Character Subarea Precedent Imagery

Maker District

Downtown Gateway District

Forbes Lake District

Green Innovation District

Rose Hill Gateway District

6.0

Land Use and Zoning —

Land Use, Zoning Concepts and Goals

The future land use concept for the station area focuses on two main ideas: establishing mixed use areas of various intensities in currently commercial or industrial zones and introducing lower scale missing middle housing types in those existing residential areas which are closest to the station. This land use concept is the basis for the form-based code regulating districts. The Station Area will facilitate existing City allowances for Missing Middle Housing typologies.

All inclusive neighborhoods with nodes of commercial gathering places and essential services in walking distance should be facilitated to create 15 minute neighborhoods. While existing businesses and households should be retained and the City could provide incentives for development that help to retain these key spaces.

The Form-Based Code

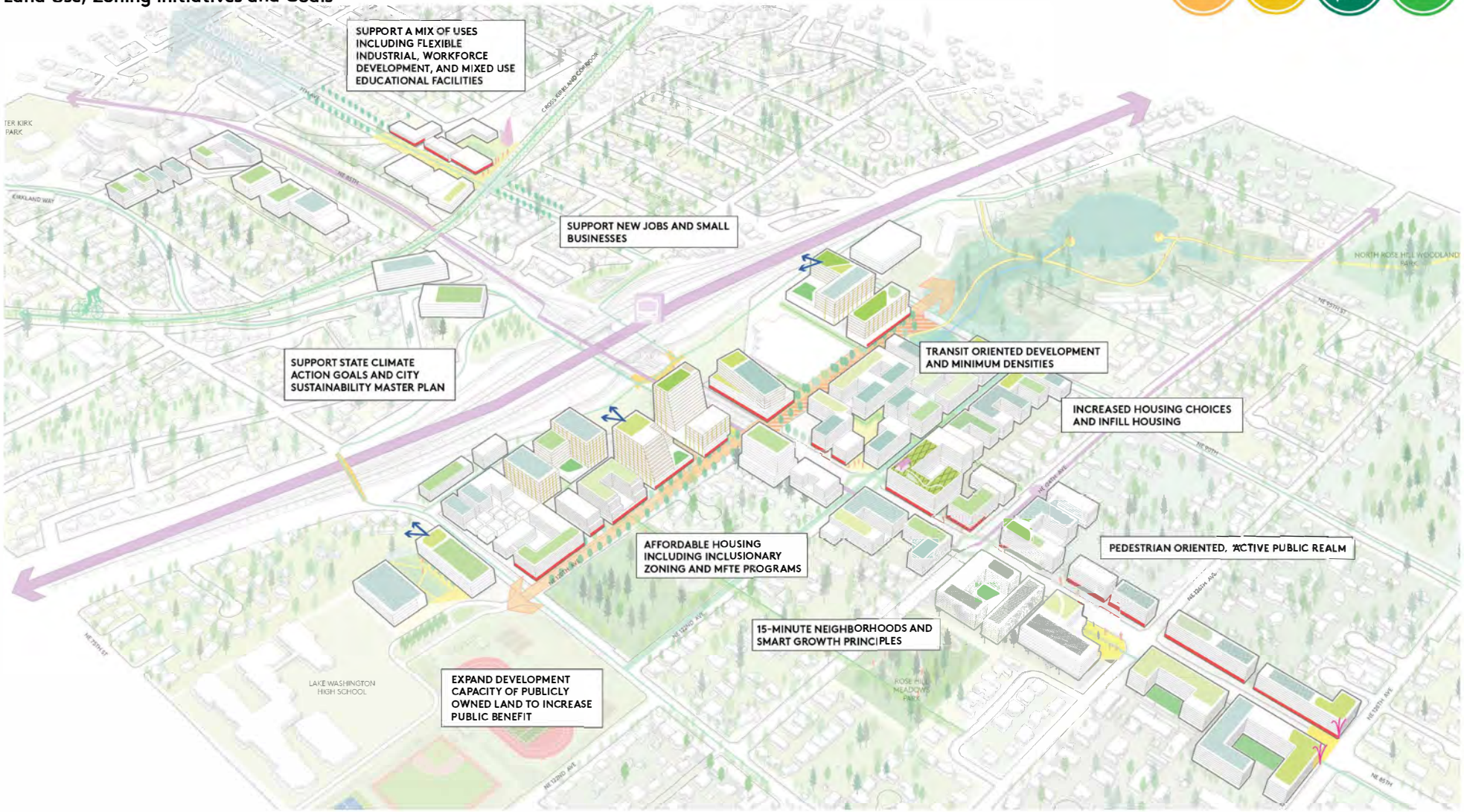
This land use concept is the basis for the form-based code regulating districts. Design standards implemented through the Form-Based Code will ensure compatible development and transitions. The form-based code will also help to encourage building designs that break up the massing to avoid monolithic forms, particularly for tower style developments. Limits on the footprint of tower-style development will regulate relationship of building massing to site open space. Design of exterior building illumination will reduce light pollution and spillover into adjacent, lower density neighborhoods outside the station area, including the use of shielding lighting, ground level fixtures, or other screening techniques.

All inclusive neighborhoods with nodes of commercial gathering places and essential services in walking distance should be facilitated to create 15 minute neighborhoods. Existing businesses and households should be retained and the City could provide incentives for development that help to retain these key spaces.

Green Innovation and Building Standards

Within the Form-Based Code districtwide green building standards, incentives and credentialing programs will be implemented. Retrofits to existing buildings to reduce energy use will also be encouraged. These goals will help to reduce energy consumption by retrofitting existing buildings with any renovations or upgrades.

Land Use, Zoning Initiatives and Goals



Growth Framework

Proposed Growth

The overall Station Area Plan growth framework developed in 2020 as a basis for the Draft Supplemental EIS alternatives is aimed at supporting an inclusive, transit-oriented district that supports existing residents and businesses while offering more choices for living, working, learning, and visiting the area. As a transit-oriented community, the station area will accommodate a significant share of the City's growth, in support of city and regional plans, and add more jobs to improve the balance of land uses in the area and the City as a whole. The intent ofhis strategy is to:

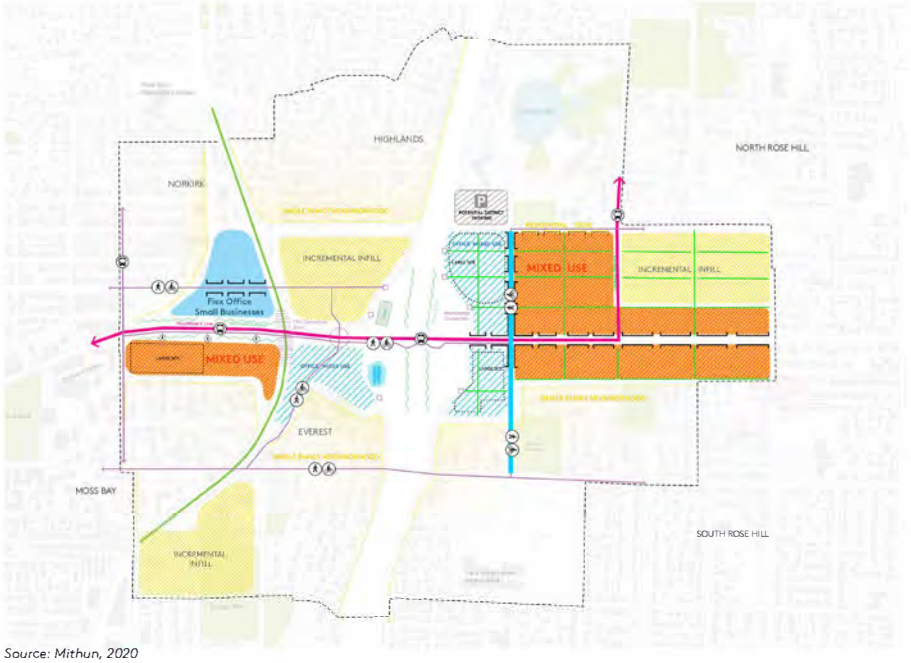
- Optimize for workforce and affordable housing.
- Attract new jobs to foster economic activity and meet citywide targets.
- Include commercial-focused development across different areas of the Study Area.
- Foster an environmentally sound land use pattern that helps achieve the City's sustainability goals.

The Growth framework responds to the public comment heard during the DSEIS comment period and the May 26, 2021 Council Listening Session.

The final Growth Framework only proposes increased allowable heights in areas that provide clear benefits to the community and take advantage of regional transit connections. To that end, several areas where height increases had been proposed as part of DSEIS Alternative 2 and 3 have been removed from consideration in the final growth framework. These include areas that are unlikely to redevelop due to market forces, are limited by development feasibility, or are constrained by other factors. The final growth framework is closest to DSEIS Alternative 2, with lower employment to create a better match between jobs and housing in the future.

In alignment with the Station Area Initial Concepts Growth Framework, a few areas of greater capacity for change as compared to existing conditions are included. These are focused around the BRT node and the Cross-Kirkland Corridor, including two areas in Rose Hill nearest to the future BRT station: the mid-rise office designation in the northeast quadrant and the high intensity office designation in the southeast quadrant; and the flex industrial – residential capacity in the Norkirk LIT area in the northwest quadrant. Because of this greater capacity for change, these areas receive greater study in some studies regarding fiscal impacts and potential for community benefits. It is important to note that development will likely occur incrementally, and in all cases, the analysis reflects a hypothetical assumption of the total allowed development in the June Alternatives and is not meant to presuppose decision- making by private landowners or the actions of the market. References to the current ownership have been included to assist the reader in identifying the locations that were evaluated.

Study Area (June 2020): initial growth concept that served as the basis for the draft SEIS alternatives



Source: Mithun, 2020

Preferred Plan Direction (2044)	
Households	8,152
Employment	22,751

Totals refer to 2044

Growth Expectations (2044) - GSF	
GSF Residential	4,990,000
GSF Office	5,260,000
GSF Retail / Restaurant	900,000
GSF Flex / Industrial	150,000

Totals refer to 2044

NE 85th Study Area Future Vision

Future Land Use Map

Regulating Districts are intended to translate the vision and goals documented in the NE 85th Station Area Plan into standards that define allowed uses, lot parameters, building massing, and height controls. Regulating districts consist of two elements: Regulating District Standards that specify development standards for each district, and a Regulating Plan that maps these districts to specific parcels.

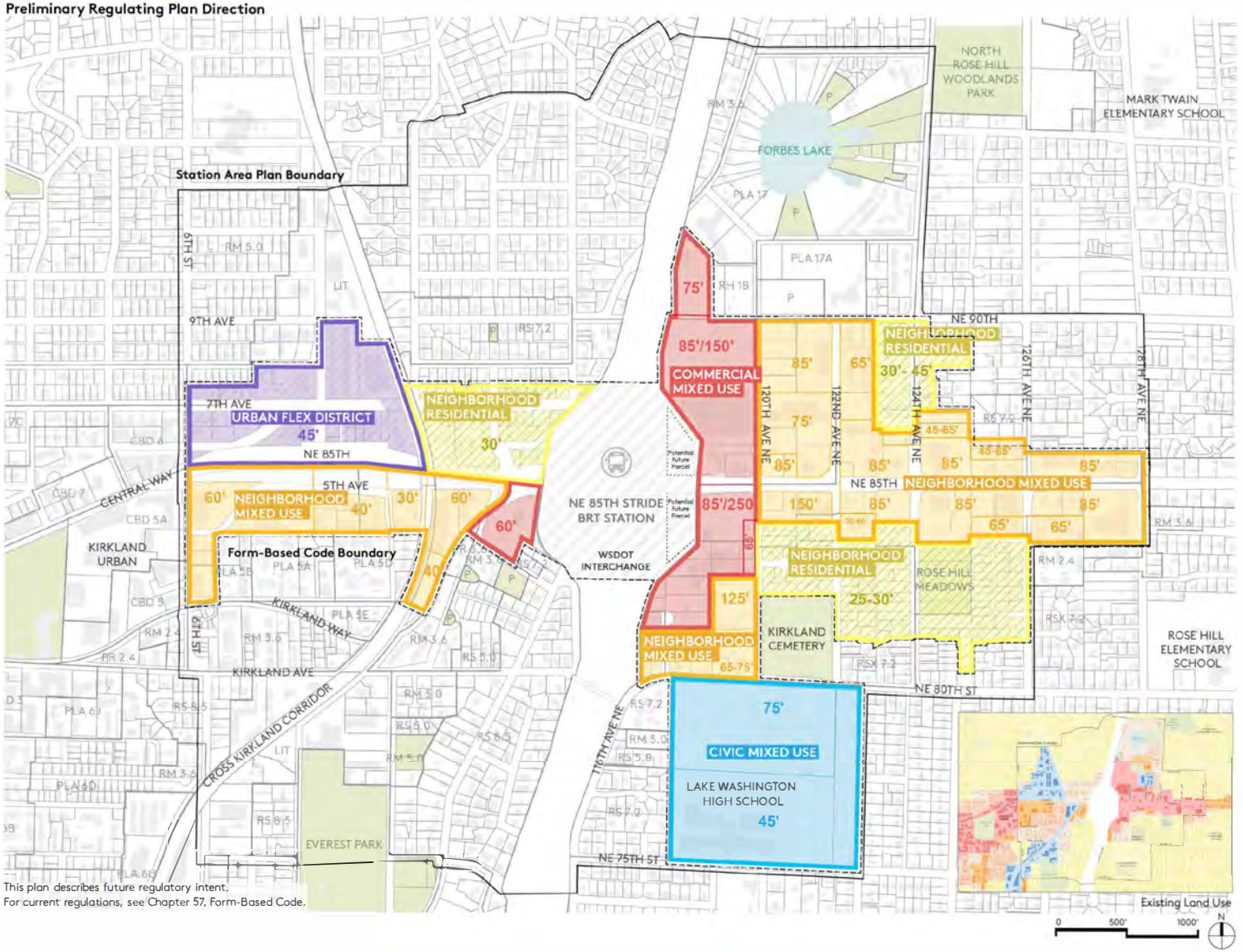
The Regulating Plan maps the applicable areas of the form-based code area with the appropriate regulating district designation. Each designation includes two parts: a district designation followed by the height subdistrict for that zone. Heights are stated in terms of maximum base and bonus heights. For instance, NMU 85/150 would reflect a base maximum height allowance of 85' and a bonus maximum height of 150'. The Incentive Zoning section of the Form-based Code will include details on utilizing the bonus allowances.

Mixed use areas are represented in the form-based code regulating plan as Commercial Mixed Use, Neighborhood Mixed Use, Civic Mixed Use, Neighborhood Residential, and Urban Flex districts. The Commercial Mixed Use district does not allow residential and focuses on institutional and commercial land uses, with active ground floor uses on key streets. Neighborhood Mixed Use and Civic Mixed Use districts allow for a combination of residential, institutional, and commercial uses, with different height subdistricts established. The Urban Flex district allows for light industrial, some residential, and commercial uses consistent with a neighborhood scale, pedestrian oriented environment. Residential areas intended for lower intensity infill are represented by the Neighborhood Residential regulating district

Commercial Mixed Use
Urban Flex
Civic Mixed Use
Neighborhood Mixed Use
Low Density Residential
Park/Open Space

RSX 7.2 Existing Zoning
Form-Based Code Boundary
Station Area Plan Boundary

Preliminary Regulating Plan Direction



This plan describes future regulatory intent.
For current regulations, see Chapter 57, Form-Based Code.

The Form-Based Code

In December 2021, City Council voted to confirm the Preferred Plan Direction. Implementation of the vision established in the Preferred Plan Direction and forthcoming NE 85th Street Station Subarea Comprehensive Plan Chapter requires a comprehensive set of regulations and supporting design guidelines. This form-based code is intended to facilitate development in the Station Area with clear and predictable standards that support transit-supportive development intensities in a high quality, pedestrian-oriented built environment.

Form-Based Codes Overview

Form-based codes are an approach to land use regulation that focuses on physical form as a primary element of zoning. Conventional zoning evolved with a focus on the separation of land uses, and over time has adapted to take on more complex topics like building height, massing, and other elements of physical form. This can create zoning codes that have unpredictable outcomes, do not achieve the character desired by the community, and which become complex to administer.

By contrast, form-based codes are organized around the desired physical character of future development with graphic, clear illustrations. This focus on physical form can result in future development that better matches the desired character of an area. One key aspect of form-based codes is that they can better link private development to the character of adjacent development and public spaces, creating a more seamless, inviting public realm.

Form-Based Code Elements

Form-Based Code Applied

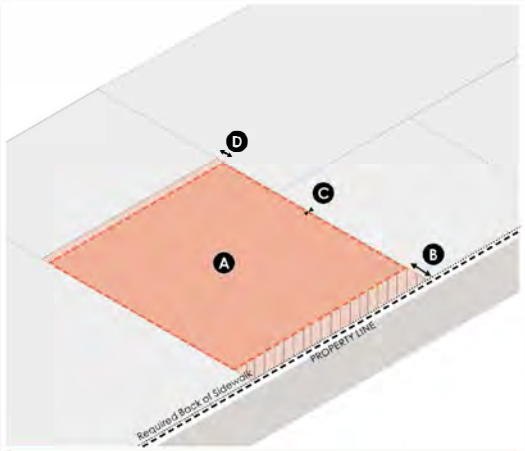
NE 85th Street Form-Based Code

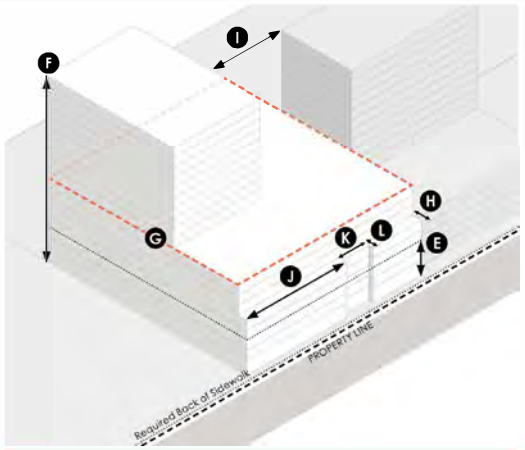
The form-based code for NE 85th St Station Area Plan applies to a subset of the larger study area (see regulating plan). The NE 85th St form-based code is key to realizing several aspects of the vision and goals of the overall plan. For instance, frontage standards include ground level parking setbacks that require structured parking to be located behind ground level uses that activate the public realm. Regulating districts like the urban flex district include standards to encourage smaller scale commercial spaces that can support existing local businesses and "maker" uses. This code is organized into four sections:

Regulating Districts
Regulating districts define primary features of overall building form, including lot parameters, massing, height, and permitted uses. A regulating plan defines the regulating district designation and allowed height for each parcel. These regulating districts are established on the Kirkland Zoning Map and in the code. An example of the Commercial Mixed Use district is shown to the right.

This excerpt is for illustration purposes only. For current regulations, see Kirkland Zoning Code Chapter 57.

Regulating District Example: Commercial Mixed Use





LOT COVERAGE AND SETBACKS

	Permitted Uses	
	General Permitted Uses	Commercial, Institutional
	Lot Coverage	
A	Max Lot Coverage *	90%
	Required Yards	
B	Front	Refer to Frontage Types
C	Side	0' Min
D	Rear	5' Min

** Lot coverage as shown does not represent intended building placement or setbacks.*

MASSING AND DEVELOPMENT DENSITY

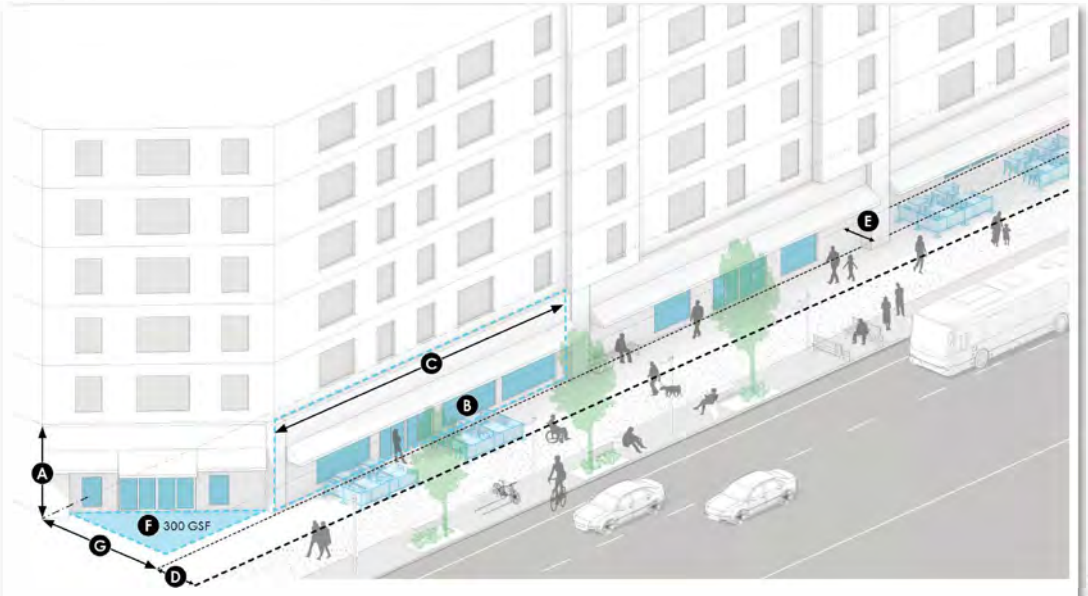
	Height and Floor Area	
E	Base Maximum Allowed Height	Refer to Regulating Plan
F	Bonus Maximum Allowed Height	Refer to Regulating Plan
G	Maximum Floor Plate (per building)	Between 45'-75': 35,000 GSF Between 75'-125': 25,000 GSF Above 125': 20,000 GSF
	Setbacks and Tower Separation	
H	Upper Story Street Setbacks	At 75': 15' setback At 125': 30' setback
I	Tower Separation	60'
J	Maximum Facade Width	160'
K	Minimum Facade Break Width	15'
L	Minimum Facade Break Depth	5'

Frontage Types

Establish design regulations for private property frontages, including the required front setback and building base. Eligible frontage types are determined based on the adjacent street type for a subject property.

This excerpt is for illustration purposes only. For current regulations, see Kirkland Zoning Code Chapter 57.

Frontage Type Example: Retail and Active Uses



GROUND FLOOR DESIGN AND ENTRY		
Ground Floor Design		
A	Minimum Street Level Story Height	15'
B	Facade Transparency	75%
C	Max Street Level Facade Width	65'
Entrances		
	Location	Required on primary street-facing frontage
	Entry Transparency	80%

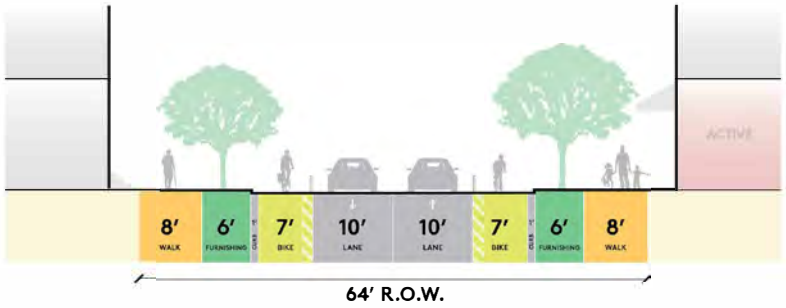
PUBLIC REALM		
Public Realm		
D	Front Setbacks (Min, Max)	0',15'
E	Sidewalk Cafes/ Amenity Zone	Min depth 7', up to 10' additional setback allowed
F	Corner Design	300 GSF required within property line at corners where two intersecting streets are a combination of major thoroughfare, main street, or neighborhood mixed use
G	Ground Floor Parking Setback	25'

Street Types

Set the design intent for specific segments of public ROW, including functional classification, prioritized transportation modes, sidewalk and bikeway facility dimensions, and expected streetscape amenities like trees, planting, hardscape, and street furnishings.

This excerpt is for illustration purposes only. For current regulations, see Kirkland Zoning Code Chapter 57.

Street Types Example: Neighborhood Mixed Use Street



DESCRIPTION

Neighborhood mixed use streets have low to mid-intensity commercial and residential, with occasional active ground floors. With generally lower vehicular volume than major thoroughfares, these streets require careful balancing among modes and should include wider sidewalks, buffered bike facilities, transit routes, and narrower travel lanes.

PERMITTED FRONTAGE TYPES

URBAN STREET EDGE	RETAIL & ACTIVE USES	RESIDENTIAL STOOP/PORCH	PLAZA/ PUBLIC SPACE	PRIVATE YARD
Permitted	Permitted	Permitted	Permitted	Permitted

FUNCTIONAL CLASSES	Minor Arterial, Collector, Neighborhood Access
ADJACENT LAND USES	Low to mid-intensity commercial, residential, and occasional active ground-level uses, civic and urban flex uses

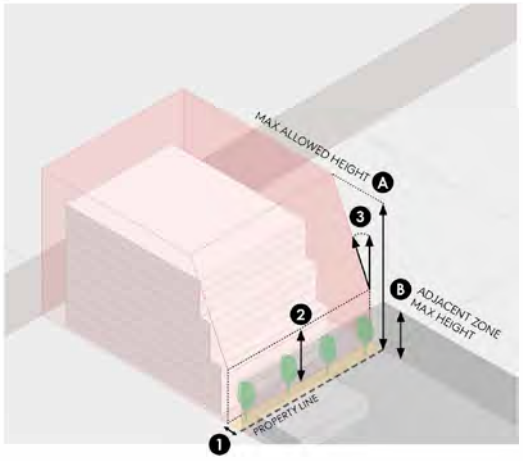
Districtwide Standards

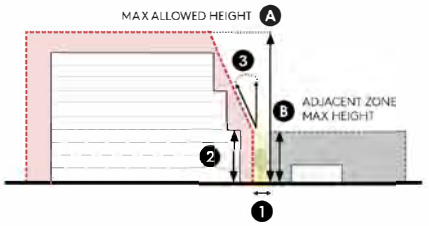
Shown in the transitions example apply across the subarea, and include overall transitions, parking, plazas and public spaces, landscaping and open space, and sustainability and green innovation.

To use the code, an applicant first identifies the applicable regulating district for their property. Based on the street type designation for the parcel frontage, the applicant can choose from a set of eligible frontage types for that street type, as well as an understanding of the requirements for any improvements to the public right of way.

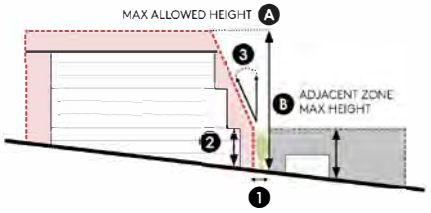
This excerpt is for illustration purposes only. For current regulations, see Kirkland Zoning Code Ch 57

Transitions Example





Additional example: slope condition



TRANSITIONS

Applicability	A B	Transitions are required if the **allowed maximum height for the subject parcel** is greater than 30' above the **maximum allowed height for any adjacent parcel.**
Requirement	1	Create a vertical plane 15' away from and parallel to the common lot line.
	2	Establish a maximum height of the vertical plane that is equal to the midpoint grade elevation plus the maximum allowed height for the zone of the adjoining property.
	3	From the top of this vertical plane, extend a sky exposure plane at an angle of 25 degrees to the maximum allowed height of the subject property zone.

Green Innovation

Within the Form-Based Code District wide Standards, a Green Innovation component has been included to ensure that new development is consistent with the vision of the NE 85th Street Station Area Plan Sustainability Framework as well as aligned with the Sustainability Master Plan. The document outlines several requirements in detail with the overarching subjects of:

- High Performance Buildings
- Energy and Decarbonization
- Ecosystems and Green Infrastructure

Green Factor

The Green Factor is one of the primary tools that will be used to achieve the Ecosystems and Green Infrastructure goals at the project scale through building- and site-integrated green infrastructure. The Green Factor sets criteria for landscape and site-based sustainability measures. The landscape elements and benefits that are included in the Green Factor code will contribute to larger district sustainability goals focused on the natural environment, ecosystems, and stormwater.

Green Factor Criteria

1 LANDSCAPE ELEMENTS

- A Bioretention facilities and/or soil cells
- B Structural soil systems
- C Landscape areas with soil depth less than 24"
- D Landscape areas with soil depth of 24" or more
- E Preservation of existing trees
- F Preservation of Landmark trees bonus
- G Preservation of exiting evergreen trees bonus
- H Groundcovers or other low plants
- I Medium shrubs or perennials
- J Large shrubs or perennials
- K Small trees with 500 ft^3 soil volume
- L Medium trees with 1000 ft^3 soil volume
- M Large Trees with 1500 ft^3 soil volume

2 GREEN ROOFS

- A Area planted with at least 2" but less than 4" of soil
- B Area planted with at least 4" but less than 8" of soil
- C Area planted with at least 8" but less than 30" of soil
- D Area planted with trees and least 30" of soil

4 LANDSCAPE BENEFITS

- A Landscaped areas in food cultivation
- B Landscape areas with native or drought tolerant plants
- C Landscape areas at sidewalk grade where the majority of the area is covered with vegetation that is native or drought tolerant, and/or provides habitat for urban wildlife and pollinators
- D Rainwater harvesting
- E Planting that provides food, forage and refuge for a diversity of species and/or inclusion of habitat elements such as woody debris, gravel/cobble, nesting materials, etc.

5 PERMEABLE PAVING

- A Permeable paving over 6"-24" soil or gravel
- B Permeable paving over at least 24" of soil or gravel

3 GREEN WALLS

- A Facade or wall surface onbstructed with vines
- B Facade or wall surface planted with a green wall system

Green Factor Criteria

7.0

Parks, Open Space & Environment —

Parks, Open Space and Environment Concepts and Goals

Open space within the Station Area will provide multiple benefits for employees, visitors, and resi-dents living in and around the Station Area and these spaces will be critical in supporting growth while providing places for people to gather and support mental, physical, and community well-being. Open spaces that are welcoming to people of a wide range of ages and stages of life, that support social connections, art and culture, and everyday interactions should be prioritized.

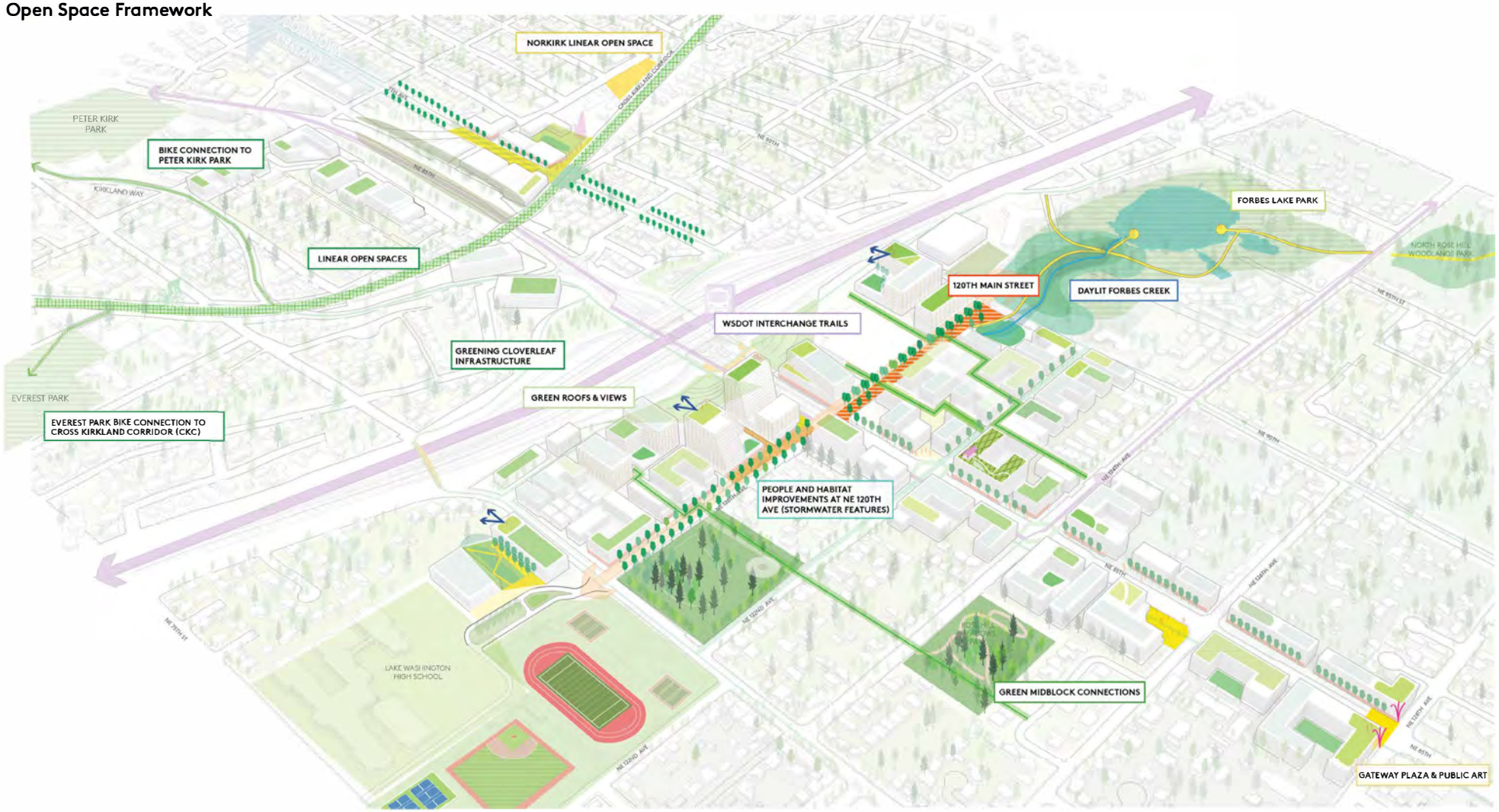
Open Space strategies within the larger Station Area align with the goals of the Parks, Recreation and Open Space Plan and the Sustainability Master Plan, and should respond to the character and scale defined for each of the Character Subareas and respond specifically to the environmental conditions of their watersheds (Moss Bay and Forbes Creek). While there are existing assets within the station area including Forbes Lake and areas of tree canopy and habitat, there are also gaps that exist due to urban development patterns and barriers. Goals include improving and connect-ing tree canopy and habitat areas, improving stream health by daylighting or making other im-provements, and generally minimizing impervious surfaces. Green infrastructure techniques that incorporate trees, planting, and natural materials as part of the drainage system, instead of con-ventional 'gray' stormwater facilities, provide additional environmental and open space benefits and support resilience through air and water quality, shade and cooling, and habitat. When con-sidering new open space design and existing open space enhancement opportunities, multi-benefit strategies that serve functions of active/passive recreation, flexible use open space, and environ-mental functions like stormwater management, carbon sequestration, air quality, and urban heat island mitigation, should be prioritized to maximize value.

Within the Station Area, open space opportunities include: the creation of urban linear parks, pocket parks, and plazas, rooftops and mid-block connections, passive and active recreational parks, arts, cultural, and gathering spaces, and enhancements to existing parks and open space. Within these spaces, sustainability goals are promoted by prioritizing the use of large canopy trees, a diverse plant pallet of species that are native, drought tolerant and provide habitat such as food, forage, and refuge, and the integration of stormwater management. Management of Kirkland's urban forest resource for optimal health, climate resiliency and social equity will be important in creating new open spaces.

New development within the Station area should be encouraged to provide publicly accessible parks and sustainability components at ground level or at upper-level portions of the site, while considering opportunities to replace tree canopy to support ecological goals by adding new trees and habitat with plantings wherever gaps exist. Enhancing publicly owned land to support open space objectives with improvements to provide open space and recreational amenities and explore potential partnerships for shared use agreements to support recreational uses. These actions will help to contribute to the overarching goal to provide all areas within the Station Area a park or open space within a 15-minute walk. Coordination with the PROS Plan on how park LOS is defined in more urban areas of the City that moves toward equitable park access within walking distance and away from a per acre approach should be considered to more broadly leverage green infrastructure to create more open space, educational and environmental opportunities.

Integrate parks and open spaces throughout the area and ensure all residents have access to open space within a 15-minute walk.

Open Space Framework



Open Space Typologies: Characteristics

Open space opportunities will arise through public projects and with private development throughout the Station Area. Several varying typologies have been identified in the table below which can supplement and enhance private development while improving the open space network already in existence. As more development occurs and jobs and housing increase, so will the amount of open space. City of Kirkland staff will work with the development community as projects arise to fulfill the appropriate scale and type of open space to enhance the overall park and public realm system.

The following table describes twelve (12) open space typologies with siting criteria, approximate sizing requirements, programming potential and some example project opportunities.

Support park opportunities and amenities for community.

Open Space Typology	Siting Criteria	Sizing Range	Example Typical Program / Features	Example Opportunities within Study Area
1. Linear Open Space Along Trails	To be located in dense areas linking major urban nodes.	Minimum size of 15,000 SF	• Landscaping • Seating • Public Art • Performance spaces	Developer improvements along Cross Kirkland Corridor (CKC) or Trail connections to transit stops along NE 85th Street and the BRT station
2. Pocket Parks	Within tightly spaced urban fabric where accommodating larger open space is difficult, or where open space is needed in areas with limited access to park spaces.	Minimum size 10,000 SF	• Trees • Seating • Public Art • Performance spaces	Pocket park within dense commercial district
3. Active Recreation Spaces	Consider in areas where programming is lacking.	Playground minimum of 5,000 SF / Pickleball minimum of 7,500 SF	• Playground • Exercise Equipment • Pickleball / Tennis / Courts • Dog Parks and Dog Runs	Pickleball Courts; playground or exercise equipment in pocket parks and/or linear open space
4. Community Gardens (small & rooftop ex.)	Consider rooftops and temporary surface parking lots.	Varies on context	• Planter beds • Pollinator and bee habitat • Gathering tables / sinks / tool sheds	Surface parking lot potential; pocket parks; public plazas; private rooftops; publicly accessible rooftops
5. Rooftops with Public Viewpoint	Programming such as dog runs or playgrounds should be chosen in areas where a large proportion of families with young children live.	Playground minimum of 5,000 SF	• Playground • Cultural / Performance spaces • Dog Parks and Dog Runs	Potential for Playground or dog runs on top of residential rooftop within new commercial district zone.
6. Green Mid-block Connections	Sited within a travel corridor to maintain continuity for pedestrians and/ or cyclists. Or may exist adjacent to active frontages.	Varies on context	• Seating • Elements of landscaping • Water components	Opportunities for east/west connections off 120th Main Street
7. Neighborhood Park	Should be sited near residential land use and provide adequate opportunity for a variety of program.	Minimum size of 2 Acres	• Seating and Public Art • Elements of landscaping • Community gardens • Cultural and Performance spaces	Enhance existing publicly owned parks and improve access to support open space objectives. Seek opportunities for community access to recreation assets, spaces, and facilities.
8. Community Park	Sited next to residential areas with access to pedestrian and bike paths. Large areas of managed landscape and opportunities for shade, program, refuge and impermeable surface.	Minimum size of 15 Acres	• Community center • Elements of landscaping • Connections and walking/cycling paths	Enhance existing publicly owned parks and improve access to support open space objectives. Seek opportunities for community access to recreation assets, spaces, and facilities.
9. Plazas	Plaza will supply physical and visual access from the adjacent right-of-way. Support sense of security to users through well-lit and visible spaces.	Minimum size of 3,000 SF	• Seating • Elements of landscaping • Public Art • Water components	Norkirk Plaza at 7th Avenue and 112th St Ave NE; other examples could be larger-scale redevelopment in Station Area; coordination with corner treatments required in FBC
10. Tree Canopy and Habitat	Locate in areas where abundant natural light and limited infrastructure below grade is present to accommodate large soil volumes and trees. Seek opportunities to expand canopy and habitat, and bridge existing gaps.	-	• Landscaping • Green infrastructure and stormwater features • Nature trails	Opportunities for additional tree canopy and habitat improvements within underutilized spaces, public land, and easements could be included as part of streetscape and multi-benefit projects. There is also an opportunity for a city Tree Nursery that would require a site at about 20,000 SF.
11. Unprogrammed Green Space	Opportunity to provide refuge and passive place to contemplate or simply enjoy nature, which may be sited within medium to lower scale density.	0.25 Acres.	• Heavy vegetation • Landscaping • Seating	Forbes Lake Park Kirkland Cemetary
12. Green Infrastructure and Stormwater with Open Spcae for People	Areas that can accommodate water storage, conveyance, and quality improvements through natural systems that provide co-benefits	See standards	• Landscaping • Green infrastructure • Green roofs	Forbes Lake Park

Open Space Typology Examples

Linear Open Space Along Trails

Linear Open Spaces along trails will be a minimum of 15,000 square feet and incorporate a variety of programs. Opportunities within the study area include developer improvements along the Cross Kirkland Corridor (CKC) and trail connections to transit stops along the 85th Street and BRT Station.

Community Gardens

Community gardens are opportunities to provide planter beds for food cultivation and/or habitat for pollinator species and bees. They can be in surface parking lots as temporary programming, or in more permanent conditions such as on private rooftops, within pocket parks, public plazas and on publicly accessible rooftops.

Pocket Parks

Pocket parks are opportunities to incorporate open space in dense, tight urban fabric with a minimum of 10,000 square feet. The commercial mixed use district could see potential for pocket parks given its density.

Active Recreation

The types of active recreation programming is limitless and varied. Some example opportunities for the Station Area include pickleball courts, playgrounds, exercise equipment, and bocce ball courts.

Rooftops with Public Viewpoint Areas

Rooftops have a wide potential to create public amenity space whether it be on private rooftops, or publicly accessible ones. Potential for playgrounds within the new commercial district zone is possible, along with other programming including community gardens or dog parks.

Green Mid-Block Connections

Opportunities for east/west connections off of 120th Main Street are possible for green mid-block connections which can vary in size depending on its context.

Neighborhood Park

New neighborhood parks should be a minimum of 2 acres in size. Existing neighborhood parks in and near the station area include Rose Hills Meadows Park and North Rose Hill Woodlands Park. Better connections to existing community parks will support open space objectives, and an inventory of existing publicly owned parcels within the station area should be completed to seek other opportunities.

Community Park

New community parks should be a minimum of 15 acres. Existing community parks near the station area include Peter Kirk Park and Everest Park. The City currently has an agreement with Lake Washington High School for shared use of their fields and recreation facilities. Enhancements and better connections to existing community parks will support open space objectives, and an inventory of existing publicly owned parcels within the station area should be completed to seek other opportunities.

Plazas

Plazas are a minimum of 3,000 square feet and offer the opportunity for flexible gathering spaces for events, performances, art, or other uses, as well as an important opportunity for wayfinding and identity elements. The future of the area could include a plaza at 7th Avenue and 112th St Avenue NE, or a gateway plaza in the Rose Hill area along NE 85th Street as part of a larger scale redevelopment in Station Area; Coordination with corner treatments required in FBC

Tree Canopy and Habitat

Tree nursery opportunity within the area would provide greater tree canopy and habitat as well as serve a function for the Parks and Community Services Department.

Unprogrammed Green Space

Passive, unprogrammed green space is important to a neighborhood to provide moments of refuge, contemplation, and true connection to nature. Areas of this nature could include public or interpretative art, should be a minimum of 0.25 acres and examples include Forbes Lake Park and the Kirkland Cemetery.

Green Infrastructure and Stormwater With Open Space for People

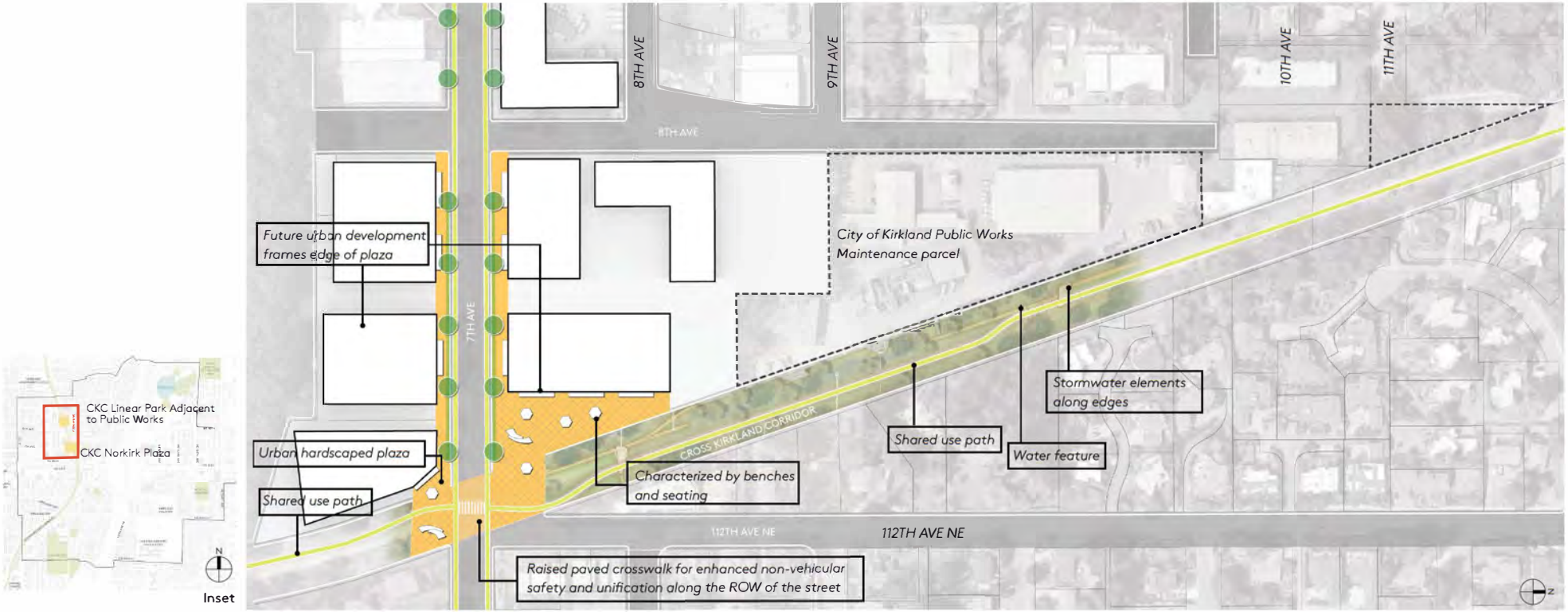
Areas to store and contain extra water can be accomplished throughout the Station Area within a variety of scales. Forbes Lake Park will have the opportunity to accommodate green infrastructure and storm water while providing green space for people to enjoy.

Open Space Project List

Cross Kirkland Corridor Related Improvements at Norkirk Plaza and adjacent to Public Works Maintenance Center

The Cross Kirkland Corridor (CKC) Norkirk Plaza is located at the important intersection of 7th Avenue and 112 Street where bike focused infrastructure is envisioned to connect from the BRT pick up / drop off location to downtown. This concept builds on the CKC Master Plan vision and will support the creation of publicly accessible transit-oriented open space within the urban neighborhood. It is characterized by high quality landscape materials, pedestrian-oriented amenities like seating, and buildings that engage the open space.

Feriton Spur Park

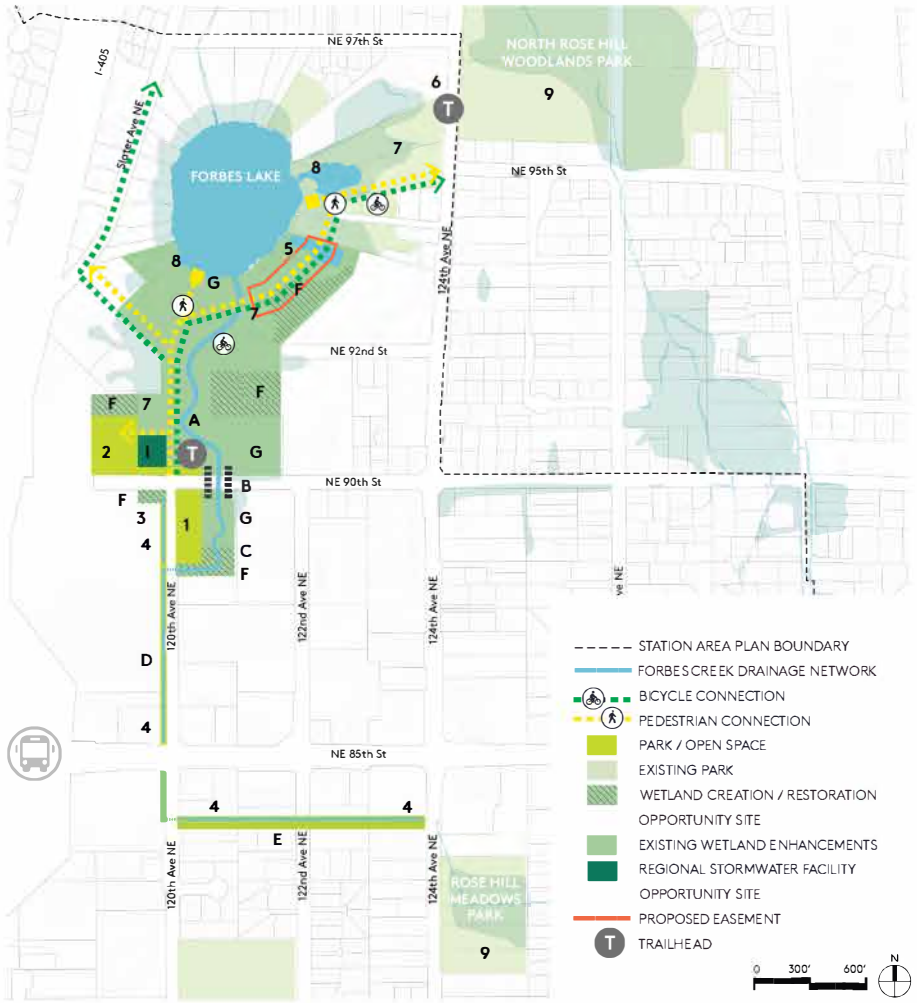


Forbes Lake Park

Preliminary planning to expand public open space and neighborhood connectivity near the City of Kirkland's Forbes Lake Park as part of the Station Area Plan has been explored. Existing protected critical areas, including Forbes Lake and associated wetlands and tributary drainages to Forbes Creek, including some piped conveyances, appear to restrict options for developing recreational facilities, however the attraction of these natural features provide opportunities for passive and active recreational public use and environmental education and interpretive exhibits.

Forbes Lake Park is proposed to have a boardwalk with easy connections to North Rose Hill Woodlands Park as well as active transportation facilities nearby, that is a minimum of 10 feet wide to support two-way directional travel with open grate decking to avoid exceeding single threshold stormwater discharge. High Performance Bioretention Soil Mixture would likely be incorporated into Forbes Lake Parks to enhance overall water quality. The City encourages daylighting a stream that is located in a culver to restore it to a more natural open space with tree preservation and native buffer vegetation plantings. The purpose is to improve the values and functions of the stream, including maintaining water quality, reducing storm and flooding water flow, and providing wildlife habitat.

The proposed open space options have been selected to avoid and or minimize potential environmental impacts, as required for regulatory compliance and permitting by federal, state, and local agencies, as applicable.



120th Ave NE Corridor and Forbes Lake Vision

A refined corridor at 120th Ave NE serves as an important connection to Forbes Lake Park as well as Lake Washington High School. It will accommodate a place for both pedestrians with wide sidewalks, as well as cyclists with dedicated bicycle facilities avoiding shared bike/ped routes where possible. Slow vehicle speeds with narrow travel lanes, smaller turning radii and other traffic calming measures are envisioned along the corridor. A strong public realm that focuses on the transitions for buildings and their relationship at the ground floor will be emphasized, and developments will be encouraged to include publicly accessible plazas and pocket parks along the 120th Ave NE frontage. The northern terminus of 120th Ave NE in the Station Area will meet a gateway to the Forbes Lake Park boardwalk.

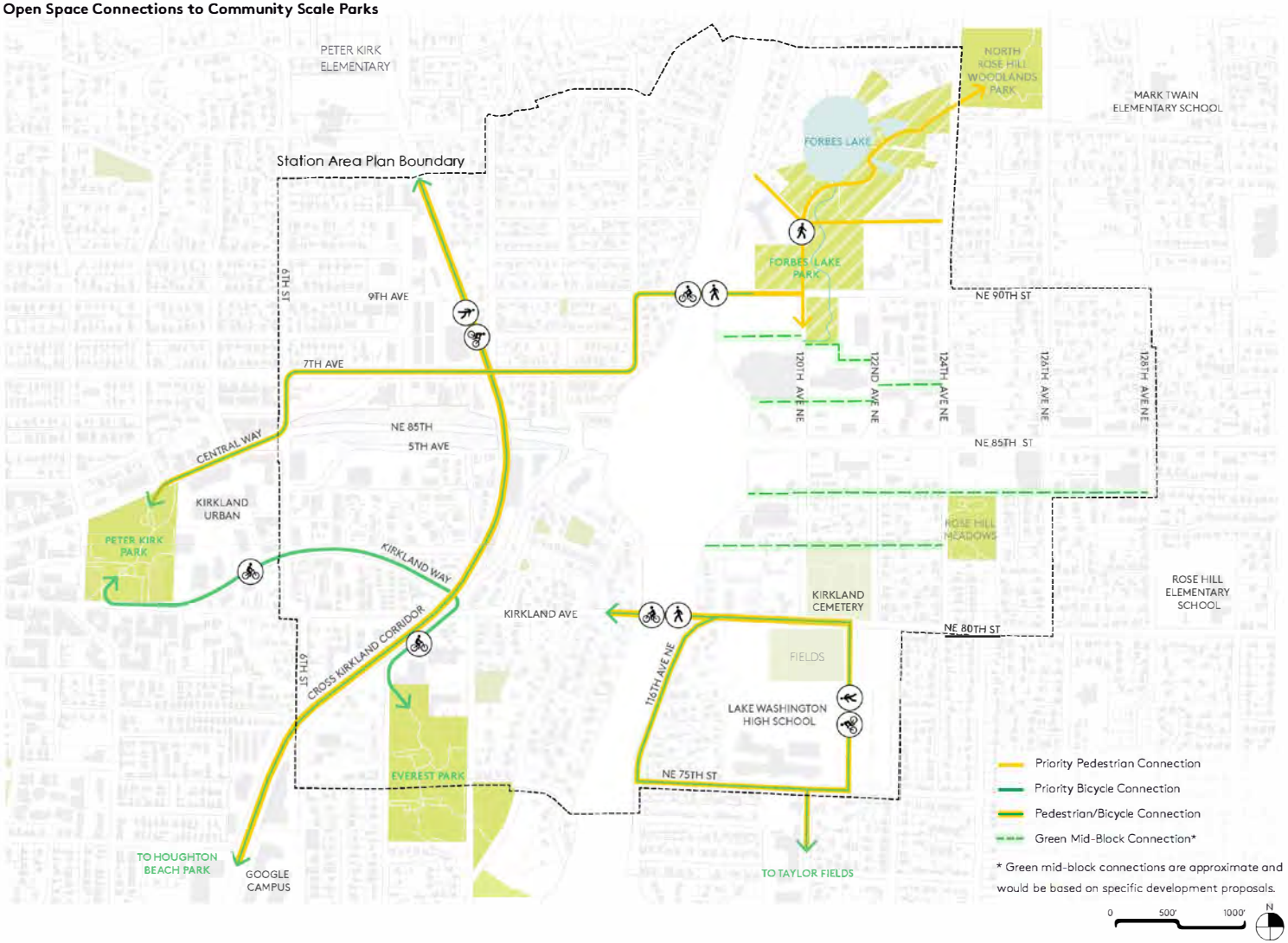
Support habitat, stream, lake and wetlands health.

Enhanced Connections and Improvements to Existing Parks

The planning process identified opportunities for enhanced connections to existing parks. These enhanced connections will improve access to parks, and creating connections from the Cross Kirkland Corridor to existing parks will help link together existing recreational spaces in, and close to, the district. Existing Community Park assets of Peter Kirk Park, Taylor Fields, and Everest Park located just outside the Station Area and partially within the area respectively could be improved, and walking and cycling routes to these community assets can be enhanced, including connections directly from the CKC. There is an opportunity for the City to improve existing public assets with enhanced or new park and recreation elements, and all publicly owned land should be studied for potential to contribute to open space objectives. These enhancements and connections can help address gaps in the system in the south western area of the Station Area.

Enhance community and neighborhood parks and improve ease of access by walking, rolling and transit.

Open Space Connections to Community Scale Parks



8.0

Transportation & Mobility —

Transportation and Mobility Concepts and Goals

The Station Area has served a crossroads for many years, as NE 85th Street, known as "Old Redmond Highway," was the first paved highway on the eastside, and with its location up the hill from downtown, has been a natural place of connections for many generations, including the old rail corridor, that is now the Cross Kirkland Corridor trail, to points north and south.

Today, NE 85th Street continues to be an important connector from Kirkland to Redmond and other east side communities, and the interchange at I-405 provides regional north-south access. As a principal arterial, NE 85th St has been designed to support throughput, moving people between places. NE 85th Street has a right-of-way width of nearly 100' wide and a typical curb to curb width of 60'. With significant roadway volumes on NE 85th St, and the north-south barrier of I-405 to east/west connectivity, these roadways have a profound effect on the surrounding neighborhoods, creating physical and social barriers between the four quadrants. Existing development is auto oriented with large parking areas and very little space devoted to walking and biking.

Construction of NE 85th Street

The planned Stride BRT station and multi-modal access improvements present a significant opportunity and impetus to improve many of these conditions. As a transit-oriented community, the station area will accommodate a significant share of the City's growth, in support of city and regional plans, and add more jobs to improve the balance of land uses in the area and the City as a whole. Together with multi-modal infrastructure and services, these plans will support a proactive shift toward a successful place that builds value for the city and community benefit.

As a place to be, rather than to pass through, the Station Area will support and improve access to businesses, homes, schools, and open spaces. It will put people, bicyclists, and transit first, while maintaining a manageable level of vehicular traffic. Along with growth and development, the plan envisions more places for people to gather and spend time, in a lively public realm. The planned transportation improvements as a part of this effort have been designed to support a robust mobility network that bridges some of the existing barriers, increases network connectivity, and provides safe intersections and crossings.

A Focus on Mobility

Main goals throughout this plan are to support mobility, to increase opportunities for people to walk, bike, and take transit to key services and destinations, and to manage vehicular congestion. Transportation analysis was conducted in coordination with The City of Kirkland to support their understanding of community benefits, tradeoffs, and fiscal impacts of different transportation alternatives for the I-405/NE 85th Street Station Area Plan (SAP).

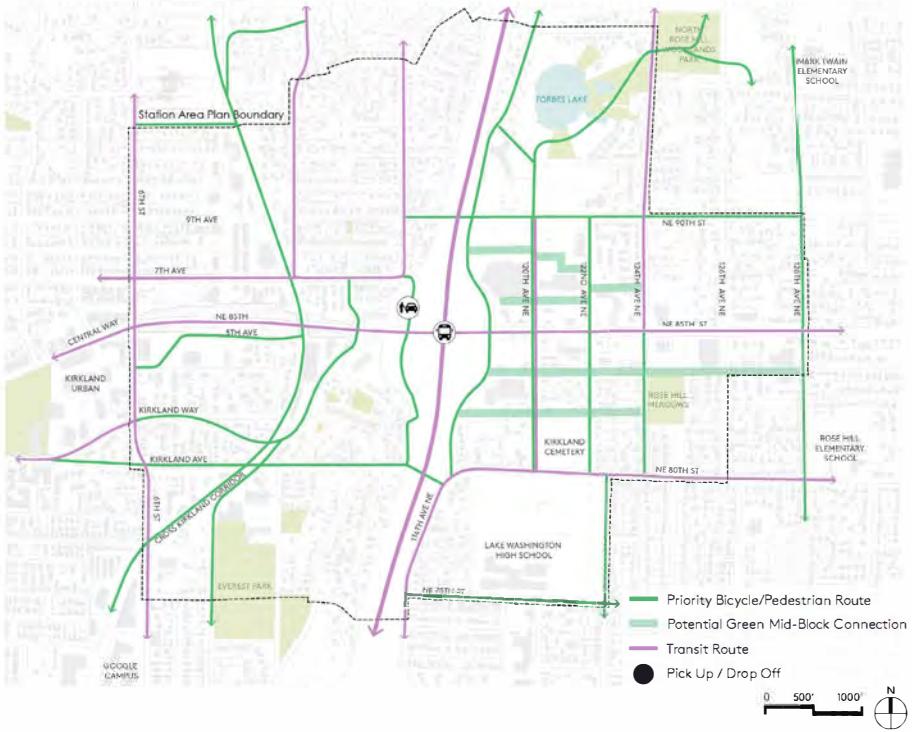
Evaluation of traffic volumes, vehicle delay, and level of stress for walking and biking under both the existing conditions and with Station Area Investments were compared. Transportation investments and mitigations were identified and evaluated against existing conditions and no action alternatives. Additionally, a Travel Demand Modeling and Forecasting Study with the goal of identifying infrastructure and policies required to support achieving objectives related to:

- Sustaining the vehicle throughput functionality of NE 85th Street as a principal arterial while enhancing its role as an urban street
- Incorporate transportation improvements appropriate to surrounding land uses and densities
- Accommodating effective transit service within the study area along transit corridors
- Establishing low-stress, connected bike and pedestrian networks

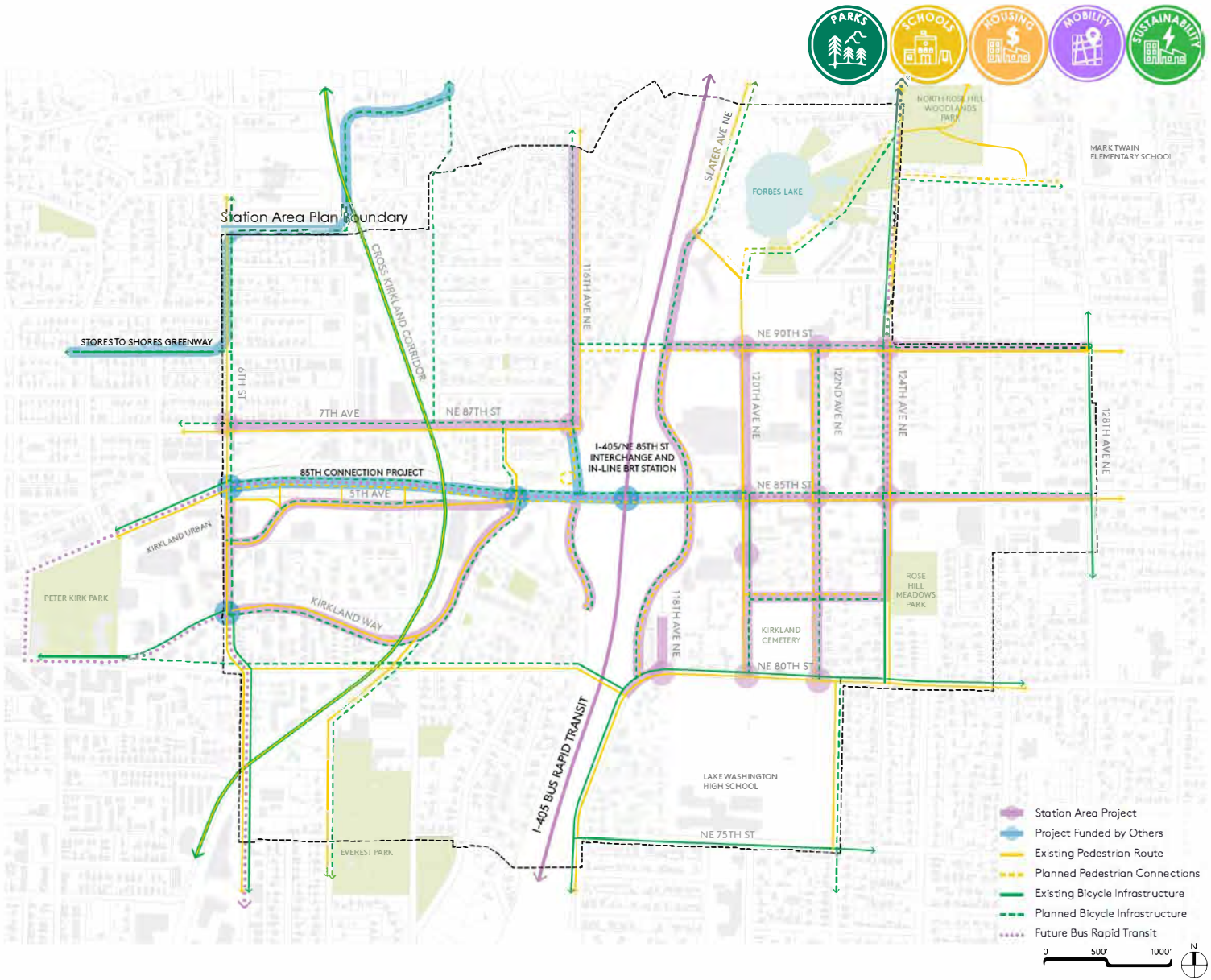
Mobility and Active Transportation

Ensuring a safe and pleasant network for walking, biking, and other active transportation options is critical to the success of the Station Area Plan and a priority for the City. The active transportation network includes a number of specific proposed concepts and projects. For this long-range plan, the City is targeting modal split goals for the station area of approximately 24% walk and bike trips, 29% transit/high-occupancy vehicle (HOV) trips, and 47% single-occupancy vehicle (SOV) trips. More information can be found on the following pages.

Mobility and Active Transportation (Bicycle/Pedestrian and Transit)



Overview of Transportation Concepts



Low Stress Bike Network
Throughout the district, a network of bikeways is intended to provide a low stress riding experience for cyclists. On streets with higher speeds and vehicle volumes, bikeways are separated from vehicles through grade separation, furnishing zones, parked cars, or striped buffers. On lower speed and lower volume streets, bikeway connections are provided through neighborhood greenways, which include signing, striping, and speed and volume controls to prioritize a street for walking and bicycling. This low stress bike network is supplemented by additional facilities such as bicycle parking and intersection improvements such as bicycle signals, green conflict markings, and refuge islands.

Pedestrian Scaled Network
A complete network of pedestrian accessible routes is intended to support the vision of the station area as a walkable, urban district. This includes a mix of expanded or improved sidewalks, green mid-block connections that provide access through otherwise large blocks, and public spaces like plazas and parks which can function as pedestrian pass-through routes. A more complete network of sidewalks and pedestrian connections is also intended to provide more universal accessibility for users of all ages and abilities.

Additional Mobility Elements
In addition to these station area-wide improvements, a number of special elements are proposed. A set of new boardwalks will provide increased access around Forbes Lake. Trails are planned through the WSDOT interchange property at the current cloverleaf locations. A shared use bike and pedestrian connection along the south side of NE 85th St will connect the station to Downtown Kirkland.

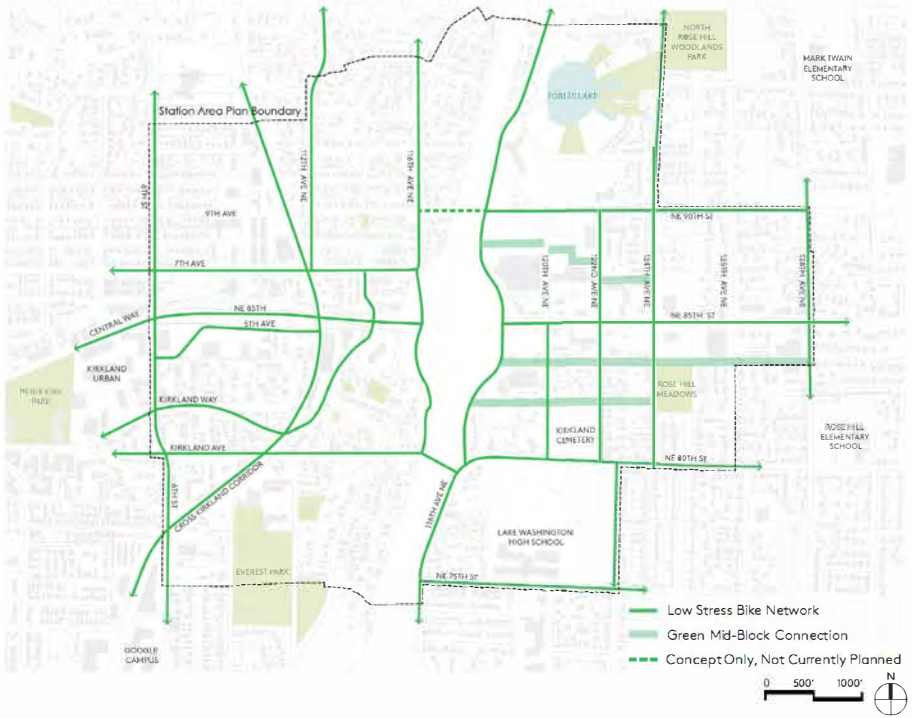
Future Auto Network
The plan recognizes the importance of NE 85th Street as a principal arterial, as well as the challenges of an incomplete network that result from existing barriers and large block sizes. The Preferred Plan includes a mix and distribution of growth and land uses to minimize substantial congestion impacts, which were studied through the EIS process and supplemental studies. The Supplemental Transportation Memo available in the appendix provides more information about the potential change in peak hour traffic volumes for the planned growth in comparison to the No Action alternative, showing an increase in limited areas east of I-4015, of up to 600 trips per hour. The planned development intensity and mix of uses east of I-405 present a greater opportunity to reduce overall vehicular trips through transit-oriented development. Within the Station Area, transportation improvements have been planned to maintain or improve the existing traffic flow and emphasize increased functionality of the network for vehicles and reducing conflicts between vehicles and people walking or biking with safe crossings and other means.

Supporting Transit
One of the main objectives for the project is to facilitate easy access and use of the future Stride BRT station. Envisioned as a transit-oriented community, the plan considers ways to complement existing local routes, as well as the efforts around the K line bus rapid transit plans. The plan includes complete street concepts for improvements to streets and greenways, and coordinates shared use trails and other connections between transit stations and key services and destinations. Analysis found that with planned growth, there may be a minimal travel time impact of 1-2 additional minutes on transit corridors within the station area. More information on this analysis follows.

Parking
With plans to support more walking, biking, and transit use, the goal is to facilitate adequate parking needs and management for people who live, work, and visit the Station Area, while reducing the negative impacts of parking requirements to the area. Bike parking and electric vehicle / micro mobility parking is addressed in the Form-Based Code. The following section on Transportation Demand Management (TDM) explores a few options to implement within the district.

As a place to be, rather than to pass through, the Station Area will support and improve access to businesses, homes, schools, and open spaces.

Low Stress Bike Network



NE 85th Street Future Vision, Looking West

Active Transportation Plan Coordination

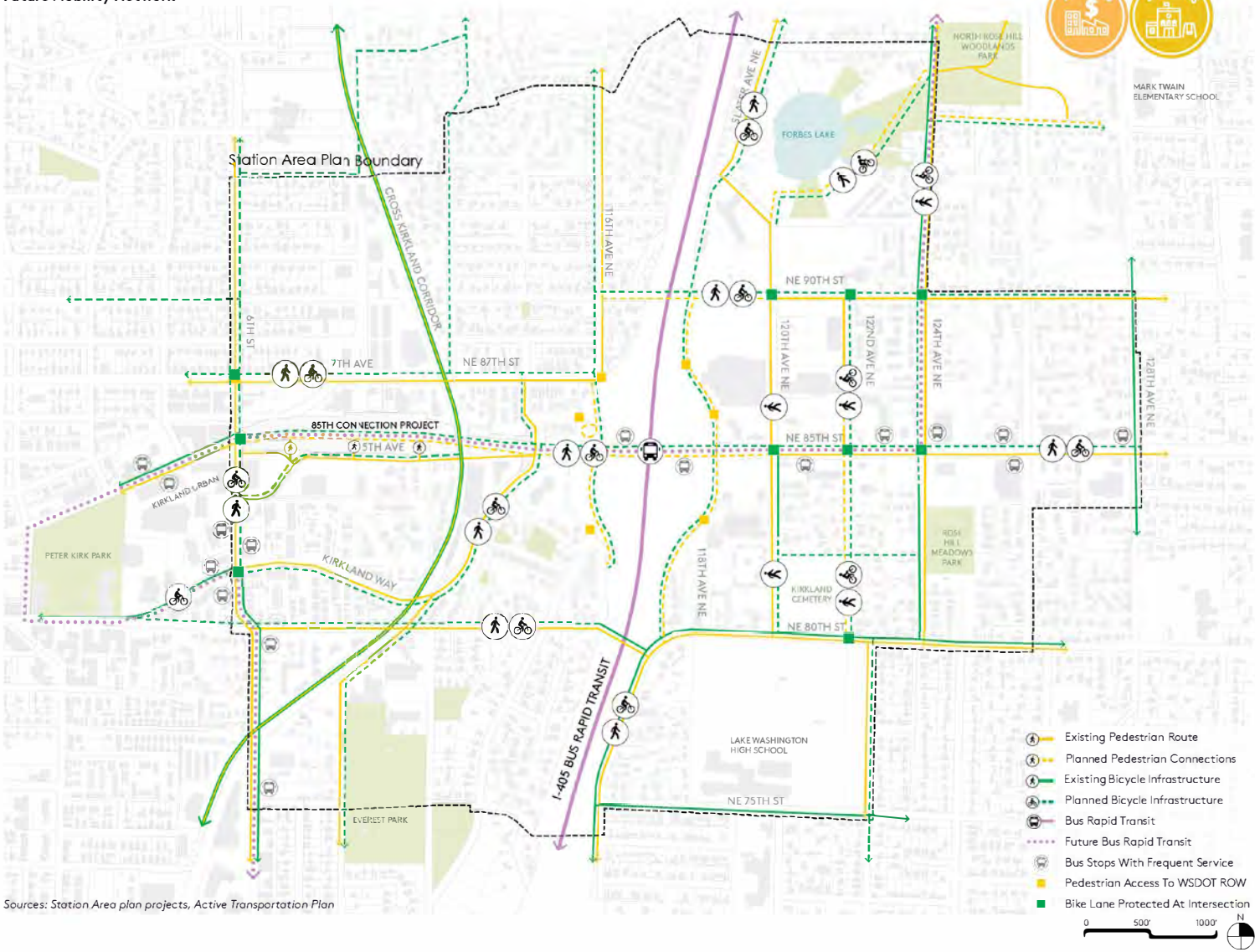
The Station Area Plan's transportation analysis and study has been running alongside the City of Kirkland's ongoing work with the Update to the Active Transportation Plan (ATP) which will be finalized in 2022. The update to the ATP reaffirms Kirkland's commitment to a multi-modal system of transportation choices by providing network and infrastructure improvement recommendations to enable people of all ages and abilities to safely walk, bike, and roll.

Specifically, the Active Transportation Plan outlines three main goals:

1. Create a safe, connected pedestrian network where walking is a comfortable and intuitive option as the first choice for many trips.
2. Create a connected bicycle network that accommodates people of all ages and abilities to get to destinations such as activity centers, parks, and transit.
3. Encourage and incentivize more people to walk and bike and encourage safe behavior for all users of the transportation system.

Network recommendations made as part of the ATP update have been incorporated into the active transportation network vision for the Station Area Plan.

Future Mobility Network



Sources: Station Area plan projects, Active Transportation Plan

Supporting the Future Transit Network

Three primary elements to understand potential change to transit conditions under the different land use alternatives are: passenger loads, speed and reliability, and access to transit. Two routes were evaluated to estimate how travel times for transit vehicles might change from existing conditions to 2044 conditions under the 2044 Preferred Alternative for the Station Area Plan. The two routes are:

- Along NE 85th St between 128th Ave NE and 6th St (Route 250)
- Along NE 85th St and 124th Ave NE between NE 90th St and 6th St (Route 239 and K-Line)

Analysis shows that projected overcrowding of buses will impact many transit routes within the Study Area. Delay at many intersections along NE 85th Street may slow down transit by 1-2 minutes according to a study done by transportation consultant Fehr and Peers (see Appendix 11.6) on point to point analysis, not the full route. This delay may reduce reliability of service. Currently, a queue jump is being planned at NE 85th Street and 6th Street to improve transit operations. Improvements to enhance access to transit include:

- Construction of shared use trail connections to transit stops along NE 85th Street and the BRT station.
- Sidewalks will be widened along 85th street throughout the SAP.
- Complete street and greenway improvements on key routes accessing transit stops along 85th Street and the BRT station, including 5th avenue, 7th avenue/NE 87th Street, 116th Avenue, and 90th Street.
- Dedicated bus lanes from 114th to east of interchange
- Initial planning and conceptual design efforts are beginning for the future K-Line BRT

Transit Network

Mobility and Modal Split Goals

Travel Demand Management (TDM)
TDM strategies suitable for the station area were analyzed with the Preferred Plan growth as part of the 2021 Fiscal Impacts and Community Benefits Study. With the recommended strategies in place, the analysis estimated a possible 13% reduction in single-occupancy vehicle (SOV) and high-occupancy vehicle (HOV) trips. The recommended TDM strategies translates to a 31% increase in the number of transit, walk and bike trips. Overall, the analysis estimated that the number of trips made by SOV could decrease by 7%, by HOV could decrease by 2%, and by transit and walk/bike could increase by 4% and 6% respectively. Mode share trips utilized number of person trips and modal percentages for each quadrant of the study area and estimated using information from the Bellevue-Kirkland-Redmond (BKR) travel demand model and the Puget Sound Regional Council (PSRC) regional travel demand model. The initial number of PM peak hour vehicle trip generated by the project were calculated using Fehr & Peers' MainStreet tool, with built in estimates for dense urban environments. vehicle trip generated by the project were calculated using Fehr & Peers' MainStreet tool, with built in estimates for dense urban environments.

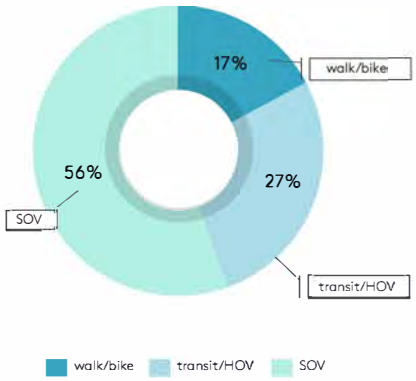
Based on analysis and a comparison of existing modal splits and targets in other areas, the City is targeting modal split goals for the station area of approximately 47% SOV, 29% HOV/Transit, and 24% walk and bike trips. TDM programs are successful when they are enforced within developments. Implementation and monitoring will be critical to the success of this target mode share in Kirkland.

Modeled no action modal split and proposed modal split goals within the study area are shown below:

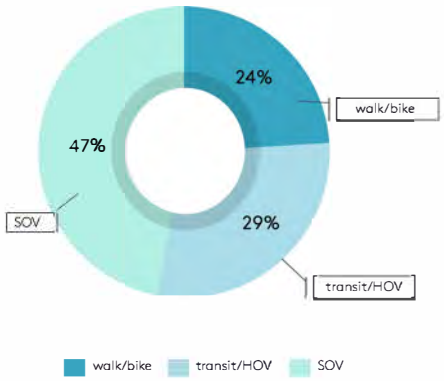
Additional mitigation measures could be considered to expand TDM strategies including:

- Unbundle parking to separate parking costs from total property cost, allowing buyers or tenants to forgo buying or leasing parking spaces if they do not park a car.
- Revise parking code to reduce the amount of parking new developments must provide.
- Implement managed on-street parking strategies (e.g., designate special use zone for activities such as loading/unloading or emergencies
- Require new development to charge for parking off-street.
- Encourage or require transit pass subsidies from developers/property owners.
- Utilize a Ridematch Program to assist potential carpoolers in finding other individuals with similar travel routes.

Modal Split: No Action



Modal Split: Proposed Goal (2044)



Mobility In Terms of Space: the number of vehicles and space needed to accommodate people traveling by different modes

Source: Cycling Promotion Fund

Street Types

Street improvements are designed to accommodate all modes of travel, support a pleasant and safe public realm, and support the homes, businesses, and community places within the Station Area. Improved sidewalks and dedicated bikeways ensure that walking and biking in the station area is safe and pleasant. Capacity is added to key intersections on major arterials through strategic widening and signal operation changes to avoid gridlock. These improvements are linked to overall urban design and mobility goals for each corridor.

Street Types set the design intent for specific segments of public ROW, including functional classification, prioritized transportation modes, sidewalk and bikeway facility dimensions, and expected streetscape amenities like trees, planting, hardscape, and street furnishings. They are addressed in the Form-Based Code and illustrated in the following sections.

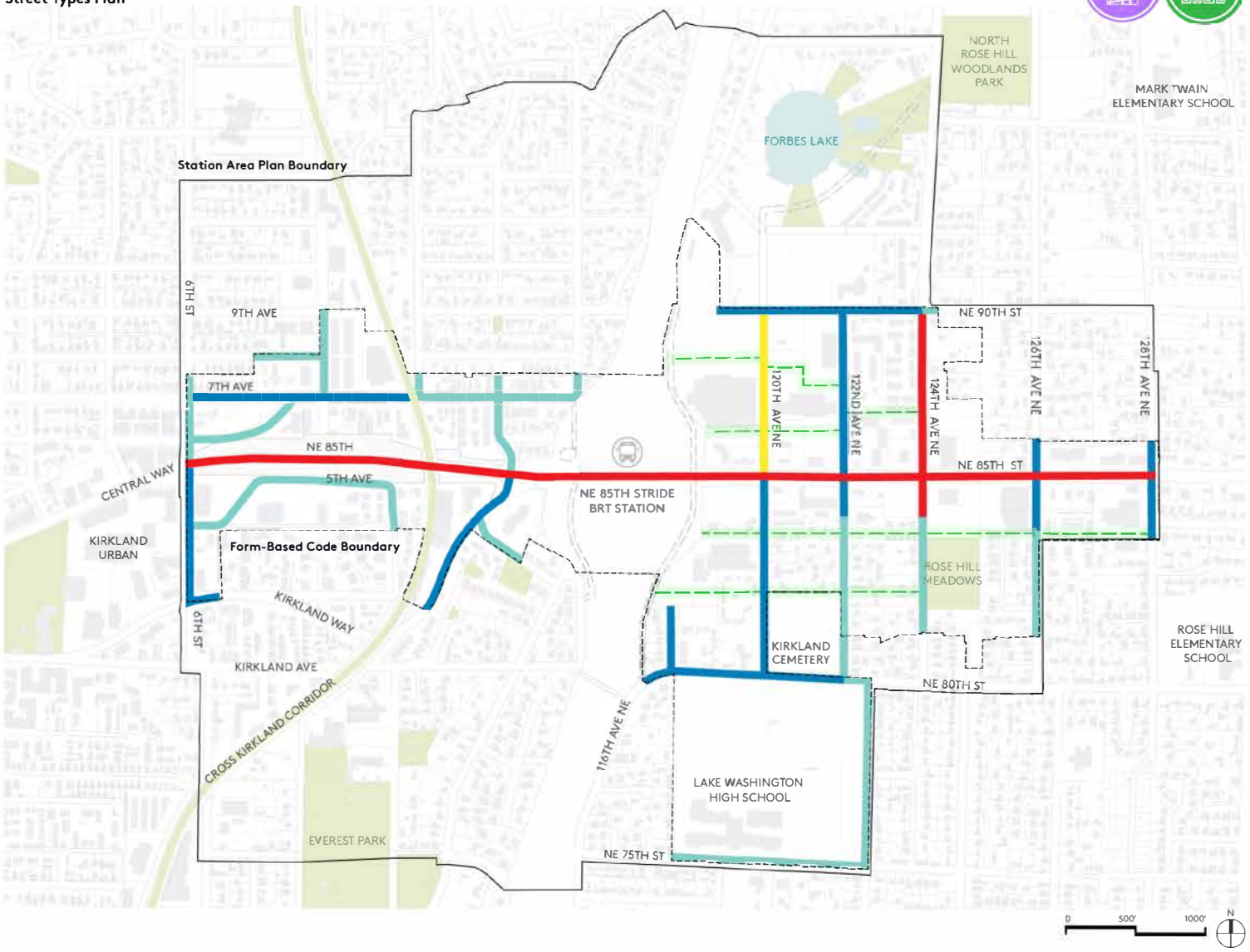
Note: only areas within The Form-Based Code boundary have a street type assigned. this does not preclude additional PEDESTRIAN/BICYCLE improvements within the Station Area

This excerpt is for illustration purposes only. For current regulations, see Kirkland Zoning Code Ch 57.

- Major Thoroughfare
- Main Street
- Neighborhood Mixed Use Street
- Neighborhood Residential Street
- Green Mid-Block Connection *
- Pedestrian/Bicycle Connection

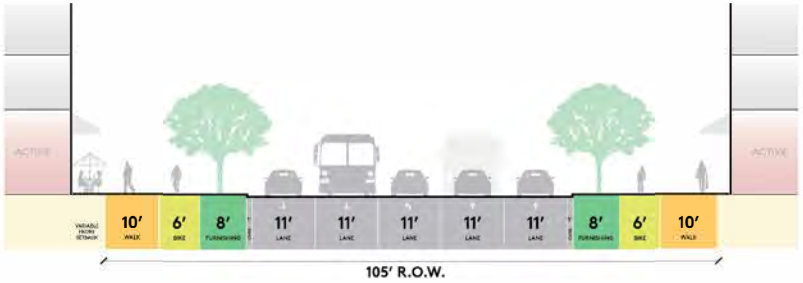
* Green mid-block connections are approximate and would be based on specific development proposals.

Street Types Plan



Street Type Sections

Major Thoroughfare



DESCRIPTION

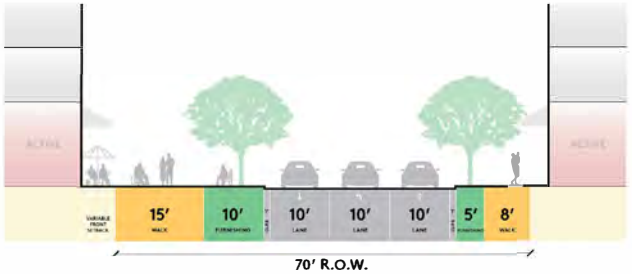
Major Thoroughfares are streets that connect regional centers or pass through central commercial corridors. Many of these streets have significant traffic volumes at peak hours, and are key places for high-capacity transit routes, separated bike facilities, and wider sidewalks.

PERMITTED FRONTAGE TYPES

URBAN STREET EDGE	RETAIL & ACTIVE USES	RESIDENTIAL STOOP/PORCH	PLAZA/PUBLIC SPACE	PRIVATE YARD
Permitted	Permitted	Not Permitted	Permitted	Not Permitted

FUNCTIONAL CLASSES	Principal Arterial
ADJACENT LAND USES	High intensity commercial, residential, and active ground-level uses

Main Street



DESCRIPTION

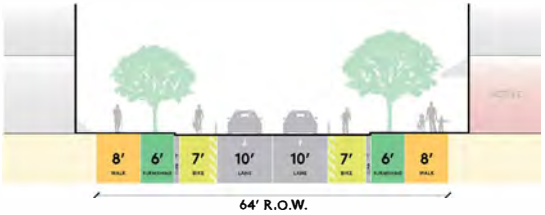
Main Streets are primary pedestrian corridors with active uses and generous sidewalks. They feature high quality streetscapes with linear open space, decorative paving, and tree canopy. These are often important corridors for transit or supported with transit nearby.

PERMITTED FRONTAGE TYPES

URBAN STREET EDGE	RETAIL & ACTIVE USES	RESIDENTIAL STOOP/PORCH	PLAZA/PUBLIC SPACE	PRIVATE YARD
Permitted	Permitted	Not Permitted	Permitted	Not Permitted

FUNCTIONAL CLASSES	Minor Arterial, Collector
ADJACENT LAND USES	Mid to high intensity commercial, residential, and ground-level retail uses.

Neighborhood Mixed Use Street



DESCRIPTION

Neighborhood mixed use streets have low to mid-intensity commercial and residential, with occasional active ground floors. With generally lower vehicular volume than major thoroughfares, these streets require careful balancing among modes and should include wider sidewalks, buffered bike facilities, transit routes, and narrower travel lanes.

PERMITTED FRONTAGE TYPES

URBAN STREET EDGE	RETAIL & ACTIVE USES	RESIDENTIAL STOOP/PORCH	PLAZA/ PUBLIC SPACE	PRIVATE YARD
Permitted	Permitted	Permitted	Permitted	Permitted

FUNCTIONAL CLASSES	Minor Arterial, Collector, Neighborhood Access
ADJACENT LAND USES	Low to mid-intensity commercial, residential, and occasional active ground-level uses, civic and urban flex uses

Neighborhood Residential Street Type 1

DESCRIPTION

Neighborhood residential streets are low vehicular traffic volume streets that have primarily residential frontages and dedicated bicycle facilities.

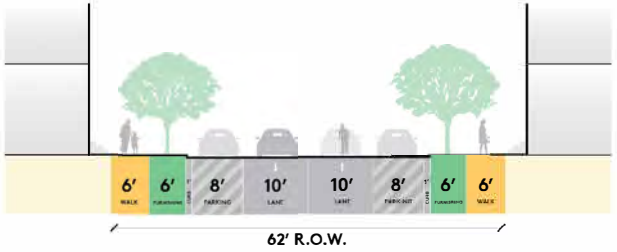
PERMITTED FRONTAGE TYPES

URBAN STREET EDGE	RETAIL & ACTIVE USES	RESIDENTIAL STOOP/PORCH	PLAZA/ PUBLIC SPACE	PRIVATE YARD
Not Permitted	Not Permitted	Permitted	Permitted	Permitted

FUNCTIONAL CLASSES	Collector, Neighborhood Access
ADJACENT LAND USES	Predominantly low to medium intensity residential uses

Street Type Sections

Neighborhood Residential Street Type 2



DESCRIPTION

Residential-focused streets with low vehicular traffic volumes, which can accommodate shared bike facilities.

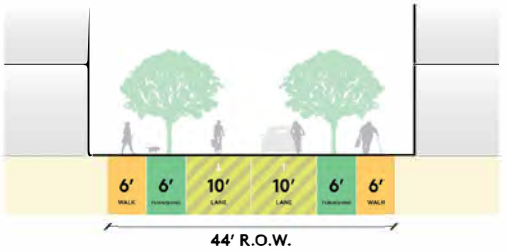
PERMITTED FRONTAGE TYPES

URBAN STREET EDGE	RETAIL & ACTIVE USES	RESIDENTIAL STOOP/PORCH	PLAZA/ PUBLIC SPACE	PRIVATE YARD
Not Permitted	Not Permitted	Permitted	Permitted	Permitted

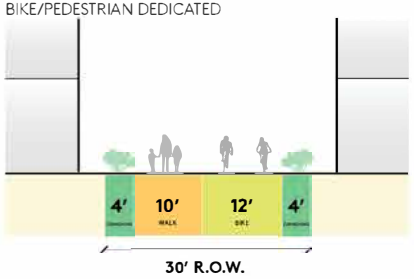
FUNCTIONAL CLASSES	Neighborhood Access
ADJACENT LAND USES	Predominantly low to medium intensity residential uses

Green Mid-Block Connection

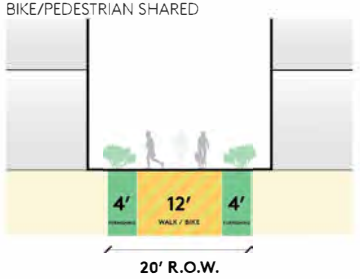
VEHICLE/BIKE/PEDESTRIAN SHARED



BIKE/PEDESTRIAN DEDICATED



BIKE/PEDESTRIAN SHARED



DESCRIPTION

These streets are generously landscaped mid-block connections typically as part of larger developments. May include required green infrastructure. Does not include public R.O.W. improvements to "green" an existing street. Mid-block connections may be used for emergency access, and may also be used for access to loading zones, parking entrances, or other "back of house" functions.

PERMITTED FRONTAGE TYPES

URBAN STREET EDGE	RETAIL & ACTIVE USES	RESIDENTIAL STOOP/PORCH	PLAZA/ PUBLIC SPACE	PRIVATE YARD
Permitted	Permitted	Permitted	Permitted	Permitted

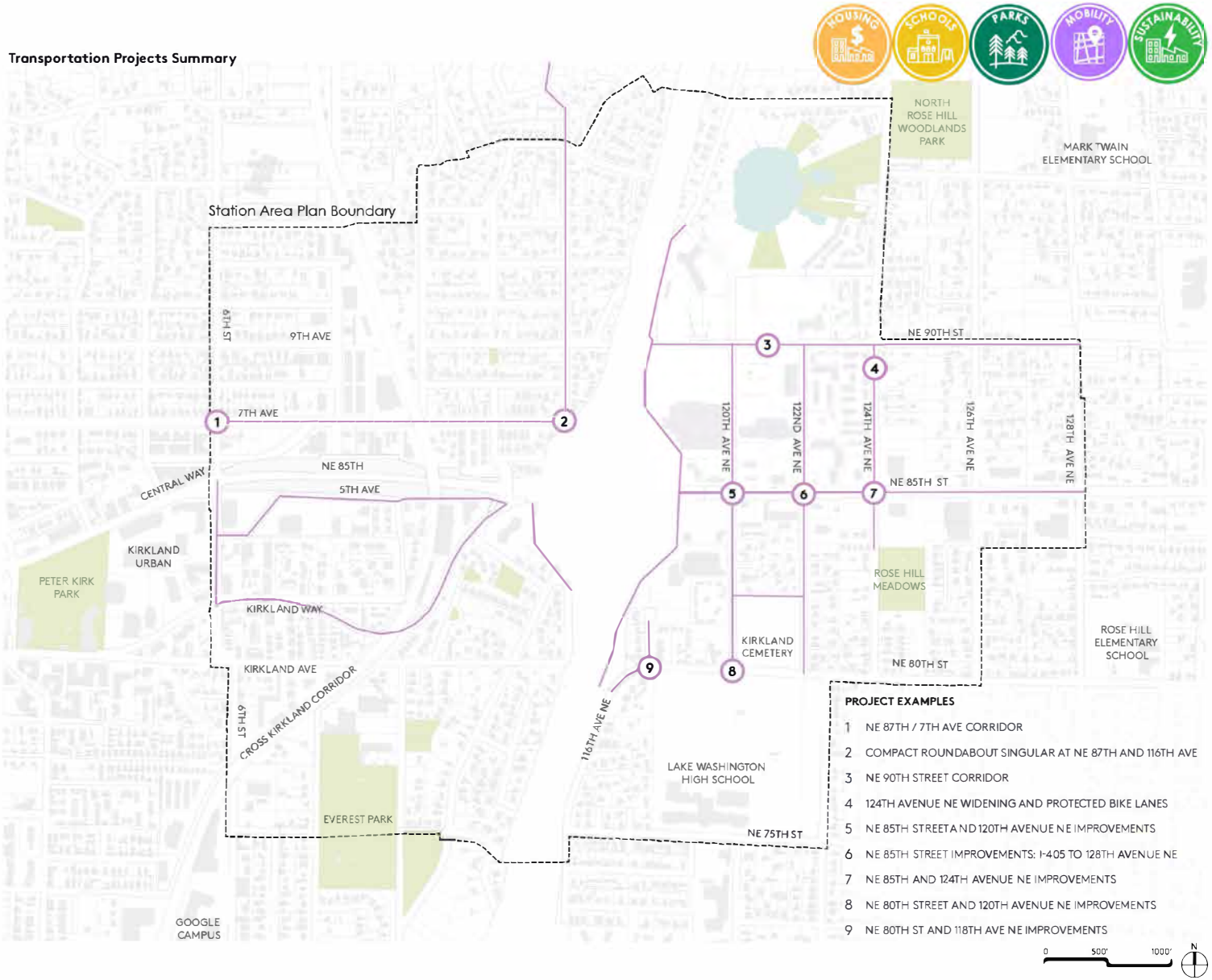
FUNCTIONAL CLASSES	Neighborhood Access, Trail
ADJACENT LAND USES	Low to high intensity commercial or residential uses, typically within larger developments. May have active ground-level uses, depending on site design

Transportation Projects

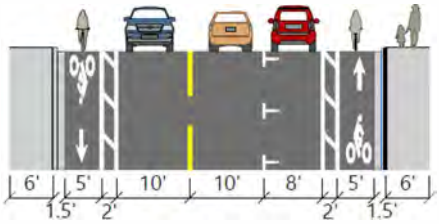
A number of different transportation projects are being considered as part of this Plan. Different categories of funding and implementation exist for these projects including developer led new site projects, 6 year CIP, 20 year CIP, and WSDOT Development funded. The K Line efforts are planned and the Station Area Plan does not preclude other transit specific infrastructure investments as a result of more detailed K line study in the future. Transportation improvements were identified as part of a range of studies during the planning process and have been developed to a representative planning level with a focus on reducing conflicts between modes of transportation, while managing vehicular congestion. When improvements move into project design, they should support mobility and safe crossings with a priority for people walking, rolling, and taking transit, as well as enhance the public realm through public art, landscape, green infrastructure, and trees.

The following are few representative projects amongst a long list, and have been developed at a conceptual plan level, and are highlighted on the following pages. The projects may evolve as design proceeds with future development review. Additional information on representative transportation projects can be found in the Appendix.

Transportation Projects Summary



7th Avenue - NE 87th Street
(6th Street to Cross Kirkland Connector)
Buffered/Parking Protect Bike Lanes



Source: Fehr and Peers

NE 87th and 7th Ave Corridor

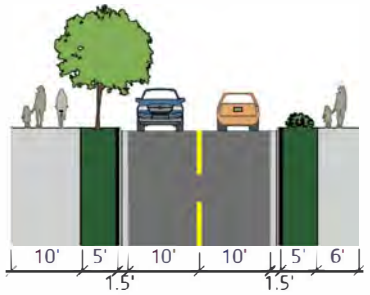
Provide buffered bike lanes and consistent sidewalks between 6th Avenue and 116th Avenue NE. West of the Cross Kirkland Corridor, provide parking-protected bike lanes on the north side of the street. East of the Cross Kirkland Corridor, provide buffered bike lanes, and a 5-foot landscape strip to enhance the street's character.

Source: Fehr and Peers

Compact Roundabouts at NE 87th and 116th Ave

Revise this intersection to be a compact roundabout that better accommodates people walking, biking, and access to the NE 85th Street Station pick-up and drop-off.

90th Street
(I-405 to 122nd Avenue NE)
Shared Use Path / Possible Boardwalk



Source: Fehr and Peers

NE 90th Street Corridor

Between I-405 and 122nd Avenue NE, build a shared-use path or boardwalk on the north side of the street. Between 122nd and 128th Avenue NE, provide buffered bike lanes and sidewalks with landscape strips on both sides of the street.

Source: Fehr and Peers

124th Avenue NE Widening and Protected Bike Lanes

Widen 124th Avenue NE to five lanes plus physically separated bike lanes from NE 85th Street through the NE 90th Street intersection. This project also includes continuation of protected bike lanes south through the NE 85th St intersection to NE 84th Lane to connect to exiting bike lanes.

Source: NACTO, Urban Street Design Guide

NE 85th Improvements: I-405 to 128th Avenue NE

To offer a high-quality experience for people walking, rolling, and making last-mile connections by bike, enhance NE 85th Street between I-405 and 124th Avenue NE. Recommended treatments include grade-separated active transportation zones on both sides of the street that include one-way raised bike lanes, sidewalks, protected intersections and amenity zones.

Source: Fehr and Peers

NE 85th Street and 120th Avenue NE Improvements

As part of the overall enhancement to the NE 85th Street corridor to better accommodate all travel modes, multiple concepts were studied. This preferred concept direction improves the NE 120th Avenue intersection to include an added eastbound lane as storage capacity from the interchange, and added northbound left turn lane to accommodate expected traffic volume increases, a bump out of the northwest corner to clarify operations for two westbound incoming lanes and reduce the north/south crossing distance, high- visibility crosswalks, shared use paths to the west connecting to the Stride BRT stations, and raised protected bike lane and wide sidewalks to the east. Project may include additional EB right turn lane.

9.0

Utilities & Public Services —

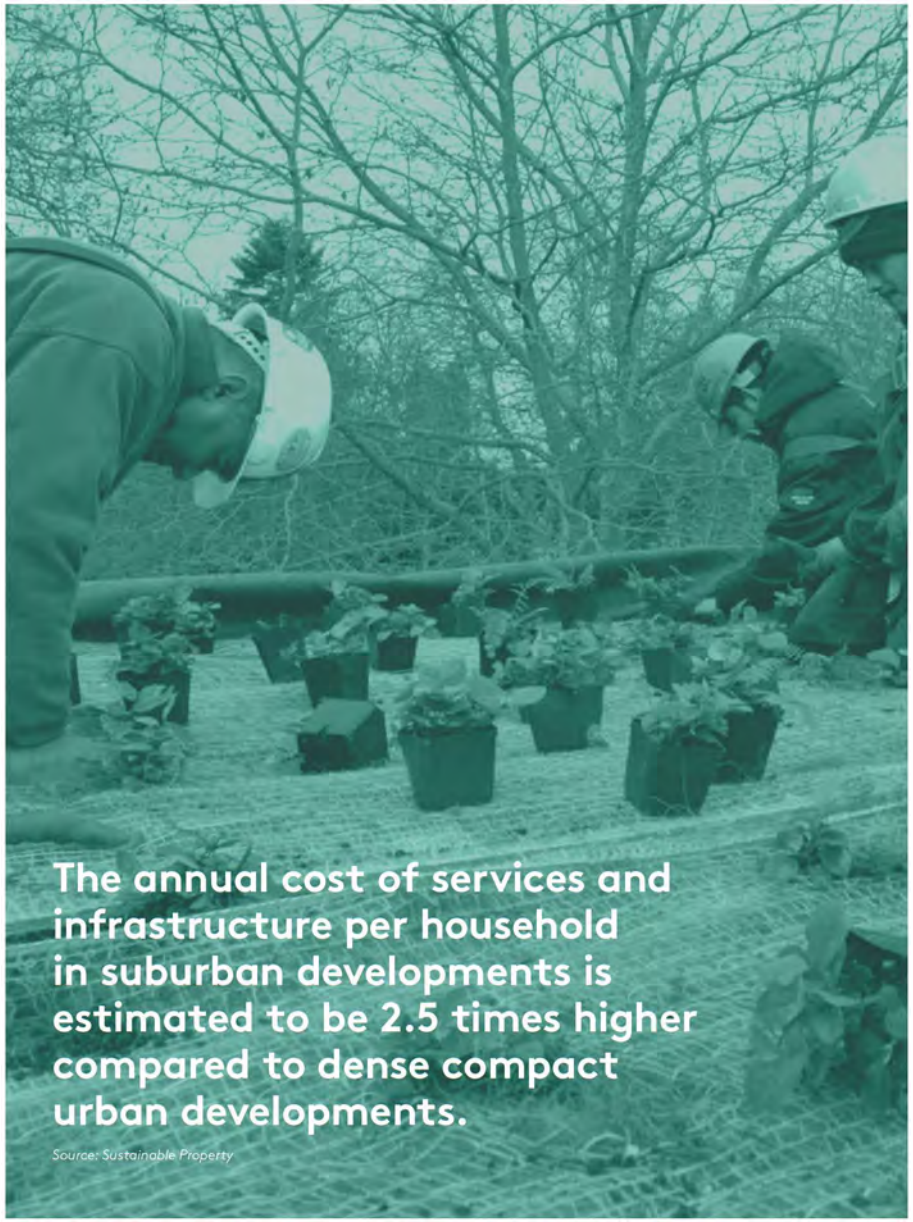
Utilities & Public Service Concept & Goals

Overall, the approach to infrastructure and public services improvements should take a holistic view of all the potential improvements and seek efficiencies through multi-benefit strategies, or timing projects to be bundled together and reduce construction needs.

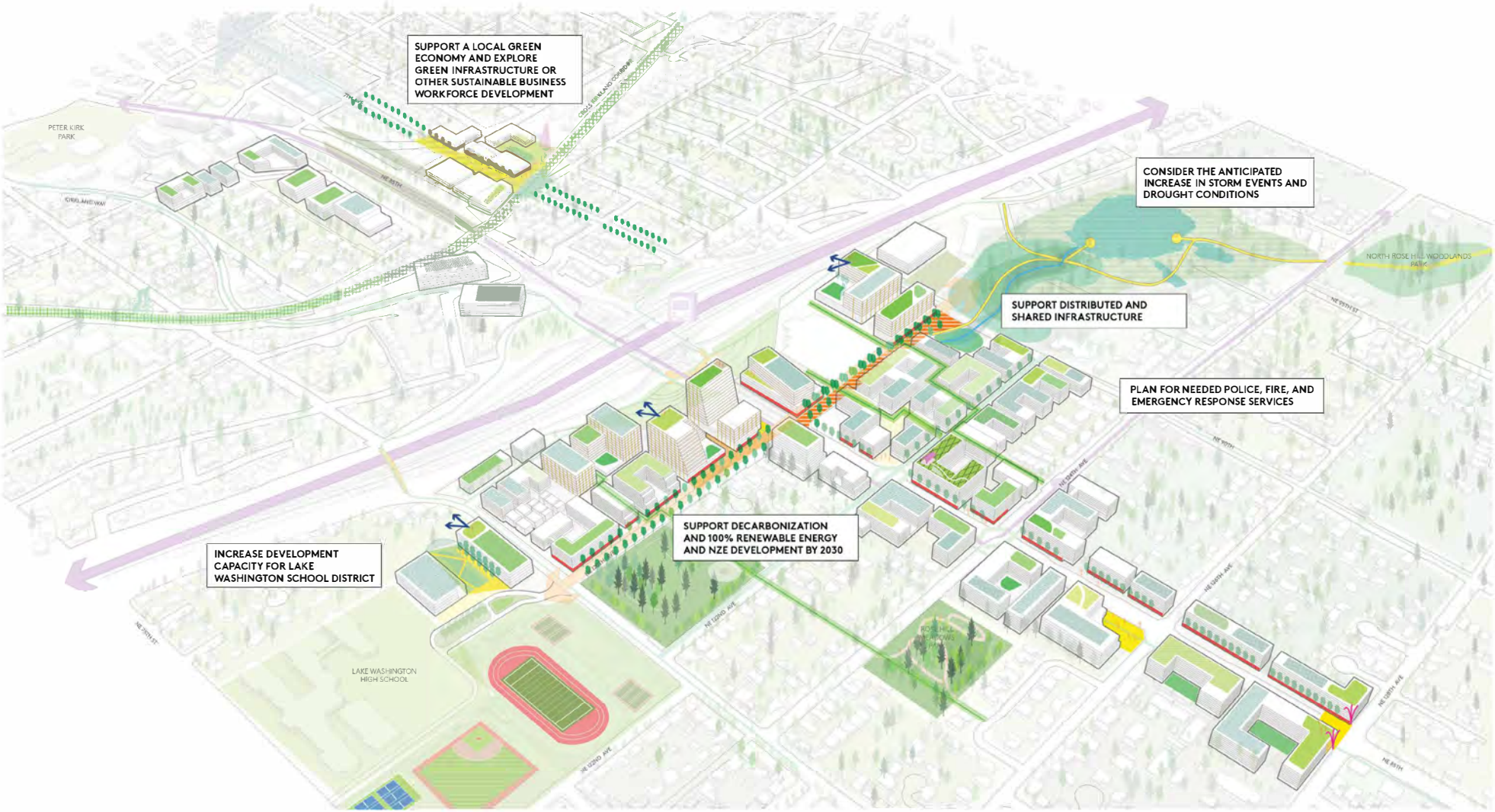
Prioritize Multi-Benefit Strategies: To maximize investment and community benefit, multi-benefit strategies that achieve multiple goals through one intervention should be prioritized. For example, green infrastructure and planting can provide tree canopy/ air quality benefit, bioswales to provide stormwater benefit, increases habitat or biodiversity, improves human mental and physical health, and provides resiliency to climate change. It should be noted that water plays into Ecosystem / Green Infrastructure, Energy due to energy needed to deliver water, and Building Performance.

Promote innovative stormwater strategies that respond to specific watershed conditions and enhance urban ecological function.

Regional Stormwater facilities provide opportunities to reduce impact on redevelopment parcels and can be coupled with other projects to contribute to other watershed goals like wetland and stream buffer restoration.



Overview of Utilities and Services Initiatives and Goals

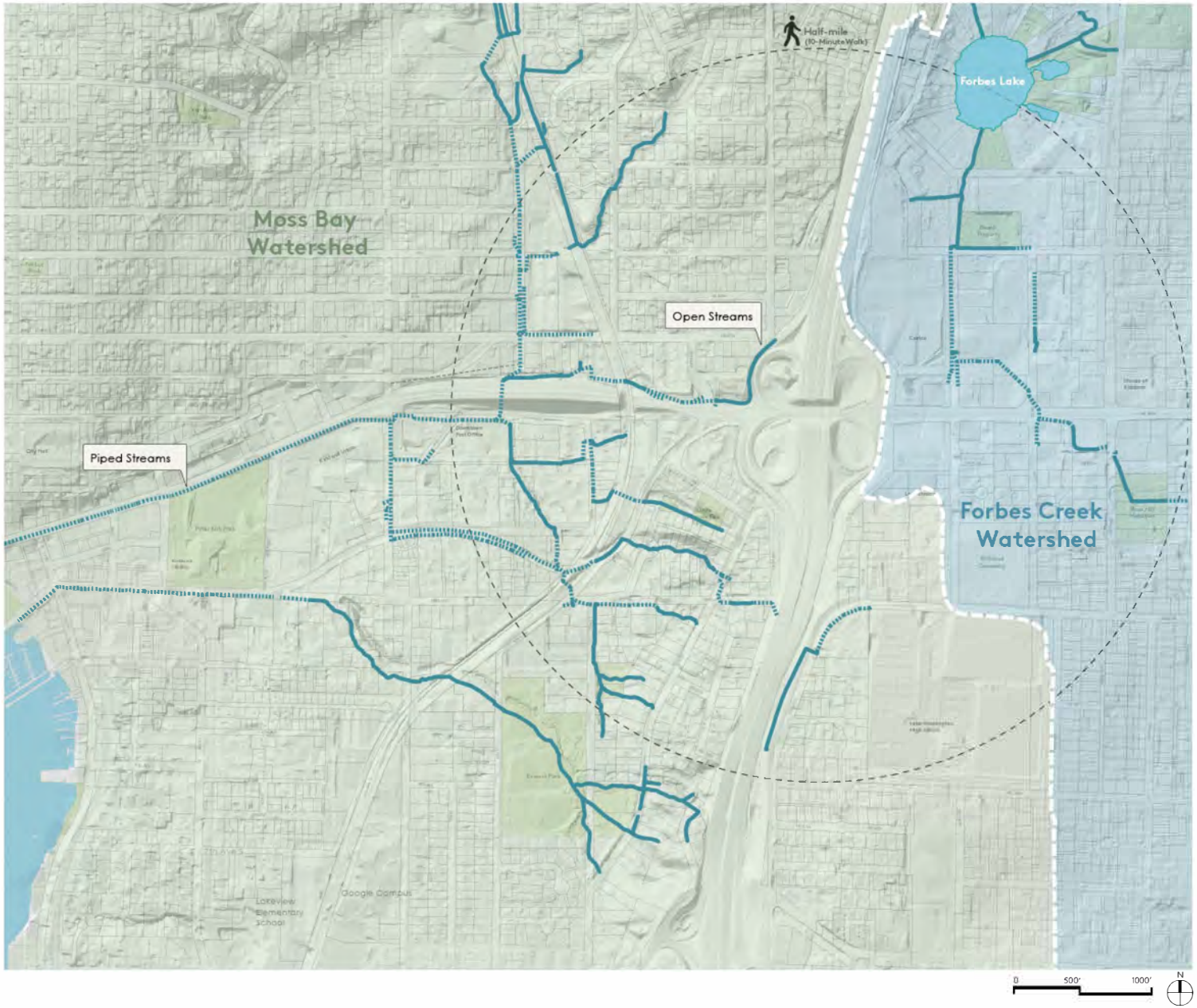


Stormwater Infrastructure

The City of Kirkland has a track record of innovative stormwater management and aquatic resource protection. The opportunities to further promote innovative stormwater strategies for future development look at possibilities to reduce the stormwater management burden (e.g. facility cost, space required) for redevelopment projects within the subarea, while protecting the natural environment and the City's stormwater infrastructure. The opportunities are strongly influenced by the environmental conditions and regulatory requirements within the two primary stream basins of the subarea, the Moss Bay Basin and the Forbes Creek Basin.

Moss Bay Stormwater Opportunities:
Development and redevelopment projects within these stream-discharge areas are required to comply with stringent flow control requirements, which necessitate large detention facilities to protect the stream channels from the damaging effects of high flow; however, there is no viable fish habitat mapped in this area. Downstream of these open stream channels, the City may allow smaller detention facilities if it can be demonstrated that the downstream stormwater conveyance infrastructure is adequate to handle the existing flows.

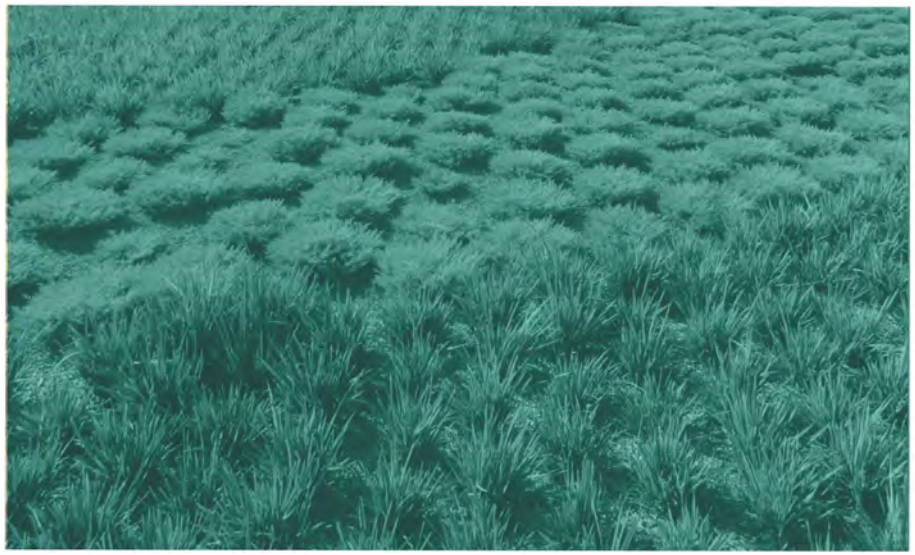
Forbes Creek Stormwater Opportunities:
Forbes Creek is a salmon-bearing stream and is identified as priority habitat. This basin also includes a large area that discharges to Forbes Lake, which requires that projects in the basin to utilize water quality practices that provide phosphorus treatment. The primary opportunity in the Forbes Creek basin to reduce the stormwater management burden for redevelopment projects is to meet those stormwater requirements at a different site, such as through regional stormwater facilities constructed by the City prior to redevelopment. Development of the Forbes Lake Park concept could also contribute to wetland and stream buffer restoration to enhance function.



Distributed / Shared Infrastructure

To increase resilience and flexibility, prioritize a more distributed, multi-source approach to infrastructure that is less vulnerable to risk from disruptions and allows for changes over time. Support the shift from centralized large-scale infrastructure, such as centralized energy or stormwater treatment plants, to networks of smaller scale facilities that can be interconnected and shared; also recognizing that this is likely to be a mid- to long-term process.

There is also an opportunity to explore the concept of a Blue Green Corridor, which can be designed to achieve a broad range of goals for placemaking, stormwater management and quality, and urban ecology and therefore can range from an open vegetated stream channel to a series of at grade bioretention cells, to water and ecology themed art installations and specialty paving, to trees and other plantings all of which can be paired with below grade traditional grey infrastructure (i.e., vaults and pipes).



Water and Sewer

Increased growth in the Station Area will mean an increased consumption of water from the regional supply and increased sewage production requiring treatment. The City is planning for needed water and sewer improvements beyond the current capital improvement planning within the Water System Plan, Water CIP Update, and General Sewer Plan. These will include upgrades and replacement of existing pipes, that will help support improvements to fire flow requirements in the water system, and improvements to address increased flow in the sewer system. The overall plan goals and policies also support a more efficient, high performance approach to water use than represented in conventional demand models. See the Green Innovation Strategies for more information. Goals and Principles include: Goals and Principles include:

Reduce Demands
Developments can incorporate efficiency measures through their systems and fixture selection, as well as operations. The Green Innovation Strategies incorporate the standard of reducing water use in buildings by 10% by 2025 and 20% by 2030 as compared to a 2019 baseline. Reduced water demands will also reduce energy needs to convey the water.

Increased water and sewer demands will require replacement and improvements to existing infrastructure.

Green Innovation strategies promote a more efficient approach to water use within buildings which will reduce potable water demands.

Use Potable Water for Potable Needs
Today, it is common practice to use potable water for all water needs, including uses such as irrigation that do not necessitate a potable water treatment standard. By using recycled water sources, such as cleaned stormwater for irrigation, the demand for potable water is reduced and we will use less water from our streams and groundwater basins. This principle will support a healthy ecosystem and habitat, and in particular, stream health within the Moss Bay watershed. While there are some regulatory barriers that exist today, recycling water on-site or in larger, district facilities is anticipated to become more common during this plan horizon, and should not be precluded. Future proofing strategies include developments with dual plumbing to allow for purple pipe connections in the future. These strategies are encouraged by third-party protocols like the Living Building Challenge.

A next step should be to study climate change impacts to sewer and stormwater / storm events and follow up planning.

Water use reduction is supported through the prioritization of using recycled water sources for non-potable water use needs

Public Services

To support planned growth, public services including schools, parks and open spaces, transportation, and utilities will also be needed. The City has planned for meeting these needs in alignment with Level of Service (LOS) standards. With a more compact, mixed-use form of development than other parts of Kirkland, there may be opportunities to consider an approach to service provision that takes advantage of more varied mobility choices, like walking, biking, and transit. The City will plan for additional Police and Fire and Emergency Services staff and equipment to align with population growth, including at Fire Station 26. For more information refer to the Fiscal Impacts and Community Benefits Analysis (2021).

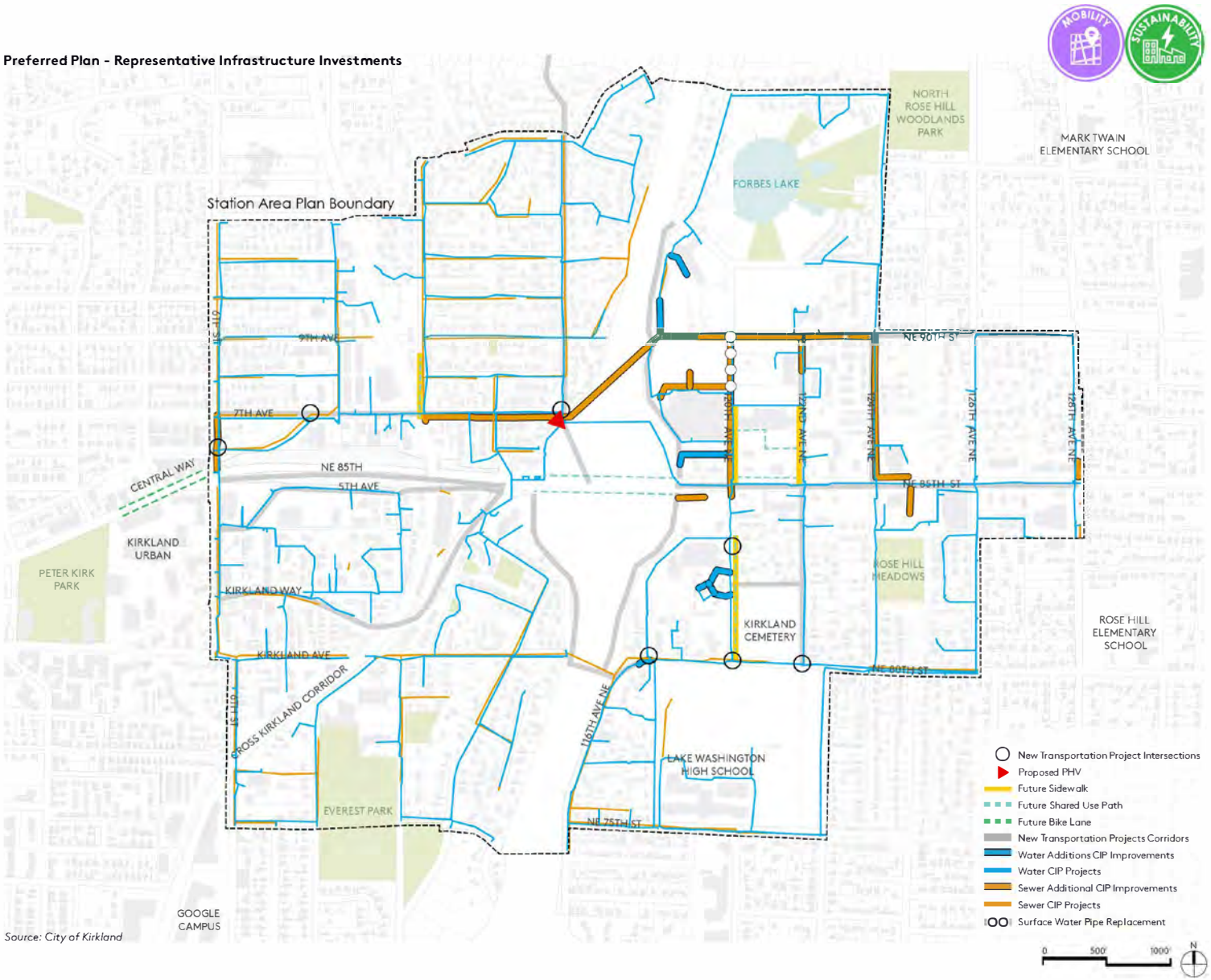
City services like Fire, Police, and Emergency Services will be increased to align with population growth.

Representative Projects

Planning level studies completed for the Fiscal Impacts and Community Benefits Analysis (2021) determined a set of representative infrastructure investments needed to maintain service levels in water, sewer, and stormwater given the planned household and employment growth for the station area. A full list is available in the Appendix 10.2, Project List.

- Notable water and sewer improvements needed include a water main under I-405 as required by WSDOT due to construction of the BRT station, as well as a sewer capacity project that crosses under I-405 to connect the King County transmission line under Cross Kirkland Corridor.
- Within the representative infrastructure improvements, the only recommended stormwater project within the Study Area consists of replacing 520 feet of pipe along 120th Ave NE with a smoother pipe material to increase conveyance capacity.

Preferred Plan - Representative Infrastructure Investments



Source: City of Kirkland

10.0

Sustainability Framework—

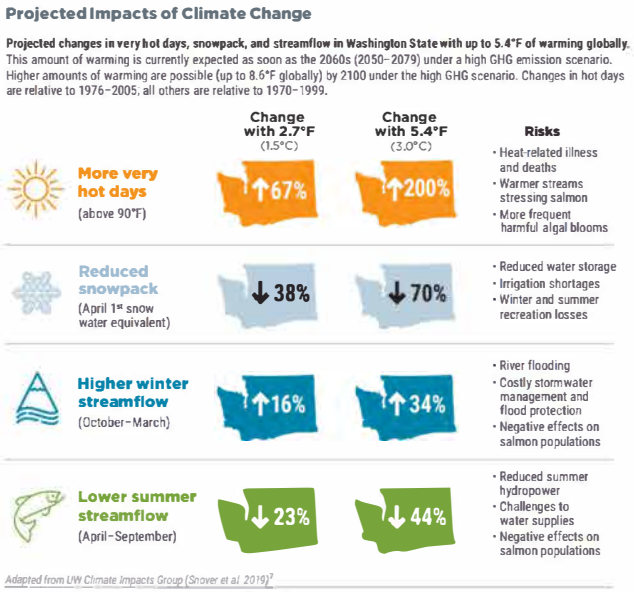
Background and Context

The purpose of this Sustainability Framework is to advance the City's objectives and Sustainability Master Plan with the Station Area as a demonstration district that maximizes opportunity for innovation and community benefit around climate action, resilience, and quality of life.

This Framework is aimed to complement the Station Area Plan and envisions a 'future-ready' district that is responsive to quickly changing climate conditions, that takes advantage of the scale and unique opportunities of a mixed-use, transit-oriented district, and that recognizes the pace of market transformation and does not preclude future innovations.

Climate conditions are changing quickly and are anticipated to have wide-ranging effects on our region by this plan's horizon of 2044. The future climate implications for Kirkland and the station area include:

- Heavier and more frequent storms and rain events, resulting in flooding
- Drought and regional decline in snow and ice in Cascades and Olympic mountains, resulting in irrigation and water shortages
- Sea level rise and ocean chemistry change in ways that are harmful to local marine species like shellfish and salmon
- Temperature ranges, increased extreme heat days, high smoke events due to an increase in regional wildfires
- Increased potential for cardiovascular illness due to heat or for vector-borne diseases
- Increased potential for food availability and affordability impacts from heat, drought, and pests



Source: 2020 Strategic Climate Action Plan, King County

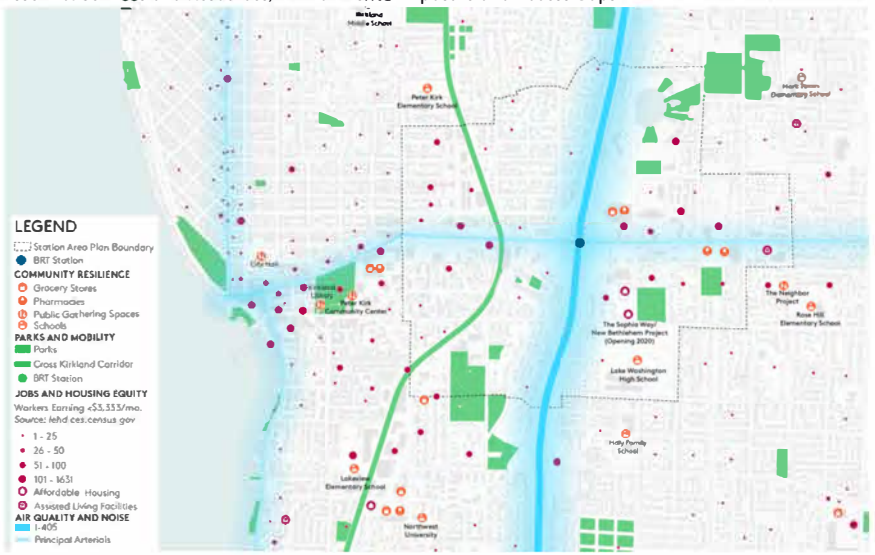
Being along a major highway corridor places the Station Area at higher environmental exposure for GHG emissions, resulting in poorer air quality and noise impacts experienced today. While the Plan includes land use strategies to buffer and mitigate these current impacts, the highways and high level of paving and impervious surface in the Station Area do reduce the community's capacity for resilience looking forward, by increasing flood and heat island risks, by forming barriers for people to get to essential services, and by creating gaps in habitat and stream corridors and reducing ecosystem performance.

How can we increase community resilience?

The adopted Preferred Plan supports growth with an increasing mix in land uses and transit-oriented development, along with improved biking and walking connections and an enhanced open space network. With the planned growth, there will also be an increased demand for resources including energy, water, and open space among others.

However, a more compact, urban development pattern affords the potential to improve upon community resilience as a part of this planned growth, with strategies including shared resources, a more distributed, flexible approach to infrastructure, and enhancing ecosystem performance.

Essential Services and Resources, Environmental Exposure and Access Gaps



Many sustainability co-benefits will accrue through the fundamentals of these smart growth concepts represented in the Station Area Plan – particularly in the areas of syncing land use, transportation, and open space together. A crosswalk indicating alignment between projects and Sustainability Master Plan goals is in the Appendix.

Some examples of strategies already embedded in the plan that will support Sustainability benefits include:

Jobs and Housing Opportunities –
Currently, Kirkland has significantly more housing than jobs, and many people who work in Kirkland cannot afford to live here. This jobs / housing imbalance creates both sustainability and resiliency challenges. The large number of commuters increases VMT, and the lack of affordable housing makes it difficult for essential workers to reach their jobs. The proposed zoning amendments in the Station Area Plan will help address the citywide jobs/ housing imbalance and can reduce the need for commuting.

Mobility and Active Transportation –
The planned mobility and active transportation projects and programs will be essential to achieving VMT reduction and climate goals. These include a suite of actions including access to the BRT station, multi-modal streets, transportation demand management strategies, and intersection improvements.

NE 120th Main Street –
120th is an important, pedestrian friendly main street for the Station Area with active ground floors and is also envisioned as a green street with plantings which could serve as a habitat corridor and stormwater management feature. These improvements help to strengthen bike and pedestrian connections between Lake Washington High School and Forbes Lake, a valuable open space asset to leverage for ecological and community benefit.

Green mid-block connections –
These mid-block easements are envisioned to help break down large blocks and parcels to a more pedestrian friendly scale. They provide valuable opportunities for stormwater conveyance and treatment and could also provide opportunities for public private partnerships that would allow the city to treat stormwater from the public ROW on private land.

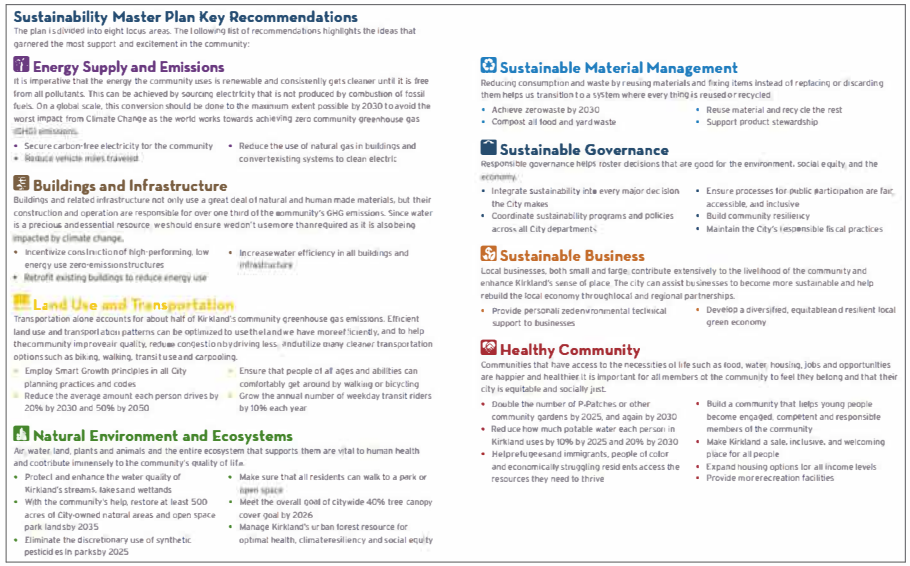
Forbes Lake Park –
Forbes Lake is an important existing open space and habitat asset. Investments including an enhanced wetland buffers could help address phosphorous levels in this salmon bearing water body. A proposed boardwalk and potential acquisitions could expand open space access in this area.

Sustainability co-benefits will accrue through smart growth concepts– particularly in the areas of syncing land use, transportation, and open space together.

Sustainability Framework Goals and Principles

To address anticipated climate changes and increased demands for the Station Area, this Sustainability Framework includes all the Sustainability Master Plan (SMP) goals informed by the community (see inset) and establishes a set of goals and principles to maximize community benefit, including sustainability measures, for Kirkland's existing residents and employees and new members of the community. Like the SMP, the High Performance Building Standards described in KZC 115.62 outline key implementation strategies and actions for development projects to readily tackle these goals.

Sustainability Master Plan (SMP) goals



Sustainability Master Plan Key Recommendations

The plan is divided into eight focus areas. The following list of recommendations highlights the ideas that garnered the most support and excitement in the community:

Energy Supply and Emissions

It is imperative that the energy the community uses is renewable and consistently gets cleaner until it is free from all pollutants. This can be achieved by sourcing electricity that is not produced by combustion of fossil fuels. On a global scale, this conversion should be done to the maximum extent possible by 2030 to avoid the worst impact from Climate Change as the world works towards achieving zero community greenhouse gas (GHG) emissions.

- Secure carbon-free electricity for the community
- Reduce vehicle miles traveled
- Reduce the use of natural gas in buildings and convert existing systems to clean electric

Buildings and Infrastructure

Buildings and related infrastructure not only use a great deal of natural and human made materials, but their construction and operation are responsible for over one third of the community's GHG emissions. Since water is a precious and essential resource, we should ensure we don't use more than required as it is also being impacted by climate change.

- Incentivize construction of high-performing, low energy use zero-emission structures
- Retrofit existing buildings to reduce energy use
- Increase water efficiency in all buildings and infrastructure

Land Use and Transportation

Transportation alone accounts for about half of Kirkland's community greenhouse gas emissions. Efficient land use and transportation patterns can be optimized to use the land we have more efficiently, and to help the community improve air quality, reduce congestion by driving less, and utilize many cleaner transportation options such as biking, walking, transit use and carpooling.

- Employ Smart Growth principles in all City planning practices and codes
- Reduce the average amount each person drives by 20% by 2030 and 50% by 2050
- Ensure that people of all ages and abilities can comfortably get around by walking or bicycling
- Grow the annual number of weekday transit riders by 10% each year

Natural Environment and Ecosystems

Air, water, land, plants and animals and the entire ecosystem that supports them are vital to human health and contribute immensely to the community's quality of life.

- Protect and enhance the water quality of Kirkland's streams, lakes and wetlands
- With the community's help, restore at least 500 acres of City-owned natural areas and open space park lands by 2035
- Eliminate the discretionary use of synthetic pesticides in parks by 2025
- Make sure that all residents can walk to a park or open space
- Meet the overall goal of citywide 40% tree canopy cover goal by 2026
- Manage Kirkland's urban forest resource for optimal health, climate resiliency and social equity

Sustainable Material Management

Reducing consumption and waste by reusing materials and fixing items instead of replacing or discarding them helps us transition to a system where every thing is reused or recycled.

- Achieve zero waste by 2030
- Compost all food and yard waste
- Reuse material and recycle the rest
- Support product stewardship

Sustainable Governance

Responsible governance helps foster decisions that are good for the environment, social equity, and the economy.

- Integrate sustainability into every major decision the City makes
- Coordinate sustainability programs and policies across all City departments
- Ensure processes for public participation are fair, accessible, and inclusive
- Build community resiliency
- Maintain the City's responsible fiscal practices

Sustainable Business

Local businesses, both small and large, contribute extensively to the livelihood of the community and enhance Kirkland's sense of place. The city can assist businesses to become more sustainable and help rebuild the local economy through local and regional partnerships.

- Provide personalized environmental technical support to businesses
- Develop a diversified, equitable and resilient local green economy

Healthy Community

Communities that have access to the necessities of life such as food, water, housing, jobs and opportunities are happier and healthier. It is important for all members of the community to feel they belong and that their city is equitable and socially just.

- Double the number of P-Patches or other community gardens by 2025, and again by 2030
- Reduce how much potable water each person in Kirkland uses by 10% by 2025 and 20% by 2030
- Help refugees and immigrants, people of color and economically struggling residents access the resources they need to thrive
- Build a community that helps young people become engaged, competent and responsible members of the community
- Make Kirkland a safe, inclusive, and welcoming place for all people
- Expand housing options for all income levels
- Provide more recreation facilities

Goals

In support of the project objectives of an inclusive district that supports community benefits and quality of life, and the Council- and community-identified priority innovation areas of Ecosystems / Green Infrastructure and Energy / Decarbonization, the following goals have been developed. Opportunities around these goals are explored further in the following frameworks.

- Support a 'future-ready' district that is more resilient to the impacts of climate change, to ensure that future innovations are not precluded, and to recognize the pace of market transformation
- Lead the way on realizing sustainability master plan goals through public projects and services in the Station Area
- Prioritize green infrastructure to improve resilience, air and water quality, shade and cooling, habitat and ecological function, as well as human health
- Support community health and emergency preparedness
- Direct incentives towards efforts that support social resilience including energy justice and equitable distribution of sustainability improvements, and/or towards efforts that achieve multiple benefits
- Support partnerships and opportunities within the Station Area for developments to plug into shared / distributed infrastructure, especially reused water and community energy systems, and to support the ecosystem performance and resilience through beyond the site contributions to tree canopy and steam health
- Support High Performance Buildings to achieve emissions, energy, materials, and water targets
- Support multi-benefit ecosystem and habitat improvements, reduce impervious surfaces, and address gaps [with the Green Factor Code]

NE 85th Station Area Ecological Framework

Subarea Context and Priorities

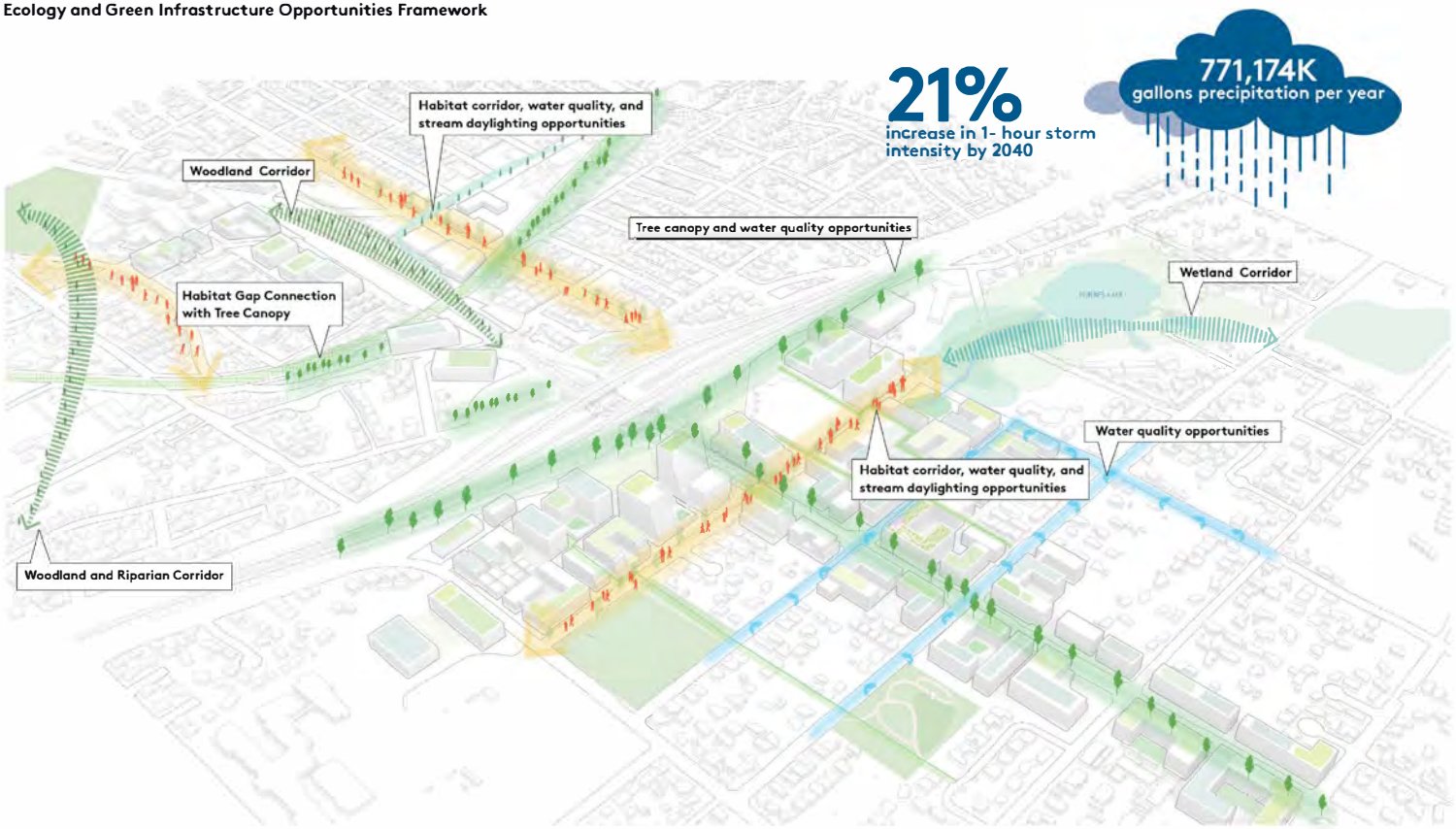
There is an urgency to address anticipated climate changes including more frequent storms and flooding; drought and water shortages; negative impacts to salmon; and increased extreme heat days and food availability. Progress can be made through project and site-level interventions, but by definition, cooperation is needed for system-wide improvements to ecosystem health and functioning.

The subarea has glacial geology with kettles and moraines and includes substantial rolling hills and topography. It is comprised of two watersheds: the Forbes Creek watershed and the Moss Bay watershed. The Forbes Creek watershed is a salmon bearing habitat. It also includes dense areas of existing vegetation interspersed through neighborhoods.

This vegetation primarily exists in an urban matrix consisting of both patches and disconnected habitat corridors. These patches and corridors are made up of layered vegetation including tree canopy and understory planting which supports structural habitat that provides for food, forage, and shelter for mammals, birds, and insects. Three of these are of particular significance: a woodland corridor at NE 85th St between 6th St and NE 114th Ave, a riparian corridor that includes Everest Park, and the wetlands and associated lands surrounding Forbes Lake.

To support the goals of enhancing urban ecology, biological diversity, and tree canopy within the station area, existing patches and corridors should be protected, while filling in the gaps between them.

Ecology and Green Infrastructure Opportunities Framework



Source: Mithun, Herrera

Prioritizing Ecosystem and Green Infrastructure Strategies

Multiple Benefits

A guiding principle for the ecosystem and green infrastructure strategies prioritized here is that they create multiple benefits across ecosystem functions such as: improving mental and physical health; cleaning water and air; increasing biodiversity; and providing resiliency to the impacts of urbanization and climate change impacts, including increased frequency and intensity of rainfall and warmer temperatures.

Resilient, Distributed Green Infrastructure

The recommended green infrastructure strategies are informed by a distributed systems approach to infrastructure and utilities that moves from large, centralized stormwater facilities to smaller scale facilities that are distributed throughout the area and, when they are interconnected, has been shown to increase resiliency. Resiliency is the ability to respond to chronic or sudden stressors, such as significant rain, flooding, or heat events. Successful green stormwater infrastructure projects use a mixture of regional facilities and distributed stormwoter features to provide multiple benefits including stormwater conveyance, treatment and adding significant value to the urban habitat, as well as to the pedestrian realm, through green streets.

Connected and Living Systems

To support citywide goals around tree canopy and habitat, this framework builds on Kirkland's existing urban forestry plon and utilizes a Green Factor criterion to incentivize integrated green infrastructure project contributions at the site scale, leveraging new buildings, sites, frontages, open spaces, and streets.

Opportunities to support broader ecosystem and habitat function beyond the site scale are very important for living, resilient systems. Existing stormwater regulations and standards offer a strong foundation to support ecosystems; however, there are gaps that can reduce participation of developments.

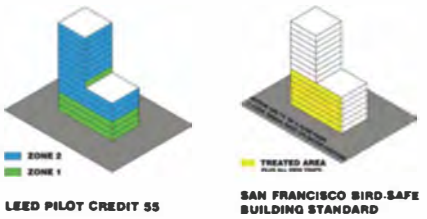
There is on opportunity to support more stringent water quality standards and biodiversity by considering amending infeasibility criteria and providing other incentives, that would also anticipate future regulations addressing water quality pollutants (such as metals, 6PPD quinone, and phosphorus) and permit drivers to retrofit existing development.

"Beyond the Site" opportunities include a range of strategies and innovations that should not be precluded, and are illustrated in the Ecosystem Opportunities Framework:

- Contribute to in-watershed habitat connectivity, tree canopy, and stream health goals beyond the site boundary
- To address flooding, reduce impervious surfaces, treat stormwater from the public right-of-way on the project site, or contribute to a district green infrastructure project
- To support ecosystem health, provide enhanced stormwater treatment for water quality pollutants including metals, 6PPD Quinone, and phosphorus, with a priority on the Forbes Creek watershed; and support stream health including daylighting of piped portions with a priority on the Moss Bay watershed
- To support urban habitat, consider design and management practices that provide dark sky environments and bird-safe construction, and adaptive management of landscapes
- To reduce potable water needs and address droughts, contribute to water use efficiencies, and include rainwater capture, harvesting, reuse, and on-site treatment

Stretch strategies for additional consideration include shared and distributed systems, like blue streets or purple pipes, and should be studied further. Some areas should be further explored by City departments and in collaboration with partner organizations or local utilities. For example, widespread adoption of water recycling could be facilitated by installation of district purple pipe as the city performs ongoing maintenance on public streets. There would need to be conversations with the City, King County, and water retailers regarding implications of this shift.

Bird Safe gloss, Louisiana Children's Museum (Mithun)



Example applications of Bird Safe Design Standards

Stormwater management integrated into plaza, Liberty Bonk Building (Mithun)

Woodland Park Zoomozium Green Roof (Mithun)

NE 85th Station Area Energy Framework

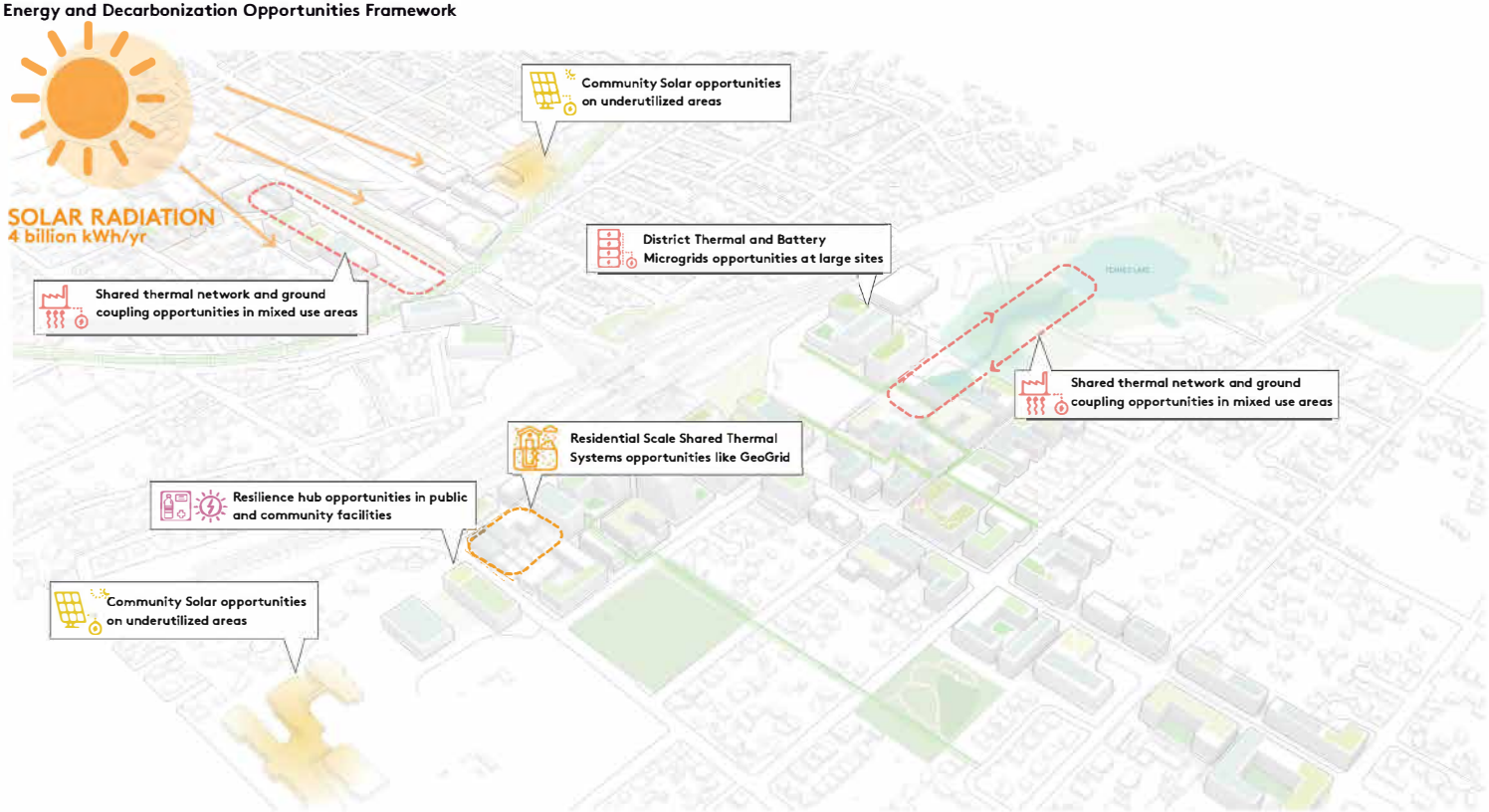
Subarea Context and Priorities

Energy use in the built environment is a major driver of climate change-related emissions. The concept of Embodied Carbon refers to emissions that occur during the manufacture, transport, construction, and operations of a building or facility. There is significant movement within the building industry towards decarbonization including construction and building materials, as well as building operation.

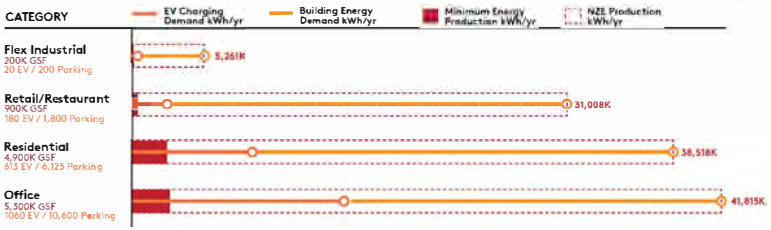
Regionally, the K4C King County Cities Climate Collaboration and Shift Zero advocacy alliance are examples of groups sharing technical, policy, and other expertise to scale up action. The building industry is well positioned for construction and building materials reductions, and tools like the Embodied Carbon in Construction Calculator (EC3), are widely known and used today. Similarly, our region is well positioned for operational reductions. The Washington State Energy Code (WSEC) is one of or the most aggressive in the country with respect to efficiencies, renewable energy production, and low-carbon systems.

Strategies should align with the recently approved 2021 WSEC, effective July 1, 2023, and the SMP target of 80% emissions reduction from baseline by 2050. These strategies should be revisited once the metrics of the WSEC are finalized, with an understanding that the WESC will require renewable energy production, efficiencies, and low-carbon technologies; and development will be moving towards all-electric energy and more electric vehicle charging.

Energy and Decarbonization Opportunities Framework



Source: Mithun, BUSS



Prioritizing Energy and Decarbonization Strategies

Addressing energy decarbonization in the built environment involves two linked approaches: lowering the demand for energy overall and investing in cleaner sources of energy. In both cases, actions should be taken at the individual building, multi-building, and district scales. As a mixed-use, transit-oriented community, there are ample opportunities to reduce energy demand.

Multiple Benefits

As with other strategies in this sustainability framework, multi-benefit solutions have been identified wherever possible. One example in this section is the opportunity for co-location of future energy production with resiliency hubs.

Sharing Resources

With a planned mix of development types, compact form, and anticipated street and public works improvements, the Station Area presents opportunities for shared energy and balancing loads. Different land and building uses tend to have differing energy use profiles, both in the typical amount of energy needed for operations and in the time of energy demand (called load).

Because of the Station Area's planned mixed of uses and relatively compact development pattern, there are unique opportunities to gain efficiencies and balance loads during different times of the day. There are opportunities to facilitate shared resources through partnerships and other models. District energy systems are being used today in Puget Sound by a variety of entities, including institutions like Seattle University or large organizations like SeaTac; and examples of public-private models exist in other places in the U.S. and Canada.

Multi-Source Approach

One of the major trends in energy today is a shift from high temperature, centralized generation plants to a more distributed, multi-source approach to generation, transmission, and storage of energy. The opportunity strategies reflect this shift in approach, while recognizing that this is likely to be a mid- to long-term process.

Building-scale decarbonization will be supported through High Performance Building Standards and third-party sustainability protocols that encourage developments to not only design, construct, and certify high performing buildings. Recognizing the imperative for decarbonization, baseline requirements will support energy efficiency, on-site renewable energy production (such as rooftop solar), and embodied carbon assessments. Baseline requirements will also include strategies that require low private investment but provide high public value and may function better with widespread adoption, such as planning for construction materials diversion.

Single-occupancy vehicle trips are a significant driver of emissions for the city. As a transit-oriented community, the Station Area will intrinsically have high potential for vehicle trip reduction and carbon reductions. This can be achieved through a combination of land use and urban design policies, together with active transportation improvements and demand management (TDM) strategies and programs. These actions and strategies are primarily addressed in other areas of the Station Area Plan and Implementing Codes; however, their sustainability co-benefits should be recognized.

"Beyond the Building" opportunities include a range of strategies and innovations that should not be precluded and could be facilitated as the market continues to move rapidly toward decarbonization. Some of these are illustrated in the Energy Opportunities Framework on the prior page:

- district thermal and battery mirogrids
- residential-scaled thermal networks
- community solar, energy storage and battery
- distributed, shared systems that move towards "5th Generation" systems that move away from centralized, high temperature plants to distributed, multi-source, more efficient energy systems
- Resilience Hubs –community-serving facilities augmented to support residents, coordinate communication, distribute resources, and reduce emissions

Stretch strategies for additional consideration include District and Shared Thermal and Low-Carbon systems. Additional technical guidance on how to contribute to district energy opportunities could help increase developer participation. This could take the form of a task force assembled by the city to provide technical support to developers considering district energy contributions, or the issuance of RFPs for partnerships on discrete strategies. When utility or street improvements are planned, it is an opportune time to evaluate the potential for installation of shared thermal system infrastructure components such as thermal storage, ambient loop systems, group coupling, and waste heat recovery including sewer heat recovery. The City and local utilities should also consider a study of the implications of requiring all electric buildings on the grid and a cohesive approach to facilitating their goals.

On-site renewable production at UC Irvine Mesa Court towers (Mithun)

Summary of Ecosystem and Green Infrastructure Strategies

Strategy	Description	Implementation Recommendations
Tree Canopy, Habitat Contributions, and Stream Health	Require developments to provide documentation that they have reviewed the NE 85th SAP Ecosystem and Green Infrastructure Opportunities Framework and encourage them to contribute to tree canopy, habitat 'patches' with similar habitat functions as adjacent properties or habitat 'corridors', and/or support stream health through daylighting piped portions with a priority on the Moss Bay watershed, to reconnect ecological corridors.	Incentive
Native, Drought Tolerant Species	Encourage planting primarily native of drought tolerant trees throughout the SAP, in addition to the existing tree retention-based code in KZC 95.	Requirement / Incentive
Bird Safe and Dark Sky Environment Standards	Require netting or screening to reflect glare on windows and prevent bird kills. Require the installation of fixtures that limit light leaving a building or a site or shining into the sky. Eliminating artificial light and sounds while few humans are present create a nighttime habitat and bird friendly environment.	Requirement
Food Production	Incentivize the provision of Pea Patches on roofs or on underutilized lots.	Incentive
Stormwater Management, Pesticide Reduction, Sediment Control	Require developments to adopt a long-term stormwater management plan, construction site management practices that control sediment, with the goal of achieving zero sediment runoff across the entire operation, and to submit a landscape plan that demonstrates a commitment to minimal pesticide and fertilizer inputs, if any, informed by Salmon Safe Standards.	Requirement
Water Use Management	Require water efficiencies and incentivize responsible water use including reduction, reuse, treatment and recycling, and treatment and reclamation. Do not preclude installation of or connection to purple pipe.	Incentive
Enhanced stormwater treatments for pollutants	To support ecosystem health, provide enhanced stormwater treatment for water quality pollutants including metals, 6PPD Quinone, and phosphorus (exceeding DOE's 50% reduction requirement) with a priority on the Forbes Creek watershed.	Incentive
Adaptive Management of Landscapes	Adaptive Management Plans developed with input from local ecologists and environmental specialists outline on-going landscape maintenance, organic management methods, and monitoring activity to support biodiversity, habitat, and ecosystem function, understanding the nature of their changing relationships.	Incentive
Adaptation Strategies	Encourage developments to assess regional climate change impacts on site design based on 50-year projections, and how these impacts can be reduced or eliminated through Site Climate Resiliency Planning, informed by Salmon Safe Standards.	Incentive

Summary of Energy and Decarbonization Strategies

Strategy	Description	Implementation Recommendations
Demand Reductions	Consider 3rd Party Protocols including Built Green 4-Star and LEED Platinum as baseline requirements to achieve demand reductions.	Requirement
Building Scale Renewable Energy Production	Require development scale renewable energy production, in alignment with 2021 WESC provisions or greater.	Requirement
All Electric Buildings	Require all electric buildings except for gas commercial cooking appliances if electric 'ready' infrastructure is provided. Incentivize fully natural-gas free buildings. Reference the Kirkland High-Performance Building Standard for additional information.	Requirement / Incentive
Waste Diversion	Require developers to provide documentation of a deconstruction and material diversion plan. Reference the Kirkland High-Performance Building Standard for additional information.	Requirement
Electric Vehicle Infrastructure	At least 20% of all required vehicular parking spaces shall be EV ready, at least 10% of all required vehicular parking spaces shall be EV ready complete with functioning charger, and all bicycle/micro-mobility storage areas shall include electrical outlets. Reference the Kirkland High-Performance Building Standard for additional information.	Requirement
District Thermal and Battery Microgrids	Incentivize the installation of battery micro-grids on large sites and in projects that serve vulnerable populations, such as seniors, youth, and people experiencing poverty, housing insecurity, or health issues. Incentivize developments to provide documentation that they have considered contributing to the microgrid opportunities outlined in the NE 85th Energy and Decarbonization Opportunities Framework.	Incentive
Residential scale shared thermal systems (ex. GeoGrid)	Incentivize residential scale shared thermal system demonstration projects.	Incentive
Resilience Hubs	Require developments to provide documentation that they have reviewed opportunities in 85th SAP Energy and Decarbonization Opportunities Framework and considered publicly accessible resilience hubs as demonstration projects, integrated into community facilities, institutions, private developments, or partnerships.	Incentive
Community Solar, Energy Storage, and Battery	Require on-site renewable energy production, or contribution to community solar within the grid area.	Requirement Scaling Option or Incentive
Low Carbon, 5th Generation District Thermal, including waste heat recovery, ambient loop systems, and ground coupling	Incentivize developments to provide documentation that they have reviewed opportunities in 85th SAP Energy and Decarbonization Opportunities Framework and considered District Thermal, including thermal storage, ambient loop systems, ground coupling, and waste heat recovery.	Incentive
Net Zero Energy (NZE) Buildings	Provide incentives for developers who achieve the International Living Futures Institute (IFLI) NZE certification. Potential partnership with PSE. Community solar will likely be needed for taller buildings to meet NZE.	Incentive
Embodied Carbon Assessment	Require developers to provide an Embodied Carbon Assessment (ECA) and set embodied carbon limits and reductions. Reference the Kirkland High-Performance Building Standard for additional information.	Requirement
Lifecycle Decarbonization	Incentivize developers to provide a Lifecycle Carbon Assessment (LCA) and achieve an established maximum carbon level. Review Design Guidelines, FBC, and Development Standards for their ability to promote or not preclude emerging technologies, such as Mass Timber, that achieve carbon reductions.	Incentive
Metered Energy Efficiency Transaction Structure	The City can explore MEETS (Metered Energy Efficiency Transaction Structure) and potentially do much of the early exploration legwork needed with the local utility.	Do not preclude
High Performance Building Envelopes	Allow a provision for departures from Design Guidelines, FBC, and Development Standards for their ability to promote or not preclude energy efficient design.	Do not preclude (process based)
Adaptation Strategies	Incentivize developers to provide documentation that they have assessed regional climate change impacts on site design based on 50-year projections, and conducted a hazard assessment. Actions are dependent on project, location, and hazard. May include: • Relocation of critical systems • Structural reinforcement • Off-Grid renewables	Do not preclude/ Incentive

11.0

Appendix — Table of Contents

11.0 Appendix Table of Contents:

11.1 Implementation Strategies

11.2 Recommendations List

11.3 Recommended Infrastructure List

11.4 Supporting Plan Summary

11.5 Market Study (2020)

11.6 Forbes Lake Technical Memo

11.7 Transit Travel Time and Person Trip Analysis

11.8 Engagement Comment Summaries

11.9 High-Performance Buildings & Sustainability Protocols

11.10 Supplemental Transportation Memo

The following includes only Appendix 11.1. The remainder of Station Area Plan Appendices are available on the project webpage at www.kirklandwa.gov/stationareaplan.

11.1

Appendix — Implementation Strategies

APPENDIX 11.1 – IMPLEMENTATION MATRIX

#	ACTION	LEAD AGENCY/PARTNERS	IMPLEMENTATION TIMELINE *Adopt with Plan, Initiate upon adoption, short-term (0-5 years), medium-term (5-10 years), long-term (10+ years), Ongoing*	STATUS *1 = Funded or resourced (staffed)* *2 = City considering allocating funding in future (e.g., CIP and/or budget process/staffing)* *3= Long-range Vision*
LAND USE				
1	Adopt a Form-based Code and urban design guidelines to accommodate the growth targets based on the capacity analyzed in the Station Area Plan FSEIS.	City of Kirkland	Adopt with Plan (FBC/Design Guidelines)	1
2	Maintain collaborative relationships with service providers in the Station Area (e.g., KCHA, Helen's Place) and identify opportunities to complement and enhance their services.	City of Kirkland/King County Housing Authority/Helen's Place/Salthouse Church	Ongoing	1
3	Pursue opportunities to utilize WSDOT right-of-way for transit-supportive uses that could include future development, recreational amenities, and/or managed open spaces through the City's legislative agenda.	City of Kirkland/WSDOT	Ongoing	3
HOUSING				
4	Adopt an incentive zoning program in the Station Area Form-based Code that creates development bonuses for affordable housing, with an emphasis on creating units in excess of the City's current 10% inclusionary zoning and, or providing units at deeper levels of affordability.	City of Kirkland/ARCH	Adopt with Plan (FBC)	1
5	Direct affordable housing in-lieu payments or commercial incentive contributions to support affordable housing within the Station Area boundary.	City of Kirkland/ARCH	Short-term	1

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6	Establish an affordable housing target within the Station Area boundaries (as a subset of Citywide targets); create and maintain a monitoring program to track progress of implementation measures towards housing targets.	City of Kirkland	Short-term	1
7	Conduct a nexus study for commercial linkage fees as a method to support affordable housing targets by collecting fees new commercial development. To the extent new State-wide enabling legislation is needed, add to the City's legislative agenda.	City of Kirkland	Medium-term	2
8	Adopt a Tax Increment Financing district and project list that identifies infrastructure projects in the Station Area that are necessary to encourage and support future redevelopment and housing production.	City of Kirkland	Short-term	2
ECONOMIC DEVELOPMENT				
9	Adopt development standards that accommodate a range of commercial spaces, particularly smaller scale commercial spaces that are accessible to small, local businesses.	City of Kirkland	Adopt with Plan (FBC)	1
10	Identify opportunities for multi-benefit partnerships and programs between private, public, and non-profit organizations in the Station Area to create community benefits.	City of Kirkland	Initiate upon adoption	1

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NATURAL ENVIRONMENT AND SUSTAINABILITY				
11	Implement the City's Sustainability Master Plan goals in the Station Area and develop a monitoring program to track.	City of Kirkland	Initiate upon adoption	1
12	Integrate strategies into sustainability regulations for the district that "future-proof" the plan to ensure development is not precluding future innovation in the field.	City of Kirkland	Adopt with Plan (FBC)	1
13	Identify programs that support achievement of state and regional greenhouse gas emissions reductions goals.	City of Kirkland	Initiate upon adoption	1
14	Identify programs that reduce air pollution and greenhouse gas emissions by increasing alternatives to driving alone.	City of Kirkland	Initiate upon adoption	1
15	Expand electric transportation infrastructure in the Station Area.	City of Kirkland/Transit Agencies/Private development	Short-term	2
16	Identify programs that encourage retrofitting of existing buildings to reduce building energy use.	City of Kirkland	Short-term	2
17	Identify programs that promote wise use of services and resources (including conserving water and energy, reducing waste, treating stormwater).	City of Kirkland	Initiate upon adoption	1
18	Explore partnership opportunities to treat stormwater from the public right-of-way on project sites with shared facilities.	City of Kirkland/Private property-owners	Initiate upon adoption	2

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19	Establish a Green Factor Code that encourages visible, functional, green spaces and high-quality habitat.	City of Kirkland	Adopt with Plan (FBC)	1
PARKS AND OPEN SPACE				
20	Identify and minimize gaps in equitable access to parks and open spaces in order to make more efficient use of existing parks and open spaces in the area.	City of Kirkland	Adopt with Plan (SAP and PROS Plan)	1
21	Leverage public assets and partnerships, including excess WSDOT right-of-way, for potential active recreational areas, managed natural areas, stormwater treatment, or sustainable landscape areas.	City of Kirkland/WSDOT	Short-term	1
22	Expand access to and through Forbes Lake Park to provide multiple benefits of environmental enhancement and education, improved nonmotorized transportation connections, and access to open space and recreation.	City of Kirkland	Short-term	2
23	Identify locations to enhance the Cross Kirkland Corridor to create recreational and open space amenities and improve active transportation connections to the Corridor.	City of Kirkland	Short-term	2
24	Identify locations for required mid-block green connections that provide opportunities for landscaping, active, and passive recreation.	City of Kirkland	Adopt with Plan (FBC)	1

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25	Adopt an incentive zoning program in the Station Area Form-based Code that creates development bonuses for new development to provide on-site public open space (e.g., plazas, pocket parks, etc.), enhanced on-site common spaces, recreation amenities, and linear parks.	City of Kirkland	Adopt with Plan (FBC)	1
26	Incorporate identified Station Area Parks projects into the City's Capital Improvement Program.	City of Kirkland	Initiate upon adoption	1
27	As part of a Tax Increment Financing district, identify candidate Parks and Open Space infrastructure projects needed to serve the Station Area.	City of Kirkland	Short-term	2
TRANSPORTATION AND MOBILITY				
28	Incorporate identified Station Area Transportation projects into the City's Capital Improvement Program, Capital Facilities Plan, and Transportation Master Plan.	City of Kirkland	Initiate upon adoption	1
29	Incorporate identified Station Area Transportation projects into a Planned Action Ordinance as required mitigation for future private development to construct.	City of Kirkland	Adopt with Plan (PAO)	1
30	Evaluate how Station Area Plan projects should be reflected in Transportation Impact Fee calculations, including the option of establishing an overlay for the Station Area.	City of Kirkland	Short-term	2

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31	Develop street standards that serve all users, including pedestrians, bicyclists, other forms of micromobility (e.g., scooters), transit users, vehicles, and – where appropriate – freight ("complete streets" vision 2040).	City of Kirkland	Adopt with Plan (FBC)	1
32	Establish parking ratios that reflect the vision for a vibrant transit-oriented district, recommended transportation investments to achieve a balanced multi-modal network, and robust Transportation Demand Management (TDM) strategies for future development.	City of Kirkland	Adopt with Plan (FBC)	1
33	Establish a TDM monitoring program for the Station Area.	City of Kirkland	Initiate with Plan	1
34	Develop bicycle parking guidelines as a Public Works pre-approved policy.	City of Kirkland	Short-term	1
35	Develop passenger load/unload areas as Public Works pre-approved roadway policy.	City of Kirkland	Short-term	1
36	Monitor parking congestion in the Station Area, and evaluate parking management strategies like residential permit parking zones, time limitations, and enforcement.	City of Kirkland	Short-term	2
37	As part of a Tax Increment Financing district, identify candidate Transportation infrastructure projects in the Station Area.	City of Kirkland	Short-term	2
38	Conduct a study to evaluate transportation solutions to connect the BRT to downtown	City of Kirkland	Medium-term	2

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PUBLIC SERVICES AND PUBLIC FACILITIES				
39	Incorporate identified Station Area Water, Sewer, and Stormwater projects into the City's Capital Improvement Program.	City of Kirkland	Initiate upon adoption	1
40	Incorporate identified Station Area Water, Sewer, and Stormwater projects into a Planned Action Ordinance as required mitigation for future private development to construct.	City of Kirkland	Initiate upon adoption	1
41	Adopt an incentive zoning program in the Station Area Form-based Code that creates development bonuses for new development to provide school space.	City of Kirkland	Adopt with Plan (FBC)	1
42	Adopt development standards that can provide Lake Washington School District with more development capacity to build additional school space on current district-owned sites.	City of Kirkland	Adopt with Plan (FBC)	1
43	Remove potential development barriers in current regulations that might preclude siting of school facilities on private properties as part of mixed use developments.	City of Kirkland	Adopt with Plan (FBC)	1
44	Conduct a Citywide assessment of zoning regulations to remove potential barriers to LWSD capacity projects on current district-owned sites and possible public/private partnership sites.	City of Kirkland/LWSD	Short-term	1
45	As part of a Tax Increment Financing district, identify possible candidate Sewer infrastructure projects in the Station Area.	City of Kirkland	Short-term	2

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ADMINISTRATIVE				
46	Develop City application materials, a fee structure, and legal agreements to implement the incentive zoning program, including forms that ensure provision of bonus incentives in perpetuity.	City of Kirkland	Short-term	1
47	Develop a Station Area implementation tracking program and establish a cadence of Council and Planning Commission updates on implementation progress.	City of Kirkland	Short-term	1
48	Adopt a Planned Action Ordinance for the Station Area, and a supplemental checklist form for projects applying to be reviewed as a Planned Action.	City of Kirkland	Initiate upon adoption	1
49	Adopt amendments to the Comprehensive Plan General elements and neighborhood plan chapters to ensure consistency with the adoption of the Station Area Plan Subarea chapter.	City of Kirkland	Short-term	1
50	Update City forms and publications for consistency with Station Area Plan development regulations.	City of Kirkland	Initiate upon adoption	1
51	As part of the City's routine budget and CIP processes, identify and prioritize Station Area funding and expenditures to support infrastructure investments and service delivery.	City of Kirkland	Short-term	2