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MEMORANDUM 4

Date: January 7, 2016

Project #: 17899

To: Paul Wyntergreen, City of Tillamook

From: Susan Wright, PE and Anais Malinge

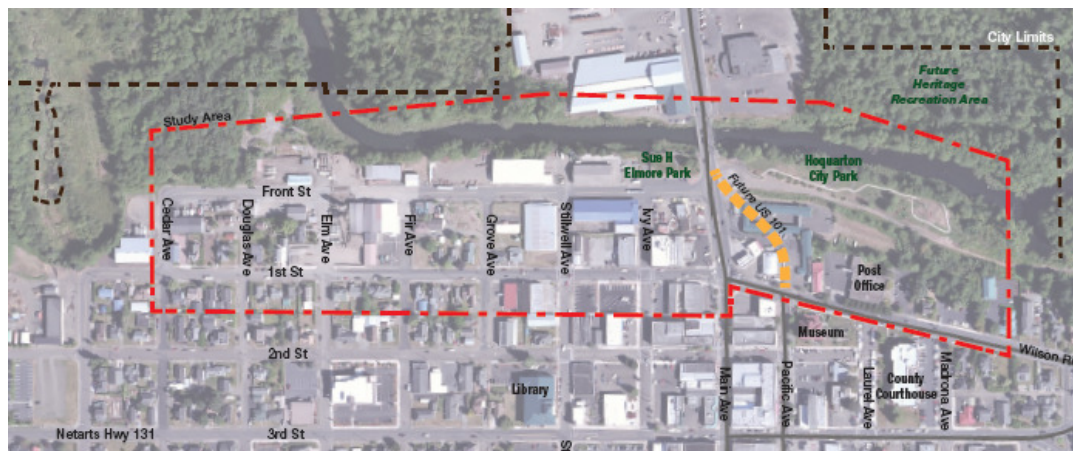
Project: Hoquarton Area Plan

Subject: Transportation System Plan Amendments

This project is partially funded by a grant from the Transportation and Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and the Oregon Department of Land Conservation and Development. This TGM grant is financed, in part, by federal Moving Ahead for Progress in the 21st Century (MAP-21), local government, and the State of Oregon funds. The contents of this document do not necessarily reflect views or policies of the State of Oregon.

This memorandum identifies the multi-modal transportation network and improvements proposed within the Hoquarton Area, as shown in Exhibit 4-1, which will be adopted as part of the City of Tillamook Transportation System Plan (TSP) during the City of Tillamook's next TSP Update.

Exhibit 4-1 Hoquarton Area Plan



Existing Transportation Plans

As documented in Technical Memorandum #2 (Existing and Planned Conditions), the following adopted transportation plans impact future planning for the Hoquarton Plan Area:

- City of Tillamook Transportation System Plan

- City of Tillamook Transportation Refinement Plan
- US 101/OR6 Traffic Improvement Project
- Crosstown Connections Project

The following proposed transportation network and improvements is consistent with the US 101/OR6 Traffic Improvement Project and the Crosstown Connections Project but represents changes to the existing City of Tillamook Transportation System Plan and Transportation Refinement Plan.

Transportation Planning Rule

The Transportation Planning Rule (TPR), OAR 660-012, requires that local agencies evaluate the potential transportation impacts of proposed plan amendments and land use regulation changes. The Hoquarton Area Plan will include recommended plan amendments and zone changes that include an increase in the allowable density of some of the existing residential areas within the study area and a change of some parcels from industrial to commercial zoning. These changes need to be reflected in the growth projections for the Hoquarton Plan Area during the city's TSP Update to ensure that the proposed plan and land use changes do not have a "significant effect" on transportation that is not otherwise mitigated by the proposed improvements for the area.

Exhibit 4-2 shows the proposed zoning changes to the Hoquarton area. These zoning changes are reflected as "worst-case" land use changes in Table 4-1.

Exhibit 4-2 Zoning Changes in the Hoquarton Plan Area



Table 4-1 provides the existing and proposed “worst-case” trip generation estimates based on the existing and proposed zoning of affected parcels in the Hoquarton Area Plan. As shown, the proposed zone changes may result in an estimated 75 additional trips during the weekday PM peak hour. The trip generation associated with the zone change does not account for internal trips (trips between uses) or multi-modal trips. Considering the mix and nature of the proposed land uses in conjunction with the proposed multi-modal infrastructure in the area, many of these trips are likely to be non-auto trips such as walking and cycling.

Table 4-1 Trip Generation Estimates

Zone	Land Use	ITE Code	Size	Weekday	Weekday PM Peak Hour		
					Total	In	Out
Existing							
R 7.5	Single-Family Detached	210	25 Units	240	25	15	10
C-C	Specialty Retail	826	25,000 Sq. Ft.	1,110	70	30	40
Ind	General Light Industrial	110	75,000 Sq. Ft.	520	75	10	65
Total Existing				1,870	170	55	115
Proposed							
R-0	Condominium	230	80 Units	470	40	25	15
O-S	City Park	411	3.4 Acres	10			
C-C	Specialty Retail	826	75,000 Sq. Ft.	3,320	205	90	115
Total Proposed				3,795	245	115	130
Difference				+1,925	+75	+60	+15

The following section identifies the transportation improvements recommended for inclusion in the Hoquarton Area Plan and in the City’s TSP. It is anticipated that these projects will mitigate any potential “significant effect” resulting from the proposed plan amendments and zone changes.

Transportation Network

The following section identifies the existing adopted roadway functional classifications for roadways within the Hoquarton Plan Area, identifies the primary circulation routes proposed for each mode (pedestrian, bicycle, transit, vehicle, and freight) within the Hoquarton Area Plan, and the recommended cross-section for each roadway. The proposed roadway cross-sections were developed considering the existing roadway functional classification, the associated standard cross-section associated with each functional classification, and the needs of each mode based on the proposed circulation maps.

Functional Classification of Roadways

Table 4-2 documents the existing functional classifications of roadways within the focus area per ODOT and City of Tillamook classifications.

Table 4-2 Adopted Functional Classifications

Roadway	Functional Classification	
	ODOT	Tillamook
US Route 101 (Main Ave)	Principal Arterial	State Arterial
HWY 6 (Wilson River Hwy)	Minor Arterial	State Arterial
HWY 131 (3rd Ave)	Urban Collector	Collector
Front Street	Minor Collector	Collector
1st Street	Minor Collector	Collector
Birch Avenue (between 1 st Street and 3 rd Street)	Local	Collector
Birch Avenue (south of 3 rd Street)	Local	Local
Cedar Avenue (between Front Street and 1 st Street)	Local	Collector
Cedar Avenue (south of 1 st Street))	Local	Local
Douglas Avenue	Local	Local
Elm Avenue	Local	Local
Fir Avenue	Local	Local
Grove Avenue	Local	Local
Stillwell Avenue	Local	Collector
Ivy Avenue	Local	Local
2nd Street	Local	Local

No changes are proposed to the existing roadway functional classifications. *The standard cross-sections associated with each of these functional classifications are provided in Attachment “A”.*

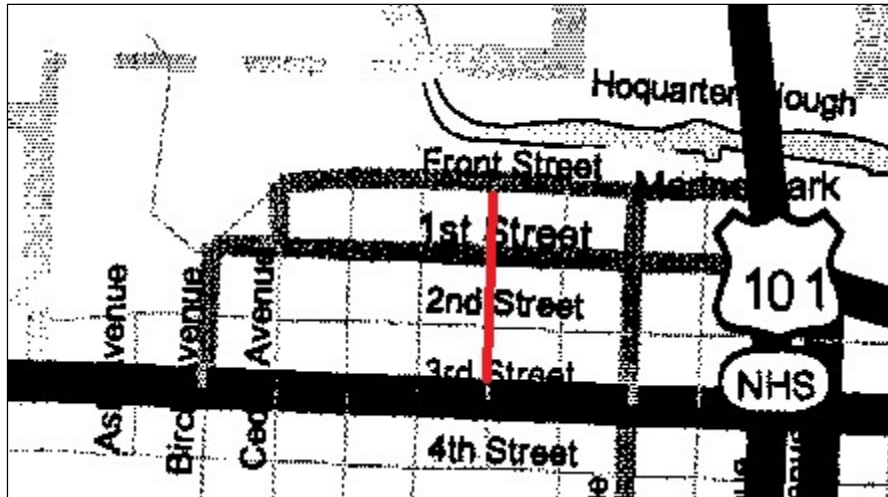
Proposed Primary Multi-Modal Circulation Routes

The Hoquarton Plan Area includes several roads that are primary routes for through vehicle traffic yet the area needs to have attractive and safe routes for people to walk and bike to and through the area. Although all modes will be accommodated on all roads, the following identifies the primary circulation routes identified for each mode to ensure that improvements are provided that are consistent with the desired primary users of each route. *Attachment “B” includes the Circulation Map.*

Freight Route

The proposed freight circulation changes within the Hoquarton Plan Area are illustrated in Exhibit 4-3. Exhibit 4-3 shows the existing designated freight routes per the 2003 City of Tillamook Transportation System Plan, and the proposed edits. As shown, an additional freight route designation along Fir Avenue between Front Street and 3rd Street is proposed. Its addition serves as an alternative to Stillwell Avenue on which bulb-outs are proposed, which would restrict turning radii for truck maneuvers, separate modes and limit modal conflicts, while promoting redundancy in the network.

Exhibit 4-3 Freight Route Changes in the Hoquarton Plan Area



Proposed Cross-sections

Alternative cross-sections are proposed to be adopted as the standard cross-sections for the roadways within the Hoquarton Plan Area. The proposed cross-sections were developed based on the primary circulation routes presented above and based on the existing standard cross-sections. However, the proposed cross-sections are proposed to supersede the standard cross-sections for these facilities. *The proposed cross-sections associated with the Hoquarton Plan Area are provided in Attachment "C".*

Transportation Improvement Projects

The following section summarizes the necessary transportation improvement projects needed to implement the circulation networks and cross-sections presented above. Planning-level cost estimates are provided for each improvement. *Attachment "D" illustrates the conceptual roadway design for the near-term projects.*

Near-Term Projects

The improvement projects summarized in Table 4-2 are those with an anticipated build-out within the next five years. The projects are divided in street segments, east-west and north-south.

Table 4-2 Near-Term Transportation Improvement Projects

Street	Segment	Project ¹	Cost
Front Street	Fir Avenue to Highway 101	Streetscape including sidewalk infill (450 linear feet), curb rehabilitation, pedestrian ramps, and roadway striping and signage.	\$48,800
1 st Street	Fir Avenue to Highway 101	Streetscape including roadway striping and signage.	\$26,100
2 nd Street	Fir Avenue to Highway 101	Streetscape including sidewalk/curb rehabilitation (600 linear feet) between Grove Ave and Fir Ave to accommodate extension of one-way section, and roadway striping and signage through segment.	\$57,900
Fir Avenue	Front Street to 2 nd Street	Streetscape including sidewalk infill (875 linear feet), curb rehabilitation, pedestrian ramps, curb extensions, and roadway striping and signage.	\$103,400
Grove Avenue	Front Street to 2 nd Street	Streetscape including sidewalk infill (500 linear feet), curb rehabilitation, pedestrian ramps, curb extensions, and roadway striping and signage.	\$68,600
Stillwell Avenue	Front Street to 2 nd Street	Streetscape including curb extensions, roadway striping and signage. Bike shelter kitty-corner from Pelican Pub.	\$120,300
Ivy Avenue	Front Street to 2 nd Street	Streetscape including sidewalk infill (125 linear feet), curb rehabilitation, pedestrian ramps, and roadway striping and signage.	\$122,500
Total Near-Term Costs			\$547,600

¹ Curb extensions included as part of north-south street projects

Long-Term Projects

The improvement projects summarized in Table 4-3 are those with an anticipated build-out beyond the next five years. The projects are divided in street segments, east-west and north-south.

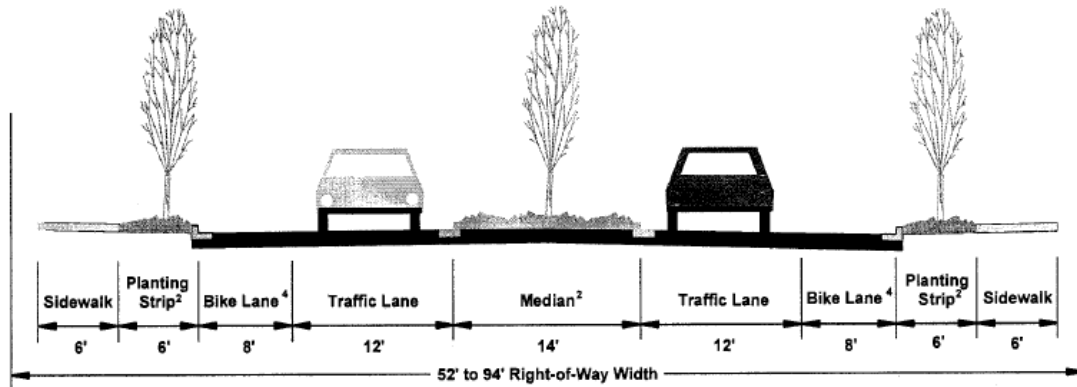
Table 4-3 Long-Term Transportation Improvement Projects

Street	Segment	Project	Cost
Front Street	Cedar Avenue to Fir Avenue	Streetscape including sidewalk infill (1,600 linear feet), curb rehabilitation, pedestrian ramps, and roadways striping and signage.	\$137,900
1st Street	Birch Avenue Fir Avenue	Streetscape including pedestrian ramps and roadway striping and signage. Incorporate landscaping per Scenic Byway designation.	\$16,300
2nd Street	Birch Avenue Fir Avenue	Streetscape including curb extensions and roadways striping and signage.	\$41,600
Cedar Avenue	Front Street to 2nd Street	Streetscape including sidewalk infill (750 linear feet), curb rehabilitation, and pedestrian ramps.	\$57,500
Douglas Avenue	Front Street to 2nd Street	Streetscape including sidewalk infill (750 linear feet), curb rehabilitation, and pedestrian ramps.	\$57,500
Elm Avenue	Front Street to 2nd Street	Streetscape including sidewalk infill (500 linear feet), curb rehabilitation, and pedestrian ramps.	\$38,700
Total Long-Term Costs			\$349,400

ATTACHMENT “A” – EXISTING ROADWAY DESIGN STANDARDS

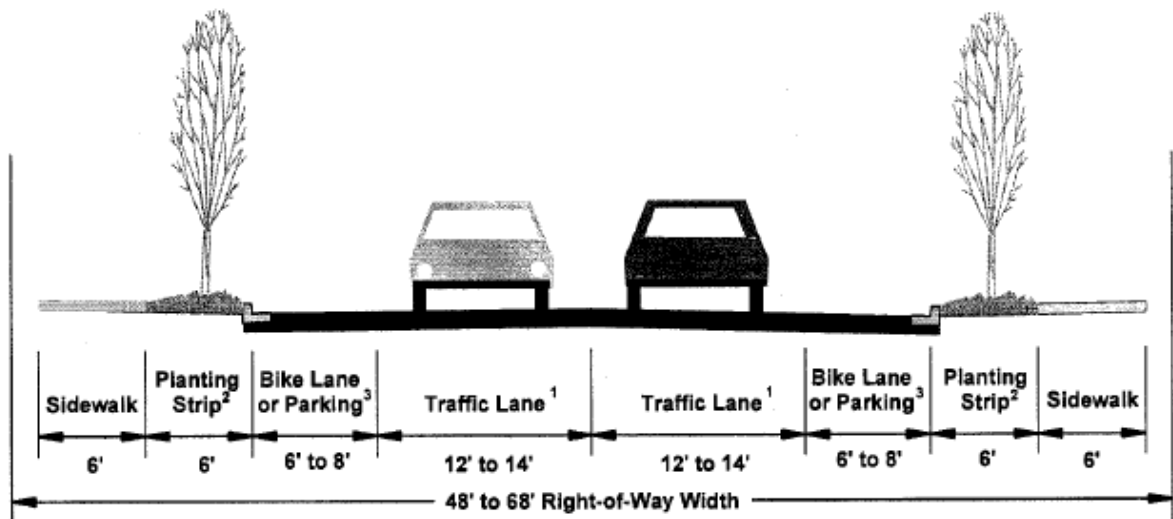
Roadway design standards associated with each roadway functional classification are presented below¹:

▪ 2-Lane Arterial Road



Source: 2003 TSP, Figure 5-3

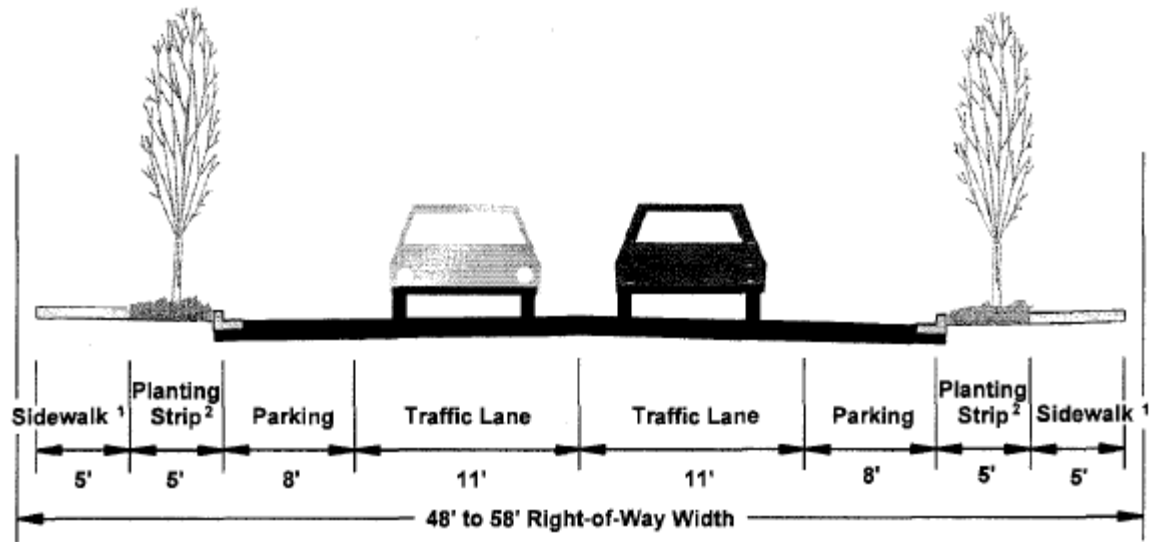
▪ Collector Road



Source: 2003 TSP, Figure 5-3

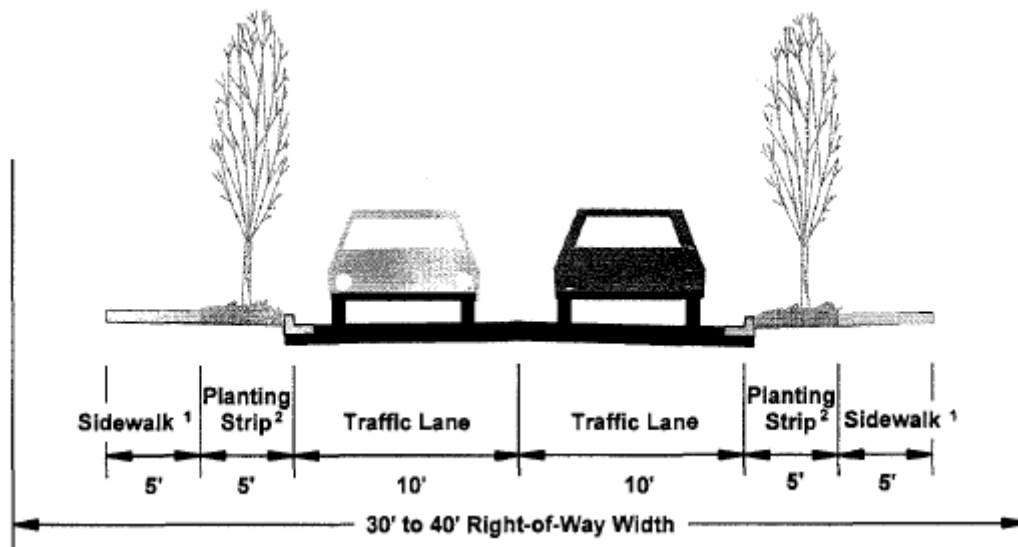
▪ Local Road

¹ The City of Tillamook is not required to update or retrofit roadways not currently meeting the design standards; however, these standards should be applied during future development.



Source: 2003 TSP, Figure 5-4

- Alternative Local Road



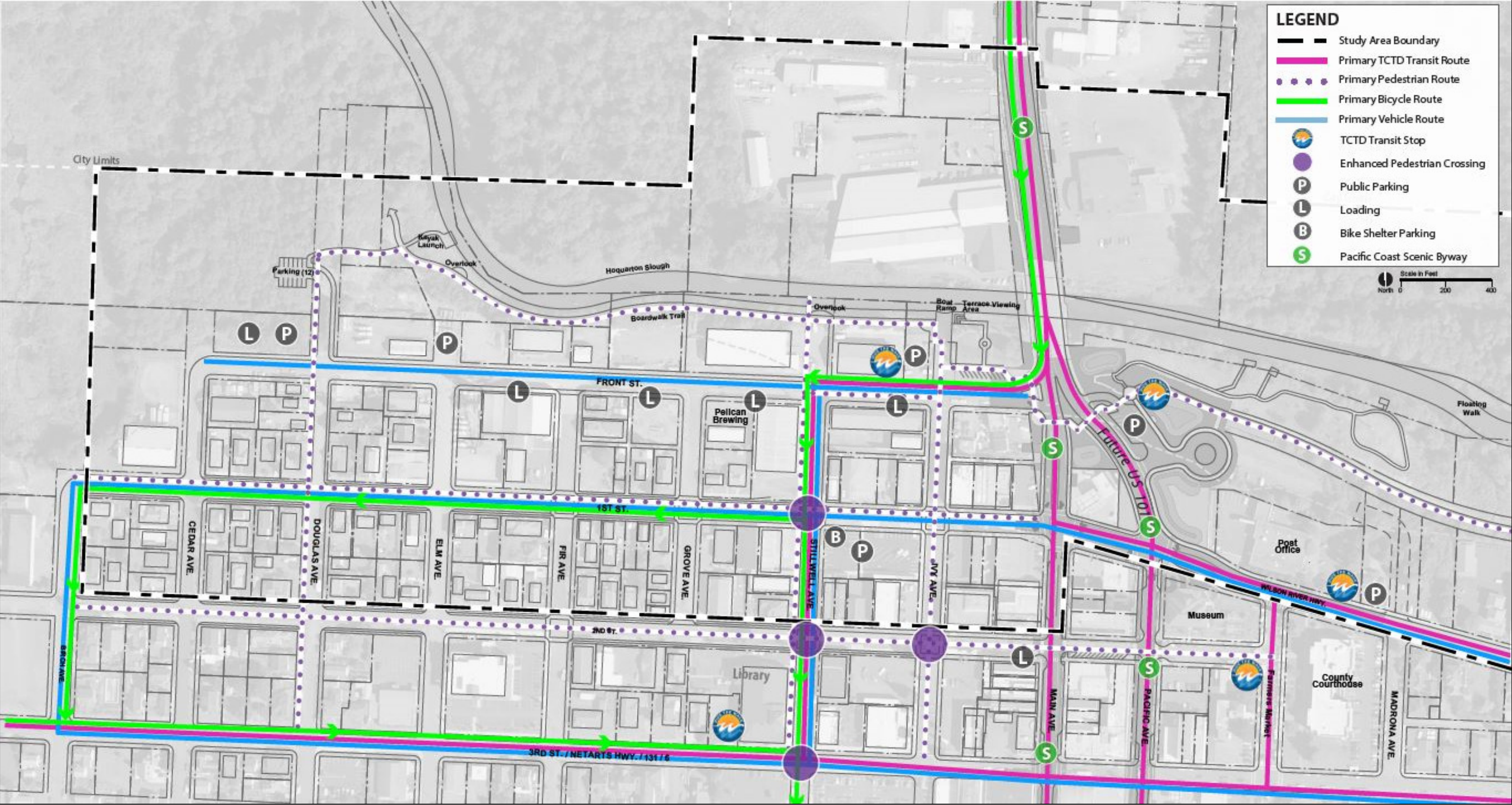
Source: 2003 TSP, Figure 5-4

ATTACHMENT “B” – CIRCULATION MAP

HOQUARTON WATERFRONT PLAN

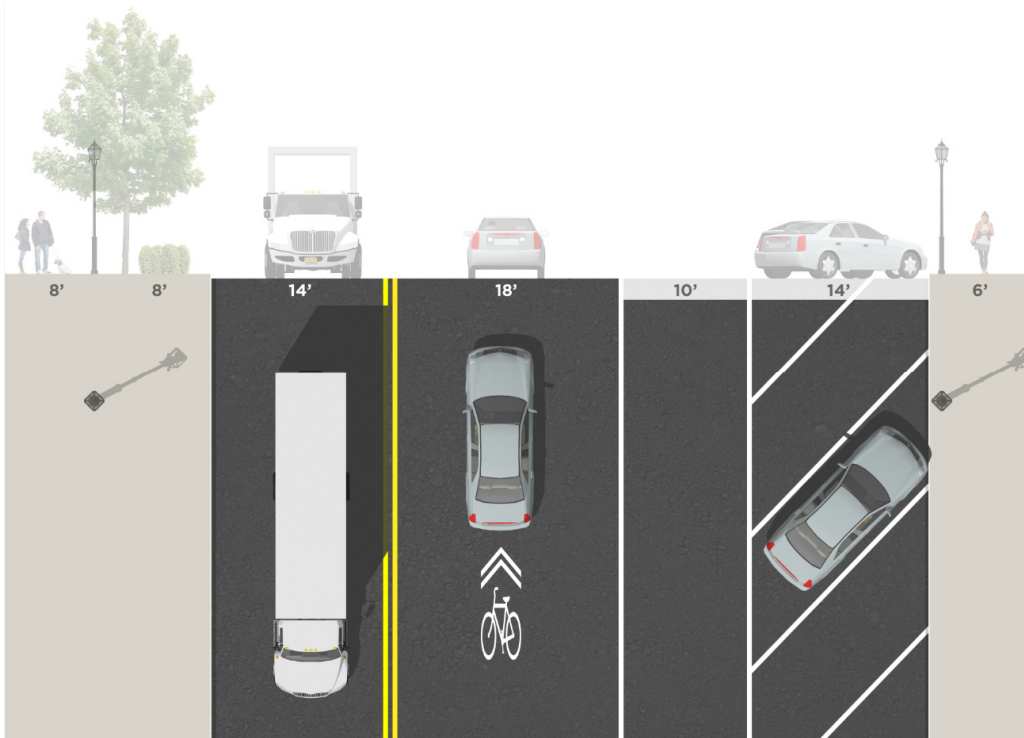
Circulation Plan

City of Tillamook

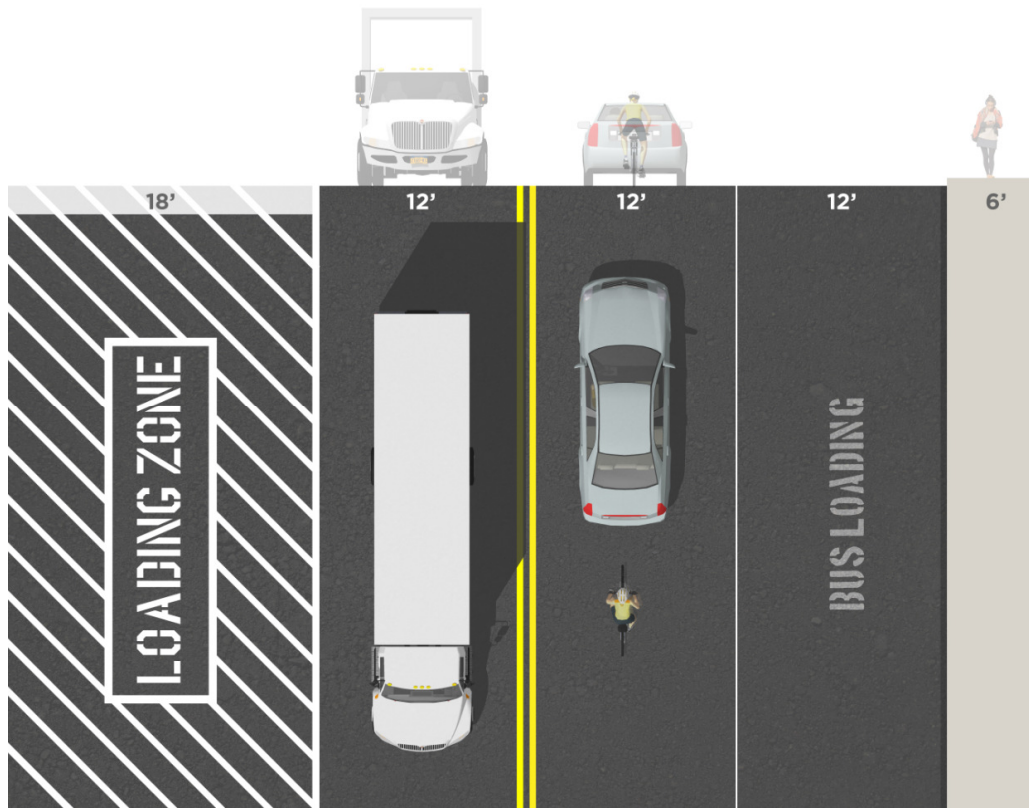


ATTACHMENT "C" – PROPOSED CROSS-SECTIONS

Cross-Section B-1 Front Street (HWY 101 to Ivy Avenue)

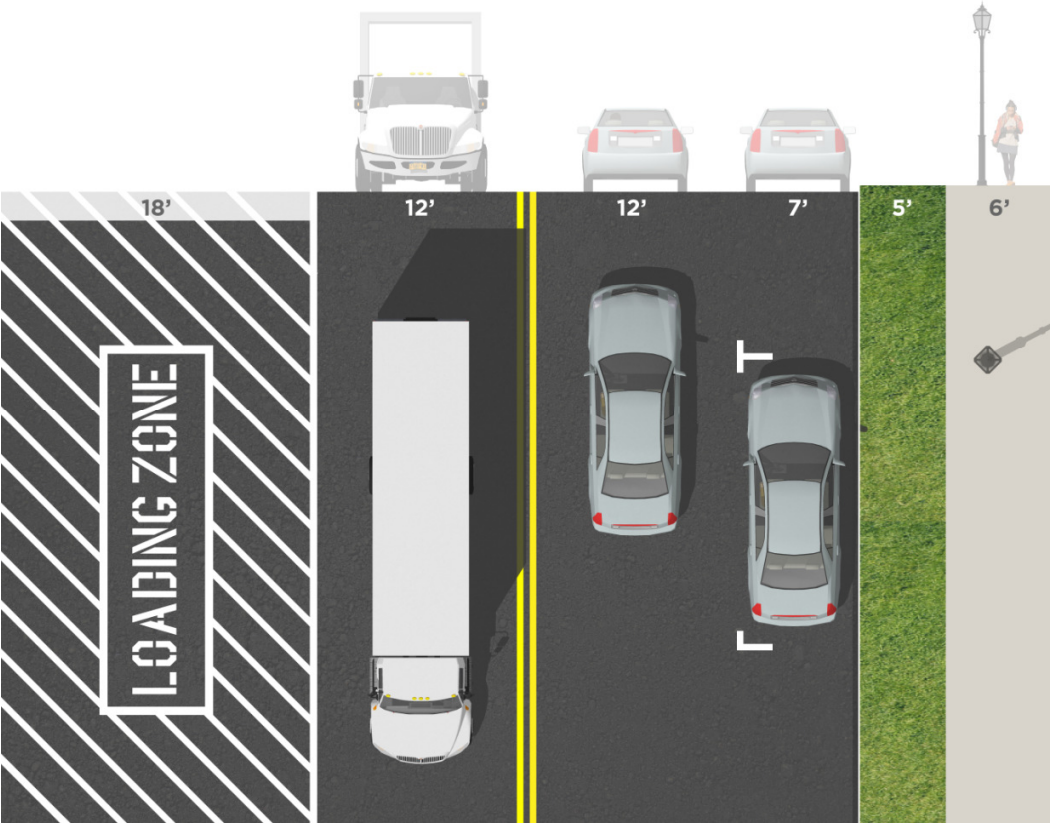


Cross-Section B-2 Front Street (Ivy Avenue to Stillwell Avenue) ¹

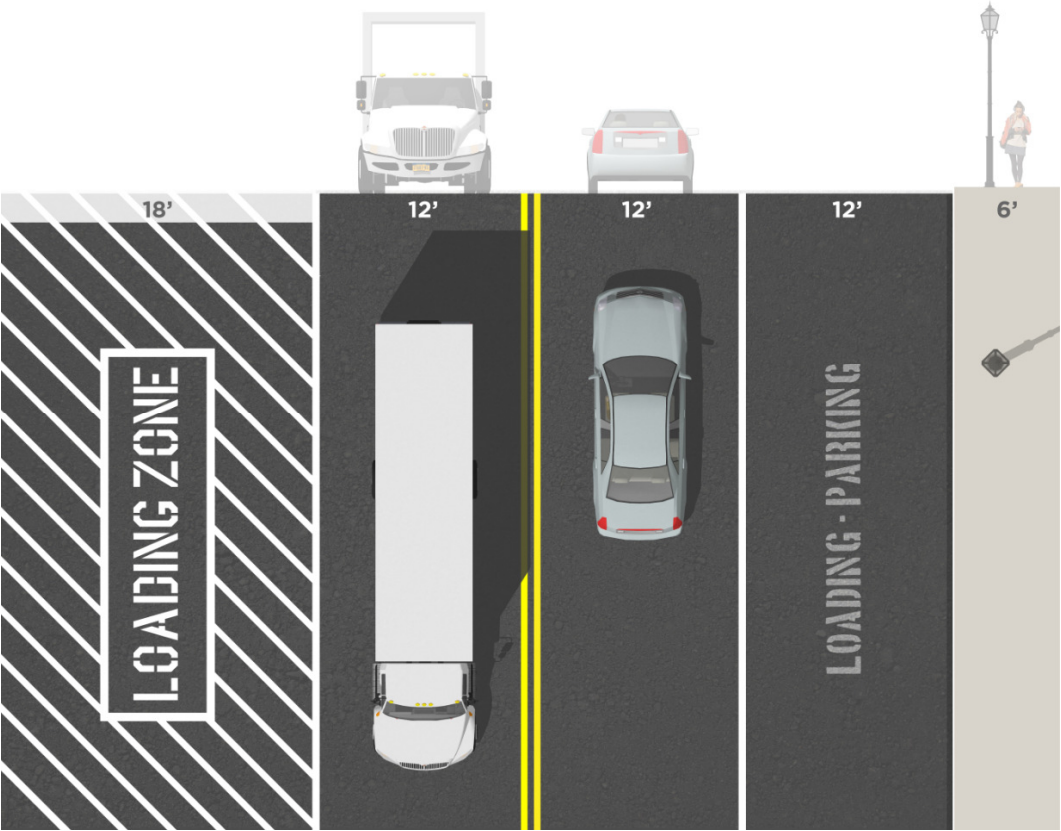


¹ Sawtooth loading preferred.

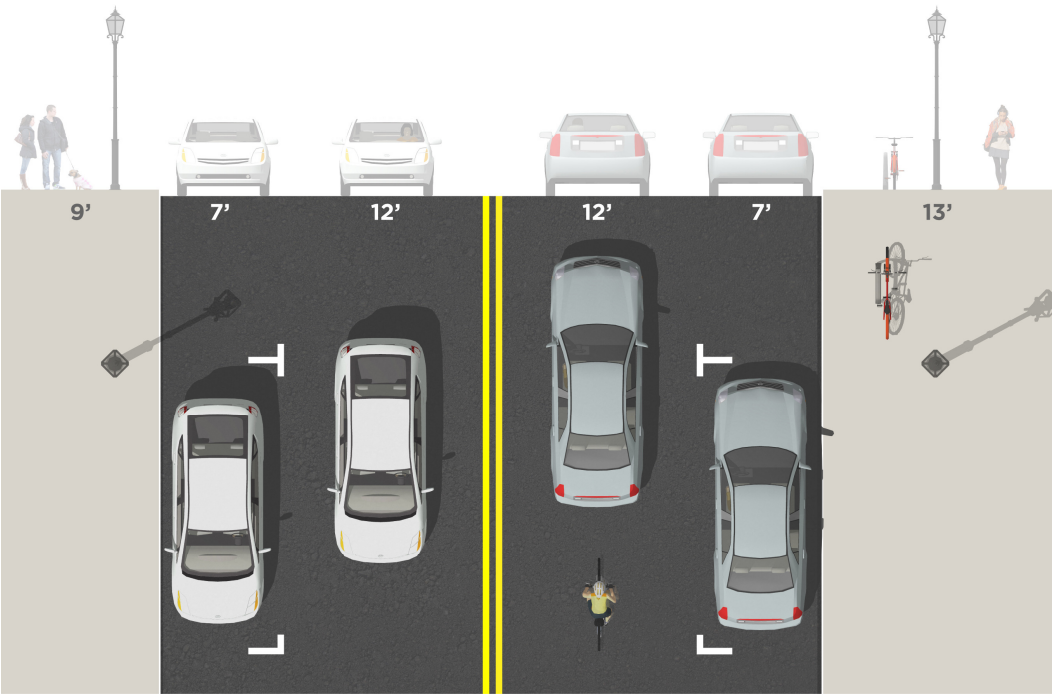
Cross-Section B-3a Front Street (Stillwell Avenue to Cedar Avenue)



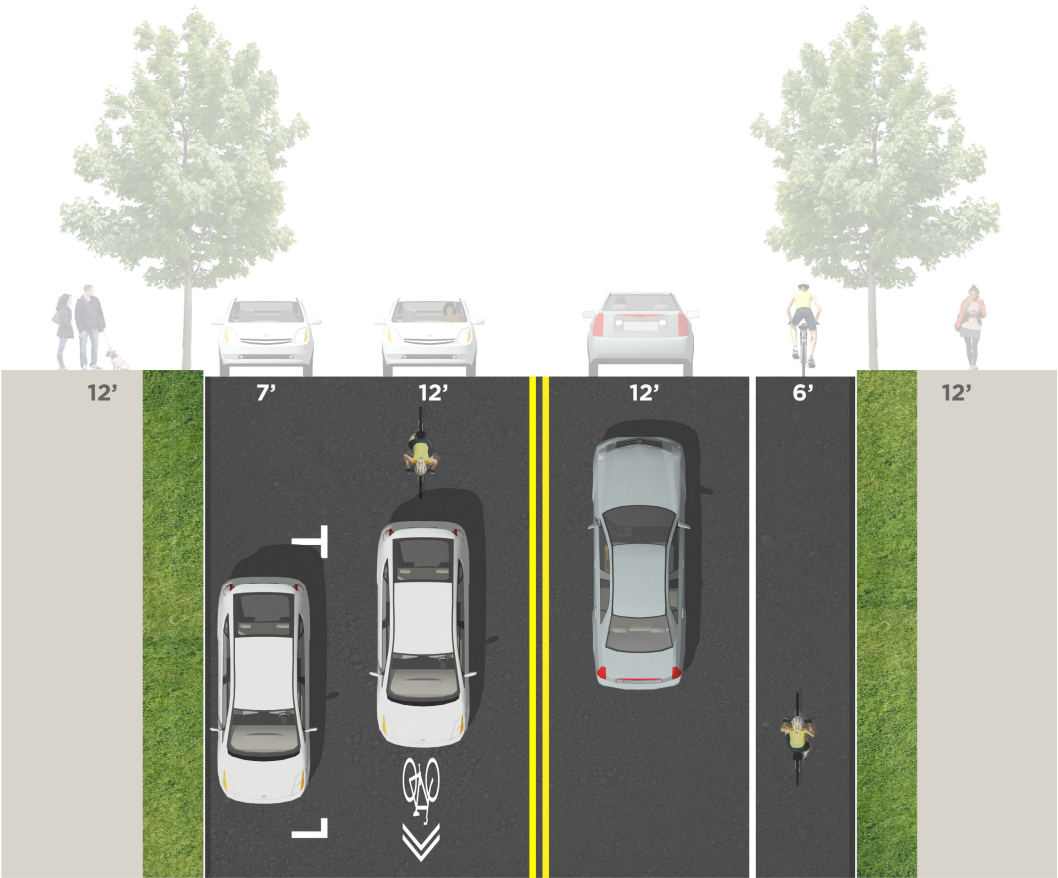
Cross-Section B-4b Front Street (Stillwell Avenue to Cedar Avenue)



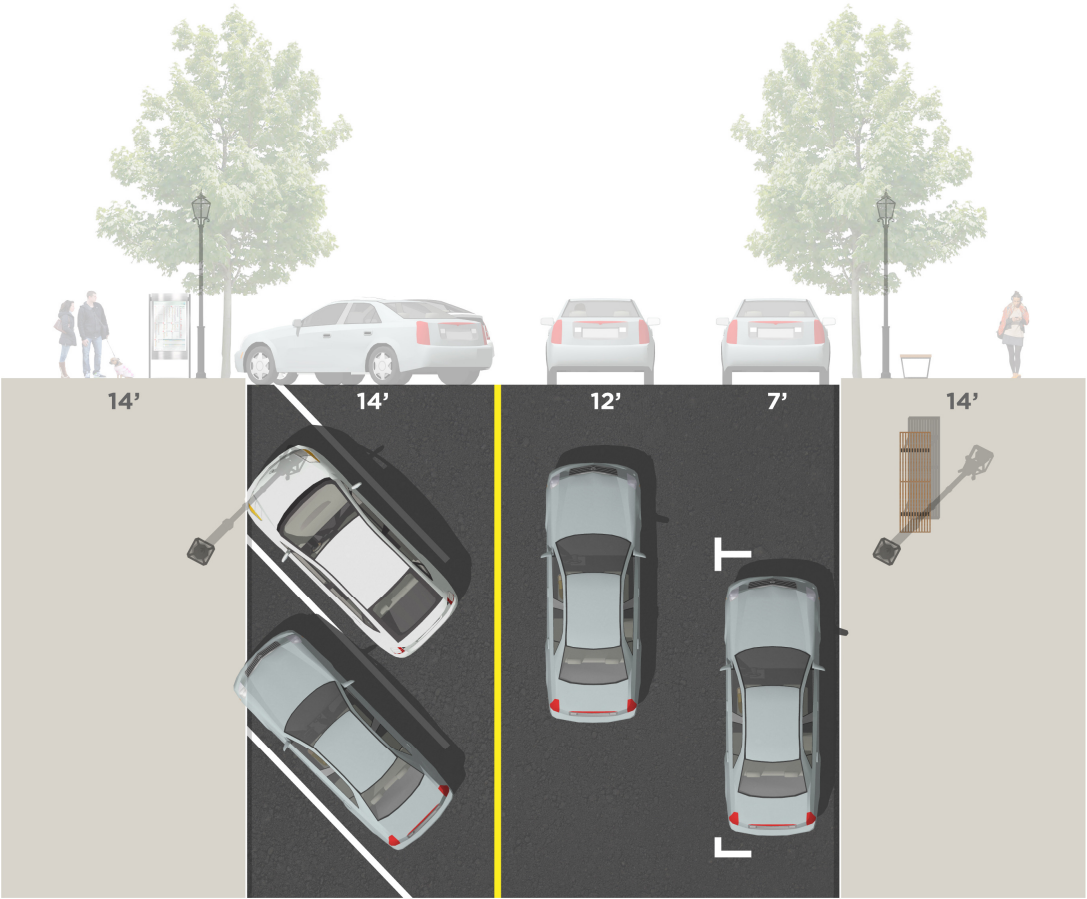
Cross-Section B-5 1st Street (Hwy 101 to Fir Avenue)



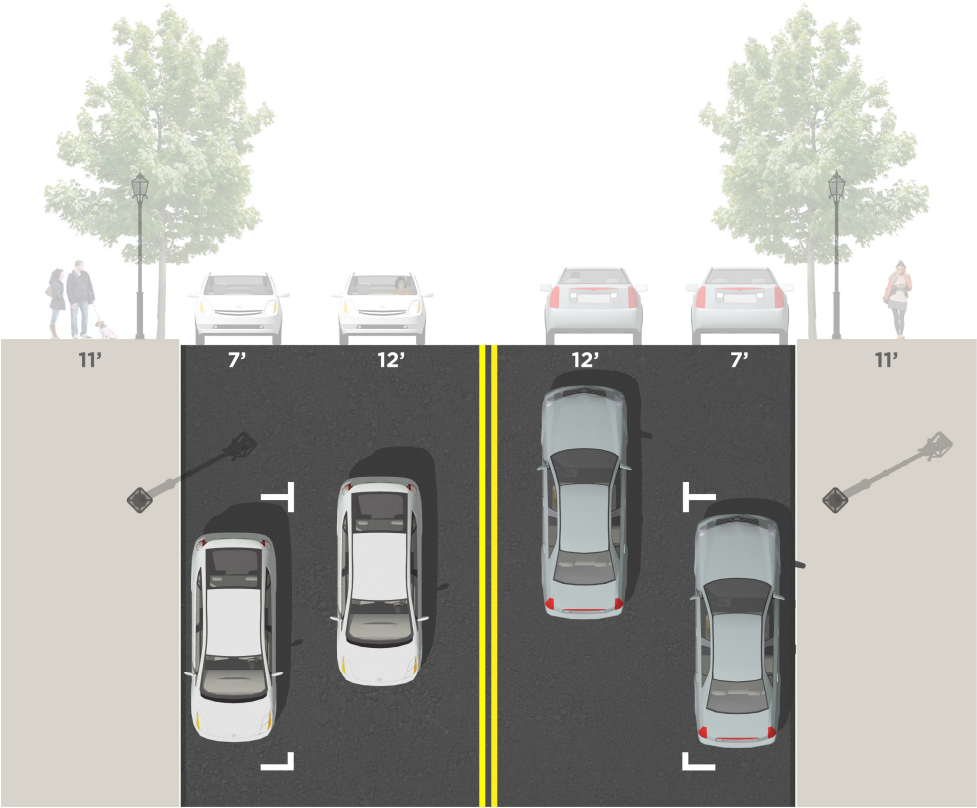
Cross-Section B-6 1st Street (Fir Avenue to Cedar Avenue)



Cross-Section B-7 2nd Street (HWY 101 to Fir Avenue)



Cross-Section B-8 2nd Street (Fir Avenue to Birch Avenue)



ATTACHMENT D – CONCEPTUAL DESIGN FOR NEAR-TERM PROJECTS

