Kent Valley Regional Trails Opportunity Study

2020

ACKNOWLEDGEMENTS

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alta
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INTRODUCTION

THE INTERURBAN TRAIL

Purpose

This trail activation framework, organized into typologies described later in this document, applies to the Interurban and Green River Trails. The Kent Valley is one of the largest concentrations of commercial and light industrial activity in the Puget Sound region and experiences a large influx of employees each day. The Interurban and Green River Trails provide different experiences for trail users through the Kent Valley.

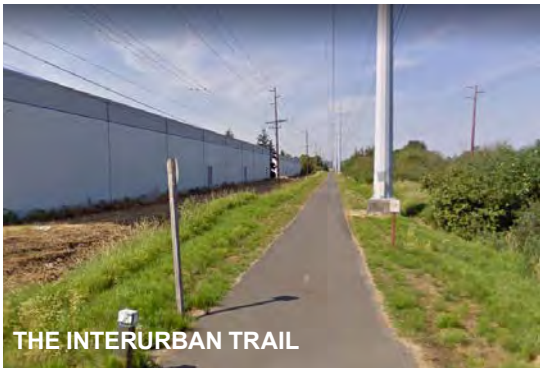
While King County Parks & Recreation owns and operates the Interurban Trail in partnership with the City of Kent, and the City of Kent owns and operates the Green River Trail through the Kent Valley, each jurisdiction through which the trails traverse has opportunities to influence the design, character, and activation of the trails themselves directly or indirectly. For example, jurisdictions can implement design standards for development adjacent to trails that can enhance the trail user's experience indirectly, through artwork, landscaping, lighting, windows on sides of buildings adjacent to the trail, and the incorporation of trail amenities. Jurisdictions can also influence trail activation in more direct ways, such as through partnerships with King County at major entrances or at locations where trails cross major roadways, referred to in this document as gateways. These enhancements raise the profiles of the existing trails and help to brand the trail as a community asset.

This Kent Valley Regional Trails Opportunity Study provides a framework for how private development adjacent to the trail, combined with strategic public investments, can jointly enhance the user experience for users of both trails. In order to assess a large area, roughly between the City of Tukwila and the City of Pacific, the Study creates a set of typologies, described further in Typologies Section to follow, that provides a framework for how community and public investments can jointly enhance the user experience along the Interurban and Green River Trails through the Kent Valley between Tukwila and Pacific. It is important to note that this document is a guide that provides a framework to assist with discussions between jurisdictions, King County Parks and Recreation, and businesses with frontages along the trails. Elements within this strategy may be codified by jurisdictions, if desired, but can also be used as future improvements and capital investments in the trails are made.

The primary objective of the opportunity study is to help coordinate how and where improvements, design enhancements, and amenities can occur, taking into consideration adjacent characteristics and the most practical activation strategies that respond to those characteristics.


THE GREEN RIVER TRAIL


THE GREEN RIVER TRAIL


THE INTERURBAN TRAIL


THE GREEN RIVER TRAIL

TRAIL CHARACTERISTICS

Interurban Trail

The Interurban Trail runs parallel to the BNSF and Union Pacific railroad, and its general conditions include the railroad on the east side of the trail and commercial and industrial activity on the west side of the trail. The existing trail varies from 8 feet to 10 feet wide and is optimal for commuters or faster riders due to its more direct configuration and it's close proximity to commercial and industrial activity as well as it's proximity to the downtown areas of Kent and Auburn. Both downtown Kent and Auburn have Sounder Commuter Rail stops and higher concentrations of bus service routes creating opportunities for mode transfers.

The Interurban Trail's adjacent characteristics are currently largely defined by commercial and industrial activity backing on the trail with little to no integration with the trail. This has led to a user experience that generally lacks any significant visual cues that would lead to the feeling that there are eyes on the trail, a concept known as Crime Prevention Through Environmental Design (CPTED). Additionally, points where the Interurban Trail crosses major arterials are generally void of any enhancements that would draw passer-by attention to the trail. Public and private sector design enhancements present an opportunity to raise the profile of the trail as a local and regional asset that reflects the characteristics of the communities it traverses while also enhancing the perception of safety.

Green River Trail

The Green River Trail takes its name from the Green River which it meanders adjacent to. The Green River Trail is predominantly situated on the top of the Army Corps of Engineers levees and follows the river between Tukwila and the southern portion of Kent. The Puget Power Trail serves as a connector between the Green River Trail and the Interurban Trail. Frager Road runs parallel to the Green River, on the west side of the river from SR 516 north, opposite the Green River Trail. Frager Road is also used by cyclists as another option to the Green River Trail. Additionally, the Green River Trail runs near and crosses the Interurban Trail in several places.

The meandering nature of the trail, and its proximity to the river, lead to an experience that is significantly more natural than the Interurban Trail, although some sections of the trail have commercial and industrial activity on one side. Several parks and open spaces lie adjacent to the trail, creating a more peaceful experience.

Despite the predominantly natural characteristics of the Green River Trail, some of the same opportunities for commercial and industrial activation also exist. Additionally, there are opportunities to raise the profile of the trail through targeted gateways and ways to enhance user experience through the addition of viewpoints, wayfinding signage, and educational signage.

THE INTERURBAN TRAIL

Ongoing or Recently Completed Planning Efforts

- Rally the Valley
- 2016 Kent Park & Open Space Plan
- Kent Valley Loop Trail Master Plan
- 2016 King County Open Space Plan
- 2016 King County Regional Trails Needs Report
- Art Master Plan for King County Trails
- Transportation Master Plan, 2020

Planning Context

The Kent Valley is home to one of the largest concentrations of industrial and commercial activity in the Puget Sound region. These areas have generally been used for industrial warehousing and some light manufacturing but are currently seeing an influx of aerospace activities and tech operations. The cities of Kent, Auburn, and Renton are currently conducting the Rally the Valley land use project which will result in changes to land use and zoning that reflect the changing dynamics. Additional projects completed by the City of Kent pertaining to the trails include the 2016 Kent Park & Open Space Plan and the Kent Valley Loop Trail Master Plan.

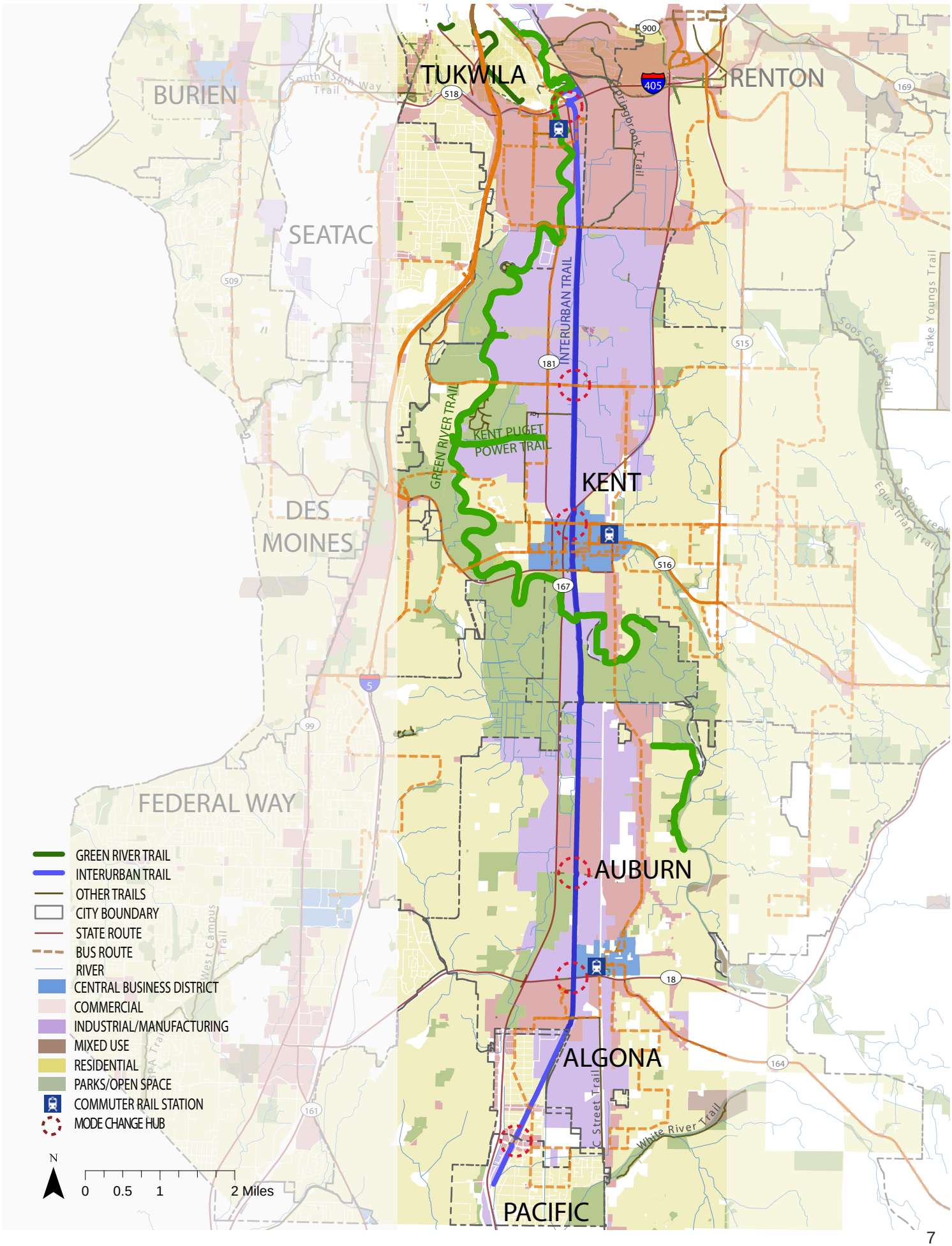
While land use is governed by adjacent jurisdictions, the Green River Trail is owned by the City of Kent and the Interurban Trail is owned by King County Parks. King County Parks has completed several planning efforts that guide future improvements to the Interurban and Green River Trails, including the 2016 King County Open Space Plan, the 2016 King County Regional Trails Needs Report, and the Arts Master Plan for King County Trails.

Many of these documents provide an in-depth assessment of trail needs, cross-sections, amenities, and design standards. This activation framework does not supercede these planning efforts but rather serves as a coordination tool for the application of amenities and standards defined in these plans.

Planning Context Map

The planning Context Map on the adjacent page depicts the generalized land use context in the Kent Valley between Tukwila and Pacific. While land use is not the determining factor for the application of activation strategies, assessing the land use framework helps provide an understanding of the general characteristics along the trail corridors which is in turn used to understand the types of strategies that may be appropriate to enhance those existing trail characteristics.

The Planning Context Map also depicts major arterials, transit routes, and commuter rail stations. The use of trails for commuting is increasing in the Puget Sound region and is one key component of a multimodal network. Areas identified as multimodal hubs in the planning context map present opportunities for enhancements that improve the multimodal network by providing efficient, safe, and well-signed connections for trail users to transfer to transit. In the future, these hubs can serve as an area where mode shifts between bikes, e-bikes, scooters, transit buses, and trains can be facilitated through the creation of a mobility hub.


TUKWILA
RENTON
BURIEN
SEATAC
DES MOINES
KENT
AUBURN
ALGONA
PACIFIC
FEDERAL WAY
INTERURBAN TRAIL
GREEN RIVER TRAIL
KENT PUGET POWER TRAIL
Springbrook Trail
Soos Creek Trail
Lake Youngs Trail
Equestrian Trail
C Street Trail
White River Trail
GREEN RIVER TRAIL
INTERURBAN TRAIL
OTHER TRAILS
CITY BOUNDARY
STATE ROUTE
BUS ROUTE
RIVER
CENTRAL BUSINESS DISTRICT
COMMERCIAL
INDUSTRIAL/MANUFACTURING
MIXED USE
RESIDENTIAL
PARKS/OPEN SPACE
COMMUTER RAIL STATION
MODE CHANGE HUB
N
0
0.5
1
2 Miles

THE GREEN RIVER TRAIL

TYPOLOGIES

Definition & Purpose

The typologies contained within this section are a tool for the application of various activation strategies based on adjacent characteristics across the Interurban and Green River Trails. For example, typologies are meant to describe the different characteristics that a user can experience as they utilize the trails and which activation strategies and amenities are most appropriate based on that experience. They are flexible, intended to be widely applied, and are not comprehensive in addressing every potential characteristic that one might experience along the trail.

The typologies developed and described in more detail within this section include:

A **Activity Hubs:** Highest population and employment concentrations

L **Long Stretch:** Portions of the trail with long distances between entry and exit points with minimal impediments; likely used for direct route travel between destinations

G **Major Gateways:** Trail crossings at arterial locations with a high potential to enhance trail visibility and serve as multi-modal hubs by leveraging transit access

g **Minor Gateways:** Local roadway crossings where safe crossings and minor gateways are the primary objective

R **Residential:** Linkages between adjacent neighborhoods and the trail for accessibility

N **Natural:** Open space areas leading to a more recreational and leisurely experience

Development

The typologies were developed using a project steering committee comprised of staff from Kent, Pacific, King County Metro, and King County Parks as well as a local cycling advocate. While the intent of the typologies are not to correspond directly with adjacent land use, the assessment began by utilizing the planning context map to develop generalized conditions which are largely associated with land use characteristics.

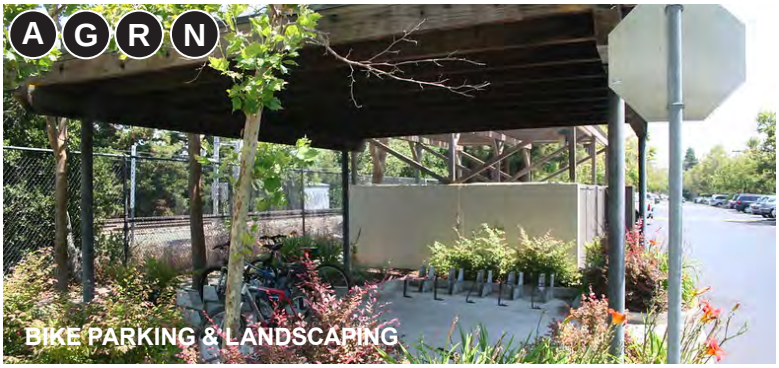
Discussions occurred on the different characteristics associated with each. For example, the Interurban Trail through industrial areas was predominantly defined by buildings backing to the trail. These long stretches of the trail had few crossings or impediments making them a great pathway for commuters or those looking for a direct route. Visually they are defined by a lack of aesthetic appeal due to many buildings backing the trail. In some areas, this can create the perception of isolation and lack of safety which might deter some users. Strategies in this situation would minimize amenities that create a more passive experience, such as benches and activity plazas, and would instead focus on ways to leverage adjacent development to enhance the experience by incorporating artwork, windows, and lighting in areas adjacent to the trail.

These types of discussions occurred with the different trail characteristics until the six typologies described above were developed. Strategies on how the public and private sectors might contribute to activation were assessed based on a prioritized application approach.

Trail Amenities

The trail amenity images represent design features and elements that may be incorporated into the trail design along the corridor. In general, the amenities correspond to specific trail typologies as is indicated with the key to the right.

- **A** Activity Hubs
- **L** Long Stretch
- **G** Major Gateways
- **g** Minor Gateways
- **R** Residential
- **N** Natural


A G R N
BIKE PARKING & LANDSCAPING


A G R L
PUBLIC ART - MURAL


A G R N
SEATING AREA


A G R N
SEATING AREA, LANDSCAPING, & VERTICAL ELEMENTS


A L R N
BIKE REPAIR STATION


A G R
BOLLARD LIGHT


A G R
SEATING & LANDSCAPING


A G g R N
BIKE PARKING


A G R N
PUBLIC ART


A G R N
PUBLIC ART


A G R N
SEATING AREA, BIKE RACKS, & WAYFINDING SIGNAGE


A L G R N
PAINTED PATH


A
MATERIALS & SEATING AREA

TRAIL SIDE SEATING, BIKE PARKING, LANDSCAPING, BALCONIES PROVIDING “EYES ON THE STREET”

TRAIL SIDE ACTIVITIES

ACTIVITY HUB

Activity Hubs are areas with a larger concentration of employees and residential populations, such as near the downtown areas of Kent and Auburn. These locations have the opportunity to jointly serve as a public space, particularly where adjacent public parks are present. Activity Hubs could incorporate trail-oriented development, with businesses and establishments adjacent to the trail providing benches and outside space along the trail frontage. Public investments might include larger gateway features, wayfinding along the trail that reflects the local character and directs trail users to downtown attractions, outdoor gyms, and other activities that draw people near the trail. Rest stops and lighting would also be the most appropriate in these locations.

TRAIL SIDE BIKE PARKING

MOVEABLE SEATING

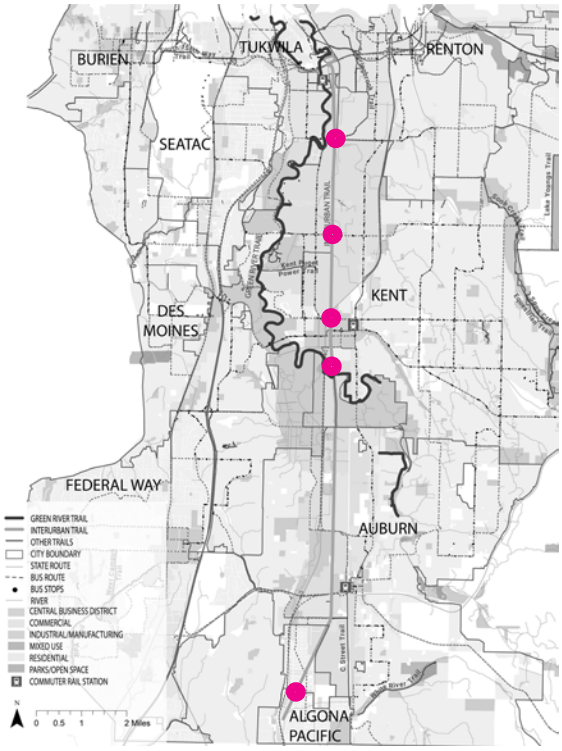
OUTDOOR GYM EQUIPMENT

HARDSCAPE PLAZA WITH SEATING AND GATHERING SPACE


TREES TO PROVIDE SHADE

Key Map

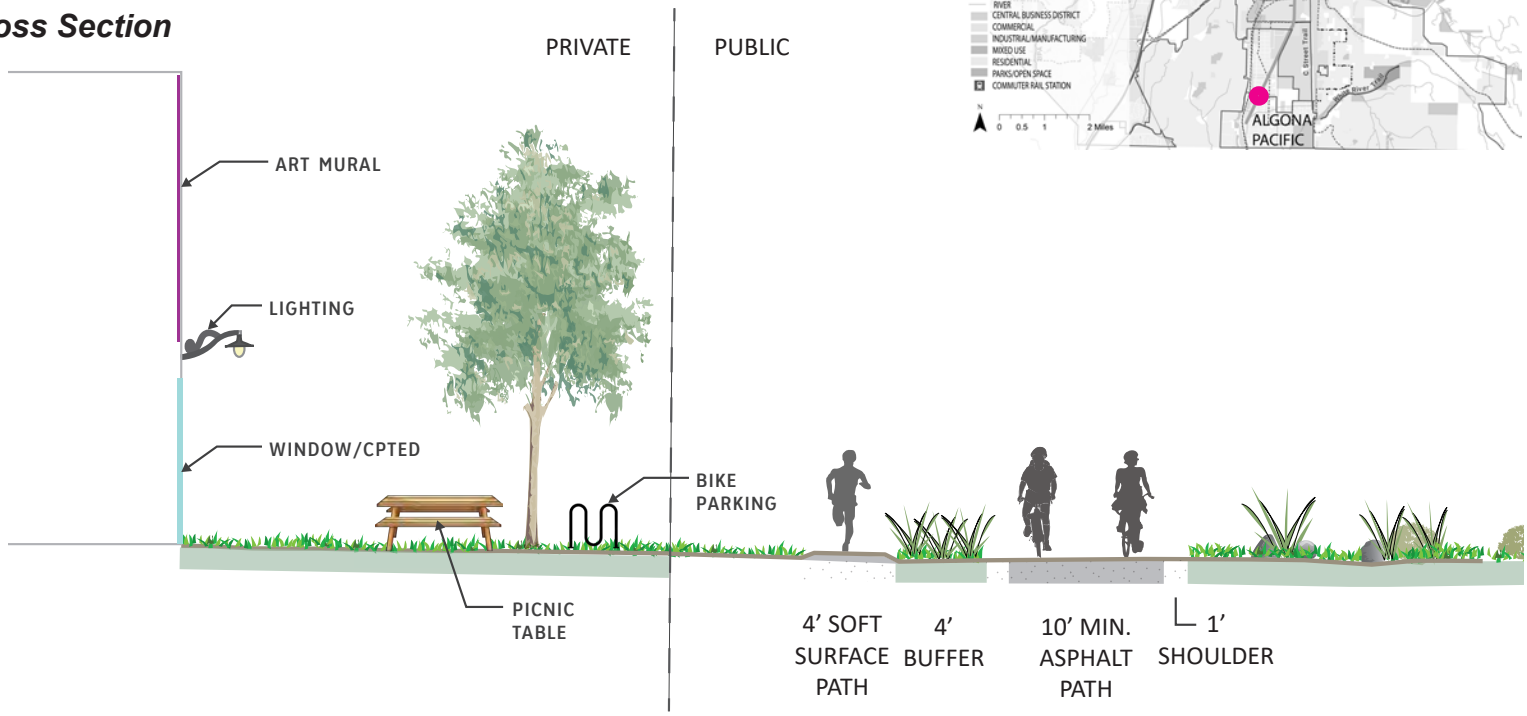
Hub/Activity Center



Potential Amenities

- Lighting
- Public Art
- Gateways
- Drinking Fountains
- Bike Repair Station
- Wayfinding
- Bike Share Parking
- Restrooms

Cross Section



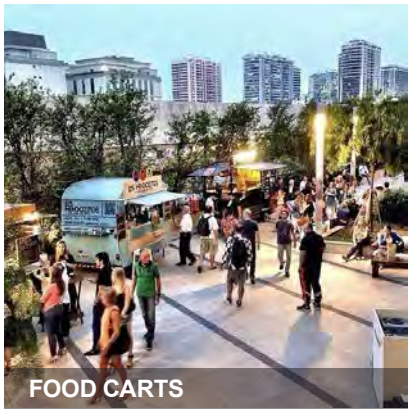
(WIDER BUFFER POSSIBLE ON GREEN RIVER TRAIL)

Private Stewardship

- Required Trail Connection
- Spillover Lighting
- Amenity Maintenance Partnership
- Adopt a Trail
- Amenities at Trail Side
- Tree and Landscape Plantings/Maintenance

Public Leadership

- Trail-Oriented Development Standards
- Wall Art Incentive
- Public/Private Partnerships for Large Improvements
- Trail Amenity Menu for Developers
- Trail Lighting
- Trail Branding
- CPTED Design Standards
- Trail-adjacent Landscaping Standards
- Public Art Program Site
- Wayfinding & Signage
- Soft Surface Secondary Trail
- Trail-adjacent Park Improvements


FOOD CARTS

REST AREA WITH PAVILION FOR SHADE, PICNIC TABLES, TRASH RECEPTACLES

EDUCATIONAL SIGNAGE

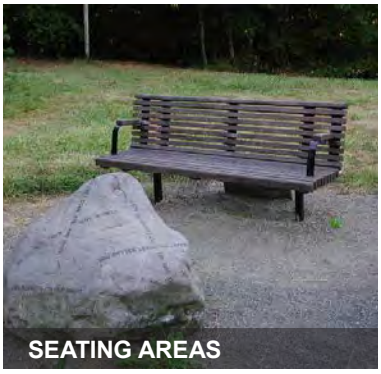
PICNIC AREAS

TRAIL NETWORK KIOSK

NATURAL

While predominantly located along the Green River Trail, both trails have areas with a natural setting. These areas should reflect a more leisurely experience, leveraging natural elements such as trees, native riparian plantings and pollinator meadows. On both the Green River and Interurban Trails, educational wayfinding signage would provide information on natural elements, such as flora and fauna, along the trail route. Small viewpoints and rest plazas can provide amenities such as shade, seating, drinking fountains, bike repair stations, and trail network maps, among others. Development adjacent to trails could incorporate natural elements within landscaping along the property line, such as trees and shrubs, to contribute to the natural feel.

POLLINATOR MEADOWS



SEATING AREAS

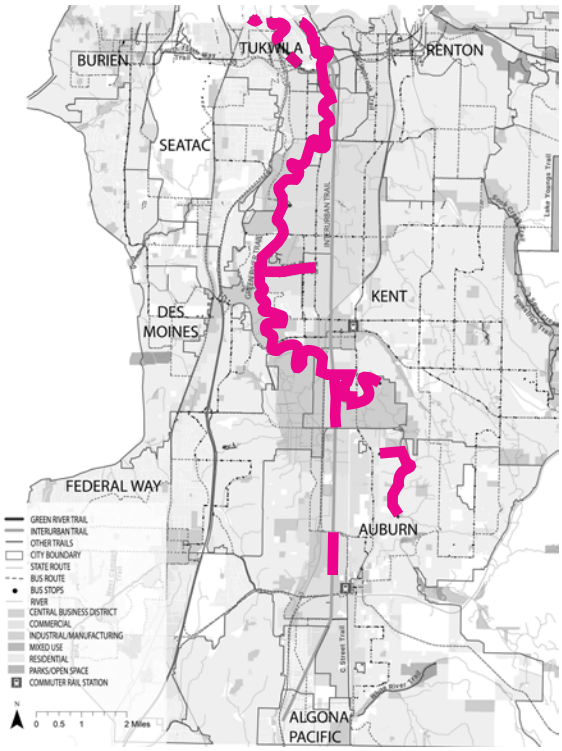
INFORMATION AND EDUCATIONAL WAYFINDING KIOSKS

REST AREA WITH SEATING

TRAIL SIDE PLAZA, BIKE REPAIR STATION, WAYFINDING

Key Map

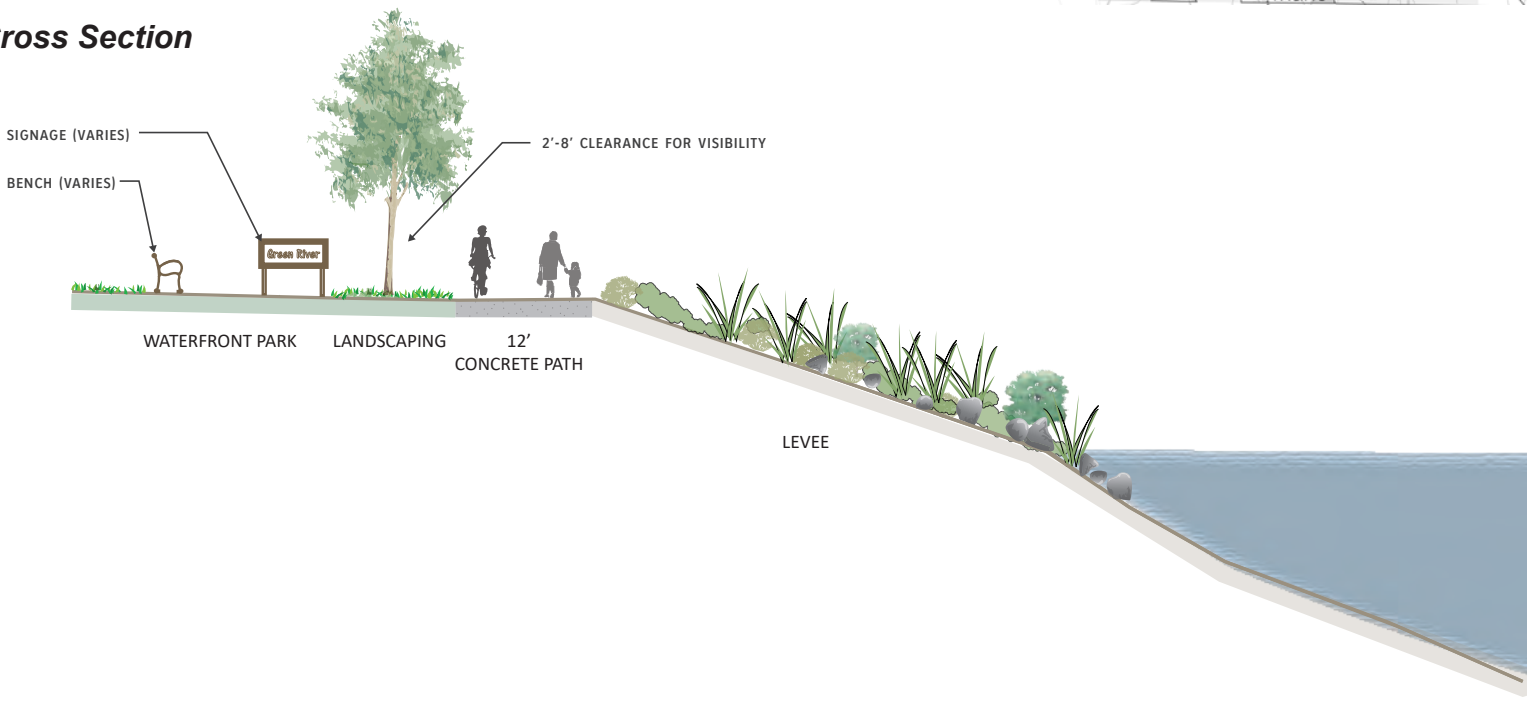
Natural



Potential Amenities

- Landscaping
- Educational Signage
- Viewpoints

Cross Section



Private Stewardship

- Voluntary Trail Connections
- Employee Space Adjacent to Trail
- Educational Wayfinding on Business Facilities
- Public Art
- Lighting on Buildings

Public Leadership

- CPTED Design Standards
- Trail-adjacent Landscaping Standards
- Wall Art Incentives
- Low-Maintenance Landscaping
- Viewpoints and Sporadic Amenities
- Wayfinding & Signage
- Trail Branding

VIEWPOINTS, SEATING

MURALS AND TREES

UNDERPASS LIGHTING

LONG STRETCH

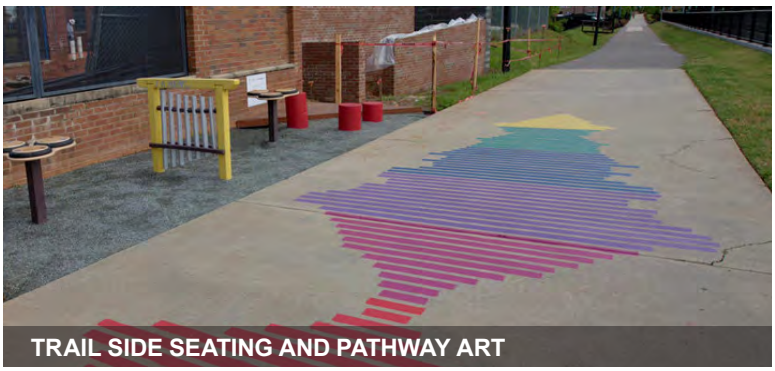
Long Stretch areas are primarily located in industrial and commercial areas where existing buildings back the trail. These stretches serve as a direct route and, with minimal impediments and crossings, allow users to travel at higher speeds. Due to buildings backing to the trail, some users may be deterred from use due to visibility and safety concerns. Crime Prevention Through Environmental Design (CPTED) principles are the primary activation strategy for these areas and would include murals or artwork and flood lights or spill-over lighting on the sides of buildings that are adjacent to the trail. Windows and faux window treatments, gates that provide connectivity between the trail and the adjacent business, and simple trail artwork that is created and supported by adjacent businesses and the local community. Other trail amenities would be kept to a minimum, with occasional rest points and wayfinding that directs users to activity hubs, transit, and other attractions or points of interest.

WAYFINDING ELEMENTS

SIDE OF BUILDING MURALS

PUBLIC ARTWORK AND LIGHTING

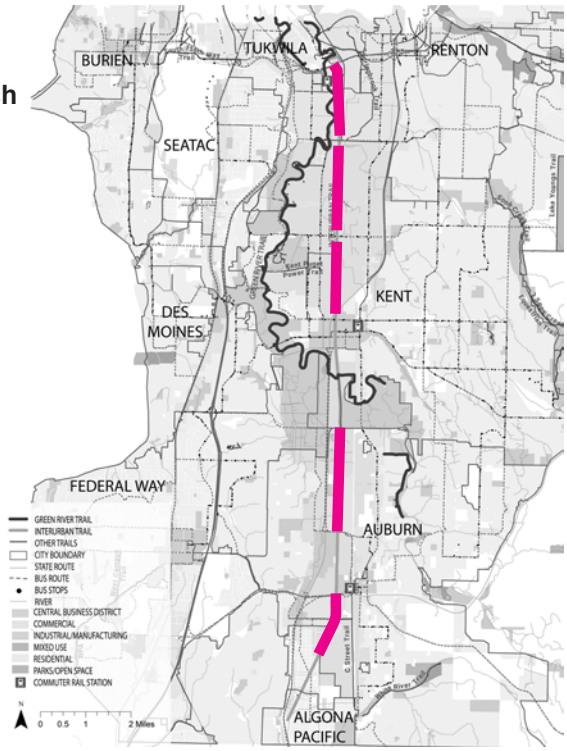
PUBLIC ARTWORK AND REST POINTS



TRAIL SIDE SEATING AND PATHWAY ART

Key Map

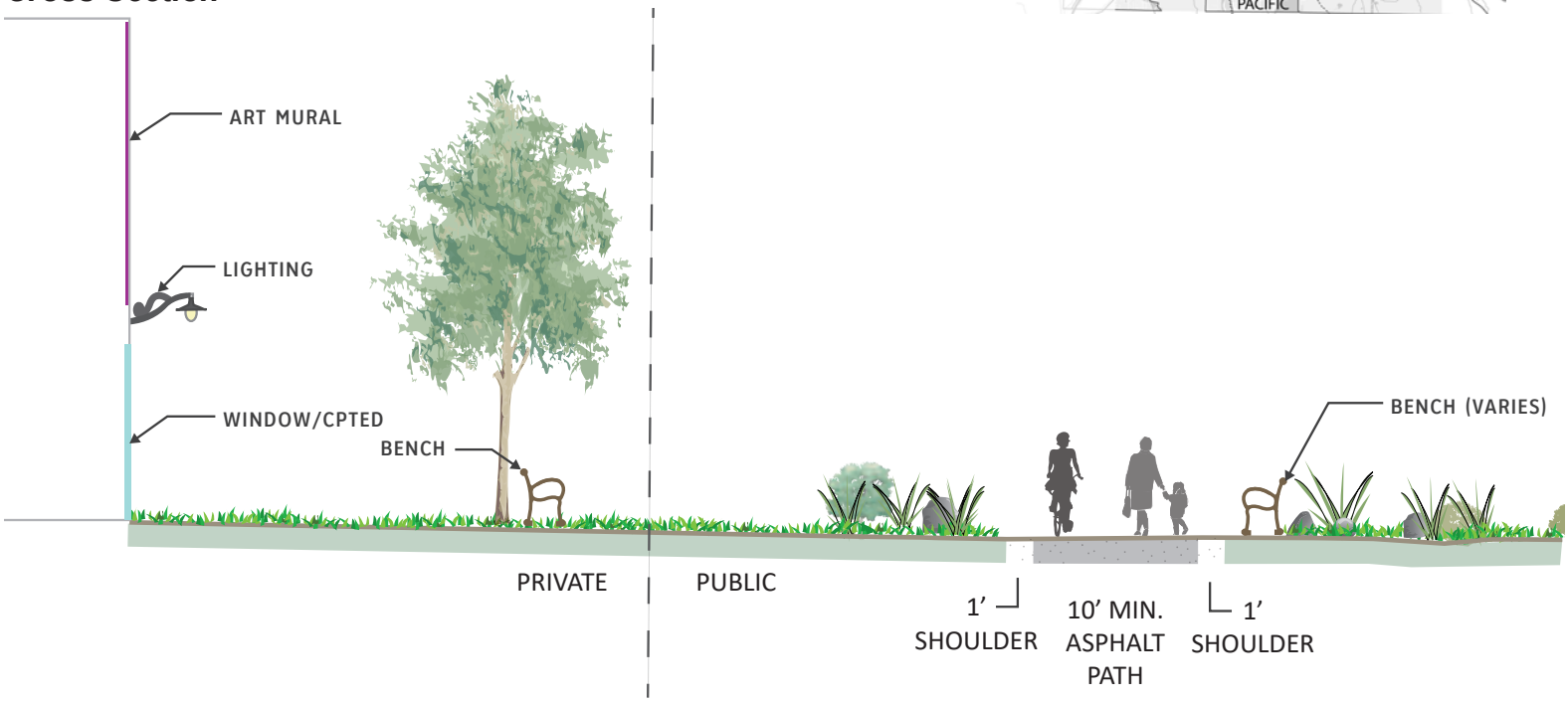
Long Stretch



Potential Amenities

- Private Investment
- Murals
- Art on Trail
- Benches
- Split Rail Fence
- Educational Signage
- Wayfinding

Cross Section

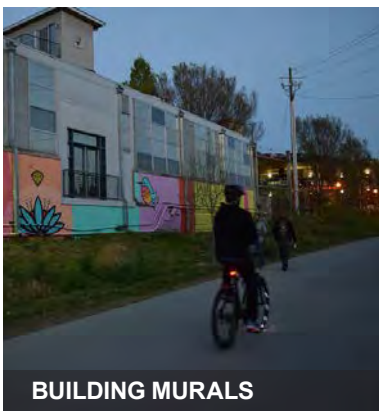


Private Stewardship

- Voluntary Trail Connections
- Pubic Art
- Educational Wayfinding on Business Operations
- Employee Space Adjacent to Trail
- Private Spillover Lighting
- Trail Side Amenities
- Amenity Maintenance Partnership
- Adopt a Trail

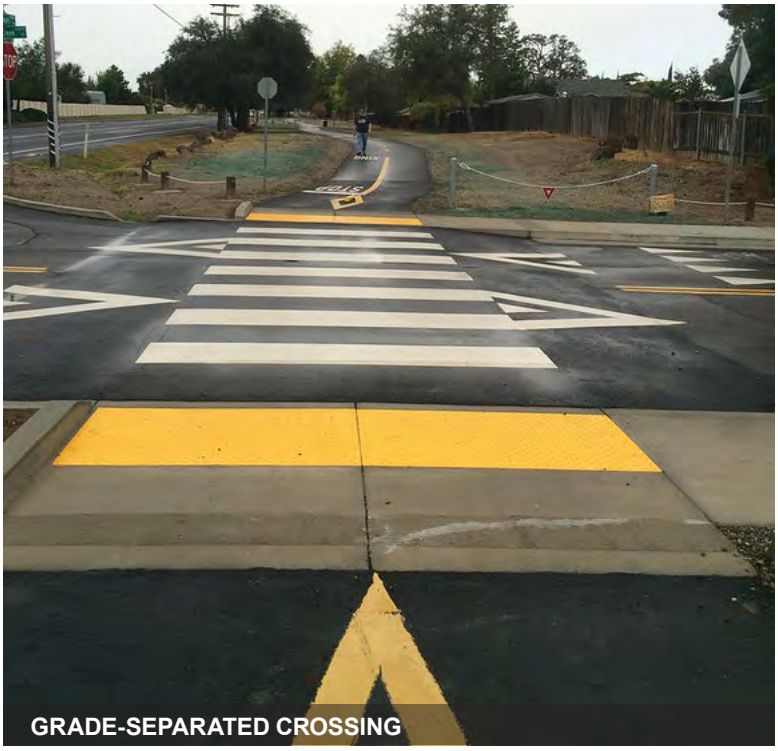
Public Leadership

- CPTED Design Standards
- Trail Amenity Menu for Developers
- Amenity Maintenance Partnerships
- Minimal Amenity Investment
- Wall Art Program Incentives
- Wayfinding and Signage



BUILDING MURALS

SMALL TRAILHEAD PLAZA



GRADE-SEPARATED CROSSING

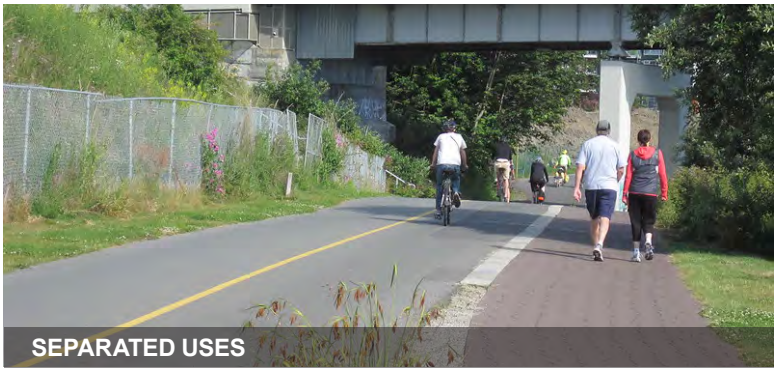
PUBLIC ART

MAJOR GATEWAY

Major Gateways are highly visible crossings at arterial roadways. Major Gateways are opportunities to both enhance the safety of users crossing arterial roadways while also raising the profile of the trail to those passing by on the roadway itself. Major gateways also provide opportunities for multi-modal hubs by integrating adjacent bus stops at or near trail access points, potentially through small plazas with seating, trash receptacles, and other amenities such as a drinking fountain or bike repair station. Major Gateways might include a protected median, artistic or highly-visible crossings, potential use of Pedestrian Hybrid Beacon (PHB) or RRFBs, vertical design elements that contain trail signage, enhanced landscaping, and other elements that brand the trail and generate interest. Grade-separated crossings could include wall or bridge art along with trail signage. FHWA does not allow artistic crossings of highways.

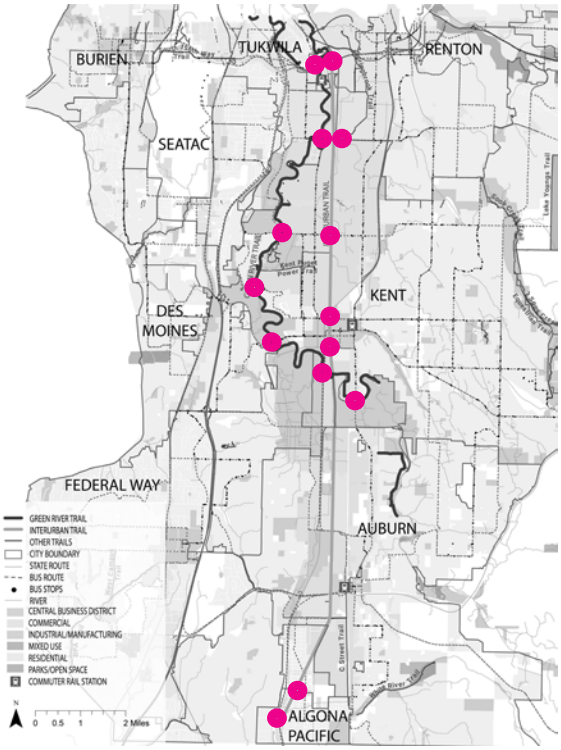
GATEWAY PLAZA AMENITIES

TRAIL BRANDING AND SIGNAGE



Key Map

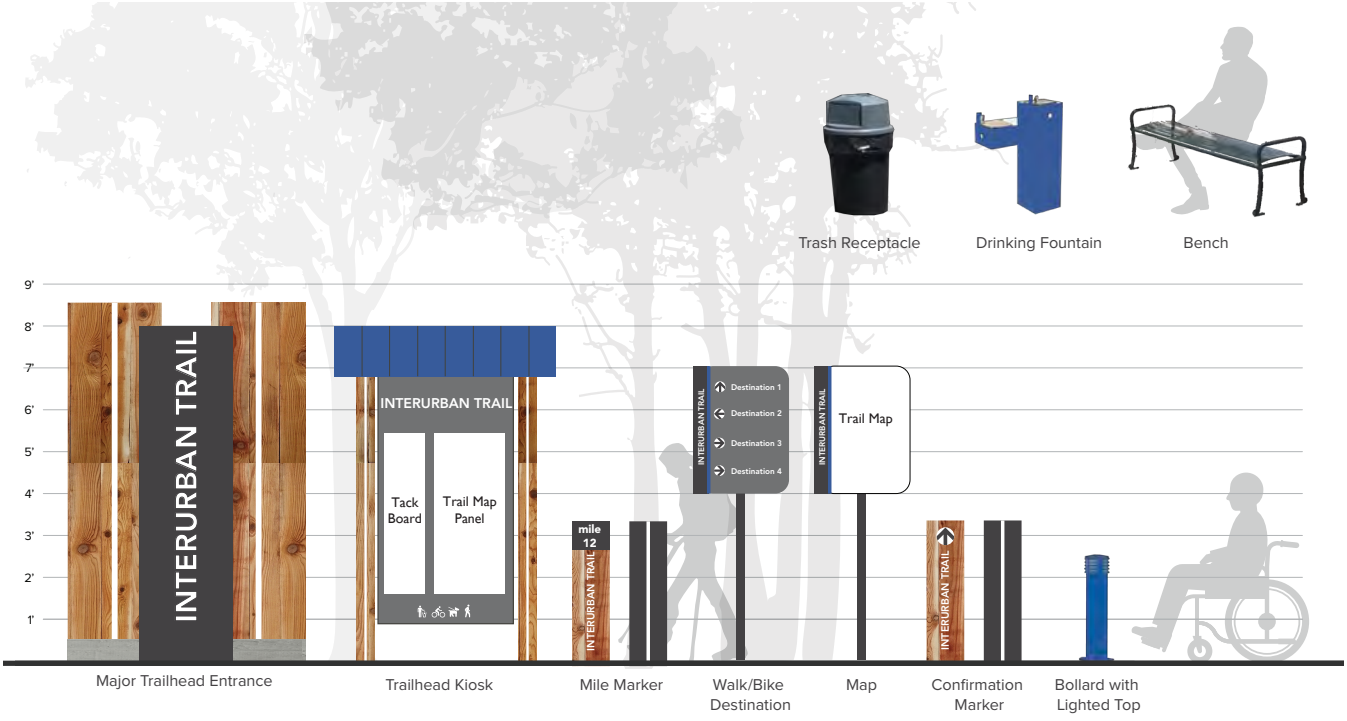
Major Gateway



Potential Amenities

- Pocket Parks
- Seating Areas
- Larger Signage
- Bus Stop Coordination
- Transit Wayfinding
- Public Art
- Vertical Elements
- Murals
- Enhanced Crossing
- HAWK signals or RRFBs
- Bike Share Hubs

Cross Section

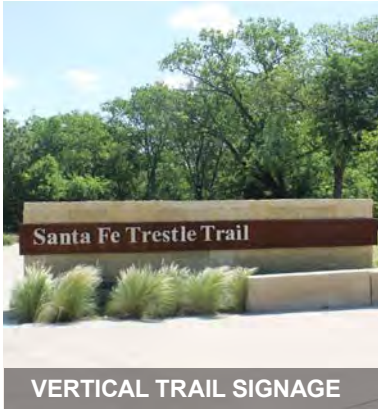


Private Stewardship

- Adopt a Trail
- Custom Transit Shelters and Informational Kiosks

Public Leadership

- Low Maintenance Landscaping
- Trail Signage and Branding
- Roadway Crossing Infrastructure
- Lighting
- Trailhead Amenities
- Wayfinding & Signage
- Multimodal Hub



SAFE TRAIL CROSSING WITH RRFB

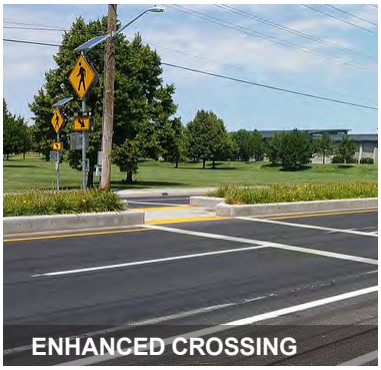
SMALL TRAIL SIGNAGE

MINOR GATEWAY

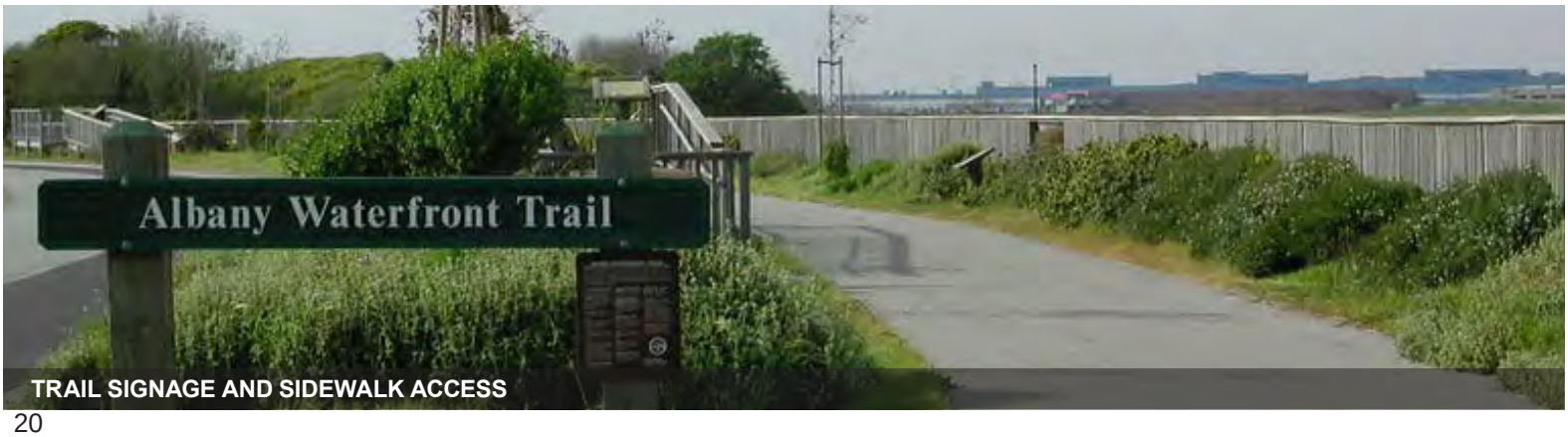
Minor Gateways are crossings that occur at local roadways. At these locations, focus should primarily be on safe trail crossings of the roadway by incorporating enhanced crossings, raised crossings, Rectangular Rapid Flashing Beacons (RRFBs), and other safety elements. Design elements would include smaller trail signage features as well as sidewalk and/or bicycle route connections to access the trail.

TRAIL CONNECTION, SEATING, SIGNAGE

PAVEMENT MARKING



ENHANCED CROSSING

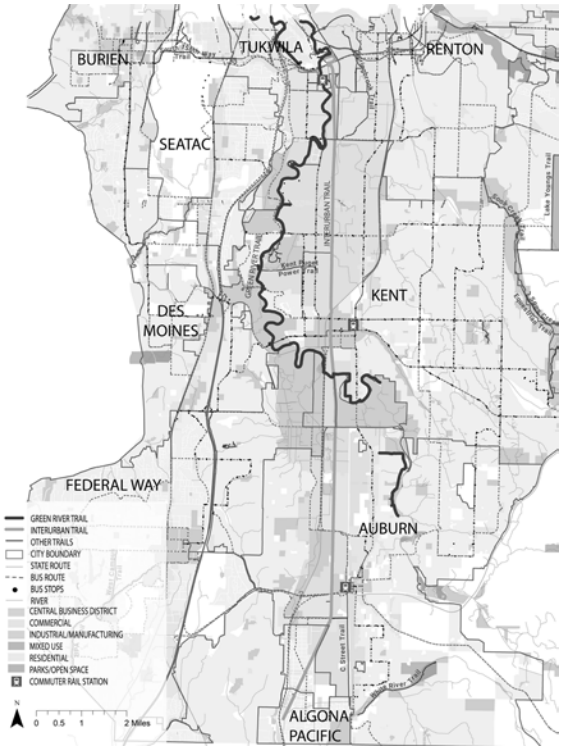


TRAIL SIGNAGE AND SIDEWALK ACCESS

VERTICAL SIGNAGE, BOLLARD, SEATING

Key Map

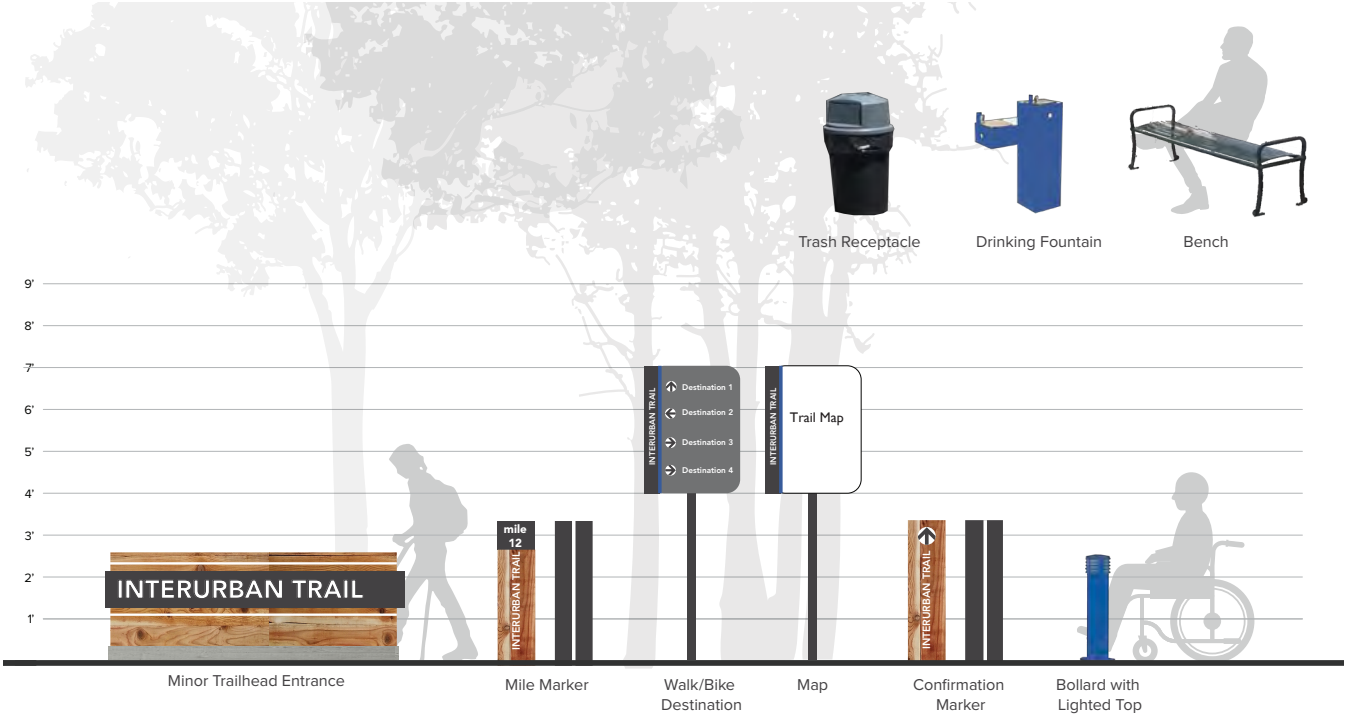
Minor Gateway (Varies; at local roadway intersections with trail)



Potential Amenities

- Trail Signage
- Raised Crossing
- Enhanced Crossing (2-Lane)
- Trash Receptacles
- Drinking Fountain
- Seating Areas

Cross Section



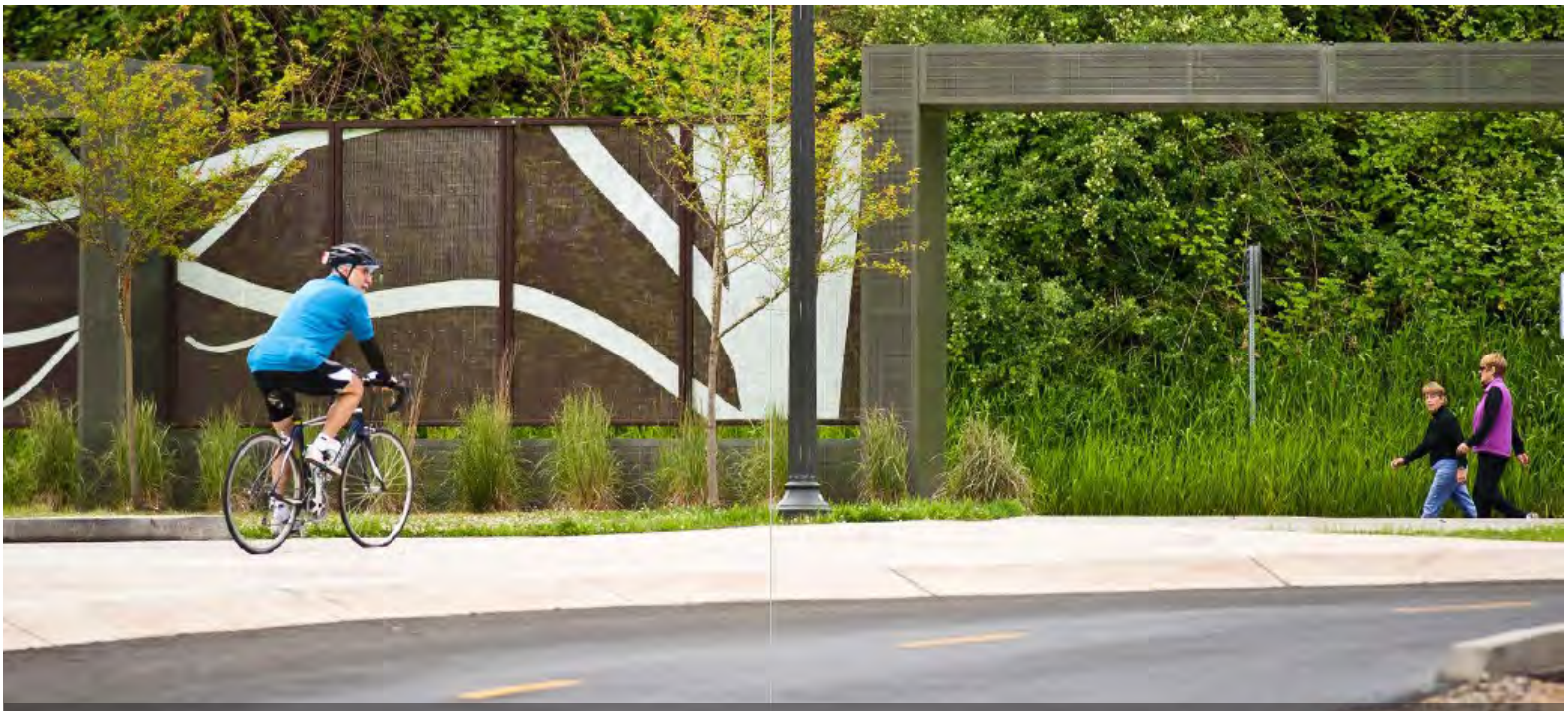
Private Stewardship

- Adopt a Trail
- Neighborhood Art Program

Public Leadership

- Low Maintenance Landscaping
- Trail Signage and Branding
- Roadway Crossing Infrastructure
- Lighting
- Wayfinding & Signage

TRAIL SIGNAGE



IMPROVED TRAIL CONNECTION AND VISIBILITY, TRAIL SIGNAGE

SOLAR LIGHTS, GARDENS

RESIDENTIAL

While both the Green River and Interurban trails largely traverse commercial and industrial contexts, there are small portions of trail that go through residential areas. Incorporating painted trail artwork on the trail itself or on adjacent walls can be a neighborhood and community-building project that reflects the demographics and unique characteristics of adjacent neighborhoods which generates a sense of ownership of the trail by the adjacent neighborhood. Additionally, neighborhood gardens could be incorporated and solar lighting can improve the perception of safety by trail users and adjacent property owners. Additional focus could be on improving or creating additional connections to the trail from adjacent neighborhoods to enhance accessibility and encourage regular use by nearby residents.

TRAIL IDENTITY MARKERS

COMMUNITY BUILDING EVENTS

POTENTIAL FOR FUTURE CONNECTIONS TO ADJACENT COMMUNITIES

ENHANCED ACCESSIBILITY

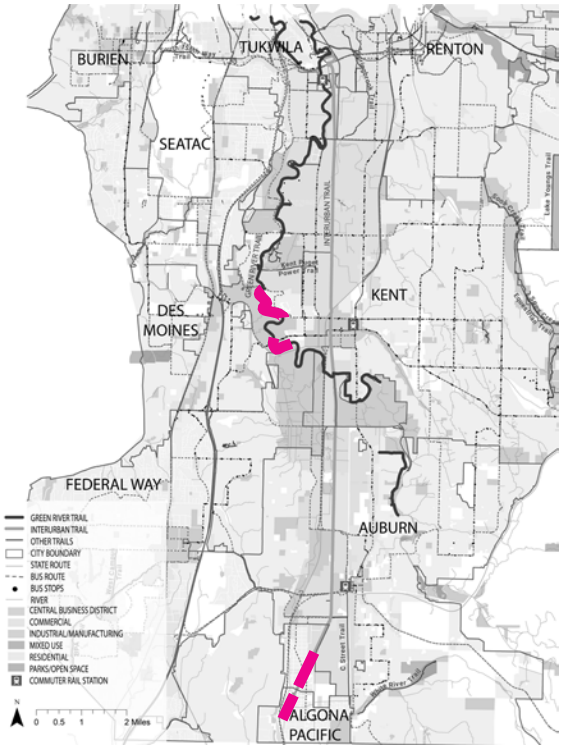
TRAIL CONNECTION AMENITIES

Potential Amenities

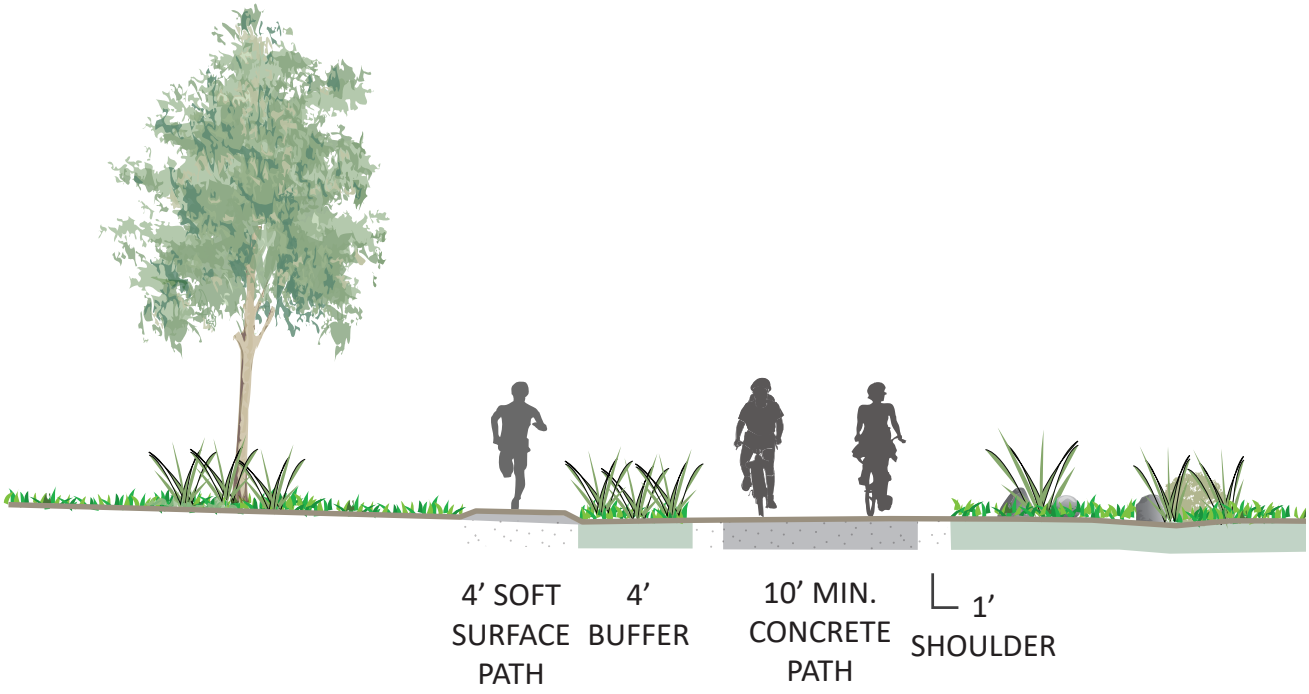
- Enhanced Fence Design
- Design Treatments
- Connections to Neighborhood Parks and Open Space

Key Map

Residential



Cross Section



Private Stewardship

- Voluntary Trail Connections
- Neighborhood Art Program
- Adopt a Trail Program

Public Leadership

- Public Art Program Site
- Wayfinding and Signage
- Soft Surface Secondary Trail

CONCEPTS

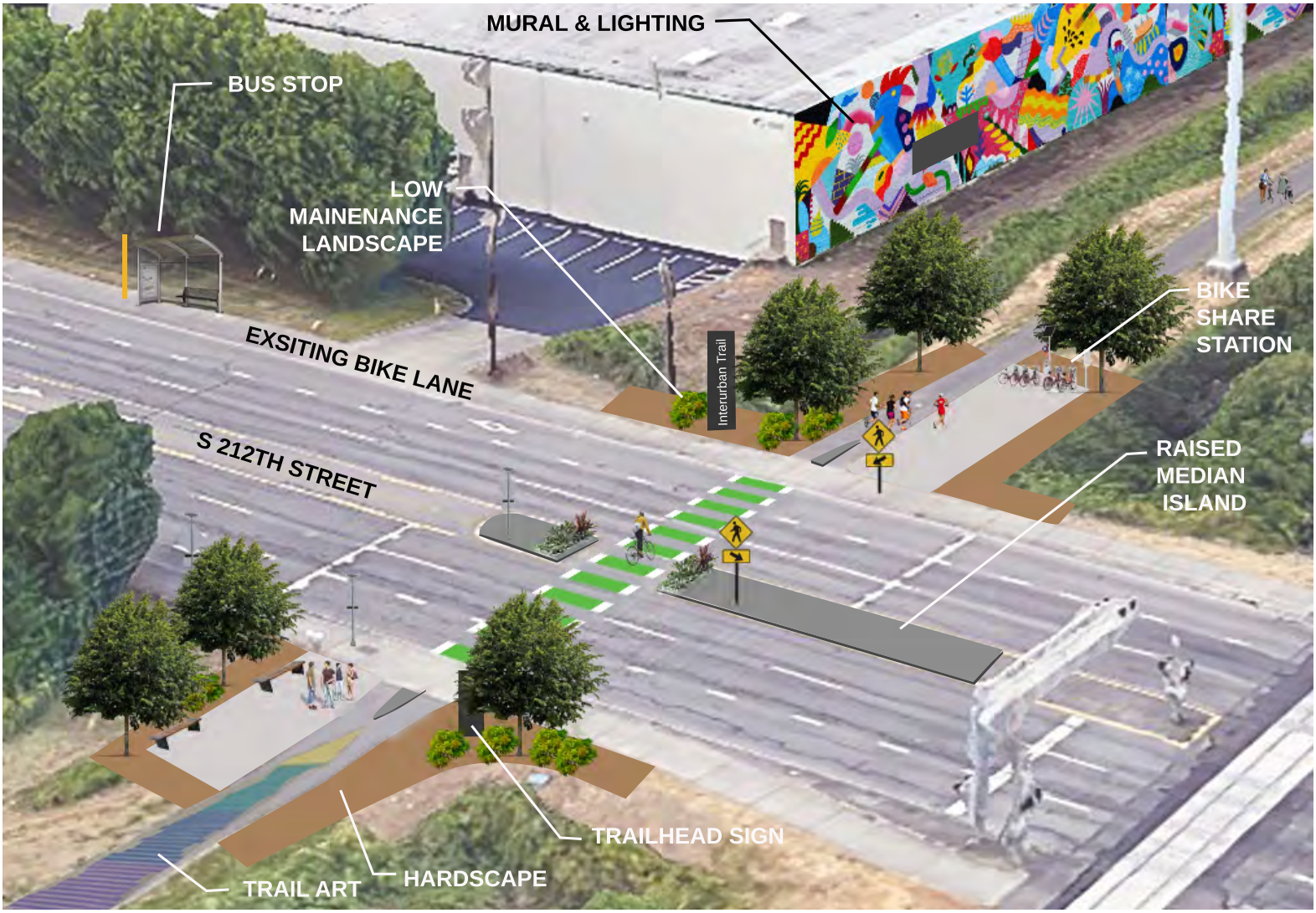
Background

The four concepts on the following pages are intended to provide an overview of how some of the private and public improvements depicted within the typologies might be applied at specific sites. The sites are intended to reflect a general application of ideas and were chosen due to their ability to be replicated at numerous other locations within the Kent Valley. These concepts are intended to be idea-starters, rather than comprehensive solutions, and demonstrate low-cost ways in which both public and private investments may occur.

The concepts are intended to depict the following types of locations for application:

- Major Gateway implementation at an at-grade crossing
- Major Gateway implementation at a grade-separated crossing
- Private sector trail activation along the Interurban Trail
- Private sector trail activation along the Green River Trail

The sites selected have potential application points along both the Interurban and Green River trails and are not intended to be exclusively applied on the trails where the examples are located. Rather, designs included within concepts could be applied interchangeably between both trails depending on adjacent site characteristics.



Arterial Crossing At-Grade

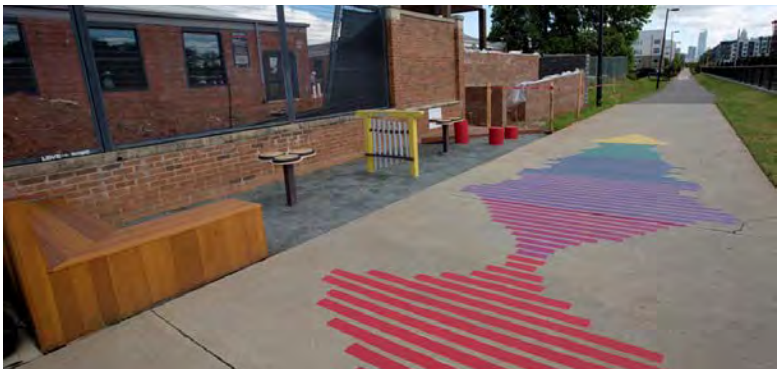
This concept located at S. 212th Street and the Interurban Trail depicts design enhancements that can be made at an at-grade trail crossing across an arterial. Currently, many crossings incorporate very minimal design enhancements making the trail almost unnoticeable to many passing by. Design enhancements at these locations have two primary purposes - they enhance the safety of trail users crossing major roadways and they raise the profile of the trail for those passing by. Enhancements at these locations are likely to be primarily driven by public investment in gateway signage, wayfinding, low-maintenance landscape enhancements, and the incorporation of public art, as possible. At-grade arterial crossings also often present opportunities for mode shift with transit stops located within close proximity of the trail on most major arterial crossings. As possible, assisted crossing, such as a Rapid Rectangular Flashing Beacon (RRFB) should be considered for safety, along with a center pedestrian refuge.

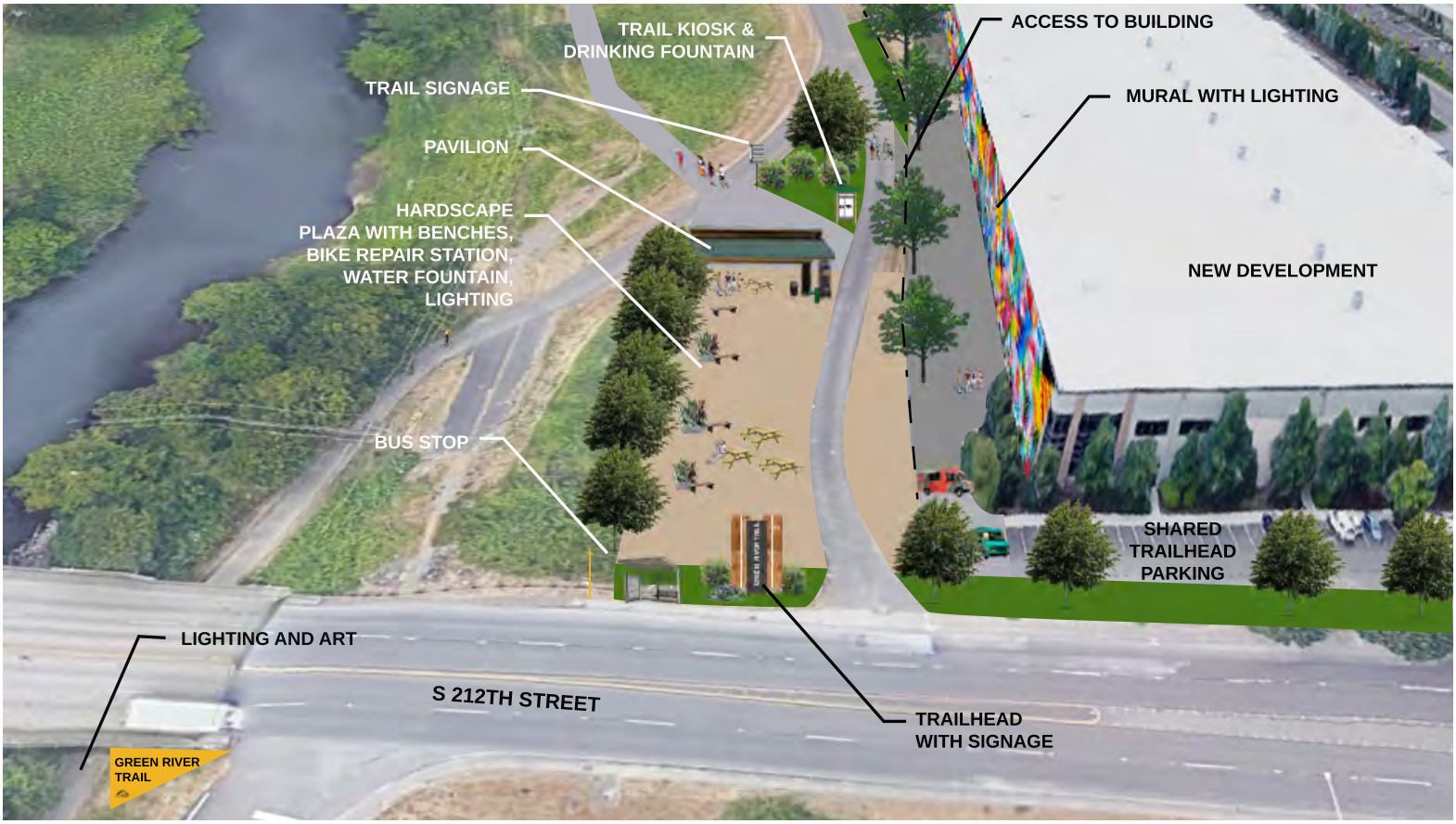
Grade Separated Crossing

Grade separated crossings present another opportunity for gateway treatments, albeit generally less prominent than at-grade crossings due to the presence of ramps from street level to the trails themselves. Vertical gateway treatments at the intersection of the trail ramp and street can visibly identify the existence of a trail access point and assist with trail branding. Small entrance plazas can function as a small trailhead and multimodal hub, providing signage, shelter, benches, and other types of small amenities. Vertical elements at grade separated crossings make exceptional opportunities for public art that both beautify the community and raise the profile of the trail as a community and regional asset.

Private-Sector Trail Activation

There are opportunities along both trails for a larger participation in trail activation by the private sector that potentially leverage incentives or partnerships with local jurisdictions. This concept is intended to show a site that has provided trail access for its employees in a way that both activates the trail and provides some degree of public space, but also provides a place for employees to take breaks or have lunch. This site, in particular, is at an area with somewhat higher volumes of trail pedestrians and depicts a larger amount of public space. The primary intent is to demonstrate how trail activation can have both a public and private benefit.





Public-Private Trail Activation

There are opportunities along both trails for larger scale activation opportunities, particularly as sites either develop or redevelop. This concept leverages a prime location on the Green River Trail along a vacant site adjacent to S. 212th Street. In this concept, the availability of land makes it a prime candidate for a trailhead and major gateway. Features such as trailhead parking, gateway signage, a transit plaza, and pavilion are depicted and would likely be implemented as part of a partnership between public agencies and the private developer of the adjacent site. Additionally, activation can occur on the development site adjacent to the trail by providing lighting and innovative components, such as the food truck area depicted in this concept, that could serve employees and trail users alike.

APPLICATION AND IMPLEMENTATION

Incentives & Regulatory Controls

There are incentives, partnerships, and regulatory controls that jurisdictions can use to help implement trail activation goals. Example programs and incentives are highlighted within the typology sections under Private Stewardship and Public Leadership and may include the following:

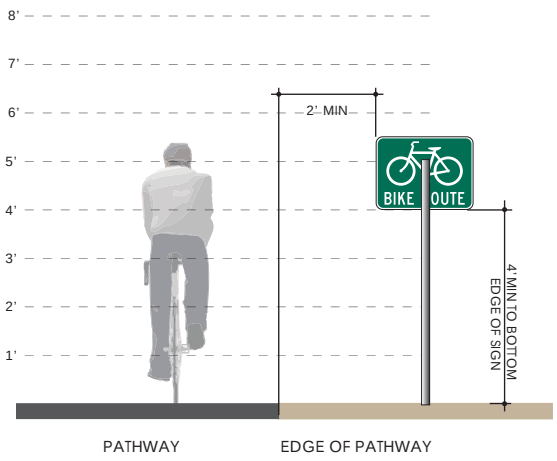
- **Train Amenity Menu:** As development or redevelopment occurs next to portions of the trail where limited public investment is desired, jurisdictions can include a trail amenity menu that assigns points to various types of trail amenities. If codified, development and redevelopment would have to achieve a certain number of total points for compliance. Code would limit the application of some amenities, such as bike repair stations, based on distance from a previously existing one to limit and protect against over-application.

- **CPTED Design Standards:** Jurisdictions can codify the requirement of Crime Prevention Through Environmental Design standards in new development and redevelopment. This can also be a menu of design standards such as windows (faux or real), spillover lighting, building ingress/egress, employee break areas, and other elements that provide activity or reduce the perception of isolation to those traveling on the trail.

- **Art Incentives, Amenities, & Maintenance:** Jurisdictions can consider bonuses in building densities and floor areas if, as part of development and redevelopment, the site adjacent to the trail incorporates and maintains significant features, such as large murals within view of major arterials, public access to the trail through the site, trail adjacent pocket parks and plaza spaces, public art, and larger-scale amenities. The development would be required to maintain amenities.

- **Trailside Landscaping Regulations:** Jurisdictions may consider requiring landscaping standards for areas that lie adjacent to trails, similar to what occurs along public frontages. Landscaping along trail frontage should maintain visibility between buildings and the trail, and the use of evergreen screening should be discouraged.

- **Voluntary Participation:** *I*n addition to regulatory controls and incentives, voluntary involvement by businesses and neighborhood can play a role in activation. Businesses should be encouraged to provide trail access points and should place outdoor employee space towards the trail. Regulations should allow for artistic expression on walls facing the trail so that businesses that wish to provide public art are not restricted form doing so. Businesses and neighborhoods should be encouraged to adopt trail segments not only for maintenance, but also for aesthetic enhancements such as on-tail artwork or public spaces.



Wayfinding Signage

The AASHTO Guide for the Development of Bicycle Facilities largely defers to Part 9 of the MUTCD for guidelines related to the design and placement of signs for bicycles, however the AASHTO guide does provide general information on the type and application of guide signs needed to support bicycling facilities:

- Bicycle wayfinding signs should supplement other infrastructure improvements so that conditions are favorable for bicycling, as signs alone do not improve safety or rider comfort.
- Guide signs may be used to designate continuous routes that may be composed of a variety of facility types and settings.
- Wayfinding guidance may be used to provide connectivity between two or more major bicycle facilities, such as a street with bike lanes and a shared use path.
- Wayfinding may be used to provide guidance and continuity in a gap between existing sections of a bikeway, such as a bike lane or shared use path.
- Road/path name signs should be placed at all path-roadway crossings to help users track their locations.
- Reference location signs (mile markers) assist path users in estimating their progress, provide a means for identifying the location of emergency incidents, and are beneficial during maintenance activities.

The MUTCD specifies bicycle sign placement for off-road applications such as trails, and on-road facilities. The figure above illustrates the minimum sign clearances for signs on shared use paths.

Wayfinding Placement

Placement planning is a multi-layered process. The steps below illustrate considerations when determining destinations and where to place signs.

STEP 1: IDENTIFY KEY DESTINATIONS

Select destinations according to an established criteria.

STEP 2: ROUTE SELECTION

Select routes that are continuous, logical, and safe for people walking and bicycling. Use existing and planned facility GIS data, field observations, and stakeholder input to generate key routes along which to install wayfinding signage.

STEP 3: KEY DECISION POINTS

Identify critical turning points and junctions where people walking and bicycling make decisions in route direction.

STEP 4: CAN I GET THERE SAFELY?

The wayfinding system should only include route where people of all ages and abilities can safely travel.

STEP 5: POTENTIAL MESSAGES

Determine which destinations should be used for each sign location based on the route direction, consistency in destination identification, and destination hierarchy.

STEP 6: REVIEW HIERARCHY OF DESTINATIONS

Select up to three destinations per sign and prioritize destinations of a city-level or regional importance.

STEP 7: MESSAGE NAMING

Use MUTCD guidance and local naming conventions to limit the number of characters displayed in destination names to preserve sign legibility.

STEP 8: ROUTE TESTING

Review sign location, destination progression, and sign content along chosen routes with fieldwork.

Lighting

Lighting installation on a trail is an effective way to increase hours of safe operation for trail users. Lighting can improve visibility, increase overall trail access and convenience, and give trail users a sense of security at night.

In contrast to highway lighting, trail lighting should be done on a small scale and only where necessary. To preserve dark skies and wildlife, lenses should be flat in order to shed light only on the path below. Round lenses, comparatively, shine light in all directions. Fixtures should be selected to reduce loss of light or glare in any way possible.

According to ASSHTO guidelines, pedestrian-scale lighting is characterized by shorter light poles (standards about 15 feet high, lower levels of illumination (except at crossings), closer spacing of standards (to avoid dark zones between luminaires), and high pressure sodium vapor or metal halide lamps. Metal halide lamps produce better color rendition than sodium vapor lamps and can facilitate user recognition in areas with high volumes of night use. Depending on the location, average maintained horizontal illumination levels of 0.5 to 2-foot candles (5 to 22 lux) should be considered.

Lights on a trail should, at the very least, be installed at the following locations according to AASHTO guidelines:

- Always in a tunnel or at overpasses
- Trailheads
- Bridge entrances and exits
- Public gathering places
- Along streets
- Crosswalks
- Where the path crosses another path or sidewalk
- On signage

When preparing to install lighting along a trail, it is best to consult a licensed lighting professional. Such authorities are able to evaluate the trail for the best use of lighting in terms of type, placement and design.

Resources: Rails to Trails Conservancy, https://www.railsto-trails.org/build-trails/trail-building-toolbox/design/lighting/

Typology Application

The typologies described, at a high level, the characteristics and strategies for activation. They are intended to be applied at a broader scale at various locations along trails. The concepts on pages 24 to 28 also provide ideas for application at points along the trail. The following are examples of additional areas that fit the characteristics under which their respective typologies may be applied.

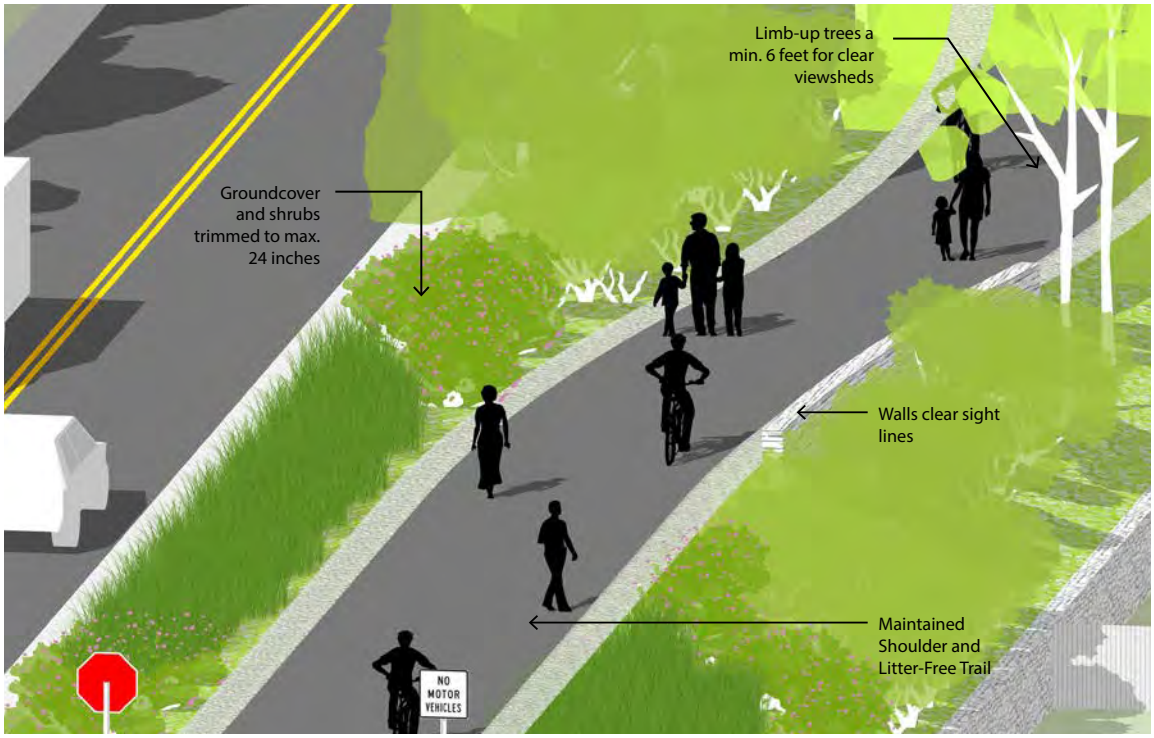
- **Activity Hub:** One location that serves as a prime example of the potential that an Activity Hub could achieve is the Interurban Trail at W. James Street in Kent. The City currently owns parkland directly adjacent to the Interurban Trail that could be used for the inclusion of trailside amenities on public land. This area is near Downtown Kent and numerous other activity generators and would have the nearby foot traffic, employees, and population to support a variety of activities. Additionally, this is a major multimodal hub with close proximity to bus stops and Kent Station where both Amtrak and Sounder Commuter Rail have multiple daily stops. The inclusion of bike share and scooter docking areas would contribute to the overall connectivity and function of the area as a multimodal hub. Additionally, due to the potential activity, this area would be optimal for restroom facilities that would be located on the adjacent city park and would provide a respite place for trail users.

- **Natural Areas:** While the Green River Trail is predominantly natural in character, there are only a few locations along the Interurban that are truly natural in nature. One location is the Interurban Trail near Emerald Downs. To the west of the trail lies Mill Creek and its associated floodplain. There are natural pastures as well as significant flora and fauna along this stretch of the Interurban. This presents a prime opportunity for activation with the use of educational wayfinding and rest area that takes advantage of the quiet, non-urban feel of this stretch of the trail. It provides a contrast for users to stop, rest, or picnic with a view of Mt. Rainier in the distance.

- **Long Stretch:** While there are numerous locations where long stretch strategies may be appropriate, one location that has great potential would be the interurban trail between Highway 167 and S. 212th Street. This portion of the trail has a higher density of employees, and is adjacent to Blue Origin. It is likely that aerospace industries will continue to grow, particularly in spaces near Blue Origin. Partnerships with the tech industry would be optimal, encouraging the creation of employee spaces near trails, the provision of amenities along the trail, and the incorporation of artwork and other visual indicators that reflect the industry. To the south, the trail proceeds into an Activity Hub while to the north, a major gateway could shape the Interurban trail crossing at 212th Street. This area has the potential to serve as a standard and statement in the Kent Valley that integrates the trail into planned and future development.

- **Minor Gateway:** An example of a major gateway is provided on page 25 and page 26. There are also numerous opportunities for minor gateways along the corridor. One example is the Interurban Trail at 1st Ave N. in Algona. 1st Ave N. is not a major arterial roadway and does not provide direct access to Highway 167. It is, however, an important street that is centered in the middle of Algona's residential neighborhood. Algona Interurban Trailhead Park is located here and has the opportunity to be used for additional amenities. The crossing could be enhanced visually and the trailhead could include trail system signage and information. Additionally, trail gateway signage would raise the profile of the trail through Algona.

- **Residential:** The interurban trail traverses established neighborhoods in Algona and Pacific. Due to the smaller blocks, there are numerous local street crossings of the trail that provide access. The greatest opportunity for activation along this stretch of the trail lies with the neighborhood itself. Neighborhood groups, places of worship, and nearby businesses can take part in aesthetic enhancements of the trail and can be encouraged to participate in the artistic and aesthetic enhancements and volunteer activities that bring the neighborhoods together.



CPTED (Crime Prevention Through Environmental Design)

Personal safety, both real and perceived, heavily influences a trail user's decision to use a facility and a community's decision to embrace the trail system. Proper design must address both the perceived safety issues (i.e., feeling safe or fear of crime) and actual safety threats (i.e., infrastructure failure and criminal behavior and abnormal users). CPTED is a proactive approach to deterring unwanted behavior in neighborhoods and communities. When all spaces have a defined use and the use is clearly legible in the landscape, it is easier to identify unwanted behavior.

Principle #1: Natural Surveillance

Principle #2: Natural Access Control

Principle #3: Territorial Reinforcement

Principle #4: Maintenance

Apply CPTED guidelines to trail facilities, management features, and amenities when appropriate. CPTED does not eliminate crime, and should be used in combination with social programs and activation.

General Guidance

- Where feasible, fencing installed along trails should not obstruct the view of trail users. Use transparent fencing.
- Where the trail is fenced for long stretches, intermittent openings should be located to prevent entrapment areas. Access points to the trail should be at locations with good visibility from the surrounding neighbors.
- Trail signage should include the contact number to report vandalism, suspicious behavior, and maintenance issues (e.g., "*Immediately report any observed graffiti to 911*").
- All groundcover and shrubs along trails should be trimmed to a maximum height of 24 inches above ground level, where feasible.
- Trees should be limbed-up to provide a minimum of 6 feet of vertical clearance to provide good sight lines, where feasible.
- Tree canopies should not obstruct pathway illumination.
- Hostile native landscaping material (e.g. vegetation with thorns) can be used in strategic areas to discourage unauthorized use and eliminate entrapment areas.
- Add anti-graffiti application to retaining walls, where appropriate. Repair vandalism immediately.
- Work with local artists to provide public art along trails wherever possible.
- Where unwanted behavior is recurring on or near a trail, work with a CPTED expert (CPD) to perform an assessment and develop specific interventions for trails.

Resources: International Crime Prevention Through Environmental Design Association, *Guiding Principles* (2008). *http://www.cpted.net/default.html*