



# EVALUATION OF ALTERNATIVES NEAR RESIDENTIAL NEIGHBORHOODS

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EASTSIDE RAIL CORRIDOR REGIONAL TRAIL MASTER PLAN PROJECT

FEBRUARY 2016

The Eastside Rail Corridor Regional Trail Master Plan Project develops a baseline inventory and planning guidelines for portions of the Eastside Rail Corridor owned by King County and Sound Transit.

A variety of uses is possible for the corridor in the future, and various agencies and jurisdictions have ownership interests in the corridor. This document is an internal work product supporting a study for future development of a shared use trail in the corridor.

For more information please visit the King County Parks Eastside Rail Corridor – Regional Trail webpage at: <http://www.kingcounty.gov/erc>

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# TABLE OF CONTENTS

<b>1.</b>	<b>INTRODUCTION .....</b>	<b>1-1</b>
<b>2.</b>	<b>GENERAL EFFECTS OF TRAILS ON NEIGHBORHOODS .....</b>	<b>2-1</b>
2.1	TRESPASS AND CRIME.....	2-1
2.2	PROPERTY VALUES .....	2-2
2.3	PRIVACY.....	2-3
2.4	NOISE .....	2-4
2.4.1	King County.....	2-4
2.4.2	City of Renton .....	2-4
2.4.3	City of Bellevue .....	2-5
2.4.4	City of Kirkland.....	2-5
2.4.5	City of Woodinville .....	2-5
2.5	LIGHTING.....	2-5
2.6	AESTHETICS .....	2-6
2.7	ACCESS .....	2-7
<b>3.</b>	<b>TRADEOFFS BY RESIDENTIAL NEIGHBORHOOD .....</b>	<b>3-1</b>
3.1	KENNYDALE AND SOUTH NEWPORT NEIGHBORHOODS .....	3-1
3.1.1	On-Railbed Alternative .....	3-1
3.1.2	Off-Railbed Alternative .....	3-2
3.2	NORTH NEWPORT NEIGHBORHOOD .....	3-3
3.2.1	On-Railbed Alternative .....	3-3
3.2.2	Off-Railbed Alternative .....	3-4
3.3	WEST BELLEVUE NEIGHBORHOOD .....	3-4
3.4	WOODRIDGE NEIGHBORHOOD .....	3-4
3.5	WILBURTON NEIGHBORHOOD .....	3-5
3.6	KINGSGATE NEIGHBORHOOD .....	3-5
3.7	UPPER AND LOWER WEST RIDGE NEIGHBORHOODS .....	3-6
3.8	POTENTIAL MITIGATION MEASURES .....	3-6
<b>4.</b>	<b>REFERENCES .....</b>	<b>4-1</b>

## LIST OF FIGURES

1.	Residential Neighborhoods along the ERC .....	1-3
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# ACRONYMS AND ABBREVIATIONS

CPTED	Crime Prevention through Environmental Design
EIS	environmental impact statement
ERC	Eastside Rail Corridor
I-405	Interstate 405
I-90	Interstate 90
King County Parks	King County Department of Natural Resources and Parks
Master Plan	ERC Regional Trail Master Plan
SR 520	State Route 520



# 1. INTRODUCTION

The Eastside Rail Corridor (ERC) traverses through a variety of land uses between Renton and Woodinville. Of these, residential neighborhoods in proximity to the ERC present unique opportunities and constraints to the development of a regional trail. In the Draft ERC Regional Trail Master Plan (Master Plan) and Environmental Impact Statement (EIS), King County is considering two different trail alignments within the ERC. One would encompass the existing railbed, which is typically near the center of the ERC; the other would hug the edge of the ERC.

The purpose of this report is to evaluate these two alternatives regarding potential effects on the adjacent residential neighborhoods. The evaluation is organized by neighborhood so that an adjacent resident can quickly move to the geographic area of interest. Information from this report is summarized in the EIS.

Based on comments received during scoping for the ERC Regional Trail Master Plan, as well as what King County has heard on other trail projects, residential neighbors are concerned about:

- Potential for trespass and increased crime and need for law enforcement
- Potential effects on property values
- Potential for reduced privacy
- Potential for increased noise from trail users
- Lighting both as a tool for increasing security and as an impact for creating glare
- Changes in the visual character of the neighborhood
- Accommodating access from homes to the trail and to local recreational facilities
- Potential for increased vehicle traffic noise due to the reduction of vegetation
- Potential for loss of or reduction in parking
- Potential for trail users to park in areas customarily used for residential parking
- Keeping the area natural (green)
- Potential for increased litter and dog waste

Section 2 of this report discusses potential neighborhood effects that are unlikely to vary substantively by trail alternative or geographical location. It also provides background information on topics of concern to residents such as noise resulting from trails.

Section 3 describes the differences in impacts between the two alternatives for each residential neighborhoods or homogenous groups of neighborhoods near the ERC. For some areas along the corridor, impacts on other resources are discussed to provide context for decisions about trail alignment, which could affect the adjacent neighborhood. The residential neighborhood groups are generally defined and shown in Figure 1:

- Kennydale neighborhood—from Gene Coulon Park through NE 44th Street (vicinity of Seattle Seahawks training facility or VMAC), includes residents along Mountain View Avenue and Lake Washington Boulevard
- South Newport neighborhood—from NE 44th Street to Coal Creek Parkway, including residents of Ripley Lane, Hazelwood, Pleasure Point, and Lakehurst, Lake Lanes, and Newport Shores

- North Newport neighborhood—from Coal Creek Parkway to I-90, includes residents of Greenwich Crest
- West Bellevue neighborhood—from I-90, west of I-405
- Woodridge neighborhood—from I-90, east of I-405, to Lake Hills Connector
- Wilburton neighborhood—from Lake Hills Connector to Main Street
- Kingsgate neighborhood—from Willows Road NE to NE 145th Street
- Upper and Lower West Ridge neighborhoods—from NE 145th Street to NE 175th Street

Areas zoned for commercial, industrial, or mixed use are not identified in the above list of neighborhoods.

It should be noted that this report does not exhaustively address all topics of interest to residential neighbors. Some topics, such as the potential for conflicts between trail users and vehicles at driveways, are a concern to a broader audience than residential neighbors and are addressed in detail in the Master Plan. Also, some topics have multiple facets and are addressed in several places within the master planning documents. For example, vegetation as it provides privacy and potentially buffers noise is described here; vegetation that provides ecological function is addressed in the project's Ecosystem Evaluation of Alternatives Report. This report focuses on topics of specific interest to neighborhoods adjacent to the ERC trail.



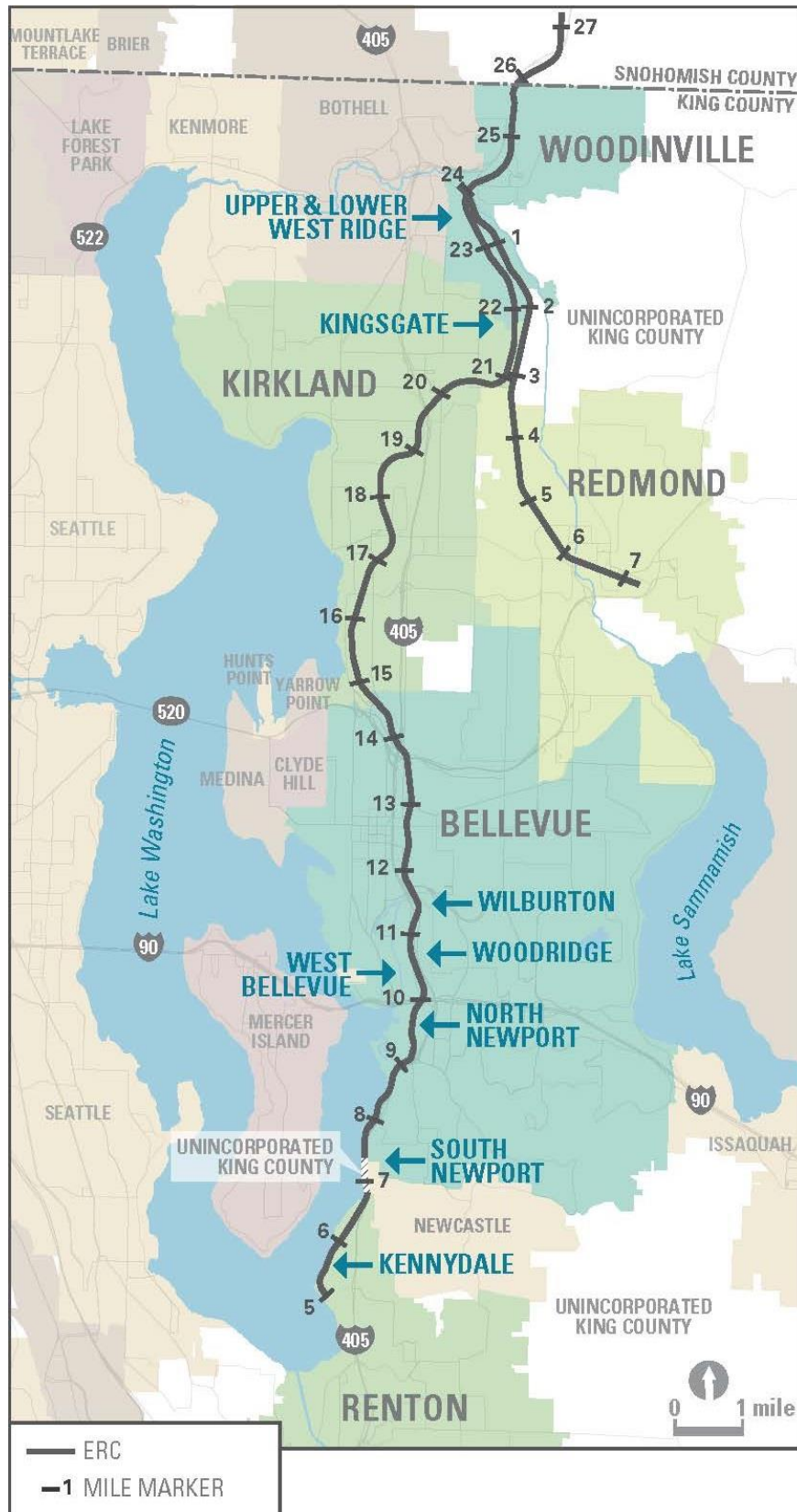


Figure 1. Residential Neighborhoods along the ERC



## 2. GENERAL EFFECTS OF TRAILS ON NEIGHBORHOODS

Over the past 20 to 30 years, a moderate amount of research was conducted regarding the potential effects of a trail on its residential neighbors. King County Department of Natural Resources and Parks (King County Parks) has identified literature and considered these effects in conjunction with a number of its regional trail projects. The sections that follow provide some of the background information based on this previous work.

### 2.1 TRESPASS AND CRIME

Some property owners adjacent to the trail are concerned about the potential for increased trespass, vandalism, or other illegal activity. The trail would attract people to neighborhoods. The majority of trail users would be there for recreational and transportation purposes, but, as with any public resource, not all unruly public behavior can be prevented. King County would not erect fencing for the purpose of keeping people off private property; that would be the responsibility of the property owners who are concerned about trespass. However, a heavily used trail (as this trail is expected to be) would provide an element of safety and “overwatch” because a busy trail is an uninviting place for those wanting to trespass or undertake other criminal activity. “Overwatch” is the informal surveillance provided by people in a busy area.

Based on a literature review of trail studies, trails within urban and suburban areas do not experience disproportionately high rates of crime relative to other recreational venues or public places. Crime rates are generally considered low on rail trails and the development of rail trails does not generate an increase in crime (Greer 2001; Indiana University 2001; Tracy and Morris 1998; City of Seattle 1987; Feeney 1997; The Conservation Fund and Colorado State Parks 1995). These trail studies are typically based on survey and interview data, not scientific surveys.

Similar to the Burke-Gilman Trail in Seattle, the proposed trail comes quite close to homes in certain locations and is adjacent to waterfront properties. The development of the Burke-Gilman Trail was not found to generate an increase in crime (City of Seattle 1987). To most residents, trails are typically viewed as desirable quality of life enhancements that, despite occasional problems, make homes and property more desirable (and valuable), and improve the quality of neighborhood life. These studies also indicate that crime does not necessarily result from trail proximity. Other factors not related to the trail, such as the location of property and the presence of a wooded area, influence the possibility of criminal activity.

In 2001, the University of Nebraska studied the effect of the Omaha Recreational Trails on public safety. The survey sought to record residents’ experiences with trail-related theft and property damage.

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#### TRAIL BARRIER TYPES

As planning for this project progresses, the need for barriers or fencing in specific locations would be assessed. At this time, three types are proposed for safety and to guide circulation (not for preventing trespass):

**Auto-Protection Barriers** are used when a trail is immediately alongside a road, driveway, or parking. The purpose is to protect trail users from vehicles. Standard roadside guardrails are the most typical barrier type used in these situations.

**Trail Safety Barriers** are located to protect trail users from falls if they lose control and leave the trail, typically applied where the trail is adjacent to a very steep slope or drop-off. The most common type of trail safety barrier for King County regional trails is vinyl-coated chain-link fence, typically colored black.

**Guidance Barriers** are sometimes used to control circulation where the edges of public space may not be clear to trail users. These types of barriers are typically low split rail or wood pole fences, and are used to control access to sensitive areas and occasionally adjacent private property where the edge of the trail is not evident.

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Property theft by a trail user was reported by 4.0 percent of the survey respondents, and property vandalism by a trail user was reported by 4.7 percent of respondents. Most of these incidents was considered relatively minor. The trails were generally viewed as enhancing the quality of life for area residents (Greer 2001).

Indiana University conducted research on neighbor attitudes along six rail-trails in suburban, urban, and rural settings in Indiana: Rivergreenway Trail, City Greenway Trail, Cardinal Greenway Trail, Pennsy Rail Trail Greenfield, Prairie Duneland Trail, and Mason Trail (Indiana University 2001). Of the six communities questioned, only respondents from a commercial area reported burglary as a frequent problem. The most common problems reported by the trail neighbor respondents were illegal vehicle use on the trail, followed by unleashed pets, litter from trail users, and excessive noise (reported in two of six cities) (Indiana University 2001).

In summary, with the development of a trail, occasional incidents of trespass or private property vandalism could occur, but would not be expected to differ substantially from existing conditions. Some trespass or vandalism may be associated with a trail, but public use of a trail may discourage vandals near homes because there would be more people around to discourage potential incidents. Good trail design can help to prevent crime by following the principles in Crime Prevention through Environmental Design (CPTED); these principles would be used for this project. CPTED principles are focused on making the facility a safe place for users by ensuring the visibility of users, regular maintenance of the trail, and clear access control and wayfinding so that users can easily identify their location on the trail. With the inclusion of CPTED principles and the incorporation of adequate public safety mitigation measures, public safety impacts are expected to be minimal.

Public safety mitigation measures could include:

- Locating fences where there is a safety or liability concern, such as access to undeveloped waterfront properties
- Placing signage to delineate limits of public property
- Considering lighting in areas remote from roads and driveways
- Posting signs to prevent trail users from parking in private or restricted parking lots near trail access points
- Implementing trail patrols by volunteer trail ranger programs
- Monitoring crime rates in the area, and ensuring additional coordination with law enforcement if crime rates increase

## 2.2 PROPERTY VALUES

Another concern about the proposed trail often expressed by adjoining property owners is the effect of the trail on their property values. The fear is that the impacts would be negative. However, it is important to note that purchasers of property abutting a rail corridor accept a vulnerability to potential future uses of the corridor as a pre-existing condition (and risk) of the purchase. The effect of being adjacent to a rail corridor on property values cannot be exactly determined because there are many factors at play, but several studies provide some information about the impact of trails on property value, as discussed below.

Many recent studies conclude that property values for residences and businesses near trails are higher than those that are not located near a trail. One study concluded that an urban greenway with a multi-use trail can generate positive effects on property values and recreational benefits, but not all recreational greenways have positive effects on property values; some have no effect at all (Lindsey et al. 2004). Another study, which looked at two rail trails in Massachusetts, found that houses near trails sell for a higher proportion of the asking price and in about half the time than for houses in the general inventory (Della Penna 2006). In 2011, two University of Cincinnati researchers found that proximity to trail access points in urban areas increases property values (The Atlantic CityLab 2011). Interestingly, research conducted in 2008 concluded that people in cities tend to perceive and value bicycle facilities differently than those living in the suburbs, with the former generally perceiving them as positive and valuing them more highly (Mogush et al. 2005). These may be sentiments relevant for this project.

In 2001, the University of Nebraska conducted a survey to determine the effect of an existing trail system on property values and public safety (Greer 2001). The survey included 67 miles of recreational trails within metropolitan Omaha. Of the respondents who purchased their homes after the trail existed, 67 percent indicated that the trail positively influenced their purchase decision, and 81 percent felt that the trail's presence would have a positive effect or no effect on the ease of selling their homes.

The Indiana Trails Study (2001) interviewed trail neighbors and local realtors to determine the effect of rail trails on property values (Indiana University 2001). The survey included six rail trails covering a total of 51 miles. Between 86 percent and 95 percent of trail neighbor respondents indicated the trail had no effect or a positive effect on their property values. Between 81 and 93 percent of respondents indicated the trail had no effect or made it easier to sell their property. Of the realtors interviewed, most did not see any major increase in property values or ease in property sales as a result of trail development. The main disadvantage of trail development noted in the study was reduced privacy near homeowner yards.

In summary, many people view trails to be quality of life enhancements that make homes and property more desirable and improve the quality of neighborhood life, despite the occasional problem. Some buyers may consider the location of the trail an intrusion of privacy, while others may be attracted by the proximity to the trail for recreational and transportation uses. In actuality, a number of factors influence the value of any given property, including employment patterns, market demand, development patterns, individual buyer preferences, and infrastructure improvements. These factors are both local and region-wide and are not related to adjacency to a regional trail.

## 2.3 PRIVACY

Residential neighbors in proximity to the corridor have expressed concerns about a potential loss of privacy. In some areas, the proposed trail would be at the same elevation as nearby homes. Residents may experience reduced privacy due to the presence of the trail and trail users. However, consideration of reduced privacy impacts in some cases is tempered by the fact that some property owners applied for variances to reduce or eliminate code-required setbacks from the right-of-way to build or expand residences.

The physical proximity of trail users would be considered an intrusion by some residents. Some residents may be less inclined to spend time in portions of their yards that are in view of the trail and may curtail their outdoor activities.

King County could consider vegetation plantings to protect privacy, but these decisions would be made during project design and on a case-by-case basis.

## 2.4 NOISE

The presence of the trail would result in potential noise impacts, primarily from trail users. Noise sources associated with the use of the trail would include bicycles traveling on pavement, occasional bicycle warning-device sounds (e.g., bells), foot traffic on pavement and gravel shoulders, and unamplified human voices. For residences located very close to the trail, voices from trail users may be audible inside adjacent residences where a window is open near the trail. Near the access point parking areas, vehicles in and around the parking lots would also create some noise. Trail maintenance would also be a source of noise. Trail maintenance would involve occasional vehicular use of the trail (at slow speeds), vegetation management (e.g., mowing in some areas and equipment for removing hazard trees), and drainage maintenance (e.g., dredging sediment-clogged ditches). These occasional maintenance activities would generate noise audible at nearby locations similar to existing neighborhood yard maintenance noise that occurs along portions of the trail.

Along areas of the ERC near I-405 and I-90, it is highly likely that trail use noise would be completely obscured by existing noise from traffic on those highways. In areas of the ERC that are relatively quiet, where ambient noise levels are lower compared to areas near highways, nearby residents could notice noise generated by trail users. However, overall trail use noise would be a minor source in the overall acoustic environment.

Construction of the trail would generate noise associated with construction equipment and activities. Construction would include the use of equipment such as excavators, graders, compactors, trucks, and pavers; this equipment would generate varying levels of noise. However, construction-related noise would be temporary, and measures to control construction noise would be implemented, when possible. No significant noise impacts related to construction of the trail are anticipated.

King County and the Cities of Renton, Bellevue, Kirkland, and Woodinville have noise regulations that the project would be subject to during construction of the trail and for users of the trail once it is open. Typically, construction noise is limited to daytime hours (varies by jurisdiction) unless the jurisdiction grants a noise variance. The local jurisdictions would be responsible for taking action against trail-related noise sources should they disrupt nearby uses. Each jurisdiction's noise regulations regarding nuisance noise when the trail is open to users are summarized below.

### 2.4.1 King County

King County's noise ordinance will apply to the areas of the trail located in unincorporated King County. According to Title 12.86.400, Public nuisance noise, of the King County Code, "it is unlawful for any person to cause, or for any person in possession of property to allow to originate from the property, sound that is a public nuisance noise." Public nuisance noise is defined as "any sound that unreasonably annoys, injures, interferes with or endangers the comfort, repose, health or safety of a community or neighborhood."

### 2.4.2 City of Renton

In the city of Renton, "it is unlawful for any person knowingly to cause or make, or for any person in possession of property knowingly to allow to originate from the property, unreasonable noise that disturbs another" (Renton Municipal Code 8-7-3). Such noise would be a public nuisance. The City lists examples of public nuisance sounds, and one that could be applicable to trail use is "the amplified or unamplified human voice which unreasonably interferes with the peace, comfort, and repose of property owners or possessors."

### 2.4.3 City of Bellevue

Bellevue's noise ordinance includes a provision that addresses noise disturbances (Bellevue Municipal Code 9.18.040). If the noise is clearly audible across a real property boundary, or at least 75 feet from the source, it is considered a noise disturbance. Bellevue considers "operating or playing, or permitting the operation or playing of, any audio equipment, television set, musical instrument or similar device, whether portable or stationary or mounted on or within a motor vehicle" to be a noise disturbance. "Creating loud and raucous, and frequent, repetitive, or continuous sounds with the human voice" is a noise disturbance under the City's code.

### 2.4.4 City of Kirkland

Kirkland Zoning Code 115.95 outlines the City's noise regulations. Public nuisance noise is defined as "any noise which injures; endangers the comfort, repose, health, or safety of persons; or in any way renders persons insecure in life, or in the use of property." Such types of noise are in violation of the City's noise code.

### 2.4.5 City of Woodinville

Public nuisance and disturbance noises are outlined in Chapter 8.08 of the Woodinville Municipal Code. According to the code, it is unlawful for a person to cause a sound that is a public nuisance. Some sources of sounds Woodinville defines as public nuisances are:

- "Yelling, shouting, hooting, whistling or singing on or near the public streets, particularly between the hours of 11:00 p.m. and 7:00 a.m., or at any time and place so as to unreasonably disturb or interfere with peace, comfort and repose of owners or possessors or real property"
- "The making of any loud and raucous noise which reasonably interferes with the use of any residential property, school, church, hospital, sanitarium, nursing or convalescent facility"
- "Sound from audio equipment, such as, but not limited to, tape players, radios and compact disc player, operated at a volume so as to be audible greater than 50 feet from the source"

For residences close to the trail, removal of vegetation that may provide some noise buffering (if the vegetation is thick and deep enough) is discussed below. In future design phases, as additional parking and trailhead opportunities are identified, the trail's proximity to residences will be further considered.

## 2.5 LIGHTING

Trails in the King County Regional Trail System are considered linear parks, open from dawn to dusk 7 days a week, according to King County Code Section 7.12.480. Trail illumination is largely limited to intersections with public roads, where the requirements of the local jurisdiction are applied. Otherwise, the trails are not typically illuminated. King County is currently considering a policy change that would extend the hours of the regional trails to 24 hours per day. If operational hours of the trail are extended to 24 hours per day, additional illumination criteria may be considered by the County and applied to the ERC during the design phase of the project.



In conjunction with the future design of the ERC trail, King County will contemplate lighting, consistent with AASHTO Bike Guide recommendations at the following locations:

- Undercrossings where trail users may feel uncomfortable or vulnerable. For the ERC, the undercrossings of I-405 and SR 520 would be considered.
- Approaches to bridges and boardwalks. For the ERC, this would include existing railroad bridges that may be restored for trail use and new bridges, such as those over I-405 and NE 8th Street.
- Changes in trail geometry. For the ERC, this could occur where the trail alignment shifts to cross perpendicular to a driveway or closer to an adjacent road.
- Areas in which the trail mixes with cross pedestrian and/or bicycle traffic. For the ERC, this could include the area around the Wilburton Station and at the intersections of the proposed trail with other regional trails (such as the I-90/Mountains to Sound Greenway Trail).

Other areas that could be considered for illumination include intersections with driveways that are steep or skewed, and remote areas in which “overwatch” is not possible from adjacent streets and highways. King County also could consider the use of a reflective material to delineate the edge or center of the trail at periodic intervals. The selection of the type and level of illumination would be sensitive to the setting to avoid creating safety issues associated with glare, and to minimize the potential for obscuring existing views.

## 2.6 AESTHETICS

The presence of the trail could change the visual character of a neighborhood with the removal of vegetation and the introduction of retaining walls, additional paved areas, fences, and potential illumination. These features would be necessary for safety and to minimize other impacts; for example, retaining walls reduce the footprint of the project, but could result in visual impacts with the landscape changes. In areas where the trail is immediately adjacent to residences, changes in visual character would be more noticeable to property owners. In these instances, the height of retaining walls and the type of fencing used would matter to the overall aesthetics. Aesthetically pleasing fencing and wall treatments would reduce the visual impact.

Overall, the paving of the trail, low retaining walls, and decorative fences (e.g., split rail fence) would not create a substantial change in the visual environment because these elements are consistent with the typically rural and suburban character in the vicinity of the residential neighborhoods along the corridor. The potential visual effects of each alternative are discussed by neighborhood in Section 3 below.

Decisions regarding aesthetic design features would not be made until the final design phase of the project. However, to reduce impacts on visual quality, the project could:

- Replant the corridor following construction
- Use a type of wall material that is cohesive with the neighborhood setting
- Minimize the use of fences, except where necessary for safety and liability
- Use the least visually intrusive type of fence where fences are necessary



## 2.7 ACCESS

Some adjacent property owners have expressed an interest in being able to access the trail from their neighborhoods. Providing good trail access is important. Trail access for local users is an essential element for making the trail part of everyday life for thousands of trail users who will connect to it from sidewalks, local streets, local trails, and other regional trails. However, access will be controlled to ensure safety. In general, there would be four types of access to the ERC trail: (1) local street crossings, which would be the most common; (2) regional trail connections; (3) local jurisdiction trail connections; and (4) neighborhood or private connections, which may be provided, if requested, and a special use permit is granted by King County Parks. These access points would result in the trail being accessible to all types of users.



### 3. TRADEOFFS BY RESIDENTIAL NEIGHBORHOOD

#### 3.1 KENNYDALE AND SOUTH NEWPORT NEIGHBORHOODS

The Kennydale and South Newport neighborhoods span the corridor from Gene Coulon Park to the Coal Creek Parkway. Through the Kennydale neighborhood, the residences occur to the west of the proposed trail on the banks of Lake Washington, and Lake Washington Boulevard bounds the ERC to the east. Kennydale includes residents along Mountain View Avenue N and Lake Washington Boulevard. The South Newport neighborhood includes residents along Ripley Lane, Hazelwood, Pleasure Point, Lakehurst, Lake Lanes, and Newport Shores. In the South Newport neighborhood, the ERC is bounded by residences to the west and I-405 to the east. In both neighborhoods, access roads and supplemental parking for the neighborhoods occur partially or wholly in the King County-owned ERC right-of-way, west of the railbed. Through this area, stormwater and streams drain from the higher elevations to the west toward the lake. Where runoff and streams encounter the existing railbed, they are either directly conveyed by cross culverts or conveyed along the east side of the railbed to cross culverts. As a result, this section of the corridor is characterized by wetlands and ditches in proximity to the railbed. Also, the King County sewer interceptor line runs along the east side of the corridor through this area.

The ERC is relatively close to homes through these neighborhoods, and the trail would be frequently visible from access roads to the west and public streets and highways to the east. The proximity of the trail to visible public areas (access roads, public streets, and

highways), combined with the expected volumes of trail users, may reduce the potential for trespass, vandalism, or other illegal activities within these neighborhoods.

In many places, the hillside between the railbed and the roadway to the east is planted with trees and shrubs. This vegetation enhances the natural feel of the lakefront area, provides partial visual screening from the adjacent roadways, and may provide traffic noise attenuation, if the vegetation is dense enough.



ERC in the Kennydale neighborhood with Lake Washington on the west (left) and Lake Washington Boulevard to the east (right).

##### 3.1.1 On-Railbed Alternative

In both neighborhoods, the On-Railbed Alternative is closer to the residences to the west, raising general concerns from the public about potential noise, trespass, and reduced privacy due to the possible removal of screening vegetation between the trail and the neighborhood. In many places, there

is a narrow band of vegetation within the ERC between the railbed and parking areas and access roads to the west. This vegetation provides a visual buffer between the railbed and the residences.

The presence of the trail could result in nuisance noise produced by the trail users. This type of noise is unpredictable in both occurrence and loudness. The Cities of Renton and Bellevue have public nuisance regulations that would apply in these neighborhoods, and it would be each City's responsibility to address nuisance noise complaints. It may be perceived that the removal of vegetation between a residence and the trail would result in a noticeable increase in noise, but, in many locations, the typical noises associated with trail use would likely be lower than the ambient noise levels of an active neighborhood.

As discussed in Section 2, trespass onto private property by trail users is a common concern of property owners. Fencing would not be provided within the ERC for keeping trail users off private property, but a heavily used trail (as this trail is expected to be) would provide an element of safety and "overwatch"; a busy trail is an uninviting place for those wanting to trespass or undertake other criminal activity.

In developing the On-Railbed Alternative, King County has created an alignment that avoids narrowing access roads and minimizes the reduction of space for parking. However, the screening vegetation to the west may be removed to minimize impacts on the wetlands and streams that occasionally occur on the east side of the railbed. Following construction, some screening landscaping could be restored where there is enough space. In general, trees must be 12 feet from the edge of the trail and shrubs must be 5 feet from the edge of the trail to minimize potential damage to the trail from roots and potential obstruction to trail use from protruding limbs. Landscaping must be consistent with King County's policies for operating and maintaining the corridor for public use.

It is likely that, to further minimize impacts on wetlands and streams, low retaining walls would be considered along some stretches of the trail during final design. Where wetlands and streams are adjacent, decorative fencing would be constructed to discourage intrusion into critical areas.

### 3.1.2 Off-Railbed Alternative

The Off-Railbed Alternative is located east of the railbed through these neighborhoods. Although located farther from residences, this alternative requires the removal of more vegetation between the trail and adjacent roadway and construction on relatively steep slopes, and would more noticeably change the visual character of the neighborhood than the On-Railbed Alternative.

In many places to the east, the hillside between the railbed and the roadway is planted with trees and shrubs. This vegetation enhances the natural character of the lakefront area and provides visual screening from the adjacent roadways. The Off-Railbed Alternative may require removal of a substantial amount of this vegetation.

In this area, the hillside between the railbed and the roadway to the east has steep grades. Some of these sloped areas are designated as Landslide Hazard Areas or Steep Slope Hazard Areas by the local jurisdiction. The Off-Railbed Alternative would require grading a flat bench into the steep hillside, requiring the construction of engineered retaining walls. With its proximity to the King County sewer interceptor line, it is envisioned that, rather than cutting into the hillside, this alternative would be built up on fill with a tall retaining wall on the west side as it travels through these neighborhoods.

The elevation of the Off-Railbed Alternative could be higher than the On-Rail Alternative. This may provide trail users with a better view of the lake, but also feel more intrusive to adjacent residents, because they may feel that trail users are looking down into their property. The raised trail would also result in visual impacts on residents as they would look out onto a retaining wall instead of the trail or

trailside vegetation. The presence of retaining walls and the removal of vegetation would change the visual character of the neighborhood views looking away from the lake.

## 3.2 NORTH NEWPORT NEIGHBORHOOD

The North Newport neighborhood spans a short segment of corridor from Coal Creek Parkway to I-90 and includes the Greenwich Crest and Newport Shores neighborhoods. Through this neighborhood, the ERC is bounded on both sides by residences and skirts the back of these residential properties. In this neighborhood, there is vegetation of various depths between the residential properties and the ERC. The topography is ascending to the east through this area so that the residences to the west are lower than the ERC and the residences to the east are higher than the ERC. The area in and around the corridor is characterized by an extensive tree canopy. Residences would not have direct line of sight to the trail in this area; therefore, visual impacts and loss of privacy are not likely.



View from the ERC to the west near Coal Creek Parkway.

The area in and around the corridor is characterized by an extensive tree canopy. Residences would not have direct line of sight to the trail in this area; therefore, visual impacts and loss of privacy are not likely.

In this neighborhood, there is not an adjacent street that provides “overwatch,” and much of the trail would be in a remote, tree-lined area. Because of the remoteness, King County could consider fencing or lighting to discourage people from straying off the trail corridor and to provide safety for trail users; these decisions would be made during final design.

Even though this neighborhood is near I-90 and I-405, existing traffic noise may be somewhat buffered by intervening topography. If that is the case, it is possible that residents may hear incidental noise from trail users regardless of which alternative is selected. In general, the project impacts would be very similar for both alternatives in this neighborhood. The few differences between the alternatives are discussed below.

Through this neighborhood, stormwater drains from the higher elevations to the east toward the lake. Where runoff encounters the existing railbed, conveyance ditches carry the water along the east side of the railbed to cross culverts. As a result, this section of the corridor is characterized by wetlands and wet ditches in proximity to the railbed. The King County sewer interceptor line continues to run along the east side of the corridor through this area.

### 3.2.1 On-Railbed Alternative

The On-Railbed Alternative would be aligned close to the center of the ERC right-of-way. The residences to the west are typically closer to the ERC than the residences to the east, which have relatively deep lots. Likewise, the trail would be closer to the residences on the west side than to those on the east side. There are critical areas in this neighborhood that would need to be avoided. Low retaining walls would



be used to reduce impacts on adjacent critical areas, and decorative fencing would typically be used to discourage trail users from encroaching into these areas.

### 3.2.2 Off-Railbed Alternative

The Off-Railbed Alternative would be aligned closer to the single-family residences to the east than the On-Railbed Alternative. The Off-Railbed Alternative would require more earthwork and potentially tall retaining walls to create the flat grade of the trail due to the steep grade. It also would require more clearing of the tree-canopied area that characterizes this portion of the corridor. Of these potential impacts, the removal of mature trees is likely to be the most noticeable, and could result in a visual impact on residents and trail users.

## 3.3 WEST BELLEVUE NEIGHBORHOOD

The portion of the West Bellevue neighborhood near the ERC is characterized by multi-family residences and some businesses. In this neighborhood, the ERC is located on the west side of I-405 until it crosses over the highway and is then located in the Woodridge neighborhood (discussed below). The multi-family residences are adjacent to the ERC, separated by a vegetation buffer.

Through this neighborhood, the topography of the area, with the trail at an elevation above the multi-family residences, would likely eliminate impacts from trail construction and use on this neighborhood. It may be perceived that the removal of vegetation between the residences and I-405 would result in a noticeable increase in traffic noise from I-405.



View of the ERC in the West Bellevue neighborhood.

## 3.4 WOODRIDGE NEIGHBORHOOD

The Woodridge neighborhood is characterized by single-family residences and encompasses an area east of I-405 and south of the Lake Hills Connector.

Much of the Woodridge neighborhood is often separated from the ERC by topography, and its road network does not intersect the corridor. The ERC skirts the back of some of the residential properties, but it is remote from roads that could provide “overwatch” of activities within the corridor. The elevation of the ERC with respect to adjacent residences changes through this neighborhood. The ERC is roughly 50 to 75 feet lower than the grade of the residences along SE 13th Street, at the same grade as

the residences near SE 11th Street, and 20 to 30 feet higher than the residences along SE 10th Street. The visibility of the trail from residents in this section of the Woodridge neighborhood would vary.

King County is considering developing trailhead access and parking west of the ERC in this area. The trailhead is intended to accommodate anticipated interest in the Wilburton Trestle as a destination. Development of this trailhead may reduce the likelihood of trail users and trestle visitors from parking in the adjacent neighborhoods. The Woodridge neighborhood would be an attractive place to park only if local access to the ERC is developed.

Through the Woodridge neighborhood, only the On-Railbed Alternative would be considered because King County would like to use the Wilburton Trestle as part of the trail. The topography of the area and the trail's distance from the residences would likely eliminate impacts from trail construction and use on this neighborhood.

### 3.5 WILBURTON NEIGHBORHOOD

The Wilburton neighborhood encompasses the area from the Lake Hills Connector to SR 520. This discussion is focused on the residential area east of the ERC between SE 5th Street and Main Street because, north of this area, the zoning switches to office, commercial, and mixed use.

The residential area occurs east of the ERC and intersects a small portion of the corridor, connected primarily by SE 5th Street and Main Street. Some office and commercial uses buffer the multi-family dwellings along 118th Avenue SE from the ERC. At this location, the ERC is about 15 to 20 feet below these adjacent properties. Because of this distance, intervening land uses, and topography, this neighborhood is not expected to be directly affected by noise during trail construction or use, loss of privacy, and other concerns that are more typical of neighborhoods immediately adjacent to a trail.

North of the Wilburton Trestle, both the On-Railbed and Off-Railbed alternatives would be considered. However, the direct effects on residential neighborhoods would not differ through this area; therefore, the primary driver in selecting a preferred alternative would be the potential future use of this area by transit or utility transmission.

### 3.6 KINGSGATE NEIGHBORHOOD

The Kingsgate neighborhood encompasses the area from Willows Road NE to NE 138th Street in Kirkland. The neighborhood is characterized by a mix of single- and multi-family residences, accessed primarily from 136th Avenue NE. The neighborhood is separated from the ERC by topography (a grade difference varying from 50 to 120 feet), a forested green belt, and distance (typically over 500 feet). Road access from the neighborhood to the ERC is limited to Willows Road NE at the south end and NE 145th Street at the north end. Any new local access to the ERC from the neighborhoods to the west, such as Kingsgate, could be proposed by the neighborhoods to the City of Kirkland. King County Parks would consider these proposals on a case-by-case basis, ensuring they are consistent with accessibility and safety objectives for the corridor as a whole. Because of the distance, topography, and forested conditions separating it from the ERC, this neighborhood would not be directly affected by noise during trail construction or use, loss of privacy, and other concerns that are more typical of neighborhoods immediately adjacent to a trail. The potential project impacts (in this case, lack thereof) on this neighborhood would be the same for both alternatives.

### 3.7 UPPER AND LOWER WEST RIDGE NEIGHBORHOODS

These Woodinville neighborhoods encompass an area west of the ERC Main Line from NE 145th Street to the Woodinville Wye. The Lower West Ridge neighborhood is immediately adjacent to the ERC with the Upper West Ridge neighborhood to the northwest beyond it. The Lower West Ridge neighborhood is zoned with less residential density than the Upper West Ridge neighborhood, and contains a few housing developments near the ERC, but they are separated by vegetation and elevation. The Upper West Ridge neighborhood is where the majority of the existing development occurs, and it is farther away from the ERC. Topography is a likely constraint to residential development within the Lower West Ridge neighborhood. West of the ERC, the elevation rapidly climbs from 45 to almost 200 feet.

Because of the distance, topography, and forested conditions separating it from the ERC, these neighborhoods would not be directly affected by noise during trail construction or use, loss of privacy, and other concerns that are more typical of neighborhoods immediately adjacent to a trail. The potential project impacts (in this case, lack thereof) on these neighborhoods would be the same for both alternatives under consideration.

### 3.8 POTENTIAL MITIGATION MEASURES

King County could implement the following mitigation measures to reduce neighborhood impacts:

- Provide parking near formal public access points to avoid and minimize traffic and on-street parking impacts in the hearts of neighborhoods
- Maintain access to residential areas and commercial businesses in the vicinity of the proposed trail
- Replant landscaping to provide visual screens and/or restore trail edge plantings, when consistent with King County policies for operating and maintaining the trail and corridor
- Limit trail use to daylight hours for safety as recommended in the King County regulations
- Provide litter receptacles, doggy litter bag boxes, and trail etiquette signs that cite applicable leash laws at public access points (King County Code 7.12, Rules for Use of Facilities)
- Post signs to prevent trail users from parking in private or restricted parking lots located near trail access points
- Post signs to designate public access points and to discourage access across private property
- Implement trail patrols by volunteer trail ranger programs
- Monitor crime rates in the area; provide additional coordination with law enforcement if crime rates increase
- Maintain the trail in a safe and clean manner, including regular vegetation pruning in accordance with identified standards
- Provide master keys to open locked bollards to all emergency service agencies serving the corridor
- Provide fencing according to project fencing schemes for each alternative
- Provide guardrails to separate vehicles from trail users where the trail is immediately adjacent to a driveway



- Include fencing along steep slopes to avoid the possibility of personal injury
- Provide signage and enforcement of trail rules and etiquette
- Provide signage along the corridor to educate trail users about the limits of public right-of-way and to warn against trespass onto private property
- Locate access points where the trail crosses existing public streets and public property, or at locations where access ramps and connector trails can be created within public rights-of-way to connect with existing streets or other public areas for safe access
- Provide sidewalks and crosswalks at many of the public access locations for public safety
- Limit speed for bicyclists according to King County's Trail Use Ordinance 8518, which establishes a speed limit of 15 miles per hour for all trails
- Notify adjacent property owners of the construction schedule
- Choose retaining wall materials that are appropriate to the particular location
- Use art or interpretive elements at sensitive locations such as gates, transition nodes or entrances, and at special environmental or natural features

The mitigation measures implemented would be determined during the project's final design phase.



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