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4. Recommended Bicycle and Pedestrian Programs

Introduction

Bicycle and pedestrian programs enhance the biking and walking experience in ways other than the provision of on- or off-road pathways and bikeways. Support programs include educational programs, the provision of bicycle parking, and various city programs and policies. The Manual on Uniform Traffic Control Devices (MUTCD) provides support and guidance regarding the need for standards in establishing safe routes to schools. The process outlined in the MUTCD should be consulted in the development of any Safe Routes to School program.

Safe Routes to School

Safe Routes to School (SR2S) refers to a variety of multi-disciplinary programs aimed at promoting walking and



bicycling to school, and improving traffic safety around school areas through education, incentives, increased law enforcement, and engineering measures. Safe Routes to School programs typically involve partnerships among municipalities, school districts, community and parent volunteers, and law enforcement agencies. City staff and consultants met with Wilsonville school district senior officials principals, as well as children from Boeckman Creek Primary School and Wood Middle School, to discuss a potential SR2S program. These community representatives support the inclusion of the SR2S program as a vital component of the Wilsonville Bicycle and Pedestrian Master Plan.

The City has a vested interest in encouraging school children to lead active lifestyles. Safe Routes to School programs offer ancillary benefits to neighborhoods by helping to slow traffic and provide reasonable facilities for walking by all age groups.

Why Do We Need SR2S?

The purpose of a SR2S program is to identify and improve school commute routes, to increase the number of students who walk and/or bicycle to school in Wilsonville, to lessen traffic congestion, and to improve health. Although most children walked or biked to school pre-1980's, the number of children walking or bicycling to school has sharply declined since, due to urban growth patterns and safety/security issues which have made it less safe to do so. Higher obesity rates are being reported and linked to many of these lifestyle changes. Walking and biking to school are healthy alternatives to being driven, and can provide a sense of independence for children who may otherwise be restricted by school bus or parents' schedules.

What Are the Benefits of a SR2S Program?

The primary benefit of implementing a SR2S program is the resulting increase in safety for children walking and riding bicycles to school. A



comprehensive strategy based on a cooperative effort between school officials, parents, residents and city planning and engineering staff will ensure that specific school-related traffic calming projects and pedestrian and bicycle improvements will become priority projects eligible for state, federal, or other grant funding. The involvement of various stakeholders throughout the Safe Routes process increases the likelihood for implementation of needed safety improvements. While the primary focus of a SR2S program is improving safety for children walking and biking to school, these safety benefits often extend to all age and activity groups.

In addition to safety enhancements, a SR2S program helps integrate physical activity into the everyday routine of school children. Health concerns related to sedentary lifestyles have become the focus of efforts both statewide and nationally to reduce health risks associated with being overweight. Identifying and improving routes for children to safely walk and bicycle to school is one of the most cost-effective means of reducing weekday morning traffic congestion and can help reduce auto-related pollution.

Local Coordination and Involvement

In order to be successful, a SR2S program in Wilsonville will need buy-in from individuals and organizations throughout the community. While each individual school will have unique concerns and goals for developing a SR2S program, an organizational strategy that promotes the sharing of ideas between schools can be more effective than several isolated school groups. The key components of an effective SR2S program include champions (individuals at each school who spearhead their school's organizing effort), stakeholders (a team of people from an individual school), and a task force made up of all the stakeholder teams in the community.

The basic components of the proposed SR2S program include:

Education

Students are taught safety skills, and educational campaigns aimed at drivers are developed. Safe Routes to School maps help provide guidance for the best bicycling and walking routes. SR2S maps for the four schools in Wilsonville are shown in Map 2 on page 60-Map 5 on page 63.

Curriculum programs implemented in schools can teach children the basics regarding pedestrian and bicycle safety. Classroom educational materials should be presented in a variety of formats (safety videos, printed materials, and classroom activities), and should continually be updated to make



use of the most recent educational tools available. Classroom education programs should also be expanded to promote the health and environmental benefits of bicycling and walking. Outside schools, educational materials should be developed for different audiences, including elected officials (describing the benefits of and need for a SR2S program), and parents (proper school drop-off procedures and safety for their children).

Educational programs should be linked with events and incentive programs when appropriate, and students should be included in task force activities, such as



mapping locations for improvements. Involving students can serve as an educational tool and can also provide the task force with meaningful data that is useful for prioritizing improvement locations. Educational programs, and especially on-bike training, should be expanded to more schools and for more hours per year.

Encouragement

School commute events and frequent commuter contests are used to encourage participation.

Programs that may be implemented include a "Walking School Bus Program," which involves parents taking turns walking (or bicycling) with groups of children to school. A good opportunity to kick-off a SR2S program is during International Walk to School Day, held annually in early October. Good resources and start-up material can be found at the City of Portland's new Safe Routes to School website, <http://www.trans.ci.portland.or.us/saferoutes/program/>. Organized Bike and Walk to School Days should be held monthly or weekly to keep the momentum going and encourage more children and their parents to walk or bike to school. Prizes or drawings for prizes offered to participants have been used in some schools as an incentive. Events related to bicycling and walking should be incorporated into existing curricula when practical. Involving local celebrities or publishing the names of student participants in events

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can be effective means of encouraging student involvement. Another key to successful events is promotion. Ensuring that parents are aware of events, whether classroom-specific or district-wide, is key to gaining maximum student participation.

Other contests and event ideas to encourage bicycling and walking to school include: competitions in which classrooms compete for the highest proportion of students walking or biking to school, themed or seasonal events, and keeping classroom logs of the number of miles biked and walked by children and plotting these distances on a map of Oregon or the US. A wealth of information and ideas for promoting SR2S programs can be found at: www.nhtsa.dot.gov/people/injury/pedbimot/ped/saferouteshtml/index.html.

Enforcement

Various techniques are employed to ensure traffic laws are obeyed. The Wilsonville Police Department patrols school zones and conducts crosswalk enforcement regularly. The SR2S task force and stakeholder teams should develop priority areas in need of enforcement. One option to avoid the cost of providing physical police presence is to use innovative signage, such as in-roadway crosswalk signs or in-roadway warning lights, to alert motorists that children may be crossing, or speed feedback signs that indicate to motorists their current speed. Neighborhood speed watch programs, in which community members borrow a radar device and use it to record the license plate numbers of speeding vehicles, can also be effective.

Engineering

To provide safe access for children, school sites should have designated pedestrian access points that do not require students to cross in front of drop-off and pick-up traffic. Locations identified through the SR2S process should be considered for SR2S grant funding.

Streetscaping improvements should ensure adequate sight distance on all access routes, crossings, and intersections. School zone designations for speed limits should be an element of a comprehensive circulation plan that also includes school-based student as well as Police Department crossing guard programs and identification of safe routes for bicycling and walking to school.

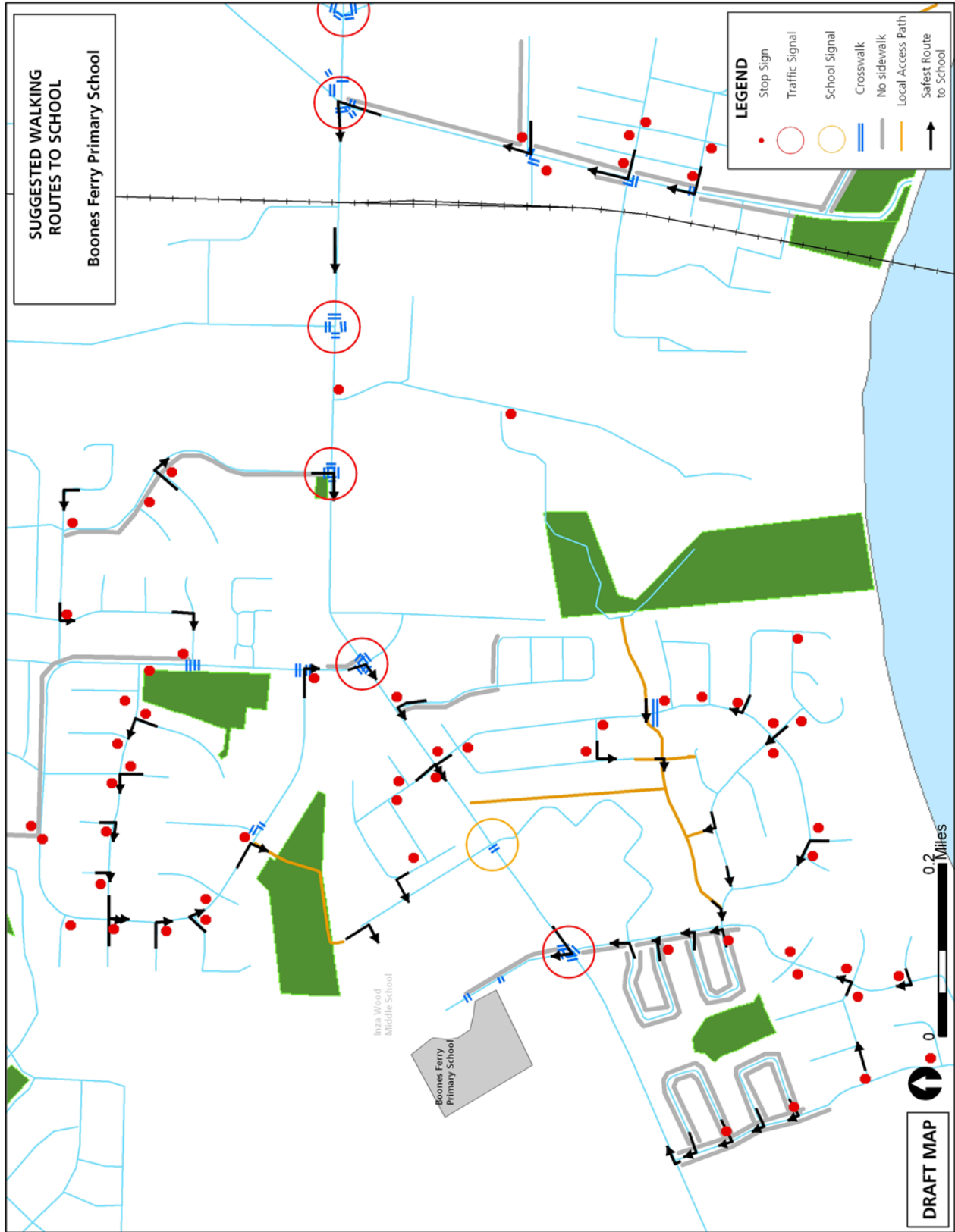
Suggested Route to School Maps

Suggested Route to School Maps were prepared for Boones Ferry Primary, Inza Wood Middle School, Boeckman Creek Elementary, and Wilsonville High School. Map 2 through Map 5 show the suggested routes to school for these four schools.

These maps are based on the process outlined in the 2003 MUTCD, Chapter 7. Section 7A.01 notes: "A school route plan for each school serving elementary to high school students should be prepared in order to develop uniformity in the use of school area traffic controls, and to serve as the basis for a school traffic control plan for each school. The school route plan, developed in a systematic manner by the school, law enforcement, and traffic officials responsible for school pedestrian safety, should consist of a map showing streets, the school, existing traffic controls, established school walk routes, and established school crossings."

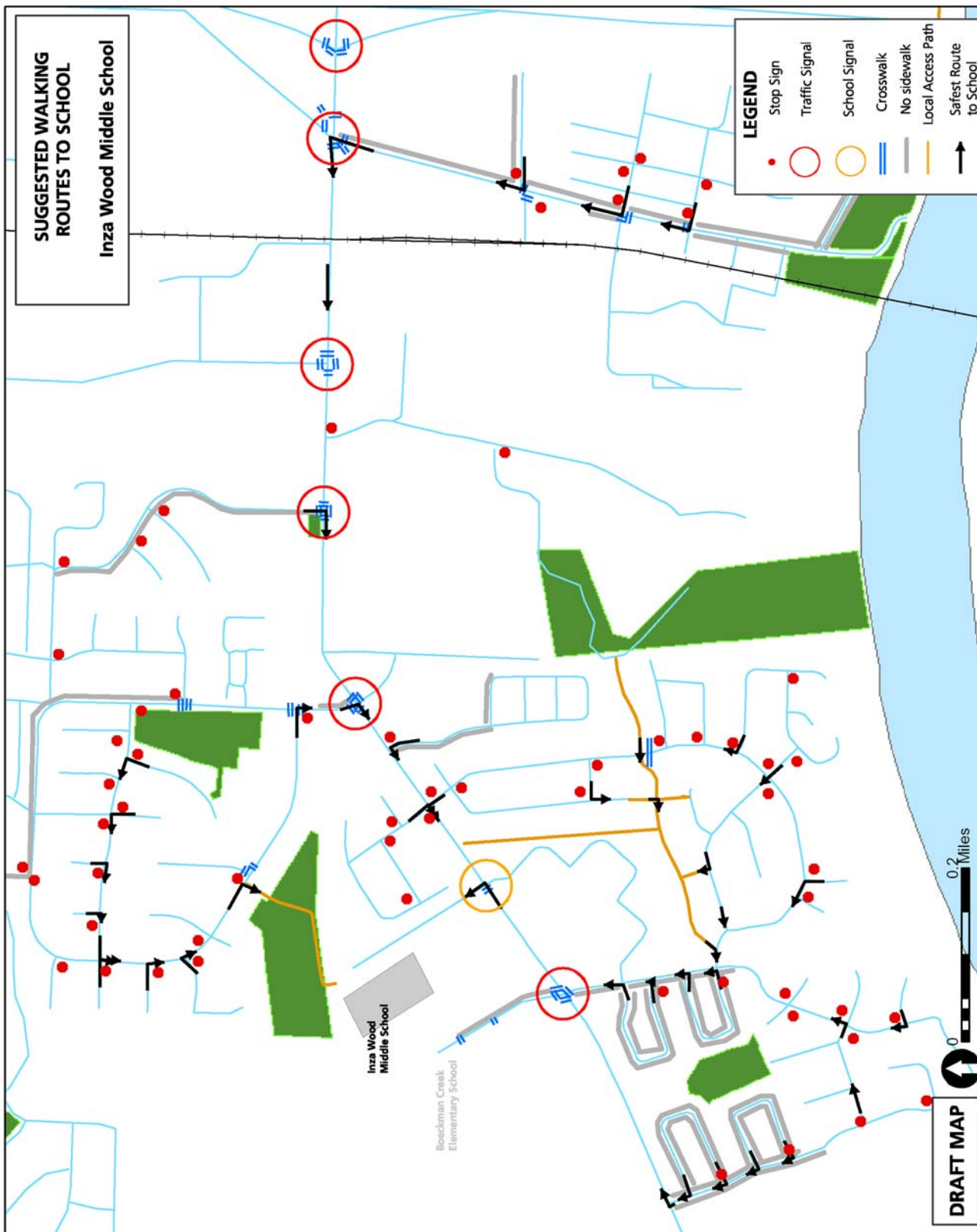
For each school, staff conducted a field visit to inventory the traffic controls, signage, crosswalks, and other physical conditions on streets surrounding the school. Factors for determining the "best" routes to a school along the street grid included the presence of traffic controls, crosswalks, or crossing guards at key crossing locations, and presence of sidewalks or bike lanes along street segments. In some cases, roadside paths or known off-street cut-throughs (such as a path leading to the back of a school) are noted as suggested routes. The suggested routes extend a distance of about one-half mile for elementary schools, and about one mile for junior high and high schools.

The Suggested Route Maps are intended to reflect a partnership between City and school officials. Each map should be reviewed and signed by both the School Principal and a City Engineer to ensure that they accurately reflect both the physical roadway conditions around the school and the walking patterns of students. It is recommended that the maps be reviewed and updated regularly to reflect changes in the roadway network, such as new traffic control or crosswalk locations. It is recommended that the maps be reviewed by the school officials at the beginning of each school year in order to confirm that the Suggested Routes shown are still the best ways for children to walk and bicycle to the school.

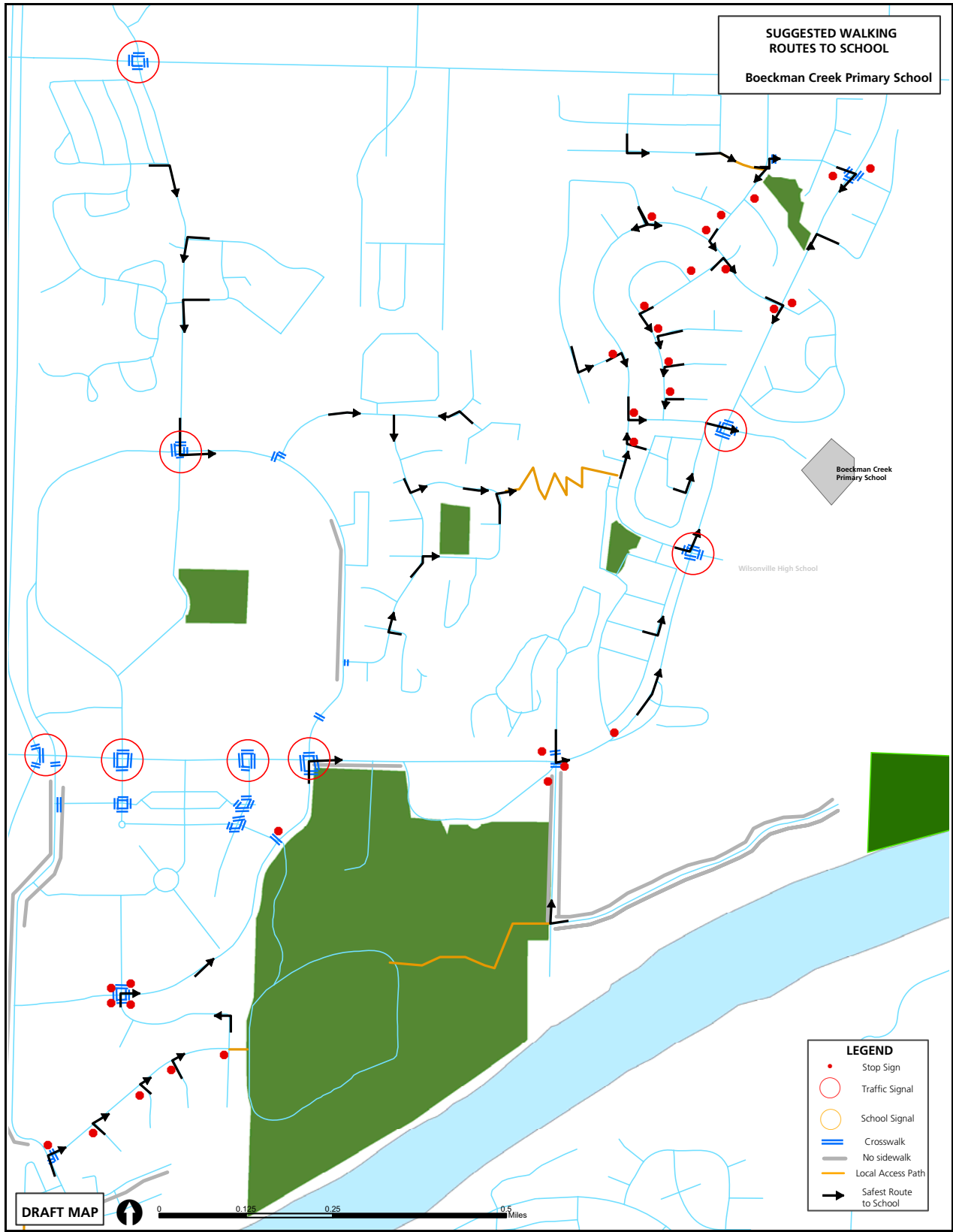


Map 2. Suggested Routes to School for Boones Ferry Primary

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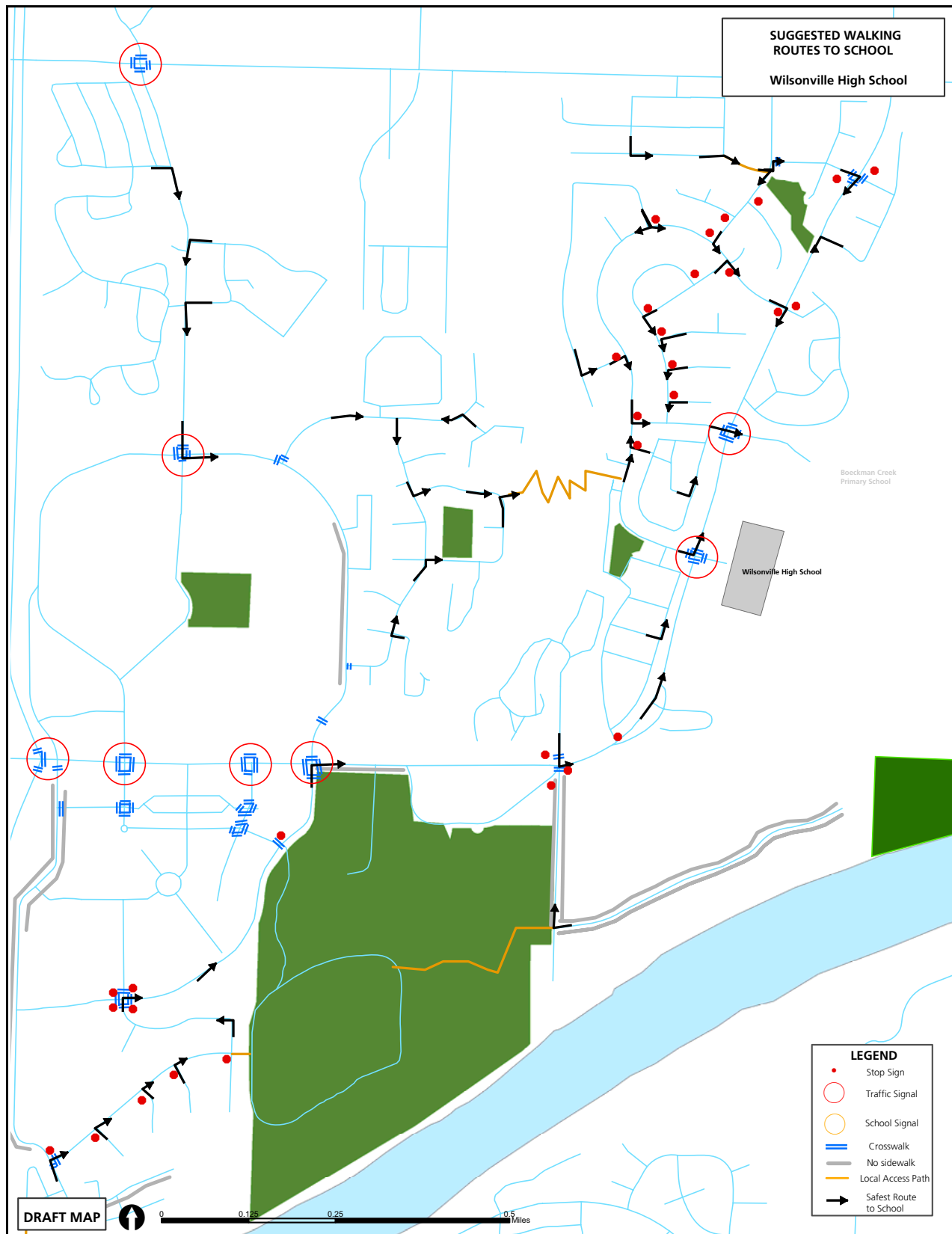


Map 3. Suggested Routes to School for Inza Wood Middle School



Map 4. Suggested Routes to School for Boeckman Creek Primary

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Map 5. Suggested Routes to School for Wilsonville High School

Additional review and practice runs by parents are a key component to the successful use of the maps.

The City will assist in developing and distributing suggested route to school maps to local schools as part of the Master Plan and future SR2S efforts, subject to school approval and City resource availability. It is recommended that the City and schools work with the West Linn / Wilsonville School District to change the existing policy prohibiting the riding of bicycles and scooters on school property. This policy unnecessarily punishes those students who choose to ride to school.

Wilsonville High School (pop. 963) and Boeckman Creek Primary School (pop. 573):

Access is constrained by their location near Boeckman Creek, and the Wilsonville city boundary. Consequently, all vehicle traffic utilizes Wilsonville Road, creating traffic problems during the morning and afternoon time periods. One solution is to create stronger bicycle and pedestrian connections to the surrounding subdivisions, particularly just north of Boeckman Creek Primary. The neighborhoods are curvilinear, with many ending in cul-de-sacs. This helps control the amount of traffic, as well as traffic speed; however it also makes biking and walking trips longer and more difficult. Furthermore, an official Boeckman Creek Trail, in conjunction with the existing Boeckman Creek crossing, connected to the nearby neighborhoods would provide an alternative to Wilsonville Road for students coming from the west. Currently, all school traffic is routed to two intersections - Wilsonville Road and Meadow Loop for the high school, and Wilsonville Road and Meadows Parkway for the primary school.

Inza Wood Middle School (pop. 603) and Boones Ferry Primary School (pop. 730):

Also located off of Wilsonville Road, with only one access point each. The intersections of the school roads with Wilsonville Road are well marked with crosswalks. The intersection of Inza Wood School access road with Wilsonville Road has been improved with a light and traffic control devices to increase safety for the children. There is a path from the neighborhood to the north, through The Park at Merryfield and onto the school grounds. This path provides a safe off-street option for children in that neighborhood to walk or bike to school. The neighborhoods in this part of town share similar

characteristics with the neighborhoods around Wilsonville HS and Boeckman Creek Primary, and would also benefit from improved internal bicycle and pedestrian connections.

Other School District Property:

Additionally, the West Linn-Wilsonville School District owns property in the Frog Pond Area and south of Advance Road, both adjacent to the Wilsonville city limits. The Frog Pond parcels are located off of Boeckman Road/Advance Road and Stafford Road and straddle the Urban Growth Boundary. This property is currently for sale. The Advance Road property is the current focus for school expansions. Any new schools located in this area are likely to have similar issues to Wilsonville High School and Boeckman Creek Elementary School, given their close proximity to the school district property. Traffic generated by these schools will most likely utilize Boeckman Road/ Advance Road to access the school property, since most of the population is located south and east of the current site.

Funding

While much of the initial work involved in starting a SR2S program can be conducted by stakeholder team volunteers, eventually funding will be needed to plan and implement physical improvements, hold events, and develop and implement educational programs and materials.

Capital Funding

Capital funding for infrastructure improvements is available from a variety of sources. The SR2S task force should work with City staff agencies to identify all potential funding sources and to provide support on funding requests. Wilsonville may be able to pursue federal funds recently made available with the new Safe Routes to School Program established in the Safe, Accountable, Flexible, Efficient Transportation Equity Act - A Legacy for Users (SAFTEA-LU). This section of the bill provides \$612 million in funding over the next five years with no state receiving less than \$1 million per fiscal year. Other portions of SAFTEA-LU, such as the Transportation Enhancements (TE) and the Congestion Mitigation and Air Quality (CMAQ) funds may also provide funding opportunities for bicycle and pedestrian projects.

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Program Funding

As Wilsonville's SR2S program develops, funding will be needed to support the overall program, including coordination assistance, purchasing incentives, printing newsletters, staffing events, and developing educational materials. Both school-based and program-based funding will be essential for success. When program funding is pursued, it should be emphasized that a SR2S program improves the entire community by relieving traffic congestion, contributing to cleaner air, creating alternative transportation routes, and improving the health and safety of children and the entire community. In order to maintain and expand the program, new sources of funding need to be obtained. Other possible funding sources include:

- Corporations and Businesses: Local corporations and businesses may be able to provide cash, prizes, and/or donations, such as printing services, through community giving or other programs. Parents or other members of stakeholder teams may be a good source for contacting companies.
- Foundations. There are institutions throughout the country that provide funding to non-profit organizations. The Foundation Center is a national organization dedicated to collecting and communicating information about philanthropy in the U.S., and is an excellent source for researching potential foundation funding sources. Potential foundation funding sources can be searched by geographic region and by category. Some categories that may be applicable include transportation, health, environment, and community building.
- Individuals. Statistically, individuals give more money than corporations and foundations combined. A local fund drive can quickly reach a large number of people if outreach is conducted by stakeholder team members.
- Events. Many SR2S programs have raised funds by holding special events, often using a related themed event such as a walkathon or a bicycling event. More traditional fundraising efforts, such as bake sales, concerts, talent shows, etc., can also help raise funds.
- Parent Teacher Associations (PTAs) and School Districts. Many PTAs have funds to distribute to school programs, and often schools have their own safety funding sources. Stakeholder teams

should work with local PTAs and school districts to see if there is a method for applying for a grant.

- City and County Funds. Some cities and counties allocate funds to support SR2S programs. Some also allocate a portion of their local Transportation Enhancement funds to SR2S educational programs.
- State Funds. Each state receives Federal Highway Safety Funds, also called 402 Funds. Although each state handles this program differently, most funding is available on a competitive basis for projects that increase road safety.

Bicycle Parking

Lack of secure, convenient bicycle parking is a deterrent to bicycle travel. Bicyclists need parking options that can provide security against theft, vandalism, and weather. Like automobile parking, bicycle parking is most effective when it is located close to trip destinations, is easy to access, and is easy to find. Where quality bicycle parking facilities are not provided, determined bicyclists lock their bicycles to street signs, parking meters, lampposts, or trees. These alternatives are undesirable as they are usually not secure, may interfere with pedestrian movement, and can create liability or damage street furniture or trees.

Bicycle parking facilities that are conveniently located and adequate in both quantity and quality can help to reduce bicycle theft and to eliminate inappropriate parking, benefiting everyone. Bicycle parking is highly cost-effective compared to automobile parking.

Wilsonville's bicycle parking is generally adequate; however, there are a few noticeable locations such as Town Center Loop where bicycle parking is missing, lacking, or difficult to access. Chapter 4: General Development Regulations of the Wilsonville Development Code contains language governing the provision of bicycle parking in Wilsonville. Section 4.155, Table 5 provides the minimum and maximum parking standards, as well as the minimum bicycle parking requirements, for various land uses. For example, Wilsonville Code requires: one space per 4,000 sq feet for commercial retail, one space per 1,000 sq ft for a library (minimum of six spaces), and eight spaces per class (above 2nd grade) for an elementary or middle school.

The parking minimums, particularly for the public use spaces such as the school and library, exceed the minimum requirements set out in the Oregon Bicycle and Pedestrian Plan, which is commendable. However, the commercial parking requirements are not as stringent as the Oregon Bicycle and Pedestrian Plan, occasionally leading to a lack of accessible bicycle parking.

The City should revisit the current bicycle parking requirements and revise them if deemed necessary. The City might also undertake a bicycle parking analysis to determine whether all of the bicycle parking required by city code is being provided, and if so, that it is being provided in locations that are visible and free of obstacles. It should also be noted that Wilsonville city code only establishes parking minimums, and new commercial establishments should be encouraged to exceed the standards as set out in the Wilsonville city code.

Bicycle Parking can be broadly defined as either short-term or long-term parking.

Short-Term Parking: Bicycle parking meant to accommodate visitors, customers, messengers and others expected to depart within two hours. Requires approved standard rack, appropriate location and placement, and weather protection.

Long-Term Parking: Bicycle parking meant to accommodate employees, students, residents, commuters, and others expected to park more than

two hours. This parking is to be provided in a secure, weather-protected manner and location.

Short-Term Bicycle Parking

Short-term bicycle parking facilities are intended to provide short-term bicycle parking, and include bicycle racks which permit the locking of the bicycle frame and one wheel to the rack and support the bicycle in a stable position without damage to wheels, frame or components. Acceptable rack types are shown in Figure 1 and Figure 2; other acceptable racks include ring racks.

Short-term bicycle parking is currently provided at no charge at most locations. Such facilities should continue to be free, as they provide minimal security, but encourage cycling and promote proper bicycle parking.

The following recommendations come from the Oregon Bicycle and Pedestrian Plan regarding dimensions for short-term bicycle parking, and could be adopted by Wilsonville as bicycle parking standards:

- Bicycle parking spaces should be at least six feet long and two feet wide, and overhead clearance in covered spaces should be at least seven feet.
- A five-foot aisle for bicycle maneuvering should be provided and maintained beside or between each row of bicycle parking.
- Bicycle racks or lockers should be securely anchored to the surface or structure.

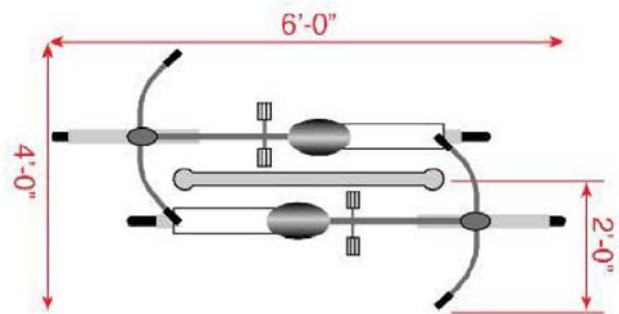


Figure 1. Inverted “U” Rack

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Ribbon, Spiral, or Freestanding Racks

(with access from only one side)

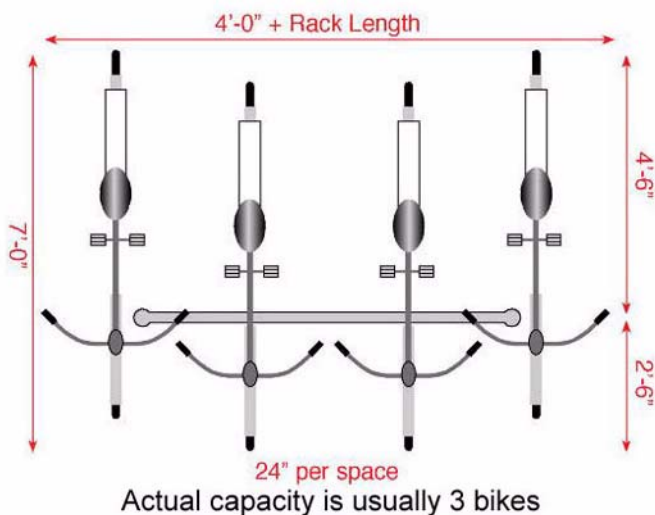


Figure 2. Ribbon, Spiral, or Freestanding Rack



Sleeve ring rack



Bolt-on ring rack

On-Street Bicycle Parking

Where racks are not possible on sidewalks, because of narrow sidewalk width, sidewalk obstructions, or other issues, bicycle parking can be created in the street where on-street vehicle parking is allowed. Two possible options for creating parking in the street include: clustered racks in a car parking space protected by bollards, and racks installed on sidewalk bulb-outs where adequate sight distance can be provided.

Installing bicycle parking directly in a car parking space incurs only the cost of the racks and bollards or other protective devices. A bulb-out is more expensive to install, and can be prohibitively expensive if substantial drainage and/or utility work is necessary. Bulb-out

installation alone can exceed \$30,000, not including bicycle rack costs. Costs may be less if the bulb-out is installed as part of a larger street or pedestrian improvement project.

While on-street bicycle parking may take space away from the automobile parking, there are ways to mitigate auto parking loss:



Additional auto parking spaces can be created by consolidating driveways, moving fire hydrants, or otherwise finding places where it may be possible to admit auto parking where it is currently proscribed. Options for combining bicycle and motorcycle parking also exist.

On-street bicycle parking may be installed at intersection corners or at mid-block locations. Mid-block on-street parking may be closer to cyclists' destinations, although it could force cyclists to dismount and walk to the parking site if access from the street is difficult or dangerous. Combining a mid-block pedestrian crossing with mid-block on-street parking facilities could mitigate this situation.

Table 9. Rack Placement Guidelines

Design Issue	Recommended Guideline
Minimum Rack Height	To increase visibility to pedestrians, racks should have a minimum height of 33 inches or be indicated or cordoned off by visible markers.
Signing	Where bicycle parking areas are not clearly visible to approaching cyclists, signs at least 12 inches square should direct them to the facility. The sign should give the name, phone number, and location of the person in charge of the facility, where applicable. Where Class I parking is provided by restricted access, the sign should state that the enclosure must be kept locked at all times.
Lighting	Lighting of not less than one foot-candle illumination at ground level should be provided in all bicycle parking areas.
Frequency of Racks on Streets	In popular retail areas, two or more racks should be installed on each side of each block. This does not eliminate the inclusion of requests from the public which do not fall in these areas. Areas officially designated or used as bicycle routes may warrant the consideration of more racks.
Location and Access	<p>Access to facilities should be convenient; where access is by sidewalk or walkway, curb ramps should be provided where appropriate and ADA compliant. Parking facilities intended for employees should be located near the employee entrance, and those for customers or visitors near the main public entrances. (Convenience should be balanced against the need for security if the employee entrance is not in a well-traveled area).</p> <p>Bicycle parking should be clustered in lots not to exceed 16 spaces each. Large expanses of bicycle parking make it easier for thieves to operate undetected. A clearance of 24 inches between adjacent bicycles and from walls or other obstructions should be maintained.</p>
Locations within Parking Garages	When possible, bike racks should be located within the view of an attendant. Bike racks should not be placed immediately adjacent to the street, where components would be susceptible to theft.
Locations within Buildings	Provide bike racks within 50 feet of the entrance. Where a security guard is present, provide racks behind or within view of a security guard. The location should be outside the normal flow of pedestrian traffic.
Locations near SMART Stops	To prevent bicyclists from locking bikes to SMART bus pole stops - which can create access problems for transit users, particularly those who are disabled - racks should be placed in close proximity to SMART stops where there is a demand for short-term bike parking.
Locations within a Campus-Type Setting	Racks are useful in a campus-type setting at locations where the user is likely to spend less than two hours, such as classroom buildings. Racks should be located near the entrance to each building. Where racks are clustered in a single location, they should be surrounded by a fence and watched by an attendant. The attendant can often share this duty with other duties to reduce or eliminate the cost of labor being applied to the bike parking duties; a cheaper alternative to an attendant may be to site the fenced bicycle compound in a highly visible location on the campus. For the long-term parking needs of employees and students, attendant parking and/or bike lockers are recommended.
Retrofit Program	In established locations, such as schools, employment centers, and shopping centers, the City should conduct bicycle parking audits to assess the bicycle parking availability and access, and add in additional bicycle racks where necessary. Town Center Loop is an excellent candidate for this type of audit.

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Long-Term Bicycle Parking

Long-term bicycle parking facilities are intended to provide secure long-term bicycle storage. Long-term facilities protect the entire bicycle, its components and accessories against theft and against inclement weather, including wind-driven rain. Examples include lockers, check-in facilities, monitored parking, restricted access parking, and personal storage.

Long-term parking facilities are more expensive to provide than short-term facilities, but are also significantly more secure. Although many bicycle commuters would be willing to pay a nominal fee to guarantee the safety of their bicycle, long-term bicycle parking should be free wherever automobile parking is free.

An ideal location for long-term bicycle parking is the site of the proposed commuter rail station. Bicyclists would be able to bike to the station and lock their bicycles in a secured location, knowing that they would have reliable transportation once they returned to the station. Other potential locations are large

employers and institutions where people use their bikes for commuting, and not consistently throughout the day. Xerox has installed a number of bicycle lockers for commuters. Another advantage of lockers is that they can be configured to more easily accommodate different styles of bicycles, such as recumbent bicycles.



Solid construction Cycle-Safe lockers

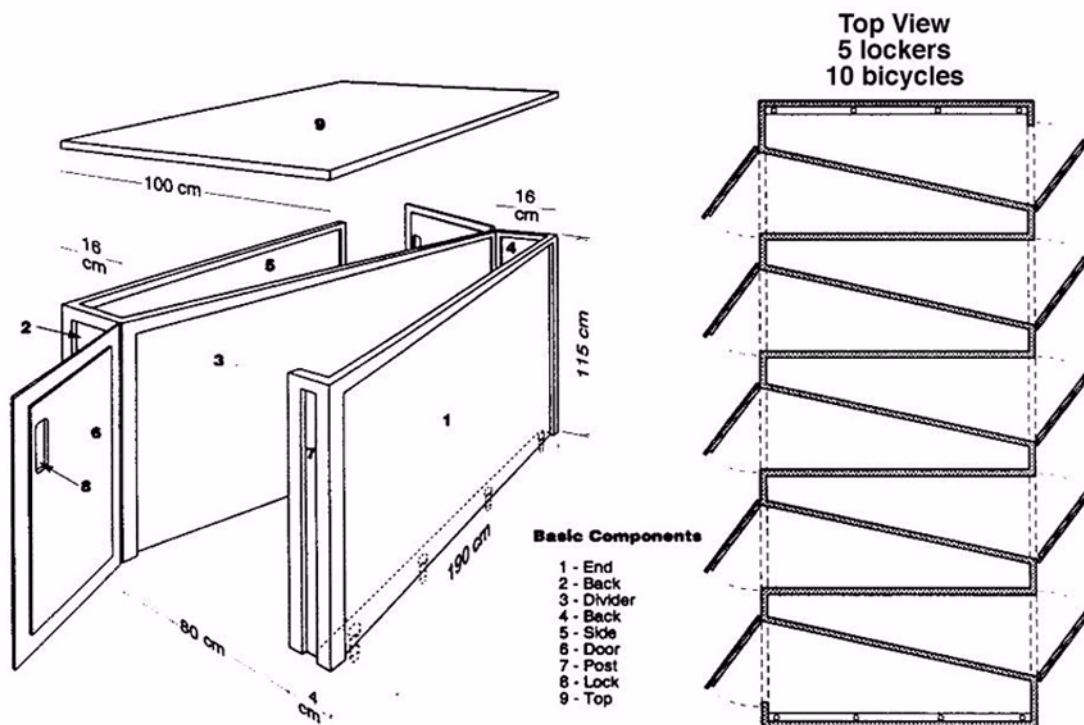


Figure 3. Cycle-Safe Lockers

City Programs

Alternative Transportation Coordinator/Advisory Committee

Wilsonville should enhance the existing Transportation Options coordinator position funded by SMART. This position is responsible for implementing the walkSMART program and other programs directed at reducing the number of vehicle miles traveled in the city. This position would oversee implementation of the various related plans, such as the Bicycle and Pedestrian Master Plan, as well as the Transit Master Plan. This position would also coordinate with other departments, such as Public Works and Community Development to ensure that the needs of bicyclists and pedestrians are being considered in all new projects.

Along with a coordinator, the city should encourage the formation of a full-time Bicycle and Pedestrian Advisory Committee that meets regularly to identify and discuss the needs of bicyclists and pedestrians within the City of Wilsonville.

Wayfinding / Signage Program

The ability to navigate through a town or city is informed by landmarks, natural features, and other visual cues. A signage system is a key component of a navigable environment and would inform pedestrians, bicyclists, and motorists, while also enhancing the identity of Wilsonville.

An effective wayfinding system communicates information clearly and concisely. Wilsonville currently has a Wilsonville Trail signage program, and is encouraged to continue those efforts. Similar signs could be posted along Wilsonville Road and other well-traveled bike routes. For example, a sign placed at Wilsonville Road and Boones Ferry Road could indicate to bicyclists that Boones Ferry Park is to the south, Graham Oaks Natural Area and Commuter Rail are to the west, and



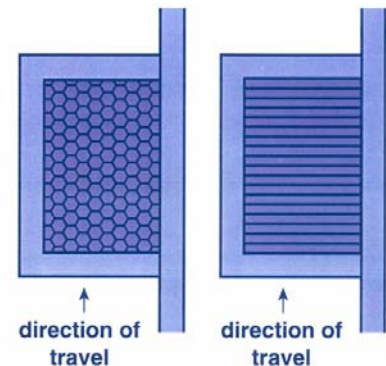
Wilsonville Trail signage

Town Center Loop and Memorial Park are to the east. A sign at Kinsman Road would then reinforce that Graham Oaks Natural Area and schools are still west, while Commuter Rail is to the north. The directions could be posted either separately, as shown in the photo to the right, or beneath the Wilsonville Trail or other city logo directly on the sign. Note that too many road signs tend to clutter the right-of-way, and it is recommended that these suggested signs be posted at a level most visible to bicyclists and pedestrians, rather than per vehicle signage standards. Care also needs to be taken that any signs are posted at the proper location and orientation to be visible to bicyclists.

Placing signs throughout the city indicating to bicyclists and pedestrians direction of travel, location of destinations, and the time/distance to those destinations will increase users' comfort and accessibility to the bicycle and pedestrian system. Additional information about signage and other network amenities can be found in the Design Standards and Guidelines chapter.

Drainage Grate Retrofit

Wilsonville has taken a number of steps to make storm drainage grates bicycle safe, as required by ORS 810.150. In Council minutes from early 2005, it was noted that, "The City has



completed a program to retrofit catch basin inlets that had parallel metal strips where bicycle tires could slip into the grating. This retrofit program was a joint effort between our Fleet Crew (who welded crossbars into each of the old-style grates) and our Roads Crew (who removed/reinstalled the grates). Now bicyclists can safely navigate all City streets without risk of having their tires drop into catch basin inlets."

Where the City has retrofitted the existing drainage grates, the City has begun a program to replace those grates as the road is resurfaced, since the new grates still have spacing that is narrow enough to catch narrow bicycle tires, or cause flat tires. In new road and curb construction, Wilsonville is installing inlets in the

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curb face to eliminate the drainage grates entirely. If a street surface grate is required for drainage, care is taken to ensure that the grate is flush with the road surface.

Internal Circulation Standards

Pedestrian circulation in larger residential and commercial developments is influenced by both the infrastructure provided for the pedestrian as well as the infrastructure and design of the automotive circulation and parking.

Automobile Infrastructure

Parking lots should be located in such a manner as to encourage pedestrian access to the development, connect uses to the street and decrease the distance between adjacent developments. To accomplish this, parking should be located behind and to the side of buildings wherever possible.

Landscaping should be provided between the pedestrian circulation system and automobile areas to provide protection, security and accessibility for the pedestrian while providing sufficient sight distance. Parallel parking can also be used to buffer pedestrian routes from moving vehicles.

Pedestrian Infrastructure

An internal pedestrian circulation system should:

- Be barrier-free and designed for safety and security;
- Ensure continuous sidewalks and safe crossing points;
- Connect all uses within a development (buildings, parking areas, pad buildings etc.);
- Clearly link public sidewalks with all internal walkways;
- Clearly link the individual sites within a development to each other and to surrounding off-site uses (mixed-use and residential areas);
- Be defined with landscaping, paving, and pedestrian scaled lighting;
- Meet ADA guidelines; and
- Provide adequate sight distance.

Pedestrian circulation routes could be composed of treated surfaces such as scored or brushed concrete in order to differentiate the pedestrian system from the auto system. Where pedestrian routes cross an auto circulation route, striping should be provided.

Pedestrian connections should be designed to provide the most direct route to the SMART stops to avoid out-of-direction travel and minimize travel distance. Direct routes will also reduce the damage to landscaping by providing pedestrians with other preferred routes. Connections should be a continuation of the sidewalks and trail system to reduce dead-end paths.

To provide greater opportunity for pedestrian connectivity and to prevent autos from having to use the public street system to travel between adjacent developments, parking and pedestrian circulation should be designed to accommodate connections between developments.¹

Pedestrian circulation plans should be required with each large lot development. These plans must emphasize connectivity through sidewalk design, traffic circulation, landscaping, and lighting.

Bicycle Infrastructure

Internal circulation for bicyclists is as important a consideration as for cars and pedestrians. Bicyclists should have a clearly delineated travel path through any development, as well as clear travel paths that link individual sites within the development and provide safe travel.

In smaller developments or constrained situations, this can be accomplished through directional signage, lane markings, and signage that clearly show a shared road system (such as the shared lane marking), and signage and markings indicating slow speeds (10 mph) required while in the development.

In larger developments, bike lanes should be striped to both indicate the travel route to bicyclists and to constantly inform motorists to expect bicyclists within the development. The bike lanes should be supplemented with appropriate directional signage for bicyclists. Signage and markings indicating slow speeds (10 mph) are also recommended.

Bicycle circulation plans should be required with each large lot development. In addition, it is recommended that the city perform a comprehensive code review to

1. Clark County, Washington Appendix A: Commercial Design Guidelines

ensure that the needs of pedestrians and bicyclists are being met as Wilsonville continues to grow.

Capital Spot Improvement Program

Having the ability to respond quickly to the requests of bicyclists and pedestrians will enhance Wilsonville's standing as a bicycle and pedestrian friendly city while demonstrating a commitment to alternative transportation modes. This program could be funded once a year, with all funds dedicated to smaller spot improvements identified by city staff and residents. Such improvements might include:

- Striping and signing of a particular trail to increase safety and trail user compliance along a heavily-used trail.
- Adding bike parking to locations that are currently lacking appropriate or insufficient parking, such as areas of Town Center.
- Sidewalk infill to safely connect vital pedestrian routes, especially in school areas and to transit.
- Adding appropriate directional and informational signage along trails, sidewalks, and bicycle routes.
- Striping of bicycle lanes where the striping has worn away, such as the bike lane on Elligsen Rd westbound approaching I-5.
- ADA improvements in parks.

Bike Maps

Put downloadable maps of all trails and paths on the city's website and allow others to mirror them. Make sure to put high (as well as low) resolution versions up for those with access to reasonable printers.

Becoming a Bicycle Friendly Community

The Bicycle Friendly Community (BFC) Campaign is a national awards program that recognizes municipalities that actively support bicycling. A Bicycle-Friendly Community provides safe accommodations for cycling and encourages its residents to bike for transportation and recreation. The Bicycle Friendly Community Campaign is administered by the League of American Bicyclists, an education and advocacy organization working to bring better cycling to communities around the country. The BFC designation is awarded at one of four levels (from lowest to highest): bronze, silver, gold, and platinum. To date, there have been no platinum designations awarded. In Oregon, five communities

have been designated Bicycle Friendly Communities - Portland (Gold), Corvallis (Gold), Eugene (Silver), Ashland (Bronze) and Beaverton (Bronze).

What Does it Take?

Determining whether a community is bicycle-friendly involves considering many factors and conditions. The application is an audit of a community's efforts to provide a more bicycle-friendly environment. The audit reviews engineering, education, encouragement, enforcement, and evaluation and planning efforts for bicycling. The entire application and feedback from cyclists in the community is sought to determine whether the League will award the BFC designation. The application is available online at <http://www.bicyclefriendlycommunity.org/apply.cfm>. 24. The BFC campaign effort can be initiated by anyone; however, the application process requires information that only the city and city staff would possess, and requires the enthusiastic support of Wilsonville.

Opportunity

There are a number of short- and long-term steps Wilsonville can take to make it a "Bicycle Friendly Community."

Commit to becoming a BFC. The League of American Bicyclists provides an "Action Plan for Bicycle Friendly Communities," which identifies ten specific steps that the community will take to improve bicycling conditions.

Adopt the action plan publicly with full backing of the mayor and city council.

Action Plan for Bicycle Friendly Communities

1. Adopt a target level of bicycle use (e.g. percent of trips) and safety to be achieved within a specific timeframe, and improve data collection necessary to monitor progress.
2. Provide safe and convenient bicycle access to all parts of the community through a signed network of on- and off-street facilities, low-speed streets, and secure parking. Local cyclists should be involved in identifying maintenance needs and ongoing improvements.
3. Establish information programs to promote bicycling for all purposes, and to communicate the many benefits of bicycling to residents and businesses (e.g. with bicycle maps, public relations

4. Recommended Bicycle and Pedestrian Programs

campaigns, neighborhood rides, a ride with the Mayor).

4. Make the City a model employer by encouraging bicycle use among its employees (e.g. by providing parking, showers and lockers, and establishing a city bicycle fleet).
5. Ensure all city policies, plans, codes, and programs are updated and implemented to take advantage of every opportunity to create a more bicycle-friendly community. Staff in all departments should be offered training to better enable them to complete this task.
6. Educate all road users to share the road and interact safely. Road design and education programs should combine to increase the confidence of bicyclists.
7. Enforce traffic laws to improve the safety and comfort of all road users, with a particular focus on behaviors and attitudes that cause motor vehicle/bicycle crashes. Bicyclists should be educated to always ride in the direction of vehicle traffic.
8. Develop special programs to encourage bicycle use in communities where significant segments of the population do not drive and where short trips are most common, such as the Safe Routes to School program discussed earlier in this section.
9. Promote intermodal travel between SMART, commuter rail, and bicycles e.g. by putting bike racks on buses, improving parking at transit, and improving access to rail and public transport vehicles.
10. Establish a citywide, multi-disciplinary committee for non-motorized mobility to submit to the Mayor/Council a regular evaluation and action plan for completing the items in this action plan.

Educate community members and the city of Wilsonville staff on how to become more bicycle friendly. This could entail holding a workshop or other public forum to introduce community leaders to the basic elements of a BFC. Work with the Bicycle Transportation Alliance (BTA) and Safe Routes to School efforts to further the education effort.

Implement the Action Plan. Once the Action Plan has been adopted, Wilsonville needs to ensure that the Plan is implemented and prepare and submit its BFC application.



5. Existing Conditions

Introduction

Connection to Parks

Regional Connections

Bicycle Parking

5. Existing Conditions

Introduction

The network recommended in the Bicycle and Pedestrian Master Plan builds upon the strong foundation that Wilsonville has established for the City's existing bicycle and pedestrian network. The City of Wilsonville covers about seven square miles and measures about four miles from north to south. The City currently has 21 miles of sidewalk on the arterial streets and even more on the local residential streets. Bicyclists enjoy 11.1 miles of bike lanes with more under construction. There are currently 3.3 miles of shared use paved trails and 2.2 miles of unpaved trails. More than 16 additional miles of shared use path are proposed in newly adopted plans, including The Tonquin Trail Feasibility Study, Memorial Park Trails Plan, Wilsonville Tract Master Plan (Graham Oaks), and the Villebois Master Plan.

Paved city trails and earthen local trails are found throughout many of Wilsonville's parks, such as Memorial Park and Town Center Park. Informal earthen trails can be found along the Boeckman Creek corridor, and paralleling Boeckman Road. Other locations with either paved city trails or local trails include:

- The Park at Merryfield
- Canyon Creek Park
- Landover Park
- Tranquil Park
- Water Treatment Plant Park

Sidewalk connections are fairly comprehensive and well maintained in much of Wilsonville. However, most of Old Town (the original town area along Boones Ferry Road south of Wilsonville Road) and its



surrounding neighborhoods, the Fox Chase neighborhood, Charbonneau, and some isolated industrial areas are lacking a good, connected pedestrian system. Additionally, some major collectors, such as Boeckman Road, have an insufficient pedestrian environment. These key network gaps, which were identified in the Recommended Bicycle and Pedestrian Network chapter, as well as the location of existing sidewalks on major circulation routes and trails, are shown on Map 6 on page 81. Additional difficulties encountered by pedestrians within Wilsonville include:

- Missing sidewalks force pedestrians to either cross the road back and forth—increasing the out of distance travel—or to travel in the right-of-way or shoulder of the road.
- Poor crossings in several locations, including: near City Hall, from the Mentor Graphics path across Boeckman Road, and across Canyon Creek by Kinetic.

Bicycle lanes in Wilsonville are typically located on roadways with traffic volumes exceeding 3000 vehicles per day. Bicycle lanes currently exist on the following roads:



- Wilsonville Road
- Canyon Creek Road
- 95th Avenue
- Boberg Road
- Kinsman Road
- Memorial Drive
- Burns Way
- Day Road
- Parkway Center Drive

And on portions of the roads listed below:

- Boones Ferry Road
- Main Street
- Barber Street

- Parkway Avenue
- Park Place
- Jessica Street
- Rebekah Street
- Boeckman Road

The bicycle lanes are largely well-marked and maintained, providing a safe travel lane for bicyclists. Many of the residential streets easily accommodate bicyclists of all ages and currently have little need for dedicated bicycle facilities. The location of existing bicycle lanes and key network gaps identified in the Recommended Bicycle and Pedestrian Network chapter are shown on Map 7 on page 83.

Connection to Transit

Ensuring a strong bicycle and pedestrian link to transit is an important part of making non-motorized transportation a part of daily life in Wilsonville. There are four main components of bicycle/pedestrian - transit integration:

- Allowing bicycles on transit
- Offering benches, shelters, schedules, bicycle parking, and other amenities at transit locations
- Improving connections between pathways, bikeways, and transit
- Encouraging usage of bicycle and transit programs

Currently, all buses within the SMART fleet are equipped to carry two bikes on the front of the bus. However, if the racks are full, cyclists often must wait for the next bus, though bikes may be brought into the bus at the driver's discretion.

In Wilsonville, the majority of the SMART stops have excellent pedestrian access, as shown on Map 8 on page 85, with continuous sidewalks on both sides of the streets. However, there are a number of stops that lack an adjacent sidewalk or path from nearby buildings, decreasing accessibility for all users, especially during the winter months when inclement weather is expected. A number of the transit stops lack amenities such as a bench, shelter, and schedule. This decreases the attractiveness of transit as a viable transportation option.

The bikeway network in Wilsonville also provides very good access for bicyclists to transit. Many of the current SMART stops are located near the bikeway network, as shown on Map 8, as is the identified

location of the future Commuter Rail station. However, as was noted above, most of the transit stops are very simple, in most cases only a sign identifying the location as a SMART stop. The existing conditions of the Boeckman Rd overpass, a key connection to the proposed commuter rail site, are not favorable for bicyclists or pedestrians. The lack of adequate short- and long-term bicycle parking facilities, particularly at the existing park and ride station in Town Center, decreases the likelihood that someone will commute to the station by bicycle. The Transit Master Plan will address these deficiencies.

Connection to Parks

Bicyclists and pedestrians in Wilsonville enjoy a strong connection to the existing parks. All of the parks can be accessed by either biking or walking, with some type of dedicated facility (sidewalk, bike lane, or shared use path) available for reaching each park. Some of the parks, however, do not have strong connections to other logical destinations. For example, the lack of a good bicycle and pedestrian connection between Boones Ferry Park and the Willamette River Water Treatment Plant Park is a noticeable gap in the existing bicycle and pedestrian network.

Regional Connections

The State recently placed an increased emphasis on bicycle tourism with the dedication of the Willamette Valley Scenic Bikeway that stretches from Armitage County Park just north of Eugene to Champoeg State Park, Wilsonville is well situated to capitalize on its location as the regional bikeway hub for the southernmost portion of the Portland metropolitan area and the rural Willamette Valley areas of Clackamas, Washington, and Yamhill counties. Wilsonville could also serve as the regional gateway to the Willamette Valley Scenic Bikeway.

Currently, bicyclists must use the roadway to reach all regional destinations. This poses some difficulties, due to natural barriers such as the Willamette River, narrow high-volume roads leading into Wilsonville, and the topography of the surrounding land. Additionally, Bike lanes are lacking on 7 of the eight "regional connectors": Boones Ferry Road, Elligsen Road, Stafford Road, Grahams Ferry Road, Wilsonville Road (westbound), Miley Road(westbound)/Butteville Road, Miley Road (eastbound). Airport Road is the

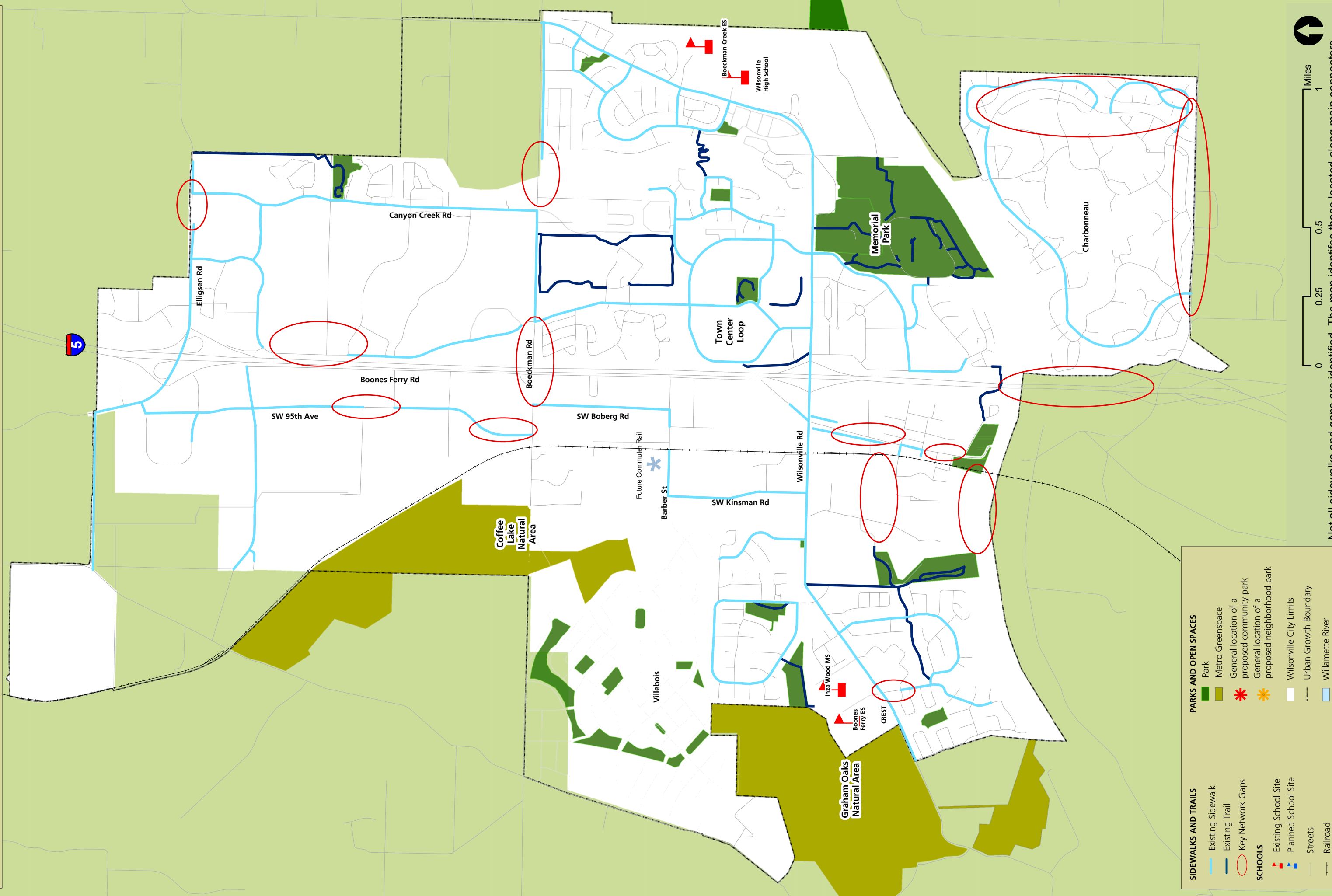
only existing bikeway leaving the city that provides bike lanes. This issue is discussed further in the next section.

Bicycle Parking

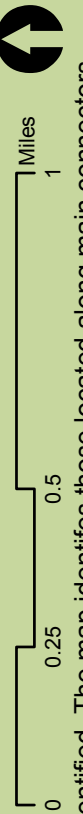
The provision of bicycle parking is an important component in planning bicycle facilities and encouraging widespread use. Minimum bicycle parking requirements for various land uses are set out in the Wilsonville Development Code, Section 4.155, Table 5. Chapter 5 of the 2003 TSP also addressed requirements for the provision and installation of bicycle parking. Bicycle parking should be provided as part of multi-family residential developments and all commercial, industrial and institutional developments; transit transfer stations, and park-and-ride lots.

In completing fieldwork, and in discussions with the public, there is a general perception that not enough bicycle parking is provided, particularly in desirable locations such as the Town Center area. The quality of bicycle parking made available can be substandard due to the style of rack chosen or the placement of the bicycle rack. Bicycle parking is discussed further in Chapter 2, Recommended Bicycle and Pedestrian Programs.

Map 6: Existing Sidewalks and Trails



SIDEWALKS AND TRAILS	PARKS AND OPEN SPACES
Existing Sidewalk	Park
Existing Trail	Metro Greenspace
Key Network Gaps	General location of a proposed community park
Existing School Site	General location of a proposed neighborhood park
Planned School Site	Wilsonville City Limits
Streets	Urban Growth Boundary
Railroad	Willamette River



Not all sidewalks and gaps are identified. The map identifies those located along main connectors.

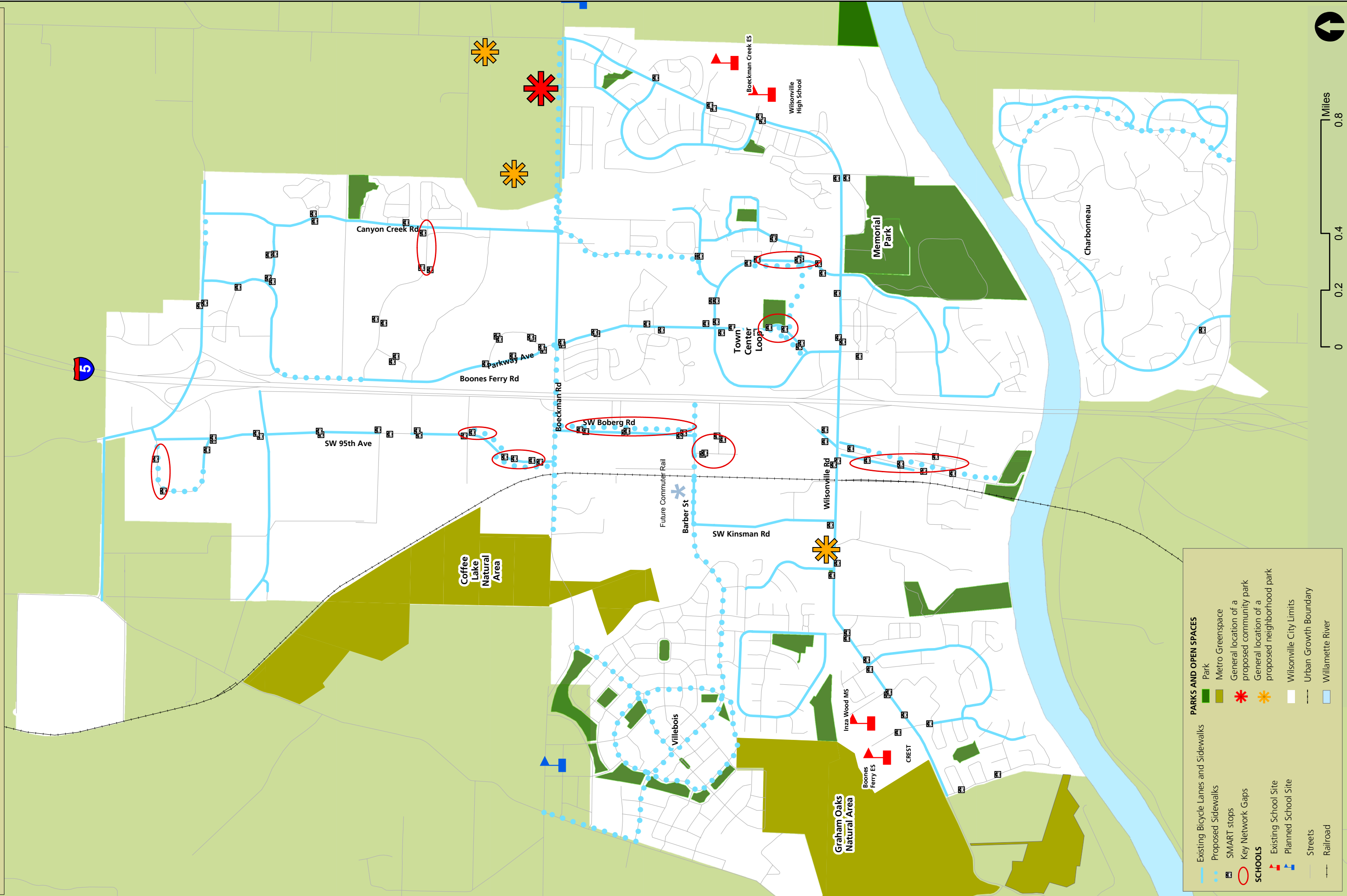
Map 7: Existing Bicycle Lanes



BICYCLE LANES	PARKS AND OPEN SPACES
Existing Bicycle Lanes	Park
Key Network Gaps	Metro Greenspace
Existing School Site	General location of a proposed community park
Planned School Site	General location of a proposed neighborhood park
Streets	Wilsonville City Limits
Railroad	Urban Growth Boundary
	Willamette River



Map 8: Bicycle and Pedestrian Access to SMART



PARKS AND OPEN SPACES

- Park
- Metro Greenspace
- General location of a proposed community park
- General location of a proposed neighborhood park

SCHOOLS

- Existing School Site
- Planned School Site

TRANSPORTATION

- Existing Bicycle Lanes and Sidewalks
- Proposed Sidewalks
- SMART stops
- Key Network Gaps
- Proposed Network Gaps
- Wilsonville City Limits
- Urban Growth Boundary
- Willamette River

