TRANSIT IN SMALL CITIES

A Primer for Planning, Siting, and Designing Transit Facilities in Oregon

Oregon's Transportation and Growth Management Program (TGM) supports community efforts to expand transportation choices for people. By linking land use and transportation planning, TGM works in partnership with local governments to create vibrant, livable places in which people can walk, bike, take transit or drive where they want to go.

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1. INTRODUCTION

Small city transit helps connect people with the places they want to go. It opens up economic opportunities for local residents and businesses, enables students who do not own cars to get to school or college classes, and helps the elderly stay independent. It gives rural populations access to jobs, retail centers, health care and social services. In short, transit enhances the quality of life and economic vitality of small cities and towns.

Transit systems – and their associated facilities– function best when they are well-integrated with local land use and community design decisions. When transit planners collaborate with local land use planners and key stakeholders in the community, they leverage the investments of others. Well-located, well-designed transit facilities can help to advance broader community goals, like downtown revitalization. They can promote active transportation by providing direct, easy access to transit stops and nearby destinations for pedestrians, the disabled, and bicyclists. And they can help to address mobility challenges facing the elderly and disabled.

In this era of economic austerity and tight budgets, it is worth noting that, by working with local governments to create a package of small and low-cost, but well-designed and well-located transit amenities, transit providers can significantly improve access to a transit system, boost its ridership, and improve its financial condition.

Yet, how do we achieve all this?

This primer answers that question by giving small-city transit providers in Oregon guidance on planning, designing, and locating transit *facilities* – e.g., bus shelters, signage, access-ways to transit stops, and other amenities – to support transit *systems*. The primer lays out a basic planning process and offers tips for success that can be tailored to individual cities. It identifies questions that small-city transit providers must address when planning and siting transit facilities in order to support the goals that communities set for themselves. Finally, it draws upon successful Oregon examples to provide relevant advice and illustrate best practices.

THIS PRIMER INCLUDES:

- ***CHAPTER 2: Planning for Transit Facilities.*** The decision making process that identifies transit needs.
- ***CHAPTER 3: Linking Transit to Livability.*** Transit principles necessary to creating livable places.
- ***CHAPTER 4: Transit Facilities Design.*** Specific issues to consider and guidelines for planning, siting and designing transit facilities.
- ***CHAPTER 5: Resources.*** Identification of resources used to create this primer.

TOOLS TO LOOK FOR:

Words of helpful advice from other Oregon transit providers appear in the form of case studies and tips related to process, design, funding and education. Resource ideas and links are also provided throughout the document. Terms highlighted in **bold** are explained in the primer.

Icons identify the following tips:

- **Process Tip**
- **Design Tip**
- **Funding Tip**
- **Education Tip**
- **Resource**

Photo credit: Jeff Youngstrom

In Oregon, public transit service is provided by various entities: cities, counties, special districts and non-profit organizations. For the purposes of this primer:

- **Transit providers** is a generic term for all entities that provide public transit services, including transit facilities and amenities. The assumption is that all "transit providers" have legal standing to provide the service, coordinate their planning efforts with local and state governments, and receive state and/or federal funding for transit programs. Transit providers can be non-profits, stand-alone public agencies, or a department of a city or county.
- **Transit facilities** are bus stops, park-and-rides, transit centers, and administrative and maintenance facilities.
- **Transit amenities** include, but are not limited to, bus shelters, trash and recycling cans, bike parking, signage, lighting, pedestrian havens and crossings, landscaping, benches, bus turn-outs, medians, and sidewalks.

The focus of this primer is on transit facilities; it does not provide guidance for transit operations. The relationship between transit facilities and operations is touched upon briefly in Chapter 4.

2. PLANNING FOR TRANSIT FACILITIES

This chapter identifies processes, tools and information available to help transit providers build strong stakeholder relationships and develop a community vision for transit.

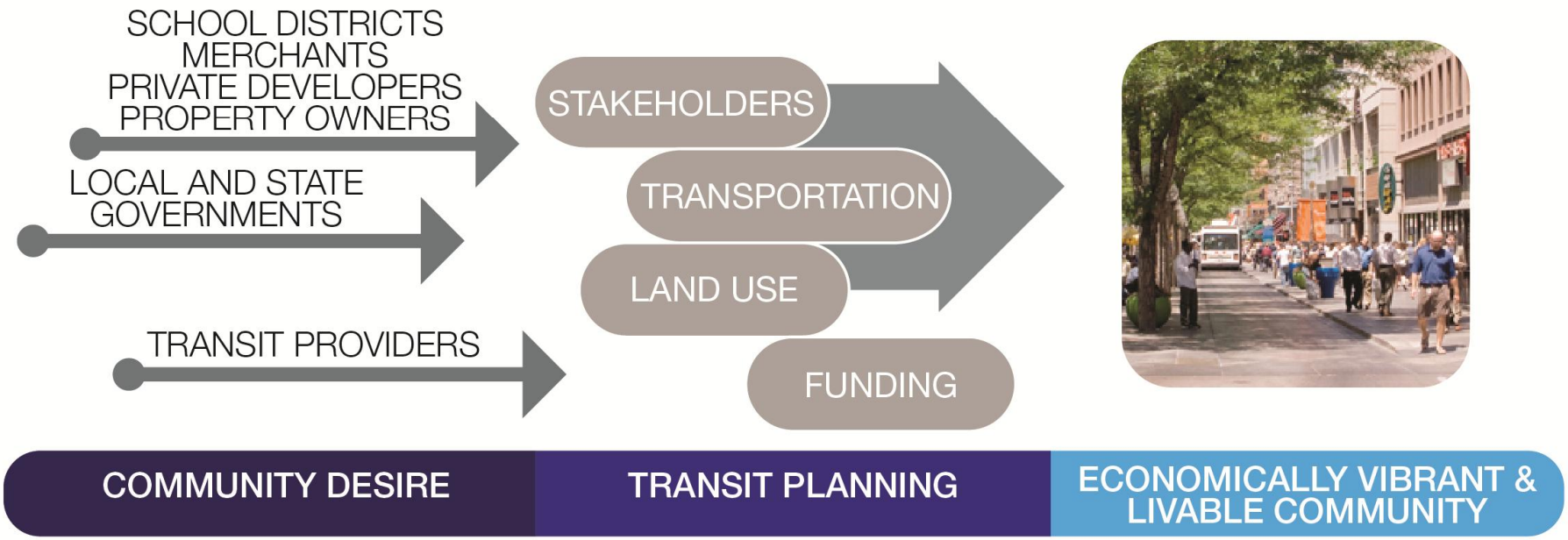
CHAPTER 2 ROADMAP

2.1: Who are the Players?

2.2: How are Opportunities for Transit Identified?

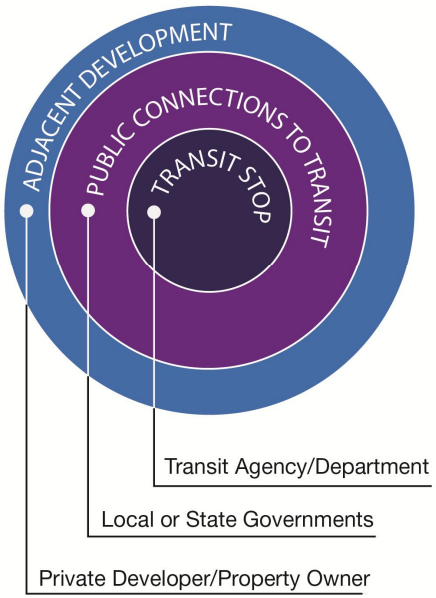
2.3: How do Projects get Funded?

2.4: What are the Steps to Develop a Project?



2.1: WHO ARE THE PLAYERS?

ZONES OF RESPONSIBILITY



On their own, transit providers lack the jurisdictional authority to ensure that key transit facilities, along with connections to, from and around such facilities, are designed to strengthen downtowns, main streets, and communities. For this reason, it is critical that transit providers collaborate with major stakeholders: cities/counties, the state, school districts, community colleges, universities, merchants, public health officials, private developers and the general public. The responsibility for integrating land use and transit is shared primarily among three parties:

- **Transit providers** are responsible for the transit facility itself.
- **Local governments** are responsible for land use decisions and public infrastructure: sidewalks, bikeways and other public connections leading to the transit facility (in the case of state highways serving as main streets, the state is the responsible entity).
- **Developers and private property owners** use land use in ways that affect, and are affected by, transit facilities.

Transit providers must proactively engage decision makers and other stakeholders in discussions about transit and land use. Local government land use planners and/or private developers may not fully understand the service and operational issues related to siting a new transit facility, the benefits and need for transit, or the relationship between transit and land use. It is up to transit providers to explain various transit requirements and make the case for including transit officials in future land use decisions. In making their case, transit providers might point out such facts as these:

- The average household spends 19 percent of its total budget on transportation. Those with good access to transit spend only nine (9) percent of their household budget on transportation, freeing up money for other purposes. (Livable Communities Act of 2009)
- Nearly 40 percent of the transit-dependent population in the United States lives in communities with populations of less than 50,000. (Putting Transit to Work in Main Street America, 2012)
- Because most transit trips begin and end with a walking or bicycling trip, public health officials consider transit an “active transportation” mode requiring physical activity. People who use transit

are less likely to be sedentary or obese than those who do not use transit. (Making the Link from Transportation to Physical Activity and Obesity, Robert Wood Johnson Foundation, 2009)

- Given the high and volatile price of gasoline, communities that offer transportation choices are in demand and face better economic futures, according to experts who have examined current market forces. (The Option of Urbanism, Christopher Leinberger)

These and other data on the economic, health and quality-of-life benefits of transit can (and should) be shared by transit providers with local government planners, developers, and others during the land use planning process.

CASE STUDY: Participate, Advocate, and Educate to Avoid Missed Opportunities

In the past, transportation planning has not always considered the importance of providing easy access to transit along Highway 101 between Astoria and Cannon Beach. This oversight has resulted in several problems. For example, buses sometimes block traffic in order to drop people off and transit riders must often cross grassy or muddy fields to reach a bus stop. The Sunset Empire Transportation District, which serves this section of Highway 101, saw the need for improvements and initiated talks with the Oregon Department of Transportation (ODOT) and local governments in its service area. The result: When a major private development was recently proposed in Warrenton, a small town west of Astoria, the District participated in the development review process and its recommendation that bus turn-outs be added to the development plans was accepted.

How Are Partnerships Created?

Partnerships help ensure relevant local stakeholders are given an opportunity to identify key issues in the transit facility planning process. Ways to create (or strengthen) partnerships between transit providers and local, regional and state transportation and planning agencies include:

- Identify partners in key departments and agencies. Maintain a reference guide for those with whom you need to work on a regular basis.
- Communicate with your land use and transportation partners, whether through formal, scheduled meetings, informal conversations or both. Communicate frequently enough to build a strong relationship, one where either party is comfortable enough to pick up the phone and have a candid conversation about land use and transit issues.
- Put decisions and agreements— such as transit access points — in writing, in the form of intergovernmental agreements and memoranda of understanding. Never let a handshake be sufficient.
- Develop bus stop location criteria and agreements for private development. Recommend that local governments include these provisions in their zoning codes.
- Engage in project development review at the earliest possible stage, such as at the pre-proposal land use conference, which is often held with city or county planning staff.
- Hold workshops to discuss pedestrian safety and other transit-related issues with local jurisdictions, non-profit organizations and the public.
- Establish a citizen committee to focus on pedestrian safety, connections to transit facilities, and other relevant topics.
- Review existing local city and county transit plans, as well as ODOT statewide transit plans, for identified priorities and potential locations for facility projects.

CASE STUDY: Partnerships – Be Open to New and Non-Traditional Partners

Community Connection of Northeast Oregon (CCNO) is the local non-profit transit provider in Wallowa, Baker and Union Counties. In 2011, CCNO engaged a new partner, the Anthony Lake Ski Resort, to provide Saturday service. CCNO provided the transit vehicle and maintenance upkeep while Anthony Lake Ski Resort provided a driver (registered as a volunteer driver for the transit provider for liability reasons), cleaned the vehicle, and paid for gas.

The situation was a win-win for all:

- Expanded service provided a boost to the local economy from the increased accessibility to the ski resort.
- Anthony Lake Ski Resort received additional revenue from the transit fares it collected.
- CCNO was able to count the Saturday transit riders as part of its ridership numbers.

How Can The Public Be Involved?

As potential riders and taxpayers for a transit system, the public is an integral part of the partnership. Transit providers have opportunities to involve the public throughout the decision-making process. In fact, it is a state and federal funding requirement to involve the public in the process of identifying transit projects and policies.

Early and frequent public involvement will help educate non-riders about the benefits of transit for the community as a whole. Opportunities for affecting the outcomes, such as workshops or public hearings, will give stakeholders a sense of ownership in the system, likely resulting in greater support.

In small towns, transit funding and other decisions are often influenced more by the personal stories than by dry statistics or long reports. For that reason, it is important to let local residents explain the value of transit to their daily lives in their own words. Let "Joe Transit" speak for your transit agency. He can be your greatest advocate.

PUBLIC ENGAGEMENT METHODS

TYPES OF ENGAGEMENT	INFORMATION SHARING AND EDUCATION	INFORMATION GATHERING	CONSULTATION	PART OF THE DECISION-MAKING PROCESS
PURPOSE	To share information to educate about changes or to encourage changes in behavior.	To collect information on attitudes, opinions and preferences for the policy or alternative creation.	To obtain specific feed-back on policy options or alternatives. This level of involvement is required for land use reviews.	To actively engage citizens at key points in the decision making process.
TECHNIQUES	• Website • Blogs • Direct mailing (e-blasts or regular mail) • Factsheets • Newsletters • Newspaper articles, advertising or inserts • Public meetings • Booths at public events	• Focus groups • Surveys or opinion polls • Public meetings • Interviews • Coffee chats (informal discussion groups sponsored by citizens)	• Public meetings • Public hearings • Written testimony	• Citizen advisory committee • Workshops • Charrettes • Online forums • Webchats

CASE STUDY: Creative Outreach

Some ways that transit providers and local governments have involved the public in transit planning include:

- Conducting workshops or charrettes (design workshops) where the public is involved in mapping future locations of transit stops and routes.
- Working with a high school civics class to identify alternative locations for a transit facility.
- Conducting a visual preference survey to seek input on which designs of facilities and amenities the public likes best.
- On-line surveys to identify priorities.

Tried and True Tips

Go to the meetings where your partners are. Often, development projects are mentioned at Chamber of Commerce or Downtown Association meetings before a developer starts the development application review process with the city. By attending these meetings, you will learn about development projects early and can build relationships.

Make sure the developer is on board. Demonstrating how transit benefits a private development may avoid a potential conflict over transit access. Since many bus stops are located on private property, owners can ask that stops be relocated. Having written proof that an owner agreed to the stop can minimize future misunderstandings, so always "get it in writing".

Don't let transit be an afterthought. Educate cities and counties at the staff and elected official level to help them recognize that transit is a vital component of any development. Convince cities that transit is a viable transportation option.

Share data on ridership benefits with cities and counties, and tie it to community livability and economic development. Transit providers may fully understand the benefits of transit, but many local decision makers may need more information before they will support transit projects.

Get support first on the need for transit from local decision makers and elected officials. Make their vision/philosophy the framework for making decisions. If city plans and policies support transit, it is easier to move transit projects forward. Make sure decision makers and citizens understand what it means to "support the bus system" (i.e., to holistically support the funding of transit, the appropriate siting of transit facilities and the day-to-day operations of transit).

Focus on transit as a vital part of the community. Bus routes can be established to benefit farmers markets, county fairs, schools and other community institutions.

Understand the perspective and rules of each agency. For example, when ODOT evaluates the best site for a transit shelter in its right-of-way, it focuses on site distances and traffic speeds as the agency must minimize the risk of fast-moving cars ramming into a shelter. Transit providers, on the other hand, must focus on the ability of passengers to get to the shelter and on the ability of the shelter to protect passengers from harsh weather.

2.2: HOW ARE OPPORTUNITIES FOR TRANSIT IDENTIFIED?

In Oregon, the state land use planning system and the Transportation Planning Rule provide the framework for communities to develop transit programs and make land use decisions that affect transit.

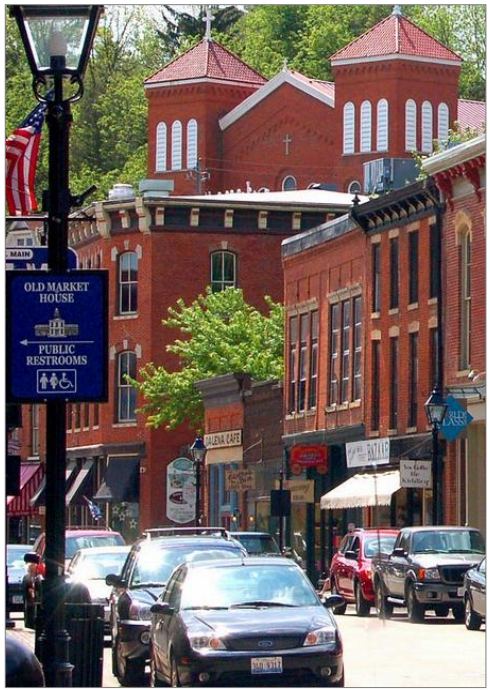
Land Use Planning: the **state land use system** requires each city and county to adopt a local **comprehensive plan** that articulates the community's vision for its future growth. The plan must address 19 statewide planning goals, including transportation and land use objectives. Cities and counties adopt local land use ordinances and development codes to implement their plans. State law requires local jurisdictions to coordinate their plans with service providers, neighboring jurisdictions, and state agencies.

Transportation Planning: long-range transportation planning in Oregon is overseen by the **Transportation Planning Rule** (TPR), which provides guidelines for implementing Goal 12 (Transportation) of the Statewide Planning Goal. The intent of the TPR is to ensure that "transportation systems [are] adequate to serve statewide, regional and local transportation needs" (OAR 660-012-000(1)(a)). Toward that end, the TPR encourages changes in land use patterns and transportation systems that make it convenient for people to walk, bicycle, use transit, and drive less to meet their daily needs. The Oregon Department of Land Conservation and Development (DLCD) administers the state land use program and the TPR. Access to the TPR is available at: http://arcweb.sos.state.or.us/pages/rules/oars_600/oar_660/660_012.html.

The TPR requires counties and cities with populations over 25,000 to prepare local **Transportation System Plans (TSPs),** which must include a **public transportation plan** (OAR 660-012-0020(2)(c) & (d)).

Both plans are long-term strategic plans that identify future multi-modal transportation system needs and priorities based on future development. The city or county is responsible for creating the TSP, including the transit element. The public transportation plan is typically created and updated by the transit provider.

TSPs are prepared by cities and counties and identify how, over approximately the next 20 years, current and future population and employment needs will be served by various modes of transportation, including by foot, bicycle, automobile, and transit. The transit element of the TSP is developed to communicate the long term vision and framework for transit as well as specific transit policies. Transit providers should work with city and county transportation planning departments to ensure that transit is included in the TSPs as a



ABOVE: Transit can help support comprehensive plan goals of revitalizing the core by directing commercial activity and tourism to the main streets of small cities. Photo credit: enjoyillinois.com

For an example of a transit provider's strategic plan, follow the link below to access Lane Transit District's Public Transportation Plan: http://www.ltd.org/pdf/aboutus/The%20LTD%20Road%20Map%202009-02-12.pdf

Photo credit: Lane Transit District

vital part of the overall multimodal transportation network. Considerations for transit providers during review of the TSP include:

- ❒ Is the existing and planned transit system accurately and adequately described?
- ❒ Can the future population be adequately served by existing or planned transit service?

A **public transportation plan** is a long-term strategic plan, created by transit providers to implement the TSP and support the transit provider's vision and mission statements. Public transportation plans cover a period of five to 20 years. Typically, the near-term years (0 to 5 years) of the public transportation plan include specific recommendations for service changes/additions and transit facilities. Less specificity is provided for long-term (6 to 20 years) recommendations. The public transportation plan allows transit providers to anticipate and plan for specific bus and facility needs at least three years in advance, so that procurement of buses and development of facilities can occur in a timely manner. Ideally, the public transportation plan is updated annually, creating a rolling plan that is current and accurate, and the public is included in making choices about future transit service. However, creating a public transportation plan is time-intensive and it may not be feasible to update plans frequently.

The recommendations in the public transportation plan should be consistent with and reflected in the local TSP. Even if a transit provider does not have a public transportation plan, it is still important to have a transit component in the local TSP to guide transit planning.

When creating a public transportation plan, transit providers should begin the process of identifying transit opportunities by assessing existing community strengths and identifying ways to take advantage of them. When identifying such opportunities, the future land uses, popular destinations, and service/operations issues should be considered. Involving the public in this discussion is important because of the public's knowledge of the community and to gain support for plan implementation.

One way to identify transit opportunities is through passenger counts. The Federal Transit Administration (FTA) requires transit agencies to prepare passenger counts and ridership data (referred to as Section 15 data) and report this information to the National Transit Data Base. Section 15 data includes passenger activity at each stop, schedule adherence for the route, passenger miles or trip length, and passenger loads. The route level and, ideally, stop level ridership counts are critical to evaluating transit service. They

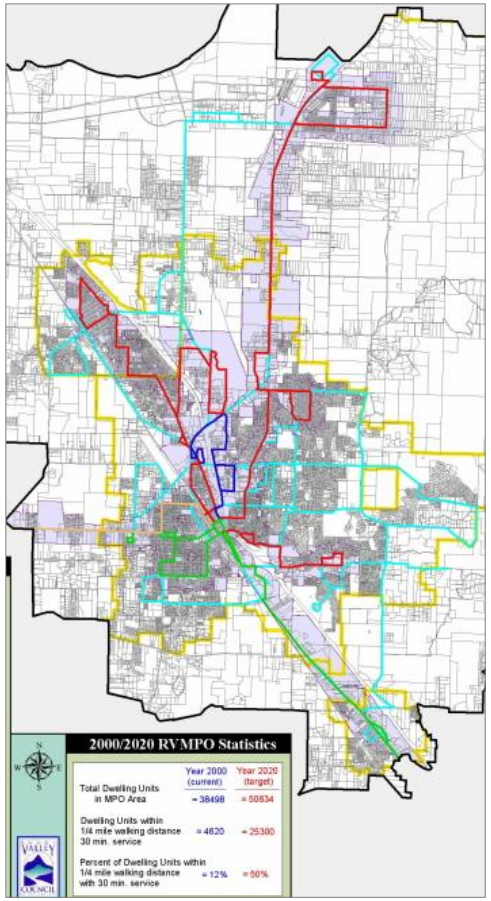
are used to determine the ridership productivity (riders per service hour) of routes and, if stop-level data is available, the ridership productivity of segments of routes. This information allows a transit agency to identify routes or route segments that are not performing well in terms of ridership. The low productivity service can be analyzed to determine what action, if any, needs to be taken. Options include leaving the service as is, making service adjustments or reductions, or eliminating low ridership routes or route segments. The evaluation and possible reallocation of underused service in the transit plan enables a transit agency to use resources more efficiently, which is especially important in this era of dwindling funding. An example of a Section 15 passenger activity form is provided in Chapter 5, Resources.

Important questions to ask during the creation of the public transportation plan include:

- ❒ Where should service go? What destinations (e.g., schools, colleges, shopping centers and hospitals) should be served? What are the future potential land uses?
- ❒ What type of service will be needed?
- ❒ What is the ridership potential?

In urbanized areas with more than 50,000 residents, the **Metropolitan Transportation Improvement Program (MTIP)** is developed through the metropolitan planning organization (MPO) and incorporates the recommendations of the local TSPs for all agencies with transportation responsibilities within the MPO. Where an MPO coordinates regional transportation improvements, transit providers should be active participants in the process to ensure that regional transit recommendations are consistent with the transit providers' vision. MPOs in Oregon include: Portland Metro MPO; Salem/Keizer MPO; Central Lane MPO (serving Eugene/Springfield area); Rogue Valley MPO (serving the Medford/Ashland area); Corvallis Area MPO; Bend MPO; and Walla Walla Valley MPO (serving cities in Washington and Oregon including Milton-Freewater). Two new MPOs are in the process of being formed: Albany MPO and Grants Pass MPO.

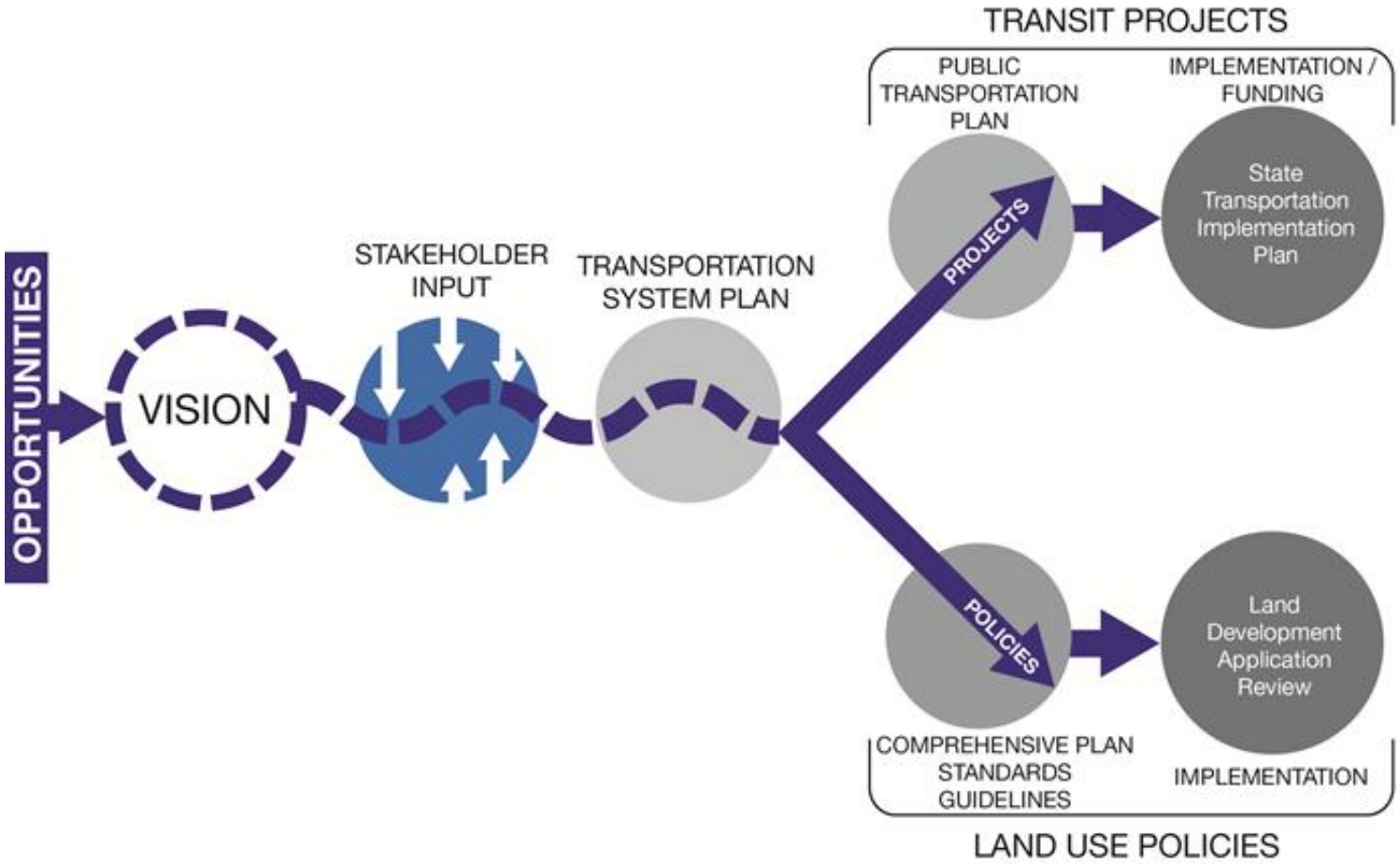
In conjunction with the planning documents of the TPR, TSP, public transportation plan and the MTIP, the **Statewide Transportation Improvement Plan** (STIP) is a four-year funding and scheduling document that identifies specific transportation projects, including transit projects, to receive statewide funding. In order to receive federal or state funding for a project, the project must be identified in the Oregon STIP. Projects listed in the STIP must be consistent with the list of needs/priorities identified in the local transit provider's



ABOVE: Rogue Valley's TSP indicates where residential areas are close to transit. This information can guide development decisions and identify locations for improved service. Photo credit: RVCOG

strategic plan and/or city and county TSPs. The STIP process is described at http://www.oregon.gov/ODOT/TD/TP/pages/stip_guide.aspx.

The figure below illustrates the planning steps in which transit providers can participate as the community moves from establishing a vision for itself to carrying out specific projects, as described on the previous pages.



What Other Planning Processes Should Transit Providers Engage In?

Cities or counties with transit service should address transit in all transportation and/or land use plans. Even if transit is not the primary focus of the plan, it relates to other modes of transportation as well as to land uses and urban form along existing and future transportation routes. The energy and effort expended by the transit agency in local land use and transportation planning will depend on the process and the significance of transit relative to other topics under consideration. Transit agencies should be involved the following three processes:

- **Comprehensive Land Use Plan** – Based on the general policy direction of the comprehensive plan, communities create land use plan elements to provide additional detail and directions regarding a variety of desired outcomes, such as redevelopment sites and mixed-use areas, urban form, and site design. These elements may directly affect transit routes, the location of transit facilities, the frequency of transit service, and other aspects of a transit program. Ideally, transit providers are involved in updating the comprehensive land use plan, which occurs every five years (specific plan elements may be updated more frequently). At a minimum, transit providers should review the proposed update and offer comments on provisions that affect transit. Adjustments to the public transportation plan and/or the TSP may need to be made based on any revisions to the comprehensive land use plan. To determine if the transportation and land use policies support each other, ask the following questions when reviewing the land use element of a comprehensive plan:
  - ❒ Are areas planned for redevelopment accessible to transit and do the future land uses have the population density to support transit?
  - ❒ Can efficient, convenient service be provided to targeted areas?
  - ❒ Are there destinations within the city that generate substantial pedestrian traffic (such as a downtown or a grouping of residential apartments) within walking distance of transit?
  - ❒ Is a high-quality pedestrian environment with good circulation envisioned for areas close to transit?
  - ❒ Is bicycle access to transit appropriately addressed?
  - ❒ Are there schools, hospitals, or other community centers that could benefit from transit?

ABOVE: Synergy between transit and community goals can reinvigorate dynamic places such as this commercial main street in Mt. Angel, Oregon.

ABOVE: All transit riders are pedestrians at some point in their journey. Landscaping, lighting, and proximity to destinations aid pedestrians at the beginning or end of their ride.

- **Land Use and Transportation Standards and Guidelines** – Land use, development, design, and transportation regulations and guidelines are used by cities and counties to implement the policies set out in the comprehensive plan. These standards and guidelines can positively or negatively influence the quality of the walking environment and accessibility to transit. Standards that require pedestrian connectivity, such as sidewalks, support transit. Standards that allow auto-oriented uses, such as a drive-through, tend to create a less safe walking environment.

  Other standards, related to public transportation infrastructure design and location, affect how the street network enables transit access, ridership, and operation. For example, standards governing bus stop locations may limit the efficiency of service if stops are limited to local streets only. Guidelines for transit facility design can ensure consistency with local community character.

  During the development or update of land use and transportation standards and guidelines, the transit agency should either be involved in the process or review the recommendations to ensure that they support and encourage, and do not detract from or prohibit, appropriate development design and density around transit, accessibility to transit and transit service efficiency. When reviewing standards and guidelines, ask:

  - ❒ Do the land uses allowed near transit prohibit or discourage auto-oriented uses that may create barriers to pedestrian accessing the transit facility?
  - ❒ Are building orientations and primary entrances easily accessible from the street and nearby transit stops?
  - ❒ Do the buildings provide adequate accessibility from/to transit for people using mobility devices?
  - ❒ Do the design and orientation of buildings – and the layout of major development projects -- allow direct pedestrian access to transit and surrounding destinations?
  - ❒ Are architectural features that convey a sense of place required or encouraged?
  - ❒ Do the standards require or encourage façade treatments – e.g., storefront windows, awnings, architectural features, lighting and landscaping - to help create a comfortable walking environment along and between buildings?
  - ❒ Is on-site parking required to be located to the side or rear of the buildings to reduce conflicts between cars and pedestrians walking from the sidewalk to the business?

- ❒ Do the street design standards encourage walking and bicycling with safe and convenient facilities?

If the answer to any of the above questions related to local government policy, standards and guidelines is "no," the transit provider should work with the city and/or county to discuss modifications to the TSP, land use comprehensive plan, and implementing standard and guidelines to align the land use and transportation policies of the city/county to best serve the future population with transit.

- **Development Review** – Land development applications are reviewed by local governments to ensure compliance with local plan policies and standards. Typically, service providers, such as utility companies and fire departments, are given opportunities to comment on applications prior to approval. Transit providers should also be considered as a service provider and be included in this review loop. Transit providers should insist on being included in these reviews even if they have no comments. Review by the transit provider should be mandatory for all conditional use permits and any development along the existing or identified future transit routes. The steps involved in reviewing development applications include:

  1. **Review the application**. The request for review of the application for development (new construction or renovation) will come from the city or county planning department along with a due date for comments (typically 10 business days). During the application review, it may be appropriate to contact the applicant's representative or the city or county's planning staff with questions and clarification. Check with the city or county planning staff to determine the specific jurisdiction's protocol.
  2. **Notify the planning department of the transit agency's comments in writing**. If the transit agency has no comment, that should also be noted in writing. If the comments are significant, work with city or county planning staff to determine if the comments should be added as conditions of development approval. An example of a condition of approval might be that the development must include a location for, and construction of, a transit stop.
  3. **Advocate for conditions of approval.** If conditions are added, and the development review process includes review by the Planning Commission and/or City Council, attend the meeting to provide agency comments. Once the application is approved with the conditions, work with the applicant's representative and city or county planning staff to see that the conditions are met.

ABOVE: A simple station includes shelter and signage. It does not impede pedestrian flow while remaining connected to the sidewalk. Contextually, it fits with the beach context of Seaside, Oregon. Photo credit: G. Araki.

When reviewing development applications, questions to ask include:

- ❒ Is the proposed project adjacent to existing bus routes and bus stops?
- ❒ Is the project at a suitable location for a new bus stop?
- ❒ Will the development generate enough ridership to warrant transit service?
- ❒ Is there adequate accessibility (or can accessibility improvements be accommodated)?
- ❒ Have the project proponents considered transit-friendly design?
- ❒ Are the perimeter or frontage streets adequate for bus maneuvering?
- ❒ Will an existing substandard bus stop be upgraded for this project?
- ❒ Should the stop have a bus turnout? If so, is there sufficient right-of-way for a bus turnout?
- ❒ Has enough street-side space been provided for bus benches, shelters, the typical sidewalk, and sufficient handicapped access?
- ❒ Are there adequate Americans with Disabilities Act (ADA)-accessible pedestrian walkways linking building entrances to transit stops? Is there good access for bicyclists? Are there secure places to park bikes and racks or infrastructure available to do so?
- ❒ Are walkways, curbs, bus stops, building entrances and parking lots designed to accommodate the mobility-limited?
- ❒ Are there breaks in the project's perimeter walls to allow access to bus stops?
- ❒ Does the street layout avoid making long routes necessary to access transit? Is there direct and convenient access to bus stops?

Not all the answers to the above questions will be "yes" or "no" and some may not be applicable depending on whether or not transit service to the development exists or is warranted. Depending on the particular development and the potential impact on transit, the transit agency may want to recommend modifications to the development plan for the city or county to consider as part of its "conditions of approval" in order to improve the integration of land use and transportation.

Tried and True Tips

Get on the planning department's mailing list to find out about proposed developments. Transit agencies should be on the mailing list of every local jurisdiction they serve to receive all development applications, even if the development is not along an existing route. Knowing what developments are planned where will help with long range service provision planning.

Start the land use and transit connection conversation now. Building informal relationships with the land use planning departments in the transit service area helps both the planning department and the transit provider understand the policies and laws of the other. Don't wait until you are invited to a meeting, or when there is a policy to be reviewed. Invite planners out to lunch to build the relationship to avoid conflict later.

Ask for assistance from land use planners when needed. Work with the land use planning department to understand current and long-range plans as well as legal requirements to avoid problems associated with the "taking" of private property. Work with land owners to obtain easements or other access to land for transit facilities when appropriate. The Oregon Department of Land Use and Development website has good resources that provide an overview of land use planning in Oregon (www.oregon.gov/LCD).

Build the economic argument for better transit. Explain how transit can advance local economic development, downtown revitalization, and other broadly supported goals.

Comment on proposed development projects. Work with local planning departments to make sure everyone understands the implications of proposed projects on transit ridership. Address potential impacts in the development applications. Provide a written response, even if it is "no comments", so that the planning department knows the transit agency is engaged.

Create better accessibility for pedestrians and cyclists. Federal funding often requires providing for bicycle and pedestrian connections.

2.3: HOW DO PROJECTS GET FUNDED?

ABOVE:The City of Corvallis used an ODOT New Freedom grant to make all its bus stops more accessible. Photo Credit: City of Corvallis.

Transit facilities can cost less than $1,000 for a simple bus stop sign or as much as millions of dollars for a transit center. Requirements and criteria often change over time, and applications must comply with grant requirements for funding. Funding sources are found at various levels of government: city, county, regional, state and federal.

As mentioned before, projects must generally be identified in the local TSP and the state-wide STIP to qualify for state or federal funding. As a result, it is always better for transit providers to have projects on the STIP lists so that they can be in the queue should funds become available. Funding for transit projects has been, and will continue to be, a challenge due to the volatility of grant appropriations and unstable transit funding. Because information is constantly changing, descriptions of potential federal, state and local funding opportunities are described below, along with web links on where to find more information as to the specific funding availability, requirements and schedules.

Moving Ahead for Progress in the 21st Century Act (Federal). Known as MAP-21, this federal reauthorization bill for surface transportation programs was passed on July 6, 2012. MAP-21 funds for transit projects will go through FTA and may be distributed by the State of Oregon. Programs identified under MAP-21 include: capital investment grants (Section 5309), mobility of seniors and individuals with disabilities (Section 5310), formula grants for rural areas (Section 5311), and state of good repair grants (Section 5337). More information can be found at http://fta.dot.gov/map21/. FTA provides training for transit agencies seeking federal funding, maneuvering through federal funding requirements, and project management training. Upcoming training events are listed on the FTA Region 10 website at http://www.fta.dot.gov/region10_13668.html

Typically, federal funding grants require:

- **Public Involvement** – The public must be involved in the process of identifying alternatives and selecting the final plans for any transit facility. Methods of public involvement are discussed in section 2.1.
- **Local Matching Funds** – The percentage of local match is typically approximately 10-20 percent. The local match may be provided as dedicated project funds or staff time, assuming that neither the matching funds nor the funds to pay wages come from a federal revenue source.

- **Environmental Clearance –** The **National Environmental Policy Act (NEPA) process** to select the preferred location of a facility and the preferred site requires a review of the potential environmental, social and cultural impacts.

State Special Transportation Fund (State of Oregon). State of Oregon funds are distributed by the ODOT Public Transit Division to local transit providers through two means: a formula based primarily on service-area population; and a discretionary grant program that includes both state and federal funds. The grants are awarded biennially. A list and more details of ODOT funding opportunities can be found at: www.oregon.gov/ODOT/PT/Pages/program_index.aspx.

ODOT Public Transit Division conducts annual training to assist transit providers with the grant application process. To stay up to date on the process go to oregon.gov/odot/pt. Other training and technical assistance events are listed at http://www.oregon.gov/ODOT/PT/Pages/tech_assist/events.aspx.

ConnectOregon (State of Oregon). Funded by the Multimodal Transportation Fund, ODOT provides grants and loans to non-highway transportation projects (i.e., air, marine, rail, and public transit infrastructure improvements) that promote economic development through the ConnectOregon program. This program funding is approved biannually by the Oregon Legislature, followed by project selection by the Oregon Transportation Commission. Up to date information about the ConnectOregon program can found at: http://www.oregon.gov/ODOT/TD/TP/pages/connector.aspx.

STIP Enhance and Fix-It Funds (State of Oregon). The STIP categorizes projects into the two broad categories of "Fix-It", those activities that fix or preserve the existing transportation system, and "Enhance", those activities that enhance, expand or improve the transportation system. Details regarding STIP funding allocation process, timeline, and application instructions are located at http://www.oregon.gov/ODOT/TD/TP/pages/stip_guide.aspx#Enhance_and_Fix-It_for_the_2015-2018_STIP.

ODOT Public Transit has developed an overview document that identifies the specific documentation needed for federally funded transit shelter and facilities projects. This is an excellent resource to help transit providers make sure that all the T's are crossed and I's are dotted. The document can be found at http://www.oregon.gov/ODOT/PT/pages/programs/capital_program.aspx

Seek enough grant funds to hire an expert to complete the project. There are many transit facility projects that do not occur often enough in a transit provider's life-cycle to allow staff to become experts. It often takes longer and is more challenging for the transit provider to do the work than to hire an outside expert to manage the project.

Regional and Local Funding Sources. Funding sources for regions and local agencies, such as MPOs, counties, and cities, provide a range of funding opportunities dependent upon their locations. Regional and local funding options are vitally important in helping transit providers see their transit plans come to fruition: local funds can be used as matching funds for federal and state projects, turning a small investment of $25,000 into $2.5 million, for example. Where there is an MPO overseeing the regional transportation system, that MPO may be a source of funding for specific transit projects. It is essential to work with regional and local governments to become aware of the specific funding sources available in your region. Working collaboratively with city and county planning staff to identify transit projects and funding can be a win-win. It is often feasible to add to or modify other planning and public improvement projects to incorporate transit improvements in a more efficient and effective way than if the two projects are done independently. Public involvement at the local level can enhance prospects for public support of transit projects. Such support, in turn, can also help raise needed funds for the projects.

Photo credit: Pivot Architecture

CASE STUDY: Lessons Learned from the Hood River Transit Facility

In 2010, Hood River County Transit District (the District) opened a new transit center to serve as a park-and-ride and as the hub for the District's dial-a-ride, intercity bus service. For the District, building a new transit facility was a decade-long learning process. Each step brought new challenges as it worked through the various requirements of land use and federal funding processes. Learning from others — whether from FTA-sponsored trainings or peer agencies going through the process at the same time — helped the District move through uncharted waters. Key lessons learned included:

- **Incorporate transit plans in the local Transportation System Plan (TSP):** The District informed the City and County of Hood River of its long-term plans for the transit system and facility needs and worked together to incorporate the plans in the local TSP. Involving the city and county in the planning process won their support and secured the project a place in the overall transportation plan for the region, laying the foundation to move the project forward.
- **Understand funding source requirements:** A small amount of matching funds can go a long way. The District used $300,000 to attract nearly $3 million from various funding sources: $1 million in American Recovery and Reinvestment Act highway program funds from ODOT's share of funding; a direct FTA grant award for $400,000; and $1.2 million from an intercity bus grant provided by ODOT from FTA 5311 funds. However, using federal funding requires a more complicated and lengthy federal review and approval process that must be built into the project schedule.
- **Understand NEPA's many requirements:** Each NEPA requirement that is not sufficiently met can delay the process. Know early what the requirements are and address them as you move through the process to avoid unnecessary delays.
- **Use assistance from state or federal resources when available:** District staff is currently developing a transit facility in The Dalles for another agency. (The District's director is shared with another agency in Wasco County.) The process is much easier and smoother the second time around primarily because of the funding source. With ODOT Flexible Funds, the District had access to ODOT highway staff members who are experienced with the land acquisition and procurement processes. For small city transit providers, this resource is highly valuable as their experience building major transit facilities is typically once-in-a-lifetime.

2.4: WHAT ARE THE STEPS TO DEVELOP A PROJECT?

American Public Transit Association's (APTA) **Architectural and Engineering Design for a Transit Operating and Maintenance Facility** best practice document, provides a step by step process to help transit providers maneuver the process of constructing larger facilities, including a model scope of services. To view this document, follow this link: http://www.aptastandards.com/LinkClick.aspx?fileticket=cfAiJFtIorQ%3D&tabid=321&mid=1761&language=en-US

Any new bus transit facility, whether it is a bus shelter or a transit center, requires a specific process for implementation. A framework for implementation, incorporating the elements described in the previous sections and adding new detail, is summarized below.

1. Identify the **long-term vision** for transit service. Identify transit facility needs in a public transportation plan and the local TSP. Involve the public in the creation of the plans.
2. Work with the local government and ODOT to place any short-term (5-year) **needs on the STIP**.
3. Begin the process of **site selection and conceptual design**. The process should involve the public in selecting the preferred location and design and include a feasibility analysis on the site to address potential environmental impacts. If a building is involved, prepare a conceptual facility design.
4. Finalize the plan and designs and **seek appropriate approvals**.
5. **Begin construction**.

What is Involved with Site Selection and Conceptual Design?

In general, the elements involved in selecting a site and creating a conceptual design of the transit facility are the same. The process must include:

1. **Coordination** with the city/county, metropolitan planning organization (MPO), if applicable, ODOT, and the Federal Transit Administration (FTA) (if federal funding is involved).
2. A **public involvement strategy** seeking input from transit users, land owners, local agencies with site jurisdiction, school districts, and tribes of any tribal land potentially impacted by the project. Involvement can include open houses, workshops, design charrettes and public hearings, to seek input on the selection of a preferred site and design as well as the community impacts.
3. A **facility and site feasibility analysis** that considers: consistency with local plan, land use zoning appropriateness, land acquisitions and relocation requirements, public transit facility needs, financial feasibility assessment, and alternative site identification and analysis.

4. A **conceptual facility design** that addresses how the space will be used by the building occupants (where public spaces, private offices and service bays will be located, for example), overall and specific space needs, and sustainability requirements (such as Leadership in Energy and Environmental Design/LEED certification). Conceptual building design should include preliminary floor plans, building sections, elevations, three-dimensional renderings, sustainability and energy conservation strategies, and cost.
5. An **environmental analysis** of the preferred site, as outlined by the National Environmental Policy Act (NEPA). The analysis typically includes: air quality, archaeology, climate change, economics, energy, fish and wildlife, geology, hazardous materials, historic significance, land use, noise, social and environmental justice, vegetation, visual aesthetics, wetlands and water quality. There are three levels of NEPA environmental reviews:
   - Environmental Impact Statements (EIS) are prepared for projects with potentially significant environmental impacts. EIS are usually for large projects, such as intermodal transit centers.
   - Environmental Assessments (EA) are prepared for projects with unknown impacts.
   - Categorical Exclusions (CE) are prepared for small, routine proposed actions that do not result in significant environmental impacts due to the size of the project or the location it is being built. This is the most common clearance review process for small transit facility projects.

ABOVE: A native plant rain garden can mitigate stormwater issues (part of NEPA requirements), educate riders through interpretive signage, and beautify a transit stop. Photo credit: Pivot Architecture

How Long Does the Design Process Take?

The length of the process varies based on the level of review and required documentation needed: the more complex the project, the more review and documentation required. Some of the key elements that may extend the length of the planning process include:

- **Size and complexity of facility.** For example, a large transit intermodal hub will require more analysis and discussions with partners to determine the design program of the facility than a new bus stop location.
- **Site ownership.** If the transit provider owns a site, or has an agreement with the property owner to locate a transit facility on a specific site, the site selection process can be streamlined (although the same requirements must still be met).

ABOVE: Bus stations can range from the very simple to the very elaborate. This station in Eugene has a dedicated bus-way, a center station and many amenities for riders.

- **Funding requirements.** As described earlier, the use of federal funds requires public involvement and environmental clearance components, which can add complexity and time to the process.
- **Environmental impact.** Environmental review can range from a few months for a CE that may only require an agency checklist, to several years for an EIS that requires an examination of a wide range of project alternatives and a host of in-depth environmental studies.

Tried and True Tips

Provide project details for each specific location on site plans submitted for grant documentation. For example, provide a map illustrating where signs and shelters will be placed. If a specific physical address is not known, use an "X" to mark the spot. If the details are missing, the grant application may be deemed incomplete.

Ask for help if help is needed to complete a declaration of categorical exclusion, or any other documentation. ODOT Public Transit Division regional transit coordinators are available to serve.

Attend training opportunities on anything that relates to the project – Disadvantaged Business Enterprise (DBE) training, NEPA training, review training. It makes understanding the complex system easier. FTA offers a number of trainings. For Oregon focused training opportunities, visit http://www.oregon.gov/ODOT/PT/Pages/tech_assist/events.aspx

Think about NEPA right from the get go. The more criteria you can meet with your site selection, the shorter the process will be in the long run.

How Does a Transit Agency get Planning Approval for a Project?

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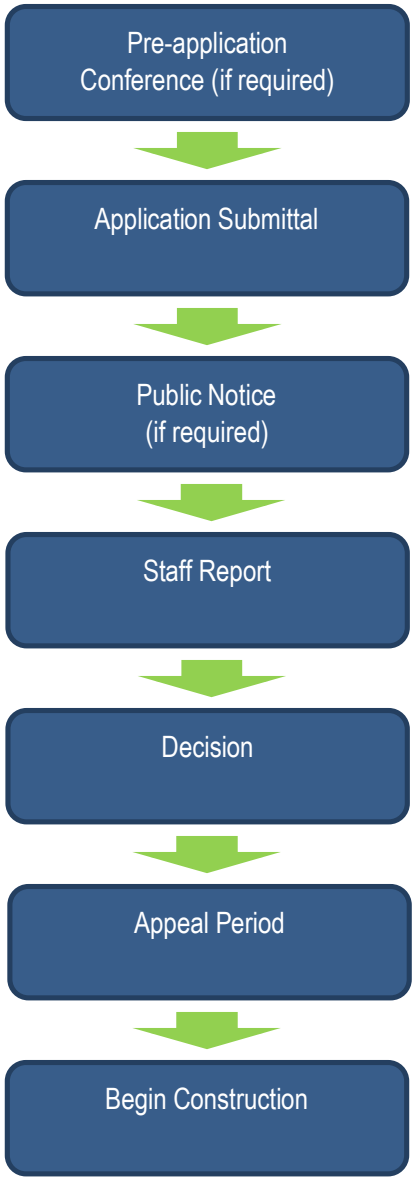
Whenever a modification to an existing transit stop or facility (or construction of a new one) is needed, the transit agency must apply for, and be granted, a development application by the city or county with jurisdiction over the site where the improvement will be made. Although the specific details will vary based on the jurisdiction, the overall development application process is similar in all cities and counties in Oregon. There are three types of development review processes that can be initiated by a land owner:

- Type 1: an administrative review, with a decision by the city or county planning director.
- Type 2: an administrative review including public notice, with a decision by the city or county planning director.
- Type 3: quasi-judicial review including public notice, with a decision by a hearings officer or Planning Commission.

The appropriate review process for the proposed development is determined by the amount of discretion that staff needs in order to make a decision. More complicated projects with a greater impact on the surrounding land uses, such as an intermodal transit center, require more discretion in making a decision than adding a shelter at an existing bus stop, for example. Both are considered changes to the existing land use and require a development application. An intermodal transit center, however, may have negative impacts on the surrounding land uses. Determining how those impacts will be mitigated will require greater discretion and therefore will likely require a type 2 or 3 review. A modification to an existing bus stop requires less discretion so will likely be a type 1 review.

Once the application is deemed complete, the entire process of obtaining development approval can take anywhere from 30 to 150 days, depending on the number of applications received at any given time.

The general development application process is described on the following page. Because the requirements, fees and process vary between jurisdictions, it is important that transit agencies work with the city and county planning departments to understand the specific details applicable to the project under consideration.



The basic steps in the land use development application process include:

1. **Pre-application Conference.** Depending on the type of review and the city or county requirements, a pre-application meeting with planning staff may be required. This is a formal meeting with staff to review the project, identify the development code criteria that must be addressed in the application, and identify any initial concerns the city or county might have with the project.
2. **Application Submittal.** Application requirements differ from jurisdiction to jurisdiction. Typical requirements include basic site details such as address and land owner; a site plan; a narrative of the project; and an explanation of how it addresses the city or county development code criteria. After review by the city or county for completeness, the applicant will receive a letter deeming the application complete or identifying any additional information required for the application to be deemed complete. Review for completeness typically takes 10-30 days.
3. **Public Notice.** Depending on the type of review, a neighborhood meeting and/or public notice of the application may be required. Often, if a neighborhood meeting is required, it must occur *before* the application is submitted. Once the application has been submitted, the city or county sends out a public notice providing the public with a period of time during which to comment on the application. The notice is mailed to surrounding property owners and neighborhood associations in the area. Typically, the comment period is 10-14 days.
4. **Staff Report.** After the public comment period, the city or county reviews the comments and prepares its report and findings.
5. **Decision.** Depending on the review process, the staff report is provided to the Planning Director for his/her decision, or the application goes before a review body, such as a hearings officer or Planning Commission.
6. **Appeal Period.** Notice of the decision is sent to the applicant and the public who submitted testimony. The applicant and public are given a 10-21 day period to appeal the decision or conditions of approval to the Planning Commission.
7. **Begin Construction.** Once the development application has been approved, the transit agency can begin the process of construction. Additional approvals, such as building permits, are required for construction.

What if an Easement is Required?

It is often necessary for a transit provider to acquire an easement from a landowner in order to locate a transit stop. An easement transfers a limited property right from the landowner to the transit provider for the purposes of providing transit service: it is not a transfer in real estate ownership. Once it is determined that an easement is required, it can be acquired in one of three ways:

- Donation, in which the landowner donates the requested easement without compensation.
- Negotiation, in which a fair market value is negotiated between the landowner and the transit agency for the right to use the land.
- Condemnation, in which the transit agency acquires the easement through its eminent domain authority, with the value based on the appraised property value.

Because an easement is a legal document, transit agencies must involve their legal counsels in the discussions with property owners. An example of a standard easement agreement is included in Chapter 5, Resources.

If an easement is requested as part of a condition of development approval, care must be given that there is both a nexus between the development application and the need for the easement, and a determination that the exaction of the easement from the applicant is roughly proportional to the impacts on transit facilities caused by the development. As determined in a couple of U.S. Supreme Court cases, the government may not require a person to give up a property right in exchange for a public benefit that has little or no relationship to the property proposed for development. If there is not a nexus and a finding of rough proportionality between the transit impacts of the proposed development and the desired easement, it may be considered a taking of property rights, subject to compensation for the property owner. For example, if a transit agency has identified the need for a transit stop in a downtown, requiring an easement as a condition of approval for a development application for a barber shop might be considered a taking since the amount of traffic generated by a barber shop is likely not enough to justify a transit stop in that location. The transit agency would likely be within its rights, however, to request that a condition of approval for a regional hospital development include an easement for a transit stop since a hospital use will likely generate enough traffic to justify a transit stop in the location.

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3. LINKING TRANSIT TO LIVABILITY

Transit affects, and is affected by, the community in which it is operates. Because transit can be a key element of a city's economic development and growth management strategies, the coordination of transit and community design is essential. Three fundamental transit components should be considered together:

- the route transit takes
- the relationship between transit facilities and surrounding destinations
- the location and design of the transit site itself

When these three elements are woven together, they can advance local economic and quality-of-life objectives.

The relationship between good transit design and community design is reciprocal. The location of transit routes and facilities can encourage and direct growth. A walkable and well-connected community sets the stage for transit—whether the system exists, is yet to come, or will be expanded in the future.

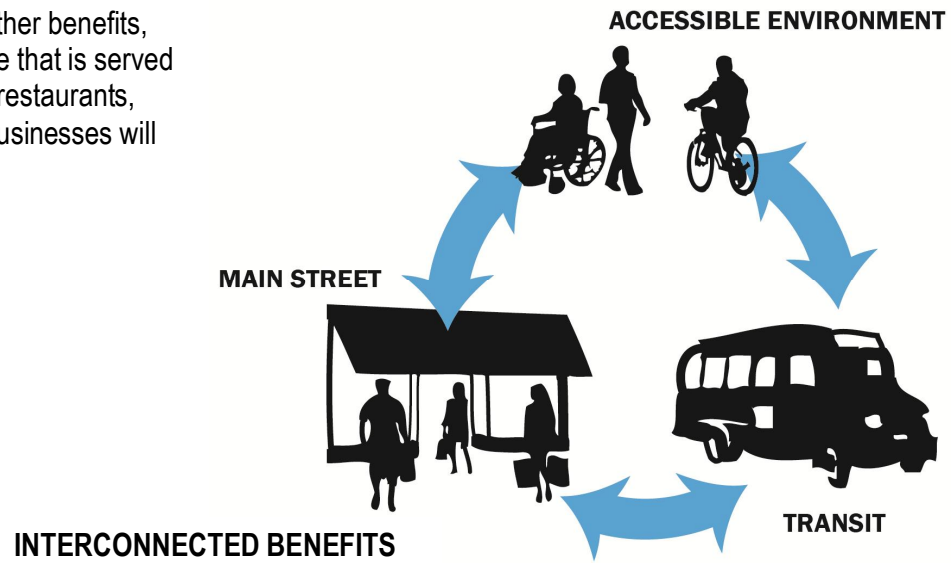
Integrating transit design with community design yields other benefits, too. Residents and employers may be attracted to a place that is served by transit AND has strong community amenities such as restaurants, parks, and social services in walking distance. Existing businesses will also benefit from the vitality that transit can bring.

CHAPTER 3 ROADMAP

3.1: Why is the Transit Route Important?

3.2: What is an "Accessible Environment"?

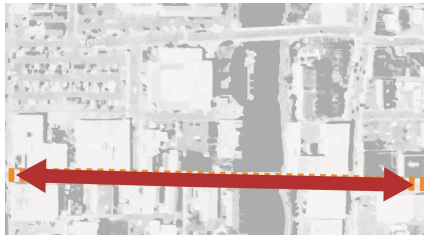
3.3: How can Transit be Integrated into the Community?



DESIGN ANALYSIS:
Balancing Benefits

Circuitous Routes:
- pull activity from business core
- atrophy main street businesses
- lengthen routes and create less efficient service

Direct Routes:
- bring people to and from main street
- encourage patronage and vibrancy
- shorten routes for faster service



3.1: WHY IS THE TRANSIT ROUTE IMPORTANT?

Improving access and connections to local businesses is an important role of transit. In many small cities, main streets are the focus of local economic development. If main streets are to prosper, transit must serve the businesses along them. Therfore, it is important that transit routes include stops in the downtown.

With the intercity service in many small Oregon cities, bus stops have often been located on side streets — off the main street and out of the downtown. The result in some cases is a circuitous bus route through town. Moving the route off the main street can result in a longer bus route and reduced efficiency of the transit system. For example, if an intercity transit service went through four cities, and in each city, the bus service moved off the main street, creating a five-minute side street "detour," the length of the route would be extended by 20 minutes. This has implications for system operation and the attractiveness of the transit service. Adding length to the trip increases operational costs and may result in less service. It can also result in less revenue if potential transit passengers instead choose to drive because of the extra time required for transit.

If a circuitous route is created to provide more community access in the downtown and throughout the neighborhoods (a potentially better solution), towns should create a network of connections within the community that provide an **accessible environment**: a series of safe, easy and direct access points within a quarter mile radius around transit stops. Bike lanes and pedestrian connections allow people within a short distance to access transit while generating more opportunities for economic and social interaction along those routes.

In cases where a through-route is designed to intentionally bypass the downtown in order to reduce travel time, a parallel route that serves the downtown should be considered.

What if the Main Street is the State Highway?

On state highways that also serve as main streets, conflicts often arise between the mobility function of the highways and the service requirements of transit vehicles. For example, when buses pull in and out of traffic to pick up and drop off riders, they often slow through traffic. The location of bus stops and pull-outs can be adjusted to reduce these conflicts between buses and automobiles.

The Oregon Highway Design Manual (OHDM) provides guidance on integrating public transit into other projects on state highways, including bus stop locations, in support of creating a multimodal transportation network. Key points to note within the OHDM include:

- **Bus Stop Location Selection** – The bus stop location must address both traffic operation issues and passenger accessibility issues. If possible, the bus stop should be located in an area where typical improvements, such as a bench or shelter, can be placed in the public right of way. Bus stop location should consider potential ridership, traffic and rider safety, and bus operational elements that require site-specific evaluation. Significant emphasis should be placed on factors affecting personal security, such as well-lit open spaces visible from the street that create a safer environment for waiting passengers (OHDM page 12-3).
- **Sidewalks** – At transit stops, sidewalks should be provided at a minimum to the nearest intersection or the nearest section of existing sidewalk (OHDM page 12-11).
- **Amenities for Waiting Passengers** – Transit ridership is enhanced by the provision of pleasant and comfortable places for waiting passengers. Protection from the elements, seating and personal security are key to a pleasant waiting experience (OHDM page 12-11).

For more information on creating a main street along a state highway, refer to **Oregon's Main Street Handbook**. http://cms.oregon.gov/LCD/TGM/docs/mainstreet.pdf

The **Oregon Highway Design Manual** can be found by following the links on the Oregon Department of Transportation Roadway Engineering website: http://www.oregon.gov/ODOT/HWY/ENGSERVICES/pages/hwy_manuals.aspx

ABOVE: Main Street in Port Orford, Oregon is also the Oregon Coast Highway/Route 101. Photo credit: Lance & Cromwell

CASE STUDY:
Main Street on Highway 101

The south terminus for the Tillamook to Yachats bus route is on Yachat's main street, known also as Highway 101. Visitors to town arrive by transit twice a day. To move pedestrians from the bus stop along the main street, the City of Yachats has applied for funding to improve the pedestrian environment along Highway 101. The goal is to create more of a "main street feel" along the corridor by calming traffic, enhancing the pedestrian experience, and encouraging multimodal connections for cyclists, transit riders, pedestrians and automobiles.

Proposed improvements include continuous bike lanes and sidewalks, crosswalks, improved parking by eliminating diagonal and head-in parking, and adding additional parking on side streets.

3.2: WHAT IS AN "ACCESSIBLE ENVIRONMENT"?

An accessible environment enables all users, regardless of mode or physical limitations, to safely access transit. Good connectivity in the area immediately surrounding the transit facility is arguably the most important element of integrating land use and transit, as all transit users are a pedestrian at some point in their trip. If a potential transit user cannot get to the transit facility, it does not matter how the facility itself is designed.

Connectivity within the first couple of blocks of the transit facility provides a first impression for visitors, helps to orient riders, and is essential to integrating the facility with the surrounding community. For infrequent or first-time users, this is extremely important and if done well, makes for a better transit experience and increases the likelihood of repeated use. In the hierarchy of accessibility, access for pedestrians and the physically limited is at the top.

Although transit providers have little or no direct responsibility for the quality of the connections to and from a transit facility, it is important that they understand the key components that contribute to a high-quality accessible environment so they can work effectively with local governments and developers during the land use planning and development process. The following elements are important to achieve an accessible environment:

- Accessibility for people with mobility issues must be considered as described in the **American with Disabilities Act (ADA)** requirements. Signage must be readable from a wheelchair. Sidewalks must be barrier free and wide enough for wheelchair movements.
- The transit stop should be clearly visible to pedestrians/cyclists from a distance. As with the front door of a house, it should be clear how to get there.
- The site layout and building design should allow for direct movements between transit, land uses, and surrounding areas (e.g., transit riders should not have to cross parking areas to get to building entrances from the transit facility).

DESIGN ANALYSIS:
Quality Accessibility

Lack of pedestrian amenities discourages transit use, creates safety issues and does not capitalize on the transit stop's location to benefit the community. The example below also does not consider access for people with mobility devices.

The transit stop below offers easy pedestrian access, seating and an overhead shelter.

Photo credit: G. Araki

DESIGN ANALYSIS:
Bus Stop Location

Transit stops are most effective if they are located near business entrances, not across parking lots. Transit use is discouraged when transit users must cross large parking lots to access their destinations. People would be more likely to take transit if the transit stop were located near the building entrance. This is a good approach for transit facility sites near medical facilities or a popular grocery store.

Photo credit: OregonLive

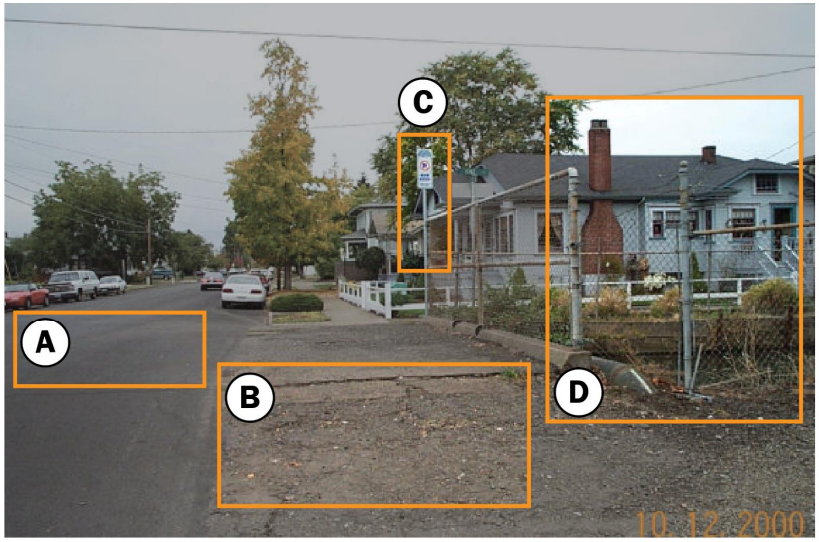
- Sidewalks are present along site frontages that connect to sidewalks and streets on adjacent and nearby properties. Accessible routes are buffered from fast-moving traffic and large parking lots. Accessible street crossings are clearly marked with adequate signal timing and generous pedestrian refuge islands.
- Secure and convenient bicycle parking is available.

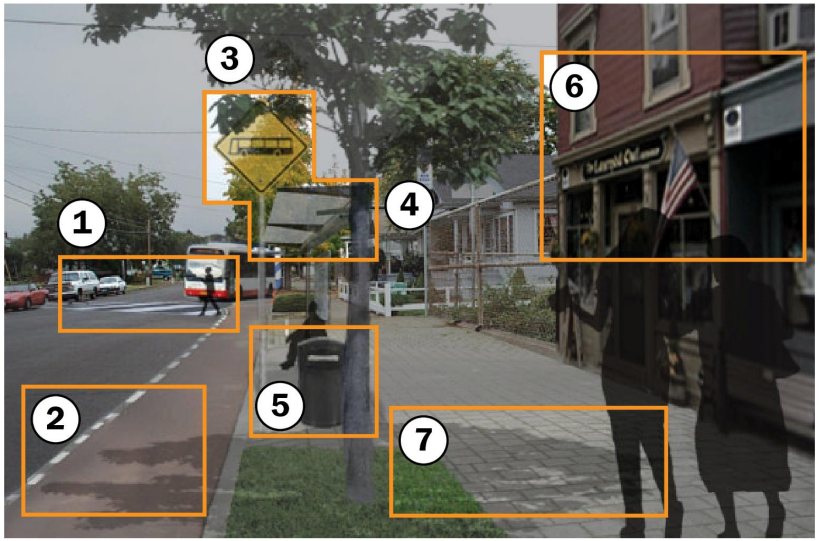
When considering a specific site or location for a transit facility, ask the following questions to determine if a site will enhance the relationship between transit and land use and allow for a good accessible environment.

- ❒ Is the site an obvious location for a transit facility? For instance, is it at the street corner? Is it located on a street with active uses, whether they are employment, office, retail, and/or residential?
- ❒ Would the transit facility be visible to people looking for a transit stop? For example make sure that the stop is not obscured by a telephone pole, business sign, or vehicle parking.
- ❒ Are there destinations near the proposed site that people want to access? Or is the site isolated and far away from popular destinations?
- ❒ Are pedestrian facilities such as sidewalks, paths and crosswalks connected to the site so it is easily accessible for all users, including those with potential mobility issues (e.g., people with young children or children in strollers, disabled persons, or the elderly)?

DESIGN ANALYSIS: Before and After Accessibility Improvements

When accessible amenities are applied, the transit facility is better integrated into the local community.





- **A** Limited or no crosswalk access to transit stop
- **B** Broken sidewalk creates unimproved and disconnected pedestrian access; no streetscape or lighting amenities
- **C** Bus signage is small and set back off of the street
- **D** Poor, severed, or non-existent links to community space or assets

- **1** Crosswalks link to bus stop
- **2** Striping defines the bus pull-out
- **3** Bus signage clearly marks the stop
- **4** Shelter is simple and provides protection from the elements
- **5** Garbage cans and seating enhance rider amenities
- **6** Direct connection to key destination
- **7** Shade and paving enhance the pedestrian space

3.3: HOW CAN TRANSIT BE INTEGRATED INTO THE COMMUNITY?

ABOVE: The transit platform in Eugene, Oregon is well-lit and has clear sight lines throughout. It also connects directly to the entrance of Sacred Heart Medical Center.

Well-sited, well-designed transit facilities can help set the stage for economic development and a self-sufficient community. The location and design of transit facilities and nearby destinations should complement each other and provide value. Transit planners should consider how existing and planned land uses could increase ridership. The following elements should be considered when integrating a transit facility into the community:

- **Sight Lines** – A clear line of sight to the transit facility, whether it is a bus stop or a transit center, from adjacent streets allows transit patrons an easy way to orient themselves and recognize where they are. Landmarks, vistas, and focal points provide key visual markers and can help to create a sense of identity. Transit patrons on foot or in a wheelchair need to be able to see where they are going. For transit facilities that serve multiple types of public transportation (like an intermodal hub), clear sight lines within and to the facility allow for the safety of various modes as well as for pedestrians making transfers. For single transit stops, the transit stop needs to be seen by the bus driver and the bus seen from the transit stop, both for safety and operational purposes.
- **Destinations** – Transit facilities should be located within a short walk of a range of popular destinations, such as service businesses, restaurants, and medical or educational institutions, in order to promote frequent and regular use of transit. A five to ten-minute walk (quarter mile to half mile) is the typical distance people are willing to walk from transit to their destinations; less if the walking environment is hostile and dangerous, and more if the walking environment is pleasant. Transit facilities should be located to serve the highest number of riders and minimize walking or biking distances to existing and planned destinations.
- **Connections** – The relationship between buildings, streets, sidewalks, and transit facilities should be assessed to determine if a linked series of spaces, visual landmarks, and available routes make it easy to access the facility. Direct, attractive connections — without barriers or dead ends — should be provided.
- **Transit Operations** – Consider the impacts on the operation of the transit system of siting the facility in this location. These impacts may include the location of other transit stops, the ability to include the stop in an existing transit route without significantly increasing the length of the route, and the ease of pulling the bus into and out of moving traffic.

4. TRANSIT FACILITY DESIGN GUIDELINES

Transit facilities can include a variety of structures and amenities. Each plays a different role in a transit system, yet not all elements are required in every case. Planning a successful system requires consideration of the specific location and needs. This section is intended as an overview for transit providers and describes guidelines to consider when planning and designing transit facilities.

4.1: OVERARCHING CONSIDERATIONS FOR FACILITY DESIGN

Before design begins, several elements must be considered as they will affect how the transit facility will function and be organized.

Operations Issues

In determining the location and design of transit facilities, transit providers must consider several factors affecting operations:

- the facility's function, how it relates to other facilities in the system and how convenient it is to access from bus routes.
- the urban/rural context, where bus routes go to and from and the impact on the vehicles from travel on unimproved roads.
- the impact on the entire transit system – e.g., how the location of the route and frequency of stops affects service.

Travel time and bus service reliability are key to attracting and retaining transit riders. If the bus takes too long, or isn't reliable, those who are not dependent on transit will not use it. Too many stops slow bus operations; too few increases walking distances and decreases coverage. Transit facility design must balance safe and convenient access with timely operation.

The overall design of the stops also affects operations and system efficiency as discussed throughout this section. When creating design standards for transit facilities, agencies should include general guidelines and principles related to the operation of the system. Recommendations, where appropriate, are included for specific transit facilities and can be found in the resource documents referenced throughout this primer.

CHAPTER 4 ROADMAP

4.1: Overarching Considerations for Facility Design

4.2: Transit Stop Design Guidelines

4.3: Transit Stop Amenities

4.4: Other Transit Facilities

4.5: Transit Facility Access and Safety

4.6: Transit Maintenance Facility

Note: all costs identified in this section are estimates based on similar recent projects in Oregon. The costs are provided to give transit providers an order-of-magnitude cost and should not be used for budgeting purposes.

CASE STUDY: Working Together to Identify Barriers

The City of Sandy's transit manager worked with a city engineer to identify and catalogue areas of non-ADA compliance and/or barriers to accessibility along bus routes. Sandy Transit then engaged and partnered with other city departments and/or other responsible parties (including, business owners, and ODOT) to make needed improvements. Several ADA improvements have been completed and others are in the queue.

Photo credit: Steve Morgan

Americans with Disabilities Act (ADA)

The **Americans with Disabilities Act (ADA)** addresses vehicle accessibility, accessibility of public meetings, and sensitivity to customers with disabilities. For transit facilities, typical ADA issues to consider are bus stop layout with adequate spacing and site-specific issues, such as the pavement incline to and around the bus stop. ADA requirements must be considered not only while planning for the transit facilities themselves, but also in the planning for connections — i.e., access — to facilities. As discussed in Chapter Three, the overall connectivity and accessibility from the community to the transit facilities is important — not just the accessibility from the transit facility to the transit vehicle.

Crime Prevention through Environmental Design (CPTED)

CPTED is a design methodology that focuses on increasing comfort and safety for transit riders while also reducing opportunities for crime. Basic principles of CPTED include:

- **Sightlines** – clear views of surrounding areas.
- **Defensible space** – active and visible places where transit riders can see and be seen.
- **Lighting** – well-lit areas to increase safety and comfort of riders.

Other attributes of **CPTED** that can be addressed at transit stops include:

- Traffic flow
- Pedestrian presence
- Accessibility from the street
- Security technology
- Visibility from surroundings
- Trash receptacles and washable surfaces to reduce and ease maintenance of graffiti and litter
- Defensible spaces that limit opportunities for hiding

Tried and True Tips

Identify the ideal locations for transit shelters when discussing transit investments with decision makers. Document the locations in local planning documents, such as the transportation system plan (TSP), to guarantee that they are built.

Talk to the transit operators when considering design. In one community, the transit provider went to the expense of providing a bus pull-out at a key stop, but the drivers didn't use the pull-out because of the additional time required to merge back into traffic. In order to stay on time, the drivers determined it was more efficient to stop traffic briefly than to lose time merging back into traffic.

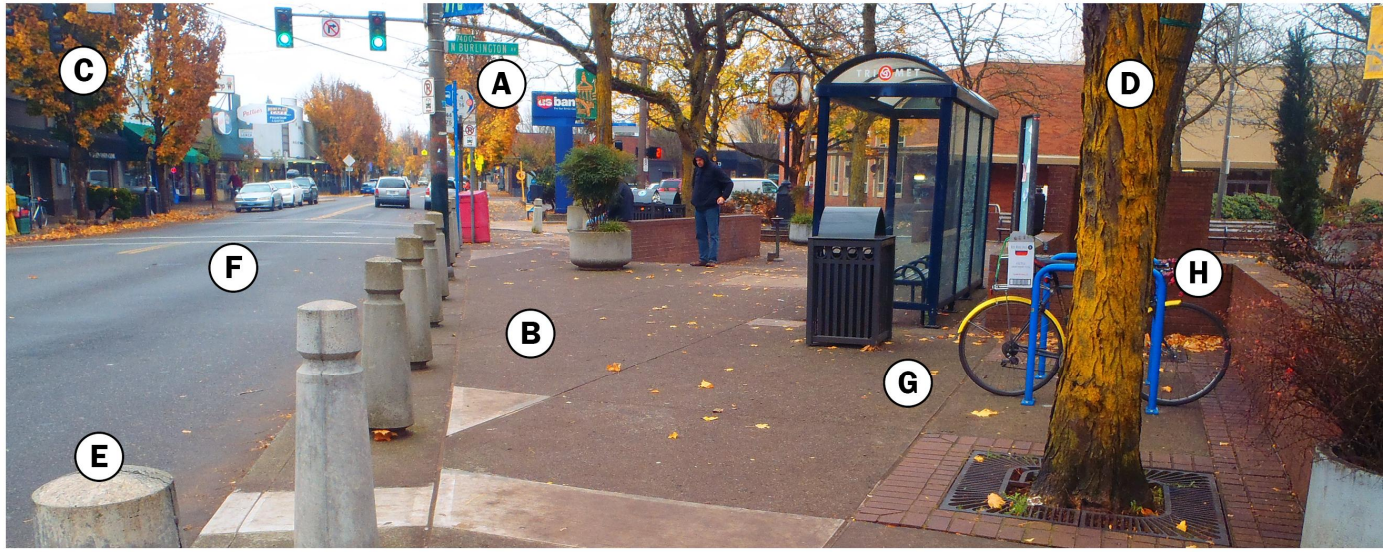
Learn from others. A resource for ADA compliance is the Easter Seals Project Action's Toolkit for the assessment of Bus Stop Accessibility & Safety.
http://cms.oregon.gov/ODOT/PT/docs/ADA/ADA-Bus-Stop-Toolkit-Aug2011.pdf

Attend trainings. The National Crime Prevention Association provides specific trainings using CPTED principles. For more information, see their website:
http://www.ncpc.org/training/training-topics/crime-prevention-through-environmental-design-cpted-

ABOVE: A bus stop bump-out creates a safe haven for waiting. Parallel parking fits before and after the stop. Photo credit: E. Rosenberg

DESIGN ANALYSIS: Application of CPTED Principles

Creating and supporting vibrant places goes hand in hand with creating a safe transit stop.



- **A** Pedestrian scale lighting and clear sight lines encourage a safe environment and deter crime.
- **B** Open placement of design elements deny access to crime targets by potential offenders by not allowing offenders to hide or surprise transit riders.
- **C** Siting transit stops on main streets, with unobstructed connection to storefronts increases visability and discourages negative activity.
- **D** Landscaping creates buffers, directs circulation, and can provide shade. Maintenance, and planning for plant growth must be considered when choosing species and placement.
- **E** Low profile elements such a bollards define the pedestrian space and can guard from vehicles while being easily permeable by not “fencing” the space.
- **F** Placement near the intersection with pedestrian safety signs and crosswalks makes access to the transit stop safe, easy, and facilitates strong connection to businesses.
- **G** Landscaping and unique hardscape elements indicate property lines and indicate the boundaries of the stop. Trash recepticles encourage a clean environment. Transit users develop a sense of ownership of this public space, deterring graffiti and other disrespectful behavior.
- **H** Bicycle racks in a highly visable location and color deter theft.

4.2: TRANSIT STOP DESIGN GUIDELINES

Transit Stop Locations

The location of transit stops is based on several factors: operational issues (e.g., interaction with other vehicles, bicycles, and other modes of transportation); passenger accessibility and safety issues; and ridership potential/destinations to be served.

Transit stops can be placed near-side or far-side of intersections, or mid-block depending on the specific circumstances of the site. Factors to consider when selecting a bus stop location include:

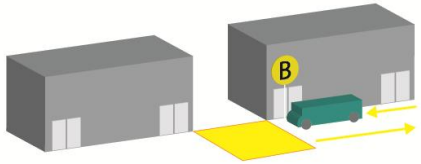
- Adjacent land use and activities
- Bus route (for example, is bus turning at the intersection?)
- Impact on intersection operations
- Intersecting transit routes
- Intersection geometry
- Parking restrictions and requirements
- Passenger origins and destinations
- Transit rider accessibility
- Physical constraints (e.g., trees, poles, etc.)
- Potential ridership
- Traffic control devices

Near-side bus stops are located before the intersection and allow the width of the intersection for the driver to enter back into traffic. Near-side stops are preferred on two-lane streets where vehicles will not pass a stopped bus or where there is interference/heavy traffic on the far side of an intersection. Near-side, turn-out bus stops can present operations challenges because traffic can back up from the intersection, trapping the bus inside the turn-out. The ODOT Highway Manual, Design Guidelines for Public Transportation specifies a distance of 100 feet from the intersection for near-side bus stops.

Far-side bus stops are located after the intersection and minimize conflict between the buses and right turning vehicles traveling in the same direction. Far-side stops are preferred on streets with wide shoulders or multiple lanes where vehicles can pass uncontrolled around the bus. The location at the far side of the intersection maintains good sight distance on approaches to the intersection. Far-side bus stops that do not allow a bus to pull out of traffic often create traffic back-ups behind the bus when passengers get on and off the bus. The ODOT Highway Manual specifies a minimum of 80 feet from the intersection for far-sided bus stops.

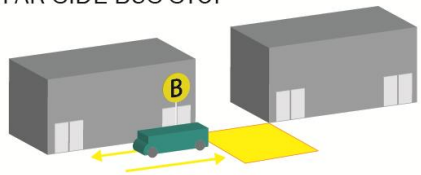
BUS STOP LOCATIONS

NEAR-SIDE BUS STOP



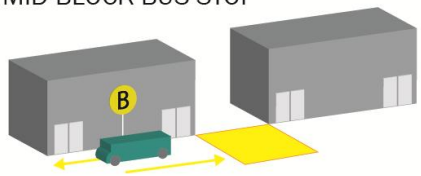
Bus stops immediately prior to intersection

FAR-SIDE BUS STOP



Bus stops immediately after passing through intersection

MID-BLOCK BUS STOP



Bus stops within the block

Additional details about the advantages and disadvantages of transit stop locations can be found in TCRP Report 19 and the ODOT Highway Manual, Chapter 12 Design Guidelines for Public Transportation.

Transit providers across the nation have developed guidelines for transit stops and amenities. Below are examples that provide in-depth details regarding specific sizes and policies for transit stops and their amenities.

Sandy Transit Master Plan, Oregon: http://www.ci.sandy.or.us/vertical/Sites/%7B08758F4D-2A53-4D1D-B7C5-B13B658BB891%7D/uploads/%7B337CB89B-26AB-463F-A777-1E85DBC49314%7D.PDF

Florida DOT Transit Facility Handbook: http://www.dot.state.fl.us/transit/Pages/FDOT_D1_D7_Transit_Facility_Handbook.pdf

City of Beavercreek, Ohio: http://ci.beavercreek.oh.us/wp-content/uploads/2008/11/public-transit-stops-criteria-062512.pdf

Riverside Transit Provider, California: http://www.riversidetransit.com/home/images/stories/DOWNLOADS/PUBLICATIONS/DESIGN_GUIDES/RTA%20Design%20Guidelines.pdf

Mid-block bus stops are preferred when a bus cut-out is warranted and should be a minimum of 150 feet from the intersection according to the ODOT Highway Manual. Mid-block bus stops often result in the elimination of parking along the block, and raise concerns for transit users crossing the street without an intersection or traffic signal.

The following checklist identifies important locational considerations, based on national best practices:

- Safety
  - ❒ Safe waiting, boarding, and a lighted area
  - ❒ Open and lighted spaces for personal security and passenger visibility
  - ❒ Safe street crossings located nearby
  - ❒ Traffic control devices (e.g., stop signs, signals) near the bus stops to slow traffic
  - ❒ Limited or no driveways near the transit stop
  - ❒ Adequate curb space for the bus(es) to pull out
  - ❒ Adequate sight distance (e.g., provide visibility for bus driver and waiting riders)
- Travel time delays
  - ❒ Far-side stops allow signal treatments to work most effectively
  - ❒ Minimal conflicts between buses and other vehicles
  - ❒ Ease of buses re-entering the traffic stream
- Accessible for all
  - ❒ Slope – no more than 2% for level surfaces, 8% for ramps (note: a concrete pad can be constructed to address slope issues)
  - ❒ Presence of sidewalks, crosswalks, and curb ramps at the stop and nearby intersections/streets
  - ❒ Direct routes and a comfortable, safe walking environment around the stop
- Compatibility with adjacent properties
  - ❒ Close proximity to major trip generators
  - ❒ Connections to nearby pedestrian circulation system

Bus Turn-Out

Bus turn-outs are intended to reduce the disruption of through-moving traffic along a main road at a bus stop, and increase transit passenger safety for those boarding or deboarding a bus. Also known as a bus cut-out, a turn-out is a designated area on the side of the main road located at a bus stop. In comparison to curb-side bus stops, bus turn-outs are more expensive and difficult to relocate. However, there are circumstances where bus turn-outs may improve the safety of transit service. Bus turn-outs should be considered for all transit stops on Oregon designated highways or when one or more of the following conditions apply:

- ❒ Traffic in curb lane exceeds 250 vehicles during the peak hour
- ❒ Traffic speed is 40 mph or greater
- ❒ Bus stops more than five times per hour, with passenger volumes exceeding 20 to 40 boardings per hour
- ❒ Average wait time expended during the stop by buses is more than 30 seconds per bus, or buses are expected to layover at the end of a trip
- ❒ Potential for auto/bus conflicts warrants separation of transit and passenger vehicles
- ❒ Stop location has a history of repeated traffic and/or pedestrian accidents
- ❒ Right-of-way width is adequate to construct cut-out without adversely affecting sidewalk pedestrian movement
- ❒ Sight distances (e.g., hills, curves) prevent traffic from stopping safely behind a stopped bus
- ❒ Bus parking in the curb lane is prohibited
- ❒ Improvements, such as widening, are planned for a major roadway, allowing an opportunity to include a cut-out as part of the reconstruction

ABOVE: Example of far side bus turn-out. Lane Transit District suggests the "…use [of] the intersection itself as part of the far-side turn-out. This provides an easy pull-out for the bus, allowing the bus to get out of the highway traffic, and gives it protection when it pulls back into traffic, especially if the intersection is signalized." Photo credit: SMART

4.3: TRANSIT STOP AMENITIES

This section discusses amenities often used at transit stops. Amenities are typically located at or next to the transit stop, although signage is often placed farther away and is used to direct users to nearby transit amenities. Transit stops can vary in purpose and use; therefore, transit amenities may or may not exist at each stop, as shown in the Design Analysis image on the following page. Determining which transit stop amenities belong at each stop typically depends on the number of riders, the number of routes served by the stop, characteristics of those served by the stop, and the potential for stop sponsorship. Amenities can range from the very simple to the elaborate and artistic, but should never impair accessibility.

Shelters

Stop signage

Information cases

Lighting

Solar Lighting

Seating

Handicap Amenities: Braille and High Curb Access

Illuminated Info

Water fountain

Bicycle Security and Storage

Trash, Recycling and Cigarette Disposal

News dispenser

Clock

Photo credits: Thomas R Machnitzki, Joe Olivieri, laconiv.org, G. Araki, E. Rosenberg

DESIGN ANALYSIS: Bus Stop with Amenities

The need for amenities varies at each stop, but good amenities will support regular and satisfied ridership.

- **A** Simple but effective shelter provides protection from elements and visually marks the station while being cost-effective.
- **B** Artistic or community derived shelter design or art elements create identity for the city and bus system.
- **C** Signage provides information on routes, schedules and general transit information.
- **D** Landscaping can create shade and a buffer from the street without impeding circulation, sight lines, and/or safety.
- **E** Access to bus stop is connected to the sidewalk.
- **F** Bicycle racks expand multimodal transportation options. They can also be an opportunity for community art and expression.
- **G** Amenities such as garbage and recycling containers maintain a cleaner site.
- **H** Benches offer riders respite while waiting.

Bus shelters

ABOVE: A distinct color (top image) or use of contextually appropriate materials such as the brick and glass treatment (bottom image), can 'brand' transit in a city. Photo credits: (top) E. Rosenberg, (bottom) M.O. Stevens

Bus shelters provide comfort to passengers waiting for the bus by providing protection from rain, sun, and wind. Shelters must meet ADA requirements, including a 5-foot pedestrian clearance, a clear pathway from the ADA waiting area in the shelter to the bus landing pad and from the rear pad to the pedestrian path. As with benches, many jurisdictions have standards that dictate when a stop requires a shelter.

The criteria for locating a bus shelter may include the number of passenger boardings per day, type of population served, required preparation of the site, and the availability of nearby shelters. Best practices indicate that a minimum of 20-35 daily boardings is the desired target for a bus shelter. Much depends on the ridership characteristics. For example, stops near senior housing or a medical facility may warrant a shelter even if the minimum boarding standards are not met. Additionally, dedicated grant funding may be available for shelters, in which case the guidelines for shelter locations may change.

The design of bus shelters may affect maintenance and safety. Many shelter designs include only a roof and no walls. Although these shelters do not provide as much protection from the wind, they are easier to maintain and do not provide as many opportunities for vandalism or hiding spaces that compromise safety. After repeatedly finding multiple shelter glass walls broken or Plexiglas® walls scratched, Lane Transit District switched to shelters with large overhangs and no walls. As a result, maintenance costs have decreased.

Cost: Approximately $6,000 for a simple shelter

ODOT is in the process of establishing a state price agreement contract that will allow transit agencies to purchase pre-fabricated passenger shelters and associated amenities. The state price agreement contracts are expected to be in place by mid-2013 and will be similar to the existing state purchasing vehicle contracts, with multiple vendors in a catalog-style. This approach will allow transit agencies to select appropriate structures for use in a variety of areas and climates throughout the state.

Priority: Medium – dependent upon the climate and number of riders who board and depart at the stop.

Signage

Signage tells passengers where the bus will stop and provides a visual reference of the stop location for bus drivers and passengers. In addition to marking the location of the stop, schedules, services, and routes can be added to the bus stop signage (see “Information Cases” below). Each bus stop location should be marked with a bus stop sign that includes, at a minimum, the operator name and/or logo and the route numbers and/or names.

When placing a bus stop sign, be sure to address passenger and public safety, convenience and bus stop visibility. Signs should meet the following guidelines:

- ❒ Neither obstruct nor be obstructed by other street signs.
- ❒ Be located downstream from the bus loading area
- ❒ Be securely mounted on their own post
- ❒ Be perpendicular to the street

Cost: Approximately $300 to $1,000

Priority: High

Information Cases

In addition to bus stop signs, information cases are used to display system-wide, or partial system, route and schedule information, often in real-time. It is particularly important to locate information cases at bus stops that serve as transfer points between routes. Having this information readily available will make the transit rider more comfortable using transit.

Cost: Approximately $1,000 to $10,000, depending on size and style

Priority: Medium – dependent upon the number of riders and complexity of system.

ABOVE: Signage ranges from simple indication of location and operator name to routing and safety information. Photo credit (top): Tillamook County Transportation District

ABOVE: Amenities such as bollard lighting, bicycle racks, seating, and trash cans focus on the pedestrian or cyclist arriving, waiting for a bus, or leaving a station. Photo credits: (top) forms-surfaces.com, (bottom) E. Rosenberg

Lighting

Lighting at transit stops improves safety for drivers, pedestrians, and transit passengers. During many months in Oregon, the nighttime commute is at or past dusk, potentially making passengers feel uncomfortable while they wait for transit or walk to/from the transit stop. All pedestrian walkways, crossing and transit stops should be well-lit with uniform and consistent lighting levels at a pedestrian scale (such as bollard lighting).

Cost: Pedestrian-level lights are approximately $3,000 to $5,000 each. Standard overhead street lights are approximately $10,000. The cost for lighting must also consider the service agreement with the local lighting district.

Priority: High

Trash and Recycling Receptacles

Trash and recycling receptacles help maintain the cleanliness of the bus stop. Having a proper place to dispose of refuse seems like an obvious amenity at transit stops. However, because these receptacles require continual maintenance, their addition is not a given and they are unlikely to be included at every stop. Guidelines for siting trash receptacles could include:

- Siting trash cans at stops in response to citizen requests
- Siting trash cans only where there is a sponsor who agrees to be responsible for maintenance
- Siting trash cans near traditionally high waste areas, such as at high ridership locations, recreation centers and shelters where they would already have regularly scheduled maintenance

Trash receptacles should be secured to the ground to prevent accidental tipping or “relocation.” They should be located where they do not hinder accessibility of other amenities, such as benches or information cases.

Cost: $1,000 to $1,500

Priority: Medium - dependent upon the level of use of the stop.

Benches

Benches provide a place for people to rest while waiting to board a vehicle. Benches can be free-standing, or mounted to a bus stop sign post, such as the Simme bench (see Case Study on page 47). A bench is one of the basic amenities that should be at many stops as long as it does not compromise safety (e.g., blocks the sidewalk, or is too close to the street). Many jurisdictions have standards that provide additional seating based on the number of boardings at the stop or the characteristics of the transit users at a particular stop (e.g., older riders). For example, a Simme bench which seats two is appropriate for a stop with 12 daily boardings. A long bench (6.5 feet in length or longer) is more appropriate for a stop with 25 boardings or more per day.

Cost: Approximately $500 - $1,500 for a Simme seat or 6.5-foot bench.

Priority: Medium - dependent upon the number of riders at the stop who board and get off at the stop and the type of riders. For instance, if many of the riders are elderly or handicapped, the need for benches increases.

Landscaping

Landscaping is an important part of a high-quality pedestrian environment, making the roadway more interesting, creating a buffer between pedestrians and traffic, potentially creating shade, and calming traffic by creating a visual sense of a narrowed roadway. Landscaping should not reduce visibility of the sidewalk or transit stop. Shrubs should be low-growing and trees should be trimmed to a maximum height of 8 to 10 feet to ensure sight distances and head room are maintained. Appropriate trees and shrubs for the buffer area between the sidewalk and the street (i.e., those that do not bear fruit, are non-invasive, have a shade creating canopy, and grow to an appropriate size) can be found in most city local development regulations.

Cost: Costs for landscaping vary widely depending on the types of trees, shrubs and flowers that are planted. Tree boxes, in which trees can be planted, range in price from $2,000 to $10,000. Ongoing maintenance costs (e.g., irrigation, pruning, and mowing) of the landscaping should be factored in when estimating the cost of landscaping.

Priority: Low, dependent upon availability of landscape-able area and community desire.

ABOVE: A Simme-Seat (top image) is a low cost option that provides seating and requires little right-of-way. Landscaping (bottom image) creates an aesthetically pleasing buffer between pedestrians and the roadway without obstructing safety sight lines. Photo credits: (top) simmeseat.com, (bottom) Hansen Landscape Architecture

Bicycle Racks and Parking

Bicycle storage provides an additional option for transit users to access transit. Bicycling is particularly important in smaller towns and rural locations where stops are less frequent and transit riders need to walk longer distances to access service.

Bike racks and parking should be:

- Visible from surrounding areas
- Located on the edge of the transit stop, yet away from benches or ADA waiting areas so they do not impede movement of those waiting for the bus
- Located upstream of the transit stop, so that they do not create a barrier to board the bus
- Securely mounted to the ground

Cost: Approximately $150 to $300 for a two-bike rack.

Priority: High for stops with bike access.

Art

Public art helps to create a sense of place, offers an opportunity for community involvement in the stop, and can discourage graffiti and vandalism. Art can be incorporated into such amenities as bus shelters, benches, trash receptacles and bicycle parking. Public art is often available for public facilities.

Cost: Varies based on materials, artist, and size.

Priority: Low – dependent upon community desire.

ABOVE: Artistic treatments of bicycle racks are opportunities for community expression. Photo credits: (top) breadbike.com, (bottom) Charleston Gazette

Tried and True Tips

Think about maintenance when providing amenities. For example, glass walls in shelters can be easily vandalized. Trash receptacles need continual maintenance. Either eliminate the design element that requires maintenance, find a private sponsor who is willing to help with the maintenance, or budget the maintenance cost if the design element is a priority.

Solve for multiple objectives whenever possible. For example, creative bike racks can serve as public art and community expression.

Be aware of barriers to accessibility in the areas around the bus stops and at the bus stops themselves. Identify known design barriers, such as lack of sidewalks, or unintentional barriers, such as landscaping without a path or amenities creating barriers at the stop.

Always consider the range of amenities. The amenities identified in this section are "best practice" – something for transit agencies to strive for, but not absolutes. Transit agencies should be aware of the range of amenities in case a funding opportunity presents itself.

CASE STUDY: Buy Local Amenities

Many transit providers, large and small, have touted the Simme-Seat as a successful transit stop amenity. The added bonus is that it was designed by a former facilities manager at Lane Transit District and is made right here in Oregon by Eugene-based company Simme LLC. The Simme-Seat seats two people in their own personal space and is mounted to the bus stop pole. It is an ideal option for stops that do not have enough ridership to warrant a bus shelter yet where seating is desired for seniors and others waiting for the bus. In addition to minimizing the footprint, Simme-Seats are helpful for bus operators because the transit riders are waiting at the bus stop sign, rather than off to the side as they would be with a stand-alone bench. The design of the seat allows for water runoff, requires little maintenance and has high durability. More information is available at www.simmeseat.com.

ABOVE: The Simme-Seat has been successfully used at Portland bus stops where space and ridership is too limited for larger treatments. Photo credit: simmeseat.com

Ideally, the design of a transit center links to and leverages the broader development goals of the community. Think more broadly than the design of the actual stop. Does the stop connect to commerce opportunities, employment centers, green spaces, or to public and community spaces? Does it focus movement around important destinations? Does it blend into its surroundings (architecturally and functionally)? Or act as a distinctive node in its own right? Does it serve key populations adequately? Can it serve to encourage economic and social vitality?

ABOVE: Simple but distinct architecture lends character to a transit center in Vancouver, WA. Photo credit: Pivot Architecture

4.4: OTHER TRANSIT FACILITIES

Transit Center/Intermodal Connections

A transit center/intermodal facility is a hub served by several transit lines and/or other modes of transportation. In their simplest form, transit centers typically provide sheltered waiting areas for transit users as they wait for route-to-route and/or mode-to-mode transfers. More significant centers may include buildings that house an enclosed lobby area with ticket sales booths, offices, staff break rooms, restrooms, and additional features such as multipurpose meeting rooms and/or a police sub-station. Often, transit centers incorporate park-and-ride facilities.

Often, transit centers are the end of a transit route and/or located at a significant destination, such as a downtown or major shopping area. Prominent transit center facilities can create a more visible and permanent presence for transit service.

For success, transit centers must be clean, safe and comfortable. Occasionally, innovative transit center design showcases environmentally sound construction practices, incorporating everything from recyclable building materials and solar panels to geothermal wells.

Cost: The cost of a transit center depends on the cost of land, size of the facility, materials specifications, architectural detailing and facility programming.

Elements of Transit Centers

Transit centers include elements determined by the programmatic requirements of each individual project. It is important to consider not only these elements but also their layout and relationship to one another to meet service and operation requirements. Key elements of transit centers are detailed in the table on the following page.

Key Elements of Transit Centers	
Element	**Description**
Sheltered Waiting Area	Either a collection of shelter structures with seating and/or an enclosed lobby area within a building. Clear sight lines are important between the waiting area and the bus loading area. It is a great opportunity to incorporate community-based art.
Ticket Vending and Information	Usually a number of automated ticket vending machines and/or retail counter with staff. Route maps, timetables, and "real-time" arrival and departure information should be available.
Bus Loading	A defined area for passengers to get on and off buses.
Bus Staging	Located before the bus loading area, the staging area is intended to provide a location for buses to park before picking up passengers. This area can be the same as the bus loading area if there is clear signage identifying when the bus is leaving so passengers understand that it may idle for several minutes.
Bicycle Parking	Located near waiting area. A safe, secure and highly visible bicycle parking should be provided in an area that has limited potential for pedestrian conflicts. It may consist of racks and/or lockers.
Pedestrian Walkways	Locate separate from other modes to avoid conflicts.
ADA Accessibility	ADA parking located closest to bus boarding area. ADA accessibility integrated throughout facility.
Optional Elements	
Staff Break Room/Restrooms	Transit centers provide a place for driver relief, satisfy labor requirements for breaks, and/or switch drivers.
Commercial/Regional Bus Service	Some transit centers provide space for commercial (i.e. Greyhound) and/or other regional bus service.
Automobile Parking	Clear access and safe movement to and within the site for vehicles. Parking should be connected to the loading area and walkways yet it is best to isolate from bus access.
Passenger Drop-Off	Pick-up and drop-off near the passenger waiting area. This area should include parking spaces with time-limited parking (e.g., 15 minute parking). The location of the passenger drop-off areas should avoid conflicts with parked vehicles or buses.
Office Space	Office space for transit agency staff can be provided within the transit center building.
Retail Space	Retail space (for ticket sales and/or other commercial ventures) can be incorporated into the transit center. This can help meet additional non-transit community development goals, while providing a revenue opportunity for the transit provider.
Meeting/Community Room	Provision of a multi-purpose room provides transit staff with conference room capability and the public with meeting space. Meeting rooms can also be made available to community groups on a free, but reservation-required, basis.
Police Substation	Police sub-stations are a popular use to co-locate in transit centers and can be incorporated into the design.
Newspaper Racks	Creates an opportunity for advertising (revenue for the station) and an activity for waiting passengers.

DESIGN ANALYSIS: Transit Center

Transit centers and intermodal hubs provide key inter- and intra-transit system linkages.

A Pavement treatment, crosswalks, ADA ramps, and lit paths create a distinct and connected pedestrian environment.

B Park-and-ride and kiss-and-ride located on opposite side of building. Riders move through or past the commercial building going to/from the bus platforms, increasing opportunity for commercial vitality.

C Clear site lines and open design increases safety.

D Secure bicycle parking is provided.

E Clear and lighted signage is located throughout the site.

F Uses are separated but integrated.

G Building has passenger and driver amenities such as restrooms, rest areas, a coffee shop, and restaurant.

Park-and-Ride Lots and Commuter Parking

Three types of facilities provide parking for commuters and others who need to drive and leave their car at the transit stop, or for those who participate in the statewide rideshare "Drive Less Connect" program. These facilities are classified by their functional characteristics and intended use:

- **Informal park-and-ride lots** – on-street, unlimited parking or multi-use parking lots near a transit stop where motorists drive and leave their cars parked nearby. Parking in these areas is not expressly designated for riders of transit.
- **Joint use lots** – parking lots in the publicly-owned right-of-way or a privately-owned parking lot with an agreement between the lot owner and transit provider. A vacant publicly-owned right-of-way can be minimally improved to accommodate parking. Existing, privately-owned parking lots that are typically under-utilized during the peak transit times are good candidates for joint use lots. A church parking lot is an example of a joint use lot because the peak use for a church is on Sundays or evenings and it is often underutilized during the day.
- **Park-and-ride lots** – owned and operated by the transit provider for the sole purpose of getting riders on transit. The lots can be located at a transit center or at a transit stop. Park-and-ride lots can be co-located with businesses that have excess parking during the peak transit times.

There is no minimum acreage size recommendation for park-and-ride facilities. The size should be based on the need and the ease of locating the facility within the existing urban area. Ideally, park-and-ride facilities are sensitively incorporated into existing downtowns (or nearby areas). If a vacant lot is being converted to a park-and-ride facility, the parking spaces should be buffered with appropriate landscaping to improve the area's appearance. As a general rule of thumb, 90 to 100 parking spaces can fit on an acre of land (45 to 50 spaces on a half-acre, 20-25 on a quarter-acre, etc.) for stand-alone park-and-ride facilities. Fewer spaces may be needed at transit centers where bus transfers are likely.

Cost: The cost of the park-and-ride facility depends on how the parking spaces are arranged (informal, joint use, or stand-alone lots), including the cost of land or lease arrangement with the land owner.

Priority: As needed.

When locating park-and-rides, use parking lots already available. For example, partner with churches or businesses that have excess parking during peak transit use times. This approach reduces the cost, requires less development, and benefits businesses where commuters will shop.

ABOVE: A Fred Meyer grocery store in Salem shares parking for park-and-ride users. The business also benefits from commuters patronizing the store on their way to and from their commute. Photo credit: Salem-Keizer Transit.

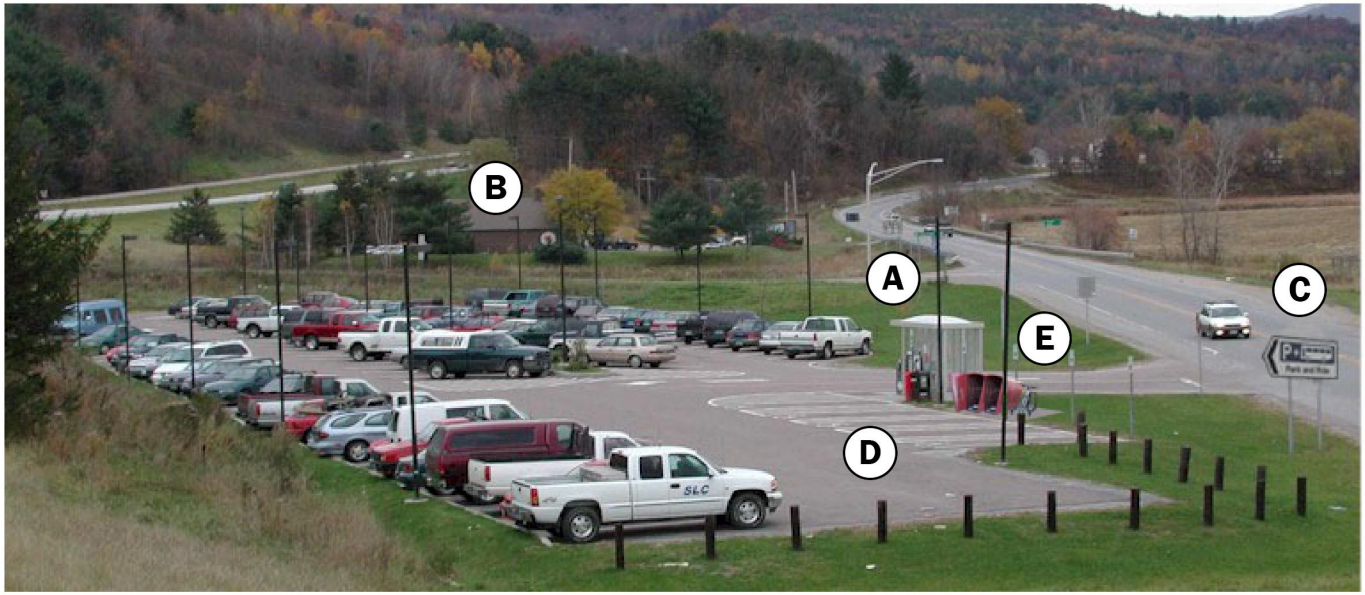
Elements of Park-and-Ride Lots

Park-and-rides have multiple elements that work together to increase transit ridership. If some elements are lacking or missing, the overall efficiency of the park-and-ride lot may be affected. It is important not only to include the following elements, but also to consider how the elements are laid out and relate to each other for the service and operation of the system. At joint use lots owned by others and used by the transit provider, the existence of the elements could be used as decision-making criteria to determine if the site is appropriate as a park-and-ride. For new facilities owned by the transit provider, the following elements are important to consider in the design and layout of the facility. Key elements of park-and-ride lots are detailed in the table on the next page.

Key Elements of Park and Ride Lots	
Element	**Description**
Bus loading area	A separate area for passengers to get on and off buses.
Bus staging area	Located before the bus loading area, the staging area is intended to provide a location for buses to park before picking up passengers. This area can be the same as the bus loading area if there is clear signage identifying when the bus is leaving so passengers understand that it will sit idling for several minutes.
Vehicle access and parking	Clear access and safe movement to and within the site for vehicles. Connected to the loading area and walkways; best to isolate from bus access.
Passenger drop-off area	Pick-up and drop-off near the passenger waiting area, with full circular entry and exit. This area should include parking spaces with time-limited parking (e.g., 15 minute parking). The location of the passenger drop-off area should avoid conflicts with parked vehicles or buses.
Bicycle parking	Located near the waiting area, safe and secure bicycle parking should be provided in an area that has limited potential for pedestrian conflicts.
Pedestrian walkways	Located separate from other modes to avoid conflicts.
ADA accessible parking	Closest to the loading area with accessibility throughout the facility.
Landscaping	Integrate landscaping into the lot design to knit the park-and-ride into the community. The landscaping should enhance the surroundings, provide environmental protection (e.g., shade or a wind break), direct pedestrian and vehicle movement, and/or mitigate stormwater collected on impervious surfaces. Landscaping may include trees, bushes, plants and/or grass. Grading and siting of plants should consider stormwater drainage patterns.
Signage	Visible from the entrance. Includes details on how long – and at what cost, if any – the lot is available to users.

DESIGN ANALYSIS: Park-and-Ride Lots

Park-and-ride lots augment the ability for people who live in rural or outlying areas to use transit.



A Bus shelter is created with amenities such as garbage, recycling and schedule information.

B Lighting increases safety for early morning and late-night riders.

C Signage located off the main road clearly indicates the park and ride location to motorists.

D Safe and accessible handicapped parking is provided.

E Bicycle boxes and/or racks in a safe and well-lit location are available for those that use the park-and-ride as part of a multimodal commute.

4.5: TRANSIT FACILITY ACCESS AND SAFETY

This section addresses issues related to connectivity, accessibility, and safety of the transit facilities. Many of these facilities are not necessarily the responsibility of the transit providers. However, transit providers should work with cities, counties and the state to ensure that there are safe, appropriate, and accessible connections to transit facilities for all people. The absence of such connections limits the ability of people to access transit.

Sidewalks and Bikeways

Sidewalks allow people to walk safely to a transit stop within the public right-of-way and away from cars. Sidewalks should be ADA-accessible and contiguous whenever possible. Retrofitting all streets with sidewalks or improving all existing sidewalks can be expensive and impractical. The highest priority for improving the sidewalk system should be along transit routes where there are many pedestrians. See Section 3.2 for more detail on what makes an accessible environment.

For those dependent on transit, bikes are a major alternative to connect to transit from destinations off the transit route. On smaller streets, bikes sharing the road with cars will help to slow traffic.

Cost: Concrete curbs and sidewalks are approximately $15 per linear foot for curbing and $11 per square foot for walkways. Costs can rise if demolition or reconstruction is needed, or if right-of-way must be purchased. Asphalt walkways cost less than concrete, but require more maintenance over the life of the sidewalk.

Priority: High. The transit provider often needs to partner with the jurisdiction over the rights-of-way. In most cases, bikeways would primarily require the painting of bike lanes.

ABOVE: Distinct bicycles lanes, pedestrian crosswalks, and traffic islands add safe modal options – an integral component of a strong and complete transit system.

Pedestrian Havens and Roadway Medians

Pedestrian havens (sometimes called “pedestrian refuges”) in the median of a street provide a relatively safe area of respite for those crossing from one side of a street to the other, increasing pedestrian feelings of safety and comfort. Pedestrian havens typically provide a break in a street median. They divide the street crossing experience into two smaller, more easily managed segments – an especially important consideration on wide streets or at locations where many pedestrian crossings are expected, such as at transit stations.

ABOVE: Improvements such as no-slip strips, crosswalk striping, and landscaping are small enhancements that add great value when connecting people to transit. Photo credit (bottom): City of Corvallis

Pedestrian havens should be ADA-compliant and highly visible (see Section 3.2 for more detail on what is an accessible environment). Pedestrian havens, ideally in combination with other features (curb extensions, bold pavement markings, signalization, etc.), can be used to help slow vehicular traffic speeds.

Medians can help manage vehicular traffic movement by restricting left-hand turns to intersections. When medians are raised, as on high-volume, high-speed roads (e.g., state highways acting as main streets), they provide a refuge for pedestrians crossing the street. Landscaping in raised medians can help change the character of the street and slow traffic. Wider sidewalks, bicycle lanes and planting strip landscaping should take priority over medians if the width of the right-of-way prevents the construction of both.

Cost: Concrete curbs are approximately $15 per linear foot and concrete paving is approximately $11 per square foot. Landscaping can range from $0.50 to $50.00 or more per square foot depending on design detailing and/or size of plant materials. Signalization costs run approximately $250,000 per intersection. Costs can also rise if demolition or reconstruction is needed, or if right-of-way must be purchased. Raised medians are approximately $15,000 to $35,000 per 100 feet. The cost varies depending on the design, site conditions and whether it is being done as part of an existing utility improvement or street construction project that requires construction in the right-of-way.

Priority: As needed.

4.6: TRANSIT MAINTENANCE FACILITY

Transit maintenance facilities can allow some or all maintenance and repair functions to be done in-house, potentially reducing the long-term cost for the transit provider. The efficiency of providing your own service versus contracting the function out is the determining factor as to whether or not a maintenance facility is needed, and what is included in the facility. Potential functions of a maintenance facility include:

- Vehicle maintenance (bodywork, metalwork, component repair, electrical repair, tire repair)
- Parts, materials, and equipment storage and maintenance (including hazardous materials)
- Fuel facilities
- Bus Wash
- Vehicle storage/parking
- Visitor and employee parking
- Administrative offices
- Dispatch functions
- Fare collection storage and transfer
- Employee facilities (restrooms, kitchen, locker rooms, etc.)
- Conference rooms, both internal and public
- Employee training
- Security
- Information technology
- Landscaping
- Vehicle exhaust collections/protection

Many transit maintenance buildings are 24-hour-a-day facilities. American Public Transportation Association (APTA) generalizes transit maintenance facilities into three categories based on the functions provided.

Level I: A basic service facility providing running maintenance and storage. Activities include fueling, washing, fare collection, light bulb replacement, wiper-blade replacement, fuel level checks, etc.

Level II: An inspection garage for light maintenance such as engine tune-ups, lubrications, inspections, tire changing, brake repair, and minor body work, as well as unit change out. Level I activities are also included in this facility.

Level III: A full-service maintenance facility that provides all vehicle maintenance. Activities include engine and transmission rebuilding, testing, major body repairs, painting, etc. Level I and II activities are included in this facility.

ABOVE: Simple facilities such as the top image in Astoria, Oregon, can perform basic service while larger tasks can be contracted to local providers. As fleets increase, it may become cost effective to perform all maintenance in-house. Photo credit (bottom): TLCD Architecture

ABOVE: The Hood River Transit Maintenance facility funnels vehicles to the back of the site leaving the front of the facility as a public face for the district. Photo credit: Pivot Architecture

The size of a maintenance facility varies based on the system size, needs, and growth projections. Nationally, an average of five to six acres is required for a facility serving 50 buses. APTA's Facility Space Needs Calculator (FSNC) provides a formula to help transit agencies determine the desired size of a maintenance facility building and site based on the following inputs:

- Fleet information (number and sizes of vehicles, buses and other, to be stored at the site)
- Number of staff/volunteers (administration, operations, and other)
- Programmed space for staff (including administration, operations, and maintenance), service bays and parking
- Facility circulation and bus parking pattern
- Type of maintenance to be conducted on the site

In addition to space considerations calculated by the FSNC, the way that various facility functions (billing, operations and maintenance, customer service, etc.) are organized can help to create a safe, efficient, and cost-effective facility. For example, operations such as fare collection require specific equipment but specialized staff training and building layout. Security, visibility and storage considerations must be designed into the facility to allow for an agency to safely collect its fares on site.

A maintenance facility building should be expected to last 30 – 50 years, if proper attention is paid to near-future planned expansion, and long-term anticipated growth during the design process. To ensure the longevity of the investment, new facilities should be designed to be fuel flexible. Currently, the use of both diesel-hybrid and compressed natural gas (CNG) vehicles is rapidly increasing. Both of these vehicle types require specialized systems and design items to operate safely and effectively. For example, CNG facilities must be designed to store compressed gases, monitor for gas leaks, safely ventilate any CNG which escapes, and avoid potential explosions by employing properly designed equipment and utilities, while hybrid vehicles require spaces designed to meet the needs of handling the series of high-power battery packs associated with electric vehicles.

The process of constructing a maintenance facility is long: typically one year to plan and design the building, and one year for construction. Because the need to construct a transit maintenance facility is very infrequent (typically once in a lifetime), it is recommended that the transit agency hire professional experts to guide it through the process of identifying what is needed in the facility and the construction of the building. This will make the experience more predictable, reduce risk, and ensure that the proper

documentations and processes are completed to comply with federal funding requirements, if federal funds are used.

Cost: The average cost to build administrative and operations facilities is approximately $200-275 per square foot (not including furniture, fixtures and equipment [FF&E]). The average construction cost of a maintenance building shell with fuel and wash capabilities is approximately $175 to $275 per square foot (not including contractor furnished/contractor installed [CFCI] shop equipment, fueling equipment, or tanks).

Priority: As needed.

DESIGN ANALYSIS: Maintenance Facilities

Depending on the size and variety of the fleet, maintenance facilities can perform routine to complex services and contract out when needed.

A Buildings facing the street should blend with the street frontage in scale and through use of architecturally appropriate treatments.

B Sharing maintenance facilities with larger transit agencies or local school systems reduces the costs of infrastructure and operation.

C Maintenance facilities can remain compact and used primarily for routine upkeep for small providers. Greater maintenance needs can be sub-contracted to local service stations.

D Build the facility to allow for alternative fuels.

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5. RESOURCES

5.1 LITERATURE REVIEW

LAND USE AND TRANSPORTATION PLANNING PROCESSES

1. "An Introductory Guide to Land Use Planning for Small Cities and Counties in Oregon", by Oregon Department of Land Conservation and Development, (January 2007) at http://cms.oregon.gov/LCD/docs/publications/introductory_guide_to_land_use_planning_in_oregon.pdf

   Comprehensive overview of the Oregon Land Use Planning System to help transit staff navigate the land use planning terms and processes. Describes long range land use planning concepts and typical land use actions. Provides details on the types of public hearings and the timelines associated with each.

2. "STIP User's Guide", by Oregon Department of Transportation, at http://cms.oregon.gov/ODOT/TD/TP/docs/stip_guide/stipusers.pdf

   Comprehensive overview of Oregon's Statewide Transportation Improvement Program to assist small transit agencies in understanding how the state and federal funding processes works and why it is important to be engaged in the local city and county transit elements of the transportation system plans.

3. "Shelters and Facilities Projects: Required Documentation for Federally Funded Facilities Grants (Structures)", by Oregon Department of Transportation in January 2010, at http://cms.oregon.gov/ODOT/PT/docs/shelters-facilities-grants-2011info.pdf

   Summary of the process and description of requirement documentation for local transit projects to receive federally funded grants.

4. "Transit at the Table: A Guide to Effective Participation in Statewide Decisionmaking for Transit Agencies in Non-Urbanized Areas", a Research and Innovation Technology Administration Final Report, (April 2008-September 2011), written by William Lyons, Lindsey Morse, and Benjamin Rasmussen, at http://www.planning.dot.gov/documents/TransPlanning/TAT_III_FinalReport.pdf

CHAPTER 5 ROADMAP

5.1: Literature Review

5.2: Sample Documents

Eight case studies explaining the process, lessons learned and results of small city and rural transit agency participation in statewide planning activities. Identifies funding strategies and statewide planning processes.

5. "Recommended Practice for Architectural and Engineering Design for a Transit Operating and Maintenance Facility", by American Public Transportation Association (APTA) Standards Development Program, APTA RP-BT-BMF-001-11, (September 2011), at http://www.aptastandards.com/LinkClick.aspx?fileticket=cfAiJFtlorQ%3D&tabid=321&mid=1761&language=en-US

   Identifies the steps necessary for the planning, funding, conceptual design, final design, development review, construction operations of a new bus transit facility. Included in the best practices is a draft scope of services procurement document for architectural, engineering and construction services.

6. "Construction Project Management Handbook", by Federal Transit Administration (FTA), FTA Report No. 0015 (March 2012), at http://www.fta.dot.gov/documents/FTA_Report_No._0015.pdf

   Provides a comprehensive overview of construction project management, geared toward public transit agencies with little or no experience with construction project management. The handbook provides guidance for constructing maintenance and operational facilities, intermodal terminals, park-and-ride stations, and other similar supporting transit facilities.

PUBLIC TRANSIT ECONOMIC DEVELOPMENT BENEFITS

1. "Putting Transit to Work in Main Street America: How Smaller Cities and Rural Places are Using Transit and Mobility Investments to Strengthen their Economics and Communities", by Reconnecting America and Community Transportation Association of America. (May 2012), at http://www.reconnectingamerica.org/resource-center/books-and-reports/2012/putting-transit-to-work-in-main-street-america-how-smaller-cities-and-rural-places-are-using-transit-and-mobility-investments-to-strengthen-their-economies-and-communities/

Case studies from across the United States illustrating how small cities and rural communities are integrating transit into their economic development strategies. The report is designed to provide examples of the variety of transit investments being made nationally. The research concludes that public transit has had a positive effect on the economy and quality of life in small towns. It also provides an overview of funding sources available to small cities and rural communities.

2. "Assessment of the Economic Impacts of Rural Public Transportation", Transit Cooperative Research Program TCRP Report 34, by Jon Burkhardt, James Hendrick and Adam McGavock (1998), at http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_34.pdf

   Identifies the economic benefits of having a public transportation system in a smaller city or rural community. Can be used by transit agencies to explain the economic development benefits of having public transit in small cities.

3. "Exploring the Role of Regional Transportation Projects as Rural Economy Drivers," a National Association of Development Organizations (NADO) Research Foundation Report (July 2011), at http://www.ruraltransportation.org/uploads/RegTransit.pdf

   Case studies of three transit projects that used transit to boost local and regional economies. Central Oregon is highlighted as one of the three transit projects.

INTEGRATING LAND USE AND TRANSIT/CREATING WALKABLE PLACES

1. Speck, Jeff. *Walkable City: How Downtown Can Save America, One Step at a Time*. 1st ed. New York: Farrar, Straus and Giroux, 2012.

   This book provides insight into how walkability contributes to urban vitality. It presents simple yet comprehensive design solutions to promote and increase the walkability within urban areas.

2. "Pedestrian Network Analysis: A safer, easier, more comfortable walk to transit," Tri-Met Analysis Report, (September 2011) by Nathan Banks, Colin Maher, and Jessica Engelmann, at http://trimet.org/pdfs/pednetwork/trimet-pedestrian-network-analysis-report.pdf

   Summary report that analyzes the pedestrian network around selected bus stops in the TriMet service area. Many of the bus stops selected for analysis are along high-capacity auto-oriented routes in lower

density portions of the service area. The report provides recommendations for making connections to transit stops and making transit stop locations more walkable. It includes considerations for improvements and the estimated cost of improvements.

3. "Pedestrian Safety Guide for Transit Agencies," Federal Highway Administration, FHWA-SA-07-017, (February 2008), by Dan Nabors, Robert Schneider, Dalia Leven, Kimberly Lieberman, and Colleen Mitchell, at http://safety.fhwa.dot.gov/ped_bike/ped_transit/ped_transguide/transit_guide.pdf

   Provides recommendations for transit agencies on improving pedestrian safety at the bus stop and safe access to and from the bus stop. Identifies tools to improve pedestrian safety, describes how to work within city and transit agency policies and organizations to increase the awareness of pedestrian safety, and identifies public improvements that can be implemented alongside transit to improve the safety at bus stops or the access to and from bus stops.

4. "Pedestrian and Transit-Friendly Design: A Primer for Smart Growth." by International City/County Management Association and Smart Growth Network (1999), at http://www.epa.gov/dced/pdf/ptfd_primer.pdf

   Identifies pedestrian and transit friendly features and categories them into essential and highly desirable. Includes multiple images and photos to explain concepts. Based on a manual prepared by the Florida Department of Transportation.

5. "Transit-Friendly Streets: Design and Traffic Management Strategies to Support Livable Communities," Transit Cooperative Research Program TCRP Report, 33, by Fred I. Kent, Stephen Davies, Cynthia Abramson, Erika Hanson, and Meg Walker (1998), at http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_33.pdf.

   Identifies design and traffic management strategies to create transit-friendly streets and provides five main-street transit-friendly street case studies.

5. "Best Practices to Enhance the Transportation-Land Use Connection in the Rural United States," National Cooperative Highway Research Program (NCHRP) Report 582, by Hannah Twaddell and Dan Emerine (2007), at http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_582a.pdf.

   Focuses on how best to integrate land use and transportation in rural communities through regional and local policies, including strategies that support community development and provide additional transportation capacity. Discussion is on transportation in general.

6. "Recommended Practice for Defining Transit Areas of Influence." APTA Standards Development Urban Design Group, APTA SUDS-UD-RP-001-09, (August 2009), at http://www.aptastandards.com/portals/0/SUDS/SUDSPublished/APTA%20SUDS-UD-009-01_areas_of_infl.pdf

   Identifies the spatial area around transit stops typically have the greater impact on land use and development and where the integration of land use and transit is important to increase transit ridership.

ACTIVE TRANSPORTATION

1. Active Transportation Alliance. 2012. *Complete Streets, Complete Networks: A Manual for the Design of Active Transportation* at http://www.atpolicy.org/Design.

   This manual provides the tools needed to design public spaces to enhance a sense of place and promote travel by all modes. Transit is noted as a key component of active transportation by providing greater access to everyday needs that cannot be accomplished solely through walking, biking, skateboarding, or other active modes.

2. Active Transportation Policy at www.atpolicy.org.

   The Active Transportation Alliance (ATA) provides a policy website that houses information and factsheets encouraging municipalities and agencies to incorporate multimodal transportation facilities, such as multi use trails connecting major destinations and/or transit stops, to encourage walking, biking and transit use above private vehicle use. The ATA suggests that a well-connected transit system can promote active transportation within communities.

3 Rails-to-Trails Conservancy. 2012. *Beyond Urban Centers: Walking and Bicycling in Small Towns and Rural America* at http://www.railstotrails.org/ourWork/reports/beyondurbancenters.html.

This publication eradicates the myth that "biking and walking are strictly a "big city" phenomenon, and that rural America can't benefit substantially from bicycling and pedestrian infrastructure." It builds the case for why investing in active transportation solutions will benefit small cities and contribute to vibrant places. The publication also provides key information about funding programs that provide funding for active transportation investments.

TRANSIT STOP DESIGN GUIDELINES AND TRANSIT PROVIDER HANDBOOK

1. "Transit Provider Handbook", Oregon Department of Transportation, at http://www.oregon.gov/ODOT/PT/Pages/programs/transit-provider-handbook.aspx

   The purpose of the Transit Provider Handbook is to provide sample forms, best practices materials, ideas, and documents for transit agencies. This document includes more in-depth information than is feasible to include in the State Management Plan (which is the guidance document for ODOT Public Transit Division's grant programs).

2. "Guidelines for the Location and Design of Bus Stop," Transit Cooperative Research Program TCRP Report, 19, at http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_19-a.pdf; http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_19-b.pdf; http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_19-a.pdf

   Guidelines for locating and designing bus stops in various operating environments that consider bus patrons' convenience, safety, and access to sites as well as safe transit operations and traffic flow. Primary audience is transit agencies, local governments, and other public bodies locating and designing bus stops. The guidelines include information about locating and designing bus stops and checklists of factors that should be considered.

3. "Transit Facility Handbook," a Florida Department of Transportation Districts One and Seven publication (October 11, 2007), at http://www.dot.state.fl.us/transit/Pages/FDOT_D1_D7_Transit_Facility_Handbook.pdf.

   Comprehensive guidance for planning and design of transit facilities including streetside factors, curbside factors, transit vehicles, park and ride facilities, transit-oriented development and institutional issues.

4. "Design of On-street Transit Stops and Access from Surrounding Areas," an APTA Standards Development Program Recommended Practice, APTA SUDS-RP-UD-005-12, (March 2012), at http://www.aptastandards.com/LinkClick.aspx?fileticket=MKWY2gvlYwA%3D&tabid=339&mid=1740&language=en-US.

   Identifies strategies to provide or improvement connections to, from and at transit stops within a public right of way. Provides multiple guidelines regarding the siting and design of transit stops, including good and bad examples.

5. "Livable Communities: Tips for Designing Transit Services and Infrastructure that Promote Livability," a National Rural Transit Assistance Program Report, at http://www.nationalrtap.org/FeatureDetails.aspx?id=517&org=a2GSpnDbruI.

   Fact sheet defining livable community, identifying how to make smaller communities more livable, and identifying grant opportunities for small cities and other helpful resources.

6. Chapter 12: Design Guidelines for Public Transportation," Highway Design Manual, by Oregon Department of Transportation (2012), at http://cms.oregon.gov/odot/hwy/engservices/Pages/hwy_manuals.aspx

   Specific chapter of the Oregon Highway Design Manual that pertains to design guidelines for public transportation, including bus stops and park and ride facilities. Includes design and operations requirements based on state and national policy. Includes a discussion of advantages and disadvantages to bus stop locations within a block, bus stop amenities, and roadway and intersection designs to accommodate buses.

7. "Bus Stops Guidelines," by TriMet (July 2010), at http://trimet.org/pdfs/publications/bus-stop-guidelines.pdf

   Provides a summary of bus stop elements and public involvement approaches specific to TriMet and the Portland Metropolitan region. Throughout the report, several issues are identified that should be considered when locating bus stops or determining the appropriate amenities to include. The attachment also includes specific dimension for public improvements. The general considerations and specific dimensions can be used by small city transit agencies as a starting point for agency specific/appropriate requirements.

8. "Guidelines for Transit Facility Signing and Graphics," Transit Cooperative Research Program Report 12, by George A. Earnhart (1996) at http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_12-a.pdf.

   Describes the use of signs and symbols for the safe and efficient movement of transit users through transit facilities. Includes specific detailed recommendations on transit facility sign design, universal symbols, wayfinding options for the impaired, and material selection and maintenance.

9. "Toolkit for the Assessment of Bus Stop Accessibility and Safety," Easter Seals Project ACTION and Federal Transportation Administration, (March 2009), at http://bussafety.fta.dot.gov/show_resource.php?id=3323

   Designed as a resource for transit agencies, this document provides an overview of the American with Disabilities Act requirements related to transit and accessibility to transit.

PEER EXAMPLES: COMPREHENSIVE TRANSIT STOP DESIGN GUIDELINES

1. "Bus Stop Design and Planning Guide," by Rogue Valley Transportation District Operations and Planning Departments (2011), at http://www.rvtd.org/images/subpages/file/RVTD%20BUS%20STOP%20DESIGN%20GUIDELINES.pdf.

Example policies for bus stop amenities and design guidelines for bus stop types. Provides a hierarchy of bus stop types and amenities to be provided based on the number of daily boardings at a given stop. Provides a description of the role of operations, transportation and planning in bus stop enhancements.

2. "Design Criteria for Public Transit Stops, Attachment B," by City of Beavercreek, Ohio (June 25, 2012), at http://ci.beavercreek.oh.us/wp-content/uploads/2008/11/public-transit-stops-criteria-062512.pdf

   Example design criteria for the design and construction of public transit stops. City of Beavercreek, Ohio has a population of approximately 45,000.

3. "Metro Transportation Facility Design Guidelines," by Municipality of Metropolitan Seattle (March 1991), at http://your.kingcounty.gov/ftp/kcdot/tdcs/Standards/PassFac/KCMFacDes.pdf

   Example of facility design guidelines for multiple types of transit facilities, including transit centers, park and rides, and bus shelters. Identifies the different functions of transit centers. Explains the relationship of transit facilities and pedestrian walkability.

4. "Guidelines for the Design and Placement of Transit Stops," by Washington Metropolitan Area Transit Authority (2009), at http://www.wmata.com/pdfs/planning/Bus_Stop_Guidelines_Brochure.pdf

   Identifies bus stop placement, spacing, type and passenger amenities. Describes two bus stop prototypes applicable to small cities: basic bus stop and sheltered bus stop.

5. "Design Guidelines for Bus Transit," by Riverside Transit Agency (August 2004), at http://www.riversidetransit.com/home/images/stories/DOWNLOADS/PUBLICATIONS/DESIGN_GUIDES/RTA%20Design%20Guidelines.pdf

   Define specific design guidelines and the planning process for bus transit. Includes considerations for bus transit on the street (spacing and location of stops), at the curb (bus stop amenities, turnouts, shelters/benches and safety) and relationship to adjacent properties (transit oriented development and design). Document audience is local government planners, engineers, developers and decision makers.

5.2 SAMPLE DOCUMENTS

Section 15 Data Report

TRIP SERIAL NUMBER		0217			Route 2 OUTBOUND		
DATE		12/13		SEATS 28			
(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Stop No.	Stop Description	Scheduled time of arrival	Actual time	**Pass. Board**	**Pass. Deboard**	**Pass. On Board**	**Miles From Front Street Station**
00	Front Street Station	:00		7	0	7	0
240	10th St. - E. of Holly					7	0.2
250	Oakdale - Just past 11th St. @ wide					7	0.4
260	Oakdale - just past Dakota	:03		3	0	10	0.7
270	Oakdale - N. of Stewart Ave					10	0.8
280	Stewart Ave./King St.- 100' East of					10	1
290	Stewart Ave/Peach - in front of 872					10	1.2
300	Stewart Ave./Hamilton					10	1.5
310	Stewart Ave./Columbus	:06				10	1.6
320	S. Columbus/Mt. Pitt - Southside of					10	1.7
330	Dakota/Benson - @ 25 mph sign					10	1.9
340	Dakota/ Hamilton					10	2.1
350	Hamilton - 118' N. of 13th					10	2.3
355	Hamilton - 153' S. of 10th					10	2.4
360	Hamilton/Probation Office - no parking	:08/ :38		0	1	9	2.6
370	W. Main/Summit - 1320 W. Main			2	0	11	2.7
380	W. Main/Columbus - No Parking			0	1	10	2.8
390	Blackbird			0	2	8	3
400	W. Main/ Reager - Liquor Store					8	3.2
405	W. Main Wells Fargo			0	2	6	3.3
4100	W. Main / Albertson's			1	2	5	3.4
4320	Bi mart - Hwy 238	:13		0	1	4	3.7
4330	Thunderbird - @ W. Main Pharmacy			2	1	5	4
420	W. Main / Wells Fargo - 35 mph sign					5	4.2
425	W. Main Across from stop #400					5	4.3
430	Blackbird					5	4.4
440	8th Street - 100' East of Elm St.					5	4.7
450	W. 8th St./Lincoln - Fire Station			0	1	4	4.8
460	W. 8th / Cannon					4	5
470	W. 8th/ Misletoe - 40' West of Misletoe					4	5.1
480	West 8th / City Hall	:19				4	5.3
490	W. 8th / Grape St.					4	5.5
00	Front St. Sation	:22		0	4	0	5.6
	Seat Miles		**156.8**	**15**		**237**	

Standard Easement Agreement

AGREEMENT AND EASEMENT FOR

BUS STOP/ SHELTER AND IMPROVEMENTS

THIS AGREEMENT is made effective _____, 2013 ("Effective Date"), between _____ ("TRANSIT DISTRICT") and _____ ("Owner").

RECITALS:

A. Owner is the owner of the real property commonly known as Tax Lot ____ of _____ County Assessor's Map No. _____, as more fully depicted in EXHIBIT "A", attached hereto and incorporated herein by reference ("TL ____").

B. TRANSIT DISTRICT wishes to site a bus stop and shelter adjacent to the easterly boundary of TL, which will necessitate the construction of a retaining wall and landscaping over a portion of TL, in the approximate location depicted on the site plan attached hereto as EXHIBIT "B" and incorporated herein. The exact location of the bus stop is uncertain at this time, but as constructed it will be approximately twenty-five (25) feet wide by fifteen (15) feet deep.

C. TRANSIT DISTRICT requires a temporary construction easement from Owner, effective at such time as TRANSIT DISTRICT begins construction of the bus stop and shelter.

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained herein, the parties agree as follows:

1. Retaining Wall/Landscape Easement. Owner grants and conveys to TRANSIT DISTRICT from back of sidewalk a 25 (25)-foot width easement, 15 (15) feet in depth, for a retaining wall and associated hardscape, the approximate location of which is depicted in EXHIBIT "B" hereto, and incorporated herein by reference ("Bus Stop Easement"). TRANSIT DISTRICT has the right to install, use, maintain, repair and replace the retaining wall and hardscape within said Bus Stop Easement at its sole discretion.

2. Construction Easement. Owner grants and conveys to TRANSIT DISTRICT a temporary construction easement approximately in the location depicted in Exhibit “B” attached hereto ("Construction Easement"). The Construction Easement is granted for the purpose of allowing access over and across the TL as reasonably necessary for the construction of the retaining wall and associated hardscape.

3. Maintenance and Repairs. TRANSIT DISTRICT shall maintain and repair at its own expense, the retaining wall within the Bus Stop Easement, and shall repair and replace any landscaping on Owner’s property which may be removed or destroyed during construction. All maintenance, repair and improvements performed with respect to the easements granted herein shall be completed in a good and workmanlike manner.

4. Term of Easements. Except as provided in this Section 2, the easements granted herein are perpetual. The Construction Easement shall terminate automatically six months after construction of the retaining wall and hardscape.

5. Easements Appurtenant. The easements granted herein are appurtenant to the real properties described herein. It is the intent of the parties that the easements granted herein shall run with the land. This agreement shall be binding upon and inure to the benefit of the parties hereto and their successors and assigns.

6. Further Assurances. The parties agree to cooperate and execute any and all documents necessary to effectuate the terms of this agreement. At the request of any party, or their successors in interest, the other parties, or their successors in interest, hereto agree to execute such documents, statements and certificates as may be reasonably necessary to confirm or certify the existence and effectiveness of this agreement.

7. Liability. Grantee shall maintain fire, theft, and liability insurance on said shelter and agrees to indemnify and hold harmless Grantor and the officers, employees and agents of Grantor against any and all damages, claims, demands, actions, causes of action, costs and expenses of whatsoever nature which may result in an injury to or death of any person(s) or from

the loss of or damage to property of any kind or nature, when such injury, loss, death or damage is due to the act or negligence of Grantee, its officers, agents and employees acting within the scope of their employment duties or when such loss or damage to person or property is occasioned by the use of such transit stop/shelter. It is the intention of the parties hereto that the Grantee shall bear full responsibility for the use and enjoyment of the property and shall hold the Grantor harmless from any claim of damages to person(s) or premises resulting from the use, occupancy and possession thereof by the Grantee.

8. Arbitration. Any controversy or claim arising out of or relating to this Agreement, including, without limitation, the making, performance, or interpretation of this Agreement, shall be settled by arbitration in _____ County, Oregon, in accordance with the Uniform Arbitration Act in ORS Chapter 36. There shall be no right to appeal the decision or award of the arbitrator for a trial de novo, and the decision of the arbitrator shall be a judgment, binding upon the parties and entered as a judgment pursuant to ORS Chapter 36. The parties agree that all facts and other information relating to any arbitration arising under this Agreement shall be kept confidential to the fullest extent permitted by law. Except as otherwise provided for herein, the cost of arbitration shall be shared equally between the parties; however, the prevailing party shall be entitled to recover attorney's fees as provided in Section 8.

9. Attorney's Fees. If any suit, action or arbitration is filed or commenced by any party to enforce this Agreement or otherwise with respect to the subject matter of this Agreement, the prevailing party shall be entitled to recover reasonable attorney fees incurred in preparation or in prosecution or defense of such suit, action or arbitration as fixed by the trial court or arbitrator(s), and if any appeal is taken from the decision of the trial court, reasonable attorney fees as fixed by the appellate court.

IN WITNESS WHEREOF, the parties have set their hands to be effective as of the Effective Date.

_____TRANSIT DISTRICT

By:_____ _____

_____, General Manager Date Signed

Oregon Transportation and Growth Management Program

A partnership between
the Oregon Department of Transportation and
the Oregon Department of Land Conservation and Development

635 Capitol Street, N.E., Salem, Oregon 97301
www.oregon.gov/LCD/TGM
503.373.0050

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