



Metro

# Designing Livable Streets and Trails

Metro Council Work Session

March 12, 2019

# Updating design guidance for regional streets and trails

*Projects funded with Regional Flexible Funds must be consistent with the guidelines*



Metro

Parks + Venues

Tools + Services

What's Happening

Metropedia



## GUIDES AND TOOLS

Local transportation system plans

Community Investment Toolkit

Guide to equitable housing +

Guide to downtown revitalization

Economic Value Atlas

Guide to safe and healthy streets

Mobility Corridors Atlas

Safe Routes to School Framework

Guide to nature-friendly development

Home > Tools for Partners > Guides and tools

## Guide to safe and healthy streets

Guides to safe and healthy streets explain how to integrate street design with nearby land uses to minimize congestion, encourage walking, biking and transit, and ensure the well-being of wildlife.



### Street Corners

Every intersection in the transportation system creates street corners – the space where sidewalks come together.

Pedestrians leave the sidewalk to cross the street at street corners, and vehicles and trucks make turns around them. Transit stops are often located at or near them. Street corners, in conjunction with adjacent land uses, can also serve as a place for entertainment, gathering, speaking, or other activities – serving a placemaking function.

#### Best Practices

✓ **Safety:** To increase safety, corner radii and the configuration of medians should be designed to shorten pedestrian crossing width. Minimizing corner radii creates compact intersections with safe turning speeds. Avoid design of channelized right-turn islands (pork chops); these decrease pedestrian safety.

✓ **Vibrant communities:** Bulb outs not only enhance safety; they support vibrant communities by providing valuable space for stormwater planters, art elements, benches, street lighting, way-finding and other placemaking activities.

✓ **Sustainable economic prosperity:** In industrial areas and on industrial streets, wider curb radii support freight movement. On major freight routes that are also regional boulevards and streets, truck aprons paired with bollards can be used to allow for wide truck turns while maintaining livability and safety.

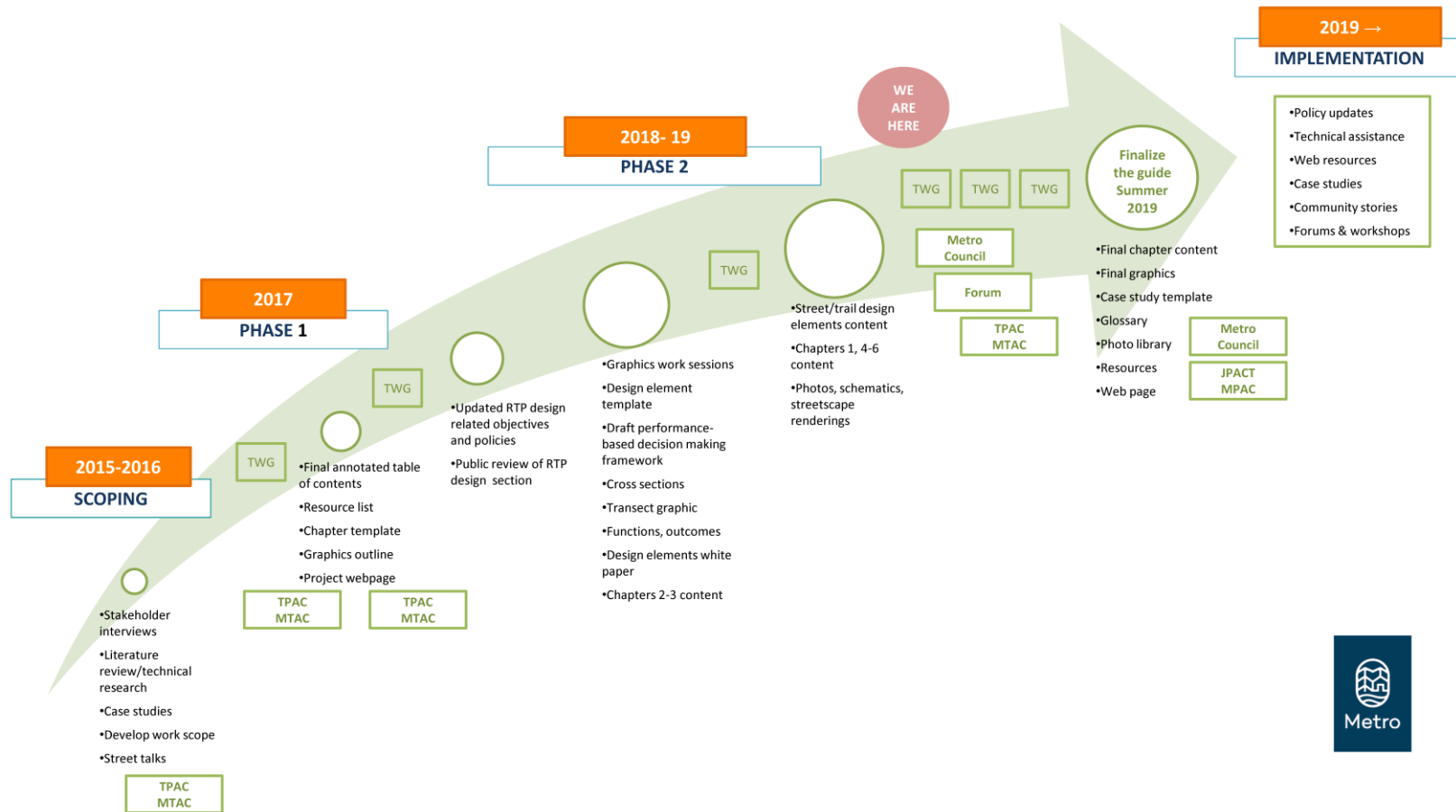
✓ **Social equity:** Street corners must be designed in alignment with Americans with Disabilities Act (ADA) guidance to ensure that people of all abilities can safely navigate crossings at intersections. Perpendicular curb cuts are the preferred design.



**Figure 37** The bulb-outs at NW Couch and NW 11th in downtown Portland ensure that people crossing the street are visible to people driving. The bulb-outs also provide space for benches, pedestrian scale lighting, newspaper boxes and planters. The perpendicular curb cuts make it easier for people using mobility devices to cross. The tight corner is appropriate for this downtown setting and keeps turning movements of motor-vehicles slow. Large trucks making deliveries take the whole intersection to make a turn.

# Designing Livable Streets + Trails Project

## Timeline & Deliverables



# Agencies and organizations represented on the Technical Work Group

*A Technical Work Group has provided review & input throughout the update*

Clackamas County Planning and Engineering  
Multnomah County Transportation Planning  
Multnomah County - Public Health  
Washington County Planning and Engineering  
Metro Planning and Development  
Metro Parks and Nature  
Oregon Department of Transportation, Region 1  
Oregon Department of Transportation, Salem  
TriMet  
US DOT Federal Highways Administration  
Tualatin Hills Park and Recreation District  
MTAC alternate  
Sustainable Cities Initiative, U of O  
Better Blocks PDX

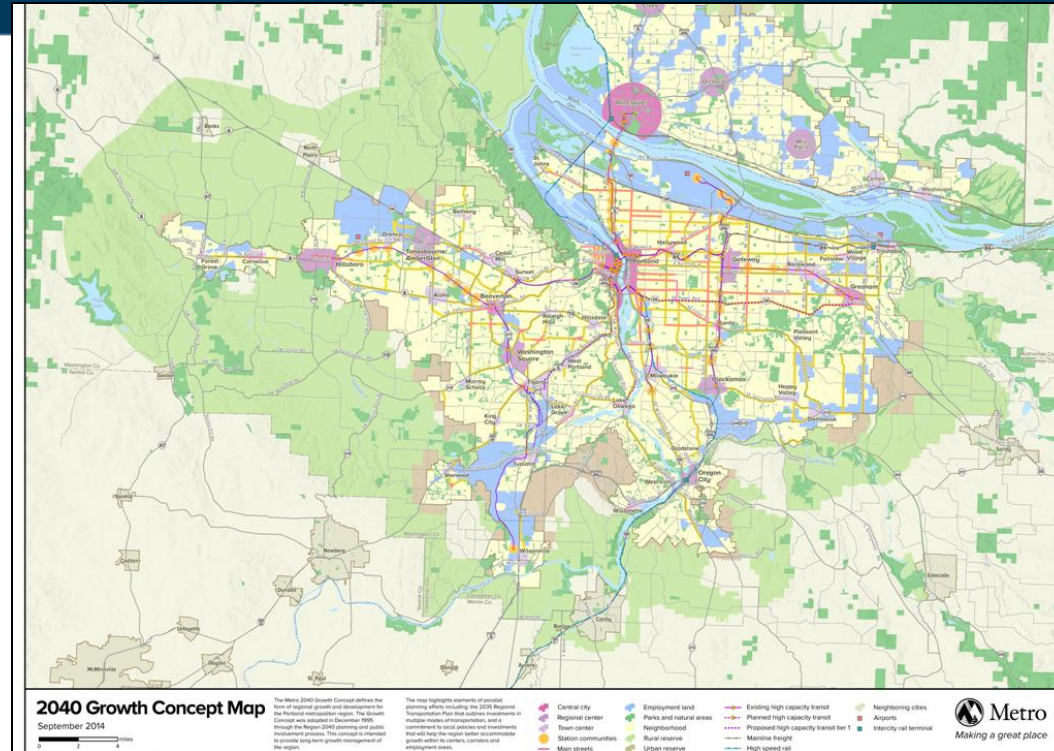
City of Beaverton Transportation Planning  
City of Forest Grove Engineering  
City of Gresham Planning and Engineering  
City of Hillsboro Planning  
City of Portland Bureau of Environmental Services  
City of Portland Bureau of Transportation  
City of Portland Parks and Recreation  
City of Sherwood Community Development  
City of Tualatin Engineering and Parks  
City of West Linn Public Works  
City of Wilsonville Engineering  
Audubon Society of Portland  
Oregon Walks  
Safe Routes to School National Partnership  
The Street Trust  
Landscape architect



# Guidelines link land use and transportation and implement the 2040 Growth Concept

The functions of streets and trails, and the design elements that support those functions, are determined by land use and adopted policies.

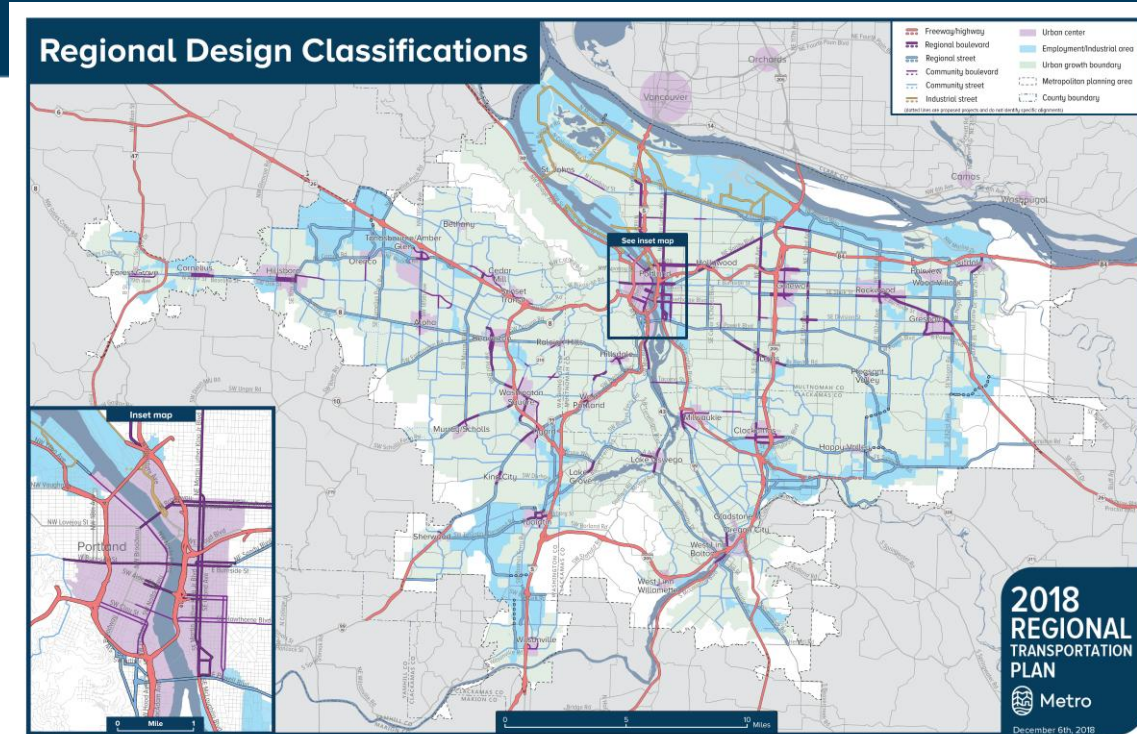
5



# Regional street design policy in the Regional Transportation Plan

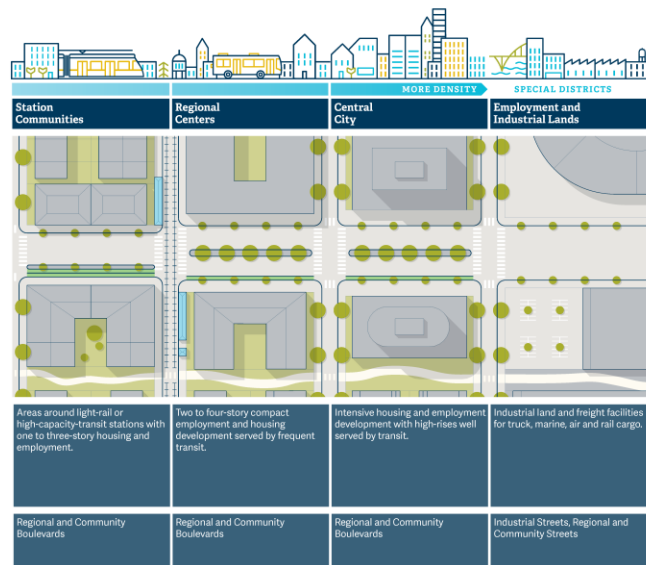
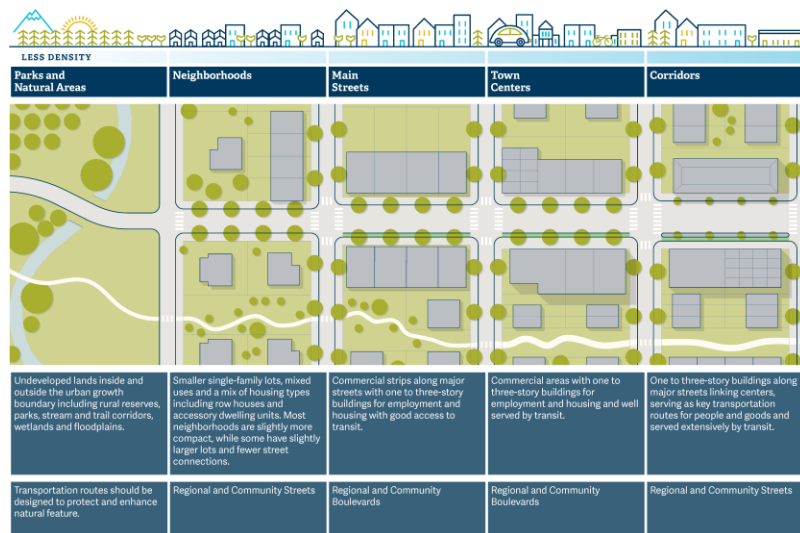
Regional street design classifications dictate how thoroughways and arterials in the RTP should be designed:

- number of lanes
- priority functions
- design speed
- separation of modes
- flex-zone uses
- place-making/public space
- green infrastructure



# Street design classifications correspond to land use

## Metro Land-Use and Transportation Transect



Regional street design classifications support multimodal travel and the specific transportation needs of the 2040 Growth Concept land use types. Local streets serve all land use types. Freeways and highways can traverse any type of land use.

Draft

# Design decisions are guided by desired policy outcomes/design principles



Safety



Healthy  
People



Reduce CO<sub>2</sub>  
Emissions



Vibrant  
Communities



Transportation  
Choices



Security



Sustainable  
Economic  
Prosperity



Resiliency



Efficient and  
Reliable Travel



Healthy  
Environment



Social  
Equity



Fiscal  
Stewardship



# Design serves the different functions of streets

*Desired functions are identified in modal plans and adopted policies*

## Livable Street Functions



### Pedestrian ACCESS & MOBILITY

Every street and trail has safe, comfortable space for people walking, rolling, and enjoying the place they're in.

### Bicycle ACCESS & MOBILITY

Connected bicycle networks, separated from heavy vehicle traffic, ensure that bicycling is a great way to get around in our communities.

### Transit ACCESS & MOBILITY

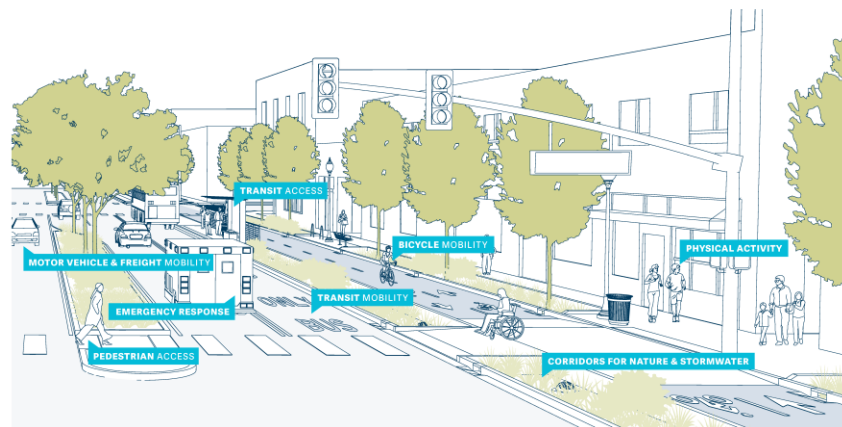
Our streets enable transit to serve the region with an efficient, reliable way to travel between and within our communities.

### Freight ACCESS & MOBILITY

Key freight corridors provide reliable freight movement, and streets allow delivery access to serve both businesses and residents.

### Motor-vehicle ACCESS & MOBILITY

Our transportation system provides for safe, reliable travel in motor vehicles, providing space to facilitate pooled or shared trips.



### Place-making & Public Space

Our streets and trails are a canvas for our community life and daily commerce, helping to form our regional identity.

### Corridors for Nature & Stormwater

Weaving nature and sustainable stormwater management into our streets and trails protects and enhances our region's natural assets.

### Utility Corridors

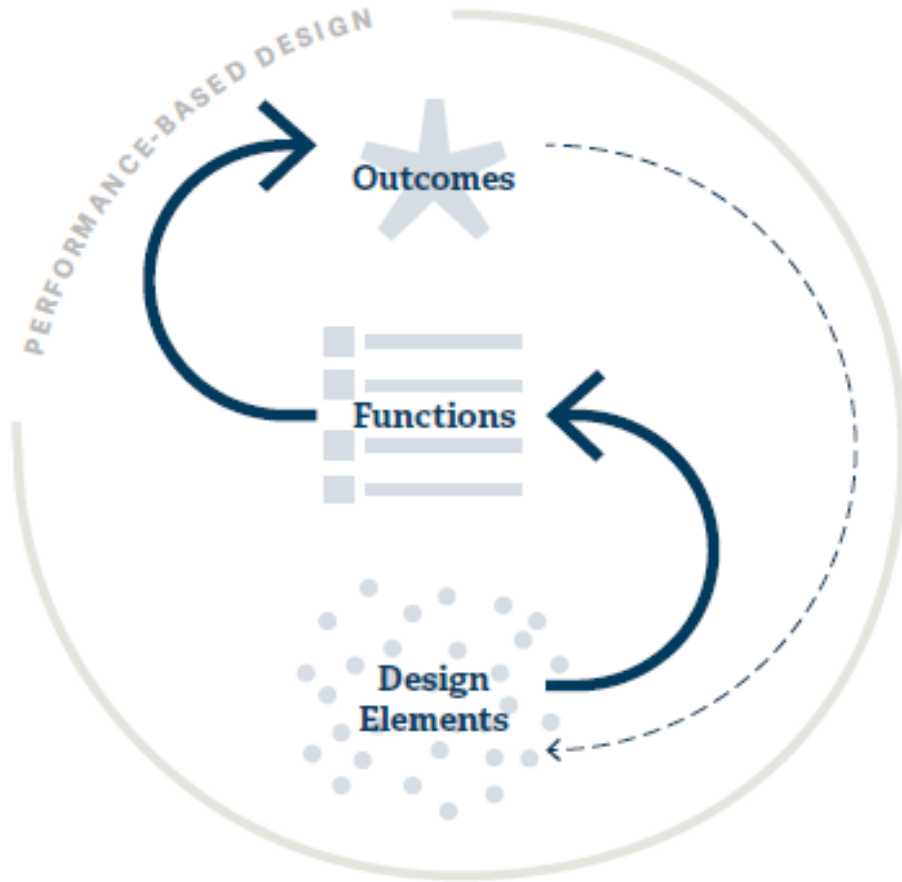
Our transportation corridors move more than just people and goods; they also move water, power, gas, communications, and information.

### Physical Activity

Our streets and trails are places where people enjoy spending time outdoors as part of an active lifestyle.

### Emergency Response

In case of a local or widespread emergency, our streets must provide access and evacuation routes to keep people safe.



With performance-based design, design elements support street functions to achieve desired outcomes

A performance-based design decision-making framework contributes to systemwide networks and regional outcomes.

It starts with a well-defined project need and clear objectives.



Draft

# What is in the guidelines?

*An annotated outline describes what will be in the guidelines – content is being developed*

1. Purpose and how to use the guidelines
2. Policy framework and desired outcomes
3. Design functions and classifications
4. Design elements, recommendations, considerations
5. Visualizations, street illustrations
6. Performance-based decision making framework
7. Implementation strategies and examples



400 NW ALDER STREET, SUITE 700  
PORTLAND, OR 97209  
P 503.251.1300 F 503.251.1309

ATTACHMENT 2

The purpose of this memorandum is to provide a draft Annotated Outline combining the existing *Creating Livable Streets, Green Streets, and Trees for Green Streets* guides (referred to herein as "Existing Metro Guide"). This update is referred to as "New Metro Guide". The content for the New Metro Guide will be a combination of existing material from the Existing Metro Guides (with reference to the *Green Trails and Wildlife Crossings* guides) and new information from current policies and best practices. This memorandum builds on the completed Table of Contents (TOC) – text shown in black – and provides a Draft Annotated Outline where the narrative in *blue italics* indicates specific information anticipated for each chapter and section based on discussion and themes from the project management team (PMT) and technical working group (TWG). Percentages next to each Chapter heading indicate the amount of space dedicated to that section relative to the whole document.

## METRO DESIGNING LIVABLE STREETS & TRAILS GUIDE DRAFT ANNOTATED OUTLINE

### CHAPTER 1: INTRODUCTION [5%]

#### 1.1 Purpose

##### o Making a Great Place

- o Describes how diverse people, education, land use, transportation choices, job choices, green infrastructure, access to parks and natural areas, housing choice and affordability, etc. come together to create a great place.

##### o Regional 2040 Growth Concept

- o Overview of the concept and how transportation helps achieve it.

##### o Regional Transportation Plan (RTP) Vision and Goals

- o Overview of the goals and reference the Regional Transportation Plan for additional details.
- o The Regional Transportation Plan, Chapter 2, Section 2.4 Regional System Definition will be used as a reference for developing this section.

#### 1.2 Who Will Use the Guide

- o This subsection will describe the audience the New Metro Guide is intended for and guide them to the areas that might be most useful:

- o Planners, landscape architects, and engineers – for best practices.
- o Public sector practitioners for best practices and project development guidance.
- o It will be public-facing and lay-person friendly.
- o Technical appendices (e.g., *Trees for Green Streets*) will provide more detail.
- o This section will use information from the current guides, but require major updates.

# Design element example: Motor vehicle travel lanes

*The number and width of motor vehicle travel lanes is one of the most important design elements of a transportation project.*

A variety of factors should guide decisions on how existing or new road right-of-way is divided up:

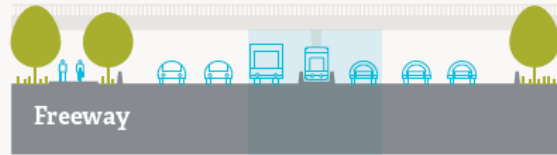
- Safety of all users
- Mobility/capacity for all users
- Serving priority functions
- Travel Speeds
- Right-of-way width needed





# Design element example: Motor vehicle travel lanes

*Guidance on number of travel lanes is provided by the Regional Design Classifications*



RIGHT-OF-WAY  
110'+



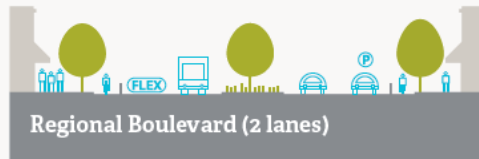
RIGHT-OF-WAY  
100'-135'



RIGHT-OF-WAY  
60'-90'



RIGHT-OF-WAY  
90'-120'



RIGHT-OF-WAY  
70'-100'



RIGHT-OF-WAY  
60'-80'



RIGHT-OF-WAY  
80'-120'



RIGHT-OF-WAY  
60'-100'



RIGHT-OF-WAY  
60'-80'

*Shaded areas optional based  
on available width*

# Design element example: Motor vehicle travel lanes

*Lane widths guidance is based on national best practice (NCHRP 880) and recommends starting with lower widths*

Regional Design Classifications	Motor Vehicle Travel Lanes							
	<10' lanes	10' lanes	11' lanes	12' lanes	>12' lanes	two-way left-turn lanes	turn lanes at intersections	Transit or BAT Lanes
Freeways	●	●	●	●	●	●	●	●
Highways	●	●	●	●	●	●	●	●
Regional Boulevard	●	●	●	●	●	●	●	●
Community Boulevard	●	●	●	●	●	●	●	●
Regional Street	●	●	●	●	●	●	●	●
Community Street	●	●	●	●	●	●	●	●
Industrial Street	●	●	●	●	●	●	●	●
<div><div>●</div> Preferred condition</div> <div><div>●</div> Typical condition (preferred in some conditions, as discussed)</div> <div><div>●</div> Not a typical/preferred condition</div>								

# Next steps

March 21- Update to JPACT

April 22 – Policymaker's forum on design

June/July – Preview final draft of guidelines

# Metro Council policy questions

- Are there additional policy outcomes or clarifications to those already identified, that the Council wish staff to reflect in the regional transportation design guidelines?
- Does the Council have further direction on the approach or content of the design guidelines?
- Is there additional direction the Council wants to provide in regards to applying regional street and trail design guidelines to future transportation funding?

**oregonmetro.gov**

