TECHNICAL MEMORANDUM #5:

STREETSCAPE DESIGN TOOLKIT

ST. HELENS - US 30 & COLUMBIA BLVD./ST. HELENS ST. CORRIDOR MASTER PLAN

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Oregon Department of Transportation

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The contents of this document do not necessarily reflect views or policies of the State of Oregon.

"In the U.S., 25 to 35% of a city's developed land is likely to be in public rights-of-way, mostly in streets. If we can develop and design streets so that they are wonderful, fulfilling places to be, community building places, attractive public places for all people of cities and neighborhoods, then we will have successfully designed about one third of the city directly and will have had an immense impact on the rest."

- Allan Jacobs,
Author of "Great Streets"

A successful streetscape is a place that helps foster strong, livable communities, is physically comfortable and safe, bolsters economic growth and stability, and helps improve our environment. It is accessible to everyone, it can facilitate chance meetings, and it promotes activities that bring people together. It is a flexible space, and can accommodate farmers' markets, political rallies, and parades. It should accommodate different modes of transportation and ease traffic congestion. It should reflect the spirit and identity of a community.

This document is intended to be used as a project resource to spark creative ideas for developing planning, design, and implementation standards to facilitate the revitalization of the US 30 & Columbia Boulevard/St. Helens Street Corridor project area as a viable, aesthetically pleasing, safe and sustainable business district.

The document provides the user with a Streetscape Design Toolkit, which is broken into four sections: Traffic Calming Features, Pedestrian Amenities, Civic Identity and Wayfinding, and Green Street Strategies. Each of these sections provide descriptions and photos of physical elements that, when used together, can make a Great Street.

STREETSCAPE DESIGN TOOLKIT

TRAFFIC CALMING FEATURES

A great pedestrian environment relies on creating streets that are safe for pedestrians and calm traffic through a city's neighborhoods. Traffic calming measures such as bulb-outs and enhanced crosswalks slow traffic and discourage neighborhood cut-throughs. Many traffic calming features contribute to the aesthetic and environmental quality of the street by incorporating landscape plantings, site furnishings such as bike racks and benches, and vegetated stormwater management features.


STOP

CURB EXTENSIONS (BULB-OUTS)

Curb extensions (also known as bulb-outs) extend the sidewalk into the parking lane to narrow the roadway and provide additional pedestrian space at critical locations. They improve pedestrian safety by increasing pedestrian visibility, slowing vehicular traffic, and shortening crossing distance.

Curb extensions can be located at street corners, or mid-block, and can be lengthened along the roadway to increase usable public space for community gathering and socializing. They can also accommodate transit shelters, benches, landscaping, and other pedestrian furnishings and amenities.

Other additional benefits of curb extensions include a reduction in illegally parked cars at corners and crosswalks, an increased ability to provide two curb ramps per corner, and potential for tightening corner curb radii that slow turning vehicles.

Many potential locations for curb extensions exist throughout the Houlton and Olde Towne project areas, primarily at block corners. Strategic planning could determine feasible mid-block curb extension locations. Priority locations for curb extensions may be identified in the St. Helens streetscape plan.

MID-BLOCK CROSSINGS

Streets with long block faces and widely-spaced intersections sometimes limit crossing opportunities for pedestrians. Mid-block crossings can provide convenient crossing opportunities for pedestrians when other crossing opportunities are distant, or where a destination creates a high crossing demand.

Mid-block crossings should be highly visible, and employ markings or materials with high contrast that clearly delineate the edge of the pedestrian zone. Signage and/or signalization, flashing beacons, or other special treatments like special paving materials or raised crossings help increase visibility of crossings.

Site specific analysis and planning would determine feasible locations for mid-block crossings throughout the project area, and should consider whether it could contribute to delays to traffic congestion or delay issues.

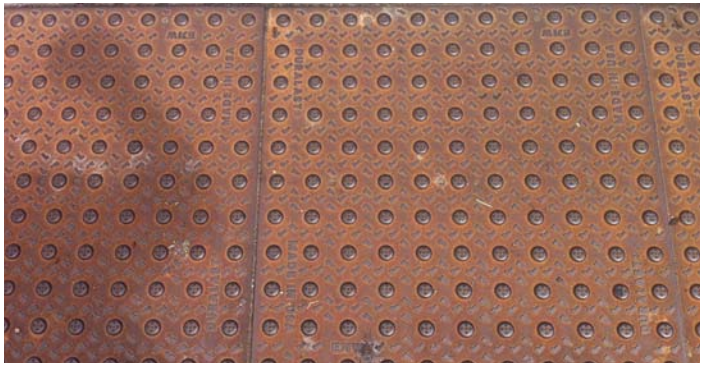

MACKINS AUTO

CROSSWALK ENHANCEMENTS

Special paving materials, articulated scoring patterns, integral concrete colors, bollards, lighting, and landscape plantings can significantly enhance the pedestrian experience along a streetscape. These enhancements visually break the monotony of asphalt streets, extend the pedestrian realm, and highlight key civic and commercial areas.

Enhancements should use textures, patterns, and colors to articulate the crossings, but should be slip-resistant, and avoid creating an uncomfortable surface for those using wheelchairs or other mobility devices. Pedestrian crossings should be designed and constructed with paving materials that contrast in color and texture to clearly designate pedestrian paths of travel.

Opportunities for crosswalk enhancements exist throughout the Houlton and Olde Towne project areas at most intersections, however, special paving materials, textures, and colors are not feasible along high-volume traffic arterials such as US 30.



INTERSECTION TREATMENTS

Like crosswalk enhancements, intersection treatments can highlight key civic and commercial locations. They can include special paving materials, color, and patterns, and can be combined with crosswalk enhancements.

Since they are typically more costly to build than standard roadway treatments, intersection treatments could be considered at key locations important to a city grid pattern, along commercial corridors at key intersections, at mid-block crosswalks, or at key civic locations such as civic buildings or entrances to open spaces.


ANTIQUES

SPEED TABLES

Speed tables (also referred to as raised crosswalks) are long raised speed humps in the roadway with a flat section in the middle and ramps on each end that enable pedestrians to cross at mid-block locations without the need for curb ramps. They are intended to visually indicate pedestrian crossings while slowing traffic down, increasing the likelihood that the driver yields to the pedestrian.

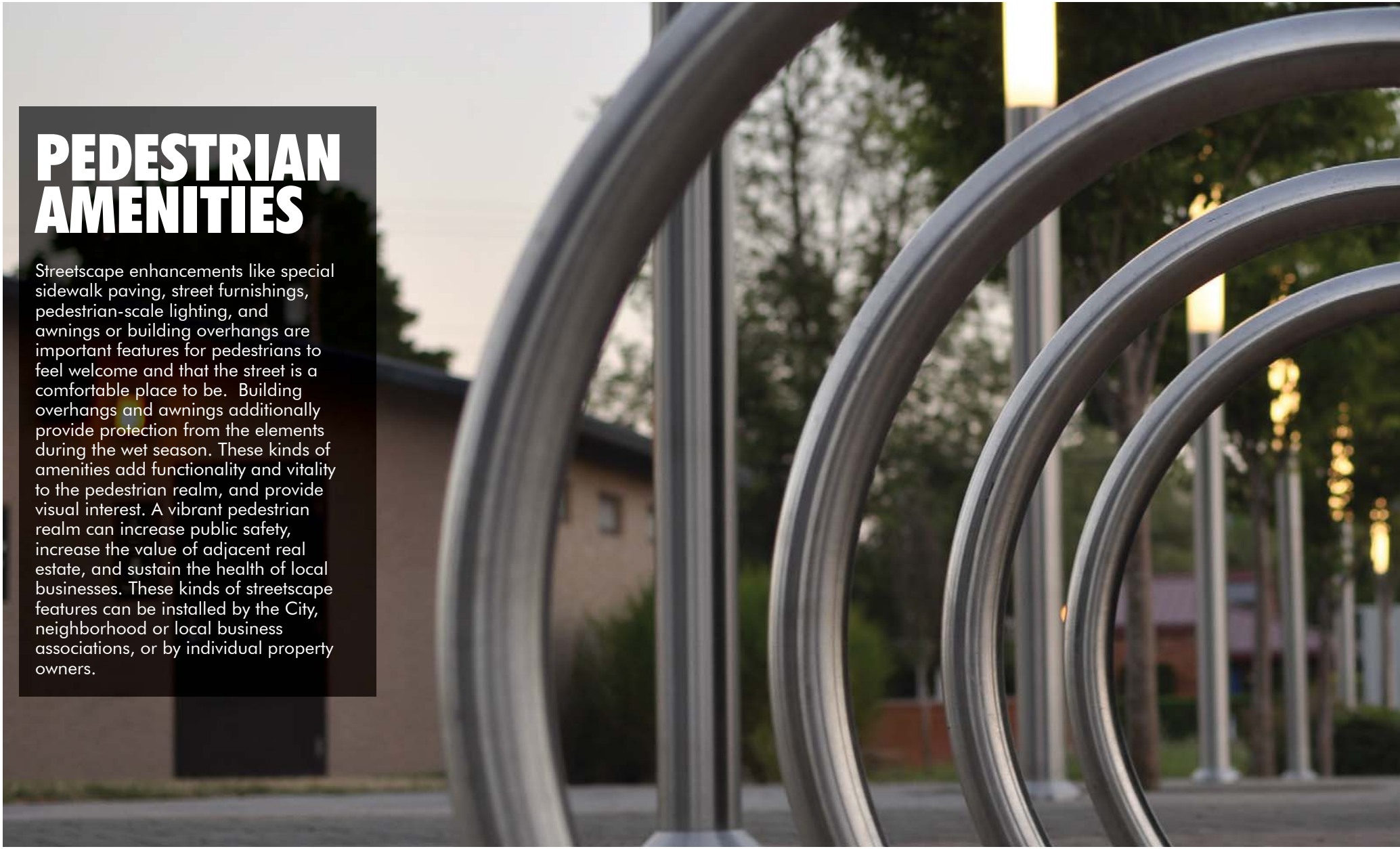
Speed tables are typically 22 feet long in the direction of travel with 6 foot wide ramps on each end, and a 10 foot flat section in the middle, though the length of the middle section can increase if preferred to address a specific situation. Crosswalk enhancements such as special paving colors, patterns, and textures should be employed at speed tables to increase their visibility.

Speed tables are not recommended on high volume roadways such as US 30, but are an ideal application on local and collector streets such as Columbia Blvd. & St. Helens St. in the Houlton and Olde Towne areas.

CHICANES

Chicanes consist of a series of narrowings or curb extensions that alternate from one side of the street to the other, forming S-shaped curves that slow vehicular traffic. Center islands are recommended to discourage drivers from taking a straight "racing line" through the feature. Landscaped bulb outs, parked cars, and stormwater planter curb extensions are all effective chicane features.

Chicanes are only appropriate at mid-block locations, and are most effective where traffic volumes are equivalent on both approaches. These might only be appropriate to the east of the Columbia/St. Helens couplet and/or in some sections of the Olde Towne project area.



PEDESTRIAN AMENITIES

Streetscape enhancements like special sidewalk paving, street furnishings, pedestrian-scale lighting, and awnings or building overhangs are important features for pedestrians to feel welcome and that the street is a comfortable place to be. Building overhangs and awnings additionally provide protection from the elements during the wet season. These kinds of amenities add functionality and vitality to the pedestrian realm, and provide visual interest. A vibrant pedestrian realm can increase public safety, increase the value of adjacent real estate, and sustain the health of local businesses. These kinds of streetscape features can be installed by the City, neighborhood or local business associations, or by individual property owners.

SIDEWALK PAVING MATERIALS: CONCRETE

Concrete sidewalks continue to be the default sidewalk surfacing employed in most right-of-way development projects throughout the United States. Compared to asphalt, concrete is comparable in cost, is more durable and attractive than asphalt, can be formed and scored in virtually any pattern, and is more reflective and, therefore, does not contribute as much to urban heat islands.

Additionally, concrete paving can be articulated with different textured finishes (stamped, lightly broomed, floated, exposed aggregate, etc.), which also add a degree of slip-resistance. Integral color concrete is another method for highlighting special pavement areas.

Concrete sidewalks are appropriate throughout the entire project area, though specially articulated concrete is most appropriate along downtown, commercial, and other special or small streets, such as throughout Houlton and Olde Towne project areas.

SIDEWALK PAVING MATERIALS: UNIT PAVERS

Special paving treatments can significantly enhance the aesthetics of public spaces in a city, give circulation areas a strong sense of place, and establish a hierarchy of public spaces.

Unit pavers can be selected from a range of options, and include natural stone pavers, concrete unit pavers, asphalt pavers, and clay brick pavers. All of these pavers are typically available in a number of different shapes, colors, and textures. Regardless of the material, unit pavers are typically installed in either sand-set or mortar-set applications.

Permeable concrete unit pavers can provide both functional and aesthetic appeal in that they can help manage and treat stormwater runoff. These pavers often have wider joints and thus a more variable surface and should be avoided along primary public circulation routes.

Unit pavers could be employed in a variety of configurations and at a number of different locations in sidewalks and crosswalks throughout the project area.

SIDEWALK PAVING MATERIALS: COMBINATIONS

Utilizing special paving treatments like unit pavers or stamped/colored concrete, with standard concrete is another effective tool in improving the sidewalk aesthetics and creating sense of place in public areas while minimizing costs. The combinations can be employed to create a pattern that helps to break up the scale of larger streets to a more pedestrian-scaled experience. The pattern can be informed by other repetitious streetscape elements such street trees and seating areas, or can help to reinforce a "theme" established in certain downtown districts.

Paving surfaces that integrate unit pavers into the design and layout must address potential ADA-related issues regarding slip or trip hazards, potential for vibratory effects on those in wheelchairs, and clarity of the paving surface for those with visual impairment. Accent paving therefore may be most appropriate in Houlton and Olde Towne areas throughout the furnishing zone of sidewalks, which is between the back of curb and the pedestrian through zone, or in other areas outside of the path of travel.

SIDEWALK PAVING MATERIALS: ARTISTIC

Pavement with innovative and artistic patterns can highlight significant civic and/or cultural locations, create a varied and pleasant pedestrian experience, and be expressive of a city's historical or cultural heritage or physical setting.

This type of paving might be considered in unique locations throughout the Houlton and Olde Towne project areas, such as in front of the elementary school, along the base of the basalt rock outcrops, or at the St. Helens and Columbia intersection.

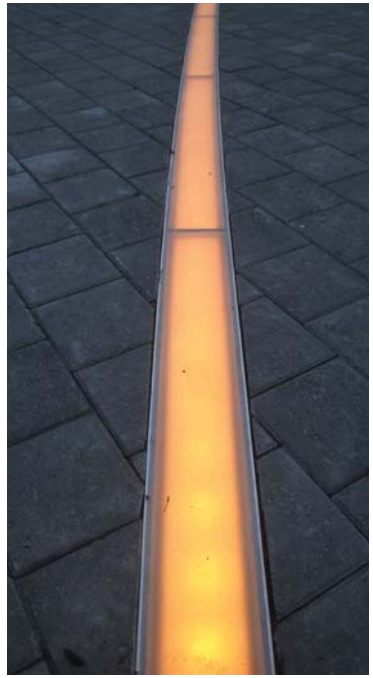
PEDESTRIAN LIGHTING

Pedestrian lighting primarily functions to illuminate pedestrian areas such as sidewalks, are less than 18' tall, and typically supplement roadway lighting, which is oriented towards illuminating the roadway, intersections, and crosswalks.

There are a number of benefits associated with pedestrian lighting in the public right-of-way. It can be a key organizing streetscape element that defines a positive daytime and nighttime character of public urban spaces. Well-lit streetscapes can extend the hours that a business district is active, which can promote economic growth and stability. It can provide for better visibility and safety during nighttime hours, improving safety for vehicles and pedestrians. Additionally, it can encourage walking as part of an active lifestyle, and improve access to transit and other services.

The styles and designs of pedestrian light poles and fixtures are virtually limitless, and can help reinforce a neighborhood, district or civic identity.

Along US 30, pedestrian lighting could be implemented along the west side to help bring the scale down to a pedestrian level, encouraging pedestrians, defining pedestrian routes, and increasing safety.



Pedestrian-scale lighting could also be implemented in a variety of ways throughout the Houlton and Olde Towne areas to help foster a safe, vibrant nighttime business district. In addition, it could be used to help illuminate special opportunity areas (page 52) oriented towards pedestrians and to help establish a more cohesive sense of place and identity for these areas.

SEATING: SEATWALLS

An abundance of pedestrian seating fixtures and seating areas along a streetscape creates a comfortable, usable, and active public realm where people can meet and socialize, rest, read, or people-watch. It is a fairly simple and straightforward element that can significantly help to create a sense of place, and encourages people to linger, which is a definitive characteristic of a successful streetscape.

Seating can take many forms, two of which presented here are seatwalls and benches. Seatwalls are typically short (16-22" tall) free-standing or retaining walls, which have a surface material suitable for sitting integral to the design of the wall. In addition, seatwalls can be designed to create focal points, direct views, and for pedestrian traffic flow.

Seatwalls are typically constructed with a concrete or concrete masonry unit (CMU) base, and can either have an articulated concrete surface, or be clad with other materials such as wood, stone, or precast concrete slabs. They can also be very expressive, and can be functional artistic elements in the landscape that help define pedestrian seating areas. Seating surfaces with dark colors or rough materials should be avoided.

Due to their permanence, seatwalls should be

located at special opportunity areas oriented towards pedestrians (page 52), primarily in the Houlton and Olde Towne project areas, which could be street corners, areas around district gateway locations, or key intersections.

SEATING: BENCHES

Benches are typically "off the shelf" products purchased from manufacturers in multiple quantities, and are distributed evenly along a streetscape corridor outside of a path of travel, or clustered at special opportunity areas (page 52). They can be made out of wood, metal, precast concrete, or stone, or customized in a variety of ways as a functional art element, or to help reinforce a civic or neighborhood identity. Often times the style of bench in a downtown district belongs to a larger "family" of site furnishings, which include lighting, bike racks, bollards, and waste receptacles that, when used collectively, further unify a streetscape. In other areas, individual benches may be more unique. For example, benches have been created in St. Helens by local artists as part of a local effort to incorporate a combination of public art and pedestrian amenities into the area.

Benches are appropriate along all three corridor segments, and should be located outside of the path of travel, at transit stops, and at special opportunity areas (page 52).


LAUNDRO MAT

STREET FURNISHINGS: BICYCLE RACKS

Bicycle racks are an essential functional element for those who travel by bike for protections against theft. Additionally, they are an effective aesthetic element that can help visually unify a streetscape. Ample bicycle parking encourages ridership and facilitates a healthy lifestyle. It is most effective when it is located close to destinations, is easy to find, not hidden from public view, and is accessible.

Bicycle racks should be located with ample area for bike parking (typically 2-feet wide by 6-feet deep) on each side of the rack. More space may be needed if the City wants to accommodate larger bicycles (e.g., "cargo bikes"). They should be located in areas that provide enough room for riders to dismount and manage their cargo, and do not conflict with pedestrian through zones. They are typically constructed of metal, and should be designed and detailed in a way that supports the bicycle, will not damage it with sharp corners, and will fit most U-bar style bike locks. Options for customizing the rack to reflect civic or neighborhood character are available on most bike rack designs.

Bike racks are appropriate throughout each of the corridor segment areas, and should be located outside of the path of travel, and at special opportunity areas (page 52).

STREET FURNISHINGS: WASTE RECEPTACLES

Trash bins and recycle bins in the pedestrian right-of-way are essential to maintaining a clean, healthy city. Their presence discourages littering, thereby improving the aesthetics of a streetscape. Though these elements are utilitarian, attention to their design and integration into the overall streetscape character, in addition to careful placement, can enhance the public realm and adds to a sense of place.

Waste receptacles should be considered as one of a "family" of streetscape furnishings, which also can include benches, bike racks, and street lights. They should be made from durable, high quality materials, and should be graffiti resistant as is feasible.

Waste receptacles are appropriate throughout each of the project corridor areas. They should be located close to intersections, out of the pedestrian through zone, as well as high activity areas and special opportunity areas (page 52). A maximum of one receptacle every 200 feet along a block face, and a maximum of 4 receptacles per intersection (one per corner) is recommended.

STREET FURNISHINGS: DRINKING FOUNTAINS

Drinking fountains provide drinking water for pedestrians, offer hydration and nourishment, and encourage a healthy lifestyle. They are also an environmentally sound alternative to bottled water, which requires much more energy to produce.

Drinking fountains should be considered as one of a "family" of streetscape furnishings, which also can include waste receptacles, bike racks, and benches. They should be made from durable, high quality materials, and should be graffiti resistant as is feasible. They should also consider additional bowls that are accessible by those in wheelchairs, as well as optional dog bowls.

Drinking fountains are most appropriate along commercial streets with a pedestrian presence, such as throughout the Houlton and Olde Towne areas. They should be located within the furnishing zone, outside of the path of travel, and should be located with enough space around them to accommodate wheelchairs. Druning fountains should also be provided in areas that host special events such as community festivals or activities during warmer months.

STREET FURNISHINGS: BOLLARDS

A bollard is a short vertical post or similar element that is most often used to separate pedestrians from a vehicular environment. They can be used to add color and visual interest to streetscapes, and are most effective when used in multiples and lined up to discourage vehicles from encroaching on pedestrian spaces like sidewalks or plazas. They are most often used when the surface of the pedestrian zones are at the same grade and elevation as the adjacent vehicular areas.

Bollards could be used in the Houlton and Olde Towne project areas where vehicles attempting to park could damage sidewalk structures, trees/plantings, furnishings, or adjacent private property. They could be used on curb extensions (either mid-block or at intersection corners), or wherever pedestrians are in close proximity to travel lanes.

STREET FURNISHINGS: TREE GRATES

Trees need air, soil, water, and space to grow. Unfortunately, soil conditions in most urban environments lack each of these critical elements trees need to thrive. Tree grates provide space for tree roots to grow while allowing pedestrian traffic over the tree planting area, which is particularly effective along narrow sidewalks where pedestrian space can be limited. They also help to suppress weed growth and trash accumulation in the tree planting areas. Tree grates come in a large array of shapes, sizes, and materials, but should all be ADA-compliant while allowing for air and moisture to enter the tree planting area.

As described further below, certain site characteristics such as shallow bedrock may limit the locations of where street trees could be located throughout the project corridor segments. Where street trees are feasible, tree grates should be considered.

STREET FURNISHINGS: DECORATIVE RAILINGS

Decorative railings can be used to define pedestrian walkways, provide separation between pedestrians and vehicular or planting areas, and protect pedestrians from long falls into adjacent sunken areas. They can be made from a number of materials including wood, metal, and sometimes stone or precast concrete. They can be highly ornamental, or utilitarian in character, but should complement existing architectural features or other site amenities.

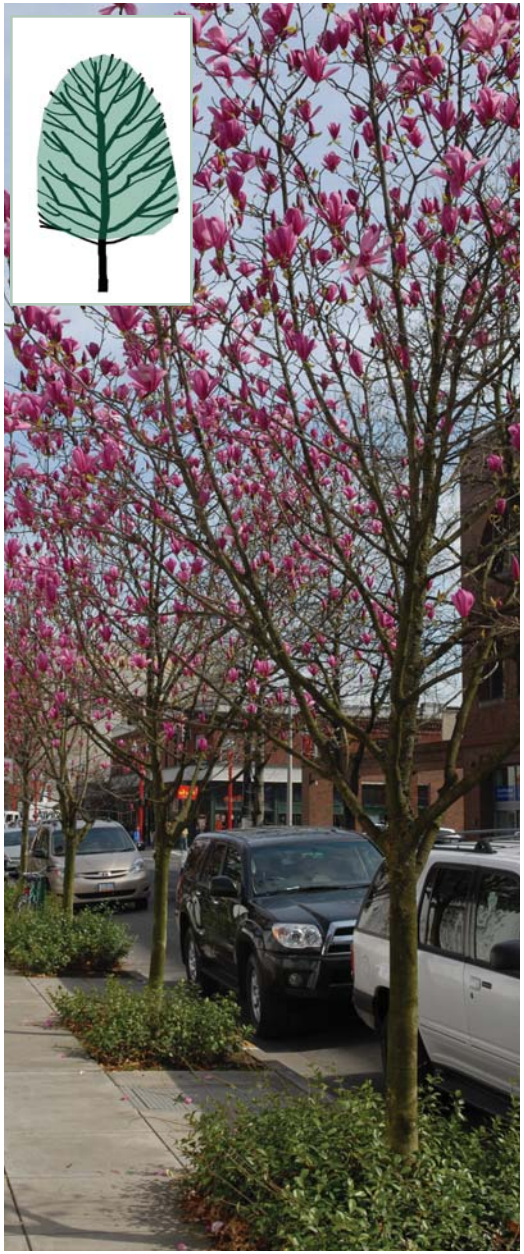
The existing chain-link railing along the basalt outcrop on Columbia Blvd could be replaced with one that is more durable and complementary of the natural and man-made stone walls in that vicinity. Additionally, a decorative railing should be considered along the "top" of the basalt outcrop running along S 1st street to provide protection from pedestrians walking along the top edge.

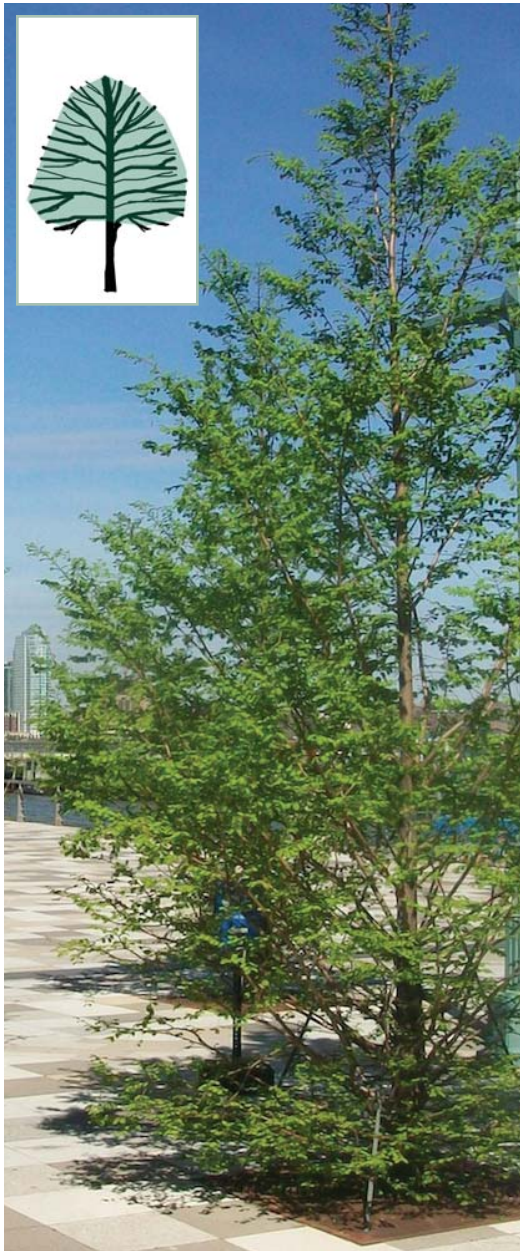
STREET TREES

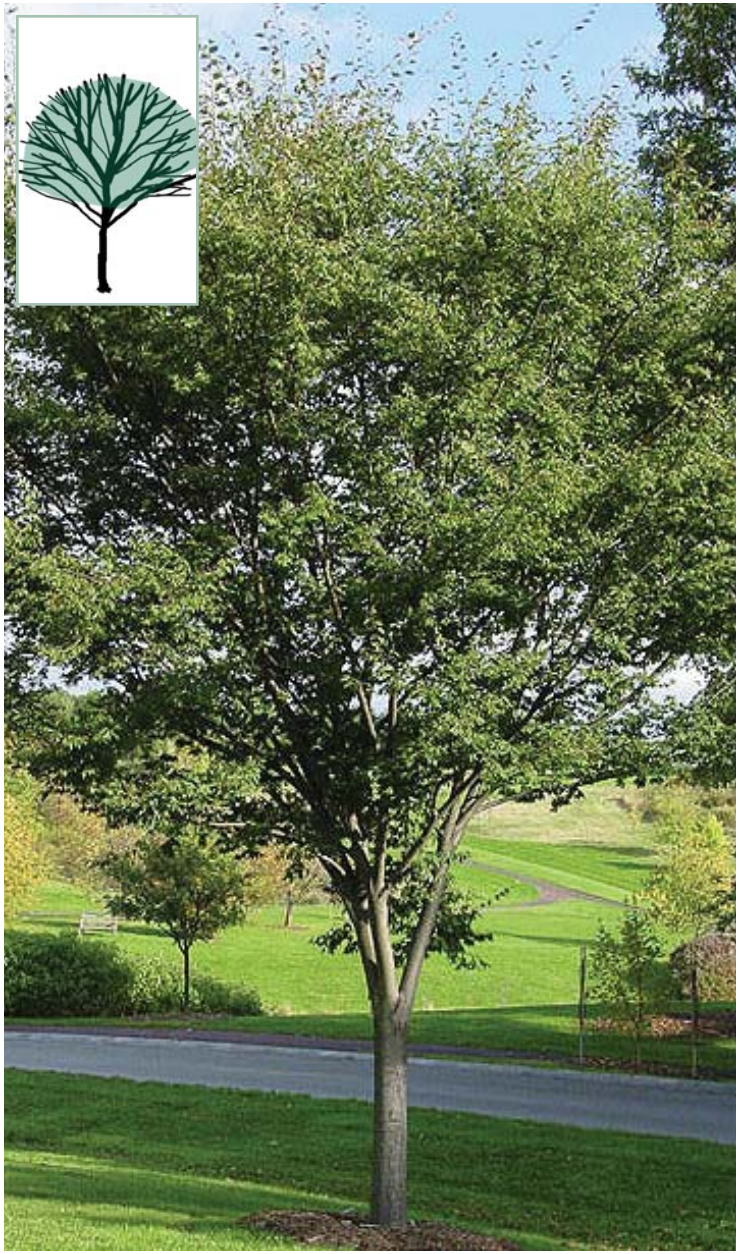
Street trees are an integral component to a successful, vibrant, pedestrian friendly streetscape. Their social, economic, and environmental benefits are innumerable, and include softening hard urban edges, shading streets and buildings, enhancing neighborhood beauty, filtering the air, and absorbing carbon dioxide. Trees have also been proven to reduce crime, improve public health, reduce energy consumption, and improve adjacent real estate values.

Street trees come in many shapes, sizes, colors, and textures, and can be used in a variety of ways in groups and as individual specimens to reflect a city's natural setting, create focal points, establish visual rhythm, and provide needed shade in areas with excessive pavement.

Site characteristics present in each of the three corridor segments, however, can significantly impact the ability to accommodate street trees as part of this project. Narrow rights-of-way and sidewalks can limit tree placement and form. Overhead utility lines and underground utility pipes present additional challenges to locating street trees. Additionally, expansive areas of shallow basalt bedrock severely impact the feasibility of installing new street trees without extensive and costly excavation, surface preparation, and drainage accommodations







in some portions of the corridor planning area.

Nevertheless, St. Helens benefits from an extensive city-wide tree canopy cover, and dozens of existing street trees planted at sidewalk grade are observed throughout the Houlton and Olde Towne segments. An analysis of where basalt bedrock is most shallow could provide insight into feasible areas to plant. Additionally, "building up" planting areas in raised planters could provide additional opportunity to implement an effective street tree program. Special attention should be given to potential "nuissances" created by certain species such as excessive leaf litter, or berries or fruit that either stain concrete or other surfaces or attract unwelcome species of birds.

Some species of trees suitable for urban environments may have rooting systems that are shallower than most, making them potential candidates for planting in areas with shallow bedrock. Since shallow-rooting trees are more likely to heave and crack sidewalks than deeper-rooted trees, however, ample planting area must be given to allow root growth, increases in trunk diameter, and root crown flare.

PLANTING AREAS

Planting areas along streetscape corridors is an effective, attractive way to enhance the pedestrian experience, improve adjacent property values, and indicate a sense of civic care for a neighborhood. Some planting areas can manage stormwater runoff, as described in the last section of this document.

Like street trees, planting areas can take many forms. They can exist at-grade, visually breaking up the paving area and providing focal points of interest, or they can be raised above the grade of the sidewalk in planters to elevate the green to the pedestrian's eye and help to create distinct spaces. They can be containerized, either in pots on or adjacent to sidewalks as the City has done in the Houlton area in recent years, or elevated in planter baskets that hang off of other steetscape elements like light posts or wayfinding signs. Plantings can also be located in roadway medians at busy highway intersections or crosswalks to help with traffic calming and pedestrian safety. Median planting/landscaping on US 30 was identified as a potential option in the St. Helens Transportation System Plan (2011).

As with installing street trees, certain site conditions in each of the corridor segments can limit the ability to implement planting areas. Shallow basalt bedrock, vehicular sight lines, and narrow rights-of-way all have an impact on where and how planting areas might be located.

CIVIC IDENTITY & WAYFINDING

Cities thrive when they capitalize on their unique strengths. The manner in which these strengths are represented -- either through gateway monuments, public art, or wayfinding signs -- can strengthen civic identity which gives added value to a downtown area beyond the physical elements that make up that area. A successful civic identity and wayfinding system enhances the visitor's relationship to those downtown areas, resulting in frequent visitation, loyalty, and an ongoing interest in the vitality of that downtown.

GATEWAY MONUMENTS

Gateway monuments are elements that mark the entrance to a district or neighborhood. They are typically larger in scale, are highly visible, and can take many different forms. Typical gateway monuments range from arched gateway markers that span over the roadway, to sculptural or iconic elements, to expansive landscape areas that visitors pass through. They are typically more sculptural in form and function at a district or neighborhood scale.

Gateway markers should be located at entry points to districts or neighborhoods or at transitions between one roadway or land use type to another. They should be highly visible and attract attention, and integrate culturally relevant elements that are appropriate for the area.

Appropriate locations for gateway monuments include the transition between the US 30 and Houlton areas, and at the intersection of Columbia Boulevard and St. Helens Street. The two basalt rock outcrops create natural kinds of gateways, and present opportunities for enhancements that mark the transition between the Houlton and Olde Towne project areas.


MAIN CITY PARK
CITY OF
GRESHAM


Welcome to
Grove Park

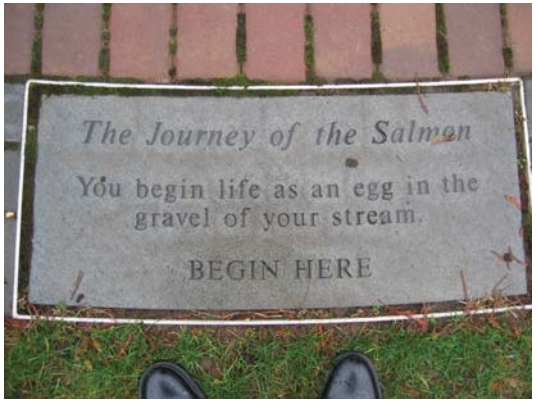
SIGNAGE

Streetscape signage can be an effective tool in unifying the character of a neighborhood or district. They can mark entry points or neighborhood edges, give directions to destinations, include maps and directories, and include relevant neighborhood information. Streetscape signage types include neighborhood orientation signs, directions signs, and interpretive signs, and can significantly enhance a visitor's experience in a downtown area.

Neighborhood orientation signs have a distinctive design and offer neighborhood information including maps and directories that guide people to various neighborhood amenities such as historic buildings and sites, cultural institutions, shopping centers, recreation facilities, and public services such as parking and rest rooms.

Directional signs can include typical street signs and wayfinding signs, and help orient pedestrians to significant destinations. They should include local destination names and directional arrows or markers, and often have maps that clearly show the current location. Furthermore, they should maintain a simple, and coordinated design, be legible from a distance, and reflect the character of the surrounding neighborhood or district.

Interpretive signs provide information about



nearby significant cultural, natural, historical, or architectural features or icons. They can be made of many different materials including metal, wood, stone, or acrylic, can be sculptural in form, be a traditional sign, or be installed flush with the paving surface. They should be unique and eye-catching, and capture the character and spirit of the surrounding neighborhood or district.

Streetscape signage elements are appropriate throughout each of the St. Helens corridor segment areas. They should be located at key intersections and special opportunity areas outside of the path of travel (page 52). They should be easy to see from a traveling vehicle but also are intended to be viewed by pedestrians in close proximity. Wayfinding signs could also be used at strategic locations to direct people towards destinations both within and outside the corridor planning area, including Olde Towne, multi-use trails along the Columbia River, or elsewhere.

BANNERS

Banners can enhance civic identity by adding festiveness and variety to commercial and arterial roadways. They can help distinguish specific neighborhoods, promote cultural awareness, or provide information on civic events.

Banners are typically hung on street lights or utility poles, but can also be mounted on freestanding poles. They should be made of durable, UV-resistant materials such as vinyl or acrylic fabric, though they can also be made out of metal if there is a desire for a customized or artistic appearance.

Banners currently exist along the US 30, Houlton, and Olde Towne corridor segments, and could be further enhanced with additional locations and/or a coordinated design/layout. New banners should be made of a durable material that will not easily damage or wear to prevent frequent replacement.

PUBLIC ART

Public art can be a significant streetscape component by enhancing civic identity at multiple scales. At the larger scale, it can help to unify an entire district or neighborhood. At the pedestrian scale, it can add aesthetic interest and also functional benefits if incorporated into pedestrian furnishings such as seating or lighting.

Appropriate locations for public art exist in a number of locations and capacities in each corridor segment. Depending on the art piece that is proposed, a suitable site should be proposed and analyzed for its feasibility. Along US 30, public art could be located at key intersections, and be of a larger scale that is highly visible and consistent with the scale of the highway. Similarly, throughout the Houlton and Olde Towne areas, opportunities for public art exist at key intersections and could reflect the scale and spirit of each neighborhood. Public art could also exist at a smaller, pedestrian scale, either in distinct, key locations such as at a gateway location at the US 30 / Houlton area border, or as a series of pieces evenly "dispersed" throughout a corridor segment.

COMMUNITY KIOSKS

Kiosks can be attractive, useful streetscape elements that provide relevant community-related information such as maps, historical information, bulletin boards and event announcements. They can also be combined with gateway monumentation or signage to create a functional and attractive streetscape element.

Kiosks can be artistic, or expressive of an area's unique character or predominant architectural style. They should be located in the furnishing zone, with no more than two at any one intersection, and can also be located in special opportunity areas such as plazas or other community gathering spaces (page 52). Additionally, the scale of the kiosk should be consistent with the space in which it is situated.

Appropriate locations within the Houlton and Olde Towne project areas include key intersections or special opportunity areas that are easily accessed by pedestrians or bicyclists (page 52). The corner at the post office, which currently acts as a community news and gathering place, is a prime location for a community kiosk.

TRANSIT SHELTERS

Transit shelters provide protection against the elements for waiting transit riders, and help to identify and give cohesion to a city/region's transit system. Shelters can be simple, shatter-resistant glass structures, or can be design in a sculptural, expressive manner that reflects the unique character of a city or site.

The Columbia County transit provider (CC Rider) provides limited transit service to St. Helens and has policies related to the provision of transit shelters.

SPECIAL OPPORTUNITY AREAS

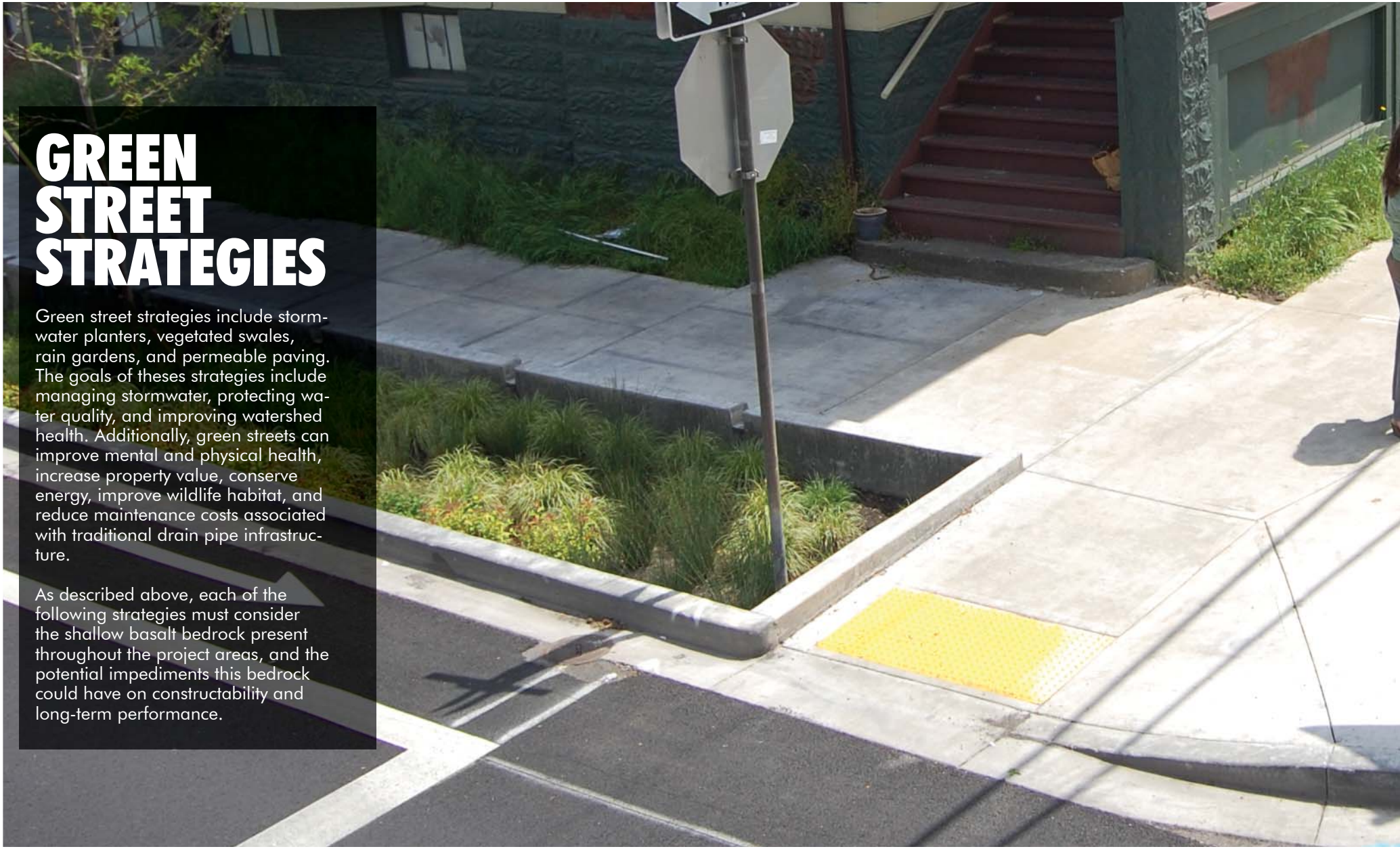
Often times a site adjacent to or within a streetscape corridor with unique characteristics presents special opportunities for developing it into an effective community resource. These special opportunity areas can be developed in a number of different ways, and can include gateway monumentation, sidewalk cafe seating areas, small plazas and/or park spaces, informal gathering spaces, or landscape art installations.

Special opportunity areas should be accessible to pedestrians, and should be located primarily along the Houlton or Olde Towne corridor areas. There are a number of locations throughout these project areas that present unique opportunities for special consideration, and may include:

- The US 30 / St. Helens Street / Columbia Blvd intersection
- The intersection of Columbia Blvd and St. Helens Street
- The vacant site at 14th Street between St. Helens and Columbia
- The corner at the post office, which currently acts as a community news and gathering place
- The open lawn areas adjacent to the S 9th Street / Columbia Blvd and S 2nd Street / Columbia Blvd intersections
- The “top” of the basalt outcrop running

along S 1st street
- The gravel parking lot at the “end” of Columbia Blvd at S 1st Street

In addition to these potential special opportunity areas, on-street parking spaces throughout the Houlton and Olde Towne project areas provide many opportunities for creating Parklets. Parklets are small spaces, typically located within designated on-street parking stalls, that serve as an extension of the sidewalk to provide amenities and a green space for people using the street. Parklets can also accommodate other uses such as bicycle parking, art, or some other visual amenity. Though Parklets should be constructed of durable materials and thus may feel permanent, they should be designed and constructed in a way that can be broken down quickly for snow removal or emergency access, and are therefore temporary improvements.



GREEN STREET STRATEGIES

Green street strategies include stormwater planters, vegetated swales, rain gardens, and permeable paving. The goals of theses strategies include managing stormwater, protecting water quality, and improving watershed health. Additionally, green streets can improve mental and physical health, increase property value, conserve energy, improve wildlife habitat, and reduce maintenance costs associated with traditional drain pipe infrastructure.

As described above, each of the following strategies must consider the shallow basalt bedrock present throughout the project areas, and the potential impediments this bedrock could have on constructability and long-term performance.

STORMWATER PLANTERS

Stormwater planters typically have vertical walls, and can be located between the curb and sidewalk or in curb extensions. They can either be constructed with "open" bottoms to allow stormwater to infiltrate into native soil ("infiltration planters"), or be lined with an impervious bottom and constructed as a container to temporarily store stormwater to filter sediments and pollutants down through the planter ("flow through planters"). Site conditions will dictate which type of stormwater planter is appropriate.

VEGETATED SWALES

Vegetated swales are gently sloping, linear depressions planted with dense vegetation that treat stormwater runoff from adjacent roadways, sidewalks, and other impermeable surfaces. They typically accept runoff and allow it to infiltrate, but like stormwater planters, where soils drain poorly, slopes are too steep, or space is confined, swales can be lined and convey runoff to another, different type of drainage facility. Due to their bermed, gently sloping sides, swales can look like typical landscaped areas.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RAIN GARDENS & STORMWATER BASINS

Where space permits, rain gardens and stormwater basins provide opportunities to treat stormwater in larger depressions, and can offer opportunities to incorporate other materials such as boulders or large cobbles, small pedestrian foot bridges, art or other interpretive elements to further enhance these facilities. These larger stormwater features typically capture larger volumes of stormwater runoff, and provide opportunities for education and public awareness about their significance.


SILVER LINING
JEWELRY & LOA

PERMEABLE PAVEMENT

Permeable (or "pervious") pavement allows stormwater to infiltrate directly through the paving medium into a reservoir base of crushed rock and eventually into native soil below. Permeable pavement types include pervious asphalt, pervious concrete, and permeable concrete unit pavers. These pervious materials resemble conventional pavement materials, but contain more air space to allow stormwater to infiltrate through, and are typically thicker as a result to support the same loads.

Permeable pavement is ideal in low traffic areas such as parking areas, highway shoulders, roadway medians, emergency access roads, and patios. Pervious concrete is best used in sidewalks, however, permeable concrete unit pavers should be avoided since they do not meet ADA requirements. Permeable pavement should not be used withing 4' of bedrock or a water table's high point, within 100' of a well, near building foundations, on slopes that exceed 5%, or within close proximity to contaminant sources such as gas stations.