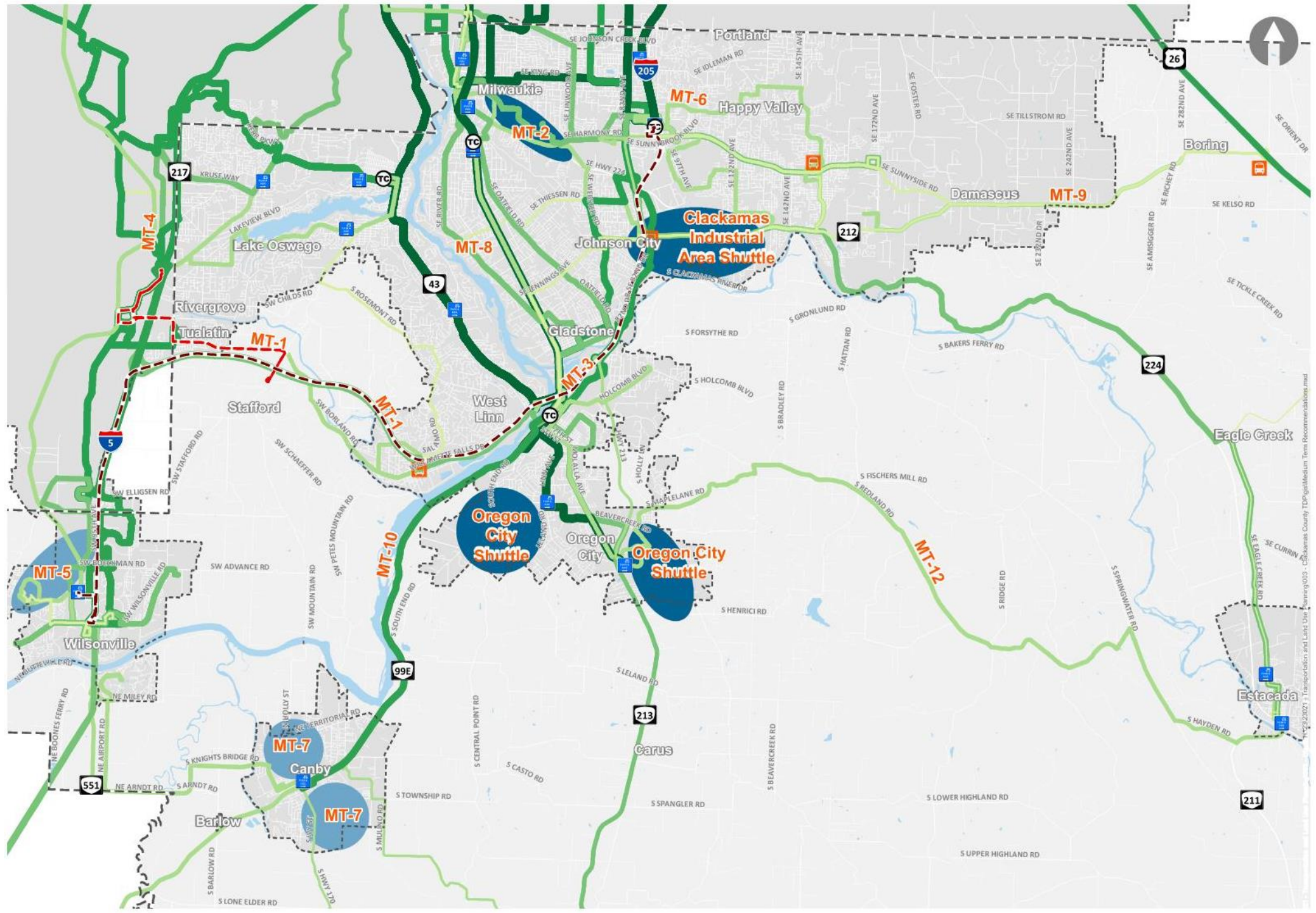
- 8 or Fewer Runs per Day
- 9 - 16 Runs per Day
- 17 - 32 Runs per Day
- 33 - 64 Runs per Day
- 65 or More Runs per Day

**Medium-Term Recommendations:
Areas**

- 9 - 16 Runs per Day
- 17 - 32 Runs per Day

Planned Services

- Wilsonville to Clackamas Town Center
- Tualatin Shuttle (New)
- Mobility Hub
- Transit Centers
- Park and ride lots
- Urban Growth Boundaries
- County Boundary



1/12/2023 7: Transportation and Land Use Planning 03 - Clackamas County TPO Medium Term Recommendations.mxd



Portland

MT-6 MT-6

Happy Valley

MT-11

MT-6

Clackamas Industrial Area Shuttle

Johnson City

MT-3

MT-8

MT-2

224

TC

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

SE OAK GROVE BLVD

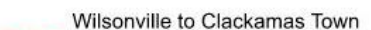

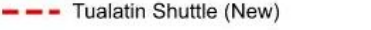
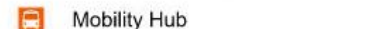
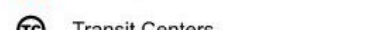

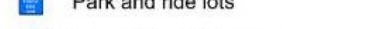
Medium-Term Recommendations: Routes

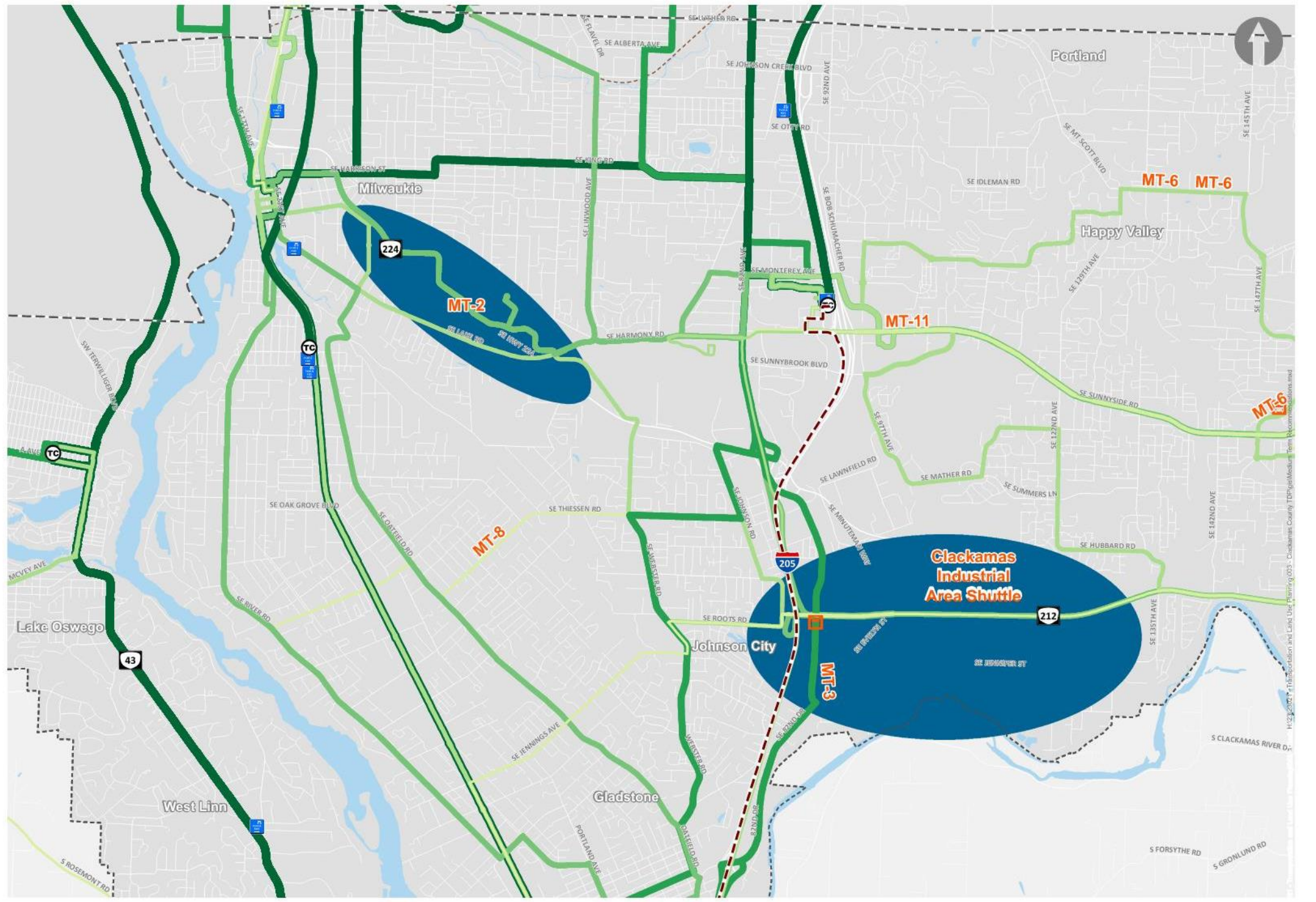
-  8 or Fewer Runs per Day
-  9 - 16 Runs per Day
-  17 - 32 Runs per Day
-  33 - 64 Runs per Day
-  65 or More Runs per Day

Medium-Term Recommendations: Areas

-  9 - 16 Runs per Day
-  17 - 32 Runs per Day

Planned Services

-  Wilsonville to Clackamas Town Center
-  Tualatin Shuttle (New)
-  Mobility Hub
-  Transit Centers
-  Park and ride lots
-  Urban Growth Boundaries
-  County Boundary



Map prepared by Transportation and Land Use Planning, Clackamas County, 2023. All rights reserved. For more information, visit <https://www.clackamascounty.gov/transportation>.

Long-Term Recommendations

Changes

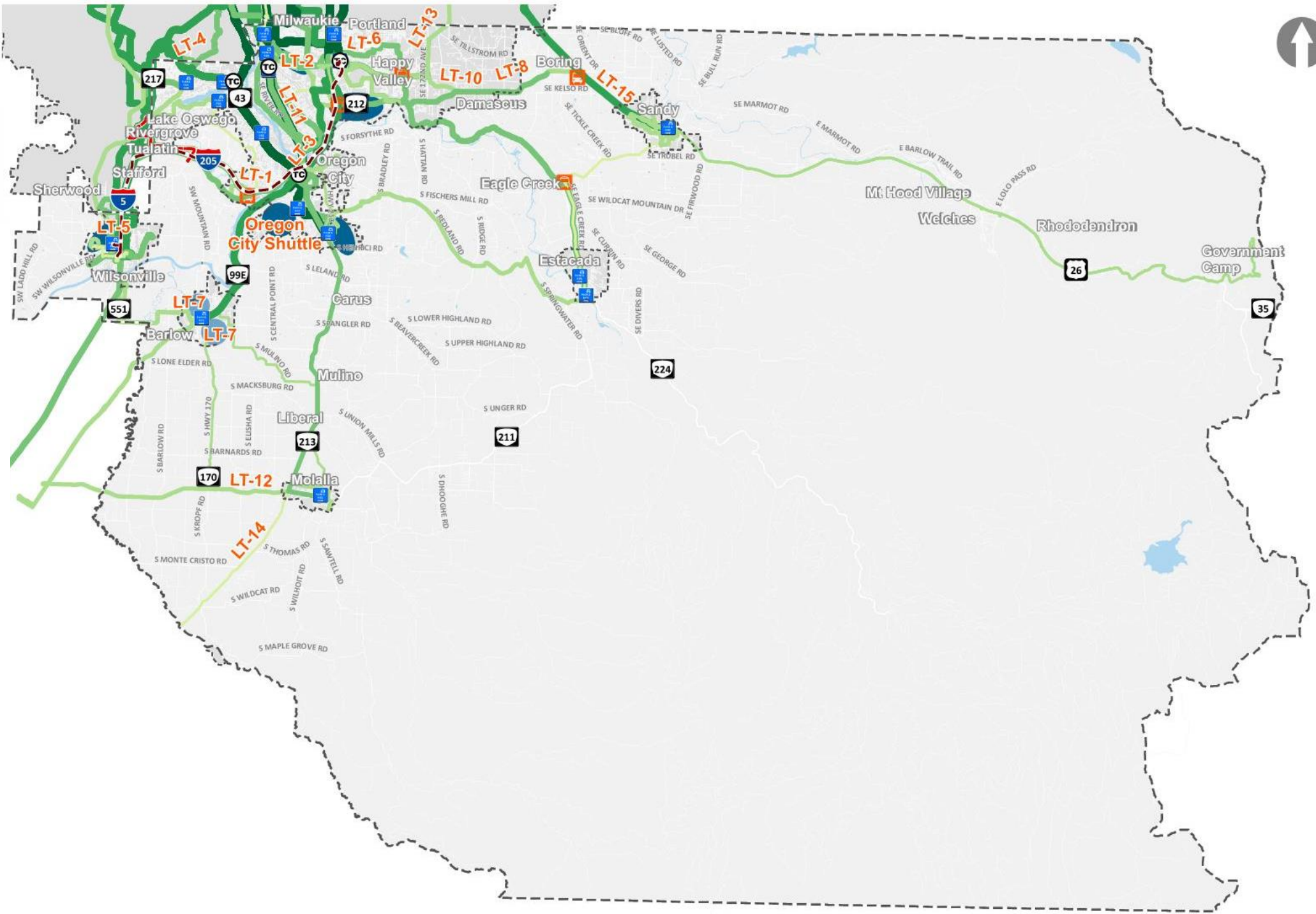
- Nominal changes in number of runs to several proposed routes

ID	Corridor or Area	Runs per Day	Additional Runs	Recommendation
LT-1	I-205: Oregon City to I-5 Interchange	31	16	Evaluate service. Consider increased service span and frequency to add about 10 runs per day.
LT-2	Milwaukie Industrial Area	55	9	
LT-3	I-205: Oregon City to Clackamas Town Center	84	3	
LT-4	West Lake Oswego/Kruse Way	22	10	
LT-5	Wilsonville (West Wilsonville)	26	9	
LT-6	Happy Valley	26	9	
LT-7	Canby (North and South)	26	9	
LT-8	Damascus	10	9	
LT-9	Highway 99E: Oregon City to Canby	34	6	
LT-10	Highway 212: I-205 to US 26	8	6	

Long-Term Recommendations

ID	Corridor or Area	Runs per Day	Additional Runs	Recommendation
LT-11	Highway 99E: Oregon City to Portland	84	11	Add 11 runs per day on Line 99, maintain existing 20-minute headways with extended hours
LT-12	Highway 211: Molalla to Woodburn	0	10	Establish hourly service
LT-13	C2C Corridor	0	10	Establish hourly service
LT-14	Highway 213: South of Molalla	0	8	Establish hourly service
LT-15	US 26: West of Sandy	33	3	Add 3 runs per day, maintain 30-minute headways with added hours
N/A	Estacada and Eagle Creek	Covered by Estacada-Redland-Oregon City route		
	I-205: North of Clackamas Town Center	Monitor potential increases to transit demand		
	Highway 224: Highway 212 to Estacada			
	Highway 213: Oregon City to Molalla			
	Highway 99E: South of Canby			
	US 26: East of Sandy			
	Boring			





**Long-Term Recommendations:
Routes**

- 8 or Fewer Runs per Day
- 9 - 16 Runs per Day
- 17 - 32 Runs per Day
- 33 - 64 Runs per Day
- 65 or More Runs per Day

LongTermTrips

- + 9 - 16 Runs per Day
- + 17 - 32 Runs per Day

Planned Services

- Wilsonville to Clackamas Town Center
- Tualatin Shuttle (New)
- Mobility Hub
- Transit Centers
- Park and ride lots
- Urban Growth Boundaries
- County Boundary





**Long-Term Recommendations:
Routes**

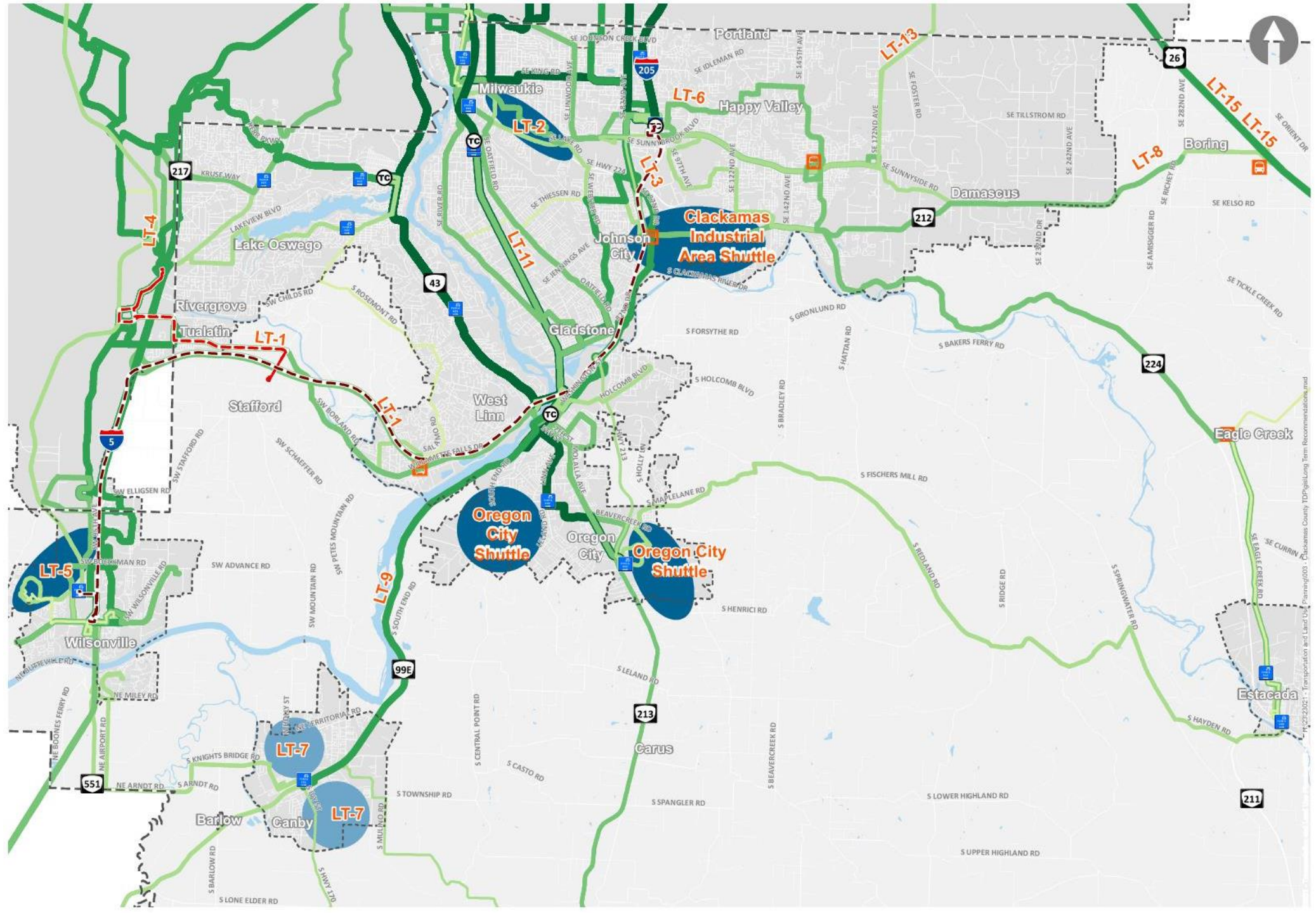
- 8 or Fewer Runs per Day
- 9 - 16 Runs per Day
- 17 - 32 Runs per Day
- 33 - 64 Runs per Day
- 65 or More Runs per Day

Long-Term Trips

- 9 - 16 Runs per Day
- 17 - 32 Runs per Day

Planned Services

- Wilsonville to Clackamas Town Center
- Tualatin Shuttle (New)
- Mobility Hub
- Transit Centers
- Park and ride lots
- Urban Growth Boundaries
- County Boundary



© 2023 Clackamas County Transportation and Land Use Planning Department. All rights reserved.



**Long-Term Recommendations:
Routes**

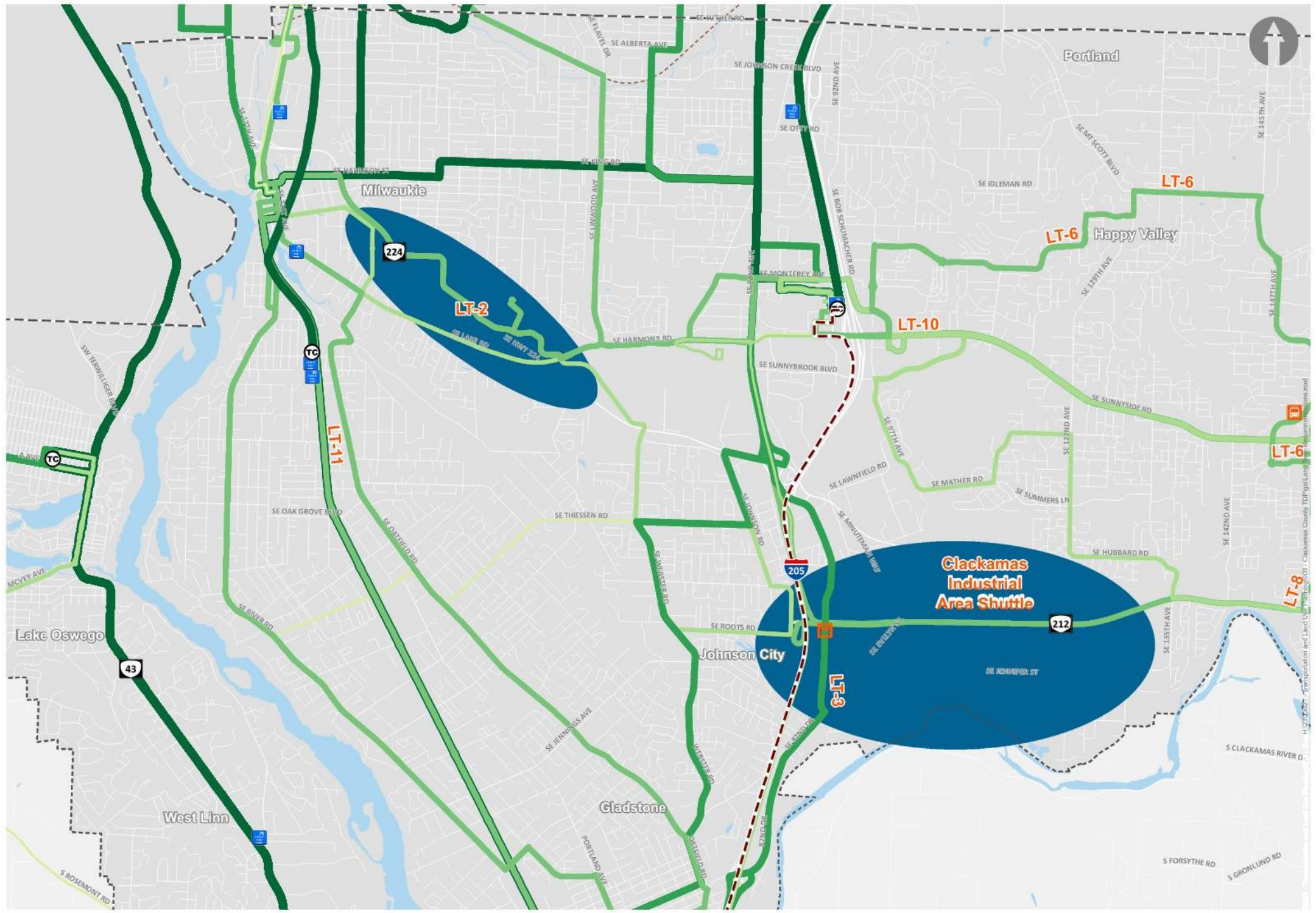
- 8 or Fewer Runs per Day
- 9 - 16 Runs per Day
- 17 - 32 Runs per Day
- 33 - 64 Runs per Day
- 65 or More Runs per Day

LongTermTrips

- + 9 - 16 Runs per Day
- + 17 - 32 Runs per Day

Planned Services

- Wilsonville to Clackamas Town Center
- Tualatin Shuttle (New)
- Mobility Hub
- Transit Centers
- Park and ride lots
- Urban Growth Boundaries
- County Boundary



H:\2024\GIS\Transportation and Land Use\GIS\Map_Series_003 - Clackamas County TDP\Project\Map_Series_003.mxd

Infrastructure Plan

Transit Centers and Stop Improvements

- Transit Centers and Major Transit Stops (more than 10 passenger boardings a day)
 - Stations should consider walking/biking access to destinations
 - Stations should be sized to meet planned 20-year growth
 - Information displays with real-time information should be included at transit centers and some major transit stops
 - Trees and vegetation should be incorporated into site design



Sandy Transit Center

Transit Centers and Stop Improvements

- Bus Stops
 - Stops with a pole and signage provide awareness and improve transit visibility
 - Stops should be located near existing or planned sidewalks and crosswalks
 - Shelters are recommended at high-use stops and transit centers
 - Benches should be considered for stops with at least 3 passenger boardings a day



Bicycle and Pedestrian Facilities

- At a high level, the following corridors generally lack walking and biking facilities
 - Rural highways: Hwy 99E (south of Oregon City), 211, 212, 213, 224, and US 26
 - Urban highways: Hwy 43, 99E (within Metro UGB)
 - Streets in areas with planned future service: Borland Road, Jennings Lodge/Oak Grove, north Happy Valley, Damascus and Boring



SE Jennings Avenue east of SE Oatfield Road in Jennings Lodge

Bicycle and Pedestrian Facilities

- Walking and Biking
 - Park and rides have high ridership and transit amenities – walking and biking access should be improved to these locations
 - Curb ramps should be prioritized at street corners near transit centers and stops with shelters
- Clackamas County plans to update its Active Transportation Plan in the near term

Information and Technology

- Information and technology services can improve the ridership experience and increase ridership by improving ease of transit use by providing information.
 - Online/Mobile Trip Planning Tool
 - Real-Time Vehicle Arrival Information
 - Fare Payment Options
 - Fleet Considerations (transitioning to low- or no-emission vehicles)

Land Use Strategies and Development

Transit-Supportive Code Strategy

- Land Use
 - Support accessory dwelling unit construction and mixed-use zoning
 - Support land uses that offer goods or services that attract large number of employees and residents (institutional, neighborhood commercial, major employment)
- Development Standards
 - Establish minimum density and floor area ratio standards
 - Allow for greater front setbacks where pedestrian or bicycle space is provided
 - Require primary building entrance oriented to street

Transit-Supportive Code Strategy (continued)

- Parking
 - Prohibit parking and circulation in front setback
 - Establish parking reductions for areas near transit
 - Establish minimum bike parking space and design rules
- Coordination
 - Require transit provider involvement for pre-app conferences
 - Work with providers to provide seating, lighting, etc.
- Access
 - Establish maximum block length standards

Funding and Implementation Options



Funding Options

- Funding sources that likely could offer full or significant funding:
 - General funds, STIF, STF, FTA grants, payroll taxes
 - Some are formula grants, which would require the funding source to increase or funds to be redirected from other services
- Funding sources that likely could offer partial or limited funding:
 - Public/private sponsorships, CMAQ, property taxes, business taxes, multimodal fees
- Other funding sources can fund bicycle, pedestrian, and bus stop improvements
 - ARTS, SDCs, roadway improvement programs

Implementation Actions

Recommendation	Action	Party
Throughout		
STIF Planning	Update STIF plan every 2 years for submission	Clackamas County
Transit Vehicles	Monitor transit vehicle needs for routes operated by Clackamas County	Clackamas County
General Transit Planning	Monitor potential increases to transit demand across the county	Clackamas County
General Transit Planning	Evaluate existing and short-, medium-, and long-term recommendation demand for increases	Clackamas County
Information and Technology	Promote real-time vehicle arrival information and other tech for transit providers; Consider coordinated study, similar to ongoing fare study	Clackamas County, CAT, SAM, SCTD, SMART

Implementation Actions

Recommendation	Action	Party
Short-Term		
Milwaukie Industrial Area	Coordinate Milwaukie Industrial Area Shuttle implementation with City and TriMet Conduct additional outreach after COVID-19	Clackamas County, TriMet, Milwaukie
Oregon City Transit Center	Conduct further capacity analysis	Clackamas County, TriMet, OC
Clackamas Industrial Area	Coordinate a mobility hub within the Clackamas Industrial Area	Clackamas County, TriMet, ODOT
I-205: Oregon City to I-5 Interchange	Coordinate a mobility hub within West Linn's Willamette neighborhood	Clackamas County, TriMet, West Linn
Fare Options	Implement steps and findings from county transit provider fare study	Clackamas County, CAT, SAM, SCTD, SMART

Implementation Actions (continued)

Recommendation	Action	Party
Medium-Term		
Hwy 212: I-205 to US 26	Coordinate with SAM on the operator for proposed route, TriMet for Clackamas Town Center access	Clackamas County, SAM, TriMet
Estacada-Redland-Oregon City	Coordinate with county transit providers on transit route operator	Clackamas County, TriMet, CCC, Oregon City
Clackamas Town Center	Monitor capacity and storage availability at Clackamas Town Center	Clackamas County, TriMet
Happy Valley	Implement a mobility hub in Happy Valley	Clackamas County, TriMet
Boring	Implement a mobility hub in Boring	Clackamas County
Long-Term		
Estacada/Eagle Creek	Implement a mobility hub in Eagle Creek	Clackamas County, TriMet, SAM



Monitoring Program

Based on the performance measures
identified earlier in the process



Potential Monitoring Program Measures

Annual Review of Performance Measures

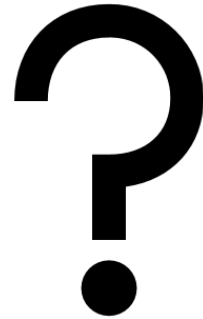
- New or enhanced intercommunity connections
- Number of communities with access to transit
- Number of directional runs per day per transit corridor
- Service span per route
- Improvements made to travel between communities or transit providers

Biennial Review of Performance Measures

- Percentage of underrepresented populations living within $\frac{1}{4}$ mile of a transit stop
- Percentage and/or number of jobs located within $\frac{1}{4}$ mile of a transit stop
- Service hours per capita within $\frac{1}{4}$ mile of a transit stop
- Percentage of people within $\frac{1}{4}$ mile of a transit stop at different levels of service
- Percentage of transit stops with walking/biking access
- Percent of fleet that uses low- or no-emission vehicles
- Capital costs for new or enhanced service
- Annual operating costs for new or enhanced service

Questions?

- Does the Clackamas County TDP meet the needs of your organization?
- What implementation considerations should be added or modified?
- Do you have any final thoughts or considerations for the TDP?



Next Steps

- Review TAC and PAC feedback on Draft TDP
- Finalize the TDP and submit to the County Board of Commissioners of adoption