



Bus Stop Design & Planning Guide

Prepared by the Planning Department

2019

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Chapter 1 – Introduction

1.1 Purpose of Guide

The design of passenger waiting areas plays a significant role in a person's decision of whether and how often to use transit. Comfort, security, access, facility attractiveness and several other factors should be considered when establishing bus stops.

RVTD has varying levels of authority to install and construct bus stops throughout the Rogue Valley. The district's goal is to provide a comfortable and accessible waiting area at each stop however, limitations exist that prevent this goal from being reached.

The purpose of this guide is to provide:

- Policies for the type of stop amenities that should be provided
- An existing conditions report as of 2019 of all bus stops
- Design guidelines for various types of bus stops
- An inter-agency framework for how bus stops are improved
- A reference on the varying levels of authority RVTD has in each city
- A budget and timeline for making stop improvements

1.2 Policies

T.B.D. will be determined when TMP is finalized.

1.3 Roles and Responsibilities

The Operations, Transportation, and Planning Departments are responsible for bus stop enhancements. The following describes the role of each department:

Operations- Provides the construction and instillation of stops, provides the ongoing maintenance of stops and oversees storage of stop materials.

Transportation- Advises on stop location to ensure safe vehicle access including traffic issues, vehicle ingress and egress, and assisting with stop amenity decision making.

Planning- Coordinates with city and county staff, developers and property owners to request stop facilities, prepares easements with property owners, evaluates pedestrian and bicycle connectivity, manages grant funding to purchase stop materials, evaluates stop activity to enhance stops as needed.

A request ticket will be submitted to Operations for any site improvements to provide greater communication between three departments and ensure there is consistency with how stops are evaluated.

1.4 Classifications

Class A	>60 Boardings/Day
Class B	31-60 Boardings/Day
Class C	11-30 Boardings/Day
Class D	0-10 Boardings/Day

Class A

These are the most frequently used bus stops in the system based on the number of boardings, transfers, bus frequency, and route served. These stops should have the highest level of amenities including a large and comfortable waiting area with multiple shelters if serving more than one route at a time and consideration of a bus pull out area. Additional amenities should include systemwide route and schedule information, a bicycle rack, an attractive trash receptacle, and consideration for restroom and food/drink nearby.

Class B

These are the stops with high boardings per day that should have at a minimum a shelter, map and route information, a trash receptacle and a bicycle rack. These stops may also need a bus pull out area if there are long dwelling times.

Class C

These stops have moderate boardings per day and should be equipped with a Simme seat or a bench. Additional amenities could include a map and route information, a trash receptacle, and a bicycle rack depending on the location. Nearby awnings or trees should be considered to allow for nearby shelter during harsh weather.

Consideration should be given in areas with higher than average elderly and disabled populations for the instillation of a shelter.

Class D

These are the stops with the lowest use and should have at least a sign posted with consideration for nearby shelter during harsh weather.

1.5 Workflow

Discovery: Week 1

- Have the Bus Stop Committee locate 2-3 possible stop locations within 0.25 mile or less.
- Visit locations and investigate if proposed stop is ADA compliant, has visibility issues, collect GPS coordinates, identify possible conflicts with the city and places to mount a sign.
- Order locates for all areas that may need excavating. (Locates can take up to two weeks)

Drafting: Week 1-2

- Pull ridership information for nearest stop and determine type of stop (shelter, Simme-seat, post).
- Check if site is within public right of way

Submission: Week 3-4

- Complete an application to submit to the city either online or in person.
- If necessary, create s TCP (Traffic Control Plan) and TPAR (Temporary Pedestrian Access Route)
- Notify the city if the stop is based on an easement agreement
- Obtain written approval from the city and property owner (if needed) before proceeding.
- If an easement agreement is needed, add 2-4 weeks from this phase until the end.

Ride Guide: Week 4-8

- Update the Ride Guide and allow four weeks: two for printing and two for shipping.

Notify Transportation: Week 4-8

- Transportation will update GPS, route footprint, and timetables as necessary.
- Ensure the implementation is aligned with an upcoming bid.

Install: Week 7-8

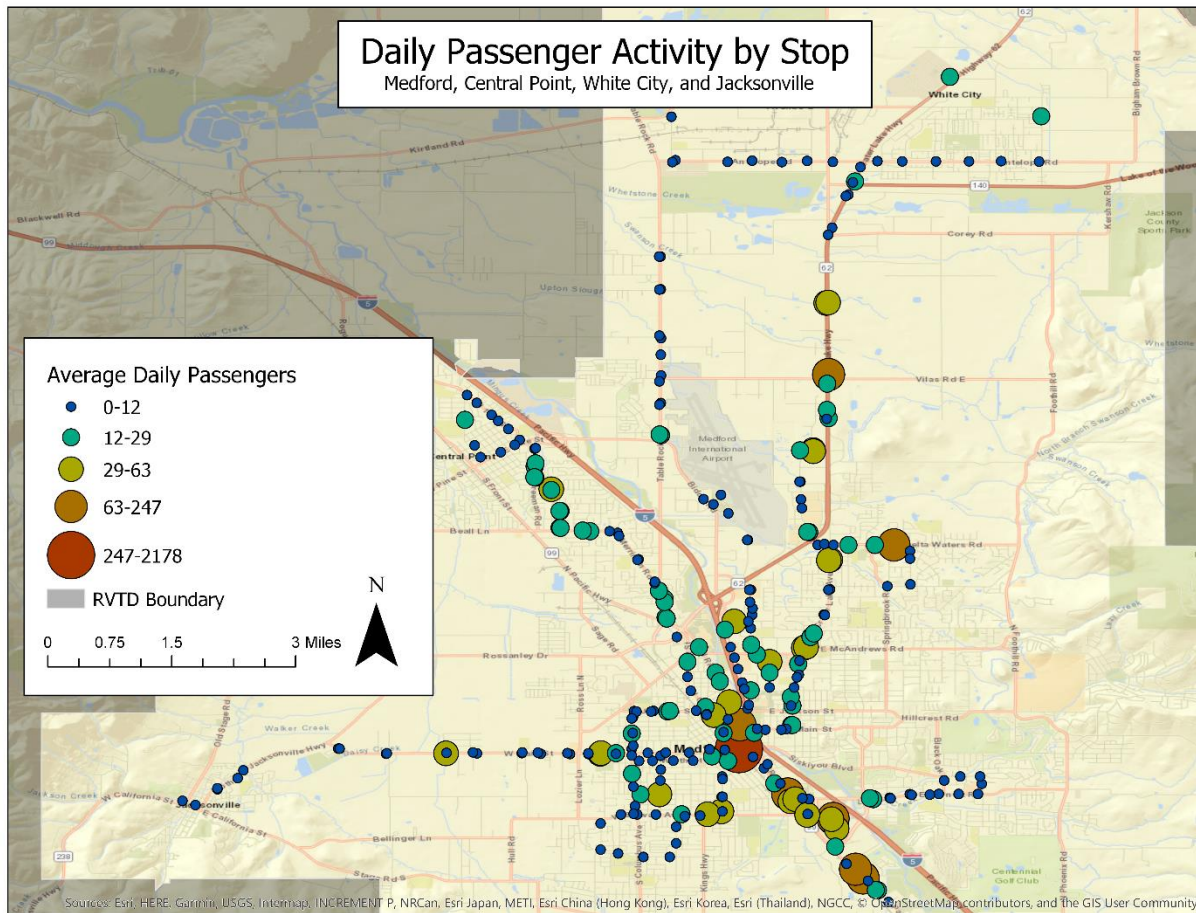
- Minimum of two weeks is needed but adjust by the number and types of stops being installed.

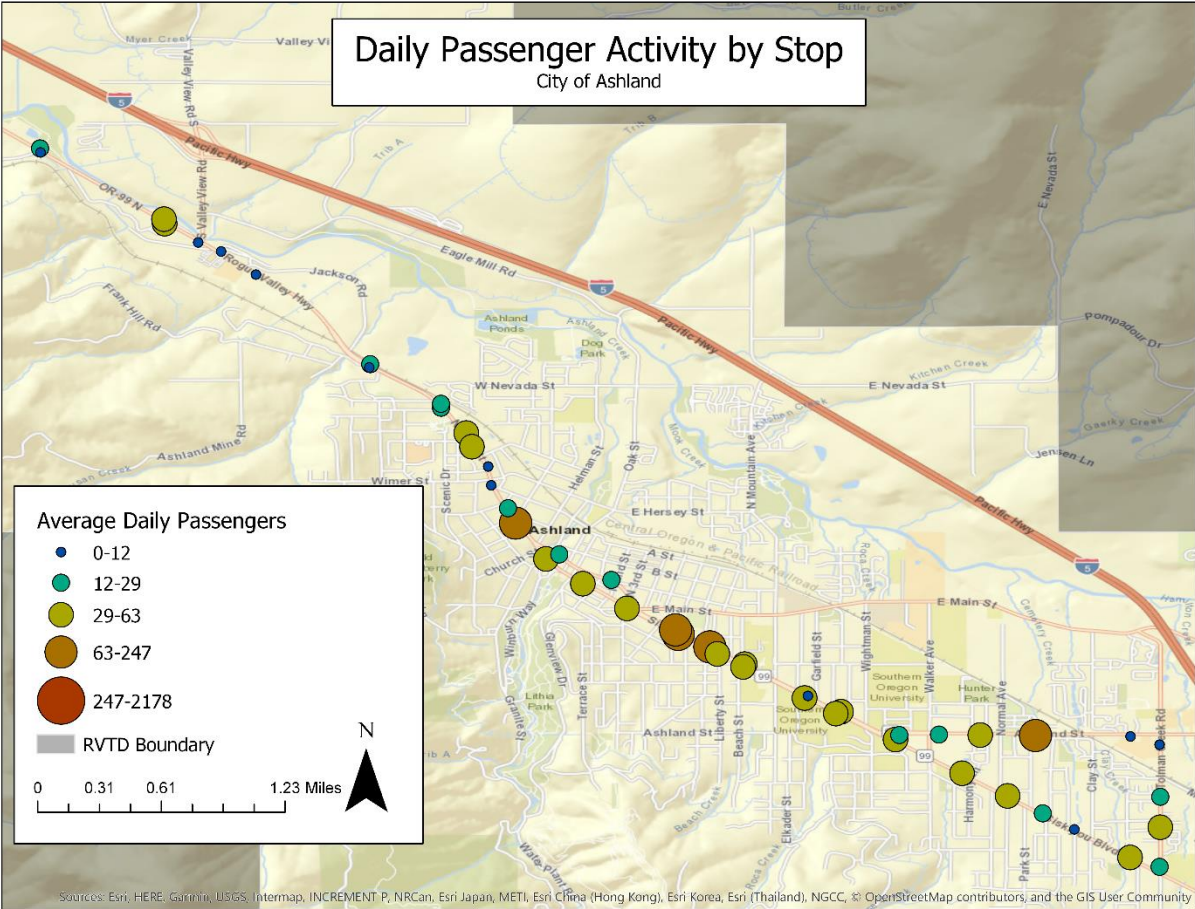
Notification: Week 7-8

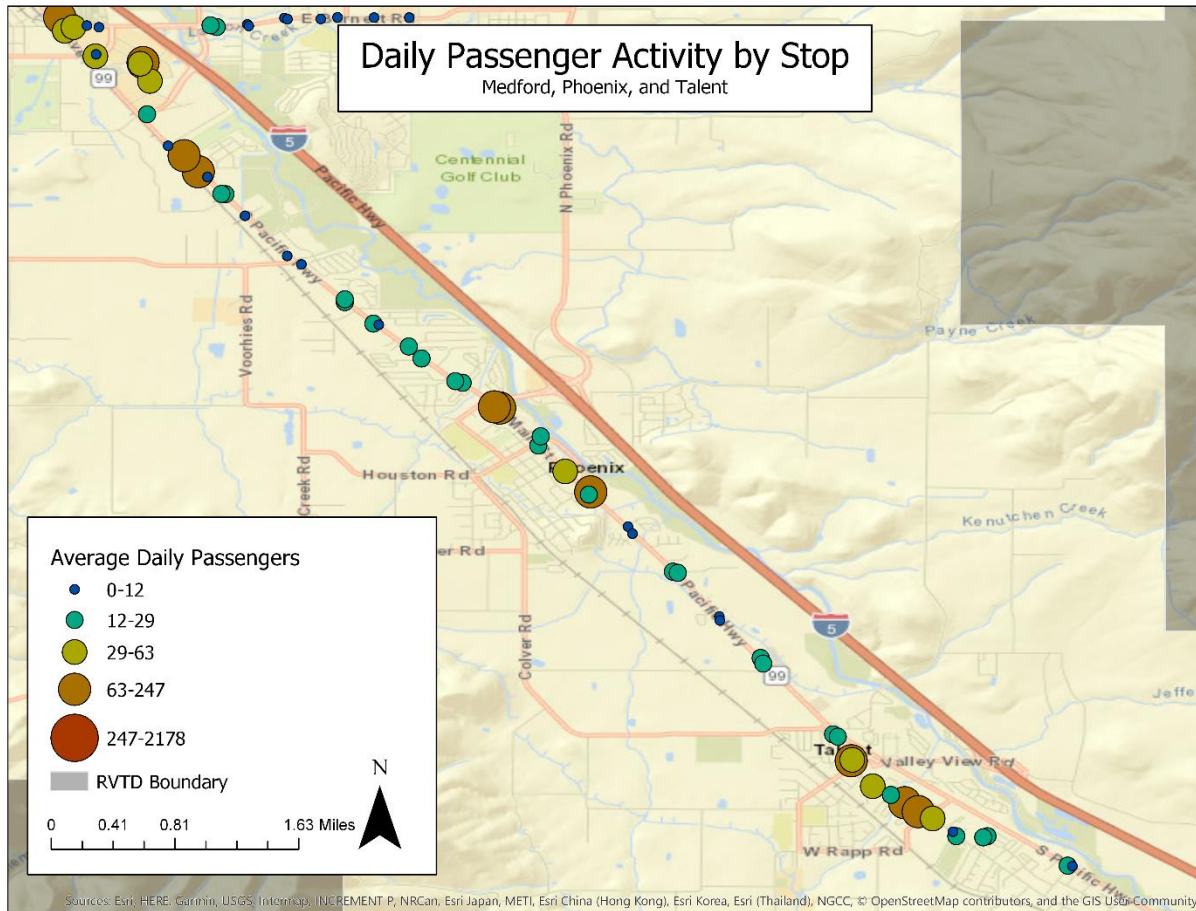
- Notify the drivers and public of a change through the use of driver alerts and rider alerts.

Chapter 2 – Existing Conditions

2.1 Passenger Activity







2.2 Existing Amenities

T.B.D. Waiting to complete inventory

2.3 Safety Considerations

In April of 2003, the California Supreme Court ruled that a transit agency could be held liable for placing a bus stop in a hazardous location. In the case of California, the factors that make up the bus stop safety are not limited to the stop facilities and the surrounding area, but also include external factors, such as sidewalks, traffic patterns, and pedestrian amenities. In general, all transit trips begin and end with a walk trip, and for this reason, RVTD collected data on the safety of its bus stops, and some external data. The data includes:

- Bus dwelling area

- Posted Speed
- Stop Hazards
- Lighting Conditions
- Nearest Ped Crossing/ Ped Crossing Amenities
- Landscaping Issues
- Sidewalk Condition

Chapter 3 – Planning

3.1 Facility Types

3.2 ADA Requirements

In accordance with the 2010 ADA Standards for Accessible Design published by the Department of Justice on September 15th, 2010 transit agencies must abide by the standards listed below.

810.2 Bus Boarding and Alighting Areas

Bus boarding and alighting areas shall comply with 810.2

810.2.1 Surface

Bus stop boarding and alighting areas shall have a firm, stable surface.

810.2.2 Dimensions

Bus stop boarding and alighting areas shall provide a clear length of 96 inches (2440 mm) minimum, measured perpendicular to the curb or vehicle roadway edge, and a clear width of 60 inches (1525 mm) minimum, measured parallel to the vehicle roadway.

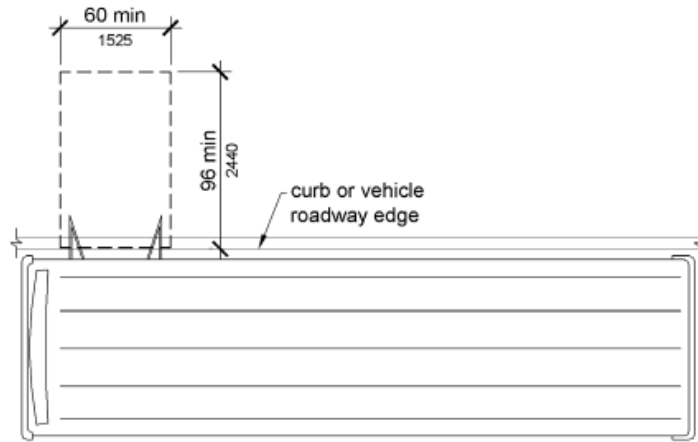


Figure 810.2.2
Dimensions of Bus Boarding and Alighting Areas

810.2.3 Connection

Bus stop boarding and alighting areas shall be connected to streets, sidewalks, or pedestrian paths by an *accessible* route complying with 402.

810.2.4 Slope

Parallel to the roadway, the slope of the bus stop boarding and alighting area shall be the same as the roadway, to the maximum extent practicable. Perpendicular to the roadway, the slope of the bus stop boarding and alighting area shall not be steeper than 1:48 (2%).

810.3 Bus Shelters

Bus shelters shall provide a minimum clear floor or ground *space* complying with 305 entirely within the shelter. Bus shelters shall be connected by an *accessible* route complying with 402 to a boarding and alighting area complying with 810.2.

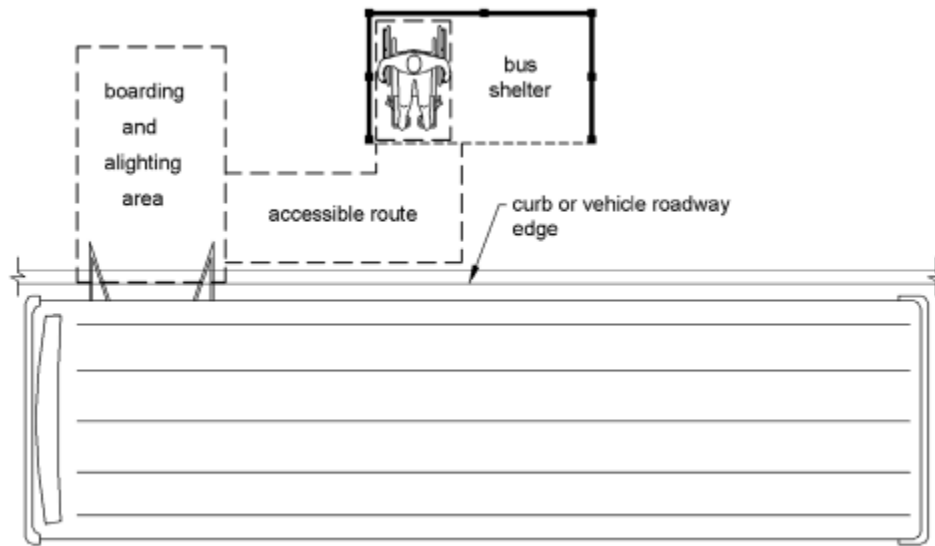


Figure 810.3
Bus Shelters

810.4 Bus Signs

Bus route identification signs shall comply with 703.5.1 through 703.5.4, and 703.5.7 and 703.5.8. In addition, to the maximum extent practicable, bus route identification signs shall comply with 703.5.5.

EXCEPTION: Bus schedules, timetables, and maps that are posted at the bus stop or bus bay shall not be required to comply.

3.3 Enhancement Prioritization

Methods

Stops should be evaluated and identified for enhancements on a routine rolling basis. However, some stops may be prioritized for enhancements and improvements during certain circumstances. Situations where a stop should be prioritized are outlined below:

1. Large and sustained increase in passenger activity
2. Current stop conditions are creating a danger for passengers

3.4 Public Right of Way

INTERAGENCY FRAMEWORK FOR STOP ENHANCEMENTS

The Operations, Transportation and Planning Departments are responsible for bus stop enhancements. The following describes the role of each department:

Operations- Provides the construction and installation of stops, provides the ongoing maintenance of stops and oversees storage of stop materials.

Transportation- Advises on stop location to ensure safe vehicle access including traffic issues, vehicle ingress and egress and assisting with stop amenity decision making.

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INSTALLATION & IMPROVEMENT PROCESS

The review process includes an evaluation of each bus stop's accessibility to patrons with disabilities. The Americans with Disabilities Act encourages transit systems to strive to become fully accessible to customers with disabilities. Whenever a bus stop is installed or upgraded the Act mandates that it be accessible to the maximum extent practicable. If a stop is not accessible, the design or the location of the stop should be modified in order to provide accessibility. If it is still not possible to provide an accessible bus stop, the installation or improvement will normally not occur.

The Bus Stop Program uses the following steps when developing and designing a new bus stop as well as bus stop improvements:

1. Site Review & Preliminary Assessment

The first step in the placement of a new bus stop process is a preliminary assessment of the bus stop and vicinity, by the Bus Stop Committee. The committee is made up of members from Operations, Transportation, Planning and Maintenance. The committee reviews ADA slope and clearance, stop level ridership, location, safety and distance between stops. A field visit is typically required as part of the evaluation process. At the same time surrounding activities should be observed to assist in selecting the type of amenity desired and its best location.

2. Right-of-Way Determination

Typically, public GIS is sufficient to determine the available Right of Way. When it's very close, contact the local jurisdiction to make a determination. In rare instances, a survey may be needed.

3. Easement Determination

On occasions when the work is beyond the Right of Way and within private property, an easement must be agreed upon by the landowner and Rogue Valley Transportation

District. Once agreed upon, signed and notarized, it is to be filed with the local county clerk.

4. Site Plans

Site plans must be of sufficient quality and detail to meet the needs of jurisdictions and contractors. RVTB planning staff typically produces these drawings. However, if the site is complex, the design may be done by an Architect and Engineering firm.

5. Jurisdictional Review and Approval

Before installing, improving, or moving a bus stop, RVTB must obtain approval from the jurisdiction having authority over the location. City, County, and ODOT require a Right of Way Permit, Site Plan, Traffic Control Plan and Temporary Pedestrian Access Route. Some cities also require approval from their City Council Members.

6. Property Owner Notification

As a courtesy, when a new bus stop or shelter will be installed, RVTB will send the property owner advance notice alerting them to the change. The property owner will have an opportunity to submit comments within a set deadline. An attempt to address any concerns prior to installation will be made. Staff may also be requested to attend the City Council meeting where the bus stop or improvement is discussed.

7. Bus Stop Notifications

In the event of a bus stop closure or removal, every attempt will be made to post a public notice at the impacted bus stop a minimum of 7 days prior to the change.

LAND USE REVIEW PROCESS

Rogue Valley Transportation District requests that the jurisdictions within our service area send us land use permit applications when new developments, major redevelopments, or road improvements are being considered. (In some cases, we have discovered these types of projects only through field observation. We then contact the appropriate jurisdiction for details.) Our interest in reviewing the applications is to determine what impacts the development will have on public transit and to mitigate those impacts.

There are four main elements to consider:

- Proximity of the development to existing or forthcoming transit routes.
- Size and usage of the development.
- Location and level of improvements at nearby existing stops, if any.

- Working with jurisdictions for Right of Way and property owners for easements.

Once these elements are reviewed, compose formal comments to the jurisdiction in writing ahead of the scheduled Land Development Meeting. Include language listing the current or planned transit route and stop location, supporting ridership information, size and style of the amenity needed and any discussion of Right of Way and/or easements needed. The intent of the reply is to improve or increase transit services to the development. It is important for RVTD planning staff to attend the upcoming meeting for the property being discussed.

Chapter 4 – Implementation

4.1 Available Amenities

Shelters

There are a variety of shelter types and lengths available for instillation at stops across the system. Shelters are available 12' sidewalk, 10' sidewalk, 8' sidewalk, 5' x 8' and 5' x 12', can have seating, bike racks, and trash cans installed. The length of shelter needed should be determined by passenger activity at the stop and how many routes service the stop. Engineering plans for the shelters can be found in the appendix.

Simme Seats

RVTD uses a Simme seat for moderately used bus stops (Class C). The Simme seat uses a single post and has two seats on either side with a sign attached to the top. The space needed is a 4' by 2' concrete pad. To comply with ADA a 4' clearance is required in front, typically a sidewalk. Often the Simme seat pad is still poured behind the sidewalk.

After installation, the Sime seat stands at just over 10' tall and is 4' wide. RVTD will consider providing a trash receptacle and bicycle rack at Simme seat locations. Simme seats can be oriented either parallel or perpendicular to the road, as long as there is proper ADA clearance.



4.2 Facility Type Requirements

RVTD preferred shelter design includes a 20' length by 10' width pad that is 4" deep and not to exceed 2% cross slope. This provides space adequate for one shelter, one trash receptacle and one bicycle rack. Variations are possible depending on the conditions. The shelter pad must have at least 4' of solid surface in front of the seating area and 5' length by 8' width landing area to comply with ADA.

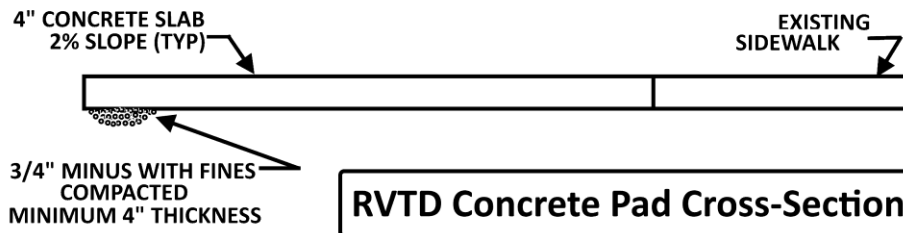


Figure 1 Surface and subsurface guide

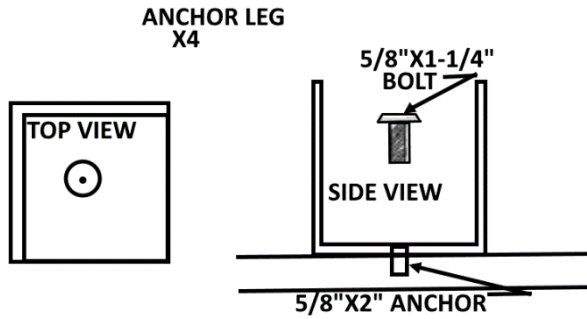
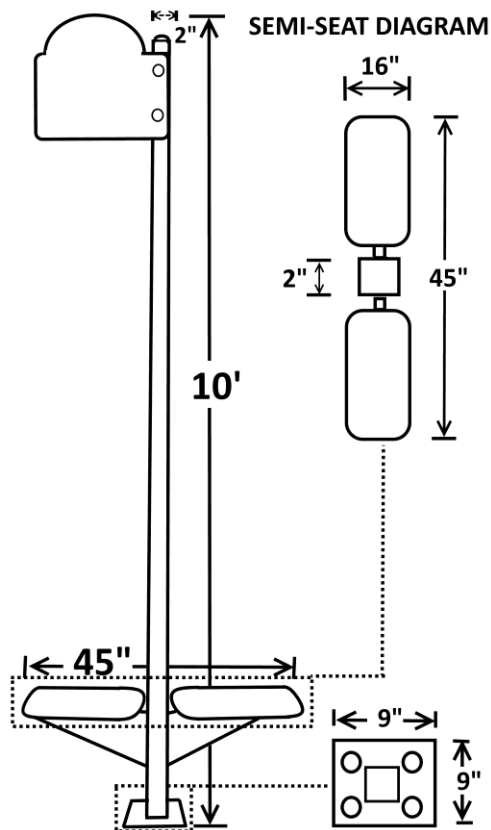
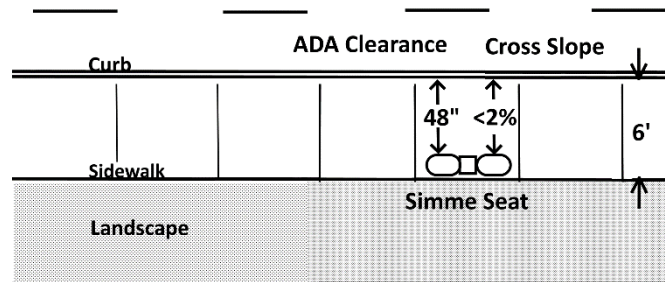


Figure 3 Shelter anchoring system

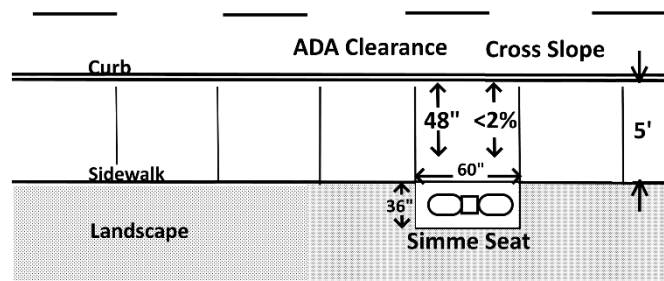
Appendix



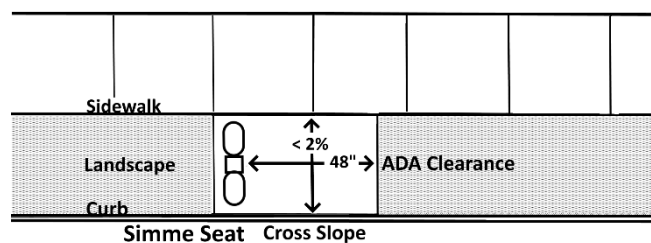
SIMME SEAT ON 6' SIDEWALK



SIMME SEAT BEHIND SIDEWALK

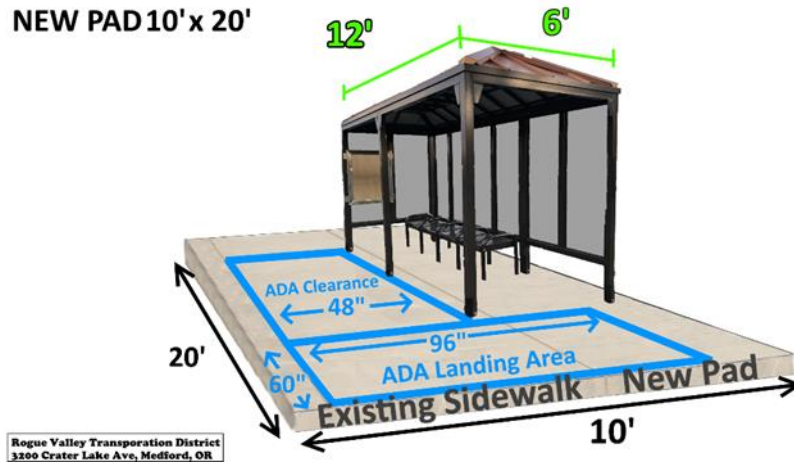


4' X 7' SIMME SEAT PAD IN LANDSCAPE



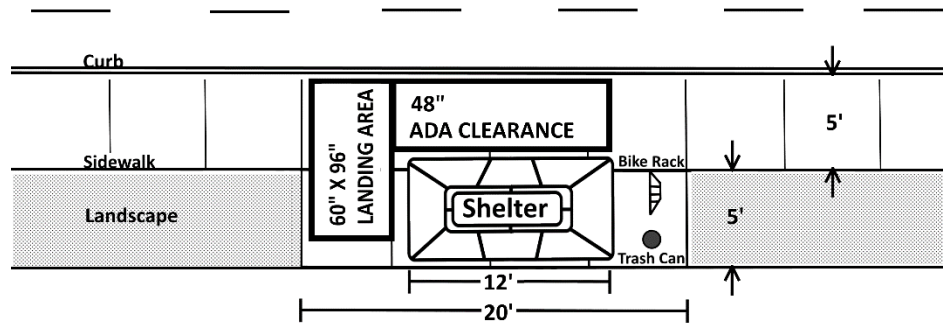
STREET

NEW PAD 10' x 20'

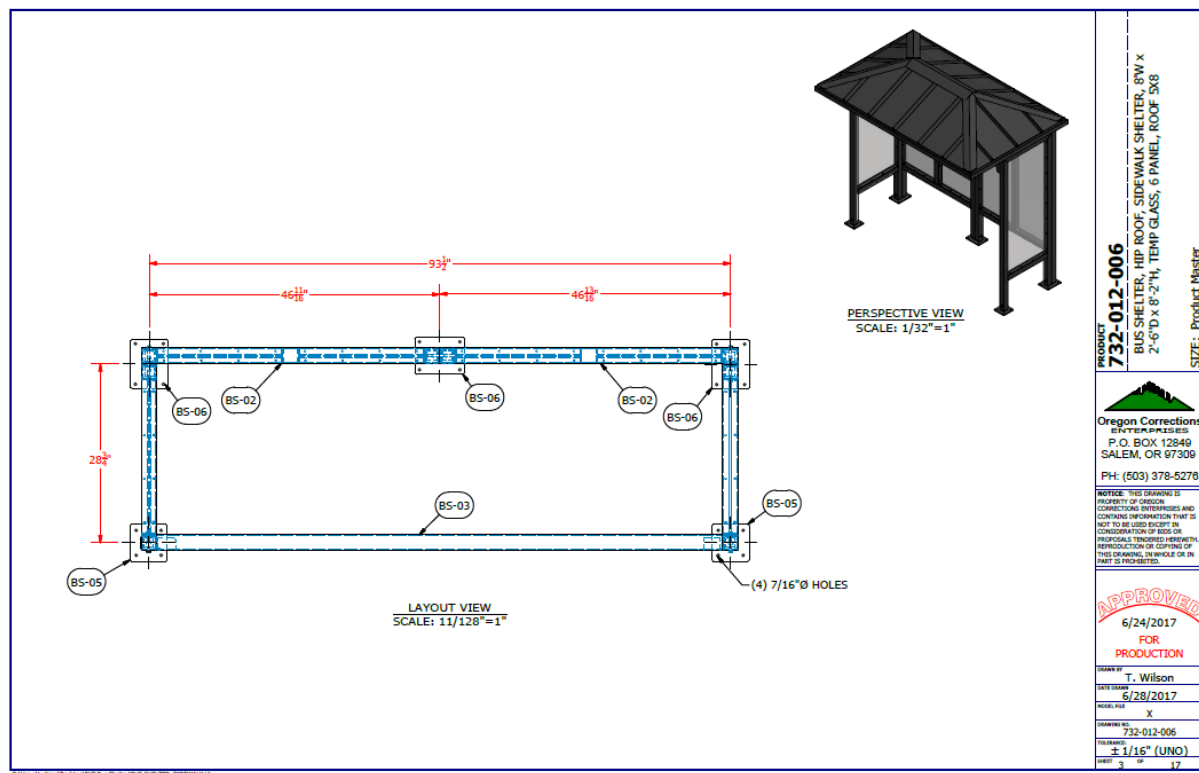
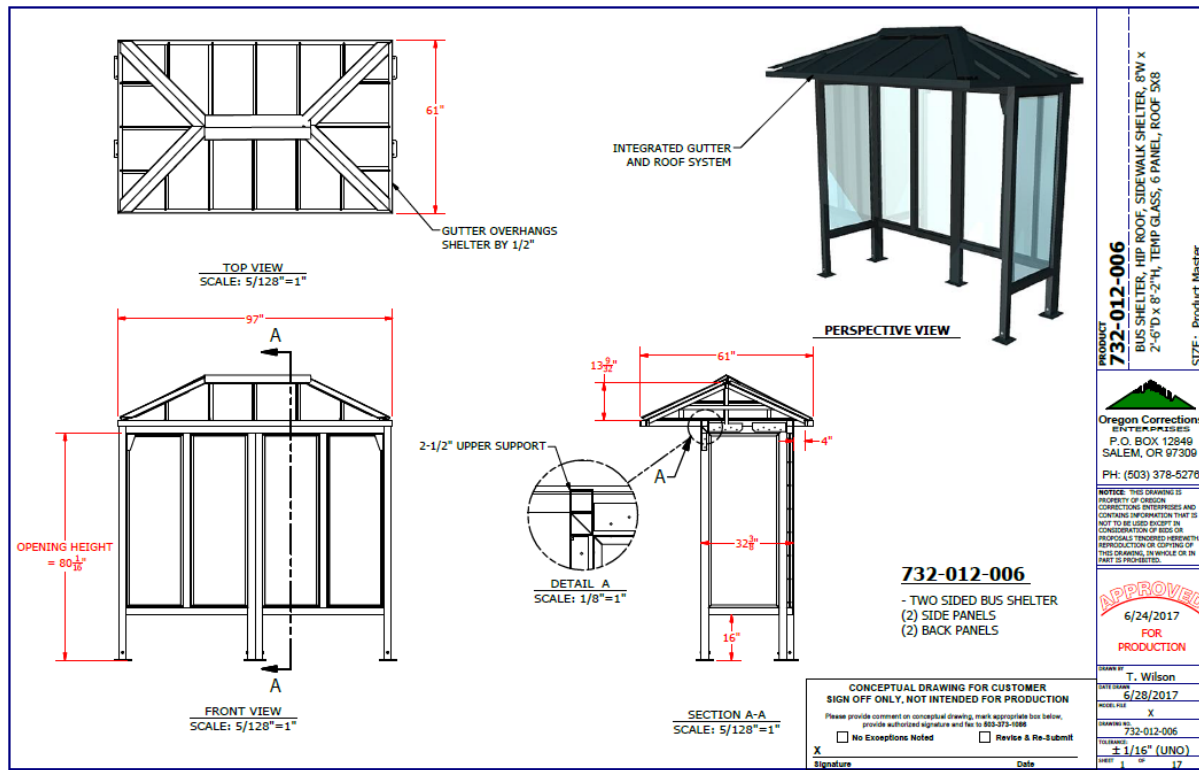


RVTD LANDSCAPE CONCRETE PAD DESIGN

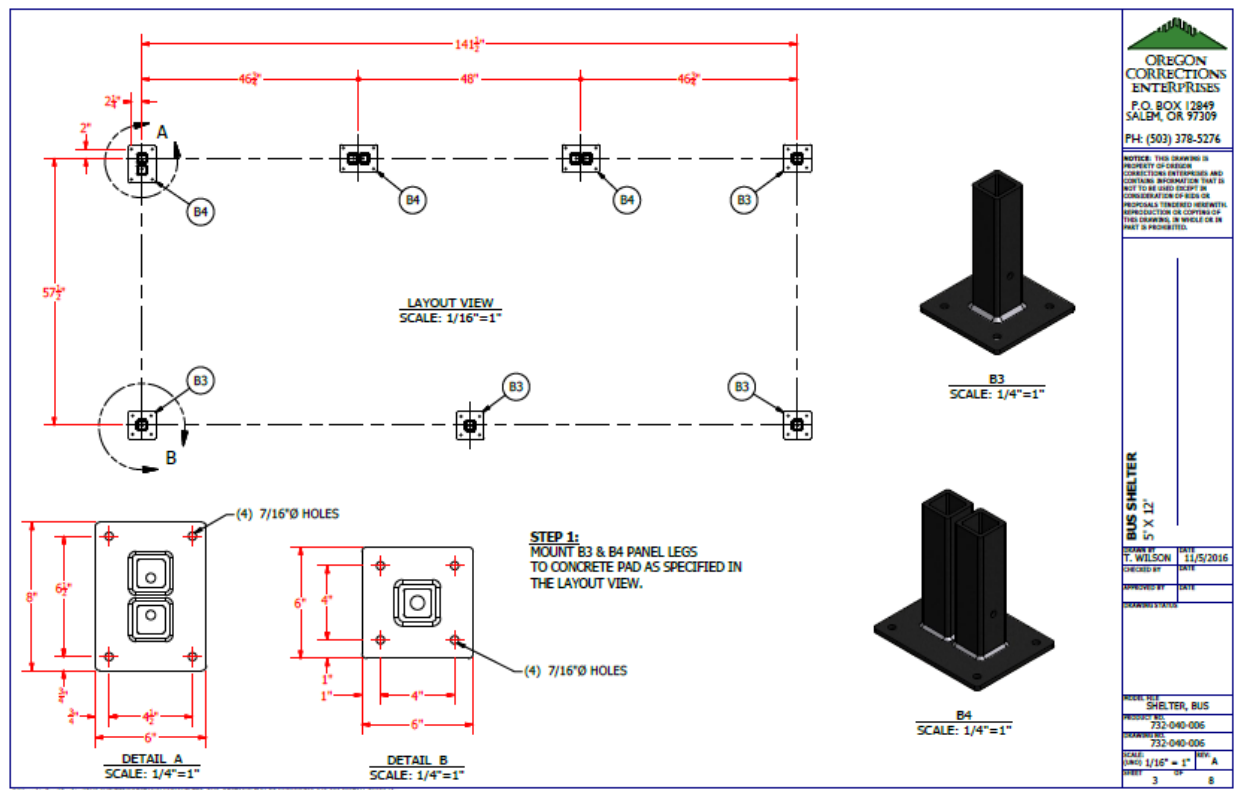
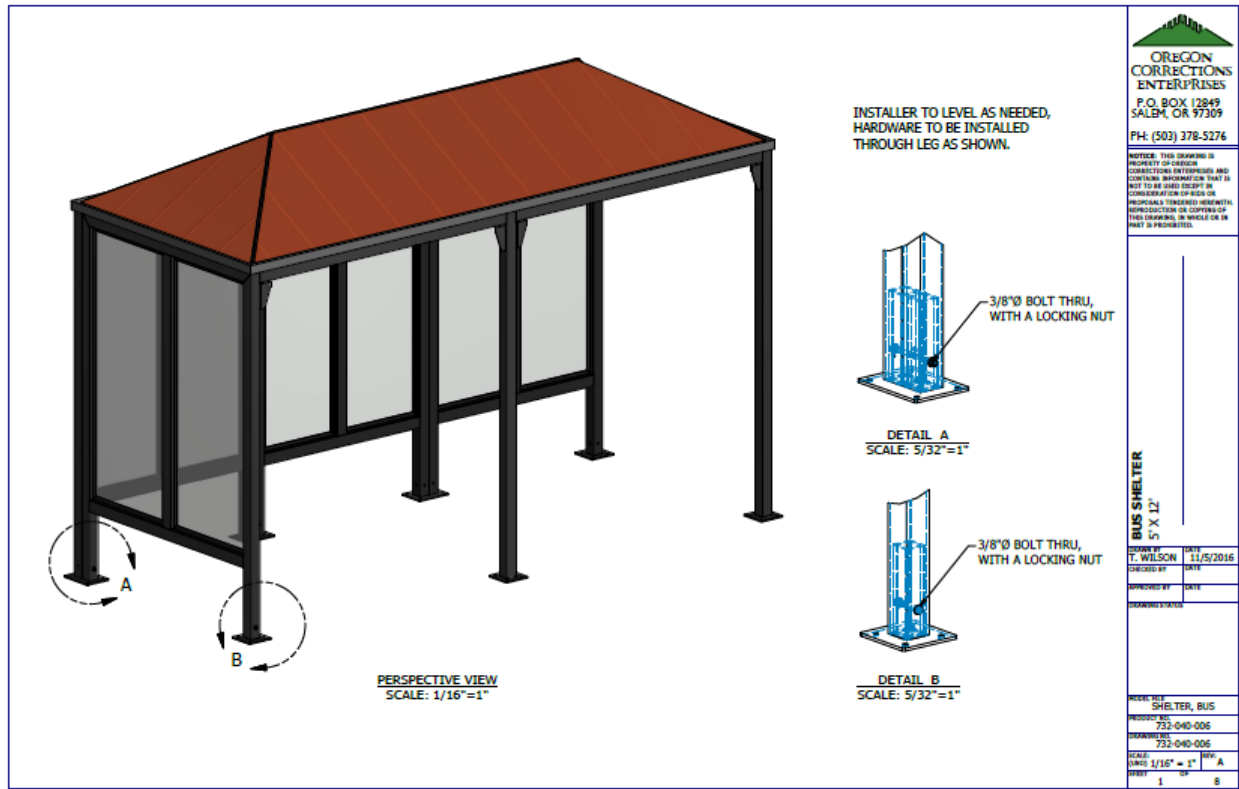
5' X 20' SHELTER PAD FOR 12' SHELTER



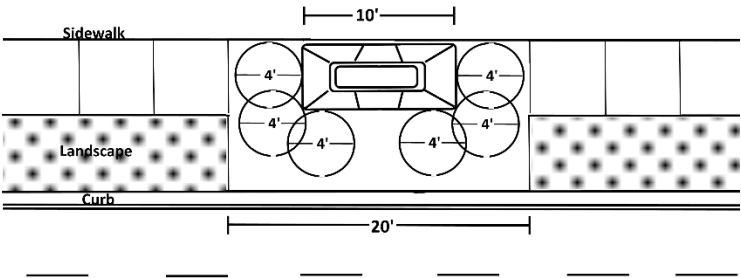
8' x 5' Sidewalk Model



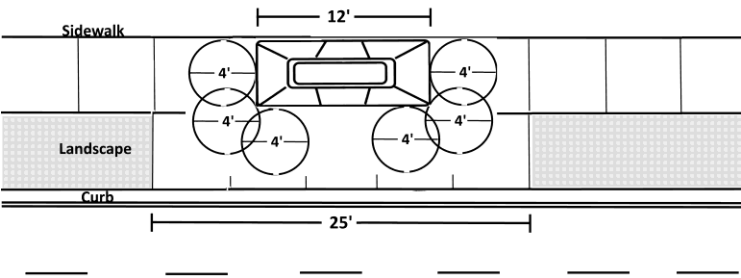
12' x 5' Model



RVTD Landscape Concrete Pad Design
10' Shelter Requires a 20' Pad



RVTD Landscape Concrete Pad Design
12' Shelter Requires a 25' Pad



RVTD Landscape Concrete Pad Design
8' Shelter Requires a 20' Pad

