City of Lacey, Washington
Lacey Planning Commission Meeting Agenda

Refer to the bottom of the agenda for meeting information.

Wednesday, October 23, 2024	6:00 PM	Council Chambers and Online

1. **Call to Order**
2. **Roll Call**
3. **Land Acknowledgment**
   We, the City of Lacey, are on the ancestral land of the Tribal People of the Treaty of Medicine Creek, including the Nisqually Indian Tribe and Squaxin Island Tribe. We acknowledge, and remember those Tribal People not recognized today who were absorbed or relocated into other tribes for survival. We recognize the ancestors and their descendants who are still here. We recognize and respect the Tribal People of the Treaty of Medicine Creek as the traditional stewards of this land since time immemorial and their role today in taking care of these lands in perpetuity. We recognize and have the responsibility to call attention to the histories of dispossession, forced removal, and abridged treaty rights that allowed our nation, state, and city to develop as they have today. We recommend that community members read the Medicine Creek Treaty of 1854.
4. **Approval of Agenda and Consent Agenda Items**
   A. Approval of Agenda
   B. Approval of October 9, 2024 meeting minutes
      1. October 9, 2024 Minutes
5. **Public Comment**
   Refer to the bottom of the agenda for instructions on how to provide public comment.
6. **Commission Members' Reports**
7. **Department Report**
8. **Public Hearing**
9. **New Business**

A. **Commute Trip Reduction Plan Update: Hans Shepherd, Senior Planner.** The Planning Commission will be briefed on an update to the Commute Trip Reduction Plan which sets forth various policies and strategies to reduce single-occupancy commute trips for large employers across the community. This is a briefing only and no formal action is necessary.

1. CTR Attachments

10. Old Business

A. **Public Works Standards Update—Chapter 4, Transportation: Tom Stiles, Development Review Engineer Manager.** The Planning Commission will receive a briefing from staff and review the draft updates to Chapter 4 (Transportation) of the Public Works Standards. This is a briefing only and no formal action is necessary. Additional chapters will be brought to the Planning Commission for review at future dates.

1. PW Standards Update Attachments

11. Communications and Announcements

A. Planning Commission Schedule

12. Next Meeting - November 13, 2024

13. Adjournment

Attendance and Public Comment

Attend Remote or In-Person

The public may attend the meeting in-person, or you may view or listen to the meeting using one of the following platforms:

In-Person	Council Chambers at Lacey City Hall 420 College Street SE, Lacey, WA 98503
Zoom:	https://us02web.zoom.us/webinar/register/WN_Bz66dPwjSBevOHs6JEzEkw
Website:	https://cityoflacey.org/government/public-meetings/
Facebook:	https://www.facebook.com/cityoflacey
YouTube:	https://www.youtube.com/watch?v=bLjZruh2I9o
Cable:	Channel 77 with your local cable provider
Phone:	(888) 788-0099 or (877) 853-5247 (Webinar ID 827 3503 9142)

Verbal Public Comment

Those wishing to provide verbal public comment may do so in-person or by Zoom:

In-Person:	Use the sign-up sheet located at the meeting location.

Zoom: Preregister using the following Zoom link no later than two hours prior to the meeting:
https://us02web.zoom.us/webinar/register/WN_Bz66dPwjSBevOHs6JEzEkw

Instructions and access details will be provided once registration is complete.

MINUTES
Lacey Planning Commission Meeting
Wednesday, October 9, 2024 – 6:00 p.m.
Lacey City Hall Council Chambers, 420 College St SE – and via Zoom

The meeting was called to order at 6:00 p.m. by Jeff Gadman

Planning Commission members present: Jeff Gadman, Gail Madden, Kyrian MacMichael, Daphne Retzlaff, Spencer Zeman & Elliot Kirk. Staff present: Sarah Schelling, Hans Shepherd and Erin Skelley.

Jeff noted a quorum present. Daphne read the Land Acknowledgement.

Gail Madden made a motion, seconded by Daphne Retzlaff to approve the agenda for tonight's meeting. Daphne Retzlaff made a motion, seconded by Gail Madden to approve September 25th minutes. All were in favor, both motions carried.

1) **Public Comments:** None

2) **Commission Members Reports:** Daphne Retzlaff saw in the Solid Waste News that the Fix It Fair is coming to Thurston County on Wednesday November 24, 2024. She also updated the Planning Commission on the Parks Improvement Funding Workgroup. The group took a tour of many different parks to show how diverse the City's parks are. Kyrian MacMichael read that Tumwater adopted a stance on Initiative 2117, and asked if Lacey would take a similar stance. Staff will do more research to bring to the meeting scheduled for October 23, 2024.

3) **Department Report:** None

4) **New Business:**

    a. **24-OSB 5290 Permit Processing Requirements: Sarah Schelling, Current Planning and Economic Development Manager.** Sarah briefed the Planning Commission on required amendments to comply with Senate Bill 5290 passed by the legislature in 2024 related to permit procedures and timelines. The draft amendments will be scheduled for a public hearing at a future meeting.

5) **Old Business:**
    a. **Critical Areas Ordinance Update: Hans Shepherd, Senior Planner.** Hans provided a briefing on the update to the Critical Areas Ordinance (CAO) required as part of the Comprehensive Plan Update to incorporate legislative changes and best available science. The updated CAO will be scheduled for a public hearing at a future meeting.

    b. **Comprehensive Plan Update Outreach: Hans Shepherd, Senior Planner.** The Planning Commission was briefed on public outreach associated with the Comprehensive Plan Update including recent public events and survey.

6) **Communications and Announcements:** Jeff Gadman stated the next meeting would be on October 23, 2024

7) **Next Meeting:** October 23, 2024

8) **Adjournment:** 7:18 PM

To hear the full discussion of a specific topic, or the complete meeting, watch the recorded video available on
YouTube: https://www.youtube.com/watch?v=Hi66paQdkBY

Planning Commission
October 23rd, 2024

SUBJECT: Commute Trip Reduction Plan Update 2025-2029

RECOMMENDATION: Staff will provide a briefing to the Planning Commission on the update to the Commute Trip Reduction (CTR) Plan as required by WSDOT through RCW 70A.15.4020. No formal action is necessary.

STAFF CONTACTS: Vanessa Dolbee, Community & Economic Development Director
Ryan Andrews, Community Planning Manager RA
Hans Shepherd, Senior Planner HS

ATTACHMENT(S):
1. LMC Chapter 10.46 Commute Trip Reduction Plan
2. Draft TRPC Commute Trip Reduction Update
3. 2009 City of Lacey CTR Plan
4. 2023 TRPC CTR Survey Results

PRIOR REVIEW: None.

BACKGROUND:

Consistent with RCW 70A.15.4020, the City of Lacey is required to periodically review and, if needed, revise its Commute Trip Reduction (CTR) Plan.

As a part of this review, the City of Lacey along with the City of Olympia, City of Tumwater, and Thurston County must review, coordinate, and adopt CTR targets for the next planning period concluding in 2029. Set targets shall apply to each corresponding municipality and the major employers contained within.

The CTR law applies to all employers, including public and private, that have 100 or more "affected" employees who work at a single worksite, and to all state agencies in the urban growth areas of Lacey, Olympia, and Tumwater.

"Affected employees" are employees who:

Work full-time (35 or more hours per week), and are scheduled to begin work between 6 and 9 a.m. on two or more weekdays for at least 12 continuous months at a single worksite.

The last update of the CTR Plan was adopted by the City of Lacey in 2009. As part of 2009 CTR Plan, the City of Lacey established a 10% reduction target of single occupancy vehicle commuter trips. This Plan also adopted a set of regional CTR Strategies consistent with neighboring jurisdictions:

- Update Plans and Ordinances
- Continue to Provide Worksite Support
- Develop Regional Parking Policies and Strategies
- Locate and Design Worksites to Support Trip Reduction
- Encourage School Participation in Commute Trip Reduction
- Encourage Voluntary Tribal Participation in CTR
- Increase Planning and Coordination with Intercity Transit
- Seek Funding to Expand Park-and-Ride Capacity
- Implement a Region-wide Marketing and Community Outreach Program
- Create a Recognition Program for Trip Reduction Efforts

In addition to these target metrics, all major employers and municipalities are required to have a designated Employee Transportation Coordinator (ETC) responsible for the development, implementation, and reporting of CTR program initiatives including:

- Information about commute alternatives to driving alone
- Implementation measures geared toward achieving the CTR goals
- Collaboration with neighboring CTR worksites
- Surveying of employees about their commute habits every two years
- Submittals of Annual Reports and Program Descriptions
- Promotion of telework per Governor's Executive Order

For the City of Lacey, Samantha Keesler fulfills the roles and responsibilities of the ETC, while the Thurston Regional Planning Council (TRPC) is contracted to administer the CTR Program at the regional level. TRPC is also responsible for working directly with major employers to achieve CTR performance targets as set out within the plan.

Within the City of Lacey, there are 23 qualifying major employer locations. These locations include the following:

- Lacey City Hall & Shop
- Hawks Prairie Warehouses
- SPSCC & EDC Campus
- Panorama
- Department of Ecology
- TwinStar Credit Union
- 17 State Agencies

2023 CTR SURVEY RESULTS:

Based on a 2023 TRPC conducted survey of these 23 qualifying employers (including City Hall and the PW Shop), 54.24% of commute trips are conducted alone within private vehicles. This percentage is higher than both Olympia (45.6%) and Tumwater (47.0%). These results can likely be attributed (in part) to the higher percentage of residents employed at Joint Base Lewis-McChord, a greater incorporated land area, segmented land areas, and in-person requirements of many of these employment sectors. Additional information can be found within Attachment 4 of this packet.

Based on these findings, a target Drive Alone Rate of 50% by 2029 has been proposed as part of this update. This translates to an approximate reduction of 1% per year through the next update cycle.

2024 UPDATE TIMELINE:

The following is a general timeline of the 2024 CTR Update:

- 2024
  - Spring: TRPC Engagement with stakeholders to create plan draft
  - Summer: TRPC conducted outreach to CTR affected stakeholders
  - Fall: Lacey conducts internal review
  - Winter: TRPC takes local plans to WSDOT for review
- 2025
  - Spring: TRPC consistency review
  - Spring: Planning Commission and City Council Review
  - Summer: TRPC will submit CTR Plan to WSDOT

NEXT STEPS:

At the October 23rd Planning Commission meeting, commissioners will have the opportunity to review the draft TRPC Update to the CTR Plan, ask questions, and suggest any additional amendments. The draft CTR will then by advanced on to WSDOT for additional review before coming back to the Planning Commission in early spring of 2025.

City of Lacey Commute Trip Reduction Four-Year Plan Update: 2025–2029

Benefits of CTR

1. **Describe the local land use and transportation context and objectives.**
    a. ***Describe the setting in the jurisdiction as it is today or will be in the near future.***
    Lacey is a small city in southwestern Washington, located at the southern end of Puget Sound. As of 2023, the city had a population of 59,430. Lacey also has a large designated Urban Growth Area (UGA) that is managed jointly with Thurston County and has considerable development potential. With the UGA incorporated as planned over the next 20 years, Lacey's total population is projected to grow to 113,440 by 2045. Lacey's economic and transportation conditions are highly interconnected with its neighboring cities of Olympia and Tumwater – this tri-city metropolitan area has a collective population of close to 200,000 people.

    While European settlement of the area dates back to the mid-1800s, Lacey was not officially incorporated until 1966, and its current land use reflects its development as a mostly suburban community dependent on automobile travel via a series of arterials and Interstate 5. A high proportion of residents commute west to Olympia or north to Joint Base Lewis McChord (JBLM) and employers in Pierce and King counties. Portions of the city are developed as low-density residential – below four units per acre – with commercial development radiating along major arterials, including Martin Way, Pacific Avenue, College Street, and Marvin Road. Lacey also has numerous lakes and associated wetlands in its urban area that have influenced its development, as well as Woodland Creek, which runs south to north through the center of the city.

    b. ***Describe features of land use and transportation facilities and services that affect commuters.***
    Lacey's land use plans and rapid population growth are driving the city toward greater urbanization and higher densities. Recent years have seen considerable industrial warehouse and residential development within the northeast Hawks Prairie area, a substantial increase in multifamily housing along commercial corridors (Martin Way, Pacific Avenue), and mixed-use development plans for the Woodland District. While this growth is being supported by expanded transit service, and greater emphasis on providing connected multimodal transportation infrastructure, these destinations are still fragmented or lacking in older areas of the city, and many Lacey residents are likely to continue to travel by car. Plans by the Nisqually Tribe to develop a major casino-resort

property in northern Lacey will also have an impact on transportation and land use in the future.

Upcoming transportation projects in the City of Lacey include:

- Carpenter Road Capacity and Safety Improvements: Widen roadway to taper from 5-lane section to 3-lane section with bike lanes and sidewalks. Realign 14th Ave.
- Marvin Road from Britton Parkway to Columbia Drive: Widen Marvin Road from 2 lanes to 5 lanes to Hawks Prairie Rd then transition to 3 lane section, with bike lanes and sidewalks.
- Carpenter Road Widening from Martin Way to Britton Parkway: Widen roadway to 5 lanes with auxiliary turn lanes, bike lanes, sidewalks, and other urban amenities.
- Rainier Rd from Yelm Hwy to City Limits (near Beckonridge): Improve tapers and storage at intersection, adds bike lanes and sidewalks.
- Yelm Hwy Improvements from Ruddell Rd to Amtrak Bridge: Widen east side for additional northbound lane, bike lane, sidewalk and other urban amenities.
- Martin Way East Roadway Improvements: Access management, bike lanes, sidewalks, and other urban amenities.
- Lacey Hawks Prairie Business District (LHPBD) Commercial Corridors: Construct new corridors within LHPBD.

c. Describe whether and how commuting patterns have changed in the past few years.

i. COVID-19 has shifted commuting patterns in Lacey, with many more workers having the option to telework. Lacey has also seen an influx of teleworkers from the Central Puget Sound region, due to its lower cost of housing. Demand on Lacey's streets seems likely to decrease during morning and evening peak commute times due to telework, and may increase during off-peak times. Lacey is also an attractive place to live for military personnel commuting to Joint Base Lewis McChord, a population who has fewer options for telework, so the city is likely to continue to see some volumes at typical commute times.

d. List the most important land use and transportation objectives from your city or county's plans that commute trip reduction most directly affects.

Commented [AO1]: Suggest asking this question of Lacey staff - do they have any new items to include?

- Woodland District Plan: The City of Lacey established a downtown vision for the urban core area (Central Planning Area) of Lacey between College Street and the South Sound Shopping Center. Goals include developing strategies to achieve a well-connected grid of streets, mixed-use throughout the downtown, and walkable streets to foster a healthy and sustainable area.
- College Street Corridor Plan: The City of Lacey completed the College Street Corridor Study, which identifies the long-term transportation needs along the College Street Corridor between Lacey Boulevard and 37th Avenue SE. The recommended alternative proposes two travel lanes in each direction with a widened outside lane to provide space for commuting bicycles.
- Lacey Transportation System Analysis and Alternatives Evaluation: The City of Lacey completed the Lacey Transportation Systems Analysis and Alternatives Evaluation (LTSAAE), a detailed evaluation of the arterial and highway network. Based on this study, even with planned local improvements, it is expected that traffic flow and access to the interstate system will be constrained to unacceptable service levels.

Commented [VJ2]: Maybe tie all these plans together and how CTR affects them.

e. ***Describe critical aspects of land use and transportation that should be sustained and key changes that should be considered to improve commute trip reduction's contribution to the land use and transportation objectives you reference.***

- Mixed use and high-density developments along urban corridors, locating a series of new Neighborhood Commercial and Community Commercial zones located at strategic nodes throughout the area to provide commercial services within proximity of every neighborhood.
- A future non-motorized transportation plan has been identified as a priority to ensure that the city maintains existing and future plans for safe and convenient pedestrian and bicycle facilities including sidewalks, trails, and street crossings.
- Complete streets concepts will be refined and combined with transportation efficient land use policies, coordinated regional Commute Trip Reduction programs, and other demand management strategies.

Commented [HC3]: Ask city staff about it

Commented [VJ4R3]: I'm sure the city will have some feedback for you, but you're mostly looking for goals of increased density/infill, etc.

2. **Describe how the CTR program will help achieve the jurisdiction's land use and transportation objectives.**
   a. ***Describe how and to what extent your CTR program will help your city or county achieve the land use and transportation objectives referenced in question 1.***

   Using CTR programs and strategies at Lacey worksites will help the city to maximize their current transportation system and build for the future. Lacey has emphasized and continues to emphasize a multimodal transportation system and increased transit-oriented development. Many of the City's streets include sidewalks and bicycle lanes, making non-motorized travel a viable alternative to cars. Current standards require non-motorized elements including bike lanes and sidewalks on all new or redeveloped portions of roadway, in order to close any gaps in the existing system and expand its network. Development standards and policies improve the walkability of the transportation network. Lacey also has committed to encouraging alternative modes of transportation through adoption of the Commute Trip Reduction Plan and implementation of regulations such as bicycle racks with most private development projects.

3. **Describe how the CTR program will help achieve the jurisdiction's environmental objectives.**
   a. ***Describe how the CTR program will support jurisdiction greenhouse gas emission reduction efforts.***

   Lacey has adopted a regional climate target: Reduce net communitywide greenhouse gas emissions 45% below 2015 levels by 2030 and 85% below 2015 levels by 2050. Every drive-alone commute trip that converts to transit, rideshare or a non-motorized mode eliminates the greenhouse gas emissions that would have been generated by that drive-alone trip.

   b. ***Describe how the CTR program will support jurisdiction environmental objectives in addition to greenhouse gas emission reductions.***

   According to the City of Lacey 2030 Transportation Plan, the city has a goal to minimize transportation impacts on the natural environment and the people who live and work in the city. The city also plans to develop a transportation system that supports compact, mixed-use development policies that curb the growth in miles of motor vehicle travel. Focusing on dense infill development will increase energy efficiency, reduce environmental impacts, and minimize greenhouse gas emissions that contribute to

climate change. Using compact urban development, and non-motorized forms of transportation will encourage overall physical activity and community health in the city.

4. **Describe how your CTR program will help achieve regional and state objectives.**
   a. ***Summarize the local, regional, and state benefits that would be gained if you achieve your CTR targets.***

   CTR programming in the region is well integrated into the City of Lacey's Comprehensive Plan transportation section. The goals and objectives noted below tie directly to those in the State CTR Draft Plan.

   Lacey Comprehensive Plan

   Goal: Making the transportation network operate as efficiently as possible, moving the city to a position that is less automobile dependent and is expected to increase the use and efficiency of other transportation options.

   Objectives:

   - Move people and goods.
   - Improve air and water quality.
   - Achieve greenhouse gas emission reduction goals.
   - Strengthen the region's economy.
   - Advance equity.
   - Invest in neighborhoods.
   - Foster innovation.

   State CTR Draft Plan

   Objectives:

   - Improve delivery of CTR programs.
   - Produce more useful transportation behavior data.
   - Respond to shifting mobility patterns.
   - Reduce greenhouse gas emissions.

   Summary of mutual benefits:

   - Reduce greenhouse gas emissions: The state and region both have the goal of reducing greenhouse gas emissions. Each commute trip that is shifted to a non-drive alone mode through the city's CTR program reduces greenhouse gas emissions.
   - Improve delivery of CTR programs: The emphasis in the capital improvement plan on building out non-motorized network infrastructure will improve connections for all modes of travel. This in turn will make all the CTR actions more productive and easier to deliver. This benefit aligns with the region and state's CTR goals.
   - Foster interagency collaboration: The requirements of the CTR program to consider state, regional and adjacent community goals naturally foster interagency collaboration which yields a more integrated and robust multimodal transportation system that better meets the travel needs of all residents.

   b. ***List adjacent CTR-affected cities and counties.***

Thurston County, Pierce County, City of Olympia, City of Tumwater.

c. Describe the top few cross-border and regional transportation issues that affect your jurisdiction.
   - Travel to and from JBLM.
   - Lack of HOV system in Thurston County.
   - Few choices of high-capacity transit into Thurston County.

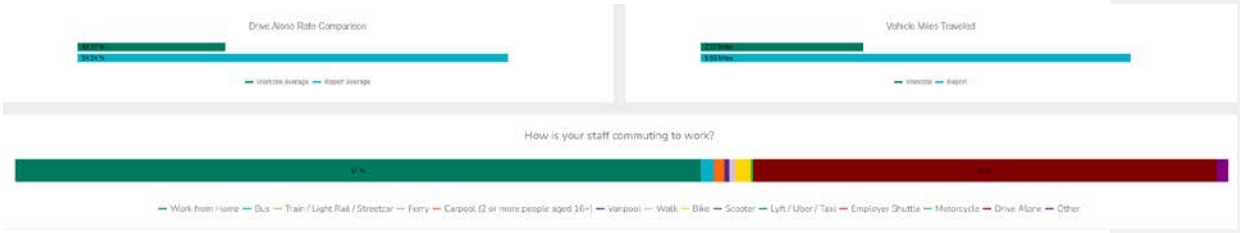
d. Describe the strategies you, adjacent cities and counties, and your region have agreed to use to address the top issues described in the previous bullet.
   - High level of collaboration with Pierce County.
   - Robust vanpool program in Thurston and Pierce County to serve our region's commuters.
   - Discussed the benefits of HOV lanes with regional transportation officials.
   - Collaborated with TRPC and IT to encourage more high-capacity options in our city and region.

Performance targets

5. **List your jurisdiction's CTR performance target(s).**
   a. List performance targets that reflect only CTR-affected worksites.
   Drive Alone Rate of 50%.

   b. List any additional performance targets.
   N/A

6. **List the base value you'll use for each performance target.**
   a. For each performance target, provide the number you'll use as the baseline (or starting number). You'll measure the difference between this number and your results to report performance.
   Recent CTR Survey Results for Lacey: Current Drive alone rate: 54.24%



7. **Describe the method you used to determine the base value for each target.**
   a. Provide the source for each base value listed.
   The source is the CTR Survey.

8. **Describe how you'll measure progress toward each target.**
   a. List the method you'll use to measure progress for each target.
   CTR Survey

9. **List your jurisdiction's CTR-affected worksites.**
   a. List all your CTR-affected sites.

- Amazon - OLM1
- City of Lacey - City Hall/Operations
- Panorama City Retirement Community - Administrative Office
- South Puget Sound Community College - Lacey Campus
- TwinStar Credit Union - Lacey Corporate Center
- Washington State Conservation Commission - Olympia
- Washington State Department of Corrections - Woodland Square Office
- Washington State Department of Ecology - Ecology Headquarters
- Washington State Department of Ecology - Environmental Assessment Program Operations Center
- Washington State Department of Fish & Wildlife - Lacey Shop
- Washington State Department of Licensing - Lacey LSO
- Washington State Department of Social and Health Services - Blake Office Park East & West-Aging and Disability Services
- Washington State Department of Social and Health Services - Lacey - Division of Vocational Rehabilitation
- Washington State Department of Social and Health Services - Juvenile Rehabilitation Administration - Reg. 3 Olympia Juv. Parole
- Washington State Department of Social and Health Services - Developmental Disabilities Administration (DDA)
- Washington State Department of Transportation - Lacey PEO
- Washington State Department of Transportation - Olympic Region
- Washington State Gambling Commission - Olympia
- Washington State Horse Racing Commission - Olympia Headquarters
- Washington State Lottery - Warehouse
- Washington State School Directors' Association - Olympia Headquarters
- Washington State Services for the Blind - Lacey Headquarters
- World Class Distribution Inc - Hawks Prairie

10. **List a performance target for each CTR-affected worksite.**
    a. For any performance targets tied to the CTR survey, indicate that you'll establish performance targets during the 2023-2025 survey cycle.
    We will use jurisdictional targets for all the worksites (Amazon was not able to survey in 2023, so will baseline in 2025)

11. **List the base value you'll use for each site.**
    a. For any performance targets tied to the CTR survey, indicate that you'll establish a base value during the 2023-2025 survey cycle.
    Survey is completed and baseline has been established.

Services and strategies

12. **Describe the services and strategies your jurisdiction will use to achieve CTR targets.**
    The services and strategies Lacey will use to achieve CTR targets:

    To support Lacey's internal CTR Program:

    - Updated Teleworking Policies/Opportunities (Lacey Policy Manual)
    - Surveying Employees and distribution of information/policies/alternatives/opportunities
    - Support Bicycle Commuter Challenge

Commented [VJ5]: We'll need to do targets for each worksite, since we've already completed our survey. If we use the jurisdiction average, some worksites that are already below it would technically have to increase their DAR to meet the target. We should ask WSDOT how they want these listed out. It may entail working with each worksite to establish a target.

Commented [HC6]: Ask city staff

Commented [VJ7]: These look like internal CTR policy actions, the question is asking about the jurisdiction, please update.

- Wellness Reward Programs

To support Lacey's jurisdictional CTR program:

- Work with TRPC to implement the CTR program for the region. TRPC has done increased outreach to sites in the industrial area of Lacey that are almost CTR affected (less than 100 employees, arrive earlier than 6am for a shift), but are some of the lower wage jobs in the area, to offer CTR services and participation in CTR promotions and activities.
- Intercity Transit is expanding service in the Lacey area to increase frequency to encourage residents to use transit.

13. **Describe how jurisdiction services and strategies will support CTR-affected employers.**
    The City of Lacey doing additional transit oriented development and providing more multimodal infrastructure for it's residents will allow more residents to participate in CTR activities. The city works with TRPC to conduct the regional CTR program that uses strategies to encourage non drive alone travel. Additional transit routes and frequency will bring more options to worksites for CTR.

14. **Describe barriers your jurisdiction must address to achieve CTR targets.**
    a. ***Describe how you'll address these barriers.***
    - The city prefers not to fine businesses for non-compliance with CTR but that is currently written into the city code, this is a barrier to compliance with the program. It will be advantageous to the city to explore options for recourse other than a fine so they can enhance participation by worksites in their jurisdiction.
    - Some people don't feel safe walking, biking, and taking transit, and that is a barrier for the jurisdiction expanding multimodal transportation. To address this, the city is working on infrastructure improvements for pedestrians and bicyclists and working with IT on rider safety. The city is also doing trail maintenance and addressing lighting and safety concerns on the trails so more users feel safe. The city is working with IT on transportation safety messaging to provide residents with education on safely using the system. The city police force is increasing traffic safety enforcement.

15. **Describe the transportation demand management technologies your jurisdiction plans to use to deliver CTR services and strategies.**
    - TRPC provides information and uses the Rideshareonline.com platform for Lacey CTR worksites.
    - TRPC uses the State CTR survey tool for surveying and program reports.

16. **Transcribe or link to your local CTR ordinance.**
    - https://lacey.municipal.codes/LMC/10.46
    - https://cityoflacey.org/wp-content/uploads/sites/3/2024/02/Lacey-Commute-Trip-Reduction-Plan-2008.pdf

17. **Describe your financial plan.**
    a. ***Describe the estimated average annual costs of your plan.***
    The City of Lacey has an agreement with TRPC to implement the CTR program.

    b. ***Describe likely funding sources, public and private, to implement your plan.***
    Currently the City of Lacey does not have a dedicated funding source for implementing the projects identified in this Plan. Without a dedicated funding source, project implementation will rely on grant funding or larger roadway resurfacing or capital projects that could incorporate one or more of the projects listed in this Plan.

Commented [VJ8]: None of these are TDM specific. This could be another place you could mention that you will use the technologies supported by TRPC (rideshare online, online bike map, etc)

- Local Funding Mechanisms:
    - Transportation Improvement Program
    - Local Tax Levy
    - Bond Measure
- Existing Local Funding Sources:
    - Impact Fees
    - City of Lacey Transportation Benefit District (TBD)
    - City of Lacey Real Estate Excise Tax (REET)
    - Motor Vehicle Fuel Tax (MVFT)
- Grants and Other Funding Opportunities

18. Describe your implementation structure.

a. Describe who will conduct the activities listed in your plan.

City of Lacey has an agreement with TRPC to implement the CTR program.

b. Indicate who will monitor progress on your plan. List job title, department, and name.

City of Lacey has an agreement with TRPC to implement the CTR program. Veronica Jarvis, Senior TDM Planner at TRPC administers the program for the region and monitors progress.

19. List your implementation schedule.

a. Provide the timeline for anticipated projects.

According to City of Lacey Six Year Transportation Improvement Program, anticipated projects will start and finish between 2024 and 2029.

20. Describe the CTR plan for jurisdiction employees.

a. Describe the services, programs, information, and other actions your city or county put in place to help its employees reduce their drive alone commute trips.

Commented [HC9]: Ask city staff

Samantha Keesler serves as the employee transportation coordinator for the city in its role as a CTR-affected worksite.

Samantha Keesler administers the program elements required of the employer including:

- Designation of a transportation coordinator and the display of the name, location, and telephone number of the coordinator in a prominent manner at each affected worksite.
- Regular distribution of information to employees regarding alternatives to single-occupant vehicle commuting.
- A regular review of employee commuting and reporting of progress toward meeting the single-occupant vehicle reduction goals to the city consistent with the method established in the commute trip reduction plan and the rules established by the department of transportation under RCW 70A.15.4060.
- Implementation of the following measures designed to achieve the city's commute trip reduction goals:
    - Administer employee parking payment program.
    - Publicize promotional challenges and campaigns.
    - Serve as commuter advisor to employees.
    - Provide briefings to various employee groups on the program and its benefits.

- Administer CTR surveys and report results to the city council and executive management.
- Produce City of Lacey program report.

21. **Describe how the CTR plan for jurisdiction employees contributes to the success of the overall plan.**
    a. ***Describe how the plan for jurisdiction employees reinforces the success of the jurisdiction plan?***
    Jurisdiction employees have the opportunity to telework and have compressed and flexible schedules. Employees also have showers and bike parking facilities setting a good example for the other worksites in the region. Offering CTR options at the city helps show the commitment Lacey has for CTR and allows it to be a model for other employers in the city.

Commented [HC10]: Ask city staff

Alignment with plans

22. **List the transit agencies that provide service in your jurisdiction.**
    Intercity Transit

23. **List the transit plans you reviewed while developing this plan.**
    Intercity Transit 2024-2029 Strategic Plan

24. **Describe how this CTR plan supports the transit plans.**
    Intercity Transit (IT) provides public transportation in Lacey and its Urban Growth Area (UGA), operating several fixed bus routes, as well as carpool and vanpool programs. IT operates a transit center, a primary transfer center and a park-and-ride lot within the city and its UGA. Over the last twenty years, transit use has increased in the region, due in part to the city's efforts in promoting alternate methods of commuting to work in compliance with the State's Commute Trip Reduction Act.

    Continuing to offer CTR programming in the city will encourage more transit use, which is good for the IT strategic plan. Incentivizing employees and educating them on the system through the CTR program helps bolster IT's ridership. The city supports Intercity Transit's strategic plans and continues to coordinate with the agency to identify how transit needs should be addressed, particularly as new development occurs. New development includes transit-oriented design standards for all zones, with pedestrian emphasis to ensure riders have a safe journey to the bus stop. The city is committed to involving Intercity Transit in the development review process, and future planning efforts, to ensure that the transit goals of the City and Intercity Transit are being met.

25. **Describe any comprehensive plan updates that are needed and when they will be made.**
    Lacey is updating their comprehensive plan and will be getting a consultant for the transportation section of comprehensive plan updates. The city plans to continue its focus on multimodal infrastructure, infill development and transit-oriented development, all of which will benefit CTR. The due date for the update is December 2025.

Commented [HC11]: Ask city staff

Engagement

26. **Describe stakeholder engagement.**
    a. ***Who did you talk to?***
    Stakeholder organization:

- Intercity Transit
- Employee Transportation Coordinators at worksites
- Thurston EDC
- Thurston Chamber of Commerce
- Rural Transit
- Thurston Thrives (Public health)
- Local Tribes
- State DEI council
- State Employee Black community
- State Employee veteran community
- State Employee LGBTQ
- State Employee Latinos
- State Employee Disability inclusion network
- State Employee immigrants
- State Employee Hawaiians, Asians, Pacific Islanders

b. When did you talk to them?
May 2024 via a survey.

c. What did they have to say?
See attached responses.

d. How did what they said influence the plan?
(after the stakeholder survey)

27. Describe vulnerable populations considered.

- State Employee Black community
- State Employee veteran community
- State Employee LGBTQ
- State Employee Latinos
- State Employee Disability inclusion network
- State Employee immigrants
- State Employee Hawaiians, Asians, Pacific Islanders

28. Describe engagement focused on vulnerable populations.

a. Who did you talk to?

- State Employee Black community
- State Employee veteran community
- State Employee LGBTQ
- State Employee Latinos
- State Employee Disability inclusion network
- State Employee immigrants
- State Employee Hawaiians, Asians, Pacific Islanders

****** More will be added to this section after outreach in summer of 2024.**

29. List employers' suggestions to make CTR more effective. Employers expressed support for the following:
    - Improving public transportation
    - Remote work flexibility at all employers in the area
    - Improving biking and walking infrastructure

- Creating a light rail system in our area
- Better options for travel between Tacoma-Olympia

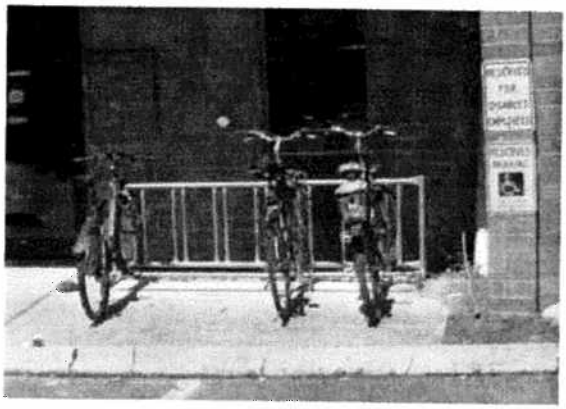
30. Describe results of engagement focused on vulnerable populations that will be provided for use in comprehensive plan and transit plan updates.

a. The engagement from the CTR plans was a reminder that vulnerable populations continue to want more options besides driving a car. The expense of driving a car, challenges for those with limited English proficiency, and emissions that cars create are a burden to the vulnerable populations in our community.

b. More to be added after outreach in summer 2024

Commute Trip Reduction Plan

City of Lacey
2009



CITY OF LACEY

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EXECUTIVE SUMMARY

Background

In 2006, the Washington State Legislature passed the Commute Trip Reduction (CTR) Efficiency Act (RCW 70.94.521) which requires local governments in those counties experiencing the greatest automobile-related air pollution and traffic congestion to develop and implement plans to reduce single-occupant vehicle trips. The law also encourages integration of CTR with land use and transportation planning processes and other City goals.

In addition to statewide benefits, meeting the CTR goals will provide a variety of local benefits, including:

- Improvements in the local level of service on various streets and at various intersections.
- Reduced emissions from vehicles.
- Reduced energy consumption.
- Improved wellness, primarily for those who walk or bicycle as their commute mode.

The City of Lacey Plan

The Commute Trip Reduction Plan is a collection of jurisdiction-adopted goals and policies, facility and service improvements and marketing strategies about how the City of Lacey will help make progress for reducing drive alone trips and vehicle miles traveled over the next four years. Building upon the success of the existing commute trip reduction program, the City of Lacey strives to meet the goals of the plan for the future by working in partnership and coordination with other agencies.

The proposed Plan has been developed through extensive involvement by employers, transit agencies, organizations and individuals from throughout the City of Lacey – and neighboring jurisdictions – who helped identify strategies and ways for successful achievement of the goals. This plan helps to support the achievement of the City of Lacey's vision and the goals of its comprehensive plan.

Goals

The City of Lacey has adopted the state standard of a 10% reduction in single occupancy vehicle use and a 13% reduction in vehicle miles traveled for all CTR worksites by 2011. For the draft plan, the City of Lacey used 2005 as the base year pending completion of the 2007 Survey by all worksites. The City will update the draft plan when complete 2007 survey results become available – likely in late 2007.

Policies and Investments

Lacey has many comprehensive plan policies which support CTR, in both the Land Use and Transportation elements. The City's goals and policies focus not only on stating specific support for Commute Trip Reduction, but also on the land use and transportation strategies needed to make it a success. The City of Lacey and other regional partners invest millions of dollars each year in projects and programs that create CTR-supportive communities.

Strategies

The City of Lacey proposes to implement the following elements as part of its Commute Trip Reduction plan. This will be done in partnership with other jurisdictions and stakeholders, building on the Thurston Region's long history of CTR collaboration and coordination.

Listed below is a summary of the planned regional and local strategies for achieving the established goals and targets for 2011. More information is available in Section IV.

EXECUTIVE SUMMARY

Regional Strategies

The City of Lacey supports the strategies outlined in the Regional Plan and will participate in implementation:

- Update Plans and Ordinances
- Continue to Provide Worksite Support
- Increase Coordination with State Government
- Develop Regional Parking Policies and Strategies
- Locate and Design Worksites to Support Trip Reduction
- Encourage School Participation in Commute Trip Reduction
- Encourage Voluntary Tribal Participation in CTR
- Increase Planning and Coordination with Intercity Transit
- Seek Funding to Expand Park-and-Ride Capacity
- Establish a Business Case for CTR
- Implement a Region-wide Marketing and Community Outreach Program
- Create a Recognition Program for Trip Reduction Efforts
- Integrate CTR with Other Regional Programs
- Seek Support and Funding for Local, Regional and GTEC strategies

Local Strategies

In addition to collaborating on the regional strategies, the City of Lacey will also implement policy, regulation, services and facility strategies, such as:

- Incorporate CTR messages into other City communications
- Explore encouraging voluntary participation by retail and other commercial employers
- Explore including park-and-ride capacity as part of new commercial development

Funding

The State provides some funding for implementing Commute Trip Reduction, supplemented by local contributions. However, the base level funding is insufficient, especially in light of the new aggressive goals set forth in the CTR Efficiency Act. The local and regional strategies identified in this plan will require additional funding – from state and federal sources, local and regional partners, and employers. The Plan identifies a Thurston Region gap of $1,475,000 for the 2008-11 timeframe.

Next Steps

The City of Lacey will submit the Plan to the State CTR Board by October 1, 2007. The Board will review the Plan by February 2008. At that time, the Lacey City Council will initiate an adoption process, including public comment.

EXECUTIVE SUMMARY

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I. ASSESSMENT OF THE LAND USE AND TRANSPORTATION CONTEXT

A. Location of Commute Trip Reduction (CTR) work sites

Lacey has eleven CTR work sites located in three clusters (Lacey Worksite Location Map). They are as follows (as of September 2007):

Cluster	Work Site	Address	CTR Status	Total Workers
Lacey City Hall/Woodland Square	City of Lacey	420 College St. SE	Affected	246
	Health Care Authority	676 Woodland Square Loop SE	Affected	240
	WA State DSHS	4450/4500 10th Ave. SE	Affected	442
	WA State DSHS – Aging & Disability Services Administration	640 Woodland Square Loop SE	Affected	230
	WA State DSHS – DASA	612 Woodland Square Loop SE	Affected	156
	WA State Employment Security Department	605 Woodland Square Loop SE	Affected	325
	WA State Gambling Commission	4565 7th Avenue SE	Affected	100
			Cluster Total:	1,739
Lacey Corporate Center	TwinStar Credit Union	4525 Intelco Loop SE	Affected	108
	Verisign Telecommunication Services	4501 Intelco Loop SE	Affected	218
			Cluster Total:	326
Martin Way Offices/Retail	WA State Dept. of Ecology	300 Desmond Drive	Affected	1,031
	WA State DSHS - Div of Child Support	6135 Martin Way	Voluntary	101
			Cluster Total:	1,132
			TOTAL:	3,902

B. Identify Major Issues Regarding Land Use and Transportation Conditions Around CTR Work Sites or Work Site Cluster.

- **Existing and planned land use conditions:**

Lacey is the newest city in Thurston County, incorporating in 1966. At that time it was a suburban area to the east of Olympia, with two main attractions, the South Sound Mall, and St. Martin's College.

Government and Offices

Lacey City Hall and Woodland Square – a preferred leasing site for State employment – form a large cluster of government and private employment in the middle of Lacey's central business district. This cluster has many employees overall (over 6,600) and fairly high employment density (13.3 employees per acre), which should contribute to ride-matching. There are a wide variety of retail and service businesses within the cluster, so that employees are not obligated to bring a car to go eat or do a few errands during lunch. This makes it more practical to commute without a car.

Lacey Corporate Center, along the Yelm Highway in the south end of town, forms another cluster of office and increasingly high tech and retail employment. This cluster has a modest number of employees overall (about 1,200) and very low employment density (2.4 per acre), which will limit ride-matching potential for the near future. Since this business park still has many available development sites, employment density will grow, with increasing opportunities for CTR over time. Fortunately, there are also a variety of retail and service businesses in Little Prairie Center to serve the workers in the cluster.

The Department of Ecology (DOE), off Martin Way and to the north of St. Martin's College, is a state-owned worksite. There is retail activity just to the north of the campus, and the Washington State Division of Child Support is along Martin Way to the east. While the Department of Ecology itself is a very large worksite with an active CTR program, its setting is somewhat isolated from other worksites. With over half the total employment (1,015 out of 1,908 workers), DOE dominates a cluster that has modest total employment, and low overall employment density (3.8 employees per acre). Across the street, the Martin Village strip center has a large movie theater, some restaurants, a large grocery store, and other mostly large retailers. Because there is some level of mixed use in this cluster, the land use pattern offers some degree of opportunity for workers to eat and run errands at lunch, but the opportunity is constrained. The pattern of land use is not ideally conducive to pedestrian activity, with a busy arterial separating DOE from the retail site, and large parking lots separating the retail buildings from the arterial. The modest total employment and low employment density suggest that CTR efforts such as ride-matching may not successfully spread very far beyond the State agencies.

High Density Mixed Use Corridors

The Martin Way and Pacific corridors link Olympia and Lacey. These two corridors are formed along arterial roads, and often have high-density housing and small businesses with little on-site parking. Along the western parts of these corridors, existing modes, parcel sizes and need for parking are limiting redevelopment potential at this time, but these areas are expected to intensify in uses. The eastern parts of these corridors – particularly Martin Way – are experiencing retail development with large retailers such as grocery stores, Costco, Home Depot, and Office Max. Both are also major transit routes.

Higher Education

St. Martin's University (previously a college) first opened in 1895. Over the last century, Lacey has grown up around it, so that today it lies in Central Lacey. In 2006-07 it had a total enrollment of 1,250 students on the Lacey campus. South Puget Sound Community College has a small satellite campus in rented space in the Hawk's Prairie Village Mall along Marvin Road south of I-5, and has purchased a new 54-acre satellite campus site along Marvin Road north of I-5.

Retail

Lacey incorporated without a central downtown area. Commercial cores have been planned for several areas, but redevelopment of existing land use patterns proves to be challenging. Lacey does have a central business district, extending roughly from South Sound Center on the west, through the Woodland Square office park, to Lacey City Hall on the east.

The South Sound Mall redeveloped from a regional shopping center into a commercial suburban "power center" in the late 1990s, with large big-box retail stores and ample on-site parking.

More recently the Hawks Prairie area has emerged as another suburban retail center, mostly aligned along the busy Martin Way arterial corridor. Easy freeway access at the Marvin Road I-5 interchange has made this area a popular one for national retail chains. It is expected that this area will continue to grow and expand. Lacey Gateway, a mixed-use lifestyle center to be anchored initially by a large outdoor store, is planned for the area north of the freeway along Britton Parkway. This area is also being considered for the new Washington State Department of Transportation Olympic Region Headquarters and new public services such as library, police, and city hall annex.

Little Prairie Center, a smaller retail center, is developing next to the Lacey Corporate Center in the southern part of the city.

Redevelopment is expected all along the Martin Way corridor stretching to the eastern city limits and beyond.

Industrial

In the 1990s, Lacey built transportation infrastructure to support industrial development in the Hawks Prairie area north of the Marvin Road interchange. Since then many businesses have located to the Hawks Prairie campus. There is ample developable land in this area that is expected to draw more industrial and warehouse types of businesses.

- **Existing and planned transportation facilities:**

Lacey has an extensive street network, with a total of 122 miles of paved roads (2005). There are no HOV lanes in Lacey (or elsewhere in Thurston County), and none are planned.

The principal north-south corridors are Sleater-Kinney Road, College Street, Ruddell Road, Carpenter Road, Marvin Road, Willamette Drive, and Meridian Road. The principal east-west corridors are Britton Parkway-15th Avenue NE, Martin Way, Pacific Avenue-Lacey Boulevard, 37th Avenue SE, Mullen Road, and Yelm Highway. Long-range transportation plans call for connecting Mullen Road through to 37th Avenue SE by 2020, which would ease east-west movement on the south side of the city.

In addition, the city is traversed by Interstate 5 from northeast to southwest. There are interchanges at Marvin Road and Sleater-Kinney Road, and a study is under way to consider improving access between the Nisqually and Sleater-Kinney interchanges, possibly including a new interchange.

The City's policy is to develop a network of interconnecting streets, to:

- reduce the distance to destinations or transit stops,
- give several route options,
- reduce vehicle miles traveled,
- reduce the need for road widening, and
- make freight delivery and emergency service more efficient.

With more streets, fewer lanes are needed on each arterial. Providing fewer lanes on streets preserves easy and safe access for pedestrians.

There are still certain parts of the city where it is difficult to achieve an interconnecting network because of intervening features. Interstate 5 presents a barrier to north-south connections. Chambers, Hicks, Long, and Pattison Lakes and their associated wetlands present barriers to east-west connections. St. Martin's University occupies a large campus in the center of Lacey. The Lacey long-range transportation plan calls for extension of 3rd Avenue and 6th Avenue to connect with Desmond Drive on the campus, which would improve connectivity between two CTR clusters, Lacey City Hall/Woodland Square and the Martin Way Offices and Retail (Department of Ecology and DSHS Division of Child Support).

As part of a larger urban area, Lacey experiences a significant amount of pass-through commuter traffic – that is, commuters who live outside the city of Lacey, and who pass through the city on their way to jobs in Olympia and Tumwater but also Pierce County, King County, and other destinations.

Specific transportation conditions by worksite cluster:

Lacey City Hall/Woodland Square

Most of this cluster is characterized by a modified grid street network, with extensive sidewalks providing good pedestrian connections.

East-west bike facilities are also good. The I-5 bike trail travels along 3rd Avenue SE on the northern edge of this cluster, turning north on College Street to rejoin the I-5 right-of-way and connect with Martin Way to the east. On the southern edge, there is a bike route along Lacey Boulevard and Pacific Avenue. There are no comparable north-south facilities reaching the site, such as along Sleater-Kinney Road or College Street, but the Lacey Transportation Plan calls for their future development. In particular, the Plan identifies the intent to provide Class II bike lanes on Sleater-Kinney Road, Golf Club Road, and College Street (which currently has bike lanes only south of 37th Avenue).

The Woodland Trail is Lacey's premiere shared-use trail. The trail runs through central Lacey and provides direct non-motorized access to commercial and retail centers and current and future recreational opportunities.

Lacey Corporate Center

The Lacey Corporate Center itself is designed as an office park, with two entrances and a looped road system. The roads all have sidewalks. Pedestrian circulation within the office park is reasonably good, but there are few connections to the abutting streets and neighborhoods.

Bicycle connections are good, with north-south facilities available on the Chehalis-Western Trail abutting the site on the west, and on College Street — though there is a gap in this facility north of 37th Avenue, as mentioned above. East-west facilities are available on Yelm Highway and 45th Avenue SE, though the latter terminates at Ruddell Road on the east, and at the Chehalis Western Trail on the west.

Martin Way Offices and Retail

Although served by Martin Way, a major east-west corridor, there are no north-south cross streets within this cluster, only College Street on the west, and Carpenter Road on the east. This is because wetlands and Interstate 5 block access to the north, and St. Martin's University Campus impedes access to the south. Hence, although there are sidewalks on Martin Way, pedestrian accessibility within the cluster is limited by the sparse street network and separation of the worksites from other land uses and neighborhoods.

Bike lanes are likewise available on Martin Way, but there are no north-south connections. Lacey's Transportation Plan calls for Class II bike lanes on Desmond Drive (connecting between Martin Way and College Street), on College Street, and on Carpenter Road.

- **Existing and planned transit services and facilities to CTR worksite clusters:**

Lacey City Hall/Woodland Square

This cluster is well served by transit, because Intercity Transit operates a hub here, the Lacey Transit Center at 4305 SE 6th Avenue in Woodland Square. Seven routes pass through the hub (60, 62A, 62B, 64, 66, 67, and 68), entering from all compass directions. Routes 60, 64, 66, and 68 each have 30-minute headways during the morning commute. Routes 62A and 62B each have hourly service over routes which overlap along Martin Way; on the portion that overlaps, they have roughly 30-minute headways. Route 67 has hourly service.

For this cluster, the principal limitation of the transit service is related not to transit, but to the geographic dispersal of the homes of the workers. While many workers live in the rural areas, Intercity Transit provides almost no service outside the north Thurston County Urban Growth Area. Those who live in Tumwater or most of Olympia could make the commute trip by transit, but would be obliged to make transfers or layovers along the way. (Several routes that begin in Tumwater or Olympia change route numbers and continue to Lacey after brief layovers at the Olympia Transit Center downtown.) Those who live in Lacey or in most of Southeast Olympia would be able to reach this cluster without making transfers or layovers.

Lacey Corporate Center

Four bus routes serve this cluster, numbers 64, 66, 68, and 94. The first three operate on 30-minute headways during the morning commute hours. Number 94, which provides service between Yelm and Downtown Olympia, operates on 60-minute headways.

Martin Way Offices and Retail

This cluster is served by two lines along Martin Way, 62A and 62B. Each has 60-minute headways, timed at roughly 30-minute headways between them along the common part of the route. The two routes diverge at Marvin Road, where 62A continues east on Martin Way and north on Meridian Road, while 62B heads south on Marvin Road.

In addition to fixed-route transit services, Intercity Transit operates a vanpool service for long-distance commuters. The 2005 Census American Community Survey found that about 1% of workers with jobs in Thurston County commuted by vanpool, while the 2005 CTR site survey found abut 2.5% of Lacey CTR site workers did so. At the beginning of 2007, IT had 147 vanpool vans, which had 467,600 boardings in 2006. Some of these vans serve workers who live in Thurston County and work in other counties. Other transit systems in western Washington also operate vanpool services. If they live in other counties, Thurston County workers who use vanpools may use either IT vans or those of other transit systems. Intercity Transit's 2007 Development Plan indicates they will increase their vanpool fleet to 238 vans by the end of 2011.

- **Existing parking conditions in CTR Employment clusters:**

Lacey City Hall/Woodland Square

This area is characterized by a large office park and retail shopping district, with Lacey City Hall, the Lacey Timberland Library, and half of the St. Martin's University campus along the eastern edge. As is typical of a suburban retail and office district, there is abundant inexpensive or free parking in surface lots, with 1.05 employees per parking stall for the CTR worksites. There is also free on-street parking within the Woodland Square office park. These parking conditions encourage driving alone.

Lacey Corporate Center

The Lacey Corporate Center is a suburban office park with retail strip centers to its south and east. Parking is free at the CTR worksites. It is also relatively abundant, at 1.14 employees per parking stall, though there is no on-street parking. These parking conditions provide no disincentive to drive alone.

Martin Way Offices and Retail

This cluster is dominated by the Department of Ecology offices, where parking is very limited. As a result, there are 1.52 employees per parking stall at the two CTR worksites combined. There is additional parking in Martin Village across Martin Way from DOE, though it is intended for customers and employees of those businesses. At this location, the Department of Ecology implemented an innovative voluntary paid parking program that helps to fund CTR incentives and outreach efforts at this affected worksite.

I. ASSESSMENT OF THE LAND USE AND TRANSPORTATION CONTEXT

C. Potential Actions for the Jurisdiction to Eliminate Barriers

- **Land Use:**

  Although much of the city is already developed in a low-density suburban pattern, Lacey's land use plan and its development regulations are very supportive of future development patterns that encourage use of alternative commute modes. New residential neighborhoods and new commercial developments are being built at more transit-friendly densities, with more pedestrian design amenities, but there is always more that can be accomplished. For example, zoning for the Hawk's Prairie Business District requires interior circulation designs for development proposals to include a) "sidewalks that provide continuous pedestrian and bicycle access along public, state, or private access roads and to primary uses within the development;" and b) "separation of pedestrian and vehicular traffic, via strategically located, clearly defined pedestrian corridors through parking lots and other means of clearly differentiating pedestrian areas from vehicle areas." These are required neither in the Community Commercial District, nor in the General Commercial District, where most of the city's commercial development occurs. The City could consider extending these design requirements to additional commercial zoning districts.

  Developing moderate density and high density housing close to business districts increases the opportunities for workers to live within walking or biking distance of their jobs. For example, the Lacey Corporate Center includes a large apartment complex (Lacey Park Apartments) and residential subdivision (The Pointe), as well as having others nearby (e.g. Lexington, College Glen, Summerwalk). Lacey Gateway Center also is planned to have a mix of high density housing along with retail and office development. The City could consider adopting a tax exemption for new multifamily housing in mixed use commercial-residential areas, provided for by Chapter 84.14 RCW. This program has been used successfully by Tacoma, Olympia, Renton, and other cities in Washington to attract multifamily housing to these areas.

  Traditionally, CTR measures have been applied mostly with office-based employment. As Lacey continues to grow its commercial districts, such as Lacey Gateway Center on Hawks Prairie, the City could explore opportunities to incorporate CTR measures with new retail development as well.

- **Transportation Facilities and Services:**

  There are several gaps in Lacey's network of bike lanes or bike routes that could be addressed over time. Heavily-traveled Sleater-Kinney Road has no facilities, and College Street has them only south of 37th Avenue, with no bike lanes in the city core, where traffic is the heaviest. Likewise Ruddell Road has bike lanes only south of 45th Avenue. Carpenter Road and Mullen Road have wide shoulders in a few stretches, but much remains to be done. Willamette Drive and Britton Parkway have bike lanes, but not their westward extension on Draham Road and 15th Avenue NE.

  The City could also continue to emphasize interconnection of streets as new areas develop, and to emphasize provision of sidewalks, bike lanes, and trails.

- **Transit:**

  Intercity Transit's 2007-2012 Transit Development plan indicates they will increase service levels by 40,000 service hours over that planning period. IT will increase frequency of service on Routes 62A, 62B, and 67 from 60-minute headways to 30-minute headways as part of these improvements (Intercity Transit Projected Service Levels by 2012 Map), from *Intercity Transit Short Range Service Plan, 2006-2011,* Perteet, 2005). Route 94 to Yelm will remain at 60-minute headways.

- **Parking:**

  The parking standards for Lacey, Olympia, and Tumwater often differ, which can cause developers to locate a project in one city rather than another simply to obtain a more favorable parking standard. For example, Olympia and Tumwater require 3.5 stalls per 1,000 square feet of floor area for government office buildings (plus or minus 20% — or 2.8 to 4.2 stalls — if CTR or other measures are taken), while Lacey requires 2 to 4 stalls (minimum and maximum) per 1,000 square feet for office buildings in general. Lacey could collaborate with the other cities to consider common standards, and to seek standards that encourage greater commute trip reduction.

- **Miscellaneous:**

  Commute Trip Reduction programs are very heavily dependent on effective marketing strategies. To make major progress community-wide during the plan's time horizon (2007-2011), raising the visibility of CTR throughout the community will be necessary, not just in the CTR worksites. The City could consider incorporating CTR messages into other public messages, such as utility bills, notices of public events, parks and recreation programs, and materials that support bicycle and pedestrian programs.

  The major employer in Thurston County is Washington State government, so the great majority of CTR worksites are state government agencies. The City could likely profit from working closely with the Governor's office to jointly improve CTR programs.

  Similarly, it may be an opportune time to reconvene a discussion of preferred state government leasing areas, coming together with the state and neighboring local government jurisdictions. Priority for preferred leasing areas could be put on sites with patterns of connected streets, good transit access, and good bicycle and pedestrian connections. Perhaps a point system could be developed which gave extra credit for sites with good CTR features.

D. Review of Comprehensive Plan Policies

As part of the CTR planning process, the City reviewed its Comprehensive Plan policies. The most recent major plan update was in 2003. The City of Lacey's Comprehensive Plan policies for land use and transportation are attached in Appendix A. In brief, the land use policies support transit-friendly urban densities, pedestrian-friendly connected streets and sidewalks, and mixed-use development.

Lacey's Transportation Plan had its most recent major update in 1998. The transportation policies support travel demand management through education, incentives, commute trip reduction programs, and parking management. There are extensive policies supporting public transit, and others supporting bicycle and pedestrian needs. The Transportation Plan's goals and policies relating to CTR are also attached in Appendix A.

E. Planning Coordination

See Section VI – Documentation of Consultation for participating agencies and other stakeholders.

The City of Lacey has adopted the state standard of a 10% reduction in single occupancy vehicle use and a 13% reduction in vehicle miles traveled for all CTR worksites by 2011. For the draft plan, the City of Lacey used 2005 as the base year pending completion of the 2007 Survey by all worksites. The City will update the draft plan when complete 2007 survey results become available – likely in late 2007.

I. ASSESSMENT OF THE LAND USE AND TRANSPORTATION CONTEXT

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II. and III. BASELINE, GOALS AND TARGETS

A. City

Area of Jurisdiction	2005 SOV Rate	SOV Rate Goal	2011 SOV Target Rate	2005 VMT	VMT Goal	2011 Target VMT
City of Lacey	75.5%	10.0% Reduction	67.9%	11.3	13.0% Reduction	9.8

B. CTR Worksites – Affected and Voluntary

Worksite Organization	2007 SOV Rate	SOV Rate Goal	SOV 2011 Goal	2007 VMT Rate	VMT Rate Goal	VMT 2011 Goal
City of Lacey	88.4%	10% Reduction	79.50%	12.3	13% Reduction	10.7
Health Care Authority	80.0%	10% Reduction	72.00%	11.1	13% Reduction	9.6
TwinStar Credit Union (formerly Twin County Credit Union)	90.8%	10% Reduction	81.80%	13.6	13% Reduction	11.8
Verisign Telecommunication Services	86.2%	10% Reduction	77.60%	12.2	13% Reduction	10.6
Washington State Dept. of Ecology	68.7%	10% Reduction	61.80%	9.8	13% Reduction	8.5
Washington State DSHS, Div of Child Support	75.5%	10% Reduction	67.90%	13.2	13% Reduction	11.5
Washington State DSHS - Aging & Disability Svcs Admin	79.8%	10% Reduction	71.80%	12.0	13% Reduction	10.5
Washington State DSHS - DASA	83.3%	10% Reduction	74.90%	12.8	13% Reduction	11.1
Washington State DSHS - Div of Child Support	82.3%	10% Reduction	74.10%	10.8	13% Reduction	9.4
Washington State Employment Security Department	61.1%	10% Reduction	55.00%	10.3	13% Reduction	9.0
Washington State Gambling Commission	81.1%	10% Reduction	73.00%	12.3	13% Reduction	10.7

II. and III. BASELINE, GOALS AND TARGETS

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IV. DESCRIPTION OF PLANNED LOCAL SERVICES AND STRATEGIES FOR ACHIEVING THE GOALS AND TARGETS

The City of Lacey proposes to implement the following elements as part of its Commute Trip Reduction plan. Implementation of the elements will be done in partnership and coordination with other agencies. Listed below are the following planned regional and local services and strategies for achieving the established goals and targets for 2011.

The City of Lacey supports and will provide local assistance for the strategies called for in the Regional CTR Plan:

- Update Plans and Ordinances
- Continue to Provide Worksite Support
- Increase Coordination with State Government
- Develop Regional Parking Policies and Strategies
- Locate and Design Worksites to Support Trip Reduction
- Encourage School Participation in Commute Trip Reduction
- Encourage Voluntary Tribal Participation in CTR
- Increase Planning and Coordination with Intercity Transit
- Seek Funding to Expand Park-and-Ride Capacity
- Establish a Business Case for CTR
- Implement a Region-wide Marketing and Community Outreach Program
- Create a Recognition Program for Trip Reduction Efforts
- Integrate CTR with Other Regional Programs
- Seek Support and Funding for Local, Regional and GTEC strategies

The City of Lacey will:

- Incorporate CTR messages into other City communications
- Explore encouraging voluntary participation by retail and other commercial employers
- Explore including park-and-ride capacity as part of new commercial development

The Jurisdiction proposes to implement the following elements as part of its Commute Trip Reduction plan. Implementation of the elements will be done in partnership and coordination with other agencies. Listed below are the following planned local services and strategies for achieving the established goals and targets for 2011.

A. Policies and Regulations

While the City of Lacey's Policies and Regulations are generally supportive of CTR goals, the City will explore minor changes that may provide additional trip reduction opportunities. The City will also review policies to ensure that CTR policy language is part of land use, transportation, environmental and other appropriate sections.

The Jurisdiction has identified the following policies and regulations that will be updated and will help reduce drive alone trips and vehicles miles traveled. The proposed changes and their scheduled adoption date are listed below.

1. Comprehensive plan policies
   - No specific changes identified.

2. Land use regulations
   - No specific changed identified.

3. Zoning code regulations
   - Consider changing parking standards in coordination with Olympia and Tumwater, by the end of 2008.
   - Consider adding development standards for pedestrian accessibility to all commercial zoning districts, by the end of 2008.

4. Street design standards
   - No specific changes identified.

5. Concurrency regulations
   - No specific changes identified.

B. Services and Facilities

As part of its capital improvement program, the jurisdiction is planning the following improvements that will help reduce drive alone trips and vehicle miles traveled. In addition to the jurisdiction's investments, the jurisdiction is working with its transit agency partners to improve transit services and facilities.

Elements that are being planned and/or being implemented include:

1. High occupancy vehicle lanes (☒ N/A)

2. Transit services
   - Transit service on all the Lacey routes except Number 94 to Yelm will achieve 30-minute or better headways by 2012, as projected in the *Intercity Transit Short Range Service Plan, 2006-2011* (Perteet, 2005). Route 94 will remain at 60-minute headways.

3. Vanpool services and vehicles
   - Vanpool services and vehicles are provided by Intercity Transit county-wide. According to their *2007-2012 Transit Development Plan,* the agency projects an increase in the number of vanpools from 147 at the start of 2007 to 238 by the end of 20011. An undetermined number of these vanpools would be used by employees at Lacey CTR worksites. Intercity Transit regularly promotes vanpools at CTR worksites, including sending an updated Vanpool roster each month.

4. Ride matching services
   - Intercity Transit provides ride-matching services for Thurston County commuters, and will continue to do so.
   - Washington State Department of Transportation is working on enhancements to the Rideshare Online system, which will be promoted at the local level upon completion.
   - Because ridesharing is the most likely mode choice for current single occupancy vehicle users in the Thurston Region, the City of Lacey will promote ride matching services at all training sessions and events for employers.

5. Car sharing services
   - The Thurston Regional Planning Council explored car sharing programs in 2006 and determined that the urban densities are not sufficient to make this a viable service at this time. The Region will continue to monitor readiness for car sharing.

6. Transit facilities
   - Intercity Transit has recently expanded the Martin Way park-and-ride lot. IT will also be developing a replacement park-and-ride lot north of Interstate 5 on Hawks Prairie to replace the Marvin Road lot that was removed due to new commercial development (see *2007-2012 Transit Development Plan*).

7. Bicycle and sidewalk facilities
   - As a standard procedure, Lacey incorporates new bicycle and sidewalk facilities into street upgrade projects where called for in the Comprehensive Plan, and will continue to do so during the planning time horizon for this CTR plan.
   - Mullen Road is being improved to major collector standards in 2007 from Ruddell Road eastward to the city limits. The improvements include widening, turn lanes, and addition of bike lanes, planter strips, and sidewalks. In 2009, it is to be extended from Ruddell Road westward to College Street, with the same standards.
   - Carpenter Road is to be widened to arterial standards in 2010, with turn lanes, bike lanes, planter strips, and sidewalks.
   - College Street is to be extended in 2009 from 6th Avenue NE to 15th Avenue NE with arterial standards, including bike lanes, planter strips, and sidewalks.
   - Yelm Highway is to be improved to arterial standards from Ruddell Road to the eastern city limits in 2010, including bike lanes, planter strips, and sidewalks.
   - Marvin Road is to be improved to arterial standards from Britton Parkway to 44th Avenue NE in 2010, including bike lanes, planter strips, and sidewalks.
   - Hogum Bay Road NE is to be improved to collector standards in 2011, including bike lanes, planter strips, and sidewalks.

C. Marketing and Incentives

The Thurston Regional CTR partners will continue to provide marketing and educational programs to all affected and voluntary worksites in the City of Lacey. These programs include, but are not limited to ETC Basic and Special Trainings; ETC Networking Sessions; Thurston Commutes – CTR Website with information, ideas, and links; and special events such as Smart Commuter Fairs.

One-on-one technical assistance is provided by the lead agency and includes presentations to worksite committees and management, sample plans, implementation strategies and compliance assistance.

Led by Intercity Transit, the City of Lacey also participates in Wheel Options and Rideshare on Line Promotions. Partners provide special Thurston Region -only prizes for Wheel Options to encourage participation.

The Bicycle Commuter Contest is a valued Thurston Region event that celebrated its 20th anniversary this year. Over 1,000 people participated in 2007. As part of the Contest, Intercity Transit hosts the Wrencher's Ball – a free tune-up clinic for participants. Participants receive tee shirts, merchant discount coupons and the winners are recognized at a community event.

For state agency worksites, the Washington State Department of General Administration (GA) provides guidelines, plan templates and technical assistance in plan development. GA also supplies the STAR Pass – a prepaid transit pass and SAFE-Ride – an emergency ride home program. These benefits are available to any state employee. Executive Order 01-03 encouraged state agencies to develop plans for telework and flexible work schedules and some agencies encourage such flexibility in support of CTR goals.

Many worksites in the Thurston Region encourage trip reduction through incentive programs. These programs include financial rewards for use of alternative modes, preferential parking for rideshare vehicles, some form of guaranteed ride home and employee recognition. The City of Lacey assists worksites in developing these programs.

Some worksites employ parking management programs to encourage trip reduction. In Lacey, for example, the Department of Ecology has instituted a creative voluntary parking charge for people who wish to park closer to the entrance in a parking structure. Those fees are used to provide incentives for other alternative mode users.

The Regional CTR Plan strategies call for a community-wide marketing campaign, targeting worksites and the residential community. The City of Lacey will participate in this outreach effort.

The City of Lacey recognizes that a built environment that supports physical activity also encourages trip reduction and will explore partnerships with the health community for mutual educational and outreach efforts. This includes working with Thurston County Public Health and Social Services Steps to a Healthier WA and Thurston Regional Planning Council's Active Community Environments programs.

D. Special Programs for Mitigation of Construction Activities

- During the time horizon for this CTR plan, Lacey is planning no major transportation construction projects that would require use of the CTR program to mitigate impacts.

IV. DESCRIPTION OF PLANNED LOCAL SERVICES AND STRATEGIES FOR ACHIEVING THE GOALS AND TARGETS

E. Schedule for Implementing Program Strategies and Services

The jurisdiction has identified the following schedule for implementing the CTR program strategies and services. The agency responsible for implementing the strategy or service is also listed. In most cases, the City's work will include collaboration with TRPC and other regional partners.

Program Strategy or Service	Agency Responsible	Scheduled Date for Implementation
Policies and Regulations		
1. Consider changes to parking regulations	1. City of Lacey	2008-2009
2. Consider changes to design requirements in commercial districts	2. City of Lacey	
3. Consider establishing multifamily tax exemption for major activity centers	3. City of Lacey	
4. Reconvene inter-jurisdictional discussion of State Preferred Leasing Areas	4. Cities of Lacey, Olympia, and Tumwater; and State of Washington	
5. Consider incorporating CTR measures for new retail	5. City of Lacey	
6. Consider including schools under CTR requirements	6. City of Lacey	
7. Consider lowering employment threshold for CTR regulations	7. City of Lacey	
Services and Facilities		
1. Improve headways on transit routes serving Lacey	1. Intercity Transit	1. 2008-2011
2. Mullen Road widening, with bike lanes and sidewalks from Ruddell Road east to City Limits	2. City of Lacey	2. 2007
3. Mullen road extension with bike lanes and sidewalks from Ruddell Road west to College Street	3. City of Lacey	3. 2009
4. Carpenter Road widening, bike lanes and sidewalks	4. City of Lacey & Thurston County	4. 2010
5. College Street extension with bike lanes and sidewalks	5. City of Lacey	5. 2009
6. Yelm Highway, Ruddell Road to E city limits, bike lanes and sidewalks	6. City of Lacey	6. 2010
Marketing and Incentive Programs		
1. Include CTR information in other public messages, such as utility bills, event announcements, etc.	1. City of Lacey	1. 2008-2011
2. Region Wide Marketing Program	2. City of Lacey and Regional Partners	2. 2008-2011

IV. DESCRIPTION OF PLANNED LOCAL SERVICES AND STRATEGIES FOR ACHIEVING THE GOALS AND TARGETS

F. Local Benefits of Meeting CTR Goals

Meeting the CTR goals will provide a variety of benefits. CTR helps the City implement land use and transportation goals and policies to create a vibrant, sustainable urban environment. CTR promotes physical activity and health, while making a local contribution to addressing climate change. Some examples include:

1. Improvements in the local level of service on various streets and at various intersections.
2. Controlling the growth in pass-through commuter traffic
3. Reduced emissions from vehicles.
4. Reduced energy consumption.
5. Improved wellness, primarily for those who walk or bicycle as their commute mode.
6. More efficient, cost effective, and on-time provision of transit services
7. Controlling congestion will support efforts to reduce sprawl and increase the concentration of development in Lacey's activity centers, such as the Core Area.

V. REQUIREMENTS FOR MAJOR EMPLOYERS

The purpose of this section is to describe the jurisdiction's required contributions from major employers. Jurisdictions should identify what expectations that they have of major employers. The CTR Law specifies that major employers are required to provide four elements as part of their CTR programs. However, the local jurisdiction can opt to require additional elements in their CTR ordinances.

The Washington State Department of Transportation is developing a revised ordinance template, which the City of Lacey will consider. Under the CTR Efficiency Act, state co-located worksites will now be affected. As the City works with the Washington State Department of General Administration to facilitate this change, new required elements may be added to the ordinance.

Required Element	Description
Designate Employee Transportation Coordinator	The Employee Transportation Coordinator is the point of contact between the employer and its workforce to implement, promote and administer the organization's CTR program. He/she is also the point of contact between the employer and the local jurisdiction to track the employer's progress in meeting CTR requirements
Regular Distribution of Information to Employees	Information about commute alternatives will be distributed regularly to employees. Examples of information that will be distributed will include: • Description of the employer's commute options program • Transit system maps and schedules • Vanpool rider alerts • Weekly traffic alerts • Wheel Options campaign promotional materials
Regular Review of Employee of Commuting and Reporting of Progress	The employer is required to complete the Employer Annual Report and Program Description Form and submit to the local jurisdiction. Every two years, the employer shall conduct a program evaluation to determine worksite progress toward meeting the CTR goals. As part of the program evaluation, the employer shall distribute and collect Commute Trip Reduction Program Employee Questionnaires (surveys) to achieve at least a 70 percent response rate.
Implementation of a Set of Measures	The employer is required to implement a set of measures that are designed to increase the percentage of employees using the following modes: • Transit • Vanpool • Carpool • Bicycle or walking • Telework • Other non-single occupant vehicle modes Measures to reduce drive alone trips and vehicle miles traveled include, but are not limited to: • Provision of preferential parking or reduced parking charges for high occupancy vehicles • Instituting or increasing parking charges for single-occupant vehicles • Provision of commuter ride matching services • Provision of subsidies for transit fares • Provisions of vans for vanpools • Provisions of subsidies for carpooling or vanpooling • Permitting the use of the employer's vehicles for carpooling or vanpooling • Permitting flexible work schedules • Cooperation with transportation providers to provide additional regular or express service to the worksite • Construction of special loading and unloading facilities for transit, carpool, and vanpool users • Provision of bicycle parking facilities, lockers, changing areas, and showers

	• Provision of a program for parking incentives such as a rebate for employees who do not use the parking facility • Establishment of a program to permit employees to work part or full time at home or at an alternative worksite closer to their homes • Establishment of a program of alternative work schedules such as compressed work week schedules • Implementation of other measures designed to facilitate the use of high-occupancy vehicles such as on-site day care facilities and emergency taxi services • Employers or owners of worksites may form or utilize an existing transportation management association or other transportation-related associations by RCS 35.87A.010 to assist members in developing and implementing commute trip reduction programs
Optional Elements	**Description**
Coordination	With the assistance of the Thurston County lead agency, the employer is required to coordinate and collaborate with other CTR affected and voluntary worksites in geographic proximity. This coordination includes but is not limited to: • Joint education and promotional events (i.e. Smart Commuter Fairs) • Ridematching coordination

VI. DOCUMENTATION OF CONSULTATION

This section describes the consultation process that was used to develop the local jurisdiction's Commute Trip Reduction plan. The plan was developed in consultation with the following organizations and individuals:

Organization/Party	Meeting Date	Contact Person
Jurisdictional Staff	Consulted throughout planning process	Tom Palmateer Martin Hoppe Dave Burns
All Thurston Region Planning Commissions	September 2007	Contact List Available
Lacey City Council	Council: June & September 2007	Virgil Clarkson, Mayor
WSDOT - Headquarters	Consulted throughout planning process	Brian Lagerberg, Public Transportation & Commute Options Manager
WSDOT – Olympic Region	September 2007	T.J. Nedrow
Thurston Regional Planning Council	Updated throughout planning process	Ken Jones, Chair
Thurston Regional Planning Council, Transportation Policy Board	Updated throughout planning process	Doug Mah, Chair
Puget Sound Regional Council	Consulted throughout planning process	Lindy Johnston, Senior Planner
Thurston County ETCs at Affected & Voluntary Worksites	Consulted throughout planning process	Contact List Available
Intercity Transit	Consulted throughout planning process	Mike Harbour, General Manager
Mason Transit	August 2007	Dave O'Connell, General Manager
Twin Transit	August 2007	Ernest Graichen, General Manager
Pierce Transit	September 2007	George Patton, Planning
Office of the Governor	August & September 2007	Jill Satran, Executive Policy Advisor
Department of General Administration	Consulted throughout planning process	Joan Cullen, State Agency CTR Program Manager
Interagency Commute Trip Reduction Board	Consulted throughout planning process	Joan Cullen, State Agency CTR Program Manager
Thurston County Public Health & Social Services Steps to a Healthier WA Program	Consulted throughout planning process	Chris Hawkins, Active Healthy Communities Coordinator

VI. DOCUMENTATION OF CONSULTATION

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VII. A SUSTAINABLE FINANCIAL PLAN

The Thurston Region works collaboratively to implement Commute Trip Reduction, so the City's Financial Plan for CTR reflects both local and regional expenses and revenues. In addition to the funding sources listed, the City and Region will explore the following funding sources: Regional STP and Transportation Enhancements, CMAQ, Local Improvement Districts, Real Estate Excise Tax, Urban Corridor and Sidewalk Programs, and Pedestrian and Bicycle Safety Programs, including Safe Routes to Schools.

It is difficult to quantify local investments in infrastructure and programs that support CTR. Is the Capital Facilities Plan the right mechanism for documenting this commitment? Or the Transportation Improvement Program? Do only transportation projects count? What about Parks projects that support mobility and encourage physical activity? How is staff time accounted for? As CTR planning is refined, local and regional governments will need to work with WSDOT to determine the most accurate and consistent methodology for capturing this critical information.

By way of example, the following table summarizes the funding secured and planned transportation investments included for the urbanized area in the draft 2008-2011 Regional Transportation Improvement Program (RTIP) for the Thurston Region. It reflects (though not necessarily comprehensively) the financial commitment local and regional agencies, and Olympic Region WSDOT are making in the Thurston Region's transportation system, many of which are supportive of CTR objectives.

The RTIP is required to include projects with federal transportation funds (FHWA or FTA), regionally significant projects (especially capacity projects that could impact air quality conformity) and WSDOT projects. Each jurisdiction prepares a local Transportation Improvement Program (TIP), derived from local budgeting and planning documents, which is then compiled with the other jurisdiction's TIPs to develop the RTIP. Because the RTIP is intended to reflect a final step in the appropriation of federal funding, it has a specialized use and does not necessarily represent the full range of transportation projects undertaken by the local jurisdictions, nor all the CTR related projects administered locally or regionally.

Jurisdiction	Funding Secured (in $1,000)	Planned (in $1,000)	Total (in $1,000)
Intercity Transit	344	12,600	12,944
Lacey	6,845	66,218	73,063
Olympia	17,346	48,831	66,177
Thurston County	14,956	3,821	18,777
TRPC		1,716	1,716
Tumwater	3,720	42,153	45,873
WSDOT Olympic Region	17,463	954	18,417
Totals	**60,674**	**176,293**	**236,967**

2008-2011 Transportation Improvement Program Investments in the Urbanized Area of the Thurston Region

In addition to City and County investments, Intercity Transit has a strong commitment to supporting CTR. Region-wide, they contribute nearly $113,000 annually. Approximately half of that amount is non-personnel costs for Wheel Options, Smart Commuter Fairs, media coverage (TV, radio, print), and market research. The other half is in personnel costs to support those efforts as well as other regional partner activities.

VII. A SUSTAINABLE FINANCIAL PLAN

Another important regional partner, the Washington State Department of General Administration (GA) supports all state agencies in the Thurston Region. Not accounting for staff time, GA spends approximately $115,000 per year for the STAR Pass (transit pass) and $5,000 per year for SAFE-Ride (emergency ride home). These programs are available to all state employees.

Intercity Transit and GA as regional partners will also contribute their time, expertise and other resources to the strategies articulated in this Plan.

A. Funding Sources

1. WSDOT CTR grant
   The WSDOT CTR Grant is the annual allocation that is given to jurisdictions to help them administer their CTR programs.

2. Local & Regional Funds

3. Construction TDM funds
   Funds may be available through construction mitigation programs. These programs can be used to enhance the City of Lacey's CTR program and provide program assistance to CTR work sites.

Source of Funding	Responsible Agency	Estimated Revenue FY 2008	Estimated Revenue FY 2009	Estimated Revenue FY 2010	Estimated Revenue FY 2011	Total Estimated Revenue
CTR Grants	WSDOT	$ 110,000	$ 110,000	$ 110,000	$ 110,000	$ 440,000
Local & Regional Funds	Local Jurisdiction & TRPC	$ 45,000	$45,000	$45,000	$45,000	$180,000
TOTAL		**$155,000**	**$155,000**	**$155,000**	**$ 155,000**	**$620,000**

The Jurisdiction has prepared a financial analysis to identify revenues and expenses that are associated with the Jurisdiction's Commute Trip Reduction Plan. The following is a description of the available funding sources that the Jurisdiction may use to implement its CTR Plan. After identifying the available funding sources, the Jurisdiction has identified the expenses which include program administration, training, employer assistance, policy and regulation development, promotional activities, transit and ridesharing services, and implementation of supporting facilities.

B. Program Expenses

1. Administration
   Program administration includes activities such as identifying and notifying affected employers, reviewing employer progress reports, evaluating employer programs, coordination with neighboring jurisdictions and transit agencies, and preparing annual reports on the CTR program.

   Agency: City of Lacey and Thurston Regional Planning Council (TRPC)

2. Facilities
   Facilities include capital elements that help to reduce the number of drive alone trips. Elements include high occupancy vehicle lanes, bicycle lanes, sidewalks, transit signal priority improvements, and bus shelters.

   Agency: City of Lacey, TRPC, Intercity Transit, WSDOT

3. Services
   Services include elements that support transit and ridesharing. Elements include transit services, assistance with the formation of vanpools, car sharing and ride matching services.

   Agency: City of Lacey, TRPC, Intercity Transit, WSDOT

4. Marketing
   Marketing includes activities that help to promote and increase awareness of commute options among commuters and residents. Activities include the development and distribution of transit and ridesharing information, promotional campaigns, web sites to promote commute options programs, and outreach to employers.

   Agency: City of Lacey, TRPC, Intercity Transit, WSDOT

5. Incentives
   Incentives include transit pass discount programs, subsidies for vanpool programs, and other contributions to encourage employers to participate in commute options programs.

   Agency: City of Lacey, TRPC, Intercity Transit, State, Employers

6. Training
   Training includes activities for both employer and local jurisdiction staff. Training may include workshops on various topics to address CTR, attendance at conferences and other training opportunities that will help improve program performance.

   Agency: City of Lacey, TRPC

VII. A SUSTAINABLE FINANCIAL PLAN

Expense	Responsible Party	Estimated Expense 2008	2009	2010	2011	TOTAL
Update CTR Plan & Ordinances	TRPC & Jurisdictions	$15,000	$5,000	$15,000	$5,000	**$40,000**
Administer CTR Program	TRPC & Jurisdictions	$150,000	$150,000	$150,000	$150,000	**$600,000**
Increase Coordination with State Government	TRPC & Jurisdictions	$15,000	$10,000	$15,000	$10,000	**$50,000**
Develop Regional Parking Policies & Strategies	TRPC & Jurisdictions	$15,000	$15,000	$10,000	$10,000	**$40,000**
Locate & Design Worksites to Support Trip Reduction	TRPC & Jurisdictions	$20,000	$10,000	$10,000	$10,000	**$50,000**
Encourage School Participation in CTR	TRPC & Jurisdictions	$8,000	$8,000	$4,500	$4,500	**$25,000**
Encourage Voluntary Tribal Participation	TRPC & Jurisdictions	$4,000	$4,000	$3,500	$3,500	**$15,000**
Increase Planning & Coordination with Intercity Transit (Planning Only)	TRPC & Jurisdictions	$3,750	$3,750	$3,750	$3,750	**$15,000**
Smart Corridors Project	TRPC & Jurisdictions	$	$500,000	$250,000	$250,000	**$1,000,000**
Seek Funding to Expand Park-and-Ride Capacity (Planning Only)	TRPC & Jurisdictions	$10,000	$10,000	$10,000	$10,000	**$40,000**
Establish a Business Case for CTR	TRPC & Jurisdictions	$	$10,000	$5,000	$5,000	**$20,000**
Implement a Region-wide Marketing & Community Outreach Program	TRPC & Jurisdictions	$25,000	$75,000	$25,000	$25,000	**$150,000**
Integrate CTR with Other Regional Programs	TRPC & Jurisdictions	$1,250	$1,250	$1,250	$1,250	**$5,000**
Seek Support and Funding for Local, Regional & GTEC Strategies	TRPC & Jurisdictions	$1,250	$1,250	$1,250	$1,250	**$5,000**
Local strategies	City of Lacey	$10,000	$10,000	$10,000	$10,000	**$40,000**
TOTAL		**$278,250**	**$813,250**	**$509,250**	**$494,250**	**$2,095,000**

VII. A SUSTAINABLE FINANCIAL PLAN

C. Financial Gaps

Program Element	Target Population	Objective	Needed Funding	Potential Source
Update CTR Plan & Ordinances	Local & Regional Entities	To ensure integration of CTR with other planning efforts	$40,000	WSDOT Budget Request
Provide Worksite Support	All employers	Encourage trip reduction	$160,000	WSDOT Base Funding Increase Budget Request
Increase Coordination with State Government	Governor, Legislature, State Agencies,	Increase state government's leadership role in CTR	$20,000	WSDOT Budget Request (Should be statewide. This number reflects Thurston County only)
Locate & Design Worksites to Support Trip Reduction	Governor, Legislature, State Agencies, Employers	Encourage trip reduction through supportive design	$30,000	For State Government: WSDOT Budget Request (Should be statewide) and Business community contribution for private employers
Encourage Tribal Participation in CTR	Tribes	Encourage trip reduction at emerging major employers	$15,000	WSDOT Budget Request to Support Tribal Planning Activities
Smart Corridors Project	Thurston Region	Develop infrastructure that supports trip reduction	$1,000,000	CMAQ, STP
Park-and-Ride Capacity (Planning only)	Thurston Region & surrounding regions	Develop infrastructure that supports trip reduction and reduction in VMT - may eliminate need for more costly capacity funding for state & local facilities	$40,000	WSDOT Budget Request to support statewide plan and funding plan
Establish a Business Case for CTR	Private employers	Support participation in trip reduction efforts by integrating CTR with other business goals	$10,000	WSDOT Budget Request
Implement a Region-wide Marketing and Community Outreach Program	Entire Thurston Region, including non-affected employers and residential community, tribes	Increase knowledge of and voluntary participation in trip reduction efforts	$150,000	CMAQ, STP
Create a Recognition Program for Trip Reduction Efforts	All employers, employees, ETCs	Reward trip reduction	$10,000	WSDOT Budget Request (see D for statewide program development)
			$1,475,000	

VII. A SUSTAINABLE FINANCIAL PLAN

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VIII. IMPLEMENTATION STRUCTURE

As part of its strategic plan for implementing the Commute Trip Reduction Program, the City plans to work in partnership with the transit agencies, neighboring jurisdictions, and other partners.

Listed below are the organizations that will be involved with the implementation of the City's plan. Their roles and responsibilities are as follows:

A. Local Jurisdiction and Contractor

Along with all other affected jurisdictions in the Thurston Region, the City contracts with the Thurston Regional Planning Council to act as lead agency to implement all requirements of the CTR Law. The City will work with TRPC to implement local and regional plans and ensure worksite compliance with legal requirements.

B. Transit Agency

Intercity Transit will be responsible for providing transit and ridesharing services to the major employers and provides in-kind and sub-contracted marketing assistance to TRPC.

C. Employers

The employer will be responsible for complying with the requirements of the State CTR Law and the City Ordinance. The City and TRPC will work with the employers to meet their goals.

CTR Implementation Plan

See Section IV – E

VIII. IMPLEMENTATION STRUCTURE

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IX. GROWTH AND TRANSPORTATION EFFICIENCY CENTERS

As part of the Regional CTR Plan, the Thurston Regional Planning Council developed a Regional GTEC Feasibility Study to explore current conditions and jurisdictional thresholds for GTEC readiness. At this time, the City of Lacey is not preparing a GTEC program.

IX. GROWTH AND TRANSPORTATION EFFICIENCY CENTERS

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APPENDIX A. LACEY LAND USE AND TRANSPORTATION POLICIES AFFECTING CTR

APPENDIX A: Lacey Land Use and Transportation Policies Affecting CTR

The City of Lacey has the following comprehensive plan goals and policies which support CTR. Through the joint planning process, Thurston County has also adopted those goals and policies which are marked by an asterisk (*).

LAND USE GOALS AND POLICIES

D. UGA Boundary and Densities

2. Goal: Have criteria for the location of a full range of urban densities based upon the UGA boundaries and the availability of roads, utilities and services and environmental limitations. This criteria can serve for development of the comprehensive plan's land use map and for future decisions concerning amendment of the land use map.*

b. Policy: Areas designated for high and moderate density residential development shall be planned to accommodate a minimum density of 6 units per acre. Both high and moderate density designations may accommodate from 6 units per acre to the full density that might be permitted given other policies and standards, including PRD bonuses, transfer of development right bonuses, and other density incentives.*

E. Residential Goals and Policies

1. Goal: Enhance appearance, quality and function of residential neighborhoods.*

g. Policy: Develop an interconnecting network of streets and alleys designed for narrower widths and slower speeds. Provide pedestrian-friendly streetscapes, transit and alternative forms of transportation, curbside planting strips with trees and landscaping and civic identity.

F. Mixed Use Goals and Policies

1. Goal: Provide opportunities that allow mixed uses, enhancing character, functionality and desirability of planning areas.*

Policies Regarding New Urban Centers

a. Policy: Utilize the urban center concept with specific development requirements as one strategy to promote a mixed use concept.*

b. Policy: Consider designation of residential parcels of 60 acres or greater in size, or parcels that are surrounded by vacant residential parcels totaling 60 or more acres in size that can reasonably be integrated into a mixed use concept, as new urban centers. New urban centers shall be designed to have interconnecting streets and appropriate placement of open spaces and commercial use to serve adjacent parcels. Encourage the*

integrated design of adjacent parcels less than 60 acres in size to develop in conjunction with and to complement urban centers. Where multiple parcels are involved, participation in dedication of land for public purposes and distribution of land uses shall be balanced as much as possible.

c. Policy: Urban center zones shall include a full range of housing choices, park area, transit services, pedestrian orientation and civic spaces. Additionally, they shall include neighborhood or community commercial scale retail and service businesses and offices, if considered appropriate to the site, and a school site if deemed necessary by the North Thurston Public Schools.*

Policies Regarding Mixed Use Arterial Corridors

a. Policy: Provide for a mixed use arterial corridor zone along Martin Way encouraging high density residential infill and redevelopment opportunities along this commercial strip as a strategy to promote a mixed use concept.

g. Policy: Use the 1993 study conducted by Thurston Regional Planning titled "Evolution of a Corridor – From Auto-Oriented Arterial to High Density Residential Corridor" as a guide for creation of the mixed use arterial zone and accompanying standards.

Policies Applying to All Mixed Use Concepts

c. Policy: In all mixed use concepts, develop an interconnecting network of streets and alleys designed for narrower widths and slower speeds. Create attractive pedestrian-friendly streetscapes, transit and alternative forms of transportation, allow on-street parking to replace or reduce uninterrupted expanses of parking lots. Require curbside planting strips with trees, significant landscaping and civic identity.

d. Policy: Use mixed use concepts to promote reduced dependency on single occupancy vehicle use by providing some selected services within walking distance of residences.

f. Policy: High quality, attractive, innovative design characterized by humanistic scale shall be the foundation of all mixed use concepts. This will include specific design and performance standards that provide pedestrian and transit orientation, spatial relationships between buildings, building and facade articulation, window and entrance treatments, the relationship of buildings to streets and pedestrians, attractive streetscapes, transportation, open space and protection of the environment, and nuisances mitigation.

g. Policy: Mixed use concepts should ensure an integrated relationship between buildings and their positive relationships to streets. Buildings and their primary entrances shall face streets.

i. Policy: Pedestrian-friendly techniques and improvements such as street trees in wide planting strips, sidewalks with brick crosswalks, pedestrian-scale lighting, street furniture

and bus stops are integral to mixed use concepts. All proposals shall include plans for such improvements in conjunction with pedestrian corridors and key pedestrian intersections shown on the future land use plan map.

j. Policy: Mixed use concepts should be designed to promote the sense of community by mixing land uses, housing types and income levels. Concepts need to integrate these uses in proximity to essential services and workplaces. Concepts must have significant interconnections of roads and sidewalks. To meet housing goals, concepts should provide a variety of housing types available to people with a range of incomes.

k. Policy: Promote the following essential mix of land uses in mixed use proposals: housing, neighborhood-oriented shopping and services, offices, civic uses and spaces, workplaces, open spaces, and natural systems network.

l. Policy: Mixed use concepts must promote efficient land use by encouraging infill, ensuring development at more compact, higher urban densities, and placing residential uses in close proximity to basic retail and support services, as well as work places.

I. Residential Streets

1. Goal: Streets and transportation systems shall enhance the appearance, quality, and functionality of residential neighborhoods.*

c. Policy: Residential developments shall require strong, multi-modal transportation and pedestrian orientation. Pedestrians need friendly streetscapes, sidewalks, pedestrian links, and convenient covered bus stops. Multifamily areas may benefit from buildings organized along the streets.*

d. Policy: Street sections shall be characterized by an interconnected network or modified grid pattern, an attractive streetscape that is inviting to pedestrians as well as vehicles, planting strips with street trees between street and sidewalks, sidewalks on both sides of streets, pedestrian scale lighting and on-street parking. Design shall promote the safe coexistence of pedestrians and vehicles in close proximity. Streets shall have narrower widths and slower speeds, accommodations for bicycles and bike parking. Nearly all streets shall terminate to other streets. Alleys shall be designed down the center of blocks and interconnected with other alleys and internal streets serving the development. Provisions shall be made for transit stops to accommodate attractive shelters.*

g. Policy: Traffic calming techniques shall be used where appropriate to enhance street space and experience by reducing vehicular speed and helping to create a sense of place for streets that serve pedestrians and cyclists, as well as vehicles. Techniques may include "T" intersections, roundabout islands and other diversions, offset intersection and slow points, such as planting bulbs that provide protected parking and force regular changes of direction.*

h. Policy: Parking lots serving mixed use developments and commercial sites in residential areas shall be located to the rear or sides of the buildings. They shall not be located on the street side of buildings. Any parking located to the sides of buildings must be designed and screened such that it neither disrupts nor distracts from the streetscape continuity.

i. Policy: All parking lots in mixed use developments and in commercial sites in residential areas shall provide bicycle parking and shall be screened. Lots shall be heavily landscaped throughout and along the edges, and shall include numerous trees and internal planting bays.

L. Commercial Goals and Policies

1. Goal: Provide a full range and appropriate siting and design of commercial facilities to support the residential environment of Lacey and support the development of Lacey as an attractive, functional regional commercial center. All commercial development should enhance the quality of life of our residents.*

e. Policy: As retail and personal services are business uses dependent on walk-in traffic, they should be encouraged to group together, preferably within planned centers to maximize sales and pedestrian movement within the concentration and to provide safer and more efficient facilities for access, internal circulation and parking.*

f. Policy: Large city-wide or regional general commercial uses should be grouped into centers, rather than dispersed throughout the city. These centers shall have a landscaped urban park quality.*

g. Policy: Future development of commercial areas should rest on a comprehensive integrated planning scheme incorporating performance standards regarding greenbelts and buffering, landscaping, public service, utilities, parking facilities, commute reduction techniques consistent with the State Commute Reduction Law, and other items of site design important to the community.*

i. Policy: New business development should be designed to encourage buses, pedestrians and bicyclists, as well as motorists.*

j. Policy: Seek methods of safely introducing the pedestrian and bicyclist into existing business areas, including, but not limited to, requiring such things as pedestrian improvements, bike lanes and bike parking with development of commercial sites.*

l. Policy: Whenever practical, site planning and design of non-residential land uses should permit the shared use of parking facilities for off-hour activities. Additionally, park and rides should be permitted and should qualify as parking for surrounding commercial activities.*

2. Goal: Create a healthy and attractive setting along the arterial commercial entrances to Lacey; Martin Way from College to Marvin and Marvin Road from I-5 to Martin, at the entrances on Pacific and along streets within Lacey's core commercial areas.

f. Policy: Development should use setbacks, site designs and landscaping to avoid creating a corridor with parking lot after parking lot and to promote safe pedestrian walkways within parking lots. This should encourage walking, public transportation and bicycle use.*

j. Policy: Arterial commercial entrance corridors should also incorporate facilities for non-automotive transportation, including:*

(1) Pedestrian facilities that provide easy access but with strong separation from heavy street traffic; and
(2) Bikeways designed to be distinct from pedestrian paths; and
(3) Transit facilities.

k. Policy: Public investments within the street corridor should also be consistent with the policies in this section, especially regarding landscaping, pedestrian facilities and transit facilities.*

TRANSPORTATION GOALS AND POLICIES

1. Travel Demand Management

GOAL: Reduce vehicle trips and vehicle miles traveled during peak periods to minimize the demand for constructing costly road improvements. In the short-term, establish education, incentives and services that encourage employees and students to use alternative transportation methods for work, school, and other trips. Over time, phase in disincentives, regulations and enforcement that discourage driving alone.

1.1. Public Information and Education

1.1.1 Develop information programs for the general public that promote alternatives to driving alone to work and school. These may include: written information; speakers bureau; interpretive displays; alternative transportation fairs; and multi-media presentations. The purpose is to inform people of available services and the economic, environmental and personal benefits that can be achieved by reducing driving alone.

1.1.2 Track the reduction in commute trips and other measures that help reduce vehicle trips and develop information about these in order to inform the public and celebrate achievements. As proposed TDM programs are funded and implemented, appropriate benchmarks and goals for urban and rural areas should be developed. Progress on these goals should be monitored and reported regularly.

1.1.3 Keep citizens informed about decisions that will be made that will affect the transportation network and transportation services so that they can participate in the decision making process.

1.1.4 Provide ongoing public education programs about safety, courtesy and the rights and responsibilities of motorists, pedestrians, and bicyclists.

1.1.5 Work with school districts and colleges to develop transportation education programs that will make students aware of the costs and benefits of various transportation choices and promote available services and alternatives.

1.1.6 Support outreach and education that encourages the use of Location Efficient Mortgages that can act as an incentive for homebuyer's to purchase homes in close-in urban areas.

1.2 Incentives and Services

1.2.1 Pursue incentive and service programs to attract people to alternative modes, such as:

- ride matching services for carpools and vanpools;
- preferential parking for carpools and vanpools;
- employer and/or Intercity Transit subsidized bus passes, and other financial incentives;
- "flex time" programs, telecommuting, teleconferencing, four days work weeks;
- a guaranteed ride home in case of emergency;
- facility support for high occupancy vehicle travel, such as park-and-ride lots and HOV lanes, if viable;
- land use development standards that promote attractive, safe environments for bicycle and pedestrian activities;
- facility support for non motorized travel, such as bicycle lanes, bicycle parking, sidewalks, and shower facilities; and
- encouraging commercial deliveries and shipping during off peak hours.

1.2.2. Recognize that single-occupancy vehicles will continue to be the primary mode of transportation for many people. Encourage the use of smaller, more fuel-efficient vehicles, such as compact cars, motorcycles, and motor scooters.

1.3 Commute Trip Reduction

1.3.1. The CTR coordinating agency will work with affected employers to implement specific measures to achieve trip reduction targets. These measures include, but are not limited to, providing TDM support facilities such as showers; lockers; lunchrooms; covered transit stops; and paths connecting transit stops to building

entrances. Local jurisdictions and the State will enforce state and local trip reduction laws.

1.3.2 Local CTR coordinators should coordinate with the State's public awareness campaign efforts. Inform employers and employees of travel demand management needs and encourage employees to use alternative travel modes. In making available services and expected results known:

- use formal procedures to establish or changes rules;
- sustain the programs over time – ongoing funding support for program coordination should be identified;
- emphasize area-wide solutions – economies of scale may be realized by programs undertaken throughout an area;
- share costs where possible – marketing strategies, printing costs and acquisition of vans can be shared by area participants; and
- The regional CTR coordinator should work with affected employers to form Transportation Management Associations (TMA's) to jointly work toward achieving trip reduction goals.

1.3.3 Encourage smaller employers to participate in the trip reduction program by providing services and incentives.

1.3.4 School districts are encouraged to evaluate measures that might help address traffic congestions, such as staggered start times, parking management, more use of public transit, sharing of school bus fleets, and other measures as appropriate to reduce traffic demand during peak commute hours.

1.4 Parking Management

1.4.1 Manage parking to decrease the percentage of drive alone commuters. This can be done by developing parking management plans in all jurisdictions, especially in the Core Areas and along High Density Residential Corridors where transit runs most frequently. Parking management should acknowledge customer parking needs in commercial areas. Parking management strategies may include:

- reducing free or subsidized long term employee parking;
- establishing appropriate maximum parking ratios for employee parking, especially for new non residential development;
- increasing the number of preferential parking spaces for carpools and vanpools;
- encouraging employers to implement a "parking cash-out program" whereby employees have the choice of parking space or a cash allowance;
- encouraging the use of common parking facilities among adjacent land uses; and
- monitoring potential impacts of parking management on adjacent neighborhoods and mitigating the impacts, where appropriate.

1.4.2 Local jurisdictions are encouraged to move from minimum parking standards to maximum parking standards, especially for employees, in areas where alternative transportation facilities are available.

1.4.3 As funding becomes available, develop area wide parking management plans for Core Areas (especially state and local government sites), other major business employment sites, and schools and colleges. These plans should consider how parking management can evolve over time as transit service and other demand management programs become available. In strategy areas (corridors with capacity deficiencies but too costly to be widened), parking management may be important.

1.4.4 Consider public provision of commercial parking in Core Areas that can be redeveloped as other transportation services become available and the density of Core Areas increase. This can serve as an incentive for development to locate in Core Areas since parking requirements are met and controlled by public entity and the development is able to fully utilize its site.

1.4.5 Maximize the use of existing parking lots, wherever possible, as park and ride lots, especially where services are available that will allow one stop shopping. Support local jurisdiction efforts to develop regulations requiring transportation management plans for new development, especially in Core Areas and along the High Density Residential Corridors.

1.4.6 School districts are encouraged to implement student parking management strategies while working with neighborhoods to minimize impacts on surrounding streets and roads.

1.5 Emerging Technologies

1.5.1 Facilitate implementation of emerging technologies to reduce daily physical travels to work, stores, business meetings, banks and schools and other activities.

1.5.2 Local and regional government entities will continue to facilitate participation in their meetings and proceedings via electronic means to reduce the need for physical travel. This may be addressed by providing sufficient capacity when local governments renew their agreements with telecommunication and cable franchises.

1.5.3 Monitor the effect of emerging technologies in reducing physical travel in order to more realistically assess future travel demand, and incorporate the findings into future Transportation Plan updates as appropriate.

1.6 TDM Implementation

TDM is an important part of the transportation solution. Local jurisdictions will work together to determine the process and funding for implementing the proposed regional TDM programs.

2. Public Transporation

GOAL: Support Intercity Transits efforts to provide effective public transportation services to help reduce car dependence in the region and serve the needs of people who rely on public transportation.

2.1. Transit System Expansion

Support increased transit service over time in response to infill, higher density development and growth. Intercity Transit should maximize system productivity by emphasizing service in the Core Areas and High Density Residential Corridors. Use smaller buses to minimize impact on residential neighborhoods and roads. Continue to explore the feasibility of providing high capacity transit (HCT) services between Thurston County and Central Puget Sound Region.

2.2 Transit System Reliability

Ensure the transit system is a viable alternative to the private automobile whenever possible. Encourage capital and Transportation System Management investments to improve the reliability, safety, and attractiveness of the transit system, especially in the Core Areas and along High Density Residential Corridors.

2.3 Transit Operating Speed

Intercity Transit should develop and work toward a transit operating speed goal in coordination with the City of Lacey and other local jurisdictions. The goal will trigger discussion of strategies on how to maintain reliable transit services. In some cases system improvements may be necessary to give transit and carpools/vanpools a travel time advantage. These improvements should not unreasonably degrade the overall LOS for other transportation modes including freight movement.

2.4 Improve Services to Attract More Riders

Intercity Transit should develop a transit system that attracts more people, especially in urban areas, to use public transportation. Special care should be taken to meet the transit needs of elderly, disabled, young, and low-income citizens.

2.5 System Coordination

Intercity Transit should assess the need for expanded and coordinated service connections to other activity centers within the county and between Thurston County and activity centers of adjacent counties.

2.6 Intermodal Coordination

Integrate the regional public transit system with other modes of transportation including auto, bicycle, pedestrian, rail, and other modes as they develop. This might include the secure bike racks and park and ride lots and on buses, and transit transfer points at rail stations.

2.7 Park and Ride Lots

Expand existing park and ride lots and develop new sites over time as needed. Implement appropriate measures to deter vandalism and theft and to ensure that sites are safe and conducive to effective use. Park and Ride Lots should be designed and located in a manner that compliments the surrounding land use.

2.8 Rail Service

Explore the options for operating short line rail in the region including tourist operations. Ideas for future freight and passenger rail operations should be examined by the Port, Intercity Transit, and private rail operations organizations to determine their viability.

2.9 Other Forms of Public Transportation

Explore high capacity transportation options as well as increased Amtrak and vintage streetcar/trolley operations wherever they are viable. The successful creation of core areas as major destinations and increased densities in other parts of the urban area will set the scene for possible future rail. While these alternatives are more costly than bus transit now, they may prove to be a good option for some areas.

2.10 Private Participation

As funding become available, the City of Lacey could work with IT to investigate possible funding mechanisms, including private participation and joint development of transit facilities and services such as transfer centers, park and ride sites, and private subscription bus service if viable.

2.11 Public Education

Look for opportunities to promote transit as part of on-going public education. For example, include transit and rideshare information in public meeting notices when meetings are held within service areas. Evaluate the cost benefit of all education projects.

3. Bicycle and Pedestrian Transportation

GOAL: Encourage bicycle and pedestrian travel by providing inviting, safe, convenient and connected routes, education and incentive programs, and support services such as bike racks, showers, and lockers.

3.1 Improved Connections

Improve bike and pedestrian facility connections over time to provide a viable transportation alternative and enable continuous recreation routes.

3.2 Long-term Improvement Programs

The City of Lacey adopted a Pedestrian Trail Plan in 1998, this plan is a list of projects that could be completed with or without roadway improvements. This plan prioritizes missing link projects based on the following criteria:

- Street design standards: higher volume roadways receive a higher ranking.
- Pedestrian Generation Factor where commercial areas, high density residential corridors, and other major trip generators, such as schools, parks, churches, and other activity centers.
- Pedestrian Safety,
- ADA Accessibility,
- Areas identified on Transit or School bus routes or identified in the regional urban trails plan.

This methodology was developed to prioritize projects on an objective level. All projects in this plan are needed to enhance travel for pedestrians, bicycles, and transit riders. Such programs can include urban trail projects where appropriate.

3.3 New Facilities

It is more cost effective to construct pedestrian and bicycle facilities in conjunction with other capital improvements (roadways, sewers, waterlines, stormlines) and new developments. The City will continue to evaluate coordination of these projects. On-street bicycle/pedestrian facilities will continue to be incorporated into road improvement projects in urban areas. Encourage employers to include bicycle and pedestrian supportive facilities at employment sites through appropriate guidelines for new development.

3.4 Interjurisdictional Coordination

Coordinate bicycle/pedestrian facility improvements among jurisdictions to complete connected routes.

3.5 Bicycle Parking

Develop standards for new developments to provide safe, convenient and secure bicycle parking at activity centers such as commercial areas, institutions, parking garages, park and ride facilities and transit stations.

3.6 Safe and Supportive Bicycle and Pedestrian Facilities

Encourage safe pedestrian and bicycle travel, especially in the core areas and high density corridors. Make sure development and redevelopment in these areas makes it as easy to get around by transit, walking, or bicycling as by driving. Development guidelines should direct building placement in ways that do not interfere with efficient transit service or access by pedestrians and bicyclists in certain areas. Sidewalks should make good connections with bus stops and with the entrances to buildings and comply with the Americans with Disabilities Act. Assign a high priority to improving the safety of sidewalks and bike lanes. This plan supports methods to provide safe crossings incorporated into roadway designs including: center roadway medians; pedestrian refuge islands; innovative traffic calming measures; narrow streets; and appropriate detectors for pedestrians and bicyclists.

4. Highway and Road Network

GOAL: Maintain and improve a network of highways, streets, and roads that moves people, goods, and services safely and efficiently throughout the region, minimizes social and environmental impacts, and supports various modes of travel.

4.6 Road Width and Community Scale

Generally, a road shall not be widened beyond two through lanes each direction with auxiliary turn lanes as appropriate. Roads with more than five lanes are perceived by the public as beyond the scale that is appropriate for this community.

4.7 Multi-Modal Approach to LOS Goals – Strategy Areas

In portions of the roadway network identified as “strategy areas” ideal LOS goals should be used as a framework to evaluate alternatives to road widening. Other alternatives for improving capacity include strict access control, center roadway medians, modern roundabouts, removal of traffic signals, restricting certain movements, one-way streets, and other innovative solutions. Actions to reduce vehicle trips, such as adding bike lanes and sidewalks, improving transit services, and implementing travel demand management measures should be considered to relieve traffic congestion in strategy areas. Local concurrency ordinances should be reviewed and updated as appropriate to implement multi-modal strategies identified for these areas.

4.8 Multi-Modal Integration

Road projects shall consider needs for transit, HOVs, pedestrians, bicycles, and freight movement, during initial project development. Measures to consider may include the provision of, but are not limited to: bicycle and sidewalk facilities at the time of road construction; transit signal priority or queue jumper lanes in urban corridors; and facilities to expedite the movement of freight between road, rail, and marine transport.

In addition, standards should be developed for traffic calming and key multimodal intersections to encourage various modes of travel, reduce vehicle speed and cut-through traffic.

4.9 Connections and Access

In the urban area an increased number of street connections should be built. This acknowledges that a network of connected streets reduces the distance to destinations or transit stops, gives several route options, reduces vehicle miles traveled, reduces the need for road widening, and makes freight delivery and emergency service more efficient. With more streets, fewer lanes are needed on each arterial. Fewer lanes on streets preserves easy and safe access for pedestrians.

4.10 Transportation and Land Use

Highway, street, and road projects shall be consistent with long range local land use plans and long range traffic forecasts, and should contribute to reaching the drive-alone reduction goals of this plan.

8. Intermodal Connections

GOAL: Provide adequate connections and access among all transportation modes that function as an integrated regional transportation system. The coordinated multimodal transportation system will enhance choice in serving the mobility and accessibility needs of people and goods within and through Thurston County and minimize transportation-related fuel consumption and air pollution.

8.1 Highways, streets, and roads should be designed and constructed to accommodate cars, transit, HOVs, pedestrians, bicycles, as well as trucks as appropriate.

8.2 Provide appropriate intermodal connections at transit transfer centers, regional activity centers, regional employment centers, the Port, the Olympia Airport, regional freight and passenger rail stations, and regional industrial areas.

8.3 Encourage the provision of intermodal supporting facilities at appropriate locations. Such facilities may include park and ride lots at appropriate interregional transit stations, bus shelters at transit transfer centers and bus stops, bike racks and shower facilities at major employment sites.

9. Land Use and Development

GOAL: Attract the density, mix, type, and concentration of development that is identified in the Comprehensive Land Use Plan, and identified corridors throughout the region to support and encourage the use of alternative transportation modes.

9.1 Continue to increase density and mixed uses in High and Medium Density Residential Corridors and Core Areas consistent with the Lacey's Comprehensive Plan's Land Use Element. This will provide the population concentration necessary to support increased transit service, and enable some people to meet day to day needs without driving.

Land Use Definitions:

***Core Areas**: High density areas mixing residential, employment and commercial activities with small parks or green spaces. Core areas create compact urban environments where people live, work, shop, and play, and are able to satisfy day to day needs with fewer vehicle trips. Residential density goals should be 15+ units/acre and employment density goals should be 25+ employees/acre in order to create the necessary concentration of activity to support and maximize use of alternative transportation options.*

***High Density Residential Corridor:** High density residential areas along the urban streets serving as primary links between Core Areas and major employment sites. Residential density goals should be 15+ units/acre in these corridors. This density should be encouraged within ¼ mile of the main streets where appropriate. Where lower density neighborhoods already exist adjoining the High Density Residential Corridor, an average of 7+ units/acre should be encouraged in these adjacent neighborhoods. Neighborhood commercial and some transit compatible commercial and retail should be provided in these largely residential areas.*

***Medium Density Residential Corridor:** Medium density residential areas within a five minute walk or ¼ mile of an urban area street that is a logical connector to a High Density Corridor, core area or major employment site. Residential density goals should be 7+ units/acre in these corridors. Small scale neighborhood commercial serving the day to day needs of the neighborhood is located at appropriate intervals. These neighborhood commercial areas are good locations for transit stops.*

9.2 Create strong incentives to attract appropriate development in and around Core Areas and High Density Residential Corridors. Site public buildings and focus public investment in these areas in order to encourage the concentration and mix of uses that will help achieve transportation and land use goals. Development in these areas will support the use of alternative transportation modes and the substantial investment in TDM focused in these areas.

9.3 Locate and develop medium and high density residential and neighborhood scale in a way that respects abutting properties and minimizes the impacts on them. Join with the development community in pursuit of good urban design through information, education and prototype projects, to assure compatible development, protect abutting property, and encourage public acceptance of compact, dense development.

9.4 Encourage urban design standards for infill and redevelopment to assure compatibility with surrounding properties, and contribute to the creation of a sense of place. In Core Areas and along High Density Residential Corridors, urban design standards for streets and buildings will be especially important to assure the creation and maintenance of human scale areas that encourage and accommodate pedestrian activity.

9.5 Use development standards that encourage and accommodate pedestrian, bicycle and transit riders. Such standards include:

- the use of connected street grids, with alley access for garages and service and delivery vehicles, where practical in new urban growth area development,
- safe and accessible transit stops;
- pleasant, safe, and attractive streets and sidewalks;
- convenient access to the fronts of buildings;
- good pedestrian connections between buildings;
- new or redeveloped buildings placed close to the street edge of the planned right of way, with parking on the sides or behind the buildings or in a way that does not interfere with efficient transit service and easy access by bicycles and pedestrians;
- park and ride lots that encourage the location of convenience stores and personal services for the day to day needs of commuters.

9.6 Encourage design standards and other requirements that support transit, bicycle and pedestrian movement in the local site plan development review process. Encourage the location of public buildings and facilities on existing transit routes if feasible.

9.8 Encourage local jurisdictions to fine tune plans and work with the State Legislature and the development, finance, and other affected communities to identify barriers to urban infill development and redevelopment, and establish tools for achieving the land use density goals.

10. Energy and Environment

GOAL: Work toward development of a transportation system that reduces dependence on fossil fuels, uses energy efficiently, promotes improved air and water quality, helps prevent sprawl, and lessens the region's vehicle emissions.

10.1 Protect air quality by reducing vehicle exhaust emissions, especially carbon monoxide emissions, through:

- promotion of alternatives to the single occupancy vehicle;
- support of roadway operational efficiency improvements such as removing bottlenecks, adding intersection turn lanes and coordinating traffic signals;
- development of a transportation system that works as efficiently as possible for all modes of travel; and
- concentration of destinations to decrease the number of miles traveled and the number of times that a vehicle's engine must be started.

10.4 Protect the environment by promoting compact urban development to reduce vehicle miles traveled. This can occur by implementing Comprehensive Plans which emphasize concentrating growth, using existing roads and building new corridors where needed, and by creating attractive urban areas where people will want to live and where they will be close to services. Compact urban development will reduce urban sprawl and help conserve rural and natural areas.

10.5 Promote energy conservation and pollution reduction through commute trip reduction programs and the use of alternative fuels.

11. Intergovernmental Coordination

GOAL: Coordinate state, regional, and local transportation plans to assure transportation facilities crossing jurisdiction boundaries are addressed in a consistent manner; and transportation and land use decisions contribute to increasing alternative travel.

11.1 Support efforts to coordinate public transit service with school district bus service where possible to reduce vehicle trips.

11.4 Coordinate regional Travel Demand Management efforts (including Commute Trip Reduction program) in order to maximize effectiveness and efficiency.

11.8 Coordinate regional Travel Demand Management efforts (including Commute Trip Reduction program) in order to maximize effectiveness and efficiency.

APPENDIX B: Public Comment

When developing the local, regional and GTEC Commute Trip Reduction Plans for the Thurston Region, TRPC solicited preliminary comments from Employee Transportation Coordinators across the region. As part of the formal public comment process for individual jurisdictional and Regional Planning Council Plan adoption, ETCs will be provided with another opportunity to comment.

- Transit service in the core Olympia/Lacey/Tumwater business areas needs to continue later into the evening because many people don't get off work until after 8:00 p.m.

- Management support is a real challenge. All of our management chooses the single occupant vehicles from their homes. They are not serious about it, so the challenge is in individual employee's lap.

- I choose to take the bus as much as possible only because I have decided I want less money in gas going toward work and more going toward my personal life. Additionally I have found that once I got past the "thinking about it" stage, the easier it got to walk out and get in the bus line.

- One method that might improve the willingness of people to take Intercity Transit is to better expose the conditions of the transit vehicles and the clientele. Thanks to TV: Many people think of buses as being dirty, "inner city", and graffiti laden vehicles. NOT TRUE. They are clean, safe, air conditioned, and many are new vehicles. Others think that the people that ride buses are weird street people and thugs. NOT TRUE. Most are middle class commuters like you and me. I found that if I just sit calmly, gripping my pepper spray, I feel better! Then I discovered that I was the "weird street people," and I quit worrying about it.

- If we want to support commuting by bicycle, we need to not only provide clean, safe and secure parking for commuters, but also for staff and visitors traveling between state buildings. I would suggest that building codes be changed so that all governmental buildings and commercial office buildings serving in excess of 100 visitors per day provide limited bicycle parking that is:
  - Clearly indicated by signage
  - Located near the entrance of the building
  - Safe to both the rider and the vehicle

- I have commuted to work by bike bus and car this summer. When I bike, I sometimes try to use my bike to go to meetings in other state buildings. Ideally a state worker could bicycle to work and to meetings in other buildings. Bike parking is usually awkward, inconvenient, or non-existent. Signage is often non-existent and visitors must allot extra time to finding out if bike parking exists and where it might be.

  Some state facilities have biking facilities convenient to visitors to the building. At others, you have to hunt around the building (no signage) to find the bike rack (hidden in between buildings) where the racks are crowded by benches. This is better then what a certain site

offers, which is to use the smoking shelter a block away, park at another building and use their bike locker or chain their bike to a tree. If you drive you just park, turn your key in the lock and walk through the door. Why would anyone ride a bike?

- Remove student parking lots from area high schools. Do you really expect kids who don't ride the very-available school bus in favor of their personal car, to suddenly park their car and take the bus as adults? And don't accept the excuse that these kids need cars for after-school activities and work, they can take the school or community buses for that. Training needs to start young.

- I would think a major concern with me would be not having access to a vehicle during the lunch hour. If one was available I could see more staff taking advantage of car pooling

- Make bus stops more appealing – such as a covered area with a bench. Weather is a big deterrent here in Washington.

- More park and ride lots with a transit center and bike lockers.

- Bike lanes on all the roads in the area. For example: I would use my bicycle (and I know others in my area would, too – even people who walk) if Meridian NE had a bike lane on it. It is 50 mph with lots of hills, big ditches, and very dangerous. I wouldn't let my son ride his bike there, so as a parent, I didn't encourage my kid to ride a bike or walk when he was young, so now he drives everywhere. Gotta teach them good habits while they are young, but we must have the tools to do this.

- I would also like bus service extended to Beach Crest/Jubilee areas in NE Lacey. The closest bus stop is 4 miles away! This is not a very great way to encourage ridership.

- Daycares, stores, and other conveniences (coffee shops) by the bus stops. Have the grocery stores sell those wheeled wire grocery carts that lots of old people use to cart their things from destination to destination.

- Have Internet outlets on the buses so we can work or take care of our home e-mails while we take the LONG drawn out Intercity Transit ride that we must suffer through because there are not enough buses to create a good transit system.

- Improve the bus system. As it is, it takes me 1-1/2 hours to get from home to work on the bus, and it takes 20 minutes by car. I have to go WAY out of the way to get to places just a couple of miles away. What is there encouraging me to ride the bus with the time it takes to get places? Other cities don't have this problem.

- There is a lack of accommodations for bikers. Have lots of bike lockers EVERYWHERE! Provide air and pressure gauges for checking tires; wipes for sweating and riding in the rain; water fountains for hydration – there could be a charge for these or have them available in vending machines (like the ones at the car washes). 25 years ago there were water fountains everywhere – what happened to them? For incentives to get people to ride bikes, why not create free parking for them – and take out some of the automobile

parking? Create a law that makes business owners have bike racks in front of their business – the lack of safe places for bicycles is a problem.

- Let vanpoolers park for free anywhere within city limits.
- A huge hurdle is not having public transportation to the South County. Our only option is van pool/car pool.
- Provide some way for carpoolers/vanpoolers to get around quickly during the lunch hour – such as renting a bicycle or moped.
- Free coffee or chocolate for people using CTR methods.
- City/County should require that all buildings be designed such that it is easy to walk from the bus stop to the building entrance.
- Would be helpful if City/County closed the gaps in the bicycle/pedestrian network as people have trouble planning a route that is safe for biking and walking.
- Transit service needs to start earlier in the morning because many people start at 7:00 a.m.
- The City/County should lower their parking requirements for new buildings. With so much excess parking, it is just too easy to drive a single occupancy vehicle.
- The City/County should broaden marketing to target all residents rather than just those at affected worksites.
- I'd like to see more pressure put on state agencies to allow teleworking at least one day each week for jobs where it is feasible. For employees living in rural areas, and who need to work a flex schedule, there are no other alternatives to driving alone.
- We definitely need cities/counties to provide more Park N Ride lots for staff to park their car and ride the bus to work. Most are currently filled to capacity and one of our staff has had difficulty finding a space at the Lakewood Park N Ride lot. The Hawks Prairie lot was closed several years ago when the new mall was erected on that site. People need places to park their cars so they can take the bus to nearby cities such as Tacoma and Seattle and vice versa. This is a current and urgent need.

APPENDIX B. PUBLIC COMMENT

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APPENDIX C. MAPS

Map 1: Thurston County Vicinity Map
Map 2: CTR Affected Jurisdictions
Map 3: Major Roadways in the Thurston Region
Map 4: Thurston Region Strategy Corridors
Map 5: Lacey Worksite Location Map
Map 6: Lacey Core – Where the Workers Live
Map 7: Thurston Region Trail Network
Map 8: Thurston County Population Density
Map 9: 2007 Generalized Zoning
Map 10: Park and Ride Facilities in South Puget Sound
Map 11: Intercity Transit Routes
Map 12: Intercity Transit Projected Service Levels by 2012
Map 13: Lacey City Hall and Vicinity
Map 14: Lacey Corporate Center and Vicinity
Map 15: Martin Way Offices and Retail Area and Vicinity

Thurston County Vicinity Map

MAP 1

- City Limits
- Urban Growth Areas
- County Borders
- Capitol Forest
- Fort Lewis
- Rochester Subarea
- Snoqualmie National Forest
- Parks and Public Preserves
- Active Railroads
- Chehalis Indian Reservation
- Nisqually Indian Reservation
- Other Indian Reservations

Note: Those portions of the Nisqually Reservation that extend into Pierce County are considered by the Nisqually Tribe to be reservation lands under the control of Fort Lewis.

TRPC Thurston Regional Planning Council

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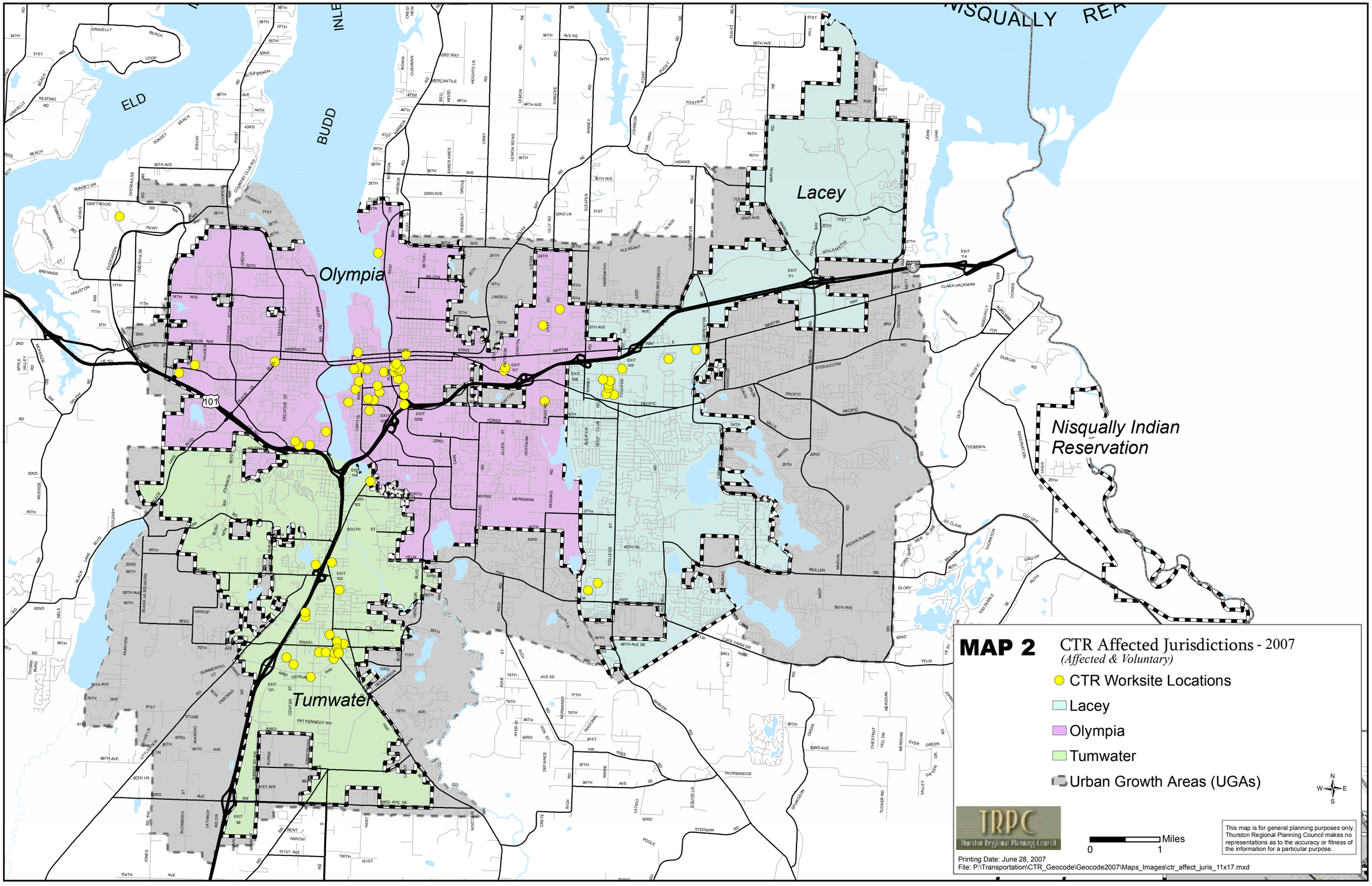
Olympia
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Nisqually Indian Reservation
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MAP 2
CTR Affected Jurisdictions - 2007
(Affected & Voluntary)
CTR Worksite Locations
Lacey
Olympia
Tumwater
Urban Growth Areas (UGAs)
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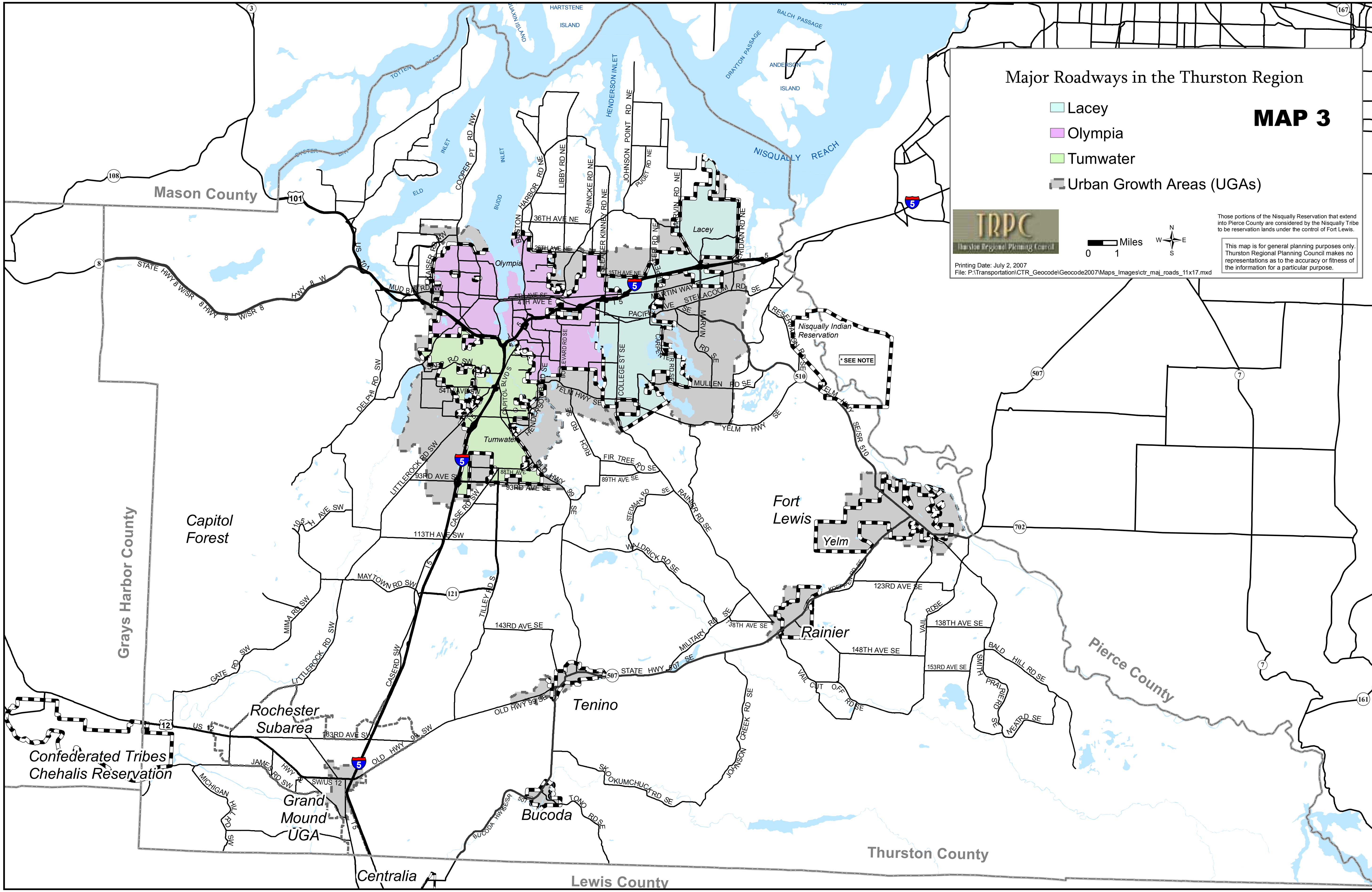
Major Roadways in the Thurston Region
MAP 3
Lacey
Olympia
Tumwater
Urban Growth Areas (UGAs)
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Those portions of the Nisqually Reservation that extend into Pierce County are considered by the Nisqually Tribe to be reservation lands under the control of Fort Lewis.
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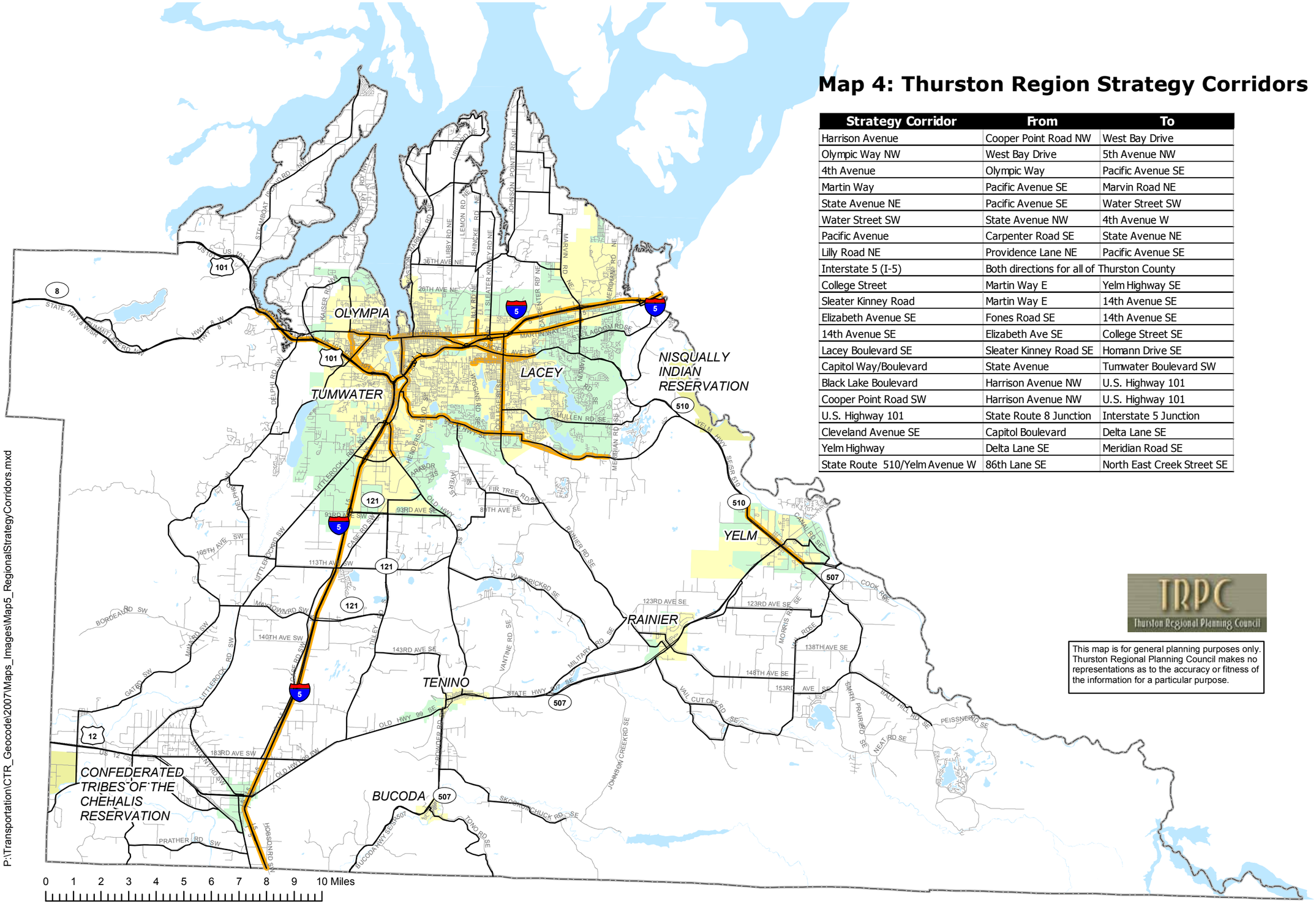
Grays Harbor County
Pierce County
Thurston County
Lewis County
Capitol Forest
Fort Lewis
Yelm
Rainier
Tenino
Bucoda
Rochester Subarea
Confederated Tribes Chehalis Reservation
Grand Mound UGA
Centralia
Nisqually Indian Reservation
SEE NOTE
Olympia
Lacey
Tumwater
NISQUALLY REACH
HENDERSON INLET
ANDERSON ISLAND
HARTSTENE ISLAND
DRAYTON PASSAGE
BALCH PASSAGE
STATE HWY 8 W/SR 8
YELM HWY SE
MARTIN WAY
PACIFIC AVE SE
MULLEN RD SE
93RD AVE SW
113TH AVE SW
143RD AVE SE
123RD AVE SE
138TH AVE SE
148TH AVE SE
OLD HWY 99 SE
STATE HWY 507 SE
183RD AVE SW
JAMES RD SW
MIMA RD SW
LITTLEROCK RD SW
DELPHI RD SW
TILLEY RD S
RAINIER RD SE
MILITARY RD SE
JOHNSON CREEK RD SE
SKOOKUMCHUCK RD SE
BALD HILL RD SE
MAYTOWN RD SW
FIR TREE RD SE
COLLEGE ST SE
MARVIN RD NE
36TH AVE NE
26TH AVE NE
15TH AVE NE
MUD BAY RD NW

Map 4: Thurston Region Strategy Corridors

Strategy Corridor	From	To
Harrison Avenue	Cooper Point Road NW	West Bay Drive
Olympic Way NW	West Bay Drive	5th Avenue NW
4th Avenue	Olympic Way	Pacific Avenue SE
Martin Way	Pacific Avenue SE	Marvin Road NE
State Avenue NE	Pacific Avenue SE	Water Street SW
Water Street SW	State Avenue NW	4th Avenue W
Pacific Avenue	Carpenter Road SE	State Avenue NE
Lilly Road NE	Providence Lane NE	Pacific Avenue SE
Interstate 5 (I-5)	Both directions for all of Thurston County	
College Street	Martin Way E	Yelm Highway SE
Sleater Kinney Road	Martin Way E	14th Avenue SE
Elizabeth Avenue SE	Fones Road SE	14th Avenue SE
14th Avenue SE	Elizabeth Ave SE	College Street SE
Lacey Boulevard SE	Sleater Kinney Road SE	Homann Drive SE
Capitol Way/Boulevard	State Avenue	Tumwater Boulevard SW
Black Lake Boulevard	Harrison Avenue NW	U.S. Highway 101
Cooper Point Road SW	Harrison Avenue NW	U.S. Highway 101
U.S. Highway 101	State Route 8 Junction	Interstate 5 Junction
Cleveland Avenue SE	Capitol Boulevard	Delta Lane SE
Yelm Highway	Delta Lane SE	Meridian Road SE
State Route 510/Yelm Avenue W	86th Lane SE	North East Creek Street SE



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Source: TRPC Geographical Information System

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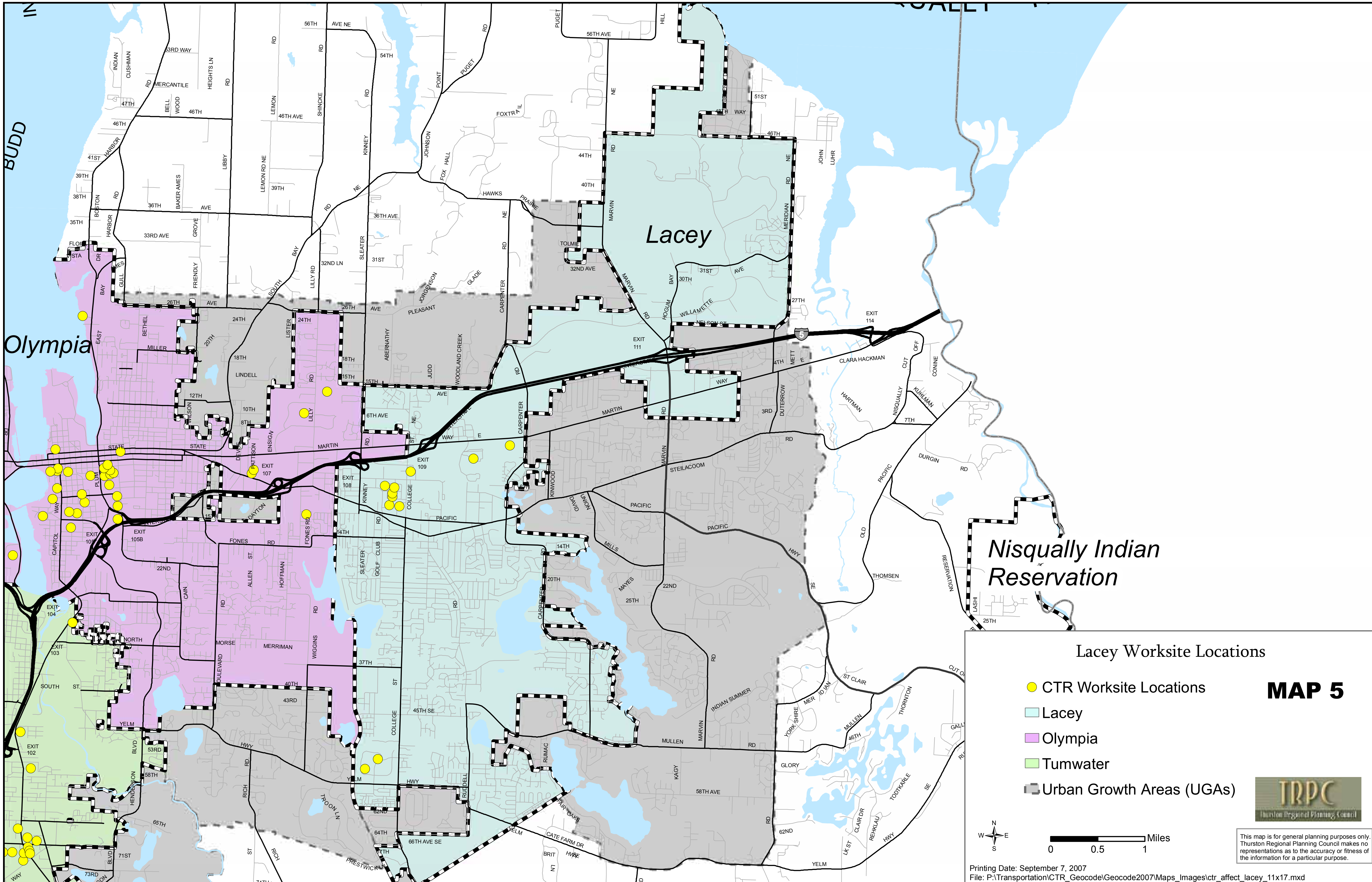

Lacey Worksite Locations
MAP 5
CTR Worksite Locations
Lacey
Olympia
Tumwater
Urban Growth Areas (UGAs)
Olympia
Lacey
Nisqually Indian Reservation
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TRPC
Thurston Regional Planning Council
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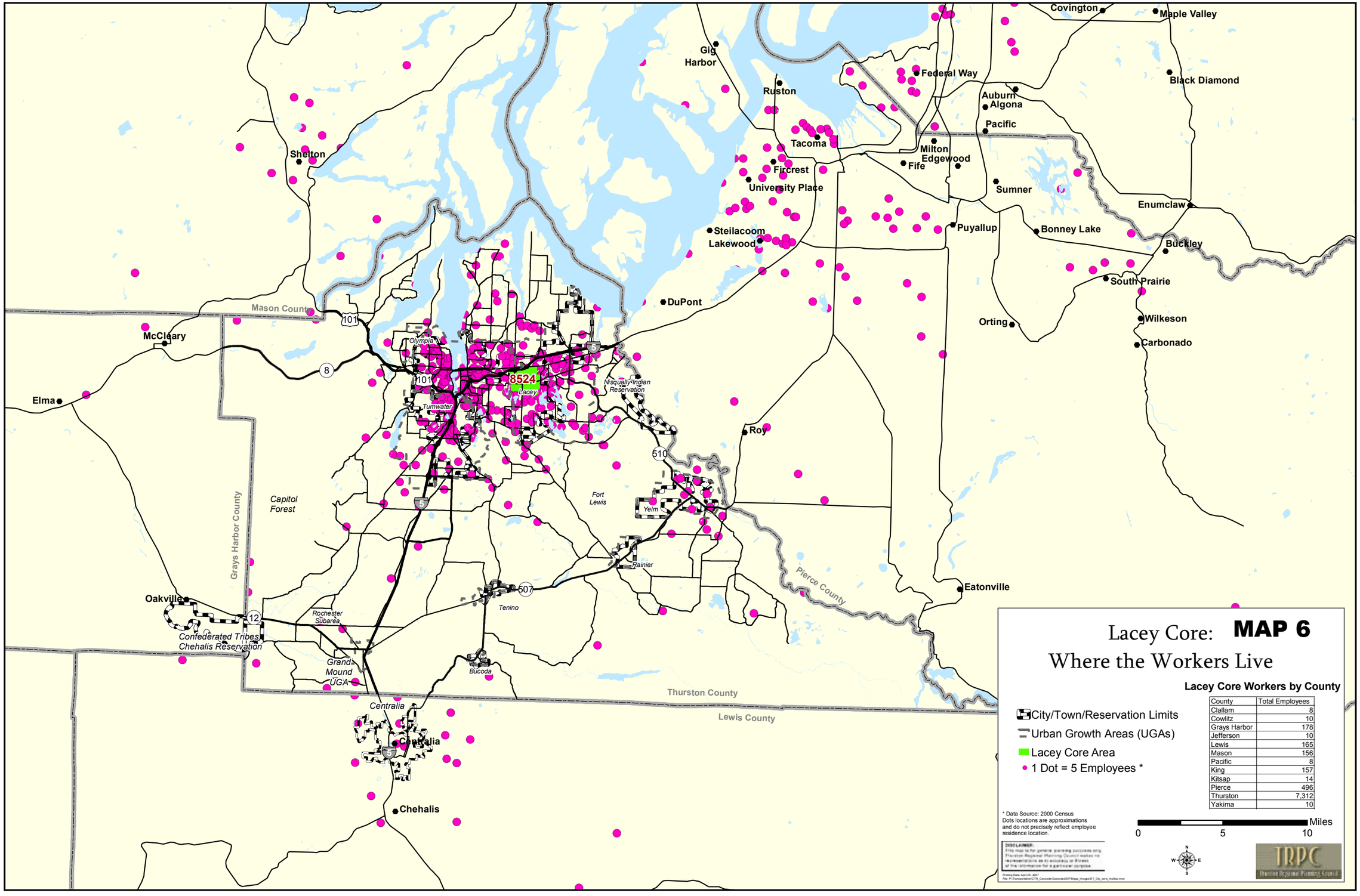

County	Total Employees
Clallam	8
Cowlitz	10
Grays Harbor	178
Jefferson	10
Lewis	165
Mason	156
Pacific	8
King	157
Kitsap	14
Pierce	496
Thurston	7,312
Yakima	10

MAP 7

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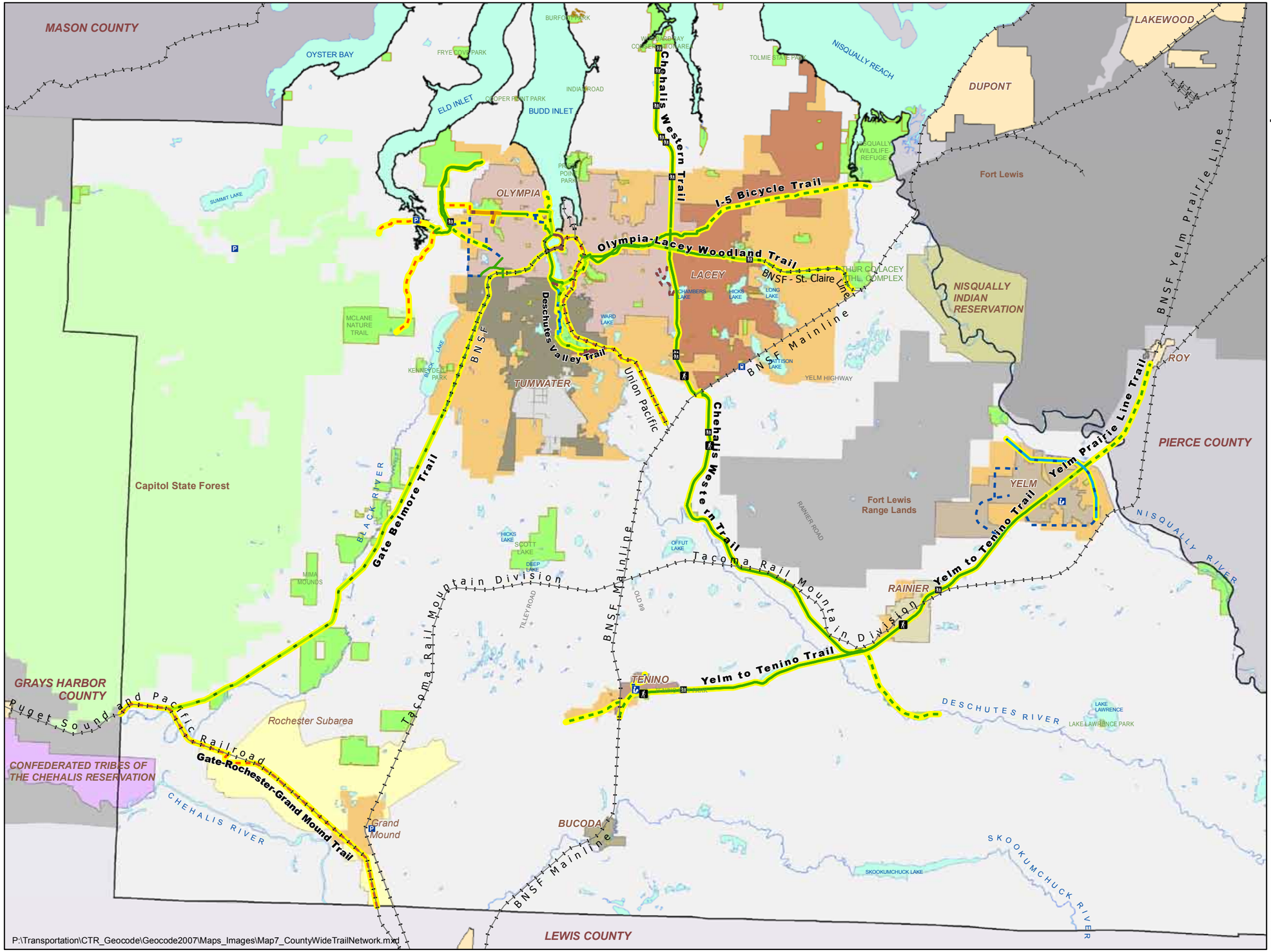
Thurston Region Trail Network



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- Trail, Shared Use, Existing
- Trail, Shared Use, Planned
- Trail, Shared Use, Proposed
- Trail/Path Potential
- Planned, On Street
- Proposed, On Street
- Trail, Recreational, Existing
- Trail, Recreational, Planned
- Trail, Recreational, Proposed
- Proposed Regional Trail Network
- Active Railroad
- Bus Transit Centers
- Hospitals
- Libraries
- Olympia Regional Airport
- Park & Ride Lots
- Trail Access Points
- Trail Heads
- Train Station
- Parks, Preserves, and Open Space
- Urban Growth Areas
- Rochester Subarea
- Port of Olympia
- DNR Managed Lands
- Unincorporated Thurston County

15 Miles
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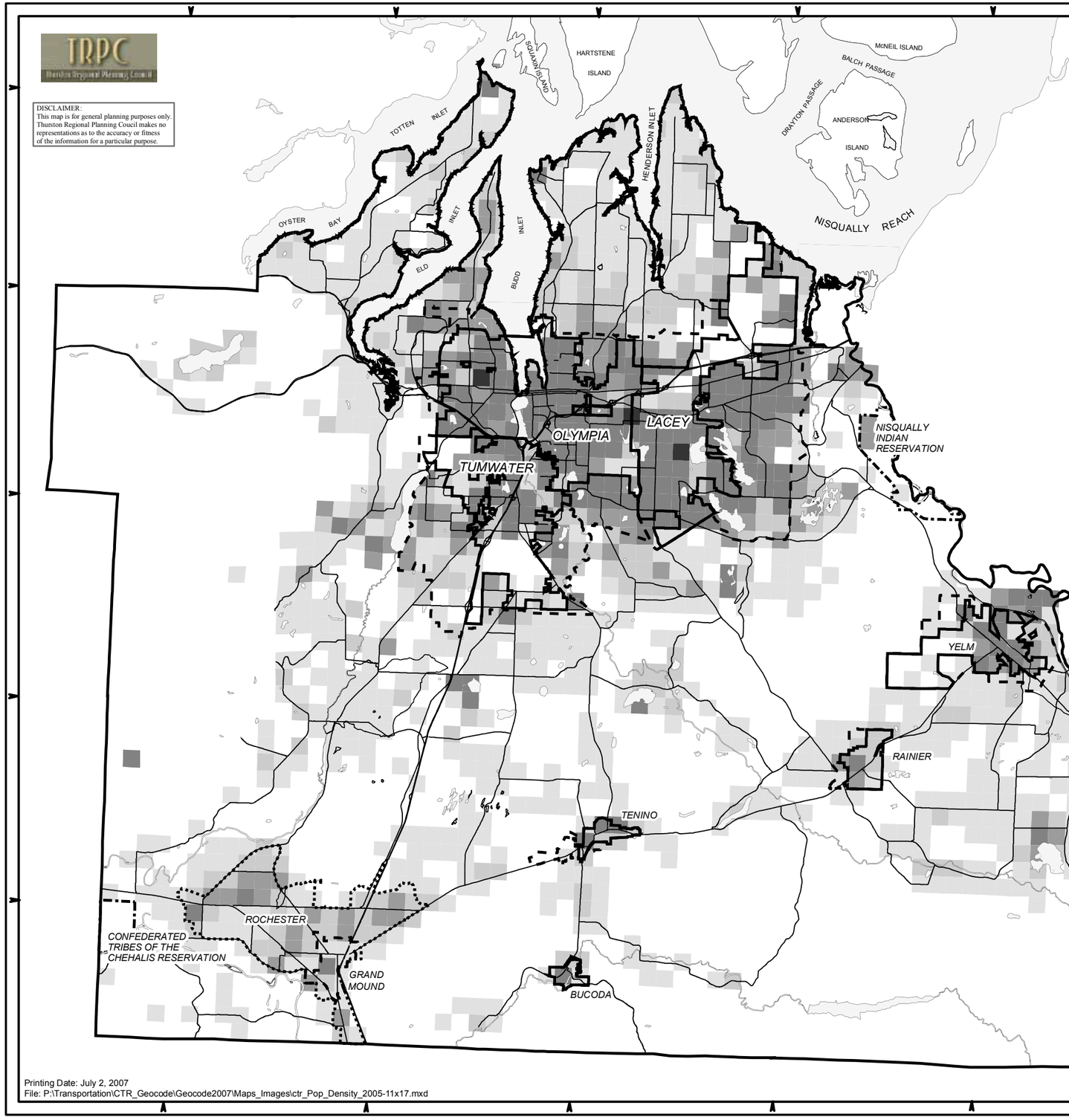
THURSTON COUNTY

POPULATION DENSITY, APRIL 2005
Population per Acre



- <1 person per 10 acres
- 1 person per 10 acres to 1 person per 2 acres
- 1 person per 2 acres to 1 person per acre
- 1-2 people per acre
- 2-10 people per acre
- 10+ people per acre

MAP 8

- City/Town Limits
- Urban Growth Areas
- Rochester Subarea Boundary
- Indian Reservations

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Map Produced by Thurston Regional Planning Council

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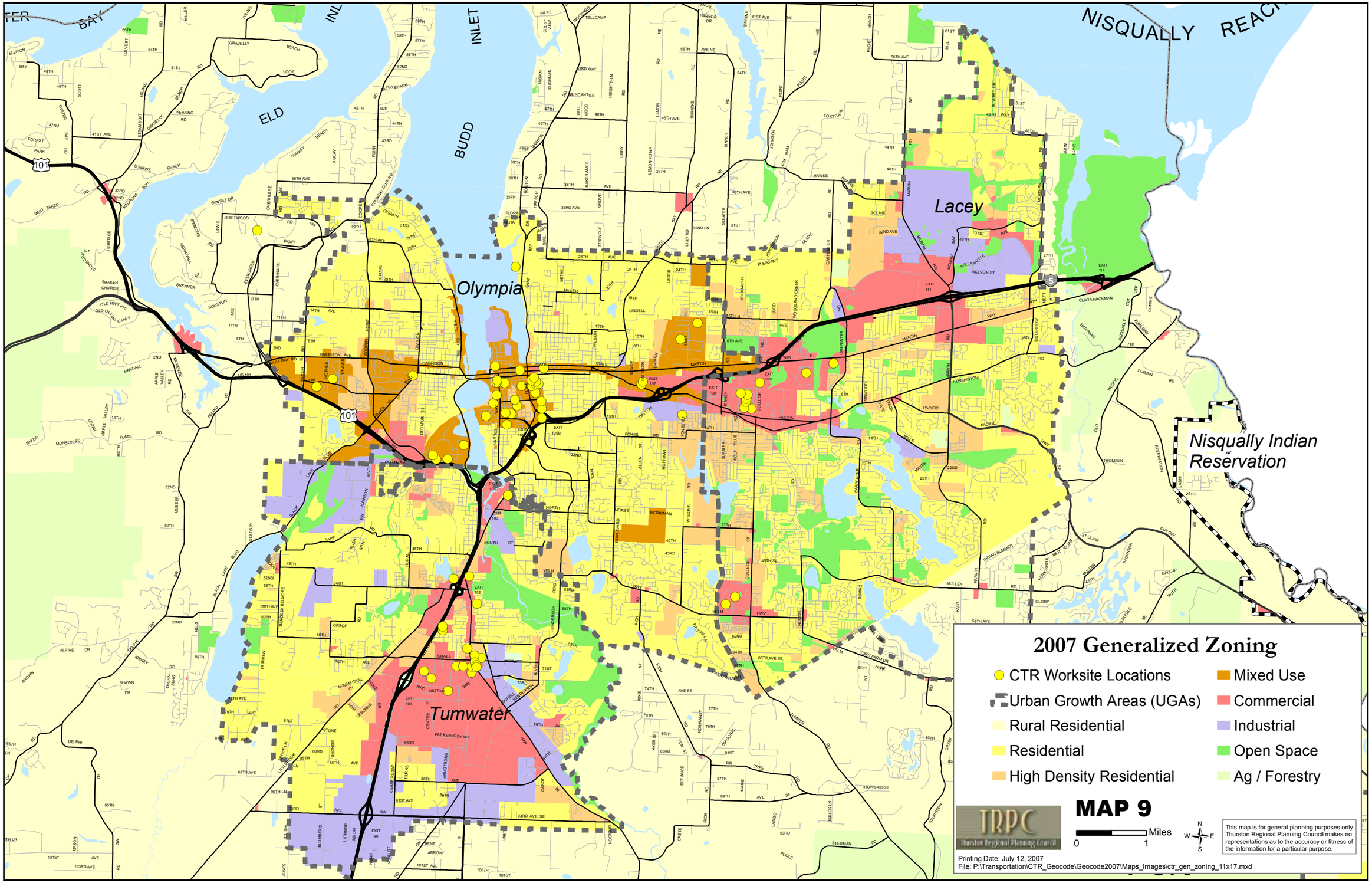
BAY
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BUDD
ELD
NISQUALLY REACH
Olympia
Lacey
Tumwater
Nisqually Indian Reservation
2007 Generalized Zoning
CTR Worksite Locations
Urban Growth Areas (UGAs)
Rural Residential
Residential
High Density Residential
Mixed Use
Commercial
Industrial
Open Space
Ag / Forestry
MAP 9
TRPC
Thurston Regional Planning Council
Miles
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Park and Ride Facilities in South Puget Sound

MAP 10

- Urban Growth Areas (UGAs)
- Park and Ride Locations
- City/Town/Reservation Limits

Mason County
Pierce County
Capitol Forest
Fort Lewis
Nisqually Indian Reservation
Lacey
Olympia
Tumwater
Rochester Subarea
Grand Mound
Tenino
Bucoda
Yelm
Rainier
McNEIL ISLAND
HARTSTENE ISLAND
ANDERSON ISLAND
SQUAXIN ISLAND
BALCH PASSAGE
DRAYTON PASSAGE
NISQUALLY REACH
HENDERSON INLET
* SEE NOTE

Those portions of the Nisqually Reservation that extend into Pierce County are considered by the Nisqually Tribe to be reservation lands under the control of Fort Lewis.

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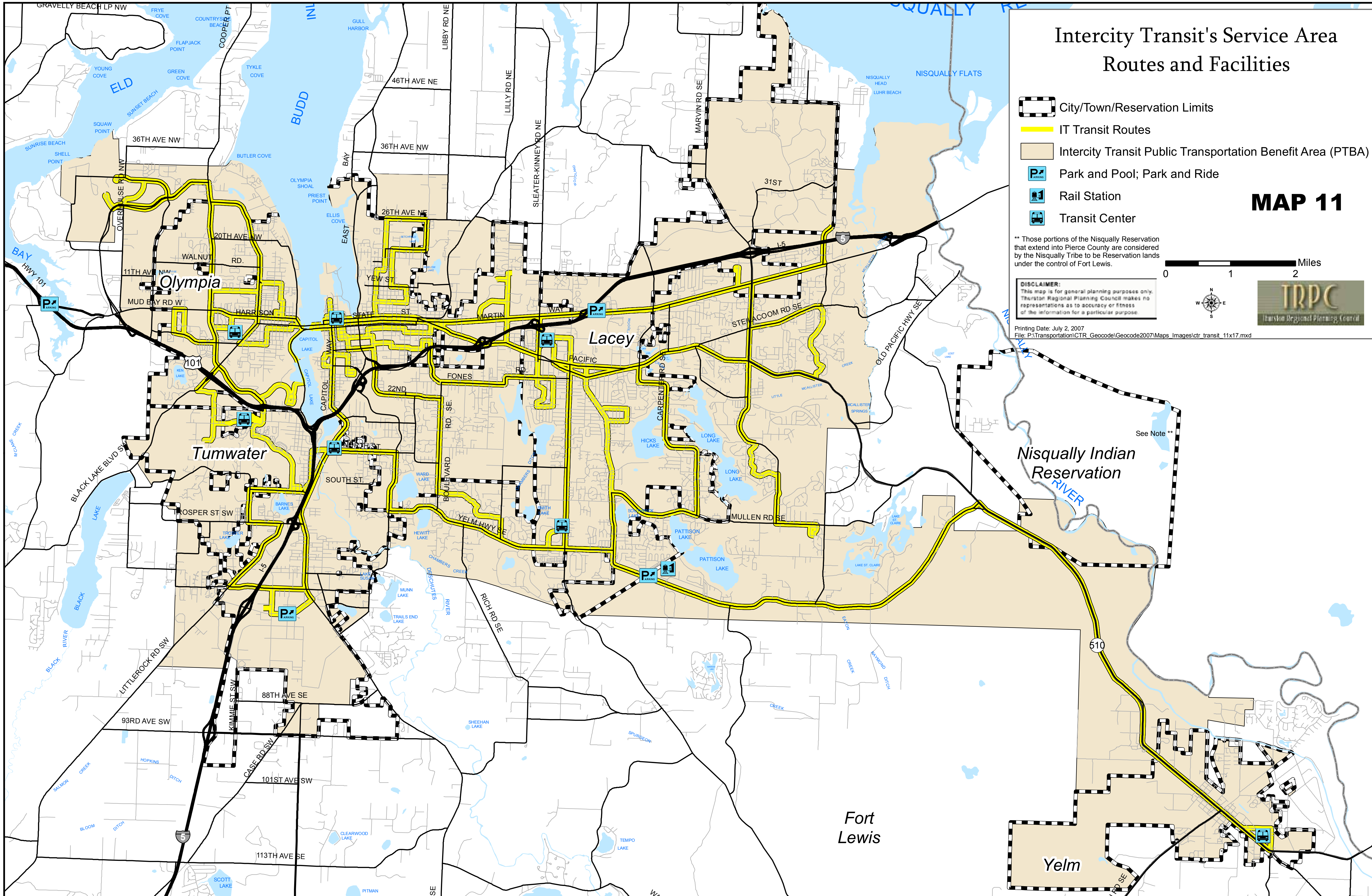

Intercity Transit's Service Area
Routes and Facilities
City/Town/Reservation Limits
IT Transit Routes
Intercity Transit Public Transportation Benefit Area (PTBA)
Park and Pool; Park and Ride
Rail Station
Transit Center
MAP 11
** Those portions of the Nisqually Reservation that extend into Pierce County are considered by the Nisqually Tribe to be Reservation lands under the control of Fort Lewis.
Miles
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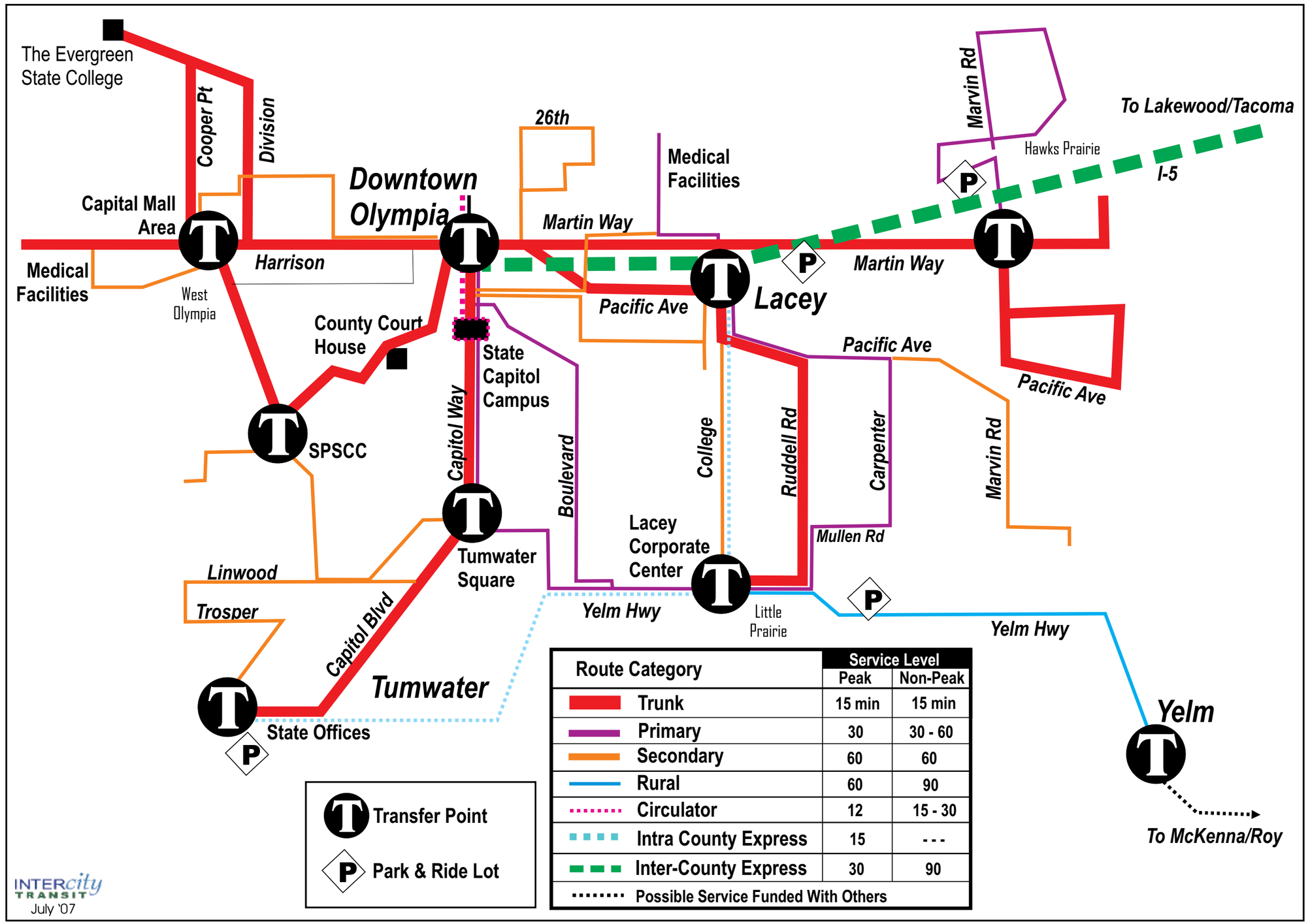
TRPC
Thurston Regional Planning Council
Olympia
Lacey
Tumwater
Nisqually Indian Reservation
See Note **
Fort Lewis
Yelm

MAP 12

Intercity Transit Projected Service Levels by 2012

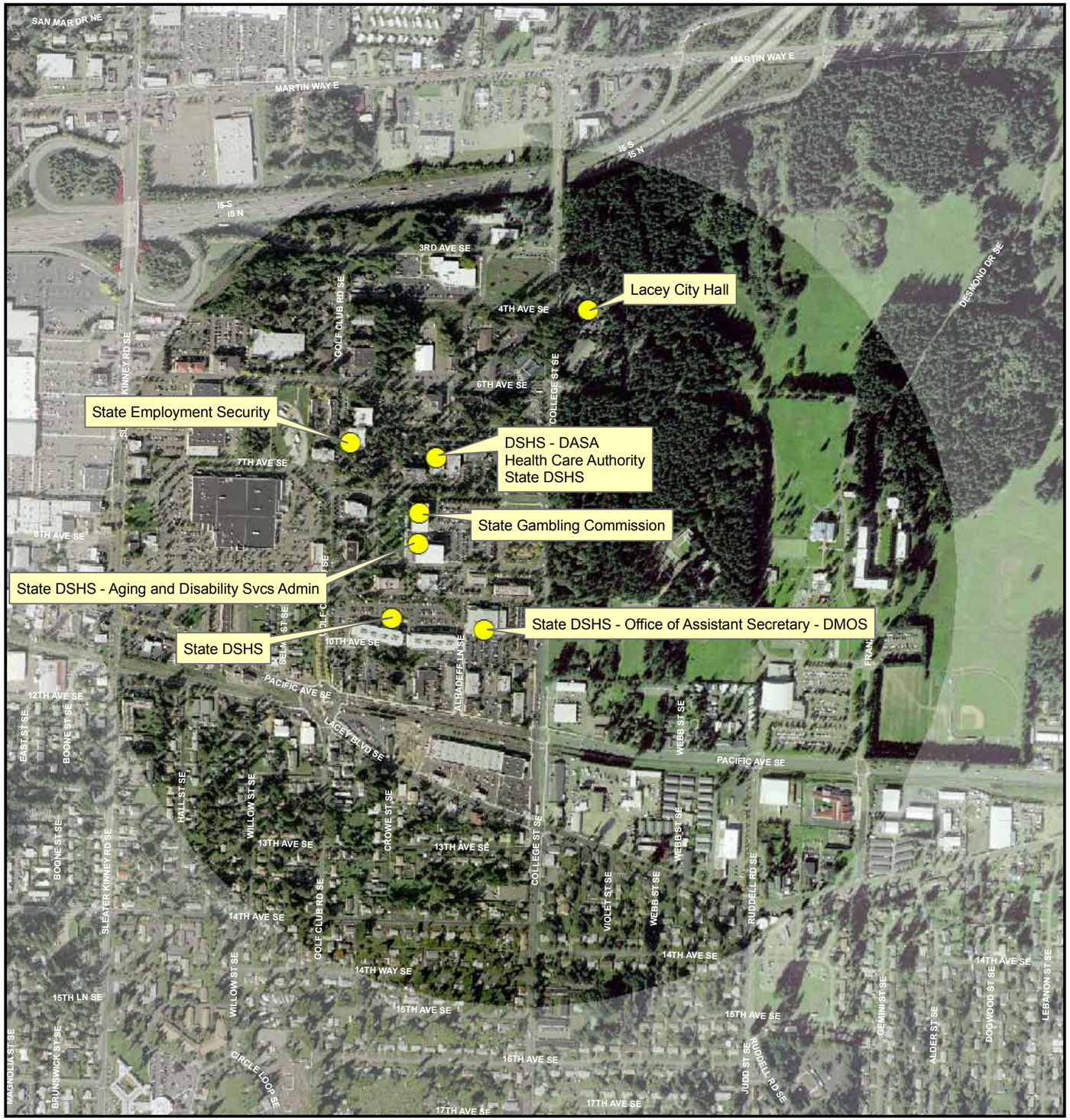
Source: *Intercity Transit Short Range Service Plan, 2006 -2011 (Perteet, 2005)*



Route Category	Service Level	
	Peak	Non-Peak
Trunk	15 min	15 min
Primary	30	30 - 60
Secondary	60	60
Rural	60	90
Circulator	12	15 - 30
Intra County Express	15	- - -
Inter-County Express	30	90
Possible Service Funded With Others		

INTERcity TRANSIT

July '07



Commute Trip Reduction Site Map

Lacey City Hall and Vicinity

MAP 13

General Description: Government Office Cluster
CTR Sites: Woodland Square and City of Lacey CTR sites

Existing and Planned Land Use Conditions

For CTR Work Sites (2005 Survey)		*For the General Area (half mile from center of cluster)*	
# of CTR Work Sites:	8	Total Dwellings:	602
# of CTR Sites Reporting Employees:	8	Dwellings per acre:	1.2
# of Affected Employees	1,436	Total Employees in Cluster:	6,639
Total Employees at CTR Sites:	1,711	Employees per acre:	13.3

Sidewalks and Bike Lanes at CTR Sites

Sidewalks onsite:	yes	Bike Lanes onsite:	no
Within three blocks:	yes	Within three blocks:	yes

Existing and Planned Transit Services and Facilities at CTR Sites

Bus Stop onsite:	some	Within three blocks:	yes

Drive Alone Rate at CTR Sites: 76.3%

Existing Parking Conditions at CTR Sites

# Employees per Parking Stall:	1.05
Average Monthly Charge:	$4.17
On-street parking in vicinity:	yes

Top Three Modes of Travel of Employees at CTR Sites (other than drive alone)

Carpool	9.0%
Bus	3.4%
Vanpool	2.8%

Top Three Things that Survey Results show will encourage CTR in Worksites in this Cluster

- Opportunity to work from home
- Financial incentives
- Guaranteed ride home

Top Three Commute Alternatives Surveyed Employees are Likely to Use

- Compressed Work Week
- Telecommute
- Carpool

Worksite Locations as of Spring 2007
Survey Data Gathered in 2005
Aerial Photos Flown September, 2004

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TRPC
Thurston Regional Planning Council

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Commute Trip Reduction Site Map

Lacey Corporate Center and Vicinity

MAP 14

General Description: Offices and Private Businesses
CTR Sites: Two private businesses

Existing and Planned Land Use Conditions

For CTR Work Sites		*For the General Area (half mile from center of cluster)*	
# of CTR Work Sites:	2	Total Dwellings:	1,351
# of CTR Sites Reporting Employees:	2	Dwellings per acre:	2.7
# of Affected Employees	304	Total Employees in Cluster:	1,211
Total Employees at CTR Sites:	490	Employees per acre:	2.4

Sidewalks and Bike Lanes at CTR Sites

Sidewalks onsite:	yes	Bike Lanes onsite:	some
Within three blocks:	yes	Within three blocks:	yes

Existing and Planned Transit Services and Facilities at CTR Sites

Bus Stop onsite:	some
Within three blocks:	yes

Existing Parking Conditions at CTR Sites

# Employees per Parking Stall:	1.14
Average Monthly Charge:	$0.00
On-street parking in vicinity:	no

Top Three Modes of Travel of Employees at CTR Sites (other than drive alone)

Carpool	5.0%
Telework	0.6%
Bicycle	0.3%

Top Three Things that Survey Results show will encourage CTR in Worksites in this Cluster

Opportunity to work from home
Financial incentives
Guaranteed ride home

Top Three Commute Alternatives Surveyed Employees are Likely to Use

Telecommute
Compressed Work Week
Carpool

Worksite Locations as of Spring 2007
Survey Data Gathered in 2005
Aerial Photos Flown September, 2004

500 250 0 500
Feet

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Thurston Regional Planning Council

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Commute Trip Reduction Site Map

Martin Way Offices and Retail Area and Vicinity **MAP 15**

General Description: Around the Department of Ecology
CTR Sites: Department of Ecology and DSHS sites

Existing and Planned Land Use Conditions

For CTR Work Sites (2005 Survey)		*For the General Area (half mile from center of cluster)*	
# of CTR Work Sites:	2	Total Dwellings:	443
# of CTR Sites Reporting Employees:	2	Dwellings per acre:	0.9
# of Affected Employees	999	Total Employees in Cluster:	1,908
Total Employees at CTR Sites:	1,115	Employees per acre:	2.4

Sidewalks and Bike Lanes at CTR Sites

Sidewalks onsite:	yes	Bike Lanes onsite:	yes
Within three blocks:	yes	Within three blocks:	yes

Existing and Planned Transit Services and Facilities at CTR Sites

Bus Stop onsite:	some	Within three blocks:	yes

Drive Alone Rate at CTR Sites: 66.5%

Existing Parking Conditions at CTR Sites

# Employees per Parking Stall:	1.52
Average Monthly Charge:	$10.00
On-street parking in vicinity:	some

Top Three Modes of Travel of Employees at CTR Sites (other than drive alone)

Carpool	12.6%
Bicycle	5.8%
Compressed schedule	0.3%

Top Three Things that Survey Results show will encourage CTR in Worksites in this Cluster

- Opportunity to work from home
- Financial incentives
- Guaranteed ride home

Top Three Commute Alternatives Surveyed Employees are Likely to Use

- Compressed Work Week
- Telecommute
- Carpool

Worksite Locations as of Spring 2007
Survey Data Gathered in 2005
Aerial Photos Flown September, 2004

500 250 0 500
Feet

TRPC
Thurston Regional Planning Council

N W E S

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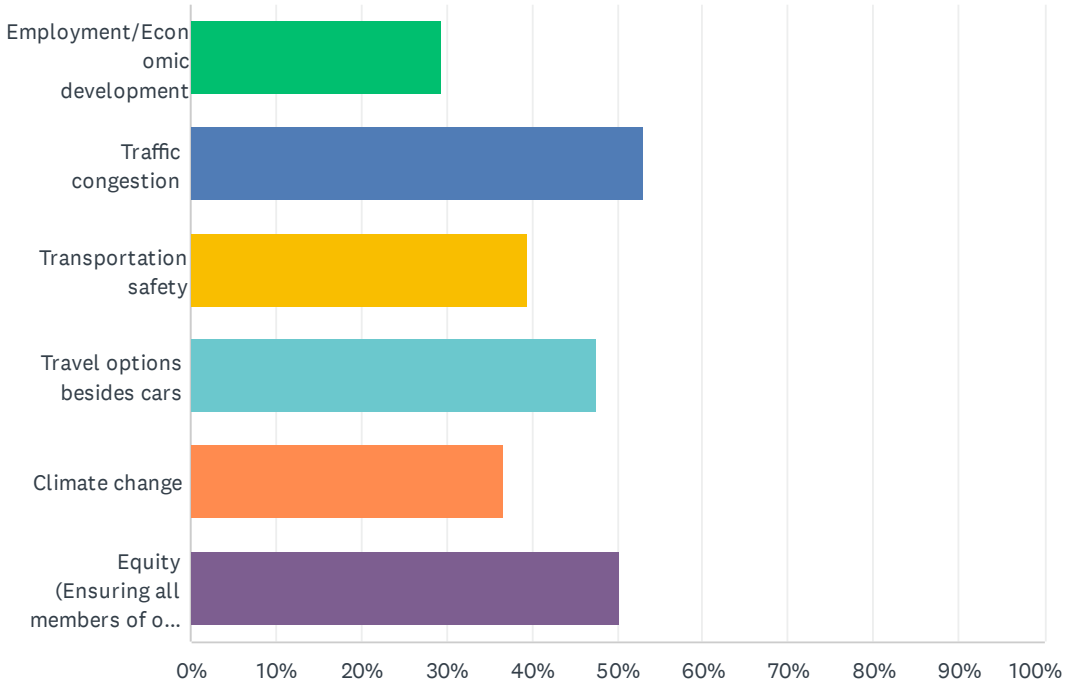
Q1 1. What do you think are the most important community issues that local jurisdictions should consider in developing their commute trip reduction programs? (choose up to 3)

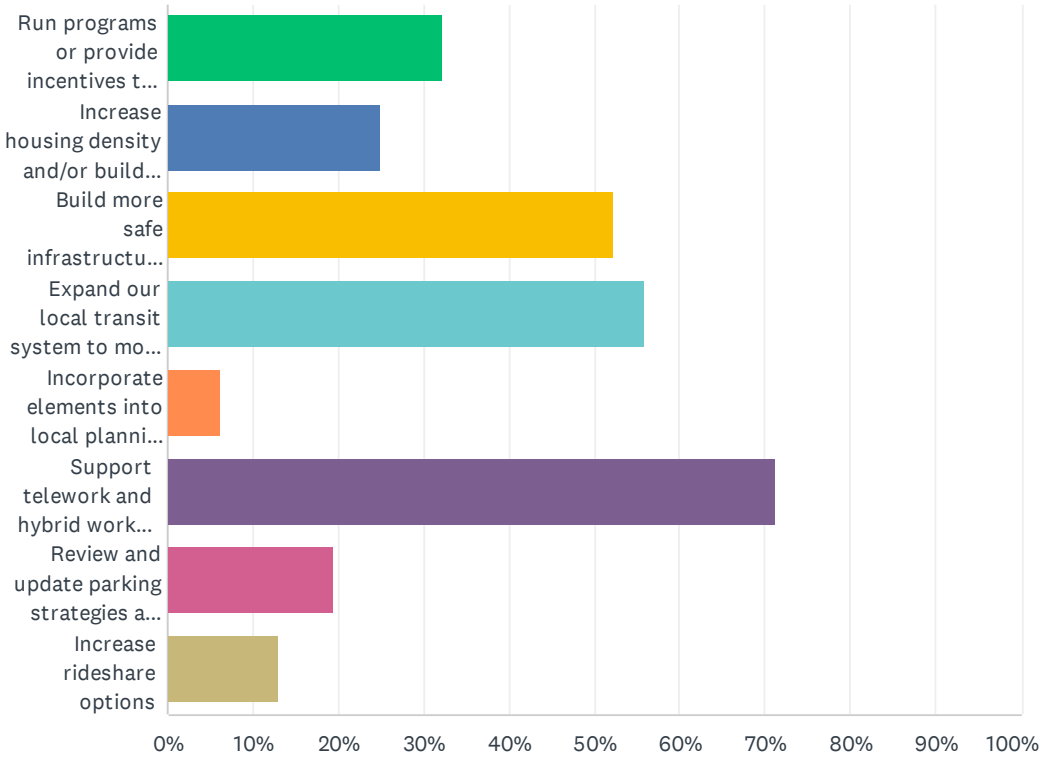
Answered: 322 Skipped: 4



ANSWER CHOICES	RESPONSES	
Employment/Economic development	29.50%	95
Traffic congestion	53.11%	171
Transportation safety	39.44%	127
Travel options besides cars	47.52%	153
Climate change	36.65%	118
Equity (Ensuring all members of our community have adequate, safe access to commute options)	50.31%	162
Total Respondents: 322		

Q2 2. What activities or investments do you think local jurisdictions should focus on through their commute trip reduction programs to help our community work on these issues? (choose up to 3)

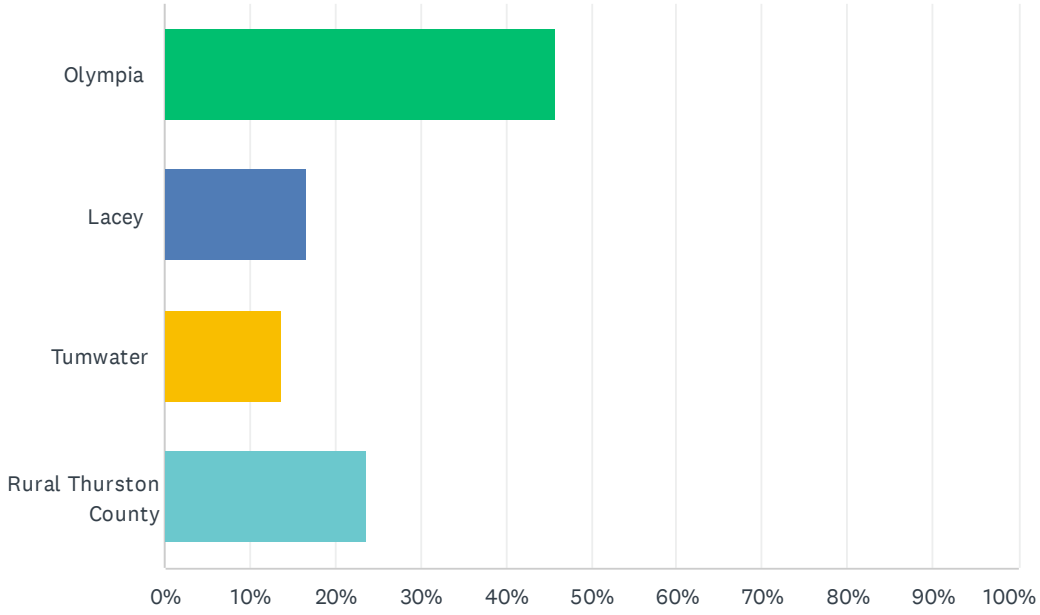
Answered: 324 Skipped: 2



ANSWER CHOICES	RESPONSES	
Run programs or provide incentives to reduce car trips	32.10%	104
Increase housing density and/or build more housing close to job locations	25.00%	81
Build more safe infrastructure for walking and biking	52.16%	169
Expand our local transit system to more areas and increase frequency	55.86%	181
Incorporate elements into local planning to bring more people and jobs to our region	6.17%	20
Support telework and hybrid work options	71.30%	231
Review and update parking strategies and programs	19.44%	63
Increase rideshare options	12.96%	42
Total Respondents: 324		

Q3 3. Where do you live?

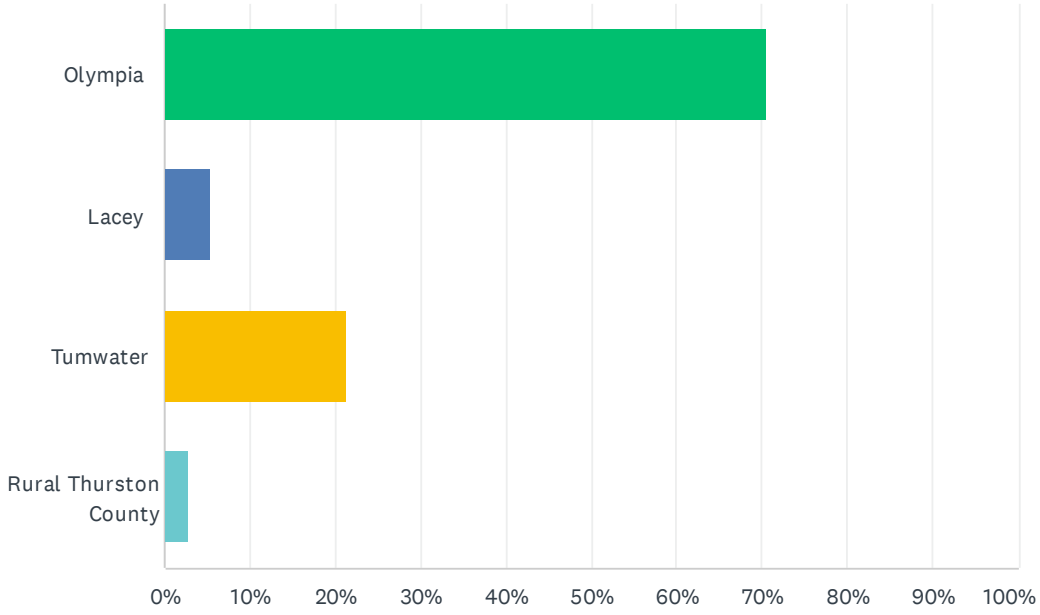
Answered: 240 Skipped: 86



ANSWER CHOICES	RESPONSES	
Olympia	45.83%	110
Lacey	16.67%	40
Tumwater	13.75%	33
Rural Thurston County	23.75%	57
TOTAL		240

Q4 4. Where do you work?

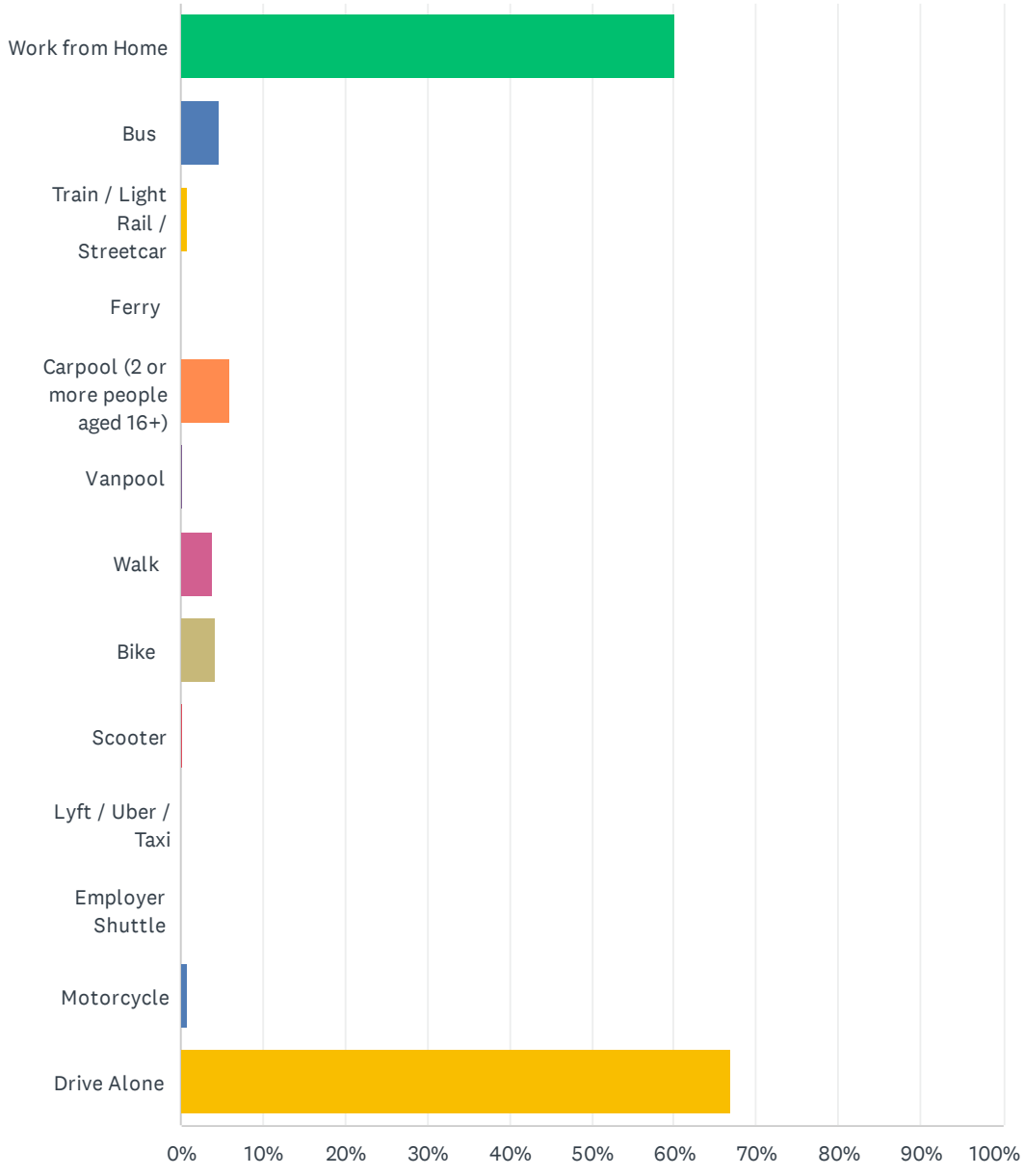
Answered: 300 Skipped: 26



ANSWER CHOICES	RESPONSES	
Olympia	70.67%	212
Lacey	5.33%	16
Tumwater	21.33%	64
Rural Thurston County	2.67%	8
TOTAL		300

Q5 5. How do you currently get to and from work?

Answered: 321 Skipped: 5



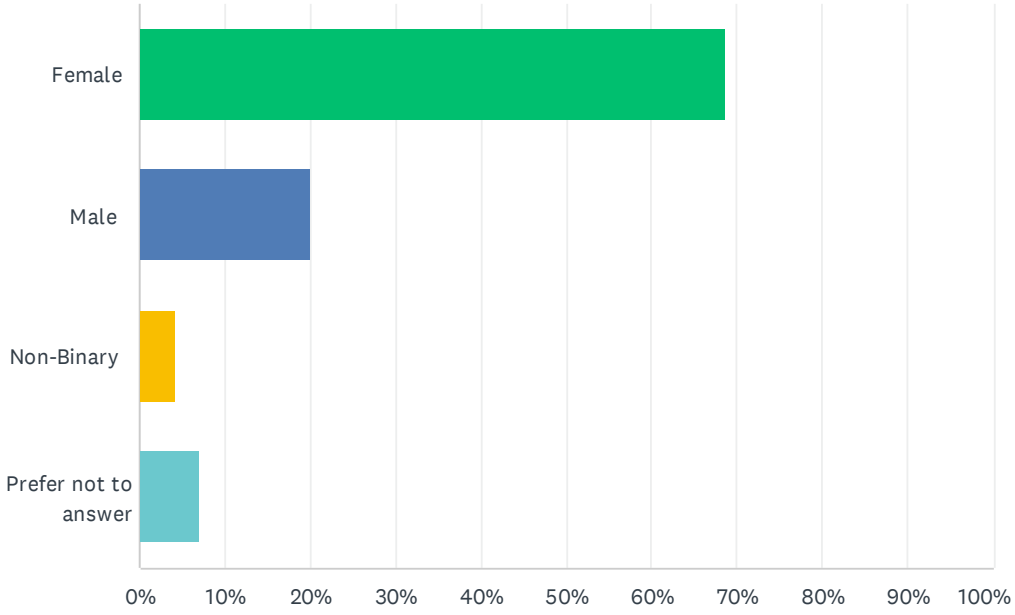
ANSWER CHOICES	RESPONSES	
Work from Home	60.12%	193
Bus	4.67%	15
Train / Light Rail / Streetcar	0.93%	3
Ferry	0.00%	0
Carpool (2 or more people aged 16+)	5.92%	19
Vanpool	0.31%	1
Walk	3.74%	12
Bike	4.36%	14
Scooter	0.31%	1
Lyft / Uber / Taxi	0.00%	0
Employer Shuttle	0.00%	0
Motorcycle	0.93%	3
Drive Alone	66.98%	215
Total Respondents: 321		

Q6 6. Is there anything else you want us to know about how to improve commute options?

Answered: 87 Skipped: 239

Q7 7. What is your gender?

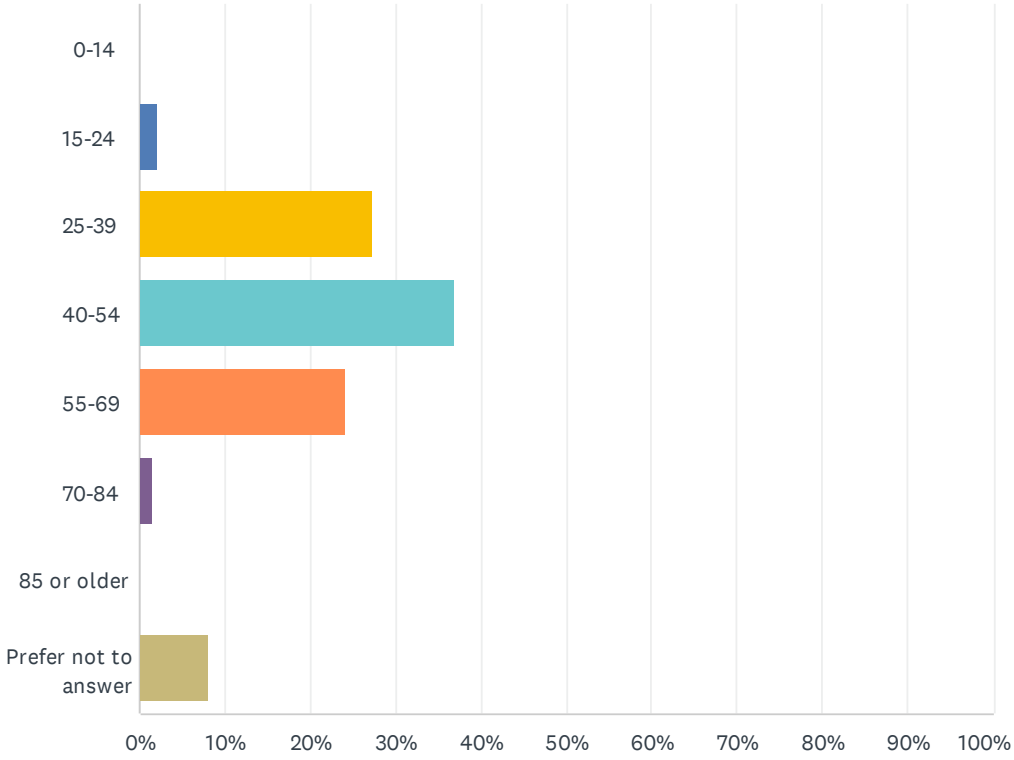
Answered: 325 Skipped: 1



ANSWER CHOICES	RESPONSES	
Female	68.62%	223
Male	20.00%	65
Non-Binary	4.31%	14
Prefer not to answer	7.08%	23
TOTAL		325

Q8 8. What is your age range?

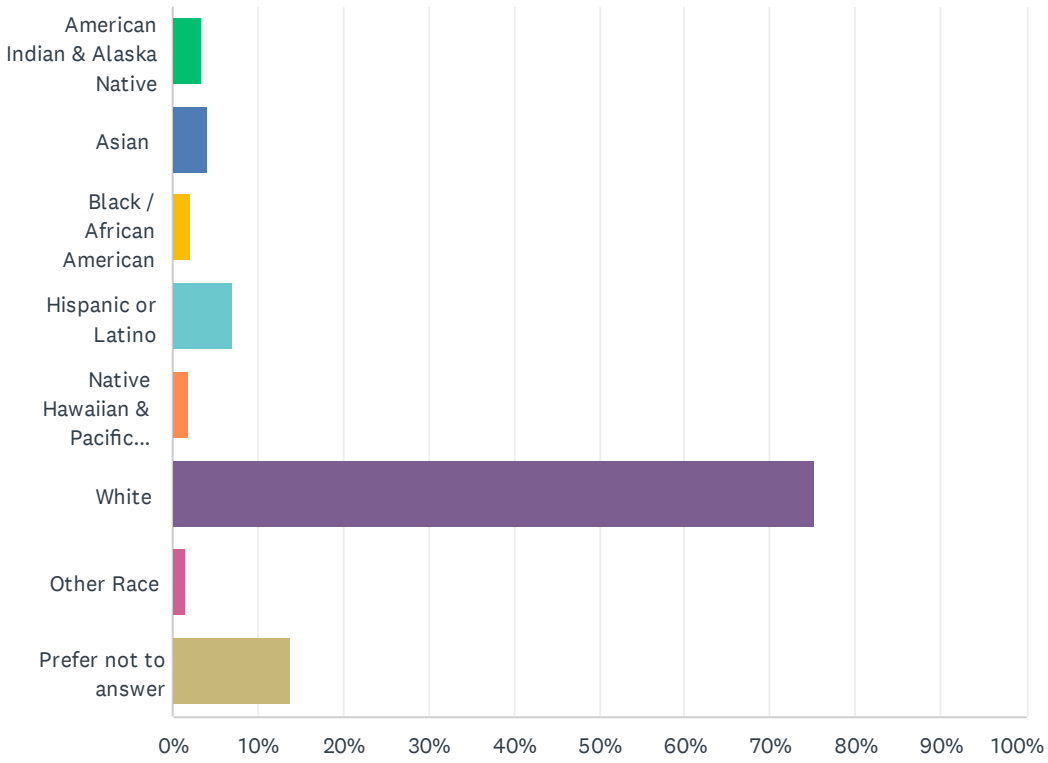
Answered: 325 Skipped: 1



ANSWER CHOICES	RESPONSES	
0-14	0.00%	0
15-24	2.15%	7
25-39	27.38%	89
40-54	36.92%	120
55-69	24.00%	78
70-84	1.54%	5
85 or older	0.00%	0
Prefer not to answer	8.00%	26
TOTAL		325

Q9 9. What is your race/ethnicity (check as many as apply)?

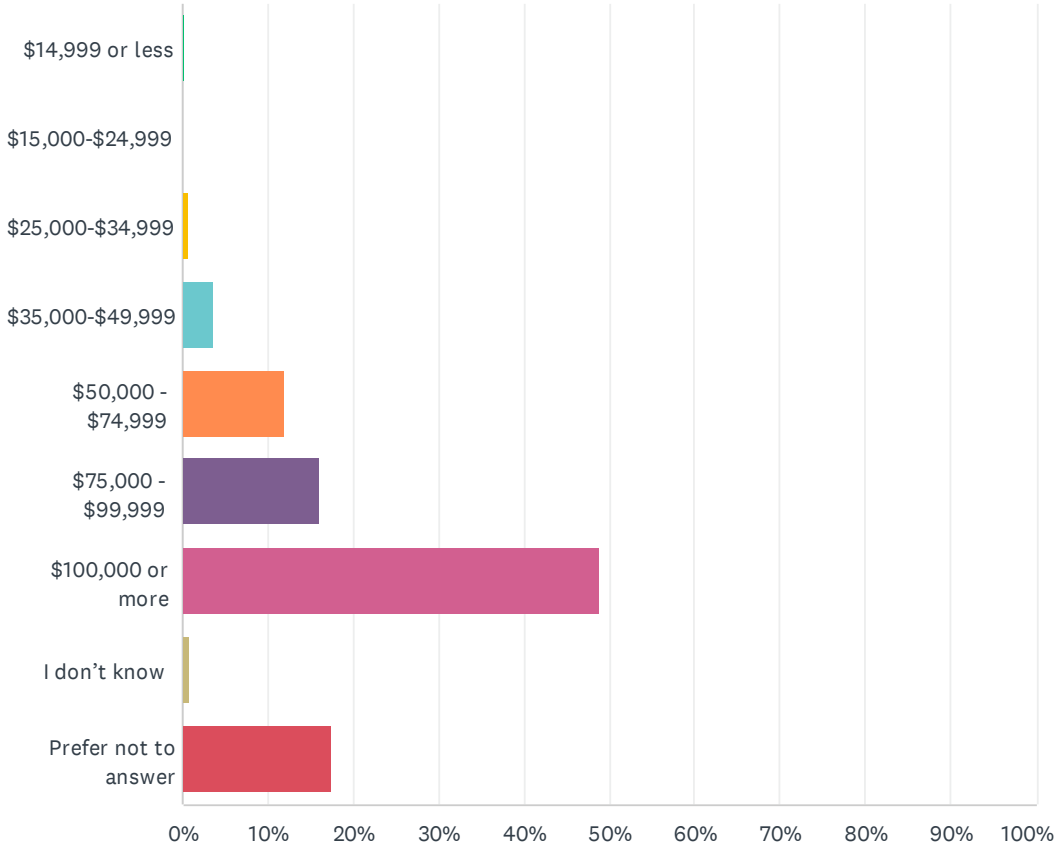
Answered: 324 Skipped: 2



ANSWER CHOICES	RESPONSES	
American Indian & Alaska Native	3.40%	11
Asian	4.01%	13
Black / African American	2.16%	7
Hispanic or Latino	7.10%	23
Native Hawaiian & Pacific Islander	1.85%	6
White	75.31%	244
Other Race	1.54%	5
Prefer not to answer	13.89%	45
Total Respondents: 324		

Q10 10. What is your household's annual income (before taxes)?

Answered: 325 Skipped: 1



ANSWER CHOICES	RESPONSES	
$14,999 or less	0.31%	1
$15,000-$24,999	0.00%	0
$25,000-$34,999	0.62%	2
$35,000-$49,999	3.69%	12
$50,000 - $74,999	12.00%	39
$75,000 - $99,999	16.00%	52
$100,000 or more	48.92%	159
I don't know	0.92%	3
Prefer not to answer	17.54%	57
TOTAL		325

LACEY PLANNING COMMISSION
STAFF REPORT

October 23, 2024

SUBJECT: **City of Lacey Development Guidelines and Public Works Standards – Chapter 4 Transportation, 2025 Update – Public Review Draft**

RECOMMENDATION: Receive a briefing from Public Works staff on the draft of Chapter 4 (Transportation).

TO: Lacey Planning Commission

STAFF CONTACTS: Ryan Andrews, Planning Manager RA
Tom Stiles, Development Review Manager TS

ATTACHMENT(S): 1. Public Works Standards Chapter 4 – Transportation with revisions.

PRIOR REVIEW: None

BACKGROUND:

The City of Lacey Development Guidelines and Public Works Standards (DG&PWS) Manual is one of the City of Lacey regulatory documents used for development within the City of Lacey and the City of Lacey Urban Growth Area. This document provides direction for requirements of development.

Chapter four of the manual discusses transportation elements of development. Major items include: street development, access management, Traffic Impact Analysis, traffic calming, street naming and signage, right-of-way, buffer, private street, gated community, frontage improvement, driveway, site obstruction, roadway surfacing, pavement marking, trench restoration and roadway repair, sidewalk, curb and gutter, bicycle facility, illumination, traffic control, roadside feature, street tree and planter strip landscaping requirements.

Most revisions to this chapter are “housekeeping” revisions and providing clarifications to existing standards.

Noteworthy revisions to chapter 4 include:

- Clarification of when parking within a parking lot can begin.
- Street lighting service requirements added.
- Street tree placement restrictions identified.

- Street tree with planter strip width list replaces previous street tree list.

RECOMMENDATION:

Review the public review draft of Chapter 4 (Transportation) and be prepared to discuss proposed revisions at the October 23, 2024 Planning Commission meeting.

CHAPTER 4

4.000 TRANSPORTATION

4A GENERAL CONSIDERATIONS

4A.010 General

The overall goal of this chapter is to encourage the uniform development that is context sensitive to create an integrated, fully accessible public transportation system that will facilitate present and future travel demand to meet the needs of people walking, driving, transit, freight and cycling with minimal environmental impact to the community as a whole. All design standards shall follow accepted engineering practices with an emphasis on safety. Safety shall override the supplemental standards as outlined in this document. See Chapter 3.021 for development within the Urban Growth Area (UGA) boundary.

This chapter provides minimum development standards supplementing the applicable standards as set forth in Chapter 3.010.

4B STREETS

4B.010 General

Roadway design must provide for the maximum conditions anticipated. The width and grade of the pavement must conform to specific standards set forth herein for safety and uniformity.

4B.020 Design Standards

The design of streets and roads shall depend upon their functional classification and usage. The design elements of City streets shall conform to City standards as set forth herein and current design practice as set forth in Chapter 3.010. Standard design cross-sections and structures are shown on the details at the end of this chapter. Alternate structural sections may be used based on the criteria as outlined in Chapter 4B.160. Safety shall be paramount in any roadway design.

All roadways classified as a collector and above shall meet the design standards of the WSDOT Local Agency Guidelines Manual. Local access roadways shall meet the guidelines herein. Any modification to those standards shall comply with the deviation process as established by the WSDOT *Local Agency Guidelines Manual*. Deviations require justification with safety being a prime consideration.

The layout of streets shall be based on their functional requirements, i.e., the grouping of roadways based on the service they provide. See Chapter 4B.025 for Access Management criteria and 4B.030 for Functional Classification applications. See the table of the Minimum Street Design Standards for design criteria.

A. Alignment. Alignment of boulevards, arterials, and collectors shall conform to the Transportation Comprehensive Plan. The City of Lacey Public Works Director shall approve deviations to the Transportation Comprehensive Plan.

B. Grade. Street grade should conform closely to the natural contour of the land. In some cases a different grade may be required by the City Engineer. See table of Minimum Street Design Standards for specifics.

C. Width. The pavement and right-of-way width depend on the street classification and functional requirements. See street details for specifics. Road widths shall be measured from face-of-curb to face-of-curb on all streets.

D. The General Notes on the following page shall be included on any plans addressing ~~dealing with~~ street design in addition to all applicable requirements in Chapter 3.040.

GENERAL NOTES (STREET CONSTRUCTION)

1. See appropriate detail for specifications for joining new and existing asphalt.

2. Compaction of subgrade, rock, and asphalt shall be in accordance with the most current adopted version of the *WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction*.

3. Form and subgrade inspection by the City is required before pouring concrete. (See WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction 8-14.3 (1) through (4)). Twenty-four hours notice is required for form inspection.

4. See City of Lacey Development Guidelines and Public Works Standards, Chapter 4B.200, for testing and sampling frequencies.

5. The City manufactures and installs public and private street name signs, and regulatory signs at the contractor's/developer's expense. Other signs that shall be manufactured and installed by the City and paid for by the contractor/developer's will include signs for well sites, tank sites, lift stations, odor control stations, maintenance and/or fire access through an easement. (See 4B.050). Signs shall be requested at the time street construction begins.

6. Material used for all plastic stop lines, plastic crosswalk lines, plastic traffic arrows, plastic traffic letters, plastic legends, and plastic symbols shall be Type B – Pre-formed fused thermoplastic at 120 mil thickness.

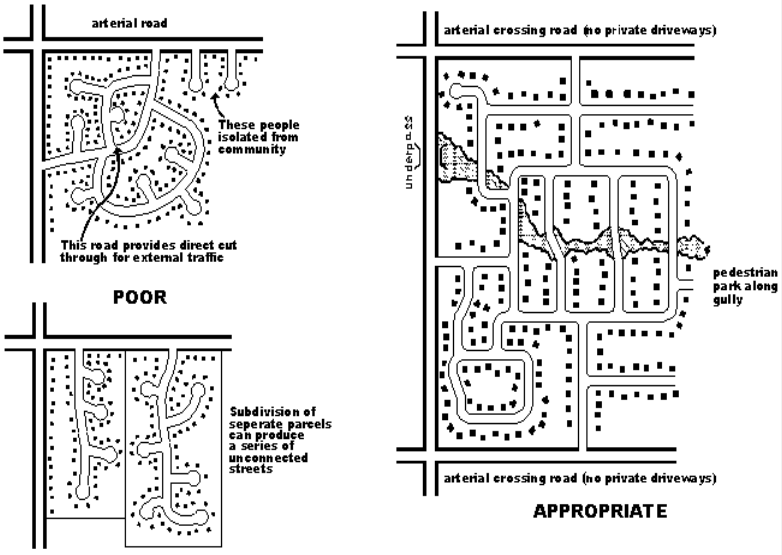
Revised: 03/2014

MINIMUM STREET DESIGN STANDARDS

DESIGN STANDARD	Boulevards	Arterials	Major Collector's	Minor Collector's	Major Local Residential	Minor Local Residential	Private
DESIGN LIMITATIONS	Access and intersections are limited.				Access limited to one driveway per SF residential lot.		
MINIMUM STRUCTURAL DESIGN	See Details 4-6.1 through 4-6.2						
MINIMUM RIGHT-OF-WAY	See Details 4-1.0 through 4-5.1						
MINIMUM PAVEMENT WIDTH	See Details 4-1.0 through 4-5.1						
PARKING LANE	None allowed	None allowed	Allowed on Type I where bulb-out parking is provided. Prohibited on Type II	Allowed on Type I where bulb-out parking is provided. Prohibited on Type II	Bulb-out parking required except in intersection transition section	Allowed	Optional, depends on easement width
MINIMUM ℄ GRADE	With curb and gutter or concrete roadway, minimum grade 0.5% On ACP roadway with no curb and gutter or curb and gutter on one side only, minimum grade 1.0%						
MAXIMUM ℄ GRADE	7.0%	7.0%	10.0%	10.0%	12.0%	12.0%	12.0%
	7 % regardless of roadway classification in Commercial and Industrial Zones						
CURB	Longitudinal slope minimum 0.5% on tangents Minimum curb return grade to catch basin 1.0%						
SIDEWALKS	See Details 4-1.0 through 4-5.1 and Chapter 4C for width variances						
INTERSECTION CURB RADIUS	The minor intersecting street shall control the curb radii						
W/O MEDIAN	35'	35'	30'	30'	25'	20'	10'
WITH MEDIAN	35'	35'	35'	35'	30'	25'	15'
DESIGN SPEED NEW ROAD	40 mph	40 mph	35 mph	35 mph	25 mph	20 mph	20 mph
DESIGN SPEED EXISTING RDS	5 mph above posted speed limit						
MINIMUM CENTERLINE RADIUS WITHOUT INTERSECTION	455' @ 30 mph 630' @ 35 mph 860' @ 40 mph		1,120' @ 45 mph 1,430' @ 50 mph		195' @ 20 mph 305' @ 25 mph	100'	Res. = 100' Com. = 195' Industrial = 195'
	Use AASHTO for centerline radius restrictions at intersections.						
SUPER-ELEVATION	Requires approval of the Director of Public Works. If allowed, design shall be per AASHTO with the maximum superelevation not to exceed 4%				Not allowed		

4B.025 Access Management

The City has adopted these Access Management guidelines. State facilities shall meet these standards in addition to the access requirements as set forth in RCW 47.50, WAC 468-51, WAC 468-52 and all other applicable RCW's and WAC's. Access Management is a tool to address traffic congestion, crashes, and loss of street capacity. The intent of Access Management is to provide access for land development while preserving the flow of traffic in terms of safety, capacity and speed of travel. Studies show the uncontrolled proliferation of driveways and intersections along a given section of roadway reduces the capacity, increases the number and severity of crashes, and inhibits bicycle and pedestrian usage. In addition, poorly designed entrances and exits cause congestion and create a negative image for a commercial district. See figure below for access management examples.



The benefits of access management include:

- Safety – by reducing the number and severity of crashes;
- Operation – by reducing delays while maximizing the roadway potential capacity;
- Environmental – by lowering the amount of air pollution caused by stop-and-go operation thereby increasing fuel economy;
- Economics – by preserving public investment in the roadway infrastructure, avoiding the need for roadway widening or other roadway improvements.

The objective of Access Management:

- Establish guidelines for location and design of driveways;
- Provide access from public roadways;
- Define an access control hierarchy for all roadways;
- Regulate access location and design; intersections, signal and access spacing standards; corner clearances; joint and cross access; functional areas of an intersection; and medians;
- Provide connectivity between neighborhoods and adjoining land uses.

A. Definitions

For the purpose of Access Management, the following definitions shall apply:

"Curb Cut" – An access without a curb radius. Generally used on private streets and driveways.

"Curb Return" – An access with a turning curb radius and constructed to full Americans with Disability Act (ADA) standards. Curb returns shall be installed on all public streets. Private streets and commercial driveways may be evaluated on a case by case basis.

"Road or Driveway" – A traveled surface used to represent an access point onto the roadway. In this Chapter, road and driveway are treated the same; both are access points.

B. Determination of Access Classification

Determination of Access shall be the responsibility of the City. The developer shall provide the following information along with recommendations to assist the City in determining access locations:

1. Local land use plans, zoning, and land development regulations as set forth in adopted comprehensive plans.

2. The current and potential functional classification of the roadway. See Chapter 4B.030.

3. Existing and projected traffic volumes, accident history, and other operational considerations.

4. Existing and projected state, local, and regional planning organization transportation plans and needs, including considerations of new or improved facilities.

5. Drainage requirements.

6. The physical features of lands adjoining the roadway.

7. The type and volume of traffic requiring access.

8. The availability of alternative connections to the existing roadway network.

9. The cumulative effect of existing and projected connections on the roadway's ability to provide safe and efficient movement of people and goods.

C. Access Spacing

Minimum access spacing provides drivers with sufficient perception-reaction time to address one potential conflict area at a time. Access points shall be located to reduce the possibility of weaving, lane shifts, or other conflicts in the traffic stream. Existing access on both sides of the roadway shall be analyzed to determine proper location for a new access. Spacing is important to the safety and capacity of a roadway, as well as the appearance of a corridor. Bicyclists and pedestrians will benefit from the reduced conflicts generated by excessive access points. The following guidelines shall be used for minimum spacing between access points.

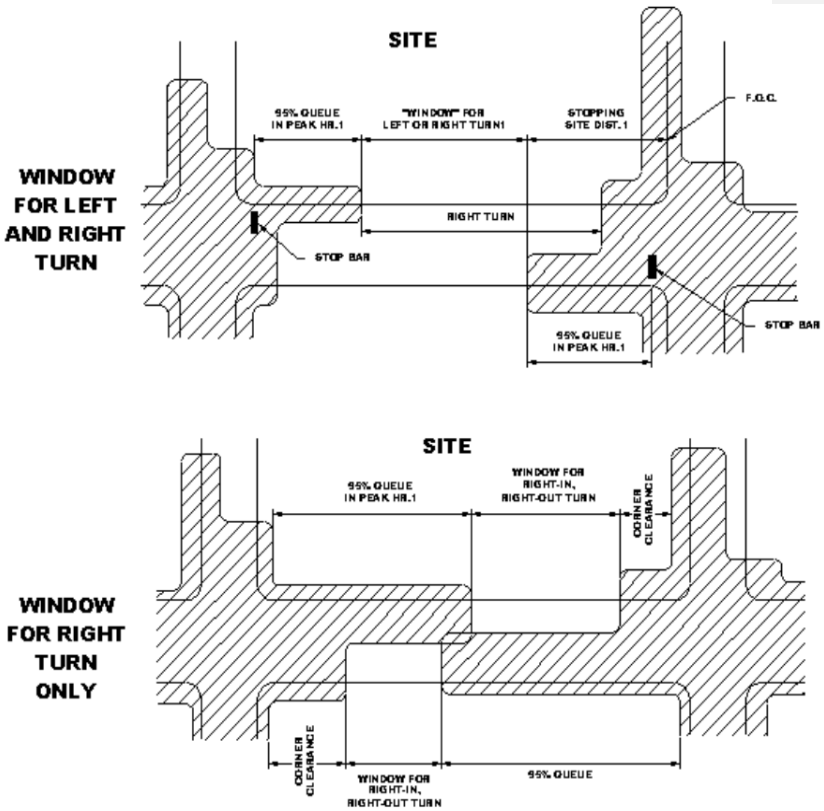
Functional Classification	**Access Spacing**
Boulevard	1320 feet
Arterial	660 feet
Collector	330 feet
Collectors in Business Districts	165 feet

The spacing standards are for full access. Restricted access (right-in, right-out), shall be half the amount shown in the table above provided that the requirements in 4B.025E, Medians, can be met.

If the spacing requirements and the connectivity requirements as outlined in this Chapter cannot be met, the access shall be designed using the objectives herein and as approved by the City. All distances given in this Chapter are measured centerline to centerline.

D. Functional Area

The functional area of an intersection is defined as the area beyond the physical intersection that comprises decision and maneuver distance plus any required vehicle storage length. The "clear area" between functional areas can be defined as the "window" in which direct access can be provided. The figure below illustrates an available window. The greater the window, the greater the flexibility in site circulation design.



The higher the speed of traffic or traffic volume, the longer the functional area needs to be. The functional area of nearby intersections determines where direct access can be provided without creating safety and congestion problems.

As the intersection functional areas become closer, direct access may be limited to right-in, right-out only. If no access window is available,

site access should only be provided to secondary roads. For specific design criteria, use the ITE *Traffic Engineering Handbook*, most current edition.

See 4B.140, Driveways, for corner clearance restrictions within the functional area of an intersection. See 4B.025E for Median opening restrictions within an intersection functional area.

E. Medians

Raised or landscaped medians in the center of a road separate opposing lanes of traffic, and shall be used to restrict turning and crossing movements. Studies show thoroughfares with raised medians are safer than undivided roads with center two-way left turn lanes. Medians prevent head-on collisions and also provide a refuge for pedestrians as they cross the roadway.

Median openings shall not occur within the functional area of an intersection. See 4B.025D for more information on Functional Areas. See 4B.140 for driveway restrictions in the functional area of an intersection. A double yellow center stripe is required 12 inches off the face of the median curb.

Medians are required as specified on the applicable roadway detail at the end of this Chapter. Medians shall be designed so as not to limit turning radius or sight distance at intersections. A non-restrictive median or two way left turn lane may be used when special conditions exist. Medians shall be formed with a WSDOT Standard Plan F1 Cement Concrete Barrier Curb or Mountable Cement Concrete Curb as applicable. Placement of the curbs shall be based on the State Design Manual requirements. Landscaping shall be installed when directed by the City Engineer. Irrigation shall be installed per Chapter 6.210.

When retrofitting existing sites where medians cannot be installed because of limited right-of-way, barrier curbs between opposing lanes of traffic shall be installed. The use of a concrete barrier island used to divert traffic (i.e. a “pork chop” shaped barrier) restricting turns to

Right-in, right-out only, is generally not effective unless combined with a barrier curb or other appropriate treatment as determined by the City Traffic Engineer.

Reflective tubular plastic delineators and raised pavement markers shall be included with any curb or other raised features constructed within the roadway. Delineators shall be installed at the nose ends of these curbs.

4B.030 Functional Classification and Connectivity

Roadway hierarchy based on functional classification provides a network of streets based on distinct travel movements and the service they provide. Roadway layout shall be based primarily on the safety, efficiency of traffic flow, and functional use of the roadway. Roadways are divided into boulevards, arterials, major and minor collectors, major and minor local residential, private streets, and alleys.

Roadways of all classifications shall be planned to provide for connectivity of existing and proposed streets in relation to adjoining parcels and possible future connections as approved by Public Works. New development roadway systems should be designed so as to minimize pedestrian travel to bus stops.

Boulevards and arterials are intended for the efficient movement of people and goods and have the highest level of access control. They have limited access and accommodate controlled intersections. Boulevards and arterials have been identified in the most current adopted version of the *City of Lacey Transportation Plan*. The City Traffic Engineer will classify all new roadways.

Collectors generally connect commercial, industrial, and residential projects to other collectors, arterials and boulevards and have a moderate level of access control. Minor collectors may be used if turn lanes are not required. If the collector connects to another collector or to an arterial, the roadway shall be a major collector. The City will determine if a collector is a major or a minor, type I or type II, based on a review of the development potential of all contributing properties, the existing right-of-way if it is an existing roadway, and the necessity of turn lanes. Auxiliary left turn lanes are desired when connecting to boulevards, arterials, and major collectors. Collectors are identified in the most current adopted version of the *City of Lacey Transportation Plan*. The City Engineer, in conjunction with the County Engineer, will classify all new roadways within the UGA.

Major and minor local residential streets shall interconnect with each other and with minor collectors and have a minimum level of access control. If the local residential street connects to a major collector or to an arterial, the street shall be a major local residential. Major local residential streets shall not transition into any other classification of roadway. Primary routes of travel shall be major local residential streets. High density, multi-family projects shall be served by a major local residential. In such developments, connectivity shall be a key design factor, although the internal flow shall be discontinuous to discourage cut-through traffic movement and excessive speed. Traffic calming techniques shall be designed into all residential subdivisions. The pedestrian network shall be paramount in the residential roadway network. Safety is always the major consideration when determining intersection locations and connectivity.

Minor local residential streets serve as land access from residences and generally connect with major local residential and minor collectors. Minor local residential streets are intended to serve low volumes and do not provide primary connectivity through the neighborhood.

Alleys in residential neighborhoods are encouraged. Alleys shall be limited to one block in length terminating with a public or private street on each end. Alleys shall run parallel to the adjacent public roads unless approved by the City.

4B.035 Traffic Impact Analysis

STANDARDIZED FORMAT FOR TRAFFIC IMPACT ANALYSIS

A. INTRODUCTION

A Traffic Impact Analysis (TIA) is a specialized study of the impacts that development will have on the transportation system. The traffic impact analysis is an integral part of the environmental review process and specifically analyzes the generation, distribution, and assignment of traffic to and from the proposed development.

The purpose of a TIA is:

- to determine the impacts of new development traffic on the existing and proposed street network;
- to determine the layout and design of the proposed roadway system;

- to determine if the new development can meet the concurrency aspects of the Growth Management Act;
- and to determine the appropriate traffic mitigation for the development.

"Development" means a subdivision, short subdivision, binding site plan, ~~or~~ conditional use permit proposal, or any other land use process to substantially intensify the use of existing land or structures, or make additions to existing structures other than one or two family residential structures, or any proposed project requiring Site Plan Review pursuant to LMC 16.84. The term shall not include individual one or two family residential lots within plats as described in LMC 14.21.050.

These guidelines have been prepared to establish the requirements for a Traffic Impact Analysis. The Site Plan Review Committee (SPRC) ~~and/or the Environmental Review Committee (ERC)~~ under the review authority of LMC 14.21 are responsible under SEPA and City Ordinances for determining the need for a Traffic Impact Analysis. The Public Works Department will approve the scope of work, review the Traffic Impact Analysis and make recommendations to the SPRC ~~and/or ERC~~.

Commented [TS1]: We don't know who serves on the Environmental Review Committee. Does it exist?

All reports shall be submitted in a professional format that can be interpreted by all departments. Exhibits shall include a border with a title block identifying the project and a description with legible text clearly identifying all items. Exhibits shall be constructed with an approved graphical software.

B. WHEN REQUIRED

To adequately assess traffic impacts on the transportation system the Environmental Review Committee (ERC) may require a Traffic Generation Worksheet be prepared to determine if a Traffic Impact Analysis (TIA) or Traffic Mitigation is required.

Commented [TS2]: What committee is being referenced here? Again, I don't know what this is.

A full or partial Traffic Impact Analysis may be required if any of the following conditions are met:

1. The "Development" lies within the Transportation Improvement Plan Area established in the Lacey Municipal Code Section 14.21.

2. The "Development" will generate more than 50 PM Peak Hour Trips.

3. The "Development" will generate more than 100 Peak Hour trips at a time other than PM Peak Hour.

4. The Public Works Department is unable to determine the Traffic Generation characteristics of the Development.

5. The Developer feels further traffic analysis may clarify questions about the identified traffic mitigation assessment for the project.

6. The "Development" access to the roadway network may create an impact as determined by the Public Works Department.

7. The "Development" impacts an area identified by the Public Works Department that cannot meet the concurrency requirements of the Growth Management Act.

8. The "Development" may potentially affect the implementation of the street system outlined in the Transportation element of the Comprehensive Plan, the Transportation Improvement Program, or any other documented transportation project.

9. If modifications are required to the original TIA that is more than two years old, or where the increase in traffic volume as measured by ADT, peak hour, or peak hour of the critical movement is more than 10%.

10. The "Development" may have an impact to the roadway or transportation system as determined by the Public Works Department.

If the SPRC~~/ERC~~ requires a TIA, the general guidelines for content and structure shall follow the format outlined herein.

C. QUALIFICATIONS FOR PREPARING TIA DOCUMENTS

The Traffic Scoping or the TIA shall be prepared and stamped by an engineer licensed to practice in the State of Washington with special training and experience in traffic engineering and who preferably is a member of the Institute of Transportation Engineers (ITE). The developer shall provide the Public Works Department the credentials of the individual(s) selected to prepare~~perform~~ the report.

D. SCOPING REPORT

If a Traffic Impact Analysis is required, the Engineer shall submit a copy~~5 copies~~ of ~~a~~ the Scoping Report to the Department of Community and Economic Development to assist the City of Lacey in the development of the scope of work for the TIA. The Scoping Report shall include all items in the following checklist:

- ☐ Traffic Scoping Information Worksheet (see following pages)
- ☐ Project Size in Square Feet and Acres
- ☐ General Location
- ☐ Proposed Use
- ☐ Number of Lots or Units
- ☐ Phasing Plan
- ☐ Trip Generation
- ☐ Daily Trips
- ☐ PM Peak Hour Trips
- ☐ Year of Occupancy (Horizon year of project)
- ☐ Land Use Code
- ☐ Ambient Growth (use 4%)
- ☐ Approved Development Projects in the Vicinity
- ☐ Intersections Impacted by 20 or more PM trips
- ☐ A ~~reduced~~ copy of the "s~~S~~ite p~~P~~lan" showing the type of development, street system, right-of-way limits, proposed access points, and other features of significance in the Development. The "s~~S~~ite p~~P~~lan" shall also include pertinent "off-site" information such as dimensioning to all existing intersections and driveways with the existing channelization, land use descriptions, street right-of-way limits with respect to

the existing roadway and other features of significance. Exhibit "B" illustrates an example site plan for reference purposes.

☐ A graphical distribution map showing site generated PM peak hour traffic from the latest version of the Thurston Regional Planning Council's Traffic Model. Generally, traffic shall be distributed to one PM peak trip within the Transportation Plan Area. This map shall clearly identify all traffic movements and the percentage of site traffic. Include a copy of an approved link-node map or identify the Traffic Analysis Zone (TAZ) of the generic distribution used. Exhibits "E" and "F" illustrate examples of distribution maps. Exhibit "G" illustrates an example of the link-node map.

☐ Name, address, email address and phone number of project developer and traffic consultant.

☐ If streets or intersections affected are in the neighboring jurisdictions of the City of Olympia, the City of Tumwater, Thurston County, or Washington State Department of Transportation, identify issues that may impact those jurisdictions.

The Scoping Report will be used to develop the scope of work for the Traffic Impact Analysis.

Traffic Scoping Information Worksheet (Include Site Plan)
Project Information

Project Title: _____
Project Description: _____
Parcel Number(s): _____
Trip Generation: _____

Quantity	Units	Land Use Code and Description	Daily Generation Rate	AM Generation Rate	PM Generation Rate	Proposed Pass-by Rate

Total PM Peak Hour Trips:

New PM Peak Hour Trips:

Total AM Peak Hour Trips:

Total Daily Trips:

Year of Occupancy (Horizon Year of Project):

Phasing Plan:

_____

Identify all intersections that are affected by more than 20 new PM Peak Hour Trips: Use additional sheets if necessary.

1. _____ 6. _____
2. _____ 7. _____
3. _____ 8. _____
4. _____ 9. _____
5. _____ 10. _____

Include: Name, address, email address, and phone number ~~and fax number~~ of project developer and traffic consultant. Include site plan showing all existing roadways and driveways.

E. TRAFFIC IMPACT ANALYSIS

The level of detail and scope of work of a TIA may vary with the size, complexity, and location of the "Development". A TIA shall be a thorough review of the immediate and long-range effects of the "Development" on the transportation system.

1. Prospectus

a) Provide a "vVicinity mMap" of the project area showing the transportation system to be impacted by the development. Exhibit "A" illustrates an example of a vicinity map.

b) Provide a ~~reduced~~ copy of the "sSite pPlan" showing the type of development, street system, right-of-way limits, proposed access points, and other features of significance in the Development. The "sSite pPlan" shall also include pertinent "off-site" information such as dimensioning to all existing intersections and driveways with the existing channelization, land use descriptions, and street right-of-way limits with respect to the existing roadway and other features of significance. Exhibit "B" illustrates an example site plan.

c) Discuss specific development characteristics such as type of development proposed (single-family, multi-family, retail, industrial), internal street network, proposed access locations, parking requirements, zoning, and other pertinent factors attributable to the "development".

d) Discuss project completion, phasing plan and occupancy schedule for the "development". Identify horizon years for traffic analysis purposes.

2. Existing Conditions

a) Discuss street characteristics including functional classification, number of traveled lanes, lane width, shoulder treatment, posted speed limit, bicycle path corridors, transit routes, transit accessibility and traffic control at study intersections. An Exhibit may be used to illustrate existing transportation facilities.

b) Identify approved nearby land development (planned or under construction) and associated traffic.

c) Identify safety and access issues including discussions on crash potential, sight distance restrictions, traffic control, and pedestrian conflicts.

d) Obtain all available traffic data from the City of Lacey and surrounding jurisdictions if applicable. If data is unavailable, the individual or firm preparing the TIA shall collect the necessary data to support the discussions and analysis in the TIA.

e) Conduct manual peak hour turning movement counts at study intersections if traffic volume data is more than two~~2~~ years old unless otherwise directed by the Public Works Department. A copy of the reduced data shall be attached to the TIA when submitted.

f) An Exhibit shall be prepared showing existing average daily traffic (ADT) and peak hour traffic volumes on the adjacent streets and intersections in the study area. This Exhibit shall represent the "base-line" traffic volumes for analysis purposes. Complete turning movement volumes shall be illustrated as shown in Exhibits "C" and " D".

3. Development Traffic

This element of the TIA shall be conducted to identify the limits of the study area. The study area shall include all pertinent intersections and streets impacted by development traffic. The limits of the study area shall be representative of the specific conditions outlined in the "Scoping Process". The threshold requirement of development traffic is one vehicle in the peak hour on the adjacent streets and intersections. Each intersection and street impacted as described shall be included in the Plan Area for mitigation or analysis purposes.

4. Trip Generation

The methodology and procedures used in preparing the trip generation and trip distribution elements of the TIA are as follows:

Site-generated traffic from the "Development" shall be estimated using the latest edition of the ITE *Trip Generation Manual*. **Average trip rates shall be used for all land-use categories where applicable.** Trip rate equations will only be allowed for those land-uses without average rates. Table formats for trip generation shall not be interpolated. Generally, the consultant shall use individual rates for mixed-use developments.

Variations from the trip rates will be considered in the "scoping process". The consultant shall submit a letter explaining the reason for the variation and all supporting documentation. Trip generation studies shall follow standard ITE guidelines and shall be statistically valid for approval by the Public Works Department.

Site traffic shall be generated for daily A.M. and P.M. peak hour periods. A "passer-by" traffic volume discount for applicable commercial development shall be calculated based on the *Trip Generation Handbook*, most current edition, published by the Institute of Transportation Engineers (ITE). If a comparable use is not identified in the ITE *Trip Generation Handbook*, an independent study of a minimum three comparable uses shall be used. The comparable sites must be approved by the City. Land uses not identified in the ITE *Trip Generation Handbook* will typically have a "pass-by" rate between 0% and 25% maximum and shall be consistent with similar land uses approved by the City. If a minimum three comparable uses cannot be identified, the developer may use rates previously approved by the City for similar uses if available. "Pass-by" discounts will not be permitted for residential or office developments.

For multi-use and/or "phased" projects, a trip generation table shall be prepared showing proposed land-use, trip rates, and vehicle trips for daily and peak hour periods and appropriate traffic volume discounts if applicable.

5. Trip Distribution

The Trip Distribution shall be based on the Regional Traffic Model approved by the City Public Works Department. A generic trip distribution is available for each Traffic Analysis Zone within the Urban Growth ~~Management~~ Area. Projects that generate more than 250 PM peak hour trips may be required to generate a project specific distribution.

The City Public Works Department shall approve the trip distribution for a "development" during the formal "scoping process".

A graphical distribution map shall be submitted showing site generated PM peak hour traffic. Generally, traffic shall be distributed to one PM peak trip within the Transportation Plan Area if a generic distribution is not used (20 trips if a generic distribution is used). This map shall clearly identify all traffic movements and the percentage of site traffic. Include a copy of the link-node map or identify the Traffic Analysis Zone (TAZ) if the generic distribution is used. Exhibits "C" through "F" illustrate examples of the distribution maps. Exhibit "G" illustrates an example of the link-node map.

6. Future Traffic Conditions

Future traffic volumes shall be estimated by including a 4% annual growth rate to the existing (base-line) traffic volumes and include all traffic generated by anticipated nearby land development (projects with an approved traffic scope) when forecasting future traffic volumes. The future traffic volumes shall be representative of the year the project development shall be completed (horizon year).

The site-generated traffic shall be assigned to the street network in the study area based on the approved trip distribution. The site traffic shall be combined with the forecasted traffic volumes to show the total traffic conditions estimated at development completion. An Exhibit will be required showing daily and peak period turning movement volumes for each traffic study intersection. Exhibit "F" shows an example. In addition, an eExhibit shall be prepared showing the base-line volumes with site-generated traffic added to the street network. This exhibit will represent site-specific traffic impacts to existing conditions.

7. Traffic Operations

The Level of Service (LOS) and capacity analysis shall be conducted for each pertinent intersection in the study area as determined by the Public Works Department. The methodology and procedures for conducting the capacity analysis shall follow the guidelines specified in the current version of the *Highway Capacity Manual-Special Report 209*. The individual or firm preparing the TIA shall calculate the intersection LOS for each of the following conditions:

- Existing peak hour traffic volumes (Exhibit required).

- Future traffic volumes not including site traffic (Exhibit required).
- Future traffic volumes including site traffic (Exhibit required).
- Level of Service results for each traffic volume scenario (Table required).

The Level of Service table shall include LOS results for the key peak periods if applicable. The table shall show LOS conditions with corresponding vehicle delays for signalized intersections and unsignalized intersections. The LOS conditions and average vehicle delay shall be provided for each approach and the intersection as a whole.

If the "development" will be completed in phases, the TIA shall conduct a LOS analysis for each separate development phase. The incremental increases in site traffic from each phase shall be included in the LOS analysis for each succeeding year of development completion. An eExhibit will be required for each horizon year of "phased" development.

The capacity analysis shall be conducted using computer software compatible with the Public Works Department's software package. The individual or firm preparing the TIA shall use the latest version of TEAPAC or Syncro software package, for capacity analysis of signalized intersections. SIDRA or latest version shall be used for analysis of modern roundabouts. Other computer software packages used for capacity analysis applications will not be accepted.

If the "development" impacts a traffic signal coordination system, the Public Works Department may require the TIA to include operational analysis of the system. Timing plans and proposed modifications to the coordination system may be required. The latest version of Passer II, Transyt-7F, or Syncro shall be used depending on the signal system. The Public Works Department will determine the appropriate software on a case-by-case basis.

The capacity analyses for each intersection shall be analyzed using the existing timing and phasing for both existing and future volumes. If the intersection runs free during the analysis period, phasing shall remain the same and existing minimums shall not be violated. All traffic signal system operational data will be made available by the Public Works Department and adjacent jurisdictions if applicable.

Generally, default values identified in the *Highway Capacity Manual-Special Report 209* shall be used in the analysis. The following values shall be used:

- Peak Hour Factor (PHF) shall be calculated for each intersection. At no time shall the PHF be higher than 0.90, regardless of the calculated value.

- Right Turn On Red (RTOR) shall not be used unless the approach has an exclusive right turn lane. If the approach has a right turn lane the maximum value shall be 100 vehicles per hour, unless approved by the Public Works Department.

Include turning movement volumes in the report. The latest City counts shall be used if available. If not, an independent count must be submitted in graphical format similar to the City's format.

An electronic copy ~~disk~~ of the analysis model and a hard copy explanation of the scenarios by filename or line number are required. The computer worksheets that identify the input and output data shall be included in a technical appendix along with an electronic version of the program data of each capacity analysis.

For unsignalized intersections, the *Highway Capacity Manual* methodology shall be used in the analysis. If the intersection or a particular movement fails, a signal warrant analysis shall be completed for the intersection.

8. Access Management

Requests for site access shall be addressed in the Traffic Impact Analysis. Recommendations shall include site access and transportation improvements needed to maintain traffic flow to, from, within, and past the site at an acceptable and safe level of service.

Areas to address include:

- Separate conflict areas. Reduce the number of access points or increase their spacing so conflict areas or maneuver areas do not overlap.

- Limit the type of conflict areas by preventing certain maneuvers.
- Remove turning vehicles or queues from through lanes
- Safety of a proposed access (sight distance both horizontally and vertically), including pedestrian features.
- Reduce the speed differential in through lanes between through vehicles and turning vehicles.
- Consider the impact of access points on adjacent or nearby properties on both sides of the roadway.

Improvements include such things as: relocation, restriction, or elimination of access point; roadway widening; turning lanes; traffic signals; modern roundabouts; and pedestrian facilities.

9. Traffic Calming

Internal traffic calming shall be incorporated into all developments to control cut through traffic and reduce speed within the development. The Traffic Impact Analysis shall identify and propose specific traffic calming measures and locations to be incorporated in the development. Traffic calming shall be aesthetically pleasing. Public transportation shall also be evaluated. The traffic-calming plan shall include an overall drawing of the development and identify specific locations and features to be included in the development. The proponent's Traffic Engineer shall work with the Public Works Department to develop a traffic-calming plan for the development.

Traffic calming measures can include but are not limited to road design (road width and curvature), speed bumps, chicanes, table-top intersections, signage, bulb-outs and traffic circles.

10. Alternate Modes of Transportation

Identify deficiencies in other modes of travel and strategies to encourage these alternate modes. New developments are encouraged to implement Transportation Demand Management practices. An eExhibit should be prepared to identify existing transit routes and stops, bicycle lanes and sidewalks within the vicinity of the development. The TIA~~Traffic Impact Analysis~~ shall identify deficiencies in the system to be mitigated.

11. Mitigation

The TIA~~Traffic Impact Analysis~~ shall include a proposed mitigation plan. The mitigation may be either the construction or financial commitment of the necessary improvements, or contributions to the City for the "development's" proportionate share of the improvements.

The LOS~~Level of Service~~ standards shall be used as the threshold for determining appropriate mitigating measures in the study area. The adopted LOS~~level of service~~ standards are as follows:

1. Lacey Core Area -- LOS E
   The Lacey Core Area is defined as that area bounded by the northerly right-of-way line of Martin Way, the southerly right-of-way line of Lacey Boulevard, the westerly City limit line, and the easterly right-of-way line of Carpenter Road.

2. All areas other than the Lacey Core Area -- LOS D

   The following guidelines shall be used to determine appropriate mitigating measures of traffic impacts generated by the development.

   A. To maintain the adopted LOS~~Level of Service~~ standard, the "development" shall provide a financial guarantee or construct improvements to maintain the LOS~~level of service~~ at or above the adopted standard. This improvement must be consistent with the City's *Transportation Comprehensive Plan* goals and policies.

   B. For affected transportation facilities identified in Lacey Municipal Code 14.21, the "development" will mitigate impacts by providing a proportionate share of the project cost on a per trip basis (LMC 14.21). The mitigation plan shall identify which payment option is proposed for the development. The Public Works Department will calculate the mitigation amount based on an approved distribution.

      Transportation facilities affecting neighboring jurisdictions shall mitigate the impacts based on a per trip methodology approved by the jurisdiction.

   C. On transportation facilities where the existing LOS~~Level of Service~~ condition is less than the adopted LOS standard and where no improvements are programmed to improve capacity

and traffic operations, the "development" shall mitigate the intersection to an acceptable LOS~~Level of Service~~ condition or wait until the improvements are implemented.

If the analysis identifies a LOS deficiency for an unsignalized intersection that is not programmed for an improvement, alternate roadway connections or non-controlled intersection improvements approved by the Public Works Department shall be appropriate mitigating measures. A controlled intersection (traffic signal, modern roundabout) to alleviate a LOS deficiency is not required. If sufficient alternate routes exist as determined by the Public Works Department mitigation will not be required.

If there are no alternatives to installation of a controlled intersection, and three or more traffic signal warrants, as outlined in the ~~MUTCD (~~Manual on Uniform Traffic Control Devices~~)~~ (MUTCD) are satisfied within the horizon year of the development, a traffic signal or modern roundabout will be required as a mitigating measure for the "development".

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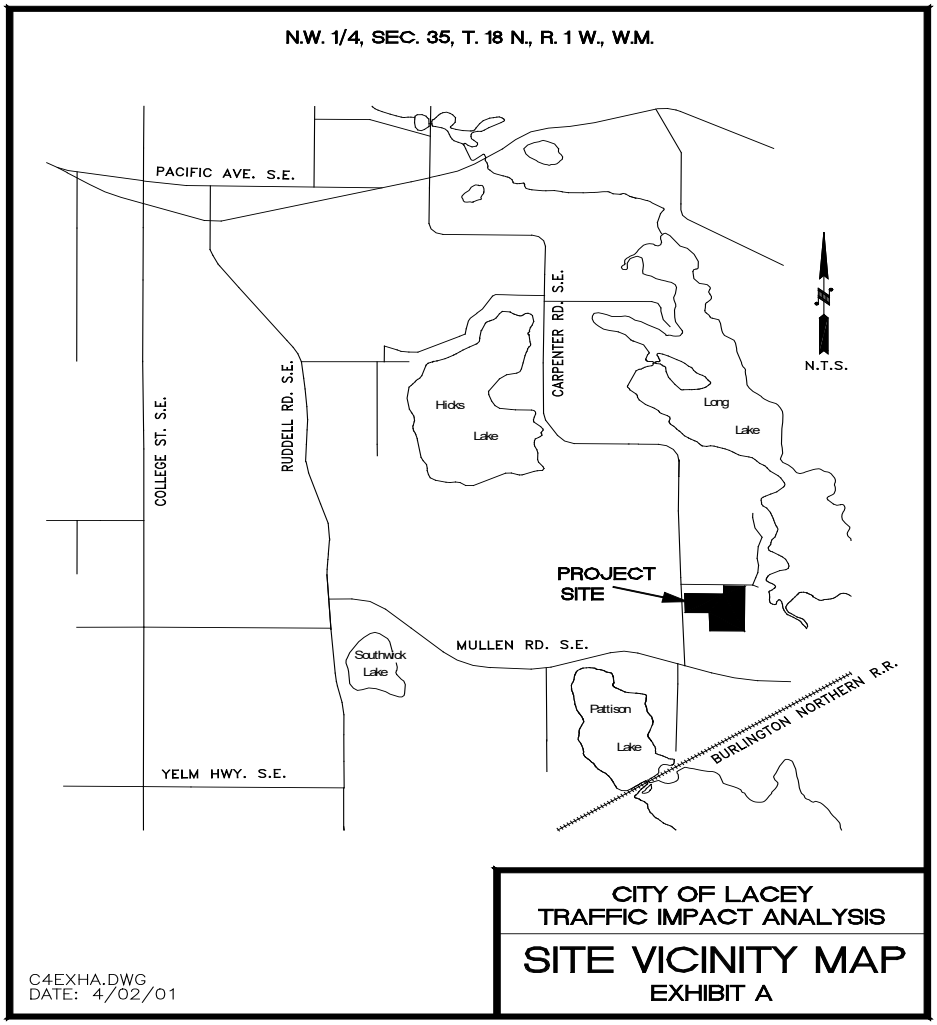
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CARPENTER RD. S.E.
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Lake
Long
Lake
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N.T.S.
PROJECT
SITE
MULLEN RD. S.E.
Southwick
Lake
Pattison
Lake
BURLINGTON NORTHERN R.R.
YELM HWY. S.E.
CITY OF LACEY
TRAFFIC IMPACT ANALYSIS
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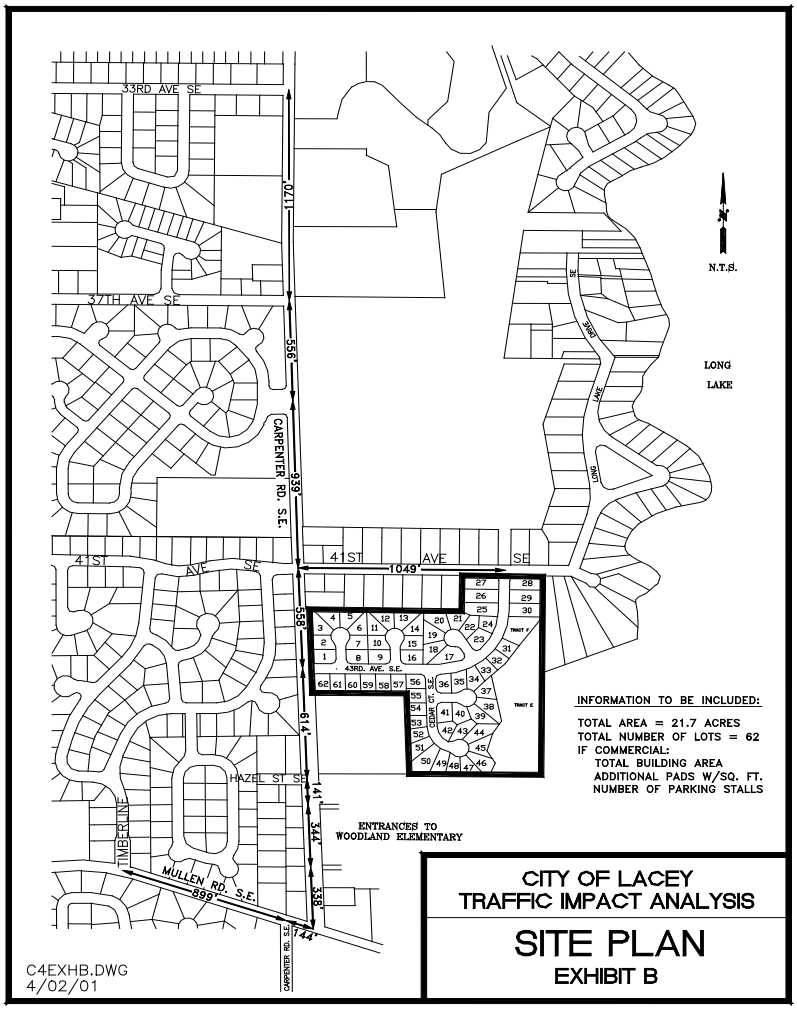
EXHIBIT A
C4EXHA.DWG
DATE: 4/02/01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37TH AVE SE
41ST AVE SE
41ST AVE SE
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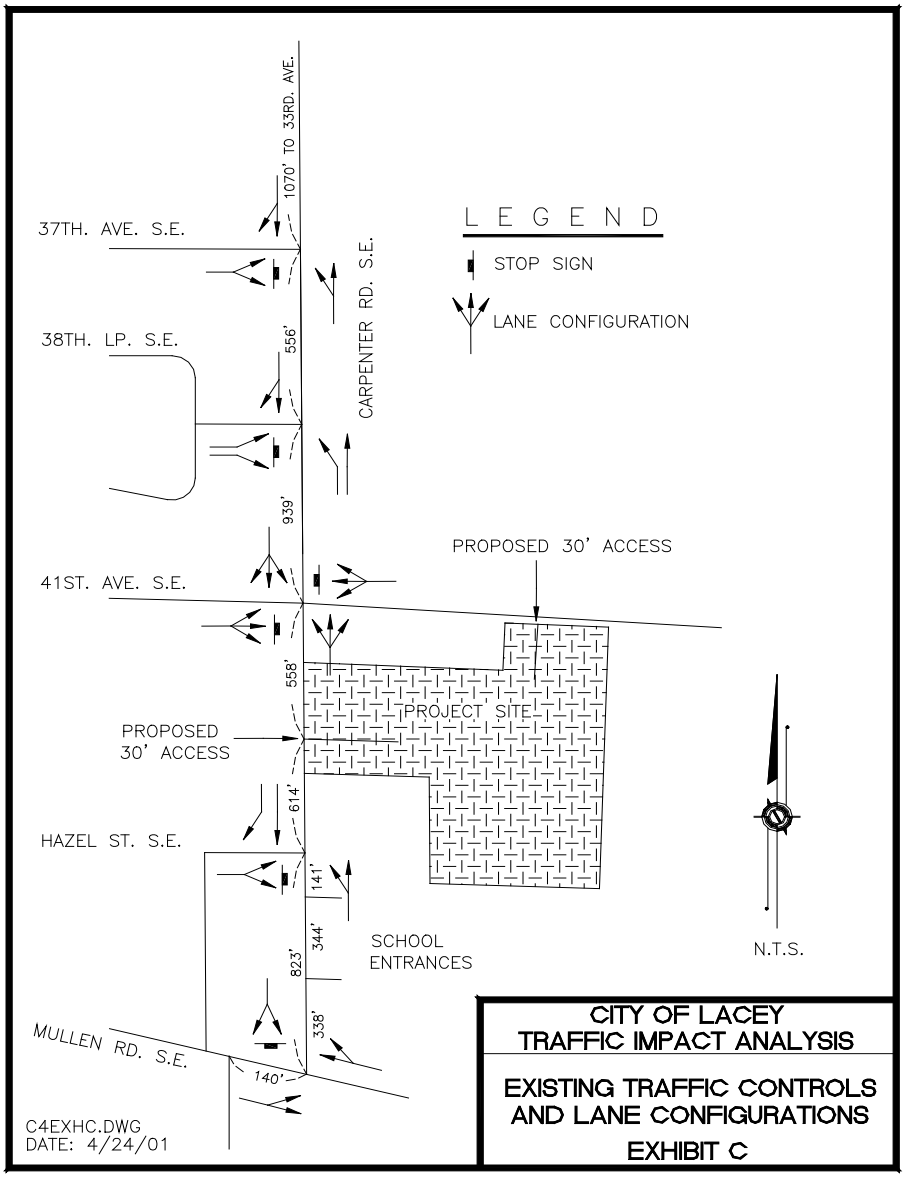
141'
344'
338'
744'
MULLEN RD. S.E.
899'
HAZEL ST SE
TIMBERLINE
43RD. AVE. S.E.
ENTRANCES TO
WOODLAND ELEMENTARY
N.T.S.
LONG
LAKE
INFORMATION TO BE INCLUDED:
TOTAL AREA = 21.7 ACRES
TOTAL NUMBER OF LOTS = 62
IF COMMERCIAL:
TOTAL BUILDING AREA
ADDITIONAL PADS W/SQ. FT.
NUMBER OF PARKING STALLS
CITY OF LACEY
TRAFFIC IMPACT ANALYSIS
SITE PLAN
EXHIBIT B
C4EXHB.DWG
4/02/01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37TH. AVE. S.E.
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PROPOSED 30' ACCESS
558'
PROJECT SITE
PROPOSED
30' ACCESS
614'
HAZEL ST. S.E.
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344'
823'
SCHOOL
ENTRANCES
338'
MULLEN RD. S.E.
140'
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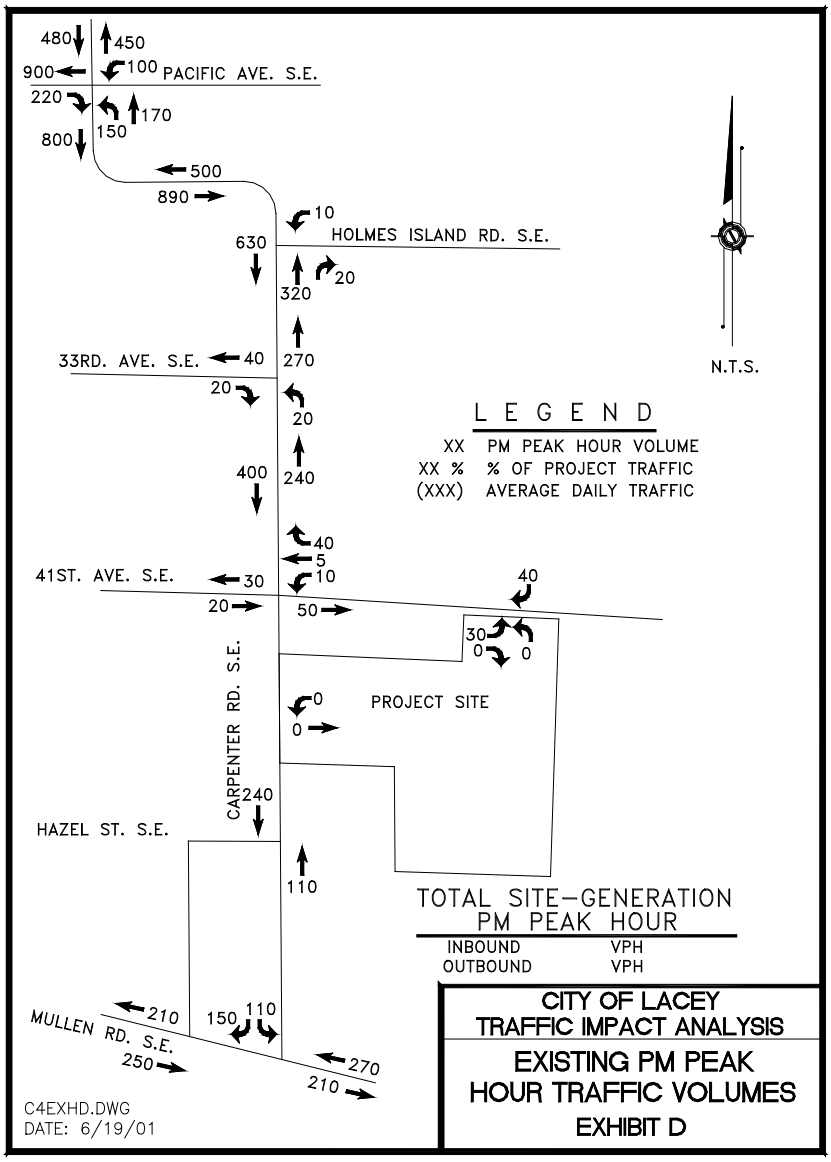
DATE: 4/24/01
L E G E N D
STOP SIGN
LANE CONFIGURATION
N.T.S.
CITY OF LACEY
TRAFFIC IMPACT ANALYSIS
EXISTING TRAFFIC CONTROLS
AND LANE CONFIGURATIONS
EXHIBIT C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20
33RD. AVE. S.E.
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270
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CARPENTER RD. S.E.
PROJECT SITE
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0
240
HAZEL ST. S.E.
110
TOTAL SITE-GENERATION
PM PEAK HOUR
INBOUND VPH
OUTBOUND VPH
210
150
110
MULLEN RD. S.E.
250
270
210
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CITY OF LACEY
TRAFFIC IMPACT ANALYSIS
EXISTING PM PEAK
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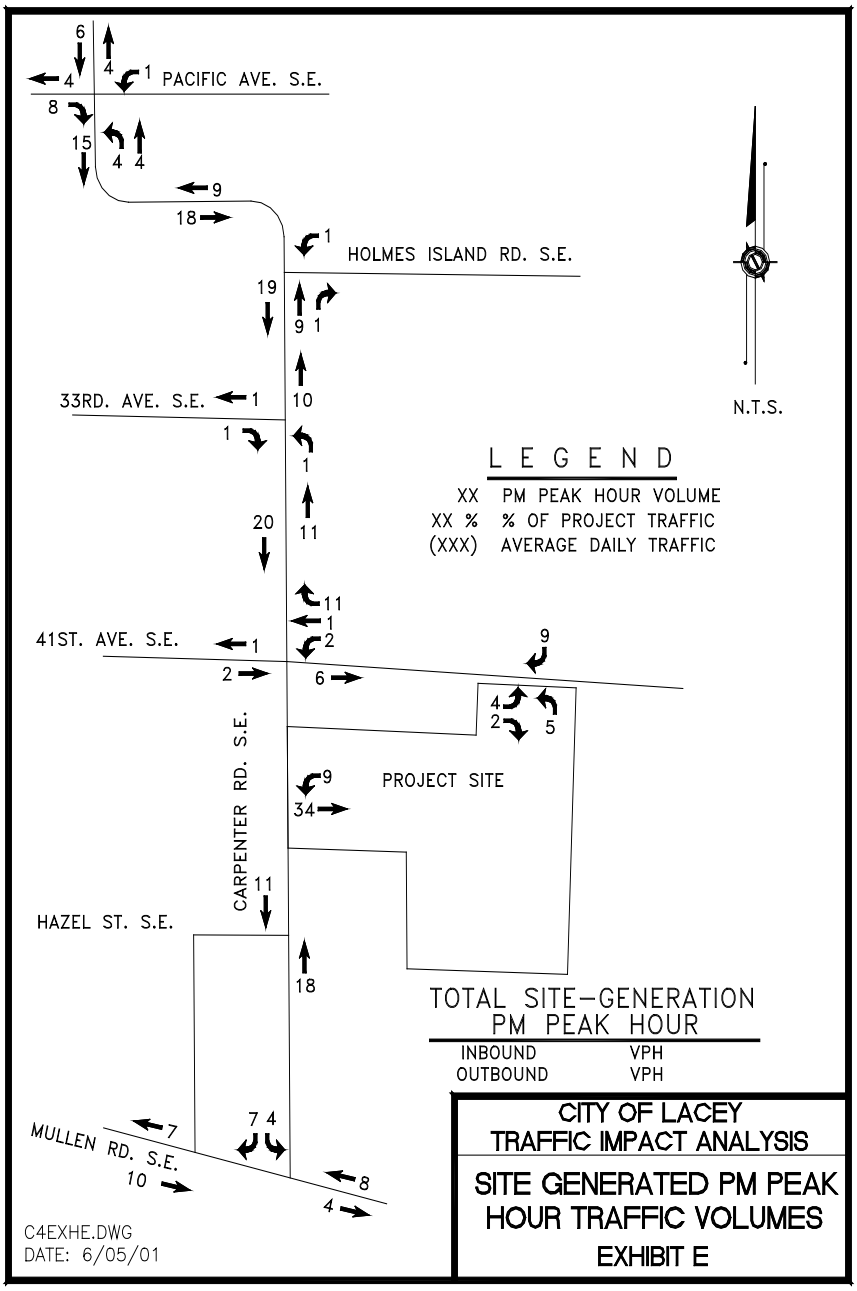
EXHIBIT D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MULLEN RD. S.E.
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TOTAL SITE-GENERATION
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OUTBOUND VPH
CITY OF LACEY
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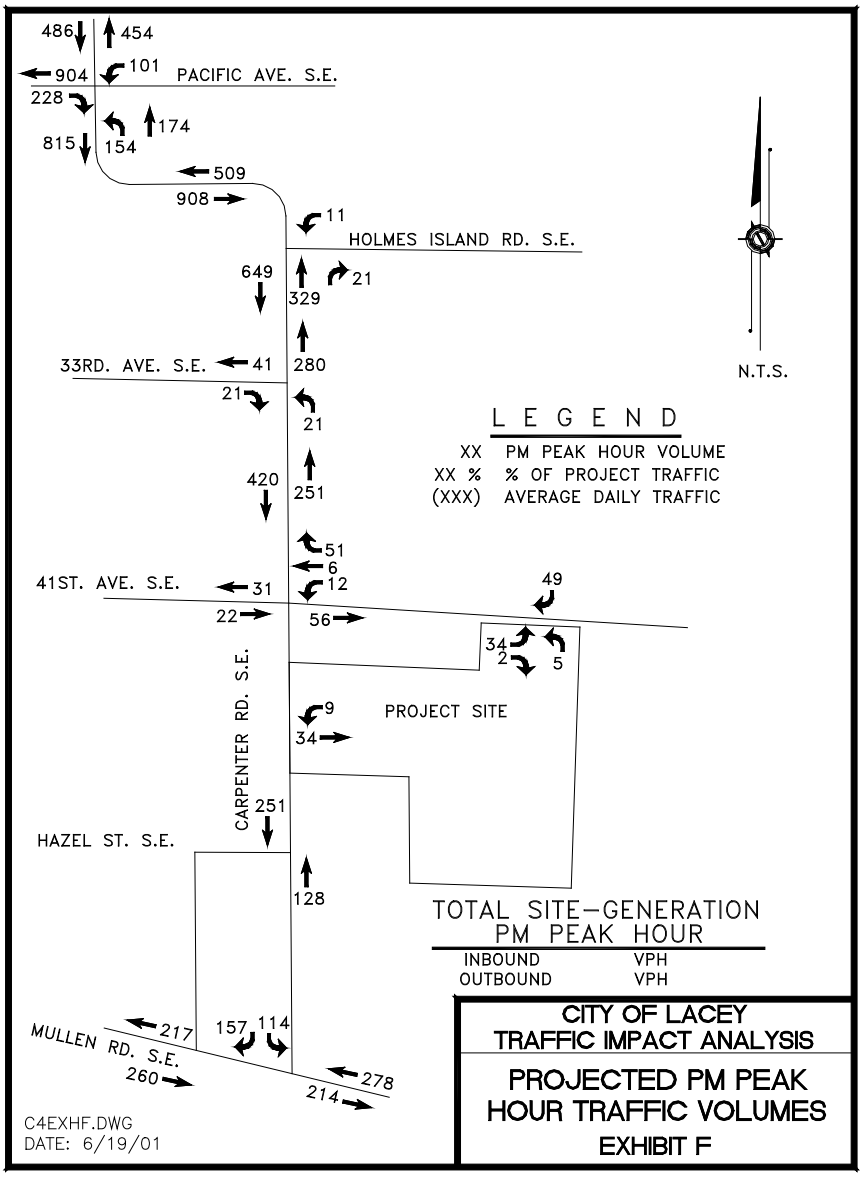
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420
251
51
6
41ST. AVE. S.E.
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12
49
22
56
34
2
5
CARPENTER RD. S.E.
9
PROJECT SITE
34
251
HAZEL ST. S.E.
128
MULLEN RD. S.E.
217
157
114
260
278
214
N.T.S.
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TOTAL SITE-GENERATION
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CITY OF LACEY
TRAFFIC IMPACT ANALYSIS
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HOUR TRAFFIC VOLUMES
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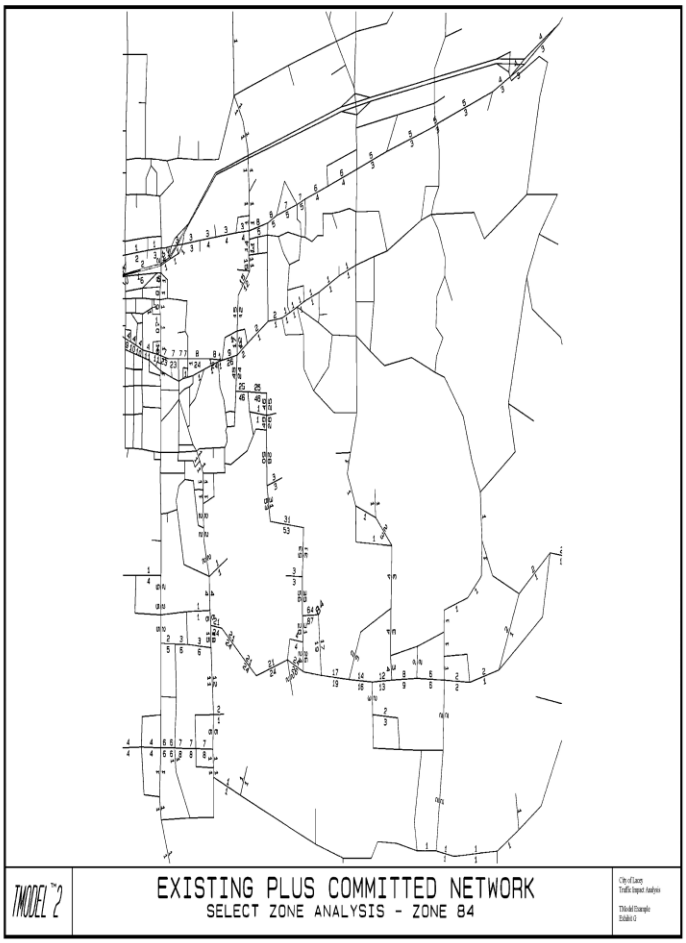
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EXISTING PLUS COMMITTED NETWORK
SELECT ZONE ANALYSIS - ZONE 84

4B.040 Naming

Commented [TS3]: This information is redundant, it currently is located within the L.M.C.

~~Streets and roads shall be named according to specific criteria:.~~

~~Street names shall be limited to 12 characters including spaces but excluding the roadway designation and quadrant (SE, NE).~~

~~All streets lying north of Martin Way are designated northeast (NE). The remainder of the streets in the City are designated southeast (SE).~~

~~"Avenues" run east west and are numbered, with the exception of certain long standing historical names.~~

~~"Streets" run north-south and are named.~~

~~"Drives" are irregular or diagonal streets over two grid blocks in length not conforming to the grid pattern.~~

~~"Roads" shall be a lengthy irregular or diagonal arterial over ten grid blocks in length.~~

~~"Boulevards" and "Parkways" may run north, south, east and west, or diagonally and shall be named. "Boulevards" and "Parkways" shall be functionally classed as a major collector or an arterial and shall contain a landscaped median.~~

~~"Places" shall be a north-south street, parallel to, but between streets and shall carry the name of the street immediately to the west.~~

~~"Ways" shall be an east-west street, parallel to, and between avenues and shall carry the name of the street immediately to the north.~~

~~"Courts" shall be a cul-de-sac which cannot be extended. Courts are to be named or numbered and carry the number of the preceding street or avenue.~~

~~"Loops" shall be small loop-type streets to carry the name of the street from which they originate.~~

~~"Lanes" shall be private streets. (LMC 12.04.040)~~

~~Exemptions to street name convention may be allowed with the approval of the City.~~

~~An address number will be assigned to all new buildings at the time of land use approval final plat, Site Plan Review, or at the time ofthe building permit issuance. issued. It is the owner's responsibility to see that the house numbers are placed clearly and visibly at the main~~

~~entrance to the property or at the principal place of ingress. (LMC 12.04.080)~~

~~The developer must check with the Building Official regarding the naming of streets.~~ New street names shall be coordinated with the City of Lacey Building Official during land use approval. ~~This should be done at the time the subdivision is submitted and again upon approval of the subdivision.~~ The Building Official will e~~i~~nsure the name assigned to a new street is consistent with policies of the City. (LMC 12.04.070)

4B.050 Signing

The developer or contractor is responsible for providing, installing, and maintaining all construction signs and temporary traffic control devices. These shall comply with the provisions as established by the US Department of Transportation ~~*Manual on Uniform Traffic Control Devices* (~~MUTCD~~)~~ and the *WSDOT/APWA Standard Plans For Road, Bridge and Municipal Construction*.

Street signs for public and private roadways, including poles and hardware, will be paid for by the developer but will be approved, furnished and installed by the City to establish uniformity. A written request must be submitted to the City Public Works Department at the time street construction begins and the developer will be billed upon completion.

All regulatory signs shall be high intensity reflectiveness grade. Street designation signs shall display street names and district destinations. (LMC 12.04.060) Street signs shall be U.S. Department of Transportation font series "B" meeting MUTCD standards.

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When shortening roadway designations, the street suffixes shall meet U.S. Postal Service standards as shown in the following table.

Roadway Designation	USPS Approved Suffix
Avenue	AVE
Boulevard	BLVD
Court	CT
Drive	DR
Lane	LN
Loop	LOOP
Parkway	PKY
Place	PL
Road	RD
Street	ST
Way	WAY

4B.060 Right-of-Way

Right-of-way dedication shall be a condition of land use approval.~~dedicated for a subdivision, short subdivision, binding site plan, for a project that triggers Site Plan Review or for a conditional use permit.~~ The requirement to dedicate right-of-way shall be determined by the City or Regional Transportation Plans, by a Traffic Impact Analysis, or as determined by Public Works. Although a right-of-way dedication may be required, frontage improvements may be deferred per chapter 4B.080 of the Development Guidelines.

Regardless of the frontage improvement requirements, right-of-way shall be dedicated in accordance with appropriate street standard identified in the Transportation Comprehensive Plan. Right-of-way dedication shall occur prior to civil plan approval or building permit issuance.

In order to construct improvements in the future, the City requires the right to make and maintain slopes for cuts or fills upon the property adjacent to the right-of-way being dedicated. This is necessary that streets may be graded to the proposed grade level in a reasonable and proper manner. This language shall be included within the right-of-way dedication deed.

Right-of-way is determined by the functional classification of a street. See details at the end of this chapter for specific right-of-way widths.

See 4B.090 for radius requirements at cul-de-sac "bulb". Right-of-way at "bulb" shall be increased accordingly.

Right-of-way requirements may be modified to accommodate~~increased if~~ additional lanes, pockets, intersection treatments, transit lanes, bus loading zones, bus shelters, operational speed, bike lanes, meandering sidewalks, tree retention, utilities, schools or future planned improvements are required as determined by the Director of Public Works. The right-of-way boundaries at intersections shall be sufficient to contain all portions of the sidewalk, curb ramps, all signal and lighting appurtenances, and any other appurtenance associated with a public utility.

Right-of-way shall be conveyed to the City on a recorded subdivision or by a right-of-way dedication deed. If the dedication is by deed, the deed shall be submitted and approved prior to civil plan approval or building permit issuance.
~~before construction begins; before a building permit is issued; before a tenant improvement is issued; or prior to certificate of occupancy, whichever comes first.~~

When right-of-way is conveyed to the City by plat or by dedication deed, the right-of-way centerline or other appropriate control line shall be monumented by a Washington licensed Professional Land Surveyor. A monumentation plan shall be submitted to the Public Works Survey Division for approval prior to placement of the monument positions. See Appendix B for examples of acceptable right-of-way dedication deeds.

4B.065 Buffers

All residential projects, whether single or multi-family, which abut a boulevard, an arterial, or any class collector street shall be required to establish a buffer from such streets. The buffer must be a separate tract of land, 20 feet in width, within the subdivision and is to be maintained by the homeowners association or individual property owners.

The buffer shall be landscaped including trees, shrubs, and ground cover contiguously, up to the back of the sidewalk whether or not the sidewalk is within or contiguous to the buffer strip. Stormwater facilities may be located within the buffer area. An irrigation system must be installed to support the required landscaping. Existing native vegetation may be used if approved by Community Development. If native vegetation is utilized, an irrigation system will not be required.

A masonry, wood or other approved solid type fence must be installed behind the buffer. The buffer is to be located on the street side of the fence.

The lots within the subdivision may go right up to the inside of the fence. The setback for the buildings on these lots is measured from their property line and does not include the buffer.

The Site Plan Review committee may delete, revise, or modify buffers as necessary to accommodate zoning or site specific conditions.

4B.070 Private Streets

A private street provides vehicular access to serve property that is privately owned and maintained.

A. Private streets may be allowed to serve the following types of properties:

1. No more than nine lots (short subdivision).

2. A planned residential development (PRD). PRDs may have public or private roadways.

3. A gated community. Gated communities must meet the criteria outlined below and specified in 4B.075.

4. Businesses or multiple dwelling units situated on one parcel. The residential private street standard is not required for apartment or condominium complexes. Also, the private street standard for commercial and industrial applications may be modified by the Site Plan Review committee to accommodate site and use specific conditions.

Private street standards are not to be applied in subdivisions greater than nine lots to avoid the use of public streets.

B. Private streets must meet all of the following conditions:

1. Private streets will be permanently established by tract or easement which provides legal access to serve private property and includes provisions for future use by adjacent property owners when applicable.

2. Private residential streets will have a minimum roadway standard of a major or minor local residential street. See Chapter 4B.030 for more information on functional classes of residential streets. See Details for typical roadway sections.

3. Private streets will be accessible at all times for emergency and public service vehicle use.

4. Private streets will not landlock present or future parcels nor obstruct public street circulation. If there is the ability for a

future roadway connection, a private street will not be allowed.

5. Covenants will be verified and approved by the City and recorded with the county. The owner or homeowners association or other legal entity's covenants will specifically provide for maintenance of private streets and associated parking areas.

6. The design and construction of sidewalks along private streets shall meet all applicable standards as for sidewalks along public roadways as specified in Chapter 4C.030.

C. Access, Structural Road Section, and Redevelopment

Driveway cuts may be used for access from public roadways onto private streets. See Chapter 4B.140, Driveways, for more information.

New structural roadway sections must meet current standards per Chapter 4B.160. The developer is responsible for roadway testing per Chapter 4B.200.

Private streets located on parcels being redeveloped may continue to exist as private streets if they meet the criteria outlined in Chapter 4B.070.B above.

D. Private Street Lighting

Short subdivisions of 4 lots or less are not required to provide internal street lighting. However, a street light may be required at the intersection with the public street as determined by the Public Works Department. An intersection street light, if required, shall meet the same standards as public street lighting.

On private streets in a subdivision of 5 lots or more, street lighting shall be required. The average maintained horizontal illumination coverage shall be the same as specified in Chapter 4E.020 for a residential street. Lighting on private streets shall remain private and shall be the homeowner's association's or other legal entity's responsibility to operate and maintain.

E. Acceptance as Public Streets.

Acceptance of private streets as public streets will be considered only if the street(s) meet all applicable public street and utility standards.

F. Private Street Exemption.

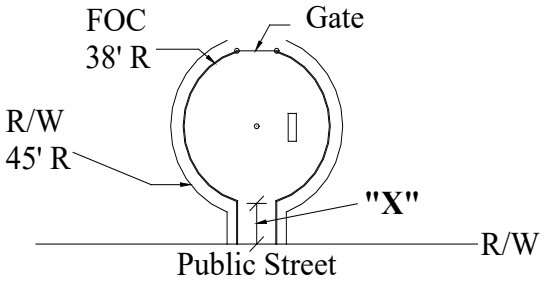
Under unusual circumstances the Site Plan Review Committee may relieve short subdivisions of 9 lots or less from some or all private street standards. At the time of preliminary short subdivision approval, the Site Plan Review Committee shall determine appropriate improvements. Each site will be reviewed in conjunction with adjacent properties and existing and potential future improvements.

A private street is not required for short plats of 2 lots or fewer.

4B.075 Gated Residential Access

Gates to neighborhoods or gated communities shall be allowed only on private streets. Private streets shall meet all the conditions as set forth in Chapter 4B.070. In addition, the following conditions shall apply:

A. A minimum stacking distance as depicted by the drawing and shown in the table below shall be required.



For Site Plan Review Projects

Intersecting Public Street Classification	**"X" Distance**
Arterial Boulevard and Arterial	If only one access use 5 feet per PM peak hour trip. Minimum "x" distance shall be 100.
Major and Minor Collector	1 foot per PM peak hour trip. Minimum "x" distance shall be 20 feet.
Major and Minor Local Residential and private	0.5 foot per PM peak hour trip. Minimum "x" distance shall be 10 feet.

B. A turn around shall be provided on the public right-of-way side of the gate. See example above.

C. Mailboxes meeting U.S. Postal standards shall be located on the public side of the gate. See Chapter 4G.070.

D. Gates shall be equipped with an emergency preemption system capable of operating from the public side of the gate to facilitate immediate entry of

emergency vehicles into the development. Such system shall be a priority control system employing data-encoded infrared communication to identify the emergency response vehicle. The type of system shall be compatible with the traffic signal priority control system used by the City. This system must be maintained in proper working order by the owners of the development or the proper homeowners or business owner's association, whichever shall be the case. LMC 14.17.020. A copy of the access key, code, or combination shall be provided to the City to facilitate access by the Water/Wastewater Departments.

4B.076 Gated Commercial Access

Gated access to commercial or industrial projects shall follow the standards as set forth in 4B.075 except, a cul-de-sac is not required. The stacking distance shall be based on vehicle length, access street classification, and entering volumes in the PM peak hour. A Traffic Impact Analysis shall be used to determine an appropriate stacking distance.

4B.080 Street Frontage Improvements

A. All commercial and residential (including multi-family) development, subdivisions, short subdivisions and binding site plans shall install street frontage improvements at the time of construction as required by the Department of Public Works. Projects within the City limits or outside of the City limits and within the City of Lacey's UGA boundary, shall install frontage improvements per this Chapter regardless of whether the City is the water or sewer purveyor.

For new proposals, if Site Plan Review approval is necessary, frontage improvements shall be required. If an existing use is being altered or improved, frontage improvements shall be required if the project meets all of the following conditions:

1. The project requires binding site plan, conditional use permit, ~~or~~ SPR, or other land use approval per LMC 16.84, and,

2. The site has more than 100 feet of total frontage, and,

3. The project meets the threshold requirements as determined by all applicable LMCs.

Regardless of frontage improvements being required, right-of-way shall be dedicated in accordance with appropriate street standard identified in the Transportation Comprehensive Plan.

Per the Site Plan Review approval, such improvements include but are not limited to: curb and gutter; sidewalk; roadway; street storm drainage; street lighting system; holiday lighting features; traffic signal modification, utility conduit, traffic control devices, signal interconnect, relocation or installation; public transit amenities; street signing; utility relocation; planter strips; landscaping and irrigation; and street widening all per these Standards. Plans shall be prepared and signed by a licensed civil engineer registered in the State of Washington.

B. All frontage improvements shall be made across full frontage of property from centerline to right-of-way line. Widening and/or overlays shall have a minimum new pavement width of one lane to the centerline of a 2-lane road or

to the lane line of a multi-laned road. Off project site frontage improvements may be required if determined by the City for public safety.

C. Utility relocations shall follow the requirements as outlined in Chapter 3.100, Utility Locations, in these Guidelines.

D. If contiguous properties are under the same ownership, frontage improvements shall be required if the project meets all of the following conditions:

1. The project requires binding site plan, conditional use permit, ~~or~~ SPR, or other land use approval per LMC 16.84, and,

2. The contiguous sites have more than 100 lineal feet of combined frontage, and,

3. The project meets the threshold requirements as determined by all applicable LMCs.

E. Exceptions. When the Director of Public Works deems the above such improvements cannot be accomplished, frontage improvements may be deferred, modified or waived. These exceptions shall be made a condition of Site Plan Review Approval or as a condition of subdivision, short subdivision, binding site plan, and conditional use permit approval.

Improvements may be deferred by signing a Waiver of Protest for a Local Improvement District (L.I.D.); by signing a Deferral of Frontage Improvements Agreement; or by paying a fee in lieu of constructing the improvements. If a fee in lieu of is paid, it shall be based on the engineer's estimate and the City will be responsible for constructing said facilities at a later date.

If the frontage improvements are deferred, all necessary right-of-way must be dedicated as a condition of approval. If additional right-of-way is required and the side slopes exceed 7:1 slope, then a 10 foot slope easement shall also be required to facilitate construction of future improvements. Methods of deferral, and components thereof, must be in place, signed, collected, and/or processed prior to the project scheduling a preconstruction meeting.

4B.090 Cul-de-sac

Streets designed to have one end permanently closed shall typically be no longer than 400 feet as measured from the intersecting right-of-way line extended, to the center of the cul-de-sac. At the closed end, there shall be a widened "bulb" having a minimum paved traveled radius as shown in the Minimum Street Design Standards Table. See Chapter 4B.100 for dead end requirements. (LMC 15.10.020)

With the exception of cases where geographical, topographic or environmental conditions preclude interconnection, cul-de-sacs shall be discouraged. When these

conditions preclude street connections, continuous non-vehicular connections shall be attempted. Cul-de-sacs may be allowed with the approval of the Director of Public Works.

Cul-de-sacs shall be required for short subdivisions bordered on 3 sides by properties developed to their maximum use.

Dead ends or a shared access may be required for subdivisions where the potential for future connectivity exists due to the proximity of underdeveloped properties.

Cul-de-sacs shall be sloped at a minimum 2% from center-to-edge to facilitate drainage.

4B.100 Dead End Roadways

Where a street is temporarily dead ended, turn around provisions and a red and white barricade the full width of the roadway must be provided where the road serves more than one lot (see details). Hammerheads will not be allowed on a dead end in a residential area. Hammerheads may be allowed in commercial or industrial areas. Permanent dead ends shall be properly signed per section 3C-4 of the MUTCD.

At the end of a sidewalk to be extended in the future if there is a slope greater than 4 percent, a red and white type II barricade the full width of a sidewalk is required. See Chapter 4C.030 (G) for interim requirements at a dead-end sidewalk.

4B.110 Half Street

A half street is an otherwise acceptable roadway section modified to conform to limited right-of-way on the boundary of property subject to development. See definition in Chapter 3.025. (LMC 15.10.020)

A. A half street may be permitted subject to approval by the Director of Public Works when:

1. Right-of-way from the adjoining property suitable for future completion of a full-section roadway must be obtained prior to considering a half street improvement, and

2. Such alignment is consistent with or will establish a circulation pattern, and

3. The right-of-way width of the half street is not less than one-half of the proposed total width of the right-of-way and may be required to be greater than one-half the total proposed width to accommodate adequate driving lanes until the other half of the street is constructed , and

4. The traveled way shall be surfaced the same as the designated street classification, and

5. The half street shall be graded consistent with the centerline of the ultimate roadway section on the property line, and

6. The roadway section meets the ultimate roadway section and all applicable stormwater requirements, and

7. Property line edge of street shall be finished with permanent curb and gutter to insure proper drainage, bank stability and traffic safety.

4B.115 Fire Access Roads

This chapter applies to Fire Access Roads outside of the public right-of-way. Fire Department access roads shall be designed and installed per the most current adopted edition of the Fire Code as adopted and amended by the Lacey Municipal Code.

4B.125 Landscape/Planter Areas

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Landscape and planter area widths shall be as shown on details at the end of this chapter. Landscaping methods shall be in compliance with section 8-02 of the *WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction.*

Landscape and planter areas shall be prepared in the following order: scarify the native soil; install the root barriers; install the irrigation system; add the topsoil; install the landscaping; add a top-dressing if applicable. See Chapter 6.210 for irrigation system requirements.

Excavate the area to be landscaped to the depth below finished grade as shown in the table below. Scarify or aerate the subgrade by tilling, disking, harrowing, or other method as approved by the City. Fracture and incorporate glacial till or other hardpans within 4 feet of the top of the finished grade. Remove debris and stones from the surface that are larger than 1 inch in any dimension. Backfill the excavated area with topsoil to the depth shown in the table below. (Work on Language) Remove all rocks, sticks, and other debris 1 inch and larger. The finished grade of topsoil at the curb shall be 1 inch below the top of curb.

	Initial Excavation Depth	**Topsoil Depth**
Medians and Islands	19 inch	18 inch
Perennial Planter Strip	13 inch	12 inch
Grass/Lawn		

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Planter Strip	7 inch	6 inch

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See Chapter 4G.100, Street Trees, for specific information on tree species, size, location, and spacing. Trees located in tree wells shall be installed per detail.

Trees located in planter strips, medians, or islands shall be installed per detail and placed in pits prepared as follows. Excavate pits 12 inches **deeper and three times the diameter** of the rootball. Thoroughly scarify the bottom of the pit by shovel cutting to a depth of 12 inches. Shovel cut pit sides to help root penetration. Only non-amended, native soil shall be used immediately below the rootball for purposes of establishing plant depth. After the proper depth of the plant material has been established, place the rootball in the center of the hole flush 1 to 2 inches above the finished grade. Release the root covering; spread roots to a natural spread and distribution. Backfill, working the soil around the roots, with topsoil. Firm the backfilled soils to eliminate air pockets (do not compact) the backfill and provide a slight depression and watering saucer. Take care to not injure the root system while backfilling.

Topsoil

Topsoil shall be composed of sandy loam, loam, or loamy sand mixed with composted organic materials. The topsoil shall be 70 percent topsoil and 30 percent composted materials by volume and shall be thoroughly mixed. A soil test shall be provided for all topsoil imported to the site.

The compost shall be a weed free, well decomposed, humus-like material derived from the decomposition of grass clippings, leaves, branches, wood and other organic materials. Composts containing shavings, cedar sawdust, or straw will not be permitted. Compost shall be produced at a permitted solid waste composting facility.

All medians shall have a one foot concrete safety landing adjacent to the curbing (all sides) to aid in maintenance of the median.

Maintenance

The property owner, lessee, homeowner's or lot owner's association will be responsible for mowing, weeding, watering, tree replacement (replaced due to death, damage or disease after approval by a City representative) and tree maintenance within the respective right-of-way and common areas. See Chapter 6.210 for installation and maintenance of irrigation systems.

4B.126 Traffic Control

The contractor shall be responsible for all traffic control in accordance with the ~~*WSDOT/APWA Standard "K" Plans for Road, Bridge and Municipal Construction, and the*~~ *Manual on Uniform Traffic Control Devices* (MUTCD). Prior to the disruption of any traffic, a traffic control plan shall be prepared and submitted to the City for approval.

At no time shall a roadway be blocked without the approval of the Director of Public Works. No work shall commence until the City has approved the plan and the traffic control is in place.

There shall be no restrictions or interruptions to traffic on Saturdays, Sundays, or Holidays. In addition, there shall be no restrictions or interruptions to traffic after 12:00 noon on the day prior to a holiday or holiday weekend unless approved by the Director of Public Works.

There shall be no restrictions or interruptions to traffic on arterial roadways during the peak traffic hours of 7:00 a.m. to 9:00 a.m. and from 3:30 p.m. to 6:00 p.m., Monday through Friday, except when deemed necessary by the City. If the City determines the peak hours differ from those specified, the contractor will be required to adjust his working hours accordingly.

No work shall be allowed in or adjacent to a residential zone between the hours of 9:00 p.m. and 7:00 a.m. A waiver to this ordinance will not be allowed except in the case of an emergency or where operations are necessary during such hours in order to promote the safety of the traveling public (Ordinance 837).

The City may require roadway work to commence at night when it is in the best interest of the public. Costs for these inspections shall be the responsibility of the developer or utility.

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Two-way traffic shall be maintained at all times unless specifically approved in the traffic control plan. Flaggers shall be shown on the traffic control plan except for emergency situations. The developer is responsible for traffic control signing per Chapter 4B.050, Signing.

All lane restrictions shall be held to a minimum time and length. Lane closures shall comply with the traffic control plans, these specifications, the *MUTCD*, and the *WSDOT Standard Plans*. If the City determines that lane restrictions are causing congestion, the contractor will be required to open any lanes, as determined by the City, until the congestion is eliminated.

There shall be no delay to school buses, U.S. Postal Service or medical, fire, police, and other emergency vehicles with flashing lights or sirens.

The contractor shall maintain pedestrian access through or around the project site at all times without having pedestrians enter the travel lane.

Flaggers shall possess a current flagging card issued by the State of Washington prior to performing any traffic control work on a project. Workers engaged in flagging shall wear reflective clothing and hard hats in accordance with the *WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction*. Flagger's paddles shall meet MUTCD standards.

4B.130 Intersections

An intersection may be any access point, whether a public street or a public or private driveway, onto a public street. See Chapter 4B.025 for Access Management criteria and 4B.030 for intersections as they relate to Functional Classification. See Chapter 4B.140 for driveway access issues. See Chapter 4B.150 for sight obstruction criteria.

A. Street intersections shall be laid out so as to intersect as nearly as possible at right angles. All intersections shall be designed so as not to create a safety problem. Sharp angled intersections shall be avoided. If through traffic is not desired on the minor legs, a "T" intersection (three-legged) is preferable to the crossroad (four-legged) intersection. For safe design, the following types of intersection features shall be avoided unless approved by the City Traffic Engineer:

   1. Intersections with more than four intersecting streets;

   2. "Y" type intersections where streets meet at acute angles;

   3. Intersections adjacent to bridges and other sight obstructions.

B. On sloping approaches at an intersection, landings shall be provided with grade not to exceed 3 percent slope for a distance of 30 feet approaching any arterial or 20 feet approaching a collector or local access street, measured from nearest right-of-way line (extended) of the intersecting street.

4B.140 Driveways

A driveway is defined as an access from a public or private right-of-way or access easement onto private property whether constructed as a curb cut or a curb return. See Chapter

4B.145 Access ~~M~~management for additional access information and spacing requirements.

Details of driveway sections are located at the end of this Chapter. All abandoned driveway areas along the frontage of redeveloped property shall be removed and the curbing, planter strip, sidewalk; or shoulder and ditch section shall be properly restored. All driveway approaches shall be constructed of Commercial Concrete and shall be subject to the same testing and inspection requirements as curb, gutter, and sidewalk construction.

Joint-use driveways serving two adjacent parcels are encouraged whenever feasible. A joint-use driveway serving two adjacent parcels is required if contiguous property is under the same ownership. An easement and a maintenance agreement shall be recorded for both parcels specifying maintenance and joint usage in perpetuity.

A. Residential Driveways

Residential driveways shall be those driveways constructed on private property to serve a single-family residential structure or a duplex. Residential driveways shall always be constructed as a driveway cut through the sidewalk. Formed curb returns for residential driveways shall not be permitted.

1. Residential access to a public street shall be limited to one driveway for each tract of property separately owned.

2. In new construction, residential driveways shall not be permitted to access arterials, major collectors, or minor collectors unless the property has no other reasonable access to the general street system.

3. If an existing residential parcel abuts an arterial, major collector, or minor collector, no residential access shall be allowed to those streets within 150 feet of the nearest right-of-way line of an intersecting street. The driveway shall access the roadway with the lower functional classification.

4. All residential driveway accesses shall meet the sight distance requirements of Chapter 4B.150.

5. The maximum residential driveway width onto an arterial or collector shall be 24 feet. The maximum residential driveway width onto any other roadway classification shall be 20 feet.

6. The minimum driveway length shall be 20 feet from the residential structure to the back of walk.

7. Grade breaks, including the tie to the roadway, shall be constructed as smooth vertical curves. The maximum change in driveway grade shall be 8 percent within any 10 feet of distance on a crest and 12 percent within any 10 feet of distance in a sag vertical curve.

If the above standards cannot be met, the proponent will have to hire a traffic engineer to design the most appropriate access with safety being the primary design criteria.

B. Public Driveways

Public Driveways shall be those driveways constructed on private property to serve commercial, industrial, and multi-family projects. For the purpose of this Chapter, private streets serving single-family residential units are also considered a public driveway. Also see the private street standards in Chapter 4B.070.

Public driveways shall be curb cuts. A traffic engineer shall design public driveways with safety being the primary design criteria. The City Traffic Engineer shall determine if a formed curb and gutter will be allowed based on the vehicle type, ADA requirements, the use, the roadway it is accessing, and the Traffic Impact Analysis. Private streets constructed as part of a Planned Residential Development (PRD) shall meet the private street standards in Chapter 4B.070. The following criteria shall apply to all Public Driveways.

1. Access to a public street shall be limited to one public driveway connected to the lowest classified roadway for each tract of property separately owned. Property fronting more than one public street may be permitted an access to each public street if the Traffic Impact Analysis supports multiple accesses. Two or more public driveways accessing a public street will only be allowed with the approval of the City Traffic Engineer. Properties contiguous to each other and owned by the same person are considered to be one tract.

2. Commercial properties shall provide internal connections between neighboring properties. Developments must give priority to internal access before access to the public roadway system is permitted. Cross access allows vehicles to circulate between commercial properties without having to re-enter the public street system.

3. If all other access management techniques have been exhausted, the City will permit public driveways utilizing the following minimum corner clearance requirements. Corner clearance is the distance between a private access and the nearest cross road intersection and is applicable to all roadway classifications. Corner clearance is necessary to provide adequate perception-reaction time to reduce potential downstream conflicts and is aimed at preventing the location of driveways within the functional area of an intersection. Minimum driveway setback and corner clearance requirements shall meet the most current ITE standard. The minimum corner clearance setbacks are shown in the following table.

Minimum Corner Clearance

85th Percentile Speed (mph)	Distance (in feet) from Near Side of Street to Near Side of Access Driveway	
	Major Traffic Generator	Minor Traffic Generator
30	200	150
35	260	215
40	330	260
45	395	310
50	460	345

Reference: *Traffic Engineering Handbook*

Major traffic generators are developments that require or would be required to complete a Traffic Impact Analysis per section 4B.035.

4. Public driveways shall meet the sight distance requirement of Chapter 4B.150.

5. No public driveway shall be approved where backing onto the sidewalk or street will occur.

6. Parking lot circulation and signing shall be met on site. The public right-of-way shall not be utilized as part of the parking lot flow.

7. The landing on all public driveways shall meet the criteria in Chapter 4B.130B.

8. The maximum driveway width for a two-way, public driveway with curb cuts shall be 24 feet for multi-family residential, 30 feet for commercial uses, and 45 feet for industrial uses.

9. The maximum driveway width for a two-way, public driveway with curb returns shall be the same as listed for curb cuts. A wider public driveway may be approved by the City Traffic Engineer where a substantial percentage of oversized vehicle traffic exists, where divisional islands are desired, or where multiple exit or entrance lanes are needed.

10. The maximum one-way public driveway width for a curb cut or a driveway with curb return shall be 14 feet for multi-family residential, and 20 feet for commercial and industrial uses.

11. The storage length of a driveway must be adequate to prevent vehicles from waiting in through lanes to enter the site or causing unsafe conflicts with on-site circulation and parking. General standards appear below but these

requirements will vary according to the projected volume of the individual driveway. The length shall be measured from the face of curb.

Adequate Driveway Storage Lengths

Development Type	Minimum Driveway Throat Length*
Shopping Center > 150,000 GLA**+	200 feet
Smaller Project < 150,000 GLA**+	75 - 95 feet
Signalized Driveway+	Based on operational analysis for 95% queue

** Gross Leasable Area

+ To prevent conflicts between parking and the storage length, the minimum distance from the right-of-way to the first parking stall shall be 75 feet.

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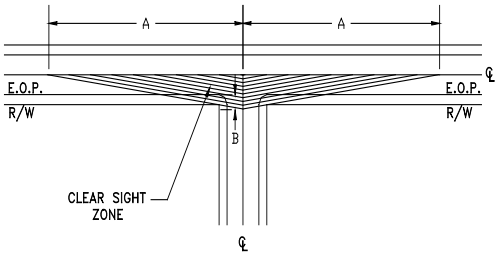
12. Road approaches and/or ingress and egress tapers may be required in industrial and commercially zoned areas as directed by the City Traffic Engineer. Tapers shall be designed per the ITE (Institute of Transportation Engineers) publication, *Transportation and Land Development*, latest edition.

4B.150 Sight Obstruction

The criteria in this chapter shall be used as a reference for streetscape amenities such as signs, trees, fences, bus shelters, etc. Use AASHTO Design Standards to determine sight distance criteria for all road and intersection designs. Intersections may include public and private driveways and pedestrian crossings. See Chapter 4B.130 for intersection definition.

The area within the sight distance triangle shall be subject to restrictions to maintain a clear view on the intersection approach. The ultimate roadway width (number of lanes) per the most current version of the City's Transportation Plan shall be used to calculate the dimensions of the sight distance triangle. Plant size at maturity must be accounted for when designing landscapes within the sight distance triangle.

STOP OR YIELD CONTROLLED INTERSECTIONS



The centerline of the road is the actual physical centerline regardless of the number of lanes. Sight distance B is 15 feet measured from the near edge of pavement to the eye of the driver on the minor road. The following table shall apply to both vertical and horizontal sight distance.

	Minimum Distance 'A' (in feet)*							
Design Speed (mph)	**20**	**25**	**30**	**35**	**40**	**45**	**50**	**Multiplier**
Collector Streets	200	250	300	350	400	450	500	10
Arterials and Boulevards	240	300	360	420	480	540	600	12

***based on Sight of Distance per 10 mph for Design Vehicle "P" Crossing Arterial**

If your speed is not shown above, use the following formula for distance A:

multiplier * design speed = sight distance A

On roadways with 5 or more lanes or roadways with medians more than 20 feet wide, use AASHTO Design Standards.

The vertical clearance area within the sight distance triangle shall be free from obstructions to a motor vehicle operator's view between a height of 3 feet and 10 feet above the existing surface of the street.

Exclusions. Sight obstructions that may be excluded from these requirements include: fences in conformance with this chapter, utility poles, regulatory signs, trees trimmed from the base to a height of 10 feet above the street, places where the contour of the ground is such that there can be no cross visibility at the intersection, saplings or plant species of open growth habits and not in the form of a hedge which are so planted and trimmed as to leave at all seasons a clear and unobstructed cross view, buildings constructed in conformance with the provisions of appropriate zoning regulations and preexisting buildings.

4B.160 Surfacing Requirements

The following are the surfacing requirements for each application listed. These designs are based on Washington stabilometer subgrade R-value of 5. Alternate structures will be accepted based on soil tests to determine the actual Washington stabilometer R-value and completion of worksheet 4-6.2 in the drawing section at the end of this Chapter. Soil tests and a completed worksheet for each road classification shall accompany plans submitted if structures other than those shown below are used.

One soil sample per each 500 lineal feet of centerline with 3 minimum per project representative of the roadway subgrade shall be taken to determine a statistical representation of the existing soil conditions.

Soil tests shall be performed by an engineering firm specializing in soils analysis.

The soils report, signed and stamped by a soils engineer licensed by the State of Washington, shall be based on actual soils tests and submitted with the plans. All depths indicated are a minimum compacted depth.

Refer to Details for Pavement Design structures. For Hawks Prairie Business Park roadways, the primary east-west arterial shall be built to a major collector standard. The connecting collectors and interior roadways shall be built to a minor collector standard.

Fire access road structures shall meet the standards as required for a minor local residential roadway. Alternate materials, e.g. paving tiles or gravel may be approved provided the structure is designed to support fire apparatus vehicles.

A. Sidewalks

Surfacing:	4 inches Commercial Concrete
Base:	1 inch Crushed Surfacing Top Course or well graded sand

Surfacing: Asphalt sidewalks will not be permitted unless otherwise approved by the Director of Public Works. (LMC 12.24.060)

B. Driveway

Surfacing:	6 inches Commercial Concrete
Base:	1 inch Crushed Surfacing Top Course or well graded sand

C. Class I Bikepath

Surfacing: 4 inches Commercial Concrete

Base:	1 inch Crushed Surfacing Top Course
Alternate:	
Surfacing:	2-1/2 inches Hotmix Asphalt Pavement
Base:	4 inches Ballast

Ballast shall consist of crushed, partially crushed, or naturally occurring granular material from approved sources and shall meet the *WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction* ballast specification 9-03.9(1) for grading and quality. The City Engineer or his/her representative will determine the exact point of acceptance.

The application of any asphalt to the roadway shall be restricted to the following conditions:

- The ground temperature for paving is based on the course location (surface or sub-surface) and depth of paving. Use *WSDOT Standard Specifications* to determine temperature limitations.
- Asphalt shall not be applied to wet material. Asphalt shall not be applied during rainfall, sand or dust storms, or before any imminent storms that might damage the construction. The City will have the discretion as to whether the surface and materials are dry enough to proceed with construction.
- No asphalt shall be applied which cannot be covered one hour before darkness. The City may require the Contractor to delay application of asphalt until the atmospheric and roadway conditions are satisfactory.
- Hot Mix Asphalt in accordance with *WSDOT Standard Specification 5-04* shall be utilized. The nominal compacted depth of the wearing surface shall not exceed two inches.

4B.165 Pavement Markings.

Channelization and pavement markings shall be as shown on the details at the end of this chapter. All markings shall meet federal metric standards. Pavement markings shall comply with these Guidelines and all applicable MUTCD, AASHTO, and WAC standards and regulations. When striping is required, a Channelization Plan complying with the Plan Checklist shall be submitted. See Chapter 3.040 for Checklist details.

Controlled intersections shall have appropriate pavement markings. Stop bars shall be a 24 inch wide thermoplastic stripe.

If required, pigmented stamped concrete crosswalks shall be Bomanite or approved equal, with 12 inch white plastic borders. The stamped concrete pattern shall be Basketweave Used Brick. The base color shall be Brick Red. The release agent color shall be Brick Red. The full depth of concrete shall be pigmented with base color. Powdered release agent shall then be applied to give the highlights desired. The release agent shall be heavy-duty quality as recommended by the manufacturer of

the stamping pattern. Concrete shall be stamped with inconsistencies in the pattern and hand finished. After a curing period of 4 days, the concrete shall be pressure washed to remove the remaining release agent. A weatherproofing sealer with moss control shall be applied to the finished surface.

In cases where crosswalks are not pigmented stamped concrete, they shall be high emphasis 24 inches wide thermoplastic.

Hash marks shall use 8 inch plastic stripes, 5 feet on center. Raised pavement markers shall be used to highlight the border of a hashed area. All "C" curbs shall be painted "traffic yellow".

Striping shall be required on all roadways. Striping, either with thermoplastic or raised pavement markers, in residentially zoned areas is generally not required except in the following circumstances:

- Stop bars or crosswalks may be required if a stop sign is required.
- Striping may be required in conjunction with roundabouts, traffic calming devices, radii and at neighborhood entrances.
- ~~Striping shall be required to delineate bulb-out parking except when concrete valley gutters are present.~~

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The thermoplastic material used to form pavement markings shall be pre-formed thermoplastic material

4B.170 Temporary Street Patching

All excavations of streets and driveways, or failure of the existing pavement which will be exposed to traffic shall be temporarily patched by the end of the working day, or as directed by the City. The patch shall be constructed of 2 inches of Hot Mix Asphalt or steel plates.

Asphalt Treated Base (ATB) used for temporary restoration may be dumped directly into the trench, bladed and rolled. After rolling, the trench must be filled flush with asphalt concrete pavement to provide a smooth riding surface.

The contractor shall maintain all temporary patches until such time as the permanent pavement is in place. If, after reasonable notification, the contractor is unable to maintain a patch for whatever reason, the City will patch it at the contractor's expense, and charge a mobilization fee of $1000.00. The City reserves the right to perform emergency repairs as deemed necessary without contractor notification. In such cases, the contractor will still be liable for costs as noted above.

4B.180 Trench Backfill and Restoration

Trench restoration shall be by a patch or overlay as required by the City.

A. All trench and pavement cuts shall be made by sawcuts.

B. All trenching shall be backfilled as shown in the appropriate trench restoration detail at the end of this chapter. The trench shall be compacted to 95 percent minimum density, as described in Section 2-03 of the *WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction.*

C. If, when trenching, cement concrete is encountered, cement concrete shall be used to restore the patch. When cement concrete is anticipated or encountered, a trench restoration detail shall be designed by a Geotechnical Engineer and submitted to the City for review and approval. The Geotechnical Engineer shall address existing and proposed joint location, load transfer, and joint pinning, if applicable.

D. Asphalt concrete pavement shall be placed on the prepared surface by an approved paving machine and shall be in accordance with the applicable requirements of Section 5-04 of the *WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction.* Fine and coarse aggregate shall be in accordance with Section 9-03.8 of the *WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction.*

   Surface smoothness shall be per *WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction* requirements. The paving shall be corrected by removal and repaving of the trench.

E. When trenching within the roadway shoulder(s), the shoulder shall be restored to its original or better condition.

F. The final patch shall be completed as soon as possible and shall be completed within 5 days after first opening the trench. This time frame may be adjusted if delays are due to inclement paving weather, or other adverse conditions that may exist. See 4B.160 for inclement weather constraints. Delaying of final patch of overlay work is allowable only subject to the City Engineer's approval. The City Engineer may deem it necessary to complete the work within the 5 day time frame and not allow any time extension. If this occurs, the Contractor shall perform the necessary work as directed by the City Engineer.

4B.190 Staking

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The surveyor directing such work shall be licensed as a Professional Land Surveyor by the State of Washington.

A pre-construction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.

The minimum staking of streets shall be as directed by the City Engineer or as follows:

A. Stake centerline every 50 feet in tangent sections and 25 feet in curved sections plus grade breaks, PVC's, PVT's, high points and low points, with cut and/or fill to subgrade.

B. Stake top of ballast and top of crushed surfacing at centerline and edge of pavement at the above-described intervals.

C. Stake top back of curb at a minimum 3 foot offset at the above-described intervals with cut or fill to finished grade.

4B.200 Testing

Testing shall be required at the developers or contractor's expense. The testing shall be ordered by the City construction inspector from a testing lab approved by the City. Testing shall be done on all materials and construction as specified in the *WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction* and with frequency as specified in Sampling and Testing Frequency Guide located in the *WSDOT Construction Manual*.

In addition, the City shall be notified before each phase that street, curb, gutter and sidewalk construction commences (i.e. staking, grading, subgrade, ballast, base, top course, and surfacing).

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4C SIDEWALKS, CURBS AND GUTTERS

4C.010 General

All properties within commercial zones of the City, properties abutting arterial streets or collector streets and properties upon which there are to be public buildings, shall, in conjunction with new construction on such properties or alterations or improvements to existing structures on such properties where the estimated cost of the alterations or improvements constitute 25 percent or more of the value of the existing structures on the property, have sidewalks constructed along abutting streets (LMC 12.24.010). Curbs and gutters must also be constructed along the abutting street when the Director of Public Works determines that the conditions of drainage require curbs and gutters (LMC 12.24.020).

In cases where a sidewalk exists adjacent to the curb, the sidewalk must be moved back to accommodate a new planter strip as required in accordance with 4B.080 of this document.

Although sidewalk construction may be deferred, the necessary right-of-way shall be granted to facilitate future construction of the sidewalk. See Chapter 4B.060 for right-of-way requirements. See Chapter 4B.080 for standards regarding deferral of street frontage improvements.

Sidewalks shall be located within the right-of-way. Sidewalks may be located within an easement with the approval of the Director of Public Works.

Sidewalks shall conform to the Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way standards.

Building footings shall not be located under a public sidewalk. Footings may be located under a sidewalk if the sidewalk is in an easement and not in the public right-of-way. If building footings are to be located under a sidewalk located within an easement, all the private utilities located within that easement and under that sidewalk shall be located within conduit.

4C.020 Design Standards

The City has set forth minimum standards as outlined in Chapter 3.040 which must be met in the design and construction of sidewalks, curbs and gutters. Because these are minimum standards, they may be modified by the Director of Public Works should the Director feel circumstances require increased or decreased widths (LMC 12.24.070). Plans for the construction of sidewalks, curbs and gutters are to be submitted as part of the street plans when applicable.

4C.030 Sidewalks

All public streets shall have sidewalks on both sides of the street as shown on the roadway details at the end of this chapter. See Chapter 4B.070 for sidewalk requirements on Private Streets. For specific driveway requirements, see Chapter 4B.140. For applicable bike path information, see Chapter 4D.

The design and construction of all sidewalks, curbs, gutters and walkways shall meet the following minimum standards:

1. Sidewalks shall be constructed of Commercial Concrete a minimum of 4 inches thick. When a portion of the sidewalk functions as a driveway, the sidewalk shall be a minimum 6 inches thick through the driveway section.

2. The width of sidewalks shall be as shown in the roadway details at the end of this chapter. When the sidewalk, curb and gutter are contiguous, the width of the sidewalk shall be measured from back of curb and gutter to back of sidewalk.

3. If sidewalk widening is required, it shall be accomplished with a monolithic width pour. This shall require removal of the existing sidewalk.

4. When existing sidewalks are removed, repairs shall be taken to the nearest expansion joint or as directed by the City.

5. The Director of Public Works may reduce the sidewalk width for sidewalks over 6 feet wide if the Public Works Department does not anticipate probable pedestrian traffic through the horizon year indicated by the traffic analysis. If the width of the sidewalk is reduced, the right-of-way width shall not be reduced. Instead, the planter width shall be increased accordingly.

~~6. To accommodate bicycles on sidewalks, a minimum design speed of 20 mph shall be used; however, when the grade exceeds 4 percent, a design speed of not less than 30 mph shall be used unless otherwise approved by the Director of Public Works.~~

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~~7.~~ 6. All sidewalks must be constructed to provide for curb ramps in accordance with the standards of the ADA and state law. See Chapter 4B.070 for curb ramp requirements on private streets.

~~8.~~ 7. Form and subgrade inspection by the City are required before sidewalk is poured. Forms shall be the same height as the thickness of the sidewalk, curb and gutter, or driveway.

~~9.~~ 8. Monolithic pour of curb, gutter and sidewalk will not be allowed.

~~10.~~ 9. Sidewalks that dead-end at the project property line shall have a minimum 5 foot wide pavement ramp constructed, at a maximum 12:1 slope that abuts the sidewalk and joins to the edge of the roadway. A

barricade may be required per Chapter 4B.100. When the sidewalk is extended in the future, these interim measures shall be removed.

4C.040 Curb and Gutter

Commercial concrete curb and gutter per the detail at the end of this chapter shall be used for all street edges unless otherwise approved by the Director of Public Works. See Chapter 4B.090 for curb requirements around cul-de-sacs.

Form and subgrade inspection by the City are required before curb and gutter are poured.

The face or top of all new curbs shall be embossed to denote the location of water and sewer services crossings. Water services shall be marked 1/4 inch into concrete with a "W" and side sewers shall be marked with an "S".

4C.060 Staking

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The surveyor directing such work shall be licensed as a Professional Land Surveyor by the State of Washington.

A preconstruction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.

The minimum staking of curb, gutter and sidewalk shall be as directed by the City Engineer or as follows:

1. Stake top back of curb at a minimum 3 foot offset every 50 feet in tangent sections and 25 feet in curved sections plus grade breaks, PVC's, PVT's, high point and low points, with cut or fill to finished grade.

4C.070 Testing

Testing shall be required per Chapter 4B.200.

In addition, the City shall be notified before each phase of sidewalk, curb and gutter construction commences.

4D BICYCLE FACILITIES

4D.010 General

Bikeway or Urban Trail construction is required in conjunction with any new development or redevelopment where the estimated cost of improvements on such properties exceeds 25 percent of the value of the existing structures, or subdivision or short subdivision approval, when the need for such a bikeway is indicated in the Lacey Urban Trails Plan and the Lacey Transportation Plan. See details at the end of this chapter for bikeway classifications. (LMC 12.24.010)

Bikeways located outside of the public right-of-way may be located within an easement or dedicated as a separate tract of land to the City of Lacey for public use. The easement or tract shall be 20 feet wide.

4D.020 Design Standards

The design of bicycle paths shall depend upon their type and usage. Bikepath surfacing shall be as outlined in Chapter 4B.160. Bike lanes and shared roadways shall be surfaced the same as the adjacent motor vehicle roadway.

All minimum design standards as set forth in Chapter 3.040 shall apply.

4D.030 Bikeway Lighting

Bikeway lighting for bike lanes, bike routes and shared roadways, shall meet the adjacent roadway lighting standards. When a class I bike path is constructed, the average maintained horizontal illumination level of 0.5 foot-candle (5 lux) to 2 foot-candles (22 lux) shall be met.

4D.040 Signing and Marking

In general, all bikeway facilities shall be signed per the MUTCD or as specified herein. The bike lane stripes and pavement markings shall be as shown on the details at the end of this chapter.

Bike lane signing at intersections shall be as shown on detail. See detail for bike lane striping at right-turn lanes.

Bicycle actuation at signalized intersections may be required if warranted.

4D.060 Staking and Testing

Staking and testing shall be done in accordance with street staking and testing as outlined in Chapter 4B.190 and 4B.200.

4E ILLUMINATION

4E.010 General

All new commercial or residential subdivisions, short subdivisions or property development requiring review by the Site Plan Review Committee shall provide street lights in accordance with the standards for such improvements of the City and they shall be owned and operated by the City. (LMC 12.24.080)

All projects outside the City limits but within the City of Lacey's Urban Growth Area boundary (UGA) shall provide street lights in accordance with the standards herein. The maintenance of street lights installed by projects within the UGA boundary shall be the responsibility of the owners or Homeowners Association until such time as annexation occurs. Upon annexation, the City shall assume responsibility for maintenance of public street lighting. Prior to annexation, any connections to the street lighting service (i.e. irrigation systems) shall be removed and an alternative power source provided by the Homeowner's Association.

Pedestrian scale lighting is required within all residential subdivisions, short subdivisions, Urban Villages, PRD's, and developments within the Woodland Planning District. Pedestrian scale lighting is also allowed when desired by the developer. Additionally, pedestrian scale lighting is to be installed as required in areas zoned Urban Villages or as required through Site Plan Review approval. See 4E.025.

Roadway lighting is required on Arterials and Collectors not located within the development.

4E.020 Design Standards

A street lighting plan submitted by the applicant and approved by the Public Works Director shall be required for all street light installations. Type of installation shall be as set forth in *WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction* and as directed by the City except where noted herein.

All public street light designs shall be prepared by an engineering firm capable of performing such work. The engineer shall be licensed by the State of Washington. All developments shall submit the lighting plan on a separate sheet. See the Plan Checklist in Chapter 3.040 for lighting plan and report components. After system is completed and approved, a set of "as-built" drawings per Chapter 3.065 shall be submitted to the City as a permanent record.

Lights shall be located in accordance with the Illumination Standards Table and the roadway details at the end of this chapter. In addition, intersections shall be illuminated to 1.5 times the highest foot candle requirement of the streets surrounding the intersection. Poles shall be opposite across the roadway or on one

side of the roadway except for pedestrian scale light poles which shall be staggered. Roadway classifications are located within the Transportation Comprehensive Plan.

All residential intersections that require pedestrian scale lights shall have two poles on opposite legs of the intersection. Street lighting and holiday lighting must be connected to a metered service disconnect.

~~For the purposes of this chapter, area classes are determined by zoning as follows:~~

~~Commercial~~

~~Business Park~~
~~Cemetery~~
~~Central Business Districts~~
~~Community Commercial District~~
~~General Commercial~~
~~Hawks Prairie Business and Commercial District~~
~~Hawks Prairie Commercial District~~
~~Light Industrial/Commercial~~
~~Mixed Use High Density Corridor~~
~~Mixed Use Moderate Density Corridor~~
~~Office commercial~~
~~Woodland District~~

~~Industrial~~

~~Light Industrial~~
~~Mineral Extraction~~

~~Residential~~

~~High Density Residential~~
~~Lacey Historic Neighborhood~~
~~Limited Business~~
~~Low Density Residential~~
~~McAllister Geologically Sensitive Area~~
~~Moderate Density Residential~~
~~Neighborhood Commercial~~
~~Open Space Institutional~~

~~As new zones are created, they will be classified by the City Traffic Engineer. If road widths differ from those in the Illuminations Standards table, other spacing will be determined by the project engineer and reviewed and approved by the City Traffic Engineer using the following criteria:~~

AVERAGE MAINTAINED HORIZONTAL ILLUMINATION (FOOT CANDLES)

Road Classification	Foot Candles
Residential/Private	0.40
Minor Collector	0.50
Major Collector	0.90
Arterials	1.40
Boulevards	1.40

Uniformity ratio:

6:1 average: minimum for residential and private
4:1 average: minimum for collectors
3:1 average: minimum for arterial and boulevard

Lamp lumen depreciation factor = 0.85

Min. Weak Point Light = 0.2fc except residential street

Average illumination at intersections shall be 1.5 higher than the average foot candles required on the street.

~~Pedestrian scale lighting shall be designed to provide a presence of light within the residential neighborhoods with particular emphasis at intersections.~~

Pedestrian scale lighting shall supplement the required roadway lighting with dual functional poles in the Woodland Planning District, and collectors within commercial and residential areas.

Line loss calculations shall show that no more than five percent voltage drop occurs in any circuit. Lamp Load factor shall equal 1.2.

A maximum of three circuits shall be associated per conduit. The minimum conduit size shall be two inch for typical installation and two to four inch for roadway crossings at intersections. Size all conduits to a maximum 26 percent conductor fill. The separate City Communications conduit shall not be used for lighting purposes.

Provide junction boxes at each end of a roadway crossing, or where the conduit changes size. All junction boxes shall be located outside of the paved areas. Junction boxes are not to be placed in the pedestrian curb ramp of a sidewalk or where it will impact the ADA requirements. The maximum conduit capacities for various types of junction boxes are shown in the WSDOT Standard Plans.

Pole foundations shall be per details depending on the type of pole used. Pole foundations shall not be located within the clear zone. The roadway clear zone, which

is typically 1.5 feet behind the face of curb, or 6.0 feet at intersections, shall be evaluated by an engineer using the guidelines set forth in the latest edition of the *AASHTO Roadside Design Guide.* No break-away foundations shall be provided for poles within the urban area, or where the City determines break-away poles would be a hazard to pedestrians.

General, Light Poles:

Poles shall meet the following minimum specifications as manufactured by General Electric, Hapco, Valmont, Lumec or Lexington or as otherwise approved by the City Traffic Engineer. In existing developed areas, the City may require the use of other poles to establish uniformity within the developed area. After installation and before acceptance by the City, all poles shall be free of dents and marks.

Shaft:

The shaft shall be a seamless, round tapered tube of aluminum alloy 6063 per ASTM B221 and shall be full-length heat-treated after welding on the base flange to produce T6 temper.

Poles shall include a hand hole centered above the bottom of the shaft for anchor base poles. The hand hole shall be reinforced with a cast frame of aluminum alloy. Hand holes shall be located 90 degrees clockwise from the plane of the bracket arm as viewed from the top. An aluminum cover with stainless steel attachment screws shall be provided for the hand hole.

Decorative Base:

The base for a dual functional pole shall be an aluminum clam shell Olympic Foundry Decorative Base model FG3548-BK with a textured black powder coated finish. An alternative to the pole and decorative base may be a Hapco Stafford structural bottleneck style pole and base cover and a decorative cast aluminum transition ring. Hapco drawing number B38355.

Surface Finish:

Roadway poles shall have a satin finish accomplished by mechanical rotary grinding or polishing.

Pedestrian poles and dual functional poles shall have a textured black powder coated finish.

Base Flange:

The base flange for the attachment of the shaft to the foundation shall be a one-piece cast socket of aluminum alloy 356 per ASTM B26 or B108. The flange shall be joined to the shaft by means of complete circumferential welds, externally at the top of the flange and internally at the bottom of the shaft tube.

Hardware:

All nuts, bolts and washers used in the fabrication of the pole shall be Grade 18-8 stainless steel per ASTM A193 Class 1 Grade B8 except for anchorage hardware.

Anchorage Hardware:

Anchorage bolts shall be hot-dipped galvanized steel per ASTM A576, Grade 1021-1046 and shall have minimum yield strength of 50,000 psi. The top 6 inches of each bolt shall have rolled or cut threads (before galvanizing) per ASTM A307. The bolts shall be hot-dipped galvanized per ASTM A153 at the treaded end. The bolts shall include a 4 inch right angle hook at the unthreaded end. The nut, washer, and lock washer shall be fully galvanized per ASTM A153.

Grounding:

Each pole shaft shall contain an internal lug with a 3/8 inch diameter hole for the purpose of attaching a grounding connector.

Shaft Cap:

Each pole shall be provided with a shaft cap of aluminum alloy. The cap shall be fastened to the shaft by means of stainless steel screws.

Bracket Arm:

Single member tapered arms (not davit or trussed) are required for arms 6 feet to 8 feet in length.

Light Pole Type	Nominal Mounting Height (ft)	Wall Thickness (in)	Pole Cross Section	Arm Shape	Pole Material	Base	Pole Finish	Arm Length (ft)	Bottom Shaft (in)	Top Shaft (in)	Bolt Circle	Anchor Bolts
Pedestrian Scale	15	0.125	Round	Post mount	Aluminum	Decorative	Black Texture	n/a	15	4	10 3/4-13	3/4 x 20
Dual Functional	40	0.219	Round	Tapered Elliptic	Aluminum	* Decorative	Black Powder	6-8	8	4.5	11-12	1 x 36
Dual Functional	30	0.219	Round	Tapered Elliptic	Aluminum	* Decorative	Black Powder	6-8	7	4.5	11-12	1 x 36
Dual Functional	25	0.219	Round	Tapered Elliptic	Aluminum	* Decorative	Black Powder	6-8	7	4.5	11-12	1 x 36
Roadway Single Arm	40	0.188	Round	Tapered Elliptic	Aluminum	Plain	Satin Ground	6-8	8	4.5	11-12	1 x 36
Roadway Single Arm	30	0.188	Round	Tapered Elliptic	Aluminum	Plain	Satin Ground	6-8	7	4.5	11-12	1 x 36
Roadway Single Arm	25	0.188	Round	Tapered Elliptic	Aluminum	Plain	Satin Ground	6-8	7	4.5	11-12	1 x 36
Roadway Twin Arm	40	0.219	Round	Tapered Elliptic	Aluminum	Plain	Satin Ground	8	10	6	14-15	1 x 48
Roadway Twin Arm	30	0.219	Round	Tapered Elliptic	Aluminum	Plain	Satin Ground	8	10	6	14-15	1 x 48

*Olympic Decorative Base FG2546BK Clam Shell

Luminaires:

Pedestrian scale luminaires shall be Lumec L80 style lantern style decorative head and shall be equipped with a LED 35 watt fixture.

Phillips Lumec fixture with a LED 35 watt fixture

E3 Asymmetrical median cutoff optics,
240 volts,

Adapter/Bracket:
15' Pedestrian Standard: SFS Adapter,
Textured Black powder coating.
30' Dual Function standard: SF80 Adapter and CRF-F-0DEG bracket
Textured Black powder coating

Catalog No. [L80-023]-35WLED4K-T-PC-CS-LE3-240-FAWS--BKTX

Roadway luminaires 35, 72 and 180 Watt Phillips Lumec luminaires with natural aluminum or black finish to match the required pole type, powered by 240 volts, with tool access for driver change out. The fixture shall have type III asymmetrical distribution, full cut off with 4000K color band to exceed 70,000 hours of operational life. Fixtures shall have built-in bubble level.

Catalog No. RFS-35W16LED4K-G2-R3M-UNIV- RCD
Catalog No. RFM-72W32LED4K-G2-R3M-UNIV- RCD

Catalog No. RFL-180W80LED4K-G2-R3M-UNIV- RCD

All street light electrical installations including wiring conduit and power connections shall be located underground.

The General Notes on the following page need to be included on any plans dealing with street design in addition to all applicable requirements as set forth in Chapter 3.040.

Illumination Standards

ROAD CLASS	STREET WIDTH (Feet)	LUMINAIRE (Watt)	MOUNTING HEIGHT (Feet)	ARM TYPE	ARM LENGTH (Feet)	CURB OVERHANG (Feet)	MAXIMUM SPACING (Feet)	POLE CONFIGURATION	POLE TYPE
RESIDENTIAL / PRIVATE									
All	20-32	34	15	Post	0	-3	100	Staggered	Pedestrian
MINOR COLLECTOR									
All	32-48	72	30	Single	6	5	180	One Side Only	Dual Function
MAJOR COLLECTOR									
Industrial	44-60	72	30	Single	6	5	180	Both Sides Opposite	Roadway
All Other	44-6-	72	30	Single	6	5	180	Both Sides Opposite	Dual Function
ARTERIAL									
Industrial	66	180	40	Single	6	5	240	Both Sides Opposite	Roadway Dual Function
Martin Way	66	180	40	Single	8	5	240	Both Sides Opposite	Roadway
All Other	66	180	40	Single	6	5	240	Both Sides Opposite	Dual Function "
BOULEVARD									
All	66	180	40	Twin/Single	8	1	240	Opposite Across/Median	Roadway
HAWKS PRAIRIE ROADWAYS									
Arterial	66	180	40	Twin/Single	6/8	5/1	220	Opposite Across/Median	Dual Function
Minor Collector	42-58	72	30	Twin/Single	6/8	5/1	160	Opposite Across/Median	Dual Function
Retail Area Minor Collector	28	34	25	Single	6	5	120	Both Sides Opposite	Dual Function

GENERAL NOTES (Street Light Construction)

1. Electrical permits and inspections are required for all street lighting installations. The Contractor is responsible for obtaining said permits prior to any type of actual construction.

2. A pre-construction meeting shall be held with the City of Lacey Construction and Electrical Inspectors prior to the start of construction.

3. Prior to installation of any materials the Electrical Contractor shall submit for approval by the City three bound, categorized copies of material catalog cuts, specifications, shop drawings and/or wiring diagrams. Any materials purchased or labor performed prior to such approval shall be at the Contractor's risk. Mounting heights, arm length, power source, luminaire type and bolt patterns shall follow City of Lacey Development Guidelines Chapter 4E.020. Modifications of any portion of the lighting system will not be allowed without prior approval by the City. Submittals shall include project name, name of electrical contractor, date and vendor name.

4. A 500 volt megger test will be performed by the City on each circuit between conductor and ground prior to acceptance of the lighting system. The insulation resistance shall not be less than 6 megaohms to ground for runs over 2,500 feet nor less than 8 megaohms for runs under 2,500 feet. A functional test will be performed by the City in which it is demonstrated that each and every part of the system functions as specified or intended herein. (*WSDOT Standard Specifications for Road, Bridge and Municipal Construction* 8-20.3(11).

5. All lighting poles shall be as specified in Chapter 4E.020 of the Development Guidelines. The Sonotube form shall be removed to below ground level. Pole bases shall be grouted and all luminaire heads shall be plumb and level.

6. Cement concrete bases shall follow City of Lacey Development Guidelines Luminaire Foundation detail.

7. Any modification to approved lighting plans shall be reviewed and approved by the City prior to installation. Any approved modifications shall be shown on a mylar as-built supplied to the City after the lighting installation is completed and before final acceptance. It shall be the responsibility of the Electrical Contractor to ensure these as-builts are provided to the City.

8. Private utilities require a 10 foot “clear zone” from the street light to the private utility located above ground on private utility poles. The “clear zone” separation shall be incorporated into the street lighting design to assure the required separation is provided.

9. A maximum of three circuits shall be associated per conduit. The minimum conduit size shall be two inch for typical installation and four inch for roadway crossings at intersections. Size all conduits to a maximum 26 percent conductor fill. The separate City communications spare conduit shall not be used for lighting purposes.

10. Provide junction boxes at each end of a roadway crossing, or where the conduit changes size. All junction boxes shall be located outside of the paved areas. Junction boxes are not to be placed in the pedestrian curb ramp of a sidewalk or where it will impact the ADA requirements. All junction boxes shall satisfy WSDOT Standards constructed with galvanized steel locking lids. The maximum conduit capacities for various types of junction boxes are shown in the WSDOT Standard Plans with the exception of a Type 1 junction box which may have a maximum capacity conduit diameter of 10 inches.

11. On roads classified as arterials, boulevards or collectors, the street lighting shall be separated into two circuits. There shall be a separate circuit for both sides ~~the right and left side~~ of the road. Separate circuits shall be provided for street lighting internal to the subdivision from collectors and arterials.

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4E.025 Street Lighting Service

Street lighting services shall be installed to support street lighting as determined by load calculations.

All private street lighting shall install a separate service separating them from public street lighting.

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4E.030 Holiday Lighting

Provisions to facilitate holiday lighting shall be provided by properties fronting the following roadways:

Sleater-Kinney Road from I-5 south to Pacific Avenue,

Pacific Avenue from Sleater-Kinney Road west to the City limits,

6th Avenue SE from Sleater-Kinney Road to College Street.

The Hawks Prairie Business District.

All roundabouts and pocket parks throughout the City and the UGA.

Developers are required to provide receptacles, conduit, and miscellaneous appurtenances to facilitate holiday lighting. Conduit shall be extended through the property to permit continuity for the area above. See detail for additional information.

4E.035 Fiber Optic Conduit

All projects requiring Public Works approval shall install a communication conduit for future fiber optics on public streets. Minimum conduit size shall be two inch for typical installation and four inch for roadway crossings at intersections. Fiber Optic conduit shall be installed parallel to the street lighting conduit. Pull boxes shall be WSDOT approved for fiber optics and installed at a maximum of 500 foot spacing and at each end of a roadway crossing, or where the conduit changes size. All pull boxes shall be located outside of the paved areas, and are not to be placed in the pedestrian curb ramp of a sidewalk or where it will impact the ADA requirements

4E.040 Staking

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The surveyor directing such work shall be licensed as a Professional Land Surveyor by the State of Washington.

A preconstruction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.

The minimum staking of luminaries shall be as follows:

1. Location and elevation to the center of every pole base.

2. Location and elevation of each service disconnect.

4E.050 Testing

All illumination systems shall be subject to an electrical inspection which shall include megger testing and a functional test. Lamp, photocell and fixture shall be under warranty for a period of one year.

4E.060 Private Utility Separation

Private utilities require a 10 foot "clear zone" from the street light to the private utility located above ground on private utility poles. The "clear zone" separation shall be incorporated into the street lighting design to assure the required separation is provided.

4F TRAFFIC CONTROL DEVICES

4F.010 General

Traffic control devices shall be installed per the requirements set forth herein. This work shall consist of furnishing and installing a complete and functional traffic control system meeting current City of Lacey standards.

Due to the complexity of coordinating the City's existing traffic control environment with any proposed traffic control device(s), the design and analysis of signals and other traffic control devices shall be coordinated under the direct supervision of the City Traffic Engineer. This is necessary to retain a uniformity of traffic control devices throughout the City.

Traffic control devices may include, but are not limited to; signals, traffic islands, modern roundabouts, stop or yield control devices, crosswalks or traffic calming features.

4F.020 Design Standards

If a traffic control device (including signage) is required, then the developer shall be required to pay the cost for the City's on-call, contracted traffic services, or, if the City's schedule allows, shall pay for the City to design the traffic control device. The City shall retain the right to determine the appropriate traffic control device based

on an approved Traffic Impact Analysis. Design of appropriate traffic control devices may be allowed by a City approved design consultant.

Traffic control devices shall be designed in accordance with the specifications as set forth by the City of Lacey, ITE, AASHTO, FHWA and WSDOT. The *WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction* shall be used unless otherwise authorized by the City. Electrical permits are required for all electrical traffic control devices. The contractor is responsible for obtaining all permits prior to construction.

All applicable design requirements set forth in Chapter 3.040 and listed on the Plan Checklist shall be included. When analyzing intersections for traffic control devices, impacts to the entire roadway corridor shall be considered.

All specifications and material samples shall be submitted to the City for review and approval prior to installation.

4F.030 Pedestrian Crossings

The City will consider the installation of marked crosswalks at uncontrolled intersections and mid-block locations as part of public project design, general roadway evaluation and/or review of land use applications. An engineering study will be performed before a marked crosswalk is approved for a specific location or corridor. The engineering study will consider existing and projected pedestrian volumes, vehicular volumes, vehicular speeds, collisions, location characteristics, proximity to existing marked crosswalks, transit stops, existing and future adjacent land uses, adopted sub-area plans and WSDOT, FHWA, ITE, NATCO and MUTCD standards. All marked crosswalks shall be consistent with the City's Pedestrian Crossing Policy.

4F.040 Staking

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The surveyor directing such work shall be licensed as a Professional Land Surveyor by the State of Washington.

A preconstruction meeting shall be held with the City prior to commencing staking. All construction staking shall be inspected by the City prior to construction.

The minimum staking of signals shall be as follows:

A. Location, with cut or fill to center of all pole bases.

B. Location of all corners of controller base.

C. Location of service disconnect.

4F.050 Signal Testing

All traffic control devices shall be subject to any necessary electrical inspections as well as requirements as set forth in Chapter 4B.200.

A signal system shall not be approved or accepted by the City until the signal has performed correctly to the City's satisfaction for a 30 day "check-out" period as outlined below.

Controller and cabinet testing shall be required by a WSDOT laboratory and/or the City of Lacey prior to being installed.

4F.060 Functional Testing

Field testing of illumination, traffic signal systems, and electrical for traffic control systems shall be per Section 8-20 of the *WSDOT/APWA Standard Specifications for Road, Bridge and Municipal Construction* with the following exceptions.

The insulation resistance shall not be less than 50 megaohms between the conductor and ground on all circuits of any length.

A functional test shall be made to demonstrate that each and every part of the system functions as specified.

The contractor shall perform in the presence of the City, frequency response and noise tests between each controller cabinet. The same test shall also be performed on all unused (spare) pairs between the master controller and the most distant cable termination cabinet served by the pair.

The Contractor shall perform continuity checks from all wires to ground, to the satisfaction of the City.

The functional test for the traffic signal system shall consist of not less than five days of continuous, satisfactory operation. If unsatisfactory performance of the system develops, the condition shall be corrected and the test shall be repeated until the five days of continuous, satisfactory operation is obtained.

Before initial turn-on, the signal system shall be placed in flashing operation for at least two full working days but no more than five calendar days. The initial turn-on shall be made between 9:00 am and 2:00 pm on a Tuesday, Wednesday, or Thursday as approved by the City. Prior to turn on, all equipment as shown on the plans shall be installed and operable. This includes pedestrian signals, pedestrian pushbuttons, vehicle detectors, and roadway lighting. All louvers, visors, and signal heads shall be directed to provide maximum visibility.

Turn on of new or modified traffic signal systems shall be made only after all traffic signal circuits have been thoroughly tested as specified above. Functional tests shall start on any working day except Friday, Monday, or the day preceding or following a legal holiday.

A shutdown of the electrical system resulting from damage caused by public traffic, from a power interruption, or from unsatisfactory performance of City furnished materials may not constitute discontinuity of the functional test.

Turn-on of the new traffic control shall be accomplished by qualified factory signal technicians with three days advance notice to the City. The contractor shall not turn on any signal system or part thereof visible to any traveled roadway without the accompaniment of the City. The temporary and permanent signing and pavement

marking shall be installed in accordance with the plans and specifications or as approved by the City before the new traffic controls are turned on.

Traffic signals shall be maintained by the developer until such time as final Public Works approval is given.

4G ROADSIDE FEATURES

4G.010 General

Miscellaneous features included herein shall be developed and constructed to encourage the uniform development and use of roadside features wherever possible.

4G.020 Design Standards

The design and placement of roadside features included herein shall adhere to the specific requirements as listed for each feature, and, when applicable, to the appropriate standards as set forth in Chapter 3.010 and 3.040.

4G.030 Staking

All surveying and staking shall be performed by an engineering or surveying firm capable of performing such work. The surveyor directing such work shall be licensed as a Professional Land Surveyor by the State of Washington.

A preconstruction meeting shall be held with the City prior to commencing staking. All construction shall be inspected by the City prior to construction.

4G.040 Testing

Testing shall be required per Chapter 4B.200.

4G.050 Survey Monuments

A. All existing survey control monuments which will be disturbed or destroyed during construction shall be referenced prior to construction and replaced after construction by a Professional Land Surveyor licensed by the State of Washington. All applicable RCW's and WAC's will be complied with, including but not limited to, WAC 332-120, WAC 332-130, RCW 58.09, and RCW 58.24.040. The monuments shall be replaced with the proper type as outlined below at the expense of the responsible builder or developer.

B. Street type: Boulevards; Arterials; Major Collectors; and, at the option of the City Survey Department, Bus Routes and Truck Routes.

   A pre-cast concrete monument with cast iron monument case and cover installed per City of Lacey standards is required.

   The monument case shall be installed after the final course on surfacing has been placed.

C. Street type: Minor Collectors; Major and Minor Local Residential, Private, and those streets not specifically outlined in 4G.050B above.

A poured-in-place concrete surface monument per City of Lacey standards is required.

D. Monument Locations

Appropriate inner-visible monuments shall be placed:

1. At all street intersections. At intersections when streets listed in 4G.050C intersect with boulevards, arterials or major collectors, the monuments shall be placed at the intersection of the centerline of the minor streets (listed in 4G.050C) with the right-of-way line of a boulevard, arterial or major collector.

2. At the PC and PT's of all horizontal curves or at the PI if it lies in the traveled roadway.

3. At all DLC corners, section corners, quarter corners and sixteenth corners that fall within the subdivision. Where these points fall outside of the pavement or sidewalks, a poured-in-place monument per City of Lacey standards shall be set so that the top of the monument is one-foot below the surface of the ground.

4G.060 Bus Pads, Shelters and Amenities

Different population densities dictate the number and placement of bus stops. The location of Intercity Transit and/or North Thurston Public Schools (NTPS) bus pads, shelters, or amenities will be evaluated on a case-by-case basis for each project. Intercity Transit and NTPS shall make every effort to coordinate the location of bus stops and shall work with the City Transportation section to determine the best location for the required amenity.

The first consideration in locating any bus stop or amenity shall be safety. The following considerations shall also be considered in determining a bus stop or amenity: operational efficiency, and minimizing impacts to adjacent property. Bus pullouts may be required if road geometry requires, such as determined by the City, Intercity Transit, and NTPS.

When constructed by a private developer, Intercity Transit pull out areas shall be constructed with reinforced concrete a minimum of 18 inches in thickness. This section shall be placed for the area of the pull out. If a utility decides to cut the concrete section, the entire bus pull out area must be removed and replaced.

Shelters, pavement markings and signs shall be provided by the developer and installed by Intercity Transit. Installation shall be at the developer's expense. Shelters can be purchased directly from Intercity Transit at cost plus labor to install. More details may be accessed at:

http://www.intercitytransit.com/SiteCollectionDocuments/BusStopSpecs.pdf

Field Code Changed

Intercity Transit shelters shall be maintained by Intercity Transit. School bus stop shelters shall be maintained by the subdivision's Homeowner's Association or apartment owner, whichever is appropriate.

Developments enclosed by walls or fences shall provide openings or gates for walkways to provide direct access between developments and bus facilities.

The City and North Thurston Public Schools will use the following criteria in placement and design of school bus stops:

A. A school bus stop shall be required for each new residential subdivision or apartment complex where school children are to be boarding or deboarding unless it is determined by the North Thurston Public Schools that a new bus stop is not required because adjacent facilities already exist for the site.

2. School bus facilities shall meet the same design standards as specified for Intercity Transit except that the contractor shall install the required school bus amenities (see details).

3. Placement shall be determined by North Thurston Public Schools and the City.

4G.070 Mailboxes

A. During construction, existing mailboxes shall be accessible for the delivery of mail or, if necessary, moved to a temporary location. Temporary relocation shall be coordinated with the US Postal Service. The mailboxes shall be reinstalled at the original location or, if construction has made it impossible, to a location as outlined below and approved by the U.S. Postal Service.

B. Mailboxes in new developments shall be clustered. Cluster mailboxes are prohibited on collectors and arterials. Mailbox locations shall be coordinated between the City and the U.S. Postal Service.

C. Individual Mailboxes shall be set on posts strong enough to give firm support but not to exceed 4 x 4 inch wood or one 1-1/2 inch diameter pipe, or material and design with comparable breakaway characteristics. See detail for clearance requirements.

4G.090 Retaining Walls

Rock, brick, concrete building block, or other approved material may be used for erosion protection of cut or fill embankments, for structurally retaining

embankments, or as desired for aesthetic purposes. Retaining walls may be subject to design review.

The height of a retaining wall is that distance as measured from the bottom of the footing, regardless of whether the footing is buried or exposed, to the top of the wall. Structural walls on private property require the issuance of a Building Permit prior to construction.

Retaining walls on private property shall meet the requirements of the adopted Building Code. Retaining walls located on private property shall be set back from any public right-of-way line a distance at least equal to the height of the wall unless otherwise approved by the Director of Public Works. Retaining walls located on private property where the public right-of-way line is closer than the height of the wall shall not exceed 4 feet in height unless the wall is designed by a Washington State Licensed Professional Engineer and the wall meets all the requirements of the adopted Building Code. Walls meeting these criteria must be approved by the Director of Public Works and the Building Official.

Retaining walls over 4 feet in height located on a public right-of-way shall meet or exceed WSDOT design standards and be designed by a Washington State Licensed Professional Engineer.

4G.100 Street Trees

All public streets within the City and the City's UGA boundary will be planted with trees to create a distinct and pleasant character for those roadways. The street trees on the following table shall be required in or along the public right-of-way, including medians. Contact the City for specific street and accent trees on arterial and collector streets. These have been specified in the current version of the Lacey Urban Forest Management Plan.

See Chapter 4B.125, Landscape/Planter Areas, for specific site preparation requirements.

A. Planting theme

~~1. Street tree plantings shall be in accordance with the Lacey Urban Forest Management Plan.~~

~~2.~~ 1. ~~Species: See following table.~~ Street trees as identified for specific planter strip widths shall be installed. See following table.

B. Planting size: Trees, 2 to 3 inch caliper, measured 6 inches above the base.

C. Location: Trees shall be as shown on the applicable roadway details. Trees shall be spaced ~~35 to~~ 50 feet on center (as directed by the City of Lacey) starting 10 to 15 feet from the property line. Also, trees shall not be planted within 50

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feet of the intersection measured from the curb radius. Exceptions may be made when there are existing sidewalks. Street trees may then be planted 3 to 5 feet behind the sidewalk. Tree spacing may be adjusted slightly to allow a minimum 10 foot spacing on either side of a driveway. To prevent root invasion, street trees shall be located 10-feet from water meter boxes, S.T.E.P. service boxes and S.T.E.P. tanks. Street trees shall also be placed 10-feet from driveways, street lights and fire hydrants. Finally, street trees shall be placed where their crowns do not impede the street lighting.

Due to the listed restrictions and smaller lots, street trees may be eliminated if separation requirements cannot be satisfied.

D. Maintenance: All projects, regardless of type or zoning, required to plant street trees will also be required to maintain the trees in perpetuity, regardless of ownership. Trees shall be maintained per the current version of ANSI A300, Standard Practices for Trees, Shrubs and other Woody Plant Maintenance.

~~The City will be responsible for pruning all street trees located in the right-of-way along arterials and collectors.~~ The owner/homeowner's association is responsible for mowing, weeding, watering, replacement (replaced due to death, damage or disease after approval by a City representative) and any other tree maintenance within the respective right-of-way and common areas. See Chapter 6.210 for installation and maintenance of irrigation systems. At the time of plat or site plan review approval, the City will determine responsibility for maintenance of medians.

E. Root barrier in accordance with tree planting details shall be installed along curbs and sidewalks.

F. Exceptions to the planting theme may be made by the Director of Public Works. Exceptions include but are not limited to; screening industrial areas; planting around historical sites; incorporation of drought resistant techniques, maintaining natural vegetation that better serves as street landscaping or beautification.

Reference: City of Lacey Urban Beautification Project Plan and Resolution 633.

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~~GENERAL TREE LIST FOR LACEY~~

~~COMMON NAME~~	~~BOTANICAL NAME~~	~~CULTIVAR~~	~~MATURE HEIGHT~~	~~CROWN SPREAD~~	~~SPACING~~
~~*Large >50' Tall*~~					~~40-50'~~
~~Sugar Maple~~	~~*Acer saccharum*~~	~~Commemoration or Bonfire~~	~~60'~~	~~35'~~	
~~European Beech~~	~~*Fagus sylvatica*~~		~~50'~~	~~35'~~	
~~Rivers Purple Beech~~	~~*Fagus sylvatica*~~	~~Riversii~~	~~50'~~	~~40'~~	

COMMON NAME	BOTANICAL NAME	CULTIVAR	MATURE HEIGHT	CROWN SPREAD	SPACING
Autumn Purple Ash	*Fraxinus americana*	Autumn Purple	50'	35'	
Tuliptree	*Liriodendron tulipfera*		70'	35'	
Scarlet Oak	*Quercus coccinea*		60'	40'	
Northern Red Oak	*Quercus rubra*		70'	45'	
Medium-Narrow Crowns 40-50' Tall					25-35'
Parkway Maple	*Acer platanoides*	Columnar-broad	40'	25'	
Armstrong Red Maple	*Acer rubrum*	Armstrong	45'	15'	
Bowhall Red Maple	*Acer rubrum*	Bowhall	40'	15'	
Columnar Tuliptree	*Liriodendron tulipfera*	Fastigiatum	50'	15'	
Fastigiate Beech	*Fagus sylvatica*	Fastigiata	45'	15'	
Skyrocket Oak	*Quercus robur*	Fastigiata	45'	15'	
Medium – Wider Crowns 40-50' Tall					35-40'
Norway Maple	*Acer platanoides*	Emerald Queen	45'	40'	
Red Maple	*Acer rubrum*	October Glory	45'	35'	
Red Horsechestnut	*Aesculus x carnea*	Briotti	40'	35'	
Katsura Tree	*Cercidiphyllum japonicum*		40'	40'	
Summit Ash	*Fraxinus pennsylvanica*	Summit	45'	25'	
Patmore Ash	*Fraxinus pennsylvanica*	Patmore	45'	35'	
Autumn Gold Ginkgo	*Ginkgo biloba*	Autumn Gold	40'	30'	
Honeylocust	*Gleditsia triacanthos*	Shademaster	45'	35'	
Littleleaf Linden	*Tilia cordata*	Greenspire	40'	30'	
Small Trees <35' Tall					30-40'
Trident Maple	*Acer buergeranum*		20'	20'	
David's maple	*Acer davidii*		30'	25'	
Flame Maple	*Acer ginnala*	Flame	20'	20'	
Paperbark Maple	*Acer griseum*		25'	20'	
Tatarian Maple	*Acer tatarian*		25'	20'	
Norwegian Sunset Maple	*Acer truncatum x A. platanoides*	Keithsform	35'	25'	
Pacific Sunset Maple	*Acer truncatum x A. platanoides*	Warrenred	30'	25'	

COMMON NAME	BOTANICAL NAME	CULTIVAR	MATURE HEIGHT	CROWN SPREAD	SPACING
Pyramidal European Hornbeam	*Carpinus betulus*	Fastigiate	35'	25'	
American Hornbeam	*Carpinus caroliniana*		25'	20'	
Eastern Redbud	*Cercis Canadensis*	Forest Pansy	20'	25'	
Pink Flowering Dogwood	*Cornus florida*	Rubra	20'	20'	
Chinese Kousa Dogwood	*Cornus kousa*	Chinensis	20'	20'	
Tricolor Beech	*Fagus sylvatica*	Roseomargina ta	30'	20'	
Goldenrain Tree	*Koelreuteria paniculata*		30'	30'	
Rustica Rubra Saucer Magnolia	*Magnolia soulangiana*	Rustica Rubra	20'	20'	
Flowering Crabapple	*Malus spp.*	Snowdrift, Red Baron, Prairiefire	20'	20'	
Black Tupelo	*Nyssa sylvatica*		30'	20'	
Flowering Plum	*Prunus cerasifera*	Thunder-Cloud	20'	20'	
Sargent Cherry	*Prunus sargentii*		30'	30'	
Snowgoose Cherry	*Prunus spp.*	Snowgoose	20'	20'	
Callery Pear	*Pyrus calleryana*	Redspire or Cleveland Select	35'	25'	
Japanese Stewartia	*Stewartia pseudocamellia*		30'	20'	
Japanese Snowbell	*Styrax japonicus*		25'	25'	
Redmond Linden	*Tilia americana*	Redmond	35'	25'	
Small Trees – Narrow <35' Tall					25-30'
Rocky Mt. Maple	*Acer grandidentatum*	Schmidt	25'	15'	
Crimson Sentry Maple	*Acer platanoides*	Crimson Sentry	25'	15'	
Golden Desert Ash	*Fraxinus oxycarpa*	Aureafolia	20'	18'	
Galaxy Magnolia	*Magnolia 'Galaxy'*	Galaxy	30'	15'	
Spire Cherry	*Prunus x hillieri*	Spire	30'	10'	
Red Cascade Mt. Ash	*Sorbus americana*	Dwarfcrown	18'	8'	
Tree Lilac	*Syringa meyeri*	Palibin	7'	5'	

**Other species or cultivars may be appropriate but must be approved by the City of Lacey.*

~~If conifers are used in informal plantings, then the following species are appropriate for use in Lacey:~~

- ~~Western red cedar (*Thuja plicata*)~~
- ~~Mt. Hemlock (*Tsuga mertensiana*)~~
- ~~Douglas-fir (*Pseudotsuga menziesii*)~~
- ~~Canada Hemlock (*Tsuga canadensis*)~~
- ~~Western Hemlock (*Tsuga heterophylla*)~~
- ~~Giant sequoia (*Sequoia gigantea*)~~
- ~~Alaska Yellow Cedar (*Chamaecyparis nootkatensis* and 'Pendula')~~
- ~~Austrian pine (*Pinus nigra*)~~
- ~~Deodar Cedar (*Cedrus deodara*)~~
- ~~Noble Fir (*Abies procera*)~~
- ~~Shore Pine (*Pinus contorta* var. contorta)~~
- ~~Western white pine (*Pinus monticola* blister rust resistant cultivars)~~
- ~~Blue Atlas Cedar (*Cedrus atlantica* 'Glauca')~~
- ~~Serbian Spruce (*Picea omorika*)~~
- ~~Dawn Redwood (*Metasequoia glyptostroboides*)~~

~~Tree species specifically **forbidden** for planting in the City of Lacey:~~

- ~~Silver Maple (*Acer saccharinum*)~~
- ~~Boxelder (*Acer negundo*)~~
- ~~American Sycamore (*Platanus occidentalis*)~~
- ~~London Planetree (*Platanus x acerifolia*)~~
- ~~Red Sunset Maple (*Acer rubrum* 'Red Sunset')~~
- ~~Sycamore Maple (*Acer pseudoplatanus*)~~
- ~~Lombardy Poplar (*Populus nigra* 'Italica')~~
- ~~Silver Poplar (*Populus alba*)~~
- ~~Black Locust (*Robinia pseudoacacia*)~~
- ~~Tree of Heaven (*Ailanthus altissima*)~~
- ~~Scotch pine (*Pinus sylvestris*)~~

~~Tree species discouraged:~~

- ~~Elms (*Ulmus* spp.)~~
- ~~European White Birch (*Betula pendula*)~~
- ~~Willows (*Salix* spp.)~~
- ~~Sweetgum (*Liquidambar styraciflua*)~~
- ~~Leyland Cypress (*Cupressus x leylandii*)~~
- ~~Colorado Blue Spruce (*Picea pungens*)~~

COMMON NAME	BOTANICAL NAME	CULTIVAR	MATURE HEIGHT	CROWN SPREAD	SPACING	MINIMUM PLANTER WIDTH
Large >50' Tall					40-50'	

Sugar Maple	*Acer saccharum*	Commemoration, Bonfire or Legacy	50- 60’	35’		8’
European Beech	*Fagus sylvatica*		50’	35’		8’
Rivers Purple Beech	*Fagus sylvatica*	Riversii	50’	40’		8’
Espresso Kentucky Coffee Tree	*Gymnocladus dioicus*	Espresso-JFS	50’	35’		10’
Tuliptree	*Liriodendron tulipfera*		70’	35’		10’
Scarlet Oak	*Quercus coccinea*		60’	40’		10’
Northern Red Oak	*Quercus rubra*		70’	45’		10’
Oregon White Oak	*Quercus garryana*		120’	100’		10’
Medium-Narrow Crowns 40-50’ Tall					25-35’	
Parkway Maple	*Acer platanoides*	Columnar-broad	40’	25’		10’
Armstrong Red Maple	*Acer rubrum*	Armstrong	45’	15’		10’
Bowhall Red Maple	*Acer rubrum*	Bowhall	40’	15’		10’
Columnar Tuliptree	*Liriodendron tulipfera*	Fastigiatum	50’	15’		10’
Fastigiate Beech	*Fagus sylvatica*	Fastigiata	45	15’		8’
Street Keeper Honeylocust	*Gleditsia triacanthos*	Draves PP 21698	45’	20’		8’
Crimson Spire Oak	*Quercus alba x Q. robur*	Crimschmidt	45’	15’		8’
Skyrocket Oak	*Quercus robur*	Fastigiata	45’	15’		6’
Medium – Wider Crowns 40-50’ Tall					35-40’	
Red Horsechestnut	*Aesculus x carnea*	Briotti	40’	35’		10’
Katsura Tree	*Cercidiphyllum japonicum*		40’	40’		10’
Autumn Gold Ginkgo	*Ginkgo biloba*	Autumn Gold	40’	30’		10’
Honeylocust	*Gleditsia triacanthos*	Shademaster	45’	35’		8’
Chinese Pistache	*Pistacia chinensis*		40’	30’		7’
Littleleaf Linden	*Tilia cordata*	Greenspire	40’	30’		8’
Emerald Sunshine Elm	*Ulmus propinqua*	JFS-Bieberich	40’	25’		7’
Small Trees <35’ Tall					30-40’	
Trident Maple	*Acer buergeranum*		20’	20’		5’
David’s maple	*Acer davidii*		30’	25’		5’
Flame Maple	*Acer ginnala*	Flame	20’	20’		5’
Paperbark Maple	*Acer griseum*		25’	20’		5’
Apollo Maple	*Acer saccharum*	Barret Cole	30’	15’		5’
Tatarian Maple	*Acer tatarian*		25’	20’		5’
Norwegian Sunset Maple	*Acer truncatum x A. platanoides*	Keithsform	35’	25’		8’
Pacific Sunset Maple	*Acer truncatum x A. platanoides*	Warrenred	30’	25’		8’

COMMON NAME	BOTANICAL NAME	CULTIVAR	MATURE HEIGHT	CROWN SPREAD	SPACING	MINIMUM PLANTER WIDTH
Pyramidal European Hornbeam	*Carpinus betulus*	Fastigiate	35’	25’		5’
American Hornbeam	*Carpinus caroliniana*		25’	20’		5’
Japanese Hornbeam	*Carpinus japonica*		20’	15’		5’
Eastern Redbud	*Cercis Canadensis*	Forest Pansy	20’	25’		5’
Pink Flowering Dogwood	*Cornus florida*	Rubra	20’	20’		5’
Chinese Kousa Dogwood	*Cornus kousa*	Chinensis	20’	20’		5’
Thornless Cockspur Hawthorn	*Crataegus crus-galli*	Inermas	25’	25’		5’
Lavalle Hawthorn	*Crataegus x lavallei*		30’	20’		5’
Tricolor Beech	*Fagus sylvatica*	Roseomarginata	30’	20’		5’
Goldenrain Tree	*Koelreuteria paniculata*		30’	30’		8’
Rustica Rubra Saucer Magnolia	*Magnolia soulangiana*	Rustica Rubra	20’	20’		8’
Flowering Crabapple	*Malus spp.*	Snowdrift, Red Baron, Prairiefire	20’	20’		5’
Tschonoskii Crabapple	*Malus spp.*	Tschonoskii	30’	15’		5’
Black Tupelo	*Nyssa sylvatica*		30’	20’		8’
Sourwood	*Oxydendron arboretum*		35’	20’		6’
Parrotia	*Parrotia persica*	Persian Spire, JL Columnar, Ruby Vase or Vanessa	30’	15-20’		5’
Flowering Plum	*Prunus cerasifera*	Thunder-cloud	20’	20’		6’
Sargent Cherry	*Prunus sargentii*		30’	30’		8’
Snowgoose Cherry	*Prunus spp.*	Snowgoose	20’	20’		8’
Callery Pear (not for street tree use)	*Pyrus calleryana*	Redspire or Cleveland Select	35’	25’		NA
Cascara	*Rhamnus purshiana*		20’	20’		5’
Japanese Stewartia	*Stewartia pseudocamellia*		30’	20’		6’
Japanese Snowbell	*Styrax japonicus*		25’	25’		6’
Redmond Linden	*Tilia americana*	Redmond	35’	25’		8’
Small Trees – Narrow <35’ Tall					25-30’	
Douglas Maple	*Acer glabrum*		25’	15’		4’
Rocky Mt. Glow Maple	*Acer grandidentatum*	Schmidt	25’	15’		4’
Crimson Sentry Maple	*Acer platanoides*	Crimson Sentry	25’	15’		5’
Galaxy Magnolia	*Magnolia ‘Galaxy’*	Galaxy	30’	15’		6’
Ivory Spear Crabapple	*Malus ssp.*	JFS KW214MX	18’	7’		5’
Raspberry Spear Crabapple	*Malus ssp.*	JFS KW213MX	20’	10’		5’
Spire Cherry	*Prunus x hillieri*	Spire	30’	10’		6’
Red Cascade Mt. Ash	*Sorbus americana*	Dwarfcrown	18’	8’		4’
Tree Lilac	*Syringa meyeri*	Palibin	7’	5’		4’

COMMON NAME	BOTANICAL NAME	CULTIVAR	MATURE HEIGHT	CROWN SPREAD	SPACING	MINIMUM PLANTER WIDTH
Lindsey's Skyward Bald Cypress	*Taxodium distichum*	Skyward	30'	10'		7'

**Other species or cultivars may be appropriate but must be approved by the City of Lacey.*

If conifers are used in informal plantings, then the following species are appropriate for use in Lacey:

Western red cedar (*Thuja plicata*)
Mt. Hemlock (*Tsuga mertensiana*)
Douglas-fir (*Pseudotsuga menziesii*)
Canada Hemlock (*Tsuga canadensis*)
Western Hemlock (*Tsuga heterophylla*)
Giant sequoia (*Sequoia gigantea*)
Alaska Yellow Cedar (*Chamaecyparis nootkatensis* and 'Pendula')
Austrian pine (*Pinus nigra*)
Deodar Cedar (*Cedrus deodara*)
Noble Fir (*Abies procera*)
Shore Pine (*Pinus contorta* var. contorta)
Western white pine (*Pinus monticola*-blister rust resistant cultivars)
Blue Atlas Cedar (*Cedrus atlantica* 'Glauca')
Serbian Spruce (*Picea omorika*)
Dawn Redwood (*Metasequoia glyptostroboides*)
Incense Cedar (*Calocedrus decurrens)*
Boulevard Cypress (*Chamaecyparis pisifera*)

Tree species specifically **forbidden** for planting in the City of Lacey:

Silver Maple (*Acer saccharinum*) Boxelder (*Acer negundo*)
American Sycamore (*Platanus occidentalis*) London Planetree (*Platanus* x *acerifolia*)
Red Sunset Maple (*Acer rubrum* 'Red Sunset') Sycamore Maple (*Acer pseudoplatanus*) Sweetgum (*Liquidambar styraciflua*)
Lombardy Poplar (*Populus nigra* 'Italica') Silver Poplar (*Populus alba*)
Black Locust (*Robinia pseudoacacia*) Tree of

Heaven (*Ailanthus altissima*) Scotch pine (*Pinus sylvestris*)

Tree species

discouraged:

Elms (*Ulmus*

spp.)
European White Birch (*Betula pendula*) Willows (*Salix* spp.)
Leyland Cypress (*Cupressus x leylandii*) Colorado Blue Spruce (*Picea pungens*)
Callery pear (*Pyrus* spp.) as street trees

4G.110 Planter Strip Landscaping

All public streets within the City and the City's UGA boundary will be planted with landscaping materials to create a distinct and pleasant character for those roadways. The shrubs and groundcovers on the following table shall be required in or along the public right-of-way, including medians.

See Chapter 4B.125, Landscape/Planter Areas, for specific site preparation requirements.

A. Planting theme: Landscaping materials shall be installed in accordance with the landscaping shown on the approved civil drawings.

B. Planting size: Ground cover (i.e., kinnikinnick), 4 inch pot spaced 18 to 20 inches on center or 1 gallon pots at 20 inches on center. Low growth shrubs (i.e., Oregon grape), 1 gallon pots at 3 feet on center. Shrubs (i.e., rhododendron), 18 to 24 inches in height at 5 feet on center or 3 gallon pot at 5 feet on center.

C. Location: Shrubs and groundcover shall be as shown on the applicable roadway sheets. Shrubs and groundcover shall be incorporated into planter strip and median areas. Sight distance requirements shall be incorporated into the civil design. Shrubs shall not be located within 10 feet of fire hydrants.

D. Maintenance: All projects, regardless of type or zoning, required to plant shrubs and groundcover will also be required to maintain them in perpetuity, regardless of ownership. Landscaping shall be maintained per ANSI A300, Standard Practices for Trees, Shrubs and other Woody Plant Maintenance.

The ~~owner/~~homeowner's association is responsible for mowing, pruning, weeding, watering, replacement ~~(replaced due to death, damage or disease after approval by a City representative) and any other shrub and groundcover~~ and maintenance of city approved landscaping within the respective right-of-way and common areas. In the absence of a homeowner's association, the property owners adjacent to the right-of-way shall be responsible for these items. See Chapter 6.210 for installation and maintenance of irrigation systems. ~~At the time of plat or site plan review approval, the City will determine responsibility for maintenance of medians.~~

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E. Removal and Replacement of landscaping within the right-of-way shall not be performed without prior authorized by the city.

F. Plant material with sight distance triangles will not exceed 3 feet of height at full maturity.

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Suitable Shrubs:

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Common Name	Botanical Name
Barberry	*Berberis thunbergii*
Dwarf Hinoki Cypress	*Chamaecyparis obtusus* 'Nana'
Rockrose	*Cystis spp.*
Salal	*Gaultheria shallon*
Mountain Laurel	*Kalmia spp.*
Oregongrape	*Mahonia aquifolium*
Andromeda	*Pieris spp.*
Rhododendron	*Rhododendron spp.*
Winged Euonymus	*Euonymus alata*
Otto Luyken	*Prunus laurocerasus* 'Otto Luyken'
Viburnum	*Viburnum davidii*
Savin Juniper	*Juniperus sabina*
Blue Star Juniper	*Juniperus squamata* 'Blue Star'
Pfitzer Juniper	*Juniperus Chinensis* 'Pfitzer'

Suitable Groundcovers:

Common Name	Botanical Name
Bunchberry	*Cornus canadensis*
Kinnikinnick	*Arctostaphylos uva-ursi*
Bar Harbor Juniper	*Juniperus horizontalis* 'Bar Harbor'
Turf*	

***Turf shall be permitted in applications as approved by the City of Lacey.**

4G.120 Parking Lots

The construction of parking lots within the City shall be governed by the Community Development Department. Access and drainage issues are governed by the Public Works Department. Contact the City of Lacey Planning Department to determine if the parking lot requires a Site Plan Review process. The configuration of the stalls shall be as outlined in the appropriate detail at the end of this Chapter.

The Public Works Department may require plans for the access. Access points to parking lots shall meet all the criteria as outlined in Chapters 4B.025, Access Management, and 4B.140, Driveways.

Plans and specifications as required in Chapter 5, Storm Drainage, shall be required to be submitted for review and approval by the City with respect to storm drainage discharge and on site retention or detention, matching street and/or sidewalk grades, access locations, parking layout, and to check for future street improvement conformity and City zoning regulations. (LMC 14.19.020)

Parking lot surfacing materials shall satisfy the requirement for a permanent all-weather surface. Asphalt concrete pavement and cement concrete pavement satisfy this requirement and are approved materials. Gravel surfaces are not acceptable or approved surface material types. Combination grass/paving systems are approved surface material types, however, their use requires submittal of an overall parking lot paving plan showing the limits of the grass/paving systems and a description of how the systems will be irrigated and maintained. If the City Engineer determines the grass/paving system is not appropriate for the specific application, alternate approved surfacing materials shall be utilized. (LMC 14.19.030)

LIST OF DRAWINGS

CHAPTER 4 - TRANSPORTATION

CITY OF LACEY PLANNING COMMISSION
WORK SCHEDULE

Planning Commission Meeting **October 23, 2024** **Packets due: October 18, 2024**	1. **Work Session:** Public Works Standards 2. **Work Session:** Commute Trip Reduction Plan
Planning Commission Meeting **November 13, 2024** **Packets due: November 8, 2024**	1. **Public Hearing:** SB 5290 Permit Processing 2. **Public Hearing:** Critical Areas Ordinance 3. **Work Session:** Public Works Standards 4. **Work Session:** Comp Plan Outreach/Survey Results
Planning Commission Meeting **November 27, 2024**	**Meeting Canceled**
Planning Commission Meeting **December 11, 2024** **Packets due: December 6, 2024**	1. **Work Session:** Public Works Standards 2. **Work Session:** Comprehensive Plan Vision, Themes, and Goals

Pending Items: PWS: 1/22
Meeting to be canceled: 12/25