Appendix F

DEIS Content Related to Analysis of Alternative 2 and Alternative 3

Appendix F includes Chapter 1, Chapter 2, and Chapter 4 of the previously published Draft Environmental Impact Statement (DEIS), which analyzed two action alternatives, Alternatives 2 and 3, along with Alternative 1—No Action. The purpose of the EIS process has been to study a range of alternatives and gather public comments. The EIS process gathered public comments and as an outcome, Alternatives 2 and 3 have been removed from further consideration in this EIS, and Alternative 4 is now analyzed in the FEIS.

It should be noted that the environmental analysis of the DEIS has been updated in the FEIS. Together, the DEIS and FEIS represent the full range of alternatives analyzed and full breadth of the environmental analysis, but content in the FEIS is the most recent and includes minor corrections and clarifications.

Lake Forest Park
TOWN CENTER
Heart of the Community

JANUARY 2019







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CITY OF LAKE FOREST PARK

Draft Environmental Impact Statement

for the Town Center Plan

Town Center Plan Draft Environmental Impact Statement (DEIS)

Fact Sheet

Draft Environmental Impact Statement Chapters and Sections

Available Appendices

The following appendices are available as separate documents upon request:

Lake Forest Park
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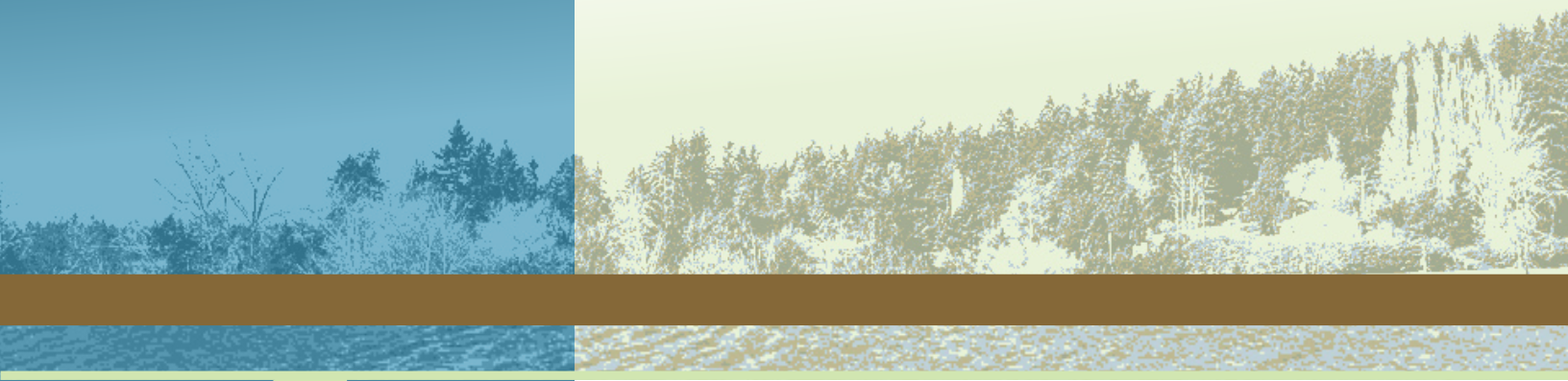
for the Town Center Plan



1

INTRODUCTION AND EIS SUMMARY

INTRODUCTION

This draft environmental impact statement (DEIS) analyzes alternatives for potential future redevelopment of the Town Center at Lake Forest Park, located at the at the northwest corner of Ballinger Way NE (SR 104) and Bothell Way NE (SR 522) in the City of Lake Forest Park, King County, Washington. The alternatives are based on the proposed action of revising the planning and land use regulations applicable to the Town Center in Chapter 18 of the Lake Forest Park Municipal Code.

The outcomes of the DEIS analysis and public and agency review process will shape the Town Center Plan and guide future redevelopment efforts through supporting code provisions and design standards and guidelines. The alternatives under analysis for the Town Center have been shaped by regional market and development potential, input from local experts and property owners, and the outcomes of an extensive community and stakeholder visioning and planning process focused on the Town Center that began in the Fall of 2017 and continues through the development of the Town Center Plan, to be finalized directly following this DEIS process.

PROJECT BACKGROUND

The Town Center has long served as the heart of the Lake Forest Park community—a place where people gather, socialize, shop, dine, access services at City Hall, and participate in events and activities. Changes are on the horizon for Town Center related to multiple upcoming opportunities for redevelopment and improvements.

Voters in the Puget Sound Region approved a $54 billion ST3 package of regional transit improvements in November 2016. As a result, Sound Transit is planning to build a bus rapid transit (BRT) system from Shoreline to Woodinville, connecting to the light rail system in the I-5 corridor and following the route of NE 145th Street and Bothell Way NE (SR 522). The BRT would provide fast, reliable, frequent transit service in LFP and other communities along the corridor. The project would include multiple BRT stations in LFP, including one station pair at Town Center, as well as improvements to intersections and sidewalks connecting to the stations. Sound Transit has identified Town Center as the representative project location for a new park-and-ride structure with space for a minimum of 300 vehicles.

Merlone Geier Partners (MGP) is a private investment company that purchased most of the property that encompasses the Lake Forest Park Town Center in 2014 and has been making improvements to the shopping center and also has plans to redevelop areas of the site in phases over the next 15 to 20 years.

The City of Lake Forest Park is also a property owner at Town Center, where City Hall is located, and the Lake Forest Park Police Department is headquartered. The Northshore Fire Department also operates out of Station 57 located at Town Center. As the community grows and changes, there will be a need for future publicly funded infrastructure and civic improvements to serve new residents and businesses. Given the extent of these potential changes at Town Center, the City has been seeking public input on what the community would like to see and is completing this DEIS to analyze the potential impacts of different redevelopment scenarios and determine a plan for the Town Center.

TOWN CENTER VISIONING PROCESS

To inform the development of a long-term vision for Town Center, input was gathered from the communities and stakeholders starting in November 2017 through a robust set of lively, well-attended engagement events, including stakeholder interviews, community meetings, and workshops. The Town Center VISION was developed in June 2018 and accepted by City Council to serve as a framework for policies regarding land use, zoning, and connections within the site and between Town Center and adjacent neighborhoods.

As part of the Town Center Plan, the VISION would guide future redevelopment so that it is designed to best serve the needs of current and next generation citizens, resulting in an enduring, people-oriented place that is consistent with the community's values. The VISION would be the foundation of the Town Center Plan and supporting code amendments, and the VISION goals and policies would be updated as part of the full plan, anticipated to go to City Council for adoption in early 2019.

The VISION focuses on the following key elements:

- ***Placemaking*—**Retaining and expanding important functions and uses that serve the everyday needs of Lake Forest Park residents, such as City Hall, Third Place Commons, the library, police, fire, and emergency services, groceries, shops, businesses, and restaurants and cafes, as well as creating high quality indoor and outdoor gathering spaces that are well connected to an enhanced pedestrian network throughout Town Center.

- ***Sustainability*—**Preserving and enhancing the natural environment—healthy streams, clean water, mature trees, and green spaces and parks that are emblematic of this place called "Lake Forest Park."

- ***Multimodal Connectivity*—**Providing a variety of transportation choices and enhancing connectivity to the high capacity BRT system through a more transit- and pedestrian-oriented form of development at Town Center that also supports effective traffic circulation and minimizes congestion.

- ***Pedestrian Realm*—**Ensuring more of a focus on pedestrian-friendly redevelopment as changes occur over time, transforming Town Center from an automobile-oriented place that requires driving from between locations to a place where people can park and safely, efficiently, and comfortably walk between multiple destinations.

- ***Parking*—**Right-sizing parking to fit the uses at Town Center and designing parking facilities so they are carefully and attractively integrated with other site uses.

- ***Public Services and Utilities*—**Ensuring that public services and utilities are improved and expanded to serve Town Center changes in the future.

- ***Mixed-Use Redevelopment*—**Retaining commercial, employment, and civic uses and introducing a variety of housing choices offered within mixed-use and residential buildings to enhance the vibrancy and livability of Town Center as the heart of the community.

- ***Town Center Character*—**Enhancing the aesthetics at Town Center and reflecting

the character of the surrounding community with timeless, northwest-style architecture and natural materials and planning and design that optimizes views of the lake and surrounding forested setting.

Policies and recommendations of the VISION are integrated into the mitigation measures of this DEIS and closely align with the adopted City of Lake Forest Park Comprehensive Plan, as well as other City plans and initiatives, including Safe Highways, Safe Streets, Town Center Connections, and the Parks, Recreation, Open Space and Trails (PROST) Plan.

The VISION may be reviewed at: http://www.yourlakeforestpark.com/library-towncentervision.html.

PLANNING AND SEPA ENVIRONMENTAL REVIEW PROCESS

The planning and environmental review process is being completed in compliance with the State Environmental Policy Act (SEPA) and applicable provisions of the Lake Forest Park Municipal Code. The process has been designed to encourage public and agency participation and review and includes scoping procedures to define environmental elements to be addressed in the DEIS. Upon issuance of this DEIS, the City will collect comments from the public and agency review and prepare responses in a Final Environmental Impact Statement (FEIS). The timeline in Table 1.1 more specifically describes the steps of the process.

ELEMENTS ANALYZED IN THE DEIS

Elements analyzed in this DEIS were determined based on the public scoping process conducted September 26 through October 26, 2018 and include:

- ***Town Center Character and Land Use***
  This section addresses setting and site character, land use, population, housing, and employment, as well as consistency with adopted plans and policies.

- ***Surface Water and Natural Conditions***
  This section addresses geology and soils, streams with a focus on the Lyon Creek corridor, surface water management, and trees, vegetation, and habitat.

- ***Public and Community Services***
  This section addresses civic and community services, City Hall and municipal services, fire and emergency services, police protection, schools, parks, recreation, open space, and trails, and other community services and facilities.

- ***Utilities***
  This section addresses sanitary sewer, water, electricity, natural gas, and communications.

- ***Multimodal Transportation and Parking***
  This section addresses traffic circulation and safety, parking, pedestrian, bicycle, and access to transit.

Table 1.1 Planning and Environmental Review Process Timeline

Dates	*Steps in Process*
Fall 2017-Summer 2018	Extensive community and stakeholder engagement to inform development of the VISION for Town Center
Summer - Fall 2018	Planning Commission work on development of potential draft amendments to existing planning and land use regulations applicable to the Town Center
September 26, 2018	Determination of Significance and Scoping Notice Issued by the City of Lake Forest Park (Lead Agency)
September 26 - October 26, 2018	Public Comment Period on Scoping
October 10 and 14, 2018	Public Open House Events during Scoping
January 2, 2019	Issuance of this DEIS
January 2, 2019 through February 1, 2019	Public and Agency Review Period
January 16, 2019 at Lake Forest Park City Hall, 6:30 pm to 8:00 pm	Public Hearing on the DEIS
February 2019	Anticipated Issuance of the FEIS
February 2019	Anticipated Adoption of the Town Center Plan, LFPMC Amendments, and Design Standards and Guidelines

SUMMARY OF ALTERNATIVES

The DEIS analysis addresses three potential alternatives for redevelopment at Town Center. It is assumed that changes under any of these alternatives would take place in multiple phases over time, within the next 15 to 20 years. Alternatives have been framed to reflect the range of potential redevelopment and associated impacts that might occur during this timeframe based on market influences, property owner preferences, funding availability, and other factors.

The alternatives represent a "book ended" approach to analysis that encompasses a range of potential changes from a lower level of impact to a higher level of impact that might occur if the site were fully built-out to the urban form proposed.

Ultimately, the proposed Town Center Plan may represent a combination of elements of multiple alternatives or a "hybrid" alternative that fits within the range of the development intensities and related impacts analyzed in the DEIS alternatives.

Alternatives analyzed in the DEIS include:

- ***Alternative 1—No Action***—Redevelopment would be subject to existing code requirements with no revisions to existing planning and land use regulations that currently allow buildings up to approximately 60 feet in height at Town Center.

- ***Alternative 2—Mixed-Use of Varied Height and Form***—This redevelopment alternative assumes a mix of commercial, office, and residential uses of varied height and form across the site, administered through revisions to the planning and land use provisions of the Lake Forest Park Municipal

Code (LFPMC) that allow building heights up to 75 feet to the base roof line.

- ***Alternative 3—Mixed-Use of Uniform Height and Form***—This redevelopment alternative assumes a mix of commercial, office, and residential uses of uniform height and form across the site, administered through revisions to the code that allow building heights up to 85 feet to the base roof line.

Detailed descriptions of these alternatives and the assumptions related to each are provided in Chapter 2—Description of the Alternatives.

SUMMARY OF IMPACT ANALYSIS

The analysis of potential effects found that with implementation of proposed and recommended mitigation measures, significant unavoidable adverse impacts would not be anticipated under any of the alternatives. Alternative 3 would require a higher level of mitigation for all elements of the environment analyzed compared to Alternative 2.

Most all of the potential effects and impacts analyzed in the EIS can be addressed through mitigation measures including planned improvements. In some cases, such as related to transportation, improvements would be needed to serve future phases of redevelopment. Each phase of redevelopment would need to include more detailed project-level analysis to determine the level of improvements that would be required to accommodate the project, with project developers coordinating closely with the City. There may be funding (grants) and public/private partnership opportunities that could be explored.

The potential improvements required to provide water service to the redevelopment would need to be analyzed and modelled in detail once an alternative is selected and more specific plans are known for the Town Center. Based on the analysis in this EIS, Lake Forest Park Water District may need to explore interties with other districts to provide adequate service. The feasibility of this and related costs need to be further studied.

Refer to Chapter 4.0 for the full analysis and a listing of mitigation measures for each element of the environment addressed in this EIS.

FUTURE ENVIRONMENTAL REVIEW

This EIS presents a programmatic, non-project level of environmental analysis addressing the potential effects of changes in planning and land use code provisions at the Town Center. Future project-level review will be completed by others as projects move forward. Environmental review for the Sound Transit BRT project is scheduled to occur in 2019.

Future phases of redevelopment at Town Center would be subject to separate SEPA compliance by each development proponent. SEPA compliance for these future phases of development may include future EIS analyses or other environmental compliance documents depending upon the threshold of development proposed.

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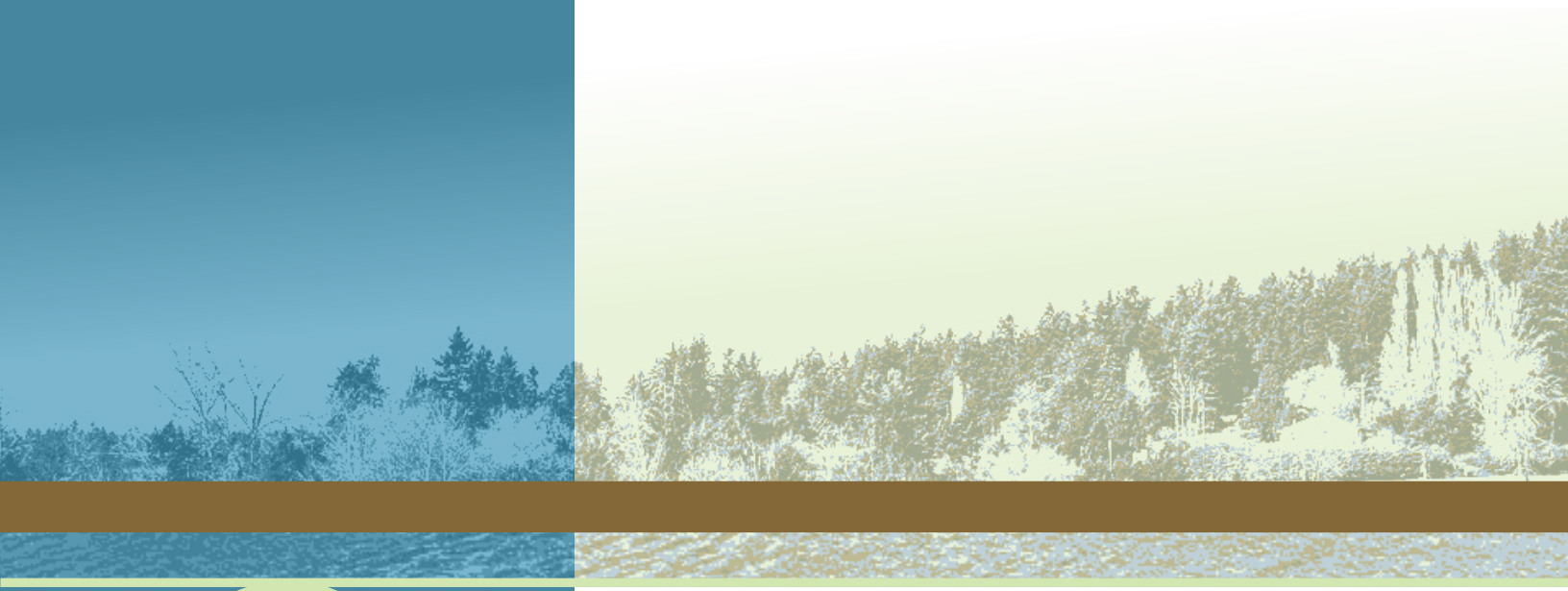


2 DESCRIPTION OF ALTERNATIVES

INTRODUCTION

The City of Lake Forest Park is analyzing three alternatives in this EIS—one "no action" alternative and two "action" alternatives.

ALTERNATIVE 1—NO ACTION

Alternative 1—No Action assumes that a new subarea plan for Town Center would not be adopted. No amendments to existing planning and land use provisions in the Lake Forest Park Municipal Code (LFPMC) would occur, and as such any redevelopment or new development at Town Center would be subject to the existing regulatory structure that is currently in place. "*No Action" does not mean that there would be no changes at Town Center*. The current planning and land use LFPMC provisions do allow for redevelopment up to approximately 60- to 66-foot building heights and the addition of housing, as well as retaining commercial, office, and mixed-use at the site. Alternative 1—No Action is depicted in Figure 2.1.

ACTION ALTERNATIVES: ALTERNATIVE 2—VARIED HEIGHT AND FORM AND ALTERNATIVE 3—UNIFORM HEIGHT AND FORM

The two action alternatives study different heights and forms of redevelopment at Town Center and both alternatives would be consistent with the Vision for Town Center shaped by community input in 2018 and would implement the important objectives of the Vision as summarized in Chapter 1.

Alternative 2 assumes a diversity of uses and building heights and forms across Town Center up to a 75-foot height limit (to the base roofline), and Alternative 3 assumes a more uniform type of mixed-use building across most of the site up to an 85-foot height limit.

The planning scenarios for each of the three alternatives are depicted in in Figures 2.1, 2.2, and 2.3 at the end of this section.

The range of alternatives and the assumed thresholds of redevelopment/development associated with each serve as effective "book-ends" for analysis of potential impacts associated with future redevelopment scenarios that could occur at Town Center. Potential impacts and associated mitigation measures are described in Chapter 4 in this EIS. The assumed planning horizon (anticipated time period for implementation of either action alternative) is 15 to 20 years for purposes of analysis in this EIS.

All three alternatives assume implementation of Sound Transit ST3 program elements, including a bus rapid transit station pair in the Bothell Way NE/SR 522 right-of-way adjacent to Town Center and a park and ride parking structure.

Redevelopment assumptions associated with each of the three alternatives are further described below and summarized in Table 2.1.

Table 2.1 Land Use and Redevelopment Assumptions Related to Each Alternative

TYPES OF LAND USES AND SPACES		REDEVELOPMENT SCENARIOS		
Non-Residential Gross Square Footage (GSF):	**Existing Conditions**	**Alt. 1 - No Action**	**Alt. 2 – Varied Height and Form[3]**	**Alt. 3 –Uniform Height and Form[3]**
Commercial/Retail Space	185,000	175,000[1]	125,000	200,000
Medical/Dental Office	24,000	24,000[2]	25,000	50,000
Bank	3,031	3,031	0[4]	0[4]
Windermere Real Estate Office Building[5]	8,000	8,000	8,000	8,000
Starbucks Coffee[5]	2,500	2,500	2,500	2,500
Arco Gas Station[5]	10 pumps	10 pumps	10 pumps	10 pumps
Residential/Multi-Family Housing (Units):		Up to 700[1]	Up to 1,200	Up to 1,500
Commuter Park and ride Structure/Some (Shared Use Assumed for Off-Commute Hours/Weekends)	0	300 Spaces for Commuters in Stand Alone Parking Structure	300 Spaces for Commuters 100 Spaces for Commercial, City/Public Use Total = 400 Could be Mixed-use/Wrapped w/ Retail/Active Use	300 Spaces for Commuters 200 Spaces for Commercial, City/Public use Total = 500 Could be Mixed-use/Wrapped w/ Retail/Active Use
Civic Space and Public Uses (GSF):				
City Hall	20,000	20,000	32,000[6]	32,000[6]
Indoor Civic/Community Space/Space for Public Meetings and Events	10,000[7]	10,000[7]	20,000[8]	20,000[8]
Northshore Fire Station 57	8,000	8,000	8,000[9]	8,000[9]
King County Library LFP Branch	5,965	5,965	5,965[9]	5,965[9]

Table Notes:

1 This GSF and multi-family unit count represents only one potential redevelopment scenario. More GSF of commercial/retail and medical/dental office square footage could be developed than this under current planning and land use regulations (see Table 2.2).

2 Medical/dental office uses would relocate on site with development of new park and ride structure.

3 Alternatives 2 and 3 assume that most all of the current Town Center commercial/retail complex would redevelop incrementally in phases over time; current medical/office space also would redevelop into new park and ride structure and medical/dental office use would occur in other locations on site.

4 Assumes bank site would be redeveloped; use could relocate to a new space on site.

5 No changes assumed to these sites under any of the alternatives.

6 Assumes City Hall and Lake Forest Park Police would expand on site to meet higher service demand.

7 Approximate size of current Third Place Commons area; separated in table for reference but counted as part of the topline commercial space under existing conditions and in Alternative 1 and as part of civic space in Alternatives 2 and 3.

8 Assumes new expanded indoor commons/community space; preserving the function of Third Place Commons and providing additional meeting facilities and multi-generational services.

9 Fire and emergency services and facilities, as well as potentially library and other human services would need to increase to meet higher service demand; may require additional GSF/facilities (to be determined as growth occurs). Note while listed separately for reference purposes, the analysis assumes the library space is part of the topline commercial space number.

Alternative 1—No Action

Under Alternative 1—No Action, the current regulatory framework applicable to Town Center would remain as is with no amendments. As such, the analysis for this alternative focuses on a potential redevelopment scenario that could occur under the current adopted planning and land use LFPMC provisions applicable to Town Center. The redevelopment scenario assumes some new residential and commercial/retail/mixed-use development at the site, replacing some of the existing commercial space on the northern portion of the site based on a previous plan that was proposed several years ago by previous owners.

Under Alternative 1—No Action, the City would not adopt a new Town Center Plan, and as such, adoption of the provisions in the 2018 Vision would not occur and redevelopment would not be guided by updated planning polices and goals that closely align with community perspectives. In addition, there would not be amendments to the Town Center planning and land use regulations (Chapter 18.42 of the LFPMC) or accompanying design standards and guidelines to illustrate the desired character and design treatments. There would be no specific provisions adopted related to housing affordability, pedestrian- or transit-oriented development, or other new standards and guidelines. (Under the action alternatives, more detailed provisions related to these elements would be adopted to support implementation of the Town Center Vision.

Alternative 1—No Action assumes up to 700 units of new multi-family residential development would be constructed in buildings of 60-foot maximum heights (five levels). This alternative also assumes about the same amount of commercial/retail and office space as under current conditions, located within a mix of existing buildings as well as some new buildings and ground floor spaces in new mixed-use buildings. Parking would be provided through a combination of surface, tuck-under, and structured (assuming some form of shared use agreement with Sound Transit for off-hours use of the commuter park and ride garage spaces).

Much of the existing surface parking would remain the same as currently configured, particularly in southern portions of the site. Several existing uses and buildings at Town Center would continue to be the same under this alternative: City Hall, Fire Station 57, Starbucks, Windermere, and the Gas Station. There would be no major expansion of civic or community space at Town Center under this alternative. The level of overall site improvements would be focused on only those areas that are redeveloped with minimal additions of new social gathering spaces and amenities (and these would primarily be focused around the area of new residential development).

Existing Planning and Land Use Regulations Applicable to Alternative 1—No Action

Alternative 1—No Action assumes that no amendments would be made to the planning and land use provisions of the LFPMC and that the current provisions of Chapter 18.42 Town Center would continue to apply. Alternative 2 and Alternative 3 assume that amendments to the LFPMC and new design standards and guidelines would be created to implement the goals and policies of the 2018 Town Center Vision.

Also, under Alternative 1—No Action, the current Town Center Framework Design Guidelines would continue to be in place and would apply to Town Center redevelopment. These design guidelines serve as an overlay of provisions that can be applied with specific design approaches, and if applied can then modify the requirements of the base zoning provisions in Chapter 18.42. Further, there are bonus guidelines that are part of the Town Center Framework Design Guidelines that can be applied in addition to the base zoning and base design guidelines. These are summarized in Table 2.2.

One of the purposes for the proposed amendments to the LFPMC under Alternatives 2 and 3 is to further clarify and simplify the required planning and land use regulations to guide Town Center development by better integrating the design standards and guidelines with the base LFPMC provisions. Refer to Table 2.3 for a summary of potential LFPMC amendments for Alternatives 2 and 3.

Alternative 1—No Action Redevelopment Scenario—Just One Potential Approach

The planning scenario shown for Alternative 1 is just one potential scenario of how redevelopment could occur under the current planning and land use provisions of the LFPMC. There are many different possibilities of how the site could be redeveloped, and change could occur anywhere on the site (not necessarily just the northern portion of the site as proposed and analyzed under this scenario). Changes in urban form and a greater level of intensity of redevelopment could occur across the Town Center planning area under the current planning and land use regulations.

It is estimated that up to 1,000 multi-family units likely could be built within the allowed building height of 60 to 66 feet, assuming bonus height provisions are applied. Under a more intensive redevelopment scenario, the level of potential effects of Alternative 1 could be similar to Alternative 2 for various elements of the environment (given that Alternative 2 would have a reduced amount of commercial/retail space compared to Alternative 1 but up to 1,200 dwelling units).

That said, the Alternative 1 analysis in this EIS section is the quantity of 700 dwelling units associated with the potential redevelopment scenario, which was an actual proposal from nearly ten years ago that did not move forward due to the economic recession. Evaluating this redevelopment scenario also provides the opportunity to understand how a first phase of redevelopment might be implemented at Town Center, although Under Alternative 2 or Alternative 3, it would be located within taller buildings.

Alternative 2—Varied Height and Form
Alternative 2 assumes a redevelopment scenario that would change the urban form of most of the Town Center planning area, implemented incrementally, in phases over the next 15 to 20 years.

New buildings of varied heights and forms are assumed with a mix of land uses (commercial/retail, office, civic, and multi-family residential) throughout the planning area. This alternative assumes up to 1,200 units of multi-family residential use and overall, less commercial/retail than under current conditions.

Civic and community uses and spaces also would be expanded in the Town Center planning area, including preserving the function of a Third Place Commons type of space as part of redevelopment, along with development of a variety of indoor and outdoor gathering spaces and amenities for public use.

Redevelopment would be guided by new standards and guidelines developed to support implementation of the goals and policies of the Town Center Vision and subsequent Town Center Plan, which have been shaped by an intensive community engagement process, as well as amended planning and land use regulations in the LFPMC. New design standards and guidelines would be in place, aligning with the goals and policies of the Town Center Vision to further guide redevelopment.

It is anticipated that updated LFPMC provisions would address housing affordability consistent with adopted plans and policies.

New standards and guidelines would require pedestrian- and transit-oriented design approaches and encourage design excellence in architecture, site design, and sustainability.

Additional elements of Alternative 2 are shown in Table 2.3.

Alternative 3—Uniform Height and Form
Alternative 3 assumes a redevelopment scenario that would change the urban form of most of the Town Center planning area, implemented incrementally, in phases over the next 15 to 20 years. Under this alternative, the maximum building height would be one level higher and the overall intensity of redevelopment would be greater than under the other action alternative, Alternative 2.

New buildings would be more uniform in height and form throughout the site, containing a mix of land uses such as commercial/retail, office, civic, and multi-family residential, but there would be more multi-family units and as such, a greater emphasis on the residential use at the site than under Alternative 2.

This alternative assumes up to 1,500 units of multi-family residential use and up to 200,000

GSF of commercial/retail space and up to 50,000 GSF of medical/dental office space—more than under current conditions, and more than Alternatives 1 and 2.

Civic and community uses and spaces also would be expanded in the Town Center planning area, including preserving the function of a Third Place Commons type of space as part of redevelopment, along with development of a variety of indoor and outdoor gathering spaces and amenities for public use.

The same as Alternative 2, redevelopment under Alternative 3 would be would be guided by new standards and guidelines developed to support implementation of the goals and policies of the Town Center Vision and subsequent Town Center Plan, as well as amended planning and land use provisions in the LFPMC. And it is anticipated that updated LFPMC provisions would address housing affordability consistent with adopted plans and policies, and because there would be more housing under this alternative, there also would be a greater level of housing affordability and choice offered.

New standards and guidelines would require pedestrian- and transit-oriented design approaches and encourage design excellence in architecture, site design, and sustainability.

Additional elements of Alternative 2 are shown in Table 2.3.

Table 2.2 Existing Planning and Land Use Regulations Applicable to Alternative 1—No Action

	Current Town Center (TC) Zoning, Chapter 18.42 LFP MC	2005 Town Center Framework Design Guidelines—Baseline	2005 Bonus Guidelines
Uses	General commercial and low density residential (but see rows below for density changes under Design Guidelines and Bonus Guidelines)	Mixed-use (horizontal or vertical) and must include Residential as a component of the overall site redevelopment	Same as baseline guidelines
Height Limits—Residential/Mixed-use	40-foot height	48 to 54-foot height (four levels total/3 over 1)	60- to 66-foot height (2005 baseline guidelines plus one additional bonus level for five levels total/4 over 1)
Height Limits—Commercial	30-foot height	See mixed-use height limit	See mixed-use bonus height
Floor Heights	Grocery 20 feet Retail 18 feet Office, Live/Work, Service 12 feet Residential 10 feet	Same	Same
Density—Residential	Maximum of 7 dwelling units per acre	Density shall be determined by form and other provisions related to setbacks, heights, etc.	Baseline standards plus one additional level
Density—Commercial	Individual uses of less than 60,000 GSF allowed outright; non-residential uses between 60,000 and 100,000 GSF allowed through Conditional Use Permit	No single store footprint should exceed 60,000 GSF	Same as baseline guidelines

Table 2.2 Existing Planning and Land Use Regulations Applicable to Alternative 1—No Action (Cont'd.)

	Current Town Center (TC) Zoning, Chapter 18.42 LFP MC	2005 Town Center Framework Design Guidelines—Baseline	2005 Bonus Guidelines
Setbacks and Edge Conditions	20-foot front, side, and rear yard setbacks for all property lines, including individually owned parcels	Buildings adjacent to public realm in either public or private ownership should incorporate 12- to 16-foot setback of the 3rd floor regardless of use	Same as baseline guidelines
Open Space	Existing footprint of buildings, structures, and pavement can be retained in redevelopment (underlying Critical Areas ordinance provision) Land coverage per lot provision in 18.42.080 does not align with current conditions or allowed density and redevelopment envelope	Enhance Lyon Creek and habitat Provide 15,000 SF of contiguous flexible open space with 7,500 SF of this as flexible interior open space (Third Place Commons concept) Provide numerous seating opportunities along pedestrian ways and "eyes on" design of surrounding buildings and spaces to public realm	Baseline standards with increase in size of indoor and outdoor open space areas and added public amenities (water features, public art, etc.)
Site Interior Design and Pedestrian Connectivity	No specific standards	Create visual connections between all public realm spaces and buildings Provide 200-250-foot grid of pedestrian walkways and "pedestrian first" design and east-west connection along Lyon Creek on site Enhanced pedestrian connection on Ballinger Way (separated from street where reasonably achievable)	Same as baseline guidelines

Table 2.2 Existing Planning and Land Use Regulations Applicable to Alternative 1—No Action (Cont'd.)

	Current Town Center (TC) Zoning, Chapter 18.42 LFP MC	2005 Town Center Framework Design Guidelines—Baseline	2005 Bonus Guidelines
Bicycle	No specific standards	Provide clear route of travel between crosswalk to Burke Gilman Trail and through site Provide weather protected bike racks/storage within multi-family residential areas and at bus stops	Same as baseline guidelines
Transit	No specific standards	Provide well-lit pedestrian ways to bus shelters and provide information kiosks on site	Same as baseline guidelines
Vehicular Routes	Other provisions of the LFPMC and basic engineering standards apply	Lengthen distance between access points and internal drive aisles Traffic calming/design to deter short cutting of intersections	Same as baseline guidelines
Parking—Residential	1.5 spaces per unit	Alternative off-street parking ratios and feasibility of shared parking to be considered	Baseline standards with increased underground/below grade parking
Parking--Commercial	5 spaces per 1,000 GSF	Same as above	Same as above
Sustainability/Green Building	Building and Energy Code provisions	LEED, Built Green, and Green Globes provisions	Additional LEED, Built Green, and Green Globes provisions
Incentives for Redevelopment	10-foot height increase for mixed-use buildings	(1) Additional height and density—see above; (2) Proactive permitting process; (3) design flexibility; (4) market based standards	Same as baseline guidelines; potential to add another level/more density with amenities and compliance with edge conditions and other standards

Table 2.3 Proposed Elements of Action Alternatives 2 and 3 Under Analysis in this EIS

ELEMENTS	ALTERNATIVE 2 VARIED HEIGHT AND FORM	ALTERNATIVE 3 UNIFORM HEIGHT AND FORM
Uses	Mixed-use (vertical or horizontal) commercial/retail, medical/dental office, civic/community, and multi-family residential uses across the site; master planning would include multi-family residential as a component of plan up to 1,200 units analyzed	Mixed-use (mostly vertical assumed) commercial/retail, medical/dental office, and civic/community, and multi-family residential uses across the site; master planning would include multi-family residential as a component of plan up to 1,500 units analyzed
Height Limits—Residential/Mixed-use	65-foot height to highest occupied finish floor level/75-foot height to base roofline level See bonus height assumptions under incentives below	75-foot height to highest occupied finish floor level/85-foot height to base roofline level
Height Limits—Commercial	For mixed-use buildings, same as Residential/Mixed-use above	For mixed-use buildings, same as Residential/Mixed-use above
Floor Heights	Maximum ground floor height of 20 feet for uses approved through development agreement; other floor level heights to be determined through development agreement and design review process This EIS analyzes the potential for second levels of podium buildings to be designed to look like the levels above rather than the ground level and to be set back from first levels per EIS analysis—see Chapter 4	Maximum ground floor height of 20 feet for uses approved through development agreement; other floor level heights to be determined through development agreement and design review process This EIS analyzes the potential for second levels of podium buildings to be designed to look like the levels above rather than the ground level and to be set back from first levels per EIS analysis—see Chapter 4
Density—Residential	Form-based design intended; specific provisions related to density may be an outcome of this EIS analysis	Form-based design intended; specific provisions related to density may be an outcome of this EIS analysis

Density—Commercial	No single use (commercial or office) footprint should exceed 50,000 GSF on one level; conditional use permit required for 50,000 to 75,000 GSF single uses (max. 75,000 GSF)	No single use (commercial or office) footprint should exceed 50,000 GSF on one level; conditional use permit required for 50,000 to 75,000 GSF single uses (max. 75,000 GSF)
Setbacks and Edge Conditions	Setbacks and edge condition parameters are under study in this EIS (see Chapter 4), to be determined based on the outcomes of analysis Building step backs may be considered for buildings adjacent to public realm and certain locations on the site (such as 12- to 16-foot step backs of the 3rd floor similar to 2005 Framework Design Guidelines), but also may consider potential for flexibility through development agreement and design review process	Setbacks and edge condition parameters are under study in this EIS (see Chapter 4), to be determined based on the outcomes of analysis Building step backs may be considered for buildings adjacent to public realm and certain locations on the site (such as 12- to 16-foot step backs of the 3rd floor similar to 2005 Framework Design Guidelines), but also may consider potential for flexibility through development agreement and design review process
Open Space, Site Interior Design, and Pedestrian Connectivity	Existing footprint of buildings, structures, and pavement could be retained in redevelopment (underlying Critical Areas ordinance provision) This EIS analyzes the potential to enhance Lyon Creek and associated habitat and to provide wider setbacks/buffers from the creek centerline than under current conditions. See Chapter 4. The potential to preserve the function of a Third Place Commons concept through redevelopment is under study in this EIS – see Chapter 4. Potential impervious surface area and open space parameters related to	Existing footprint of buildings, structures, and pavement could be retained in redevelopment (underlying Critical Areas ordinance provision) This EIS analyzes the potential to enhance Lyon Creek and associated habitat and to provide wider setbacks/buffers from the creek centerline than under current conditions. See Chapter 4. The potential to preserve the function of a Third Place Commons concept through redevelopment is under study in this EIS – see Chapter 4.

	commercial and residential uses are under study in this EIS – see Chapter 4. Provision of pedestrian seating, furnishings, lighting, visual connectivity and "eyes on" pedestrian- and transit-oriented design, public amenities such as water features, public art, and other elements would all be integrated into new Town Center Design Standards and Guidelines as part of LFPMC amendments. The provision of pedestrian connectivity at regular intervals north-south and east-west within the site and around the perimeter of Town Center is under study in this EIS; outcomes would help to shape parameters of LFPMC amendments and design standards and guidelines.	Potential impervious surface area and open space parameters related to commercial and residential uses are under study in this EIS – see Chapter 4. Provision of pedestrian seating, furnishings, lighting, visual connectivity and "eyes on" pedestrian- and transit-oriented design, public amenities such as water features, public art, and other elements would all be integrated into new Town Center Design Standards and Guidelines as part of LFPMC amendments. The provision of pedestrian connectivity at regular intervals north-south and east-west within the site and around the perimeter of Town Center is under study in this EIS; outcomes would help to shape parameters of LFPMC amendments and design standards and guidelines.
Bicycle	The provision of bicycle facilities including weather protected parking and storage areas and design standards for bicycle connectivity within the site and around the perimeter of Town Center is under study in this EIS; outcomes would help to shape parameters of LFPMC amendments and design standards and guidelines.	The provision of bicycle facilities including weather protected parking and storage areas and design standards for bicycle connectivity within the site and around the perimeter of Town Center is under study in this EIS; outcomes would help to shape parameters of LFPMC amendments and design standards and guidelines.
Transit	Transit-oriented design provisions are proposed to guide redevelopment and specific requirements for lighting of pedestrian ways, connectivity to transit,	Transit-oriented design provisions are proposed to guide redevelopment and specific requirements for lighting of

	weather protection, information and wayfinding, and other elements would be integrated into the Town Center Design Standards and Guidelines	pedestrian ways, connectivity to transit, weather protection, information and wayfinding, and other elements would be integrated into the Town Center Design Standards and Guidelines
Vehicular Routes	Vehicular circulation parameters internal to the site, access points, and intersections in the proximity of Town Center are under study in this EIS—see Chapter 4 Specific design provisions related to lengthening of distances between access points and internal drive aisles, provision of traffic calming and other design measures to deter short cutting of intersections, as well as other design treatments and necessary improvements to support implementation of the preferred alternative would be integrated into the Town Center Plan and LFPMC amendments as applicable Consistent with pedestrian-first/pedestrian-oriented design, this EIS analyzes the potential to create a better defined internal street network with sidewalks, on street parking, curb extensions/bulb-outs, and other features that would support function similarly to public streets (even though access ways may continue to be privately maintained)—see Chapter 4.	Vehicular circulation parameters internal to the site, access points, and intersections in the proximity of Town Center are under study in this EIS—see Chapter 4 Specific design provisions related to lengthening of distances between access points and internal drive aisles, provision of traffic calming and other design measures to deter short cutting of intersections, as well as other design treatments and necessary improvements to support implementation of the preferred alternative would be integrated into the Town Center Plan and LFPMC amendments as applicable Consistent with pedestrian-first/pedestrian- oriented design, this EIS analyzes the potential to create a better defined internal street network with sidewalks, on street parking, curb extensions/bulb-outs, and other features that would support function similarly to public streets (even though access ways may continue to be privately maintained)—see Chapter 4.

Parking—Residential and Commercial/Mixed-use (On-Street and Off-Street)	Right-sizing of parking is analyzed as part of this EIS, as well as the potential for alternative parking ratios and shared parking arrangements—see Chapter 4. Parking demand can be determined by future study with each redevelopment application and should assume and confirm the formula for shared parking across the site Increased height limit would make provision of underground/below grade parking and structured parking more feasible	Right-sizing of parking is analyzed as part of this EIS, as well as the potential for alternative parking ratios and shared parking arrangements—see Chapter 4. Parking demand can be determined by future study with each redevelopment application and should assume and confirm the formula for shared parking across the site Increased height limit would make provision of underground/below grade parking and structured parking more feasible
Sustainability/Green Building	To be determined based on outcomes of EIS process	To be determined based on outcomes of EIS process
Housing Choice and Affordability	Consistent with adopted plans and policies the potential for providing expanded housing choices at different levels of affordability as part of redevelopment is addressed in this EIS, see Chapter 4	Consistent with adopted plans and policies the potential for providing expanded housing choices at different levels of affordability as part of redevelopment is addressed in this EIS, see Chapter 4
Incentives for Redevelopment	Increased height is an inherent incentive; additional measures such as a multi-family tax exemption program, proactive permitting procedures with flexibility through development agreement; potential bonus density; reducing parking requirements; and other tools would be determined based on the outcomes of the EIS process	Increased height limit is an inherent incentive; although this alternative would not have additional height bonus since base allowed height is already at maximum for assumed mixed-use podium/wood frame construction type; additional measures such as a multi-family tax exemption program, proactive permitting procedures with flexibility through development agreement; potential bonus density; reducing parking requirements; and other tools would be determined based on the outcomes of the EIS process

Figure 2.1 Conceptual Planning Scenario for Alternative 1—No Action

Figure 2.2 Conceptual Planning Scenario for Alternative 2—Varied Height and Form

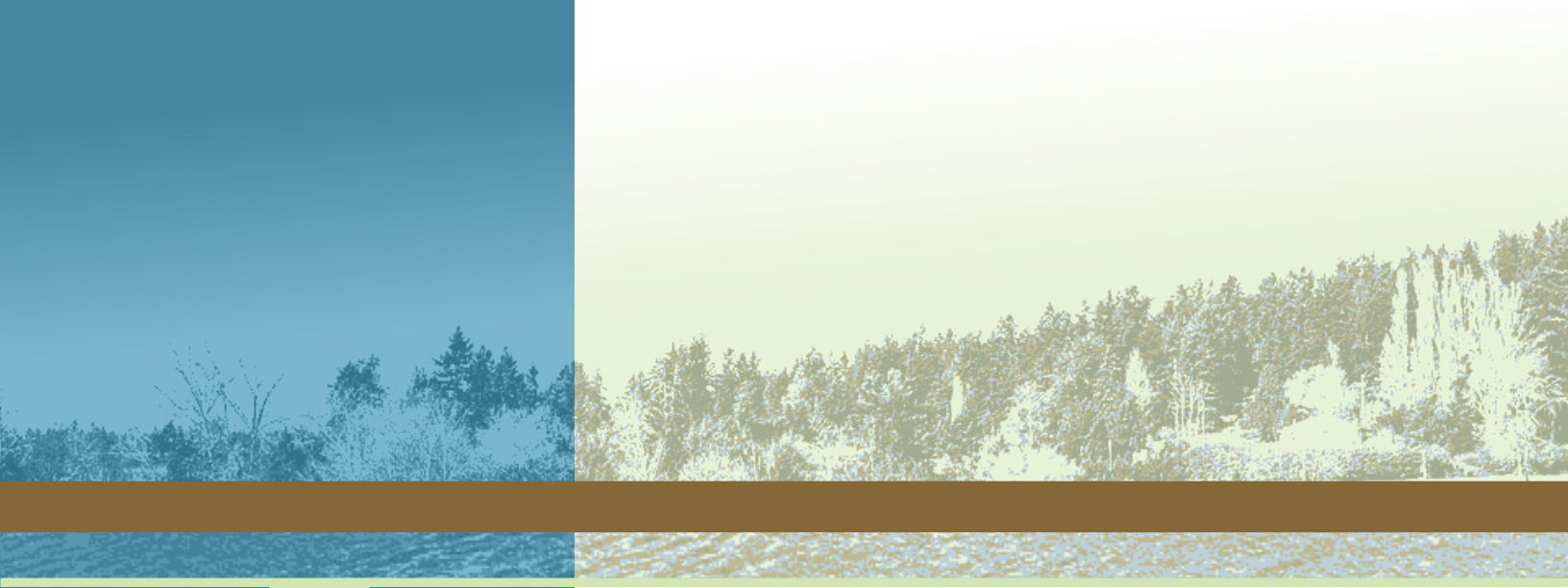
Figure 2.3 Conceptual Planning Scenario for Alternative 3—Uniform Height and Form

Lake Forest Park
TOWN CENTER
Heart of the Community

JANUARY 2019

Draft Environmental Impact Statement

for the Town Center Plan



4 ANALYSIS AND MITIGATION

INTRODUCTION

The three planning scenarios for Alternative 1, Alternative 2, and Alternative 3 as described and presented in Chapter 2.0 are further analyzed in this section of the EIS. Potential impacts related to land use and zoning, building form, views and aesthetics, sun/shade, and character are analyzed. This section also addresses consistency with existing plans and policies, and recommended mitigation measures.

ANALYSIS OF ALTERNATIVES

As discussed in Section 3.1 of this EIS, extensive community input shaped the development of a new Town Center Vision earlier in 2018. Alternatives 2 and 3 have been developed to evaluate different forms of how this Vision could be implemented over time at the Town Center.

The public is invited to comment on these alternatives analyzed in this EIS. After the DEIS comment period closes, the City will determine a preferred alternative for Town Center and adopt a new Town Center Plan with supporting planning and land use regulations specifically tailored to the preferred plan. The planning scenarios in EIS were developed for purposes of programmatic analysis; they are theoretical and conceptual. Actual redevelopment likely would differ from those shown based on more detailed master planning and design.

Land Use and Zoning

No significant changes to land use are proposed under the two action alternatives (Alternative 2 and Alternative 3) over those currently allowed by the City's planning and land use regulations (no action—Alternative 1). Multi-family residential use and mixed-use buildings are currently allowed. There is no proposed change to the existing "Town Center" zoning designation. Proposed development under all three alternatives is consistent with and supportive to the City's adopted Comprehensive Plan.

The types of commercial uses that exist at Town Center today would continue into the future under any of the alternatives, but the amount of commercial use would be less intensive under Alternative 2 and more intensive under Alternative 3, as compared to Alternative 1. New residential use would be added under any of the alternatives, and the amount of residential use under Alternative 2 an Alternative 3 would be more intensive than under Alternative 1.

Building Heights— While no changes to land use are proposed, changes to building height and form would potentially result in taller buildings and a greater intensity of redevelopment at the Town Center than could occur under current applicable planning and land use regulations. The resulting form would be more urban in character. Analysis of these potential changes under either Alternative 2 or Alternative 3 is the primary focus of this EIS.

As discussed in Chapter 2, under Alternative 1—No Action, building heights of 60 to 66 feet would be allowed after applying bonus density provisions. Under Alternative 2—Varied Height and Form, the maximum building height would be 75 feet to the base roofline, while under Alternative 3—Uniform Height and Form, the maximum height would be 85 feet to the base roofline. Roofline variation, peaks, and rooftop features and appurtenances could extend above these heights.

Figure 4.1.1 depicts the differences in these building heights side by side and the images on the following pages provide examples of the building heights related to each alternative.

The proposed building height under Alternative 3 maximizes the redevelopment potential of a highly marketable and constructible building type—wood frame over concrete podium.

Current International Building Code standards allow this type of construction up to 75 feet in height to the base of the highest occupiable floor level. With a typical residential floor height of 10 feet, this would make this building 85 feet high to the base roofline. Roof articulation, variation in roof peaks/pitches, and rooftop features could extend above this height. This is often referred to as 5 over 2 or 6 over 1 construction.

Typically, the ground floor levels are in active use (commercial, retail, studio, professional office, etc.) and the floors above are in residential or office use in these types of buildings.

Wood frame over concrete podium construction is seen throughout the region and recent examples have been or are under construction in the nearby communities of Shoreline, Kenmore, Bothell, Woodinville, Redmond, Kirkland, and Bellevue.

The Alternative 3 planning scenario studied in this EIS assumes more uniformity in building height and form with full redevelopment of Town Center (over time in phases) and a more grid-like, urban block pattern of redevelopment.

Under Alternative 2, the total building height is reduced by one floor with 65 feet to base of the highest occupiable floor and 75 feet to the base roofline. The Alternative 2 scenario studies varied building height and form with full redevelopment of the Town Center, with buildings up to the 75-foot height (at base roofline), but also buildings at lower heights and more variation in commercial, residential, office, and civic uses across the site.

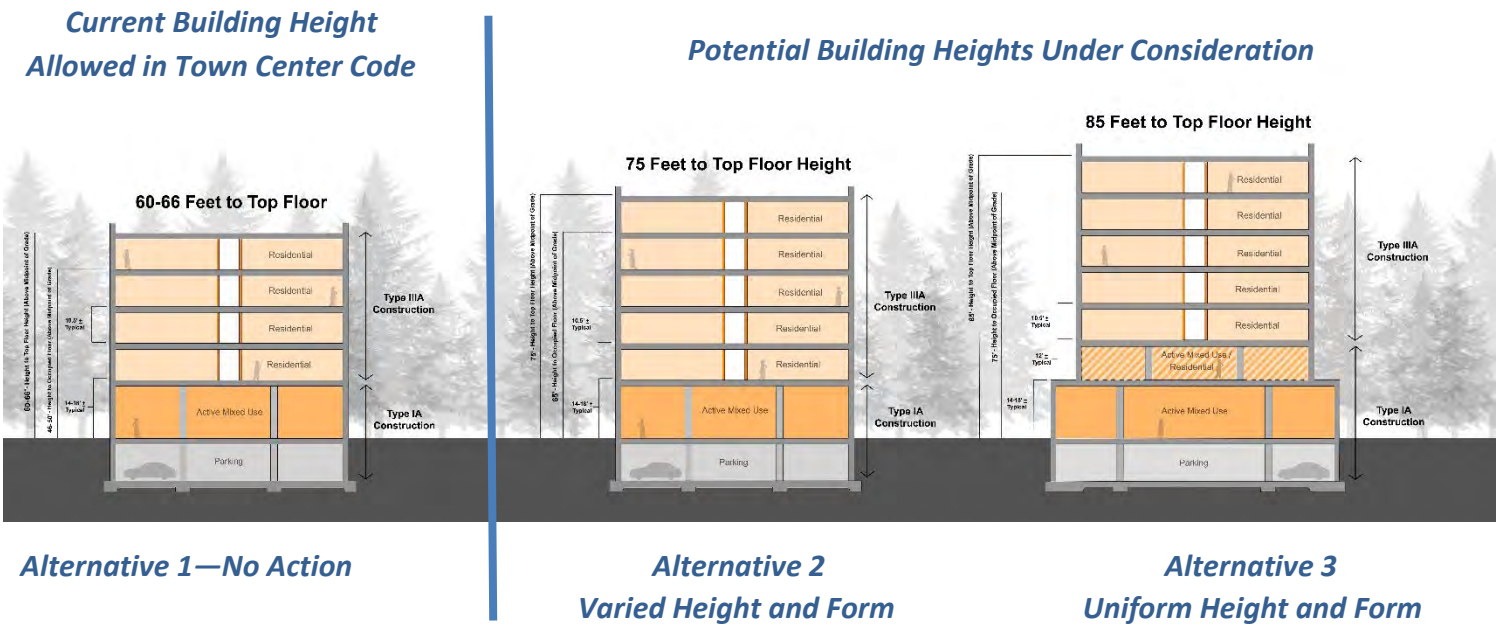
The most common building type with redevelopment would be wood frame over concrete podium (similar to Alternative 3, but in 5 over 1 configurations). Other construction types may be implemented as well. Like Alternative 3, it is anticipated that Alternative 2 also would be developed incrementally in multiple phases over time.

Alternative 1—No Action assumes redevelopment would occur in alignment with the current adopted planning and land use provisions applicable to Town Center in the LFPMC. Under current regulations, if bonus heights are applied, a building height of approximately 60 to 66 feet to the base roofline could be developed, typically referred to as 4 over 1 construction. Other buildings with lower heights may also be constructed, and redevelopment would occur incrementally in multiple phases over time.

What are the Potential Outcomes of Additional Building Height?

Maximizing redevelopment potential of the construction/building type suitable to the market offers the potential to transform the Town Center more fully into a vibrant, mixed-use center with more housing choices to serve different levels of affordability, as well as more amenities.

Figure 4.1.1 Building Heights Under Each Alternative



This redevelopment project in Bothell includes residential above active ground floor uses. This image shows the building height that might be typical of Alternative 1—No Action, with four levels of residential use over the active ground floor level (4 over 1).

These images depict types of varied height and form in redevelopment that would be similar to the planning scenario analyzed under Alternative 2, up to a maximum height limit of 75 feet to the base roofline.

These images depict the Village at Totem Lake, a major redevelopment of the former Totem Lake shopping mall, currently under construction in phases in Kirkland, Washington. The maximum building heights and construction building types shown are representative of the heights of the Alternative 3 planning scenario studied in this EIS—85 feet to the base roofline. *Source: CenterCal Development*

Maximizing redevelopment potential through increased height limits would leverage the potential to implement more elements identified as desirable by the community in the Town Center Vision, such as:

- Gathering spaces/open spaces and amenities (indoor and outdoor) for a variety of uses including new plaza spaces, rooftop viewing decks, play areas, and other features;
- Architectural treatments that enhance the character of Town Center and sustainable design treatments;
- Pedestrian friendly and transit-oriented design with a greater level of pedestrian and bicycle connectivity and more direct routes across the site and to/from transit;
- Structured parking (rather than all surface parking, moving from a more auto-oriented place to a more pedestrian-oriented place; and
- A greater variety of shops, businesses, restaurants, cafes, and civic functions.

Maximizing redevelopment potential also could support implementation of community priorities related to enhancing the Lyon Creek corridor, retaining the function of Third Place Commons, enhancing connectivity to the Burke Gilman Trail, creating an enhanced civic core with a public gathering space near City Hall, and other elements.

Building Form—Under all alternatives, building form and construction type may vary, as long as the maximum height limits are maintained. Conceptual redevelopment scenarios have been prepared to represent each of the alternatives described below.

Plan views, 3-D sketch models, and elevation views are presented for each alternative at the end of this section as Figures 4.1.2a-e, 4.1.3a-e, and 4.1.4a-e. It should be noted that these illustrations are theoretical and conceptual planning scenarios and not actual project proposals. Once the Town Center Plan is finalized and adopted, specific project proposals could be developed that align with the supporting Lake Forest Park Municipal Code (LFPMC) provisions and design standards and guidelines that support the preferred alternative in the Town Center Plan.

The 3-D sketch models are intended to provide a high level depiction of potential height and form; they do not show architectural details. As such the buildings in the models appear more simple and blocky than they would be in reality. It is important to keep this in mind when viewing the models.

Alternative 1—No Action explores a redevelopment scenario that could be built under current regulations and that preserves the central and southern legs of the existing Town Center complex, while introducing new residential and retail uses in the northern portion of the site, as well as a new commuter park and ride structure adjacent to City Hall that would provide 300 spaces. It should be noted that this is just one potential redevelopment scenario under current regulations. Redevelopment could occur on any portion of the site, with a similar level of change to that shown in the northern portion.

Alternative 2—Varied Height and Form analyzes a planning scenario for redevelopment that

would change most of the Town Center planning area over time with a mix of building forms and types that could vary in height, not exceeding the 75-foot limit to the base roofline. Alternative 2 also proposes a new commuter park and ride structure adjacent to City Hall, but assumes it is part of larger mixed-use building with civic and housing uses integrated into the upper floors that would provide 400 parking spaces.

Alternative 3—Uniform Height and Form analyzes a planning scenario that would change most of the Town Center over time with buildings in a more uniform urban grid pattern of development. All new buildings would be mixed-use buildings, laid out in a more gridded, urban blocks form, and not exceeding the 85-foot limit to the base roofline. Alternative 3 also proposes a new commuter park and ride structure adjacent to City Hall, and assumes it is part of a larger mixed-use building with civic and housing uses integrated into the upper floors that would provide 500 parking spaces.

***Open Space*—**All alternatives would be subject to open space requirements. Under Alternatives 2 and 3, a new system of open space provisions would be adopted regulating the provision of public and private open space by residential developments and public open space by non-residential development. Updated regulations would clarify expectations related to the amount of open space required and the ways that it could be provided with new redevelopment.

Dimensions for setbacks along property lines also would be updated to fit the form of proposed development selected as the preferred alternative and adopted with the Town Center Plan. With implementation of Alternative 2 or 3, there would be the potential to require and incentivize public and private open space, Lyon Creek setbacks and enhanced plantings, and a variety of public gathering spaces with amenities through updated LFPMC provisions as well as through proposed development agreements with each phase of redevelopment. Examples of open space areas that the community identified in the Town Center visioning process are shown on the following page.

In addition to preserving the function of Third Place Commons, enhancing the Lyon Creek corridor and exploring additional daylighting options, and retaining/enhancing space for the Farmers Market, the community is interested in a variety of open space uses at Town Center such as:

- Landscaped courtyards
- Roof decks/rooftop viewing areas and gathering spaces
- Festival streets/shared streets that can function as space for events and markets
- Entrance plazas and other well designed social gathering spaces/commons
- Community gardens/p-patches
- Pedestrian corridors and paths, including potential for a pedestrian/slow speed bicycling path around the perimeter of Town Center
- Children’s play areas; splash pad
- Multipurpose recreational spaces, outdoor games (such as pickle ball, bocce, and others), movie watching area, holiday












neokar coffee

- celebration space, smaller scale outdoor performances, etc.
- Outdoor food truck/café seating areas
- Commemorative gardens, rain gardens, green spaces, and more trees
- Public art, sustainable water features, and other types of attractive amenities that celebrate Lake Forest Park history and culture

Public and Community Services—The types of public and private open space uses highlighted in the Town Center Vision could be encouraged or incentivized with redevelopment. All alternatives assume the ongoing uses of City Hall, the Lake Forest Park Police Department, and Northshore Fire Station #57. Alternatives 2 and 3 examine the potential scenarios for expansion of City Hall and Police space to serve the growing population over time, although this also could occur under Alternative 1. For more analysis related to public and community services, including parks and recreation, refer to Section 4.3 of this DEIS.

Lake Forest Park Farmers Market—Organized and facilitated by staff of Third Place Commons, the Farmers Market is held outdoors in the lower parking area next to the professional office building adjacent to City Hall. The Farmers Market could continue to operate under any of the alternatives, assuming ongoing use agreements continue as exist today. Under Alternative 1, the Farmers Market could continue to operate in a surface parking area, but redevelopment over time might result in the need to relocate the market.

Under Alternative 2, the Farmers Market could operate in the "festival street" area shown in the planning scenario for redevelopment.

Under Alternative 3, local street/access areas could accommodate space for the Farmers Market.

Under any of the three alternatives, the Farmers Market (or portions of it) could operate within the lower floor of the commuter park and ride structure and/or space in front of City Hall.

Third Place Commons—The Third Place Commons space at Town Center, which is programmed and managed through a non-profit organization, that also manages the Farmers Market, could continue to be housed at Town Center under any of the alternatives. With full redevelopment of Town Center over time, the commons space likely would need to be relocated. The community has stated a strong interest and preference for retaining an indoor commons/community space with redevelopment at Town Center. The community has also stated a need for a multigenerational community/recreation center (PROS-T Plan) and for additional public/community meeting room space. With redevelopment in phases, there could be an opportunity to accommodate these uses and preserve the function of Third Place Commons at Town Center. This would require ongoing partnerships and support between private owners, public entities, and the Third Place Commons non-profit organization.

Third Place Commons space could be relocated and redeveloped into any of the new buildings that may emerge at Town Center, but a specific plan has not yet been created, because it is unknown as to when actual redevelopment may

occur. There are a variety of opportunities that could be explored through partnerships. For example, the Alternative 2 and 3 planning scenarios both depict the potential for expanded community and civic space within the upper levels (floors 2, 3, and higher) along the frontage of the commuter park and ride structure adjacent to the current City Hall building. The ground floor of this frontage could be reserved for transit-oriented retail and active uses (cafes, drycleaners, convenience store, etc.) Daycare centers are also highly compatible uses to transit centers/park and ride locations. This is just one potential redevelopment scenario and others could be explored with future master planning and design of each phase of improvements at Town Center.

King County Library Lake Forest Park Branch— The Lake Forest Park branch of the King County Library System could continue to operate at the Town Center under any of the redevelopment scenarios. With full redevelopment of the Town Center over time, such as under Alternative 2 or Alternative 3, it may be necessary to relocate the library to a new space.

Burke Gilman Trail—Under any of the alternatives, maintaining and enhancing connectivity to the Burke Gilman Trail would continue to be a priority. With more intensive redevelopment and construction of Sound Transit facilities at the site and within the SR 522 right-of-way, connectivity between the trail and Town Center could be improved as part of these projects and potential capital improvement budgeting.

Phasing of Redevelopment

Given existing long-term lease agreements at the Town Center, it is anticipated that redevelopment would occur incrementally over time, in multiple phases (with anticipated completion of all phases by 15 to 20 years or longer).

Town Center Context and Surrounding Land Uses

The Town Center is surrounded by single family properties on all sides of triangular shaped planning area, but along the southern and eastern edges, the SR 522 and SR 104 rights-of-way provide separation between the commercial uses at Town Center and properties on the other side of these corridors. Single family yards along these highways are often heavily screened with a combination of trees, vegetation, and fencing.

On the western edge of the Town Center triangle, several single family homes are located on adjacent properties. Along that edge, the existing heavy landscaping of trees and shrubs (including mature evergreen and deciduous trees) located primarily in the back yards of the adjacent home sites provides screening and buffers these residential properties from the Town Center commercial uses and activities (see photos on next page). From late fall to spring, without deciduous foliage on some of the trees and shrubs, views to the Town Center are more open in several locations. There is a wood fence extending along that edge of Town Center that provides screening to the height of the fence (approximately 6 to 8 feet high).

Setbacks, Screening, Privacy and Views—Under any of the alternatives, setbacks and screening provisions would be required by LFPMC. Under Alternative 2 and Alternative 3, there would be the opportunity to amend these requirements to more specifically address conditions around the perimeter of Town Center. For example, a 20-foot setback is currently required under the

existing LFPMC for all sides of every property at Town Center. Under Alternative 2 or 3, there could be the potential to increase this setback dimension in sensitive areas while decreasing it in other locations to provide a better transition and buffer to adjacent uses.

While the existing vegetation along the western property line provides heavy screening, there are a few locations that have partial views of the Town Center and these views are more open from late fall to spring when deciduous foliage is gone from some of the trees and shrubs.

There is one location in particular that has a partial open view of the Town Center—a property next to Whispering Willow Park, shown in the photo on the next page. With increasing height levels of buildings under Alternative 2 and Alternative 3, future buildings would become more visible. This location is studied in Figures 4.1.5a, 4.1.5b, and 4.1.5c showing the potential building heights related to each alternative in the background. At this particular location, Alternative 2 would be more visible than existing conditions and Alternative 1, and Alternative 3 would be most visible, although this is one of the few locations that has a partial open view of the Town Center from the west side. Most other homesites are heavily screened and fenced.

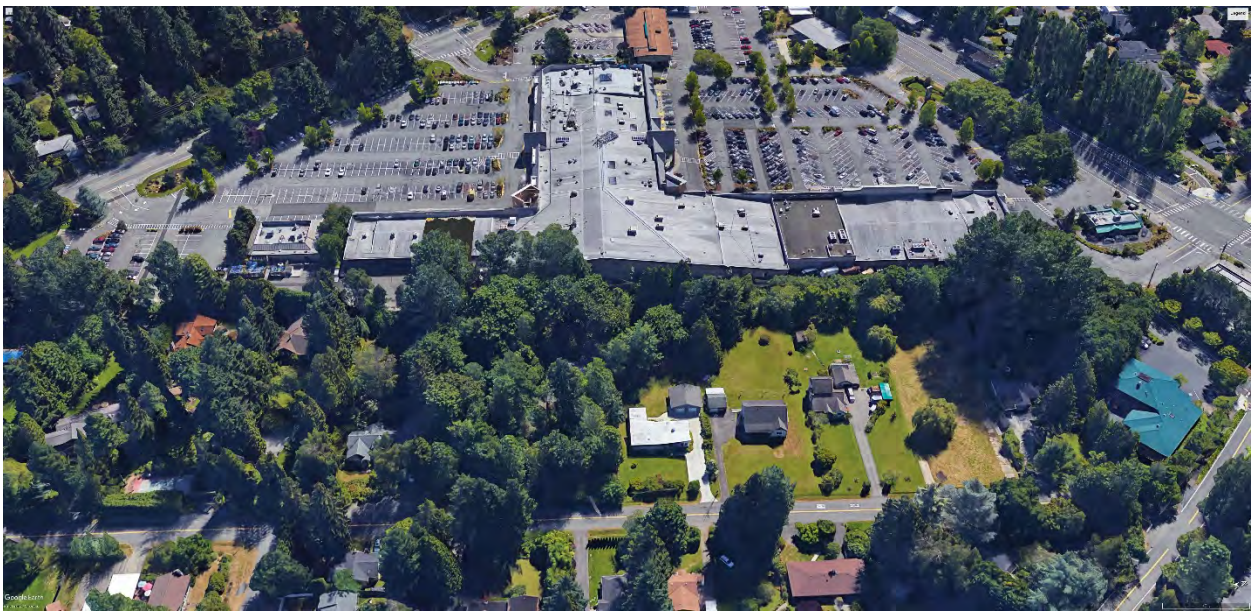
Architectural treatments of these buildings (colors, textures, façade articulation, step backs, and other features) would help to mitigate visual effects. Under either Alternative 2 or 3, development and design standards and guidelines for Town Center would be created and could include specific treatments related to architectural and landscape adjacent to single family properties.

Further study should be completed with each phase of redevelopment when specific building heights and forms are known. Setback and step-back dimensions should be based on logical behavioral objectives and a geometric rationale. When considering residential privacy, an important question to consider is, at what distance does a person feel that their privacy is being invaded by someone viewing from outside the property? In other words, how far away does an upper story window or balcony need to be so that a person in an adjacent back yard feels comfortable doing normal activities?

In the book *Site Planning* (page 15), author and urban designer Kevin Lynch noted that 80 feet is the distance at which a person becomes socially relevant, that is, the distance at which one can recognize a person and perceive mood and feelings. Striking an 80-foot arc from the center of a yard where activity might occur provides a rationale for constraints to upper story setbacks. Further study with future phases of redevelopment may determine that further setbacks are needed based on this criteria if adopted as part of design standards and guidelines for Town Center. Screening with mature trees as part of the perimeter landscaping can be a cost-effective approach for the developer because it could avoid the need to a wider setback or building step backs to provide greater separation and privacy.

Sun/Shade Analysis—This EIS analyzes how redevelopment might look and its potential effects to existing adjacent single family residential properties, particularly along the western edge of the Town Center where single family properties are directly adjacent to the commercial property.

View toward Town Center from property on 44th Avenue NE, next to Whispering Willow Park—a partial view of existing buildings can be seen; this view (#5 in key maps) was modelled showing each alternative, and the modelled results are presented with the figures at the end of this section of the EIS. Refer to Figure 4.1.5.



Aerial bird's eye view of residential properties in proximity to the Town Center at the western boundary; note heavy vegetative screening along the property line and that this is a view when deciduous foliage is out; for context, the blue-green roof at the right-hand side of the photo is Fire Station #57

This bird's eye aerial shows the location where homes are closest to the Town Center property line (within 20 feet) in proximity to the existing Lake Forest Park Bar and Grill; note heavy vegetation screen that exists in addition to wood fencing along the property line.

Another bird's eye view without deciduous foliage showing view relationships between adjacent residential properties to the west and Town Center

This photo shows the vegetation along the western property boundary in proximity to the homes closest to the Town Center near Lake Forest Park Bar and Grill (see aerial photo, previous page).

Photo of conditions along the western property boundary, behind the Town Center commercial complex, with fencing along the service alley and vegetation on adjacent residential properties.

Potential effects to solar access to adjacent residential properties is part of this analysis. Sun/shade studies have been completed using 3-D modelling tools and are presented as Figures 4.1.6a, 4.1.6b, and 4.1.6c at the end of this section of the EIS. These diagrams show the three alternatives at the following times of the year:

- June 21st (Summer Solstice) at 10:00 am, Noon, and 2:00 pm
- March 21st/September 21st (Spring and Fall Equinox) at 10:00 am, Noon, and 2:00 pm
- December 21st (Winter Solstice) at 10:00 am, Noon, and 2:00 pm

Solar access supports backyard gardens and activities, particularly during the late spring through summer growing season. As stated above, existing mature trees and shrubs along the western edge of the property provide screening and privacy, but at the same time also block sunlight from the residential yards at certain times (and particularly during the summer growing season). Preserving existing trees and shrubs and enhancing the landscaping on the Town Center side of the property to provide further screening, along with setbacks would be important to retain and enhance privacy, but also would interfere with solar access.

Another important consideration is the predominant southeast to southwest orientation of the sun. This means that the properties on the west side of Town Center would be less affected by shade from buildings than if they were located to the north, as the sun/shade studies in Figure 4.1.6a, 4.1.6b, and 4.1.6c show.

New structures built to the east of a residential lot would not interfere with sunlight to the lot most of the day. Most people's outdoor activities occur between the equinoxes. Memorial Day and Labor Day are often spoken of as the beginning and end of the summer season, and most garden vegetables are harvested by mid- to late September. The sun is at the highest during this season of the year (late spring to late summer), so shadows cast are not as long as during other times of the year (as the sun/shade studies show).

There is one location where existing homes are located approximately 16 feet from the property line/fence line adjacent to Town Center. Most other homes are located further from the property line with large back yards. Because the sun angle in the Northwest at the equinox is about 45 degrees and then the sun moves higher from April through August, these diagrams illustrate the potential effect of adjacent buildings. Either setting buildings back from the property line or stepping a building back 45 degrees would allow solar access during the most critical periods.

Diagrams in Figures 4.1.7a and 4.1.7b show the location where homes are close and building heights under Alternative 2 and Alternative 3 located at the existing 20 foot setback line and the relationship to the 45 degree angle of the sun.

Although sunlight to these homes that are closest to the fence line is already severely blocked by large trees (in some cases 40 feet high or more), other vegetation, and the wood fence, the diagrams show that taller buildings located at a 20-foot-setback on the Town Center site could block the 45 degree angle of the sun and shade portions of the homesites

along the west side. However, as shown in Figures 4.1.6a-c, this shading would be minimal during the growing season. The diagrams in Figure 4.1.7a and 4.1.7b also show that with a wider setback from the property line the shading effect can be greatly reduced. As an alternative, building levels can be designed to tier back at certain levels ("wedding cake" approach) to avoid blocking the 45 degree angle of the sun; however, this may not always be practical in architectural design (in which case a wider setback may work better).

Redevelopment at the project level can be studied in more detail to determine if new buildings would have an effect on adjacent properties and if additional mitigation may be needed, such as greater setbacks or step backs in the building levels adjacent to the affected property. With future analysis, just as it has been a consideration in this EIS analysis, it is important to consider existing shade levels on adjacent properties. Existing vegetation and fencing already partially shades the yards, and as such, effects from new buildings may not be discernable.

Town Center Character

With redevelopment the character of Town Center would change over time. The Town Center Vision, developed based on extensive community input, states the importance of the Town Center as the heart of the community and a source of pride for Lake Forest Park residents. The community expressed a strong interest in placemaking and enhancing the identity, character, and quality of places and buildings at Town Center as part of the visioning process.

Pacific Northwest design as an architectural style has been stated by community members and leaders as a preferred approach for design. It is compatible and consistent with the forested setting of Lake Forest Park and places emphasis on maintaining strong relationships between buildings and the landscape, with interaction between indoor and outdoor spaces.

In addition, given the community's commitment to sustainability, additional green space, tree canopy, and low impact development treatments (see Section 4.2) should be incorporated into the design according to the Town Center Vision.

The Town Center Design Standards and Guidelines, along with amended LFPMC provisions, developed under either Alternative 2 or 3 would emphasize these design preferences and provide examples of preferred architectural approaches to guide the design and development of Town Center character.

Changes in Demographics

In order to inform the other areas of analysis in this EIS, an understanding of potential changes in demographics is important. Anticipated population, number of households, employment levels, and other aspects of the three alternatives are summarized in the following paragraphs.

***Population and Households*—**As stated in Section 3.1, the existing average household size (persons per household) for homes in ownership in Lake Forest Park is 2.57 and the average household size for rental homes is 2.16. Existing homes in Lake Forest Park are predominantly single-family, which tend to have higher occupancy levels. Also overall, household size in urban areas has been trending downward gradually over time. In King County the overall average number of persons per household is 2.4. For purposes of this EIS analysis, a range of household size of 2.1 to 2.4 is assumed. This is a conservative estimate for analysis purposes, in that the average

household size of future multi-family residences at Town Center likely would be at the lower end of this range. Table 4.1.1 below shows the estimated future population related to each alternative given these household size estimates.

The total population of the City could rise from the population of 13,392 (2017) to approximately 15,070 under Alternative 1, 16,270 under Alternative 2, and nearly 17,000 under Alternative 3, not including any background growth in the City of Lake Forest Park, which would be expected to be low. This represents an average annual growth rate of between 1.1 and 1.2 percent over 20 years.

T able 4.1.1
Estimated Population Levels at Build-Out

	Alt. 1 No Action*	Alt. 2 Varied Height and Form	Alt. 3 Uniform Height and Form
# of Units	700*	1,200	1,500
Pop-ulation	1,470 to 1,680	2,520 to 2,880	3,150 to 3,600

** It is important to remember that under Alternative 1—No Action, a more intensive level of redevelopment would be allowed, and as such greater population levels could occur, but would still be less than population generated under Alternative 2.*

This rate of growth is slower than that of the overall region and of Seattle, which has had increasing growth at an average each year of between 2 and 3 percent over the last decade.

As stated in Section 3.1, the City of Lake Forest Park's population was in decline between 2000 and 2010, but then started to increase again over and recently saw an increase of 1.9 percent between 2016 and 2017.

Although growth may occur in other areas of Lake Forest Park, most of the community is made up of single family neighborhoods and is not likely to change significantly. As such, Town Center would become a primary focus for residential population growth in the community and a place that introduces more housing choices beyond the single family homes, which are prevalent in most parts of the city.

The potential future multi-family residential households and population at Town Center could eventually represent 14 to 21 percent of all households and population of Lake Forest Park.

***Employment*—**The three alternatives would result in varying estimated changes to employment levels at the Town Center. Table 4.1.2

Table 4.1.2
Estimated Employment Levels at Build-Out

	Alt. 1 No Action*	Alt. 2 Varied Height and Form	Alt. 3 Uniform Height and Form
Employees (FTE)	500	538	798

Note: There are approximately 585 existing employees (full time equivalent/FTEs) in the Town Center planning area.

The potential for decline of employment levels under Alternative 1 and Alternative 2 below the current level of 585 employees is caused by the assumed reduction of commercial/retail square footage in these planning scenarios. Under Alternative 1, some commercial and office spaces are converted to other uses and under Alternative 2 the overall redevelopment would

result in less commercial square footage than exists today.

Under Alternative 3, the number of employees could increase because that planning scenario assumes an increase in commercial and office square footage. As such, Alternative 3 could bring the benefit of additional employment opportunities to the community through a likely mix of jobs that would likely include positions in the services and retail industries, medical, dental, and professional offices, and other occupations.

As stated in the Background Analysis for Economic Development of the Lake Forest Comprehensive Plan, the employment level in Lake Forest Park is significantly lower than in comparison cities and the city's jobs to housing ratio is 0.3, meaning that the city has three times more housing units than jobs. While population and housing units would grow under Alternative 2 or Alternative 3 and many of these residents likely would commute to areas outside the city, increasing the potential number of jobs overall in the community would be beneficial and would help the city in meeting the target defined by the King County Countywide Planning Policies to add 244 jobs by 2035. Refer to the Economic Development and Housing Background Analyses in the Comprehensive Plan for more information.

Lake Forest Park and Regional Housing Demand— The King County Countywide Planning Policies set targets for housing unit growth for communities in the county. The target for Lake Forest Park of adding 551 units by 2035 was defined prior to 2015, and prior to the ST3 program funding for the BRT line. The Background Analysis of the Housing Element in the Lake Forest Park Comprehensive Plan identified a need for approximately 220 affordable housing based on 2015 analysis. Due to the rapid growth of the region, the high demand for multi-family housing options, and new plans for high capacity transit, these estimates are likely now likely outdated.

Based on comments and information gathered through public engagement and review of existing conditions, there appears to be a strong interest in aging in place within the community. There is also a strong interest in having housing opportunities that fit a broader range of incomes, including the regional workforce and a correlating need for housing other than single family homes.

Specific housing needs for the community of Lake Forest Park, as well as consideration of the changing needs of the region should be factored into an updated analysis. For the purposes of this EIS analysis, a specific target for affordable housing has not yet been identified, but it is recommended that the City adopt provisions as part of the Town Center Plan and supporting LFPMC amendments to serve the estimated demand calculated in the Comprehensive Plan and potentially additional demand based on regional needs.

The Comprehensive Housing Affordability Strategy (CHAS) developed by the United States Department of Housing and Urban Development (and generated from census data), provides information about the percentages of Lake Forest Park housing stock available to household income levels. Refer to Table 4.1.3 and 4.1.4.

Table 4.1.3 Lake Forest Park Housing Stock by Income Group Affordability

Income Levels	Percent of Lake Forest Park Housing Stock Available Affordable to These Income Levels
Less than 30% AMI	1.2%
30% to 50% AMI	4.1%
50% to 80% AMI	12.5%
Above 80% AMI	82.2%

AMI is the Area Median Income of the Household
Source: CHAS based on 2011-2015 ACS estimates

King County estimates that there is demand countywide of 12 percent for household income levels at less than 30 percent AMI; 12 percent demand for income levels between 30 and 50 percent AMI; and 16% for income levels between 50 and 80 percent AMI.

Table 4.1.4 Lake Forest Park Owner/Renter Income Levels

Income Distribution/ Household Income Levels	Owner	%	Renter	%
Less than 30% AMI	415	10%	155	15%
30% to 50% AMI	290	7%	215	20%
50% to 80% AMI	365	9%	70	7%
80% to 100% AMI	255	6%	175	10%
Over 100% AMI	2,815	68%	455	43%
Totals	**4,140**	**100%**	**1,065**	**100%**

Providing additional housing in the Lake Forest Park Town Center planning area would not only expand choices to meet the demand for current residents in the community, it would also provide housing opportunities to others in the region, particularly those who may be interested in living along the bus rapid transit (BRT) line in SR 522 and commuting to points south or north.

Several other communities along the BRT line have adopted affordable housing provisions, including Shoreline, Kenmore, and Bothell. Several communities also have adopted multi-family tax exemption (MFTE) programs, consistent with Revised Code of Washington (RCW) 84.14 provisions.

MFTE programs provide a tax exemption on new multi-family buildings if affordable units are provided for at least a portion of the project (minimum 20 percent per RCW 84.14). Each jurisdiction has the flexibility to adopt their own requirements related to MFTE as long as they are consistent with RCW 84.14. The MFTE has been an effective incentive tool to encourage developers to integrate affordable units into their projects. of housing affordable to all sectors of the workforce. By supporting mixed-income residential development, the MFTE program can help to ensure affordability as the community grows.

***Commuting Patterns*—**Offering the opportunity for more residents to live near the future high capacity transit line at Town Center would support ridership of the BRT line and encourage more residents to commute by bus instead of driving to and from work outside the community. In addition, bringing residents into proximity with shopping and services at Town Center can also reduce the overall number of car trips in the community and region. This should also reduce the overall vehicle miles traveled in the region, bringing a variety of other positive results such as less traffic congestion on highways and arterials and environmental benefits such as better air quality and less greenhouse gas emissions, which can help to mitigate climate change effects.

Consistency with Relevant Plans, Studies, and Projects

Implementation of any of the alternatives would be consistent with the City's adopted plans and policies, but the additional housing units that could be provided under Alternative 2 or 3, and the commensurate community amenities that would accompany maximizing development potential, would further reinforce the accepted vision for Town Center, as well as policies of the City's plans and initiatives (summarized in Section 3.1 of this EIS):

- Comprehensive Plan
- Strategic Plan
- Sustaining a Livable Lake Forest Park
- Legacy 100-Year Vision
- Parks, Recreation, Open Space, and Trails (PROS-T) Plan
- Healthy Creeks initiative
- Safe Streets, Safe Streets: Town Center Connections, and Safe Highways

Any of the alternatives would be compatible and would support the Sound Transit ST3 BRT project, but transit-oriented, mixed-use redevelopment under either Alternative 2 or Alternative 3 would better support ridership by bringing more residents, employees, and customers in close proximity to high capacity transit. Alternative 3 would have the most residents, employees, and customers of the three alternatives.

MITIGATION MEASURES

The following mitigation measures are recommended related to the Town Center Character and Land Use analysis of this section to mitigate potential affects related to implementation of either Alternative 2 or Alternative 3.

- Specific design standards and guidelines should be prepared for Town Center to support redevelopment in a manner consistent with the community's vision of having a Town Center with high quality design and materials, built in Pacific Northwest architectural style.
- Ensure that the design review process includes opportunities for flexibility in design through development agreements while also ensuring that basic code provisions are met through the formal approval procedures.
- Integrate opportunities for retaining the functions of Third Place Commons, space for the Farmers Market, ongoing branch library services, and other community services as part of the master planning and design of each redevelopment phase. Some of these opportunities would need to be realized through partnerships of multiple entities.
- Each phase of redevelopment should be subject to a specific sun/shade and view analysis related to the proposed buildings and their potential effect on adjacent single family properties as applicable. This analysis would be used as a tool for determining application of specific code provisions and design standards related to setbacks and/or screening, landscaping, architectural

treatments, and other measures. The new design standards and guidelines for Town Center should anticipate these future analyses to inform decision-making.

- Coordinate with King County and Puget Sound Regional Council to update growth targets for the community at the next available opportunity.

- Adopt affordable housing provisions as part of LFPMC amendments. The specific requirements, including voluntary and/or mandatory provisions would be determined directly following completion of this EIS process. The code provisions should assume a baseline for affordability consistent with demand identified in the City's Comprehensive Plan. These provisions could be updated in the future pending completion of a comprehensive housing demand analysis for Lake Forest Park that also factors in demand generated by the region. Also consider adopting an MFTE program to encourage development of multi-family housing including portions targeted to varying income levels.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

Implementation of any of the alternatives would change the character of Town Center. Alternative 3 would be more likely to affect views, aesthetics, and character perceivable to adjacent residents than Alternative 2 or Alternative 1. That said, the more intensive form and additional height limits under Alternative 2 and Alternative 3 could be mitigated by a variety of design standards and guidelines, including architectural treatments, building articulation, and setbacks and screening along the property line. With implementation of effective mitigation measures, no significant unavoidable adverse impacts would be anticipated related to land use and character.

Figure 4.1.2 Alternative 1 Plan View, 3-D Sketch Models, and Elevation Views

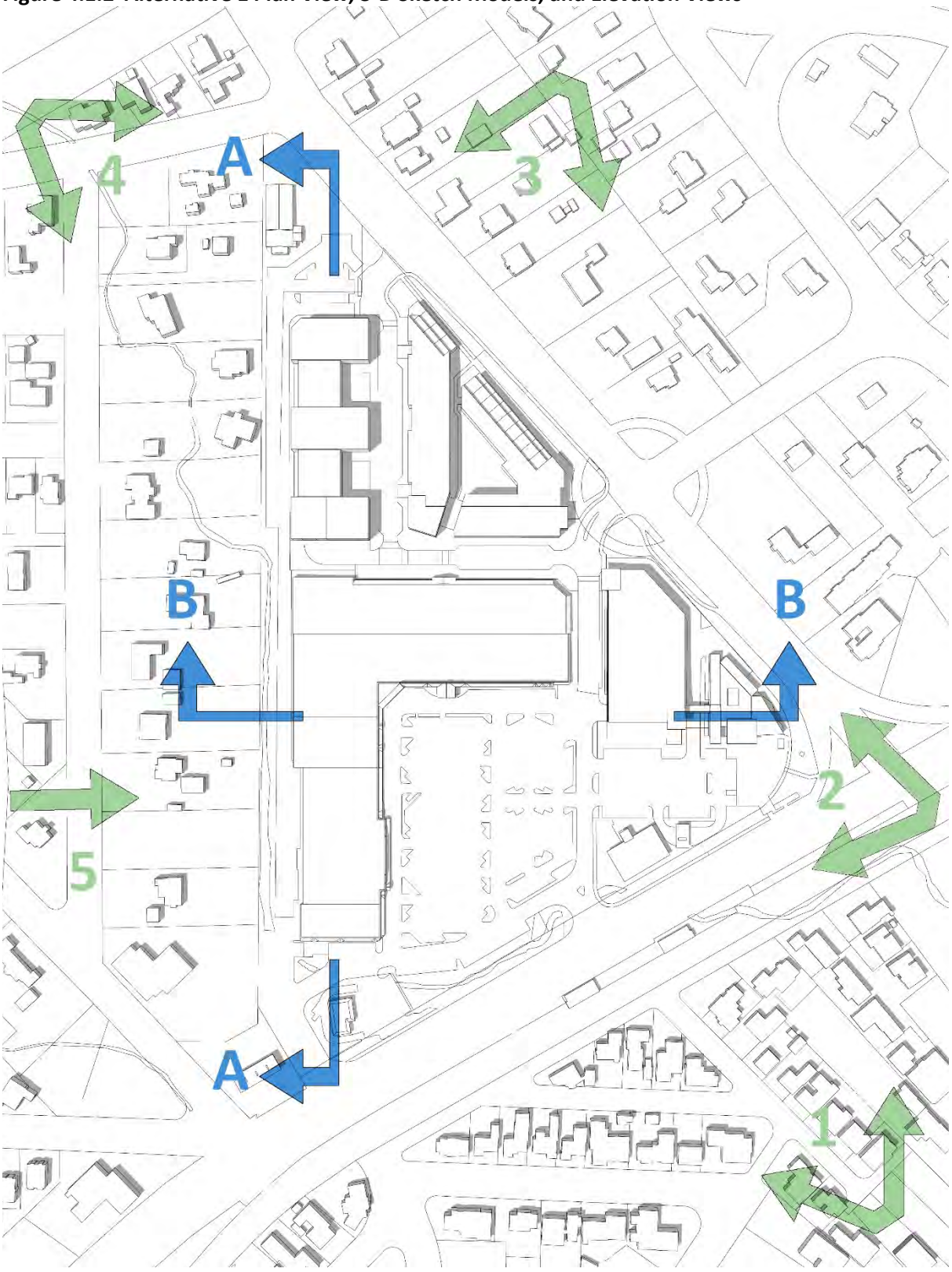


Figure 4.1.2a and 4.1.2b 3-D Sketch Models of Alternative 1—No Action

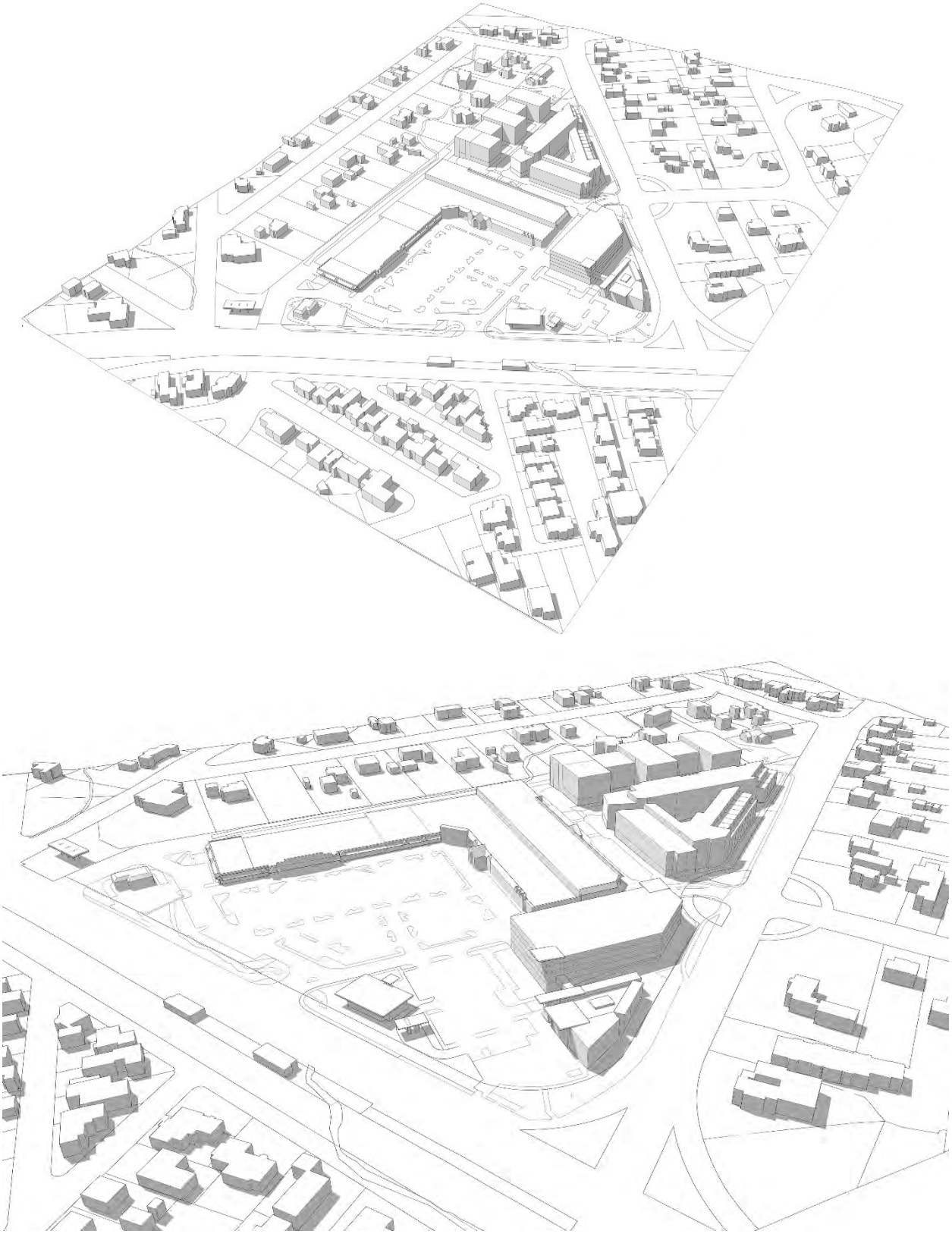
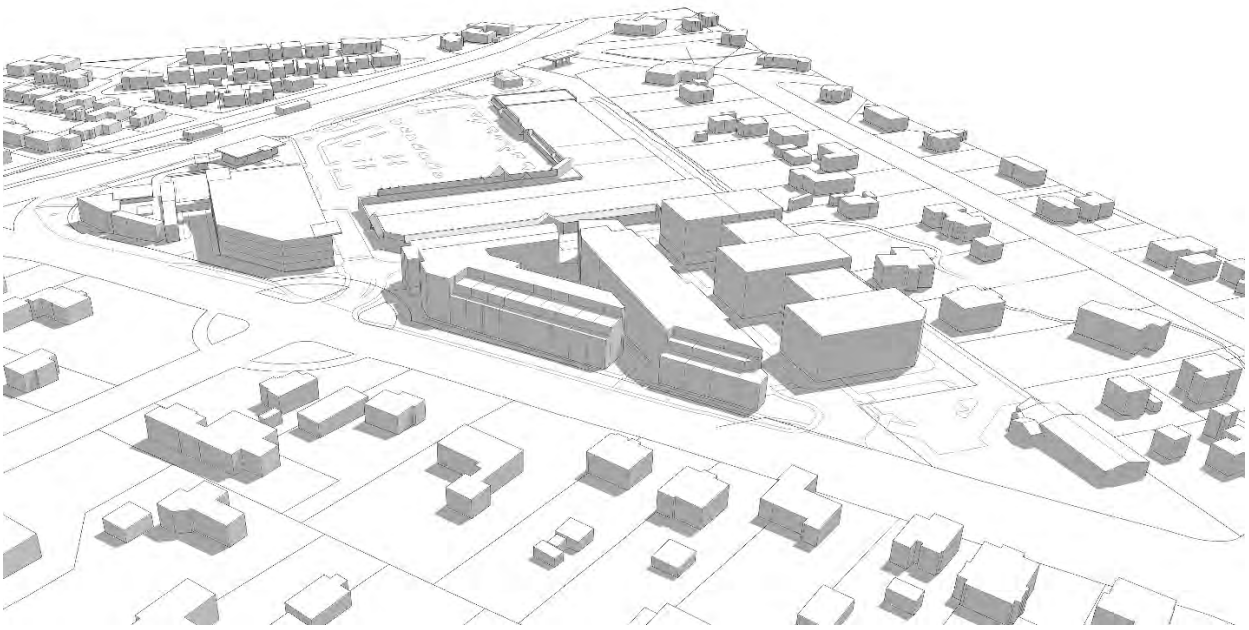


Figure 4.1.2c and 4.1.2d 3-D Sketch Models of Alternative 1—No Action



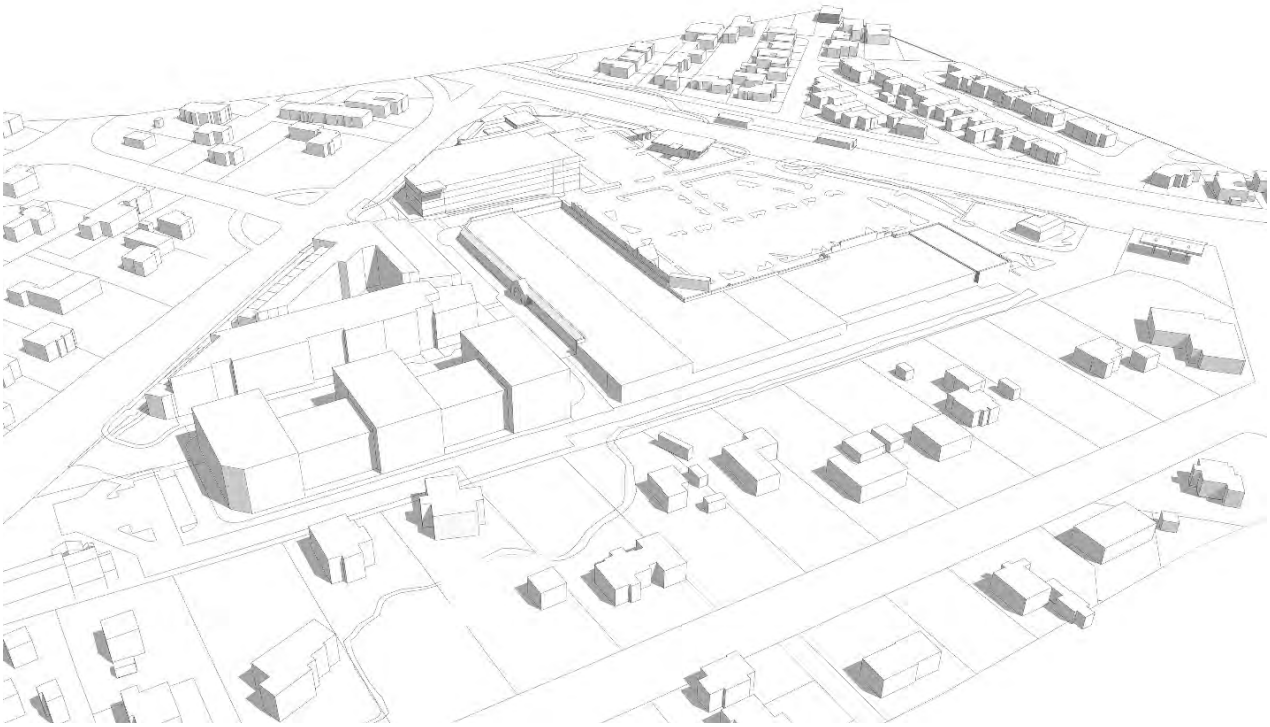
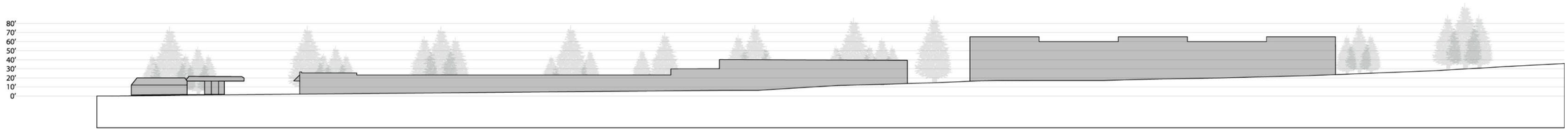
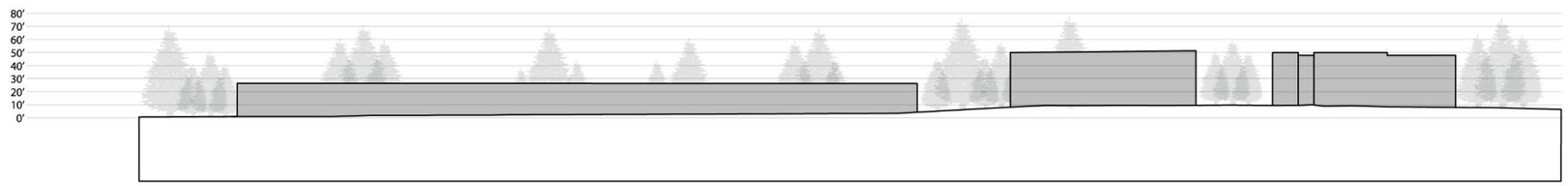


Figure 4.1.2e Elevation Views for Alternative 1—No Action

These conceptual elevations show potential building heights from south to north and from west to east across the Town Center. These illustrations show only the buildings on lines A-A and B-B in the planning scenarios and not buildings that may be visible in the background. To understand the potential heights and form of buildings throughout the site, refer to the 3-D sketch models.



Elevation A
Facing West



Elevation B
Facing North

Figure 4.1.3 Alternative 2 Plan View, 3-D Sketch Models, and Elevation Views

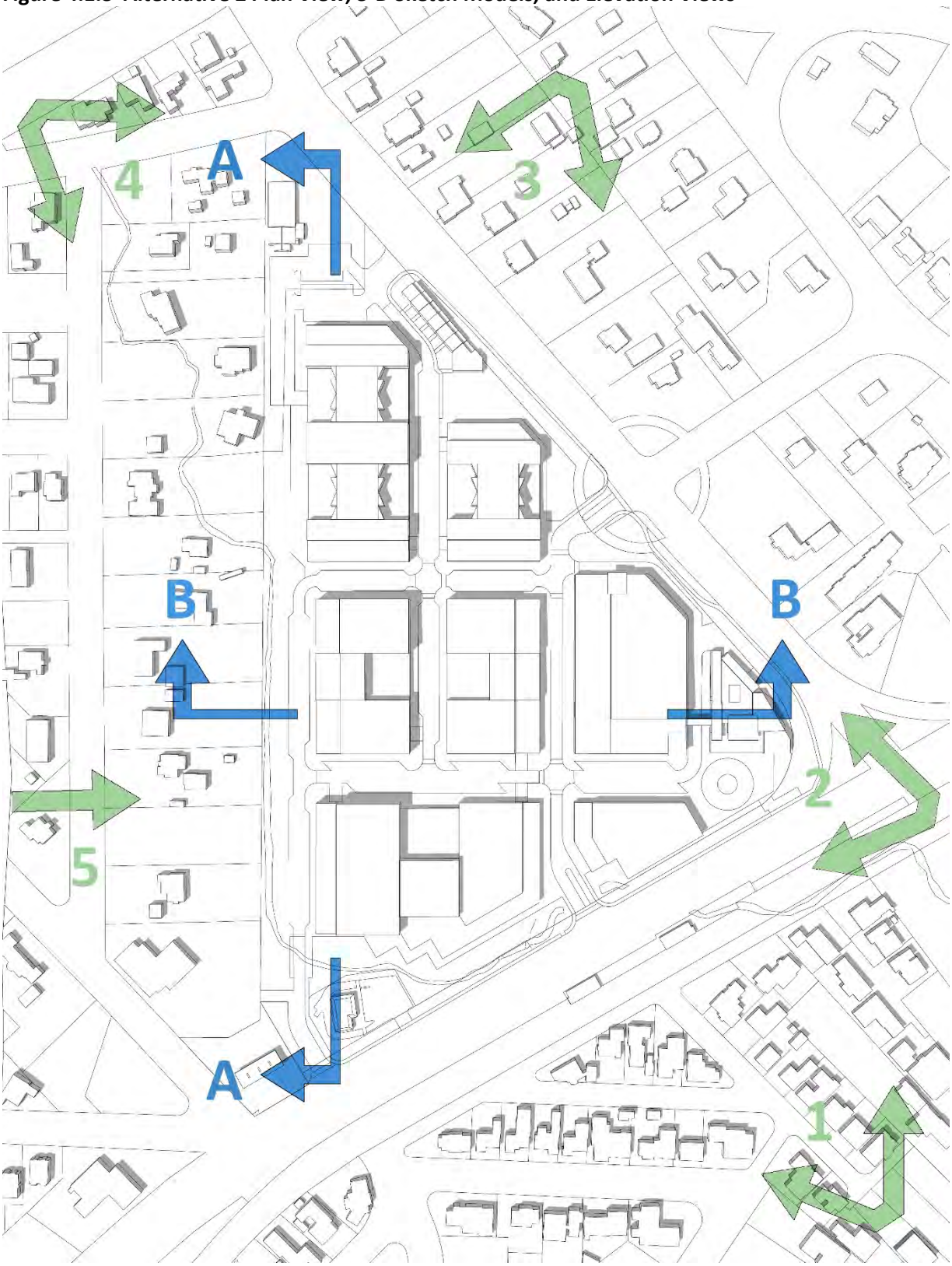


Figure 4.1.3a and 4.1.3b 3-D Sketch Models of Alternative 2—Varied Height and Form

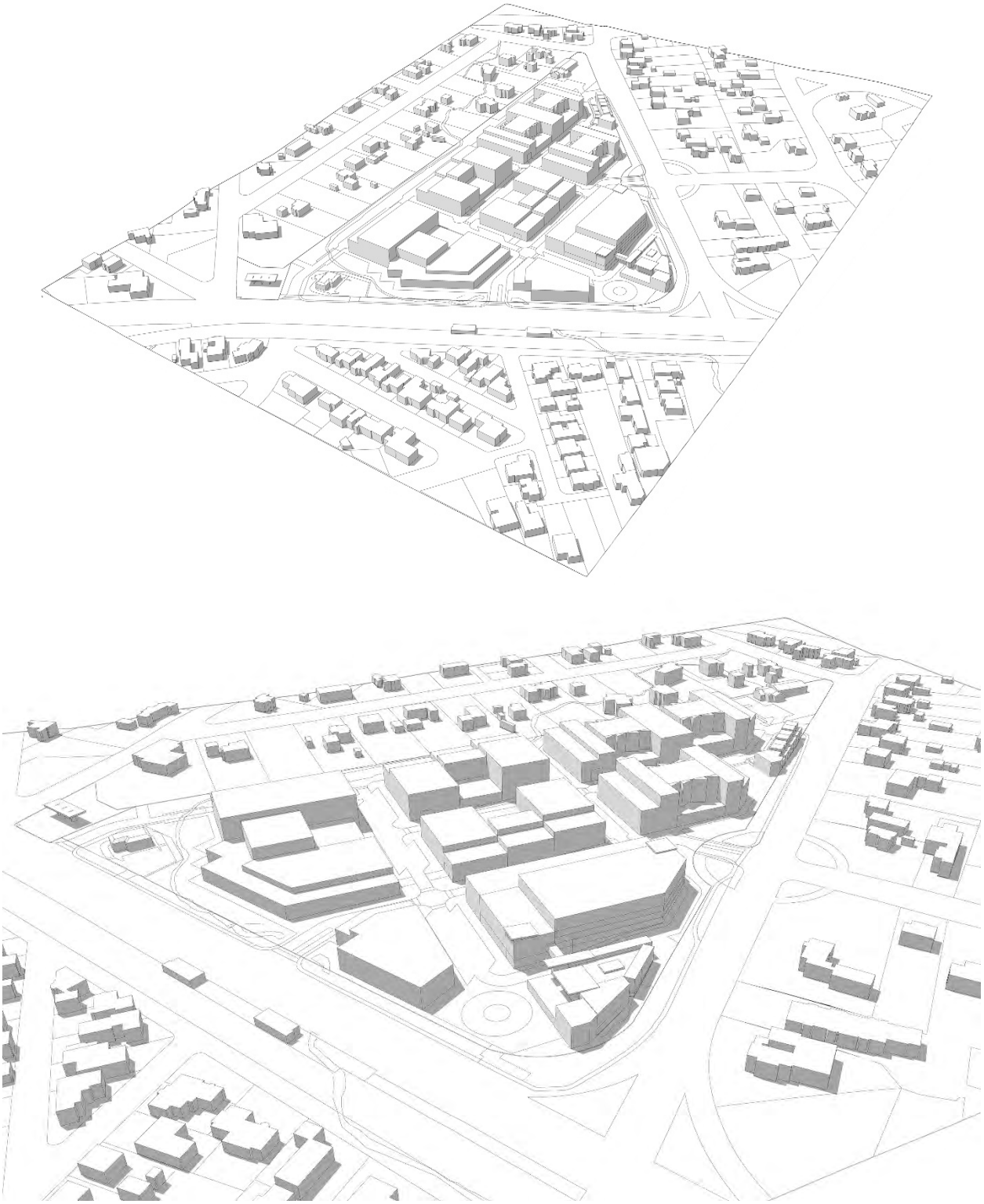
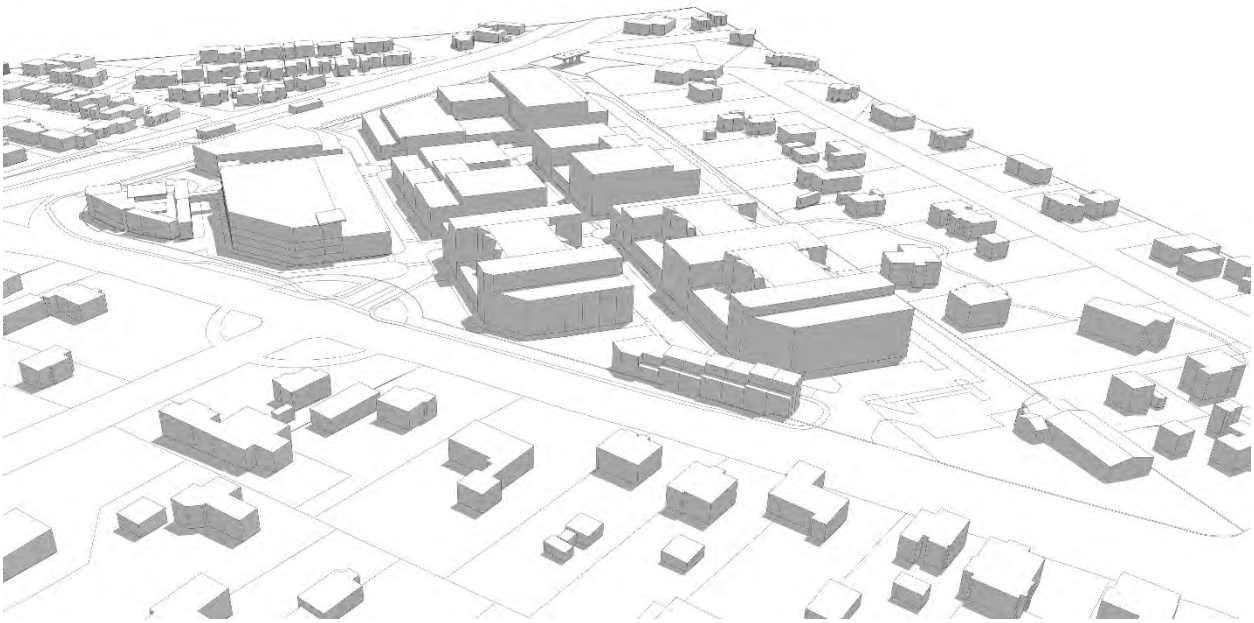


Figure 4.1.3c and 4.1.3d 3-D Sketch Models of Alternative 2—Varied Height and Form



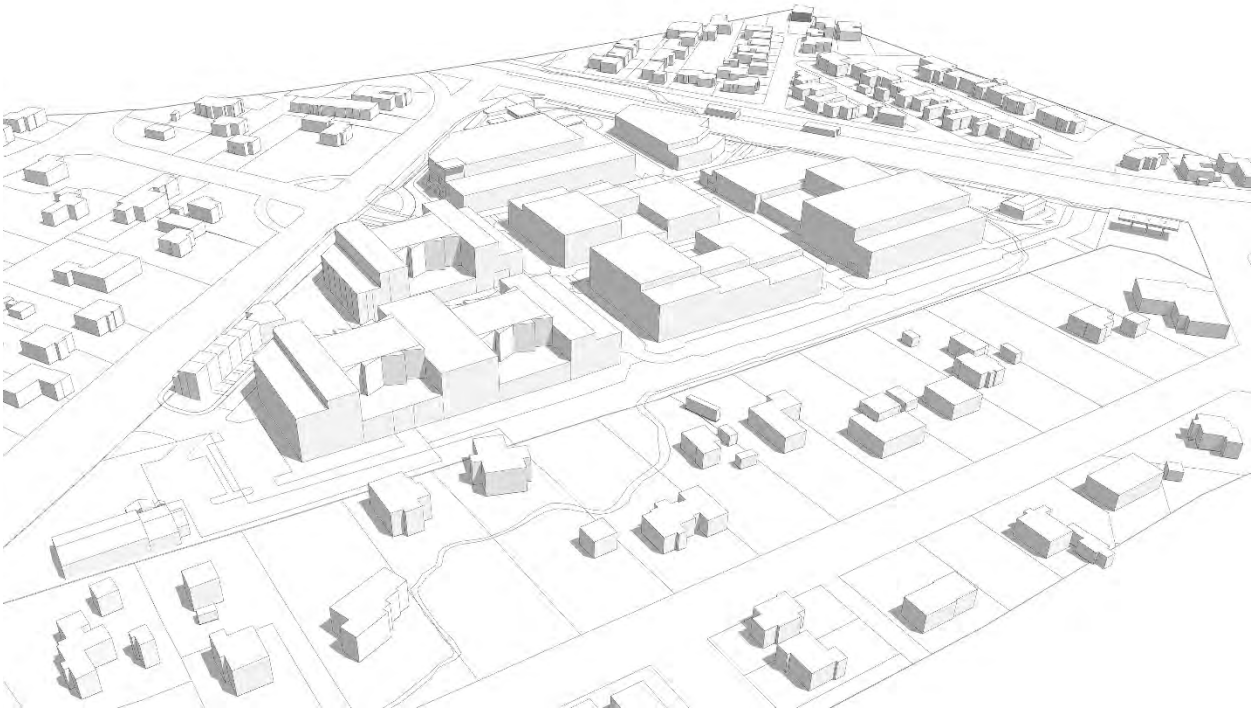
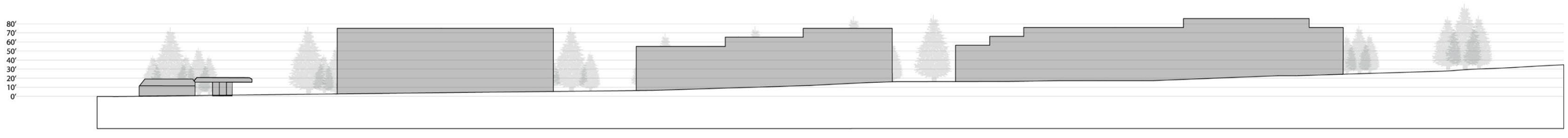
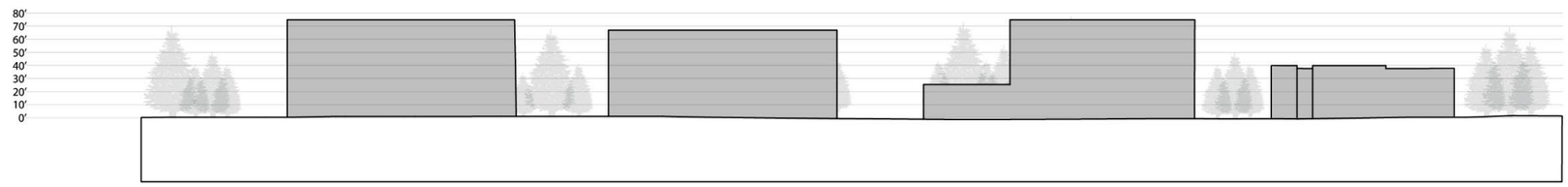


Figure 4.1.3e Elevation Views for Alternative 2—Varied Height and Form

These conceptual elevations show potential building heights from south to north and from west to east across the Town Center. These illustrations show only the buildings on lines A-A and B-B in the planning scenarios and not buildings that may be visible in the background. To understand the potential heights and form of buildings throughout the site, refer to the 3-D sketch models.



Elevation A
Facing West



Elevation B
Facing North

Figure 4.1.4 Alternative 3 Plan View, 3-D Sketch Models, and Elevation Views

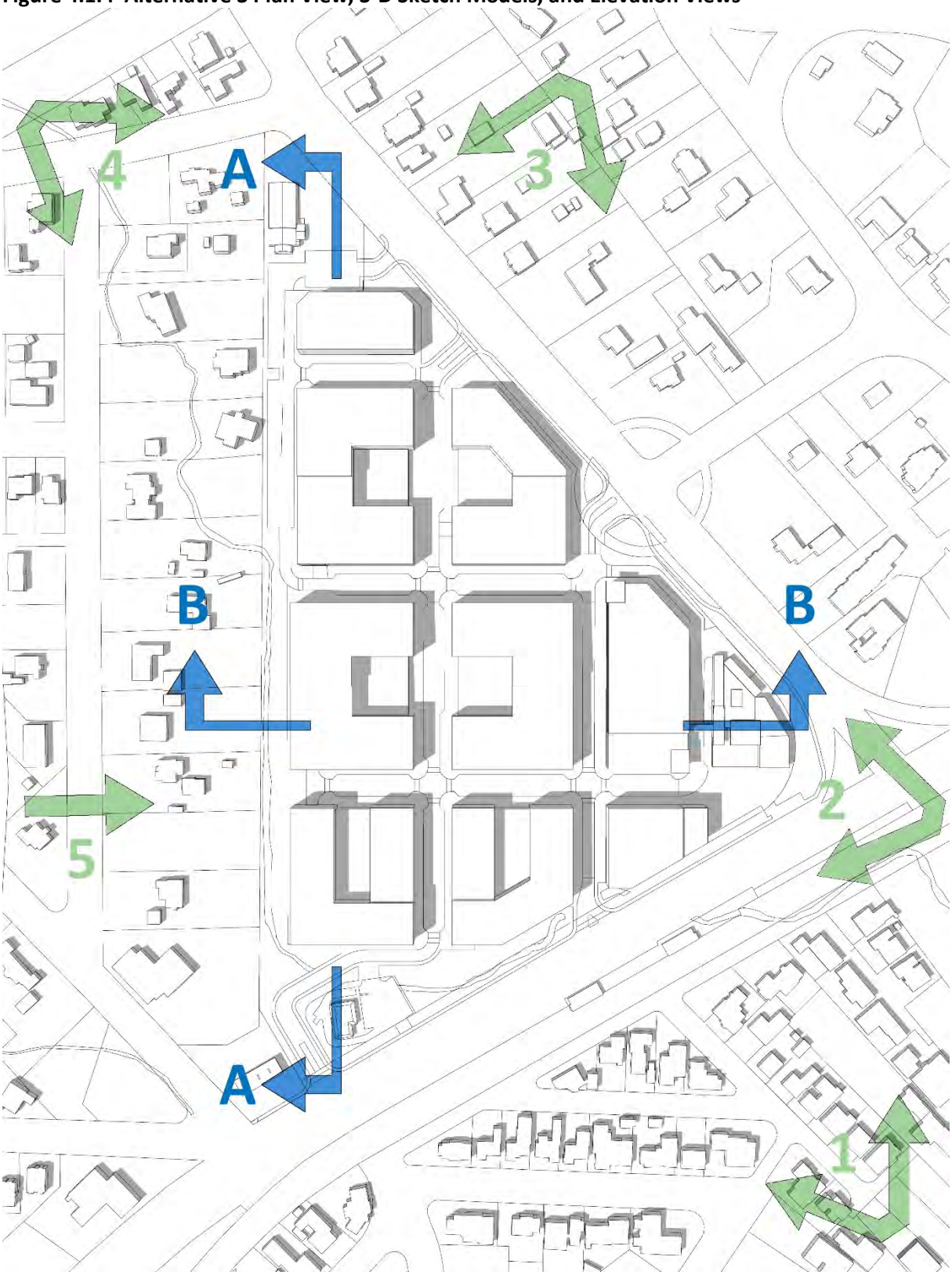


Figure 4.1.4a and 4.1.4b 3-D Sketch Models of Alternative 3—Uniform Height and Form

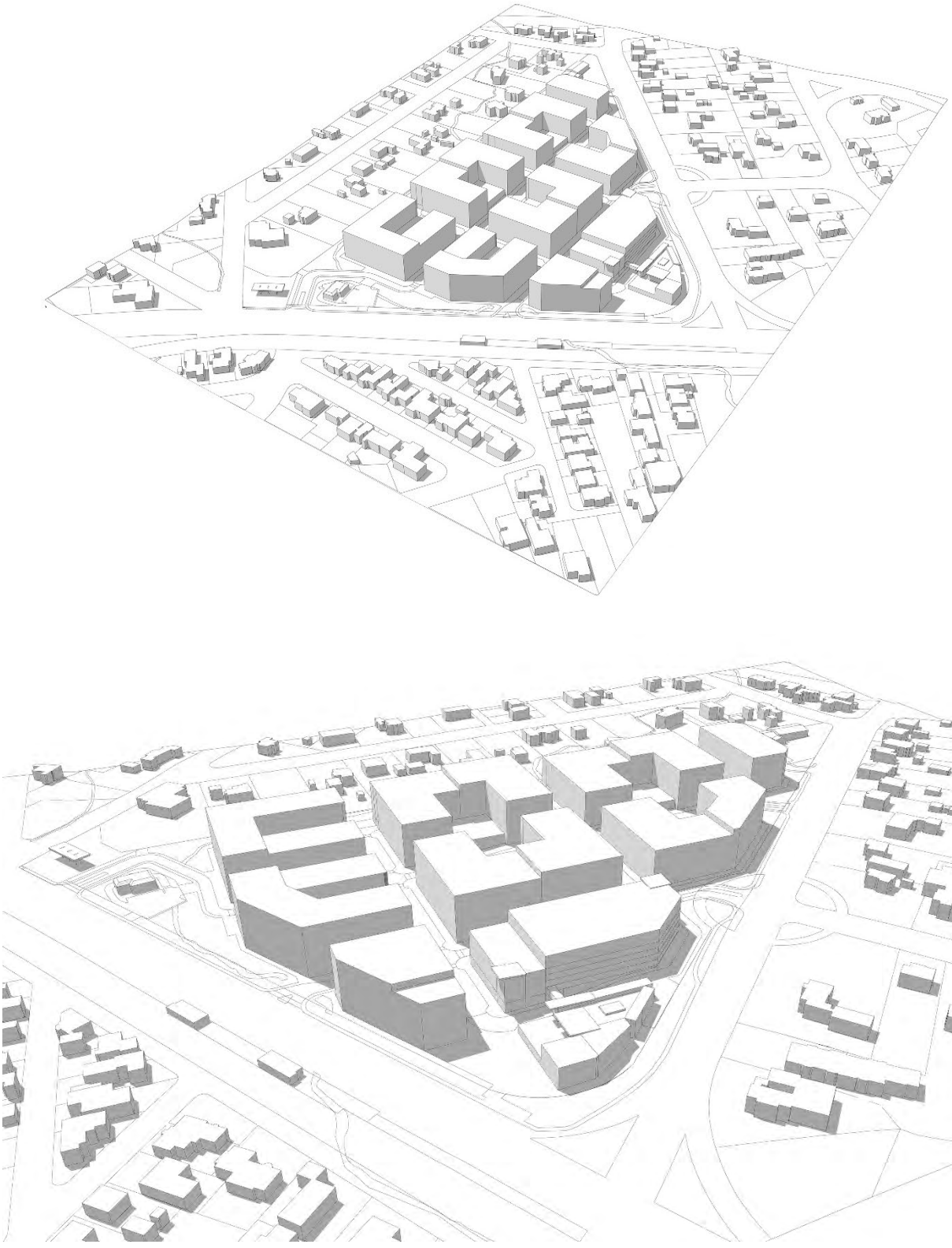
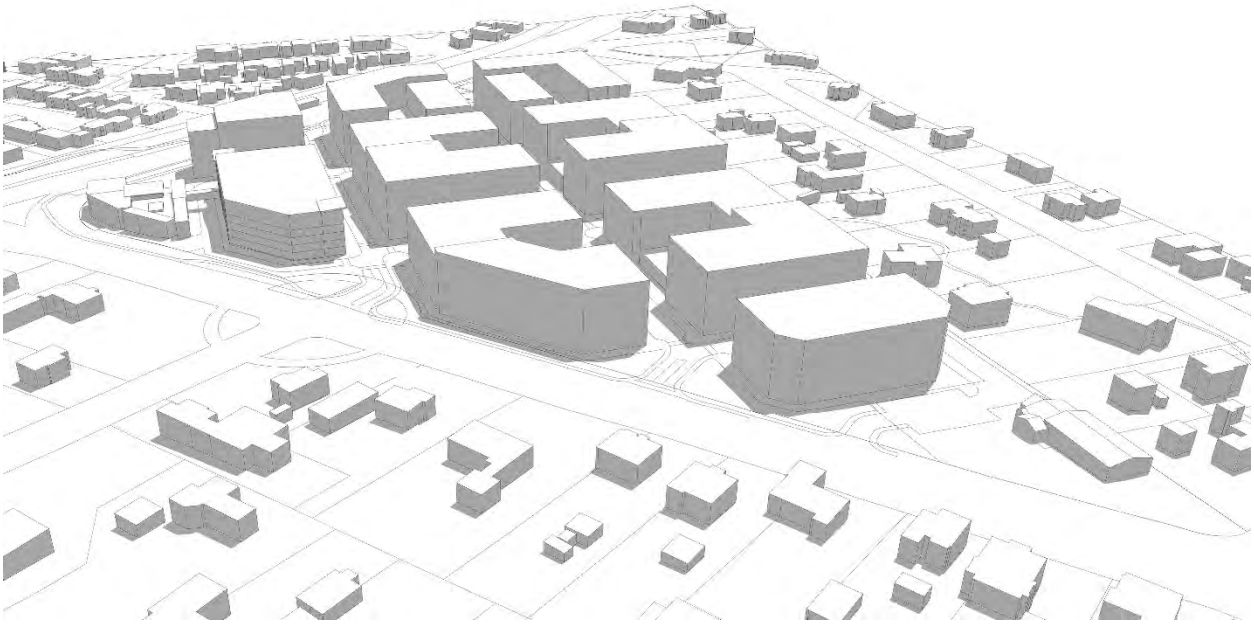


Figure 4.1.4c and 4.1.4d 3-D Sketch Models of Alternative 3—Uniform Height and Form



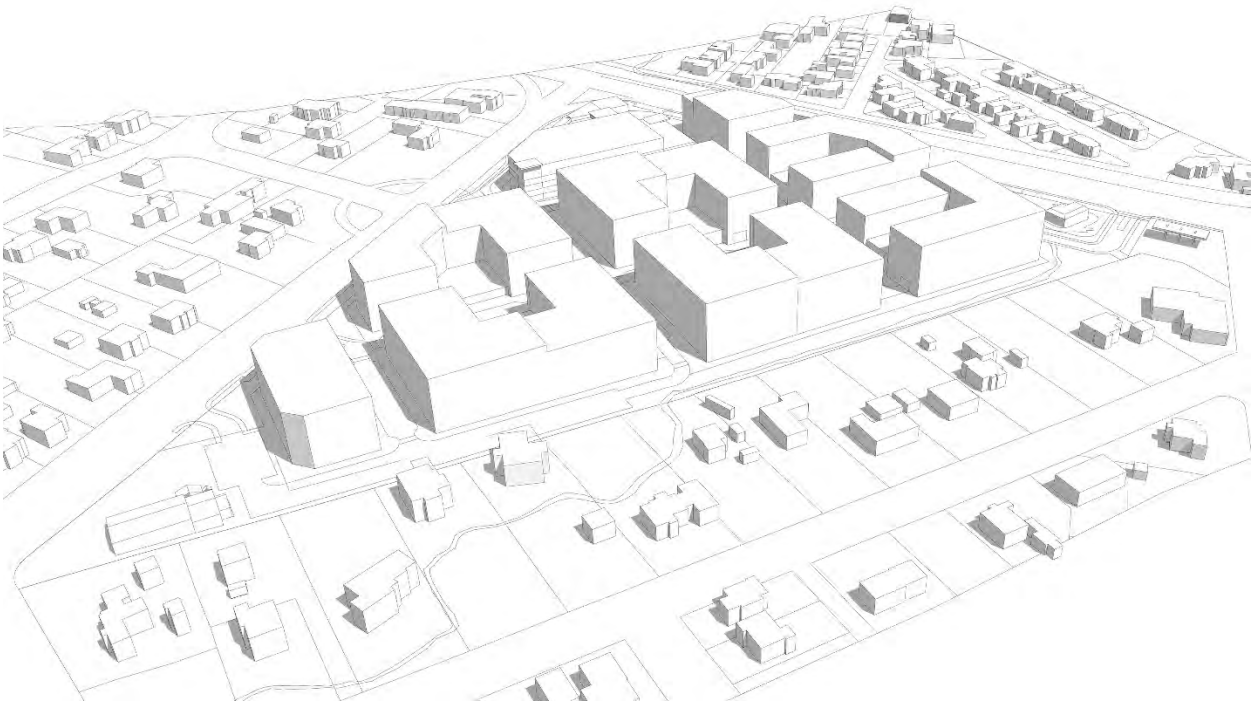
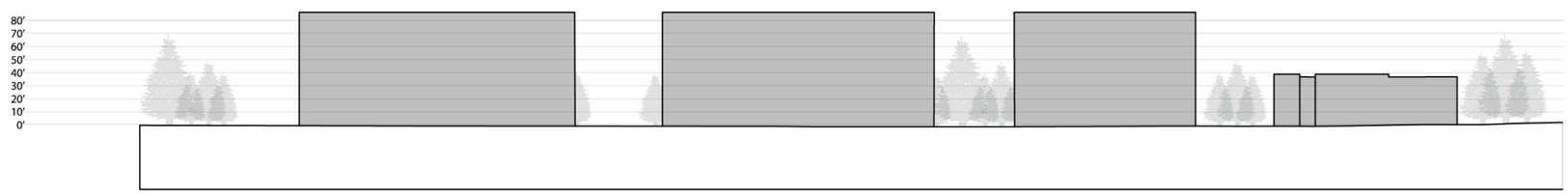


Figure 4.1.4e Elevation Views for Alternative 3—Uniform Height and Form

These conceptual elevations show potential building heights from south to north and from west to east across the Town Center. These illustrations show only the buildings on lines A-A and B-B in the planning scenarios and not buildings that may be visible in the background. To understand the potential heights and form of buildings throughout the site, refer to the 3-D sketch models.

Elevation A
Facing West



Elevation B
Facing North

Views of Conceptual Planning Scenarios from Neighboring Single Family Homesite near Whispering Willow Park (#5 View Arrow in Key Map)

Figure 4.1.5a Alternative 1—No Action

Figure 4.1.5b Alternative 2—Varied Height and Form

View of Conceptual Planning Scenarios from Neighboring Single Family Homesite near Whispering Willow Park (#5 View Arrow in Key Map)

Figure 4.1.5c Alternative 3—Uniform Height and Form

Figure 4.1.6a Alternative 1—No Action: Sun/Shade Study

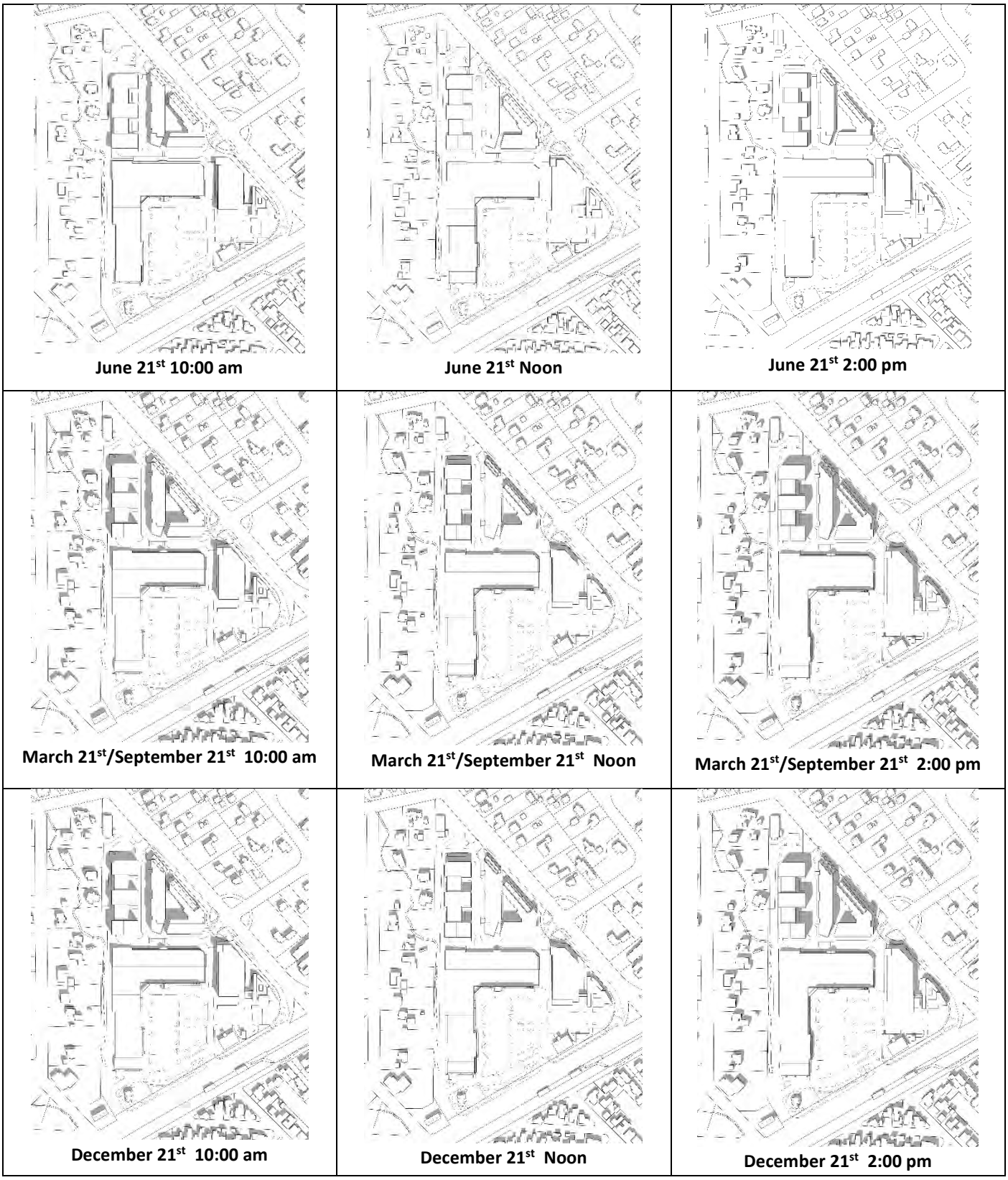


Figure 4.1.6b Alternative 2—Varied Height and Form: Sun/Shade Study

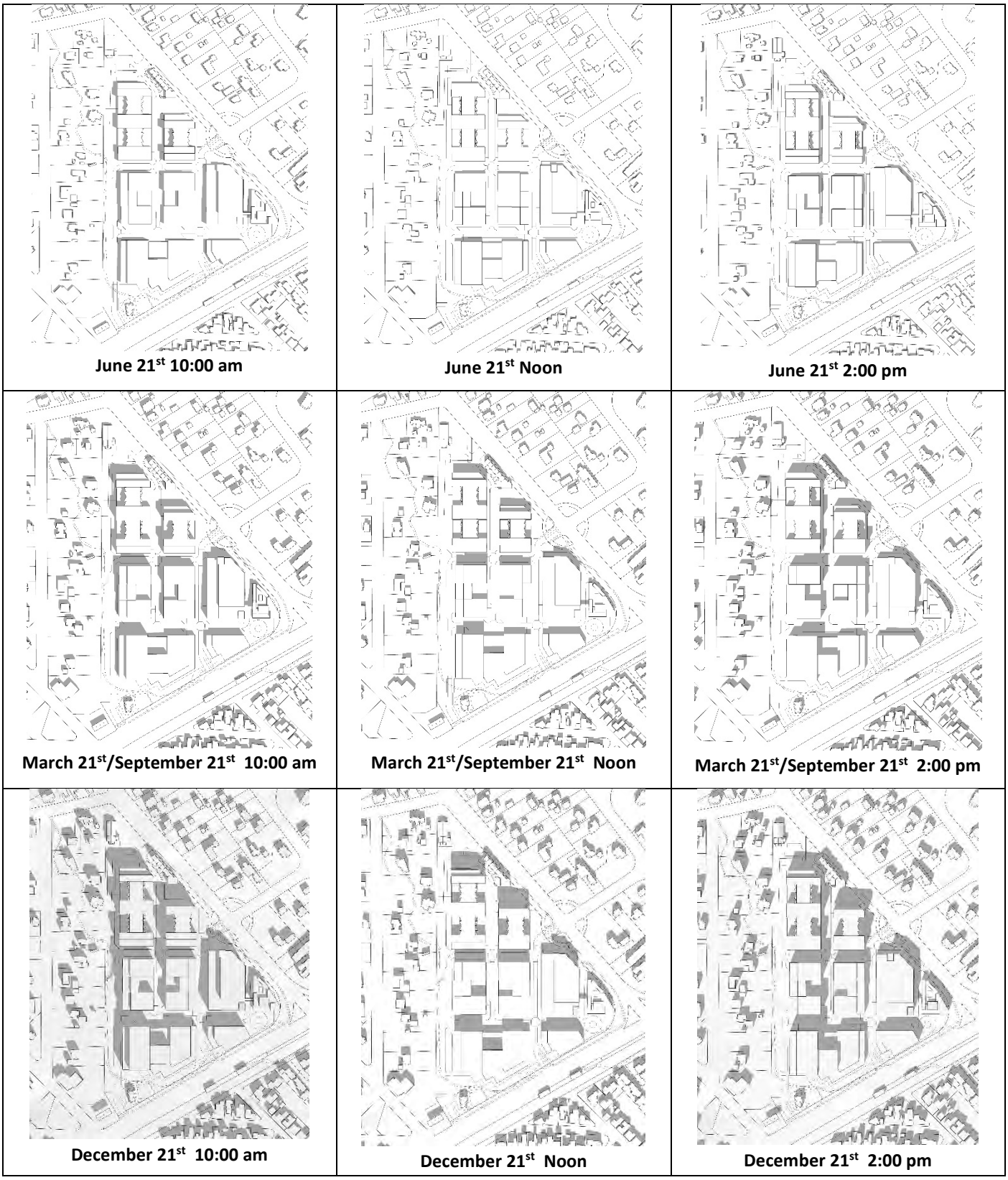


Figure 4.1.6c Alternative 3—Uniform Form and Height: Sun/Shade Study

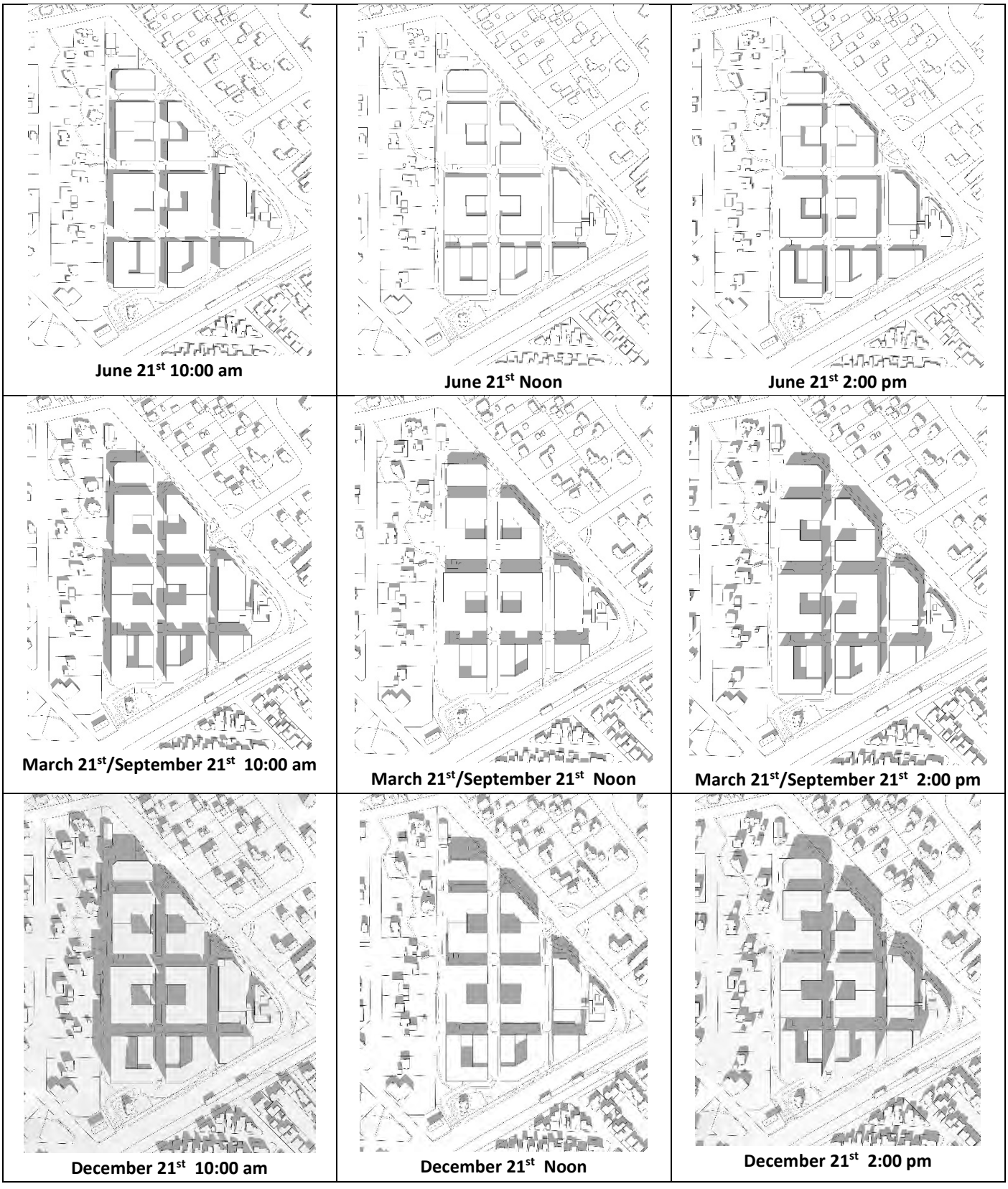
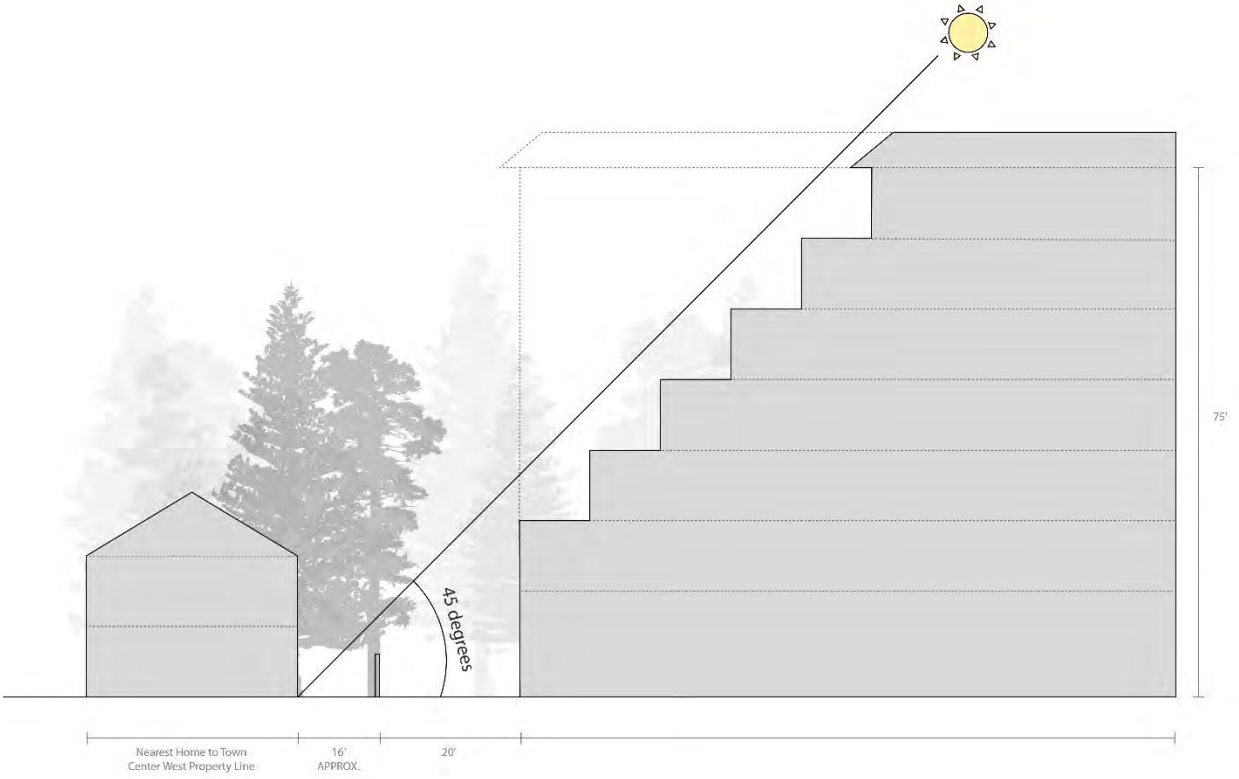
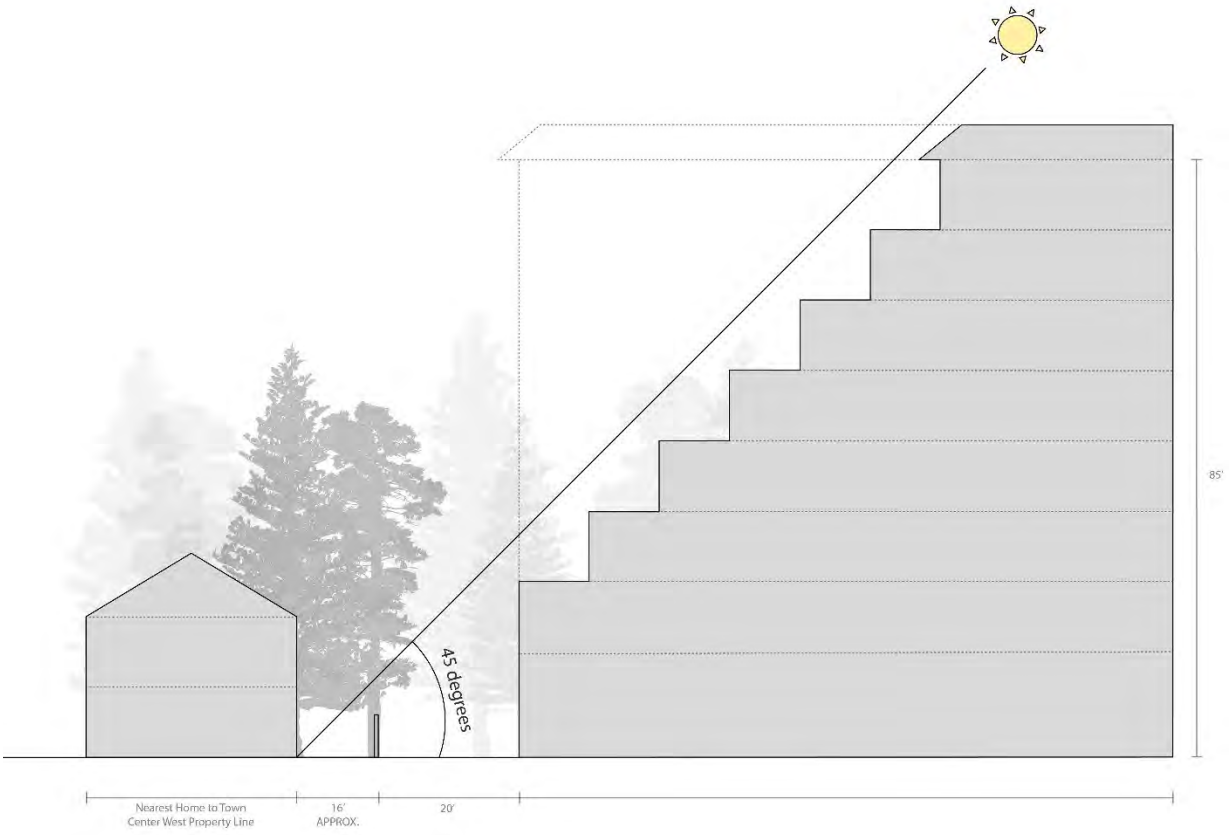


Figure 4.1.7a and 4.1.7b—Western Property Line Diagram for the Closest Homes to Town Center





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INTRODUCTION

This section of the "Analysis and Mitigation" chapter of the Town Center Plan EIS addresses surface water and natural conditions, including:

- Lake Forest Park Setting, Plans, Policies, and Regulations and Town Center Conditions Applicable to the Natural Environment
- Geology, Soils, and Topography
- Lyon Creek Corridor
- Surface Water Management System
- Trees, Vegetation, and Habitat

ALTERNATIVES ANALYSIS

Lake Forest Park Setting, Plans, Policies, and Regulations and Town Center Conditions Applicable to the Natural Environment

As described in Section 3.2, Town Center is the most developed, urban place in Lake Forest Park, and as such, the characteristics of the planning area are distinctively different than the surrounding setting. There are minimal trees within the Town Center planning area and most surfaces are impervious, with the exception of a few limited open space areas.

Any of the alternatives for implementing future redevelopment at Town Center would be required to be consistent the City's adopted plans and policies applicable to protecting and enhancing elements of the natural environment such as trees, streams, forested areas, and open spaces.

With redevelopment under Alternative 2 and Alternative 3, amended planning and land use regulations in the LFPMC would help to encourage and incentivize the provision of additional open space, trees, landscaping, pervious pavements, and other low impact development treatments, more so than under current regulations applicable to Alternative 1.

Therefore, as the extent of redevelopment of the site increases, the potential for beneficial improvements to natural elements also could increase. Additional protection and enhancement of natural areas could be part of future site redevelopment including wider setbacks along the Lyon Creek corridor, compliance with applicable surface water management provisions, and the addition of more trees and vegetation at the site are some potential examples.

While the critical areas requirements of the LFPMC would apply to any of the alternatives (1, 2, or 3), these provisions allow redevelopment to cover the same footprint of the current impervious surface area (as discussed in Section 3.2). Amended regulations as proposed under Alternatives 2 and 3 would require and incentivize public and private open space to serve residents and employees at Town Center, and also could encourage and incentivize the provision of certain types of open space improvements aligned with the community's vision for Town Center. The greater the level of redevelopment that occurs, the more likely these elements would be part of the changes occurring at the site. Maximizing redevelopment potential through the increased height limit under either Alternative 2 or Alternative 3 would in turn leverage a greater level of change and the potential for more amenities and enhancements to natural areas.

As stated in the City's Parks, Recreation, Open Space, and Trails Plan, (PROS-T), "the forests, wetlands, streams, and wildlife of Lake Forest

Park provide the highly valued, desirable character, lifestyle, and ecology that draw residents to this community." While the Town Center planning area is the most developed urban place in the community, there are actions that could be taken to improve surface water management and natural areas as part of redevelopment (refer to Mitigation Measures later in this section).

As addressed in Section 4.1, increasing the number of people living and working in proximity to high capacity transit is an important principle of smart growth and environmental protection, supported by multiple adopted federal, state, regional, and local policies. Reducing the overall vehicle miles traveled in the region by encouraging more trips via transit, walking, and bicycling, is an important measure in mitigating greenhouse gas emissions and the related the effects of climate change, as well as mitigating other potential environmental impacts (traffic congestion, air quality concerns, and health related effects).

While redevelopment of Town Center may bring some additional pressures on natural conditions, the already heavily urbanized condition of the site creates the potential opportunities to improve conditions with redevelopment. Redevelopment could be beneficial by improving surface water management and water quality conditions. Redevelopment also would include creating additional open space and landscaped areas at Town Center, which could help in expanding the tree canopy. Low impact development treatments such as permeable pavements, rain gardens, green roofs, and other improvements could be integrated into redevelopment. Lyon Creek corridor also could be a focus for enhancement as part of redevelopment.

Overall, implementation of any of the action alternatives, as well as the no action alternative, would introduce new population growth to the community, placing additional stress on the local environment and natural areas. However, there are many opportunities to integrate environmentally-beneficial features in each phase of redevelopment and to limit and mitigate potential impacts through required and recommended mitigation measures, while also meeting proposed redevelopment goals.

As stated previously, any redevelopment would be expected to occur incrementally, in phases over time, and with each phase there would be the potential for increased environmental enhancements compared to current conditions.

While Alternative 1—No Action would result in less population increase compared to Alternative 2 and Alternative 3, it may not include as many integrated environmental benefits as the action alternatives, regulated and incentivized through amended LFPMC provisions (as proposed with the adoption and implementation of the new Town Center Plan).

Geology, Soils, and Topography

Given that there are no identified geologic hazard areas or large areas of steep slopes in the planning area, no significant adverse impacts related to geology, soils, or topography would be expected.

Further changes to the planning area's topography and surficial geology could occur with redevelopment. Given the potential for shallow groundwater conditions, geotechnical analysis would be required to inform future development and construction methods to minimize impacts to and manage groundwater as part of each phase of redevelopment.

Alterations of existing grades and soil/earth movement would be expected as part of redevelopment and would be subject to clearing and grading provisions and other development requirements of the LFPMC, including erosion and sedimentation control applicable to construction and development activities. Most soil/earth movement would occur as a result of building foundation construction, installation of underground utilities, site access and parking development, and other similar activities. Unsuitable soils for development may be removed from the site and replaced with suitable soils supportive to the development activities of each phase.

Lyon Creek Corridor

Lyon Creek is the predominant natural feature extending through a portion of the Town Center planning area. While there have been significant improvements to the creek corridor in the last several years, including daylighting of major segments and the installation of flood control improvements and rain gardens, there is still the potential to protect and enhance the creek to a greater extent with future phases of redevelopment. Although existing provisions of the LFPMC (including critical areas regulations) would allow the current developed footprint to remain adjacent to the creek, code amendments and open space provisions implemented as an outcome of this EIS could incentivize wider setbacks and enhanced native landscaping in proximity to the creek. Daylighting remaining piped portions of the creek also could be encouraged through public open space provisions.

Surface Water Management System

The City of Lake Forest Park is a municipal National Pollutant Discharge Elimination System (NDPES) Phase II permittee, required to comply with all of the applicable requirements issued by the Washington State Department of Ecology (DOE). Phase II permittees are required to adopt provisions of the DOE's Stormwater Management Manual for Western Washington or a manual deemed by DOE to be equivalent. The City has adopted the 2016 King County Surface Water Design Manual (KCSWDM), accepted by DOE, and administers stormwater regulations for new development and redevelopment through the KCSWDM's provisions.

In administering the KCSWDM (2016), there are several core requirements to which each phase of a project must adhere, depending on the level of drainage review required by the project. Water quality treatment is required and may include techniques such as infiltration facilities, settling ponds and/or vaults, oil/water separation, and/or biofiltration swales and facilities. The stormwater treatment requirement applies to all development sites with 5,000 square feet or more of pollution-generating impervious surfaces subject to vehicle use as well as areas for outdoor storage of waste or chemicals.

Implementation of any of the alternatives (1, 2, or 3) would require the Full Drainage Review level and must adhere to the Core Requirements 1-9 and Special Requirements 1-5 as specified in the KCSWDM. The selection of any of the alternatives for the Town Center would require that these requirements be met to the same level of effort regardless of the alternative selected. There are four Core Requirements that can require more analysis and design. Core Requirement 3: Flow Control, Core Requirement 4: Conveyance System, Core Requirement 8: Water Quality and Core Requirement 9: Flow Control BMPs can take a significant amount of analysis and design.

For flow control where the stormwater runoff under current conditions must be detained to provide the same runoff in future conditions as under predeveloped forested conditions, there is an exemption for areas where the natural drainage basin contributes to Lake Washington.

Since development under any alternative must comply with stormwater management requirements, no significant differences in stormwater flow, volumes, or quality would be expected between the no action and action alternatives. Current conditions in the Town Center planning area indicate a land cover of approximately 90 percent impervious surface area and 10 percent pervious (landscaped) surface area. None of the three alternatives propose an increase to the impervious area, and through code amendments, additional open space, landscaping, trees, and pervious surfaces would be expected as part of future phases of redevelopment, reducing the level of impervious surface area from current conditions.

Planning level modelling calculations were conducted to determine peak runoff rates for 2-year, 25-year, 50-year, and 100-year storm events (see Table 4.2.1). Modelling was conducted using the Western Washington Hydrology Model (WWHM 2012), which is the Department of Ecology's preferred model to analyze runoff and flow levels. Soils data to support the modelling effort was derived from the USDA Western Washington Soils Map.

Modelling results indicate that there should not be a significant increase in flow due to any of the proposed alternatives and stormwater runoff rates would be expected to be similar or less than current conditions. The Core and Special Requirements must be met for any new development or redevelopment, and as such none of the alternatives would be expected to have detrimental environmental impacts relative to storm water discharges, compared to the existing built conditions.

Table 4.2.1 – Comparison of Peak Stormwater Runoff Rates (CFS) of Existing Conditions and Alternatives 1, 2, and 3

Storm Event	*Existing (Current Condition)*	*Alt. 1*	*Alt. 2*	*Alt. 3*
2-yr	5.80	5.48	5.48	5.80
25-yr	9.75	9.211	9.211	9.75
50-yr	10.79	10.19	10.19	10.79
100-yr	11.86	11.20	11.20	11.86

While Alternative 3 would have greater increased stormwater runoff rates compared to Alternatives 1 and 2, the rates would not be expected to be higher than under current conditions as shown in Table 4.2.1. Projected runoff rates are lower under Alternatives 1 and 2 given that these proposed mixed-use development scenarios could have slightly lower percentages of impervious surfaces areas (pavement and rooftops) than under current conditions or with the more intensive level of urban grid/block development proposed under Alternative 3. Less land covered by impervious surface areas results in less surface water or stormwater runoff. Although, given required compliance with surface water management regulations, no significant unavoidable adverse impacts would be expected with implementation of any of the alternatives.

Trees, Vegetation, and Habitat

While a greater intensity of urban development and increases in population can result in greater stress on environmental and natural areas, the Town Center planning area has already been in urban development for many decades, serving as an urban center to the surrounding

community and neighborhoods. It is estimated that less than 10 percent of the site currently contains trees and vegetation, and these are not naturally preserved vegetation areas, but rather areas that have been landscaped over decades of time, containing a mix of native and non-native species.

New development/redevelopment in the Town Center planning area has the potential to provide more trees and landscaping through current and amended LFPMC provisions. While the level of impervious surfaces is currently maximized in the planning area, it could be reduced as part of amended LFPMC open space provisions and incentives that could be applicable to future redevelopment.

With implementation of redevelopment under any of the alternatives, there would be in increase in the number of trees and plantings and their related urban habitat value. The more site redevelopment that occurs, the more trees and landscaping that would be required. Building setback requirements proposed in certain areas of the Town Center planning area perimeter would also help to protect and retain existing trees and landscaping in those areas. In addition, redevelopment would encourage pedestrian-friendly design that brings local citizens into greater contact with natural areas (such as the Lyon Creek corridor). Interpretation and outreach at Town Center could help to educate citizens about the benefits of these natural areas and promote sustainability and stewardship—important principles in the community.

MITIGATION MEASURES

Based on the analysis of existing site conditions, it is anticipated that the overall imperviousness of the site could potentially be reduced with redevelopment under ang of the alternatives.

The hydrologic analysis of the proposed alternatives shows that runoff rates from the site would either be reduced or maintained at the current values. While all alternatives must meet the Core and Special Requirements of the KCSWDM, it is anticipated that no mitigation would be required to address stormwater runoff from the Town Center site.

There are a variety of mitigation measures that would address potential impacts to surface water and natural conditions that may occur with redevelopment in the Town Center planning area. Compliance with the City's Municipal Code requirements and development standards, as well as other applicable regulations, would provide protection against potential environmental impacts. For example, Title 16 Environmental Protection, Section 16.08.070, includes performance standards that would be applicable to clearing and grading activities, as well as other applicable stormwater management requirements of the KCSWDM as adopted by the City of Lake Forest Park.

Various best management practices (BMPs) would be required to minimize erosion, promote soil stability, prevent groundwater pollution, maintain stream flows, and achieve other sedimentation and erosion control practices. In addition, a stormwater pollution prevention plan (SWPPP) shall be required for any development meeting the threshold for a major clearing and grading permit. A stormwater drainage report would be required for each proposed phase of development to analyze and identify how applicable provisions of the stormwater manual would be addressed. Refer to LFPMC for additional applicable requirements.

Geotechnical analysis/reports also would be required for each proposed phase of redevelopment and proposed construction on the site to confirm subsurface and groundwater conditions and evaluate and recommend proper geotechnical and structural engineering methods. Geotechnical analysis would include recommendations for erosion and sedimentation control during construction and other best management practices (BMPs) to minimize erosion, promote soil stability, and prevent groundwater pollution.

Beyond compliance with applicable requirements, additional mitigation measures could be encouraged and incentivized as part of amended code provisions. Some of these measures could also bring added environmental benefits related to mitigating greenhouse gas emissions and air quality. The following potential additional mitigation measures are recommended.

- Development along Lyon Creek should be encouraged and incentivized to provide wider setback areas from the creek centerline than exist under current conditions and to provide enhanced native trees and plantings along the stream's banks through Town Center. Trees and understory plantings along streams reduce water temperatures by their shade (supporting better water quality), prevent or reduce bank erosion and silt, and provide hiding places for improving fisheries habitat. In addition, further daylighting of the Lyon Creek corridor through the planning area should be strongly encouraged.

- Developers should be encouraged to coordinate with and provide outreach to local organizations including the Lake Forest Park Stewardship Foundation and Lake Forest Park StreamKeepers as part of redevelopment planning and design and to take into consideration the recommendations of those organizations for site features that could provide environmental benefits. This coordination could include support for ongoing monitoring of water quality, bank stabilization, and for potential obstructions in the creek corridor.

- Compliance with modern building codes would ensure best practices in energy and water conservation are incorporated into design. Future phases of redevelopment should be encouraged to include other green building and low impact development (LID) treatments including emphasizing natural hydrologic practices such as infiltration and soil and vegetative retention of stormwater runoff. LID techniques include, but are not limited to bioretention facilities, rain gardens, permeable pavements, roof downspout controls, green roofs, and dispersion of runoff through appropriate design techniques.

  LID treatments can bring added benefits of improving water quality in addition to flow control. The Washington State Department of Ecology requires that infiltration and LID techniques be explored as part of stormwater management, and redevelopment at the Town Center would be subject to these requirements. Other environmentally-friendly techniques also could be encouraged as part of redevelopment, such as alternative energy generating features (solar voltaic systems), electric vehicle charging stations, and other elements.

- All property owners should be required to maintaining site landscapes to remove invasive species that may emerge such as Himalayan blackberry, English Ivy, or other non-desirable plants.

- Increasing the tree canopy and the use of native plants across the site as part of new landscaping should be encouraged. Additional trees and vegetation bring benefits related to stormwater management and absorption as well as increased capturing and storage of atmospheric carbon dioxide (greenhouse gas emissions) and reduction of urban heat island effects.

- Consider providing opportunities for public outreach and interpretation of natural areas/features (Lyon Creek corridor, rain gardens, etc.) as part of redevelopment. Interpretation can be a helpful tool to encourage sustainability and stewardship of natural areas and environmentally-beneficial practices at Town Center.

- Evaluate current building/yard setback requirements and determine if amendments could improve the potential for retention of mature trees and vegetation around the Town Center perimeter.

- Site development and construction activities should be monitored by a professional engineer.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

No significant unavoidable adverse impacts related to surface water management or natural conditions would be expected with implementation of either of the two action alternatives (Alternative 2 or Alternative 3) given required mitigation measures, as well as the potential for additional recommended mitigation measures described above.

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INTRODUCTION

This section of the "Analysis and Mitigation" chapter of the Town Center Plan EIS addresses public and community services, including:

- Municipal Services/City Hall
- Lake Forest Park Branch of the King County Library
- 3rd Place Commons
- Fire and Emergency Medical
- Police Protection
- Schools
- Parks, Recreation, Open Space, and Trails
- Solid Waste Management
- Other Community Services

ALTERNATIVES ANALYSIS

Understanding how population levels of residents and employees might change is an important factor in analyzing potential future demand for public and community services under the alternatives. As discussed in Section 4.1, the alternatives analyzed in this EIS would generate the following potential population levels.

Alternative 1—No Action—The redevelopment scenario assumed under no action proposes 700 multi-family dwelling units. However, as previously discussed in Chapter 2.0, a higher intensity of multi-family and commercial use could be redeveloped under the existing planning land use regulations (more than 700 multi-family dwelling units). As such, this analysis assumes up to approximately 1,000 units total could be developed within the height limit and bonus heights currently allowed (60 to 66 feet maximum).

Assuming an average household size of 2.1 to 2.4 persons per household, the estimated population level for Alternative 1—No Action at full build out would be 1,470 to 2,400 people. This is approximately 11 to 18 percent increase above the 2018 population level of the entire city of 13,392. The estimated number of employees at the Town Center with full build out of the redevelopment scenario likely would be similar to the current level—approximately 580 to 600 total full-time-equivalent (FTE) employees across all uses and buildings in the Town Center planning area.

Alternative 2—Varied Height and Form—This redevelopment scenario assumes up to 1,200 multi-family dwelling units and as such would generate a population level at full build out of between 2,520 and 2,880 people given the maximum height to roofline proposed of 75 feet. This represents about a 19 to 21.5 percent increase above the 2018 population level of all of Lake Forest Park. It should be noted that the City's current planning and land use regulations already allow the height and density levels proposed under Alternative 1 (700 to 1,000 multi-family dwelling units), so Alternative 2 is proposing more density than currently could be accommodated in a form-based approach under current regulations—approximately 200 to 500 more multi-family dwelling units.

Alternative 2 would generate less employees than Alternative 1 due to the assumed reduction in gross square footage of commercial and office space across the site, with an estimated number of employees at 520-540.

Alternative 3—Uniform Form and Height—This redevelopment scenario would generate the most potential population given the taller maximum height to roofline proposed of 85 feet. Applying the 2.1 to 2.4 persons/household estimate and the assumption of 1,500 as the maximum number of multi-family dwelling units under this alternative, the estimated population level generated at full build out would be 3,150 to 3,600 people, amounting to 23.5 to 27 percent more than the 2018 population level of Lake Forest Park. Through form-based regulations, Alternative 3 would increase the realizable density at Town Center above the current allowed the height and density levels of approximately 700 to 1,000 multi-family dwelling units, adding the potential for up to approximately 500 to 800 more multi-family dwelling units.

Alternative 3 would generate the most number of employees given the proposed increase in commercial and office space, with an estimation of up to 800 FTEs throughout the planning area at full build out.

Municipal Services/City Hall

With the anticipated increase in population under any of the alternatives, there would be additional demand for municipal services. The community and city representatives have stated that there are a lack of facilities and spaces for public and community meetings in Lake Forest Park, and this also would need to be addressed with ongoing population growth of the community.

Over time, as the population levels of residents and employees at Town Center change over time, it will be important to monitor these changes and forecast demands more specifically for services, facilities, and staffing at City Hall. This would include municipal services, finance, planning and building, public works, engineering, court, and other services. Specific analysis is needed as part of the City's cyclical capital planning, operational, and budgeting to ensure the most accurate understanding of specific needs to serve the growing number of residents and employees at the site. Planning for future parking and operations needs of City Hall should occur as part of future master planning and design of redevelopment phases at the Town Center.

For purposes of this EIS analysis, and at a general planning level, to be confirmed with ongoing monitoring and forecasting, the levels of increased demand for municipal services shown in Table 4.3.1 may occur with implementation of the alternatives. It is important to keep in mind that the increasing demand for municipal services, facilities, and staffing may not always be proportionate to per capita service levels in place today (and really should be determined by specific facility planning on a regular basis).

It is also important to consider that there would be additional background population increases in Lake Forest Park within the next 15 to 20 years in areas outside the Town Center due to some additional multi-family zoned areas yet to be developed, short platting, and other activities. This general population increase also would generate additional demand for municipal services. The community and City representatives also have recently documented the need for additional community space in the PROS-T Plan, which should be considered as another potential need that may influence an increase in demand for municipal services.

Given these considerations, Table 4.3.1 estimates an additional 10 percent increase in

demand over the next 15 to 20 years based on past trends in background population growth as well as anticipated demand for more community space as identified in the PROS-T Plan. This would be a 10 percent increase in addition to the estimated increases in demand generated by the alternatives in the Town Center planning area.

Table 4.3.1 Planning Level Forecast of Demand for Municipal Services under Alternatives 1, 2, and 3 and with Estimated Background Growth

Alternative	Potential Increase in Demand at Full Build Out
Alternative 1—No Action	22 to 28 Percent
Alternative 2—Varied Form and Height	29 to 31.5 Percent
Alternative 3—Uniform Form and Height	33.5 to 37 Percent

Lake Forest Park Branch of the King County Library

There would be an ongoing demand for library services, and developers would need to coordinate with the King County Library System to address potential opportunities to relocate and/or expand the library space with future phases of redevelopment. While increased per capita demand could be estimated, similar to the estimates above for municipal services, library services methods and technologies are changing rapidly. As more content and materials become available online, there is less demand for space in the branch library. That said, the library serves an important ongoing need for people who don't have access to computers to be able to access online materials. and also provide important space for community events and activities. All these factors considered and given the focus of the branch library as a community hub for all of Lake Forest Park, demand for library services would be expected to continue to increase within the next 15 to 20 years. Just as the City would need to monitor growth on a regular basis, the King County Library System also should regularly monitor changes in demand for service at the Lake Forest Park branch and plan ahead for potential increases in facilities, space, and staffing that may be needed to serve growth.

Fire and Emergency Services

The Northshore Fire Department, part of King County Fire District #16, would continue to serve the Town Center planning area as changes in development and population occur in phases incrementally over the next 15 to 20 years. Station 57 would continue to serve Town Center property owners and commercial/office customers at Town Center, as well as new residential buildings and residents' needs that emerge incrementally over time with phased redevelopment, and other areas of the city within proximity to that station. The district also would continue to rely on automatic aid agreements working closely with the Shoreline, Bothell, Kirkland, and Woodinville fire departments.

In 2017, the Northshore Fire Department employed 48 FTEs, served a population level of 35,000, and responded to 3,511 calls. Given the population levels projected under the alternatives analyzed in this EIS, additional demand for fire and emergency services, facilities, equipment, and staffing would be expected over the next 15 to 20 years to address population growth at Town Center, as well as some background growth throughout the rest of the district. Table 4.3.2 shows a potential estimate for increases in calls per capita that might be generated by the forecasted population levels of each alternative.

Table 4.3.2 Planning Level Forecast of Potential Additional Annual Fire and Emergency Calls Generated by Alternatives at Full Build Out

Alternative	Estimated Potential Increase in Annual Total Calls at Full Build Out
Alternative 1—No Action	+147 to 241
Alternative 2—Varied Form and Height	+253 to 289
Alternative 3—Uniform Form and Height	+316 to 361

The Fire Department would monitor redevelopment and growth over time at Town Center and analyze the need for potential increases in services, equipment, facilities and staffing on a regular basis as part of operations planning, including any specialized training related to changes in building form and more intensive use at the site that may occur with various future phases of redevelopment. The Fire Department would continue to maintain its emergency access procedures and updated these as needed over time. The Fire Department does not anticipate the need for additional facilities, equipment, or staffing in the near term but would monitor potential future conditions and plan accordingly to ensure that service demands would continue to be met with each phase of redevelopment and building occupation.

The potential change in building form and height is another important consideration. Analysis for this EIS has confirmed that water fire flow capacity levels appear to be generally sufficient to serve any of the three alternatives. However, more detailed project level modelling and analysis should be completed with each phase of redevelopment to confirm site specific improvements that may be needed for fire flow/fire service.

Alternative 3 would generate the most fire flow demand given that it would result in the most square footage at build out, along with the tallest buildings of the three alternatives (up to 85 feet at the base of the roofline). The proposed building heights under any of the alternatives could increase the demand for ladder trucks. The Fire Department has confirmed that vehicles and equipment are available (either within the Department or through shared automatic aid agreements with others) to serve the potential increased building height and form under any of the alternatives.

All phases of redevelopment, whether comprised of new buildings or renovations, would be subject to the latest International Building Code requirements including fire and life safety standards. Access ways and spaces around the buildings also would be designed in compliance with applicable standards for fire and emergency access (such as designated areas along driveways/roadways “for fire access only”).

Access from the Fire Station #57 out to Bothell Way NE is another important issue that needs to be addressed with the potential for increasing traffic and congestion levels at Town Center. Transportation analysts have assessed potential near-term solutions to address the existing concern with morning pm peak traffic backing up onto the fire access drive and affecting fire and emergency egress from the station out to the highway. The alternatives analysis identified several improvements that could be made in the near to mid-term to address this concern. Refer to Mitigation Measures for these assumed improvements.

Police Protection Services and Community Safety and Security

Adding residents to the Town Center planning area would increase the demand for police protection and community safety and security. Lake Forest Park has been recognized as one of the safest communities in Washington.

Planning ahead for future growth and change at Town Center would be an important aspect of continuing to achieve this status. That said, with the addition of a residential population at Town Center, the incidences of crimes and calls for service would be expected to increase under any of the alternatives. Alternative 3 would be expected to generate the most demand for service given that it proposes the most new multi-family dwelling units of up to 1,500, compared to Alternative 2, which proposes up to 1,200 and Alternative 1, which proposes up to 1,000.

To mitigate the potential for additional crime activity and to keep up with the demand for increased police protection services and additional community safety and security, the City and Police Department would actively monitor and plan for anticipated service levels related to each phase of redevelopment at Town center in order to maintain its level of service standards (response time to calls, staffing, and crime reduction strategies). Over time, as population grows, increases in facilities and space, staffing, equipment and vehicles likely would be needed.

The City, Police Department, and other local partners also would continue to maintain and update the Hazard Mitigation plan summarized in Section 3.3. The City and Police Department also would continue to support important programs and educational outreach to the community.

In addition, the City and Police Department would continue to plan for the following identified improvement needs to serve the existing population:

- Improved, increased, secure parking (see below)
- Redesigned Sally-Port/garage
- Improved evidence collection and packaging location
- The patrol working area is insufficient in size and needs to be expanded

The Police Department would continue to maintain interlocal service agreements with SWAT, Emergency Management, Jail Services, Dispatch Services, and Animal Control/Sheltering, and would coordinate with these partners as conditions change in the future to address service needs at Town Center.

Planning for future parking and operations needs of the Police Department should occur as part of future master planning and design of redevelopment phases at the Town Center. One example is the ongoing need for secure parking spaces for Police Department vehicles and equipment. The department estimates a need for a minimum of twelve dedicated parking spaces for police use under current conditions, but this demand for space could increase over time as the population at Town Center increases. Under current conditions there are only five dedicated parking spaces available.

City of Lake Forest Park Capital Improvements Planning—Forecast of Future Needs

Section 3.3 provided a description of the City's current capital improvements planning, including forecasting of future needs.

Potential population levels and related demand for capital improvements and facilities at Town Center associated with the selected alternative for the Town Center Plan would need to be factored into ongoing planning for operations and budgeting. The City's Capital Improvement Plan is a six-year plan for expenditures on infrastructure projects within the city that would need to be updated to address the adopted Town Center Plan and projected growth through the next 15 to 20 years. This would include defining project and procurement needs, estimating costs, and establishing priorities for capital improvements and facilities that fall into the City's jurisdiction. In some cases, there would be development responsibilities assigned to certain improvements correlating to the impacts and demands generated with each future project-level phase of redevelopment.

Schools

All alternatives would result in increasing the population in the Town Center planning area due to proposed multi-family dwelling units. Based on 2010 US Census data, there are 0.41 school-age students per household enrolled in school living in Lake Forest Park. Given the predominance of single family homes in the community this ratio of students per household is likely higher than what would be expected for the multi-family dwellings under the alternatives. As such, a ratio of 0.3 to 0.4 students per household is used to estimate the potential student population that may be generated under the alternatives with future build out. Table 4.3.4 shows the estimated K-12 student population that would be generated by each alternative at full build out.

Table 4.3.4 Planning Level Forecast of Student Populations Generated by Each Alternative at Full Build Out

Alternative	Estimated Potential K-12 Student Population at Full Build Out
Alternative 1—No Action	210-400
Alternative 2—Varied Form and Height	360-480
Alternative 3—Uniform Form and Height	450-600

An estimated percentage of K-12 student population forecasted for each school level is derived through comparison of the 2018 population levels at Lake Forest Park attended schools in Shoreline School District No. 412 shown in Table 4.3.5, above. The same percentages of total students attending each level (Elementary, Middle School, High School) are assumed for the future. Table 4.3.6 shows these forecasts for each alternative at full build out.

Table 4.3.5 Percentage of K-12 Students at each School Level based on 2018 Enrollment for Lake Forest Park Attended Schools in Shoreline SD No. 412

Facility	Enrollment (2018)	Percentage
Lake Forest Park Elementary (K-6)	570	21.2%
Kellogg Middle School (7-8)	625	23.3%
Shorecrest High School (9-12)	1,493	55.5%

Source: Shoreline School District No. 412, 2018

Table 4.3.6 Estimated Forecasts for Total K-12 Students at Each School Level for Alternatives at Full Build Out

Facility	Alt 1	Alt 2	Alt 3
Lake Forest Park Elementary (K-6)	44.5 to 84.8	76.3 to 101.8	95.4 to 127.2
Kellogg Middle School (7-8)	48.9 to 93.2	83.9 to 111.8	104.85 to 139.8
Shorecrest High School (9-12)	116.6 to 222	199.8 to 266.4	249.75 to 333

These increases in K-12 student population would occur incrementally over time as redevelopment occurs in multiple phases, rather than all at once. This would provide time to monitor growth and plan to address increases in service needs.

While the School District reports that capacity is available at the three schools and that the current trend of reduced enrollment is forecasted to continue through the next couple of years, projections beyond that show potential increases in student enrollment. Given the potential K-12 student population increases in the Town Center planning area that might occur incrementally over time with future phases of redevelopment, the School District would monitor redevelopment activity and changes in population. As part of its regular operations planning and budgeting, the School District would continue to plan to serve future changes in demand through improvements to schools and facilities and increases in equipment, resources, and staffing. There are several closed facilities that could be reopened if student populations increase in the future. That said, new facilities and buildings may be needed over time to serve increases in student enrollment, from Town Center households, as well as other growth that may occur in the District.

The School District also would plan for school bus service between these schools and Town Center as a new residential origin for students.

Parks, Recreation, Open Space, and Trails

The City's PROS-T Plan recommends working toward achieving a general increase in the ratio of parks and open space lands per 1,000 people in Lake Forest Park, although a specific target ratio is not mentioned. The community currently has an average of 2 acres of parks and open space land per 1,000 population, and this is lower than national averages.

All of the alternatives propose new residential population at Town Center, and for purposes of informing the analysis for this EIS, open space standards to be applied with mixed-use redevelopment in town centers, downtowns, and with multi-family land use were researched. The nearby jurisdiction of Bothell uses these standards for its downtown as one example:

- 100 Square Feet of Public Open Space for Every Dwelling Unit (DU)
- 60 Square Feet of Private Open Space per DU
- 60 Square Feet per 1,000 Gross Square Feet of Non-Residential Use

This EIS analysis applies the standards from Bothell as one potential measure of how parks, recreation, open space, and trails facilities could be provided to serve new residents, employees, and visitors at Town Center. This is a theoretical analysis presented for the purpose of determining potential demand for open space to be presented for public and agency

comments. The actual standard required for Town Center would be determined as an outcome this EIS process and adopted as part of the Town Center Plan. The actual adopted standards in the future may vary from those referenced in this analysis.

Based on further analysis and public comments, the City may proceed to use these standards or may develop a different set of standards that may require more or less open space. The City may determine to use incentives and bonus tools that would credit certain types of open space and amenities with more value, reducing the amount of space required based on the level of importance/value to the community. The City may adopt bonus density or other incentives for the provision of open space.

Table 4.3.7 calculates the amounts of open space that would be needed to serve demand applying the example downtown standard from Bothell as a theoretical standard. This demand could be served through a wide variety of parks, recreation, open space, trails, and other spaces and amenities at the Town Center as it redevelops.

Examples of potential public open space areas and facilities for general public use include:

- Plazas, commons areas, and other social gathering spaces (outdoor and indoor)
- Rooftop decks/areas designed with amenities and open to public use
- Community gardens and p-patches
- Pedestrian corridors and festival/shared street areas designed for public markets and events
- Children's play areas and multipurpose, multigenerational recreational spaces (play structures, sports courts, outdoor games, movie watching area, etc.)
- Food truck/café seating areas and picnic/barbeque areas open to public use/not customer exclusive
- Commemorative gardens, public art displays/sculpture gardens, landscaped courtyards and other types of spaces designed for public use and enjoyment
- Enhanced areas along Lyon Creek for public use (such as a boardwalk system with overlooks along the edge of the creek buffer and/or additional daylighting of Lyon Creek with public overlook areas)
- Landscaped setback areas as long as these spaces are useable (such as including recreational paths/trails in these linear areas)
- Other types of parks and open space areas that could be determined through further planning and design, such as mini-parks, parklets spaces, or neighborhood park for the Town Center community

Examples of potential private open space areas and facilities for the use of residents include:

- Balconies and patios
- Courtyards, gardens/greens, and common areas oriented to private use
- Picnic and barbeque areas for the use of private residents
- Outdoor recreational areas and playgrounds for private use (indoor

recreation rooms/spaces for residents would not count toward meeting this standard)

- Rooftop gardens, roof and tiered floor level decks and spaces adjoined to residential floors for the common use of private residents

- Landscaped areas in the private realm with furnishings and amenities (benches, seating, pubic art, etc.) provided they are accessible to and useable by residents

Table 4.3.7 Planning Level Analysis of Potential Parks, Recreation, Open Space, and Trails Demand Generated by Alternatives at Full Build Out

Alternative	Public Open Space at 100 SF per DU	Private Open Space at 60 SF per DU	Public Open Space at 60 SF per 1,000 GSF
Alternative 1—No Action (700 to 1,000 DU)	70,000 to 100,000 SF	42,000 to 60,000 SF	10,000 SF
Alternative 2—Varied Form and Height (Up to 1,200 DU)	120,000 SF	72,000 SF	9,000 SF=
Alternative 3—Uniform Form and Height (Up to 1,500 DU	150,000 SF	90,000 SF	15,000 SF

Based on this theoretical analysis, and assuming high end range of the population forecast for each alternative, implementation of Alternative 1 would require up to 170,000 SF or 3.9 acres of parks, recreation facilities, open space, and trails at full build out. Alternative 2 would require 201,000 SF or 4.6 acres. Alternative 3 would require 255,000 SF or 5.9 acres.

Comparison to a standard of acres per 1,000 population was also analyzed. To determine correlation to this standard, potential new on-site parks, recreation, open space (calculated in Table 4.3.7 above) and existing parks and recreation facilities within walking distance of Town Center and open to the public were counted (see Table 4.3.8). Table 4.3.9 shows the total estimated existing and new parks, recreation, open space, and trails per 1,000 population.

Table 4.3.8 Existing Parks, Recreation, Open Space, and Trails within Walking Distance of Town Center

Parks, Recreation, Open Space, and Trails Resources	Size in Acres
Existing Open Spaces within Walking Distance:	
Blue Heron Park	0.50
Whispering Willow Park	0.62
Burke-Gilman Trail in Lake Forest Park (2.1 Miles)	3.05
Lyon Creek Waterfront Preserve	0.89
Existing Rain Gardens and Open Spaces Likely to be Retained	1.40
Third Place Commons	0.23
Subtotal	***6.69***

Source: Lake Forest Park PROS-T Plan; note the Lake Forest Park Civic Club provides another 1.5 acres of open space with recreational amenities, but it is a private facility/property, not open to the public.

Table 4.3.9 Total Parks, Recreation, Open Space, and Trails with Full Build Out/High End Range of Population Forecast

Alternative	Acres at Full Build Out	Acres per 1,000 Population
Alternative 1—No Action	6.69 + 3.9 = 10.59 Acres	4.4 Acres/1,000
Alternative 2—Varied Form and Height	6.69 + 4.6 = 11.29 Acres	3.9 Acres/1,000
Alternative 3—Uniform Form and Height	6.69 + 5.9 = 12.59 Acres	3.5 Acres/1,000

The National Recreation and Park Association (NRPA) conducted a 2017 survey of 925 park agencies and found that the median ratio of park land (covering a wide spectrum of parks, recreation, and open space uses) in these jurisdictions was 10.5 acres per 1,000 population, with the lower quartile at 4.4 acres per 1,000.

Lake Forest Park currently has 2 acres of park land per 1,000 population, and the PROS-T Plan recommends working to increase this ratio. All scenarios shown in Table 4.3.9 are above the 2 acres per 1,000 existing condition.

In considering the PROS-T analysis and reference to the NRPA survey, it is important to note that many urban core areas tend to have lower ratios of parks/open space land to population given the already densely developed character of these areas and challenges of acquiring land in urban centers. The Town Center planning area is limited in size (just over 19 acres not including the fire station and gas station parcels) and mostly privately owned. As such, it is important to determine a set of standards for open space that can be realistically implemented with Town Center redevelopment. In a "test of fit" analysis of the theoretical standards used for reference (Bothell downtown), the open space requirements appear to be reasonably achievable within the alternative redevelopment scenarios presented in this EIS. Table 4.3.10 provides one theoretical example of how the onsite open space areas could be provided with redevelopment (assuming full site redevelopment/full build out).

Development entities would be primarily responsible for implementing these open space improvements for each phase of redevelopment. To ensure that the full level of improvements is planned for, completion of a master development plan for the preferred Town Center Plan is highly recommended. The Master Development Plan should present the intended redevelopment at full build out and all proposed open space areas, as well as a plan for phasing indicating how open space areas could be implemented over time.

Other property owners and partners in future projects and capital investments would also hold some responsibilities related to open space provisions. For example, as part of any City Hall/Police Department/civic space improvement and/or expansion, public open space could be proposed as part of that project. Sound Transit's potential investment at Town Center related to the bus rapid transit stops and commuter parking garage also likely would have public spaces/pedestrian corridors that could count toward the overall provision of open space at Town Center.

Table 4.3.10 Theoretical Scenario of Potential On-site Open Space Areas to Show Correlation to Comparable Standards

Type of Space	Estimated Size with Redevelopment '(Acres)
Pedestrian corridors/social gathering areas	1.0
Festival/shared street space/farmers market space	1.3
Children's play area	.40
Lyon Creek enhancements/wider setbacks/boardwalk area	.30
Landscaped setback areas with paths	1.5
Private patios and balcony spaces	.20
Rooftop decks	.50
Indoor commons space	.25
New plaza near City Hall	.40
Bike station plaza	.10
Gardens (including existing rain gardens and other new gardens)	.10
Total	**6.05**

Community input gathered during the Town Center visioning process, an intensive public and stakeholder engagement effort involving hundreds of residents, identified the following public space priorities for Town Center:

- Preserving the function of the Third Place Commons, approximately 10,000 square feet of indoor space actively used by the community (according to input gathered during the PROS-T Plan development process, residents are generally satisfied with the programs offered at Third Place Commons, but also expressed that the facilities are outdated, restrictive of some public uses, and have limitations in adequately supporting certain types of events). In the Town Center Visioning process, residents recognized that the Third Place Commons space is privately owned and as such could be at risk with future redevelopment. This indoor activity space and place for community events is highly valued by the community, and residents would like to see this function continue as part of future redevelopment.

- Farmers Market space, currently outdoor space next to the professional office building, near City Hall

- Better access to/from the Burke-Gilman Trail through a grade separated crossing as well as enhanced at-grade crossings

- Indoor and outdoor public gathering spaces

- Places for events and activities, such as
  - Outdoor movie watching
  - Food trucks/picnic spaces
  - Outdoor games (pickleball, bocce, large chess and checkers sets, etc.)
  - Places to sit, relax, socialize
  - Year-round festivals and holiday celebrations
  - Community-scale concerts and performances

- Green spaces, rain gardens, landscaped areas, and TREES (convert the gray to green)

- P-patch/community garden areas

- Play areas

- Things for teens to do

- Senior citizen programs
- Multi-generational—a recreation center/community center with activities for all ages, as well as dispersed places for everyone and activities for all ages
- Places for pets
- Public/community meeting/workshop spaces
- Rooftop gardens and viewing areas (views to Lake Washington and Mount Rainier would be possible from higher floors and rooftops)

The Conclusion of the PROS-T Plan states that residents are generally satisfied with their parks, including nature parks, which are highly valued by the community. Residents also enjoy the farmers market, outdoor summer events, and indoor performances and events at Third Place Commons, and have stated that these experiences contribute to creating a strong sense of community.

Additionally, the PROS-T Plan identifies the following as types of potential improvements were most highly valued by the community:

- Trails and connections
- More parks and open space and improvements to existing parks
- A community recreation center—there is a strong interest in a community/ recreation center providing space for public events, meetings, classes, and active recreation programs
- Lake access/investment in lakefront property

The PROS-T Plan also calls for replacing some parking outside City Hall with a small gathering space or plaza, lighting, possibly a tree grove, and to negotiate the development of public space with Town Center redevelopment. The plan also recommends grade separated pedestrian and bicycle crossing(s) in the vicinity of Town Center, connecting to the Burke-Gilman Trail and lakefront parks and sites (page 39).

The PROS-T Plan also calls for the following specific improvements to parks near Town Center:

- ***Blue Heron*—**renovation of landscaping, trails, and gathering areas, interpretive and wayfinding signs, parking improvements, and a nature play coming structure.
- ***Whispering Willow*—**wayfinding signs, artwork, bike rack, create a looped boardwalk/trail, additional trees, bird boxes, seating, and interpretive signs.
- ***Lyon Creek Waterfront Preserve*—** wayfinding signs, artwork, handrail on pier, seating, native plantings, bike rack, and other improvements.

Solid Waste Management

Lake Forest Park's adopted policies and ordinances call for an aggressive program of solid waste management through waste reduction and recycling. Lake Forest Park has signed an interlocal agreement with King County to provide solid waste planning within the city. The terms of the Solid Waste Management Interlocal Agreement are in effect through June 30, 2028. King County recently

updated and expanded its Solid Waste Management Plan (2018), which can be reviewed at: https://kingcounty.gov/depts/dnrp/solid-waste/about/planning/comp-plan.aspx

The plan calls for the following waste generation and disposal targets by 2030, and the County will measure progress toward the goal of zero waste of resources:

Waste Generation

- Per Capita – 20.4 pounds/week (this target addresses residential waste from single- and multi-family homes)
- Per Employee – 42.2 pounds/week (this target addresses waste from the non-residential sector)

Waste Disposal

- Per Capita – 5.1 pounds/week (this target addresses residential waste from both single- and multi-family homes)
- Per Employee – 4.1 pounds/week (his target addresses waste from the non-residential sector)

Recycling

- Recycling rate target: Interim goal of 70 percent overall

The plan states that these targets should be evaluated at least every three years when data becomes available from the waste monitoring studies. Reductions in disposal over time are expected based on forecasted trends for an increase in waste prevention and/or recycling in the county.

Town Center Solid Waste Generation and Management

The addition of residential units and changes in commercial uses at Town Center would result in overall higher generation of solid waste under any of the alternatives than current conditions. Alternative 3 would generate the most solid waste due to the proposed number of multi-family units (up to 1,500 dwelling units and commercial/office space expansion, compared to Alternative 2, which proposes up to 1,200 multi-family dwelling units and Alternative 1, which proposed up to 1,000 multi-family dwelling units. Both Alternative 1 and 2 propose less commercial/office square footage than exists currently at Town Center.

The levels of solid waste generated would be manageable under any of the alternatives, with the assumption that there is an ongoing emphasis and sufficient facilities provided to encourage waste reduction, reuse, and recycling. At a minimum, solid waste management at Town Center would need to align with the King County Solid Waste Management Plans maximum standards for solid waste generation and solid waste listed above. The City likely would place an emphasis on achieving a higher level of standard at the Lake Forest Park Town Center, given the community's performance to date and policies that support waste reduction, reuse, and recycling.

Multi-family residences tend to generate less waste than single family but tend to recycle at a lower average rate per household of 21 percent compared to single family residences at 56 percent and non-residential generators (businesses, institutions, and governments) at 73 percent countywide.

The King County Solid Waste Management Plan cites a number of reasons that multi-family recycling has not been as successful as single-family recycling, including space constraints for collection containers and a higher turnover of

residents and property managers. These factors make it difficult to implement standardized collection services and provide consistent recycling messaging to this diverse sector. Some local progress has been made, however, in developing consistent design standards to accommodate waste in multi-family complexes.

Mixed-use buildings that contain retail shops on the lower level and residential units above also experience challenges in solid waste management and recycling due to:

- Lack of sufficient space for adequate garbage, recycling, and organics collection (often competing with parking needs and other uses);
- A need for collaborative planning among property developers, garbage and recycling collection companies, and cities early in the development process to ensure that adequate space is designated for garbage, recycling, and organics containers in the building design; and
- Different customer types, both residents and employees, with different recycling needs.

The 2019 Plan calls for substantial increases in recycling at multi-family complexes and mixed-use buildings by adopting minimum collection standards for multi-family collection. Refer to Section 3.3 for additional information, including the minimum collection standards for multi-family.

Other Community Services
As discussed in Section 3.3, there are a variety of other community services that support the health and well-being of the community. These include children and youth activities and programs, senior programs, arts programs, food banks, postal and delivery services, and other family and human services offered by a variety of public, non-profit, and non-governmental organizations.

With the increased population proposed under any of the alternatives, new residents living at Town Center would generate demand for a variety of other types of community services. Alternative 3, which would generate the most residents, with an estimated population of 3,150 to 3,600 new residents living at Town Center, compared to Alternative 2 and Alternative 1. Alternative 2 would generate an estimated population of 2,520 to 2,880 new residents, and Alternative 1 would generate an estimated population of 1,470 to 2,400 new residents at Town Center.

MITIGATION MEASURES

Municipal Services/City Hall
The City would continue to regularly plan for operations to serve the growing population at Town Center based on the adopted plan. This may include planning and implementing upgrades to facilities, equipment, and staffing over time to serve progressive phases of redevelopment.

With future master planning, the City should consider how improvements related to City Hall, civic spaces, and publicly owned land areas could accommodate implementation of recommendations of certain elements of the Town Center Vision and PROS-T Plan summarized above.

Lake Forest Park Branch of the King County Library System
Library services have been provided at Town Center for decades and are in high demand by

the community. Future master planning and design of redevelopment phases should consider how to retain space for the branch library, continuing to provide these public services to the community. Development entities should coordinate closely with the King County Library System in the master planning process.

Fire and Emergency Access

The Fire Department would continue to regularly plan for operations to serve the growing population at Town Center based on the adopted plan. This may include planning and implementing upgrades to facilities, equipment, and staffing over time to serve progressive phases of redevelopment.

To expedite emergency access from the Fire Station out to Bothell Way NE, the following potential improvements should be made in the near to mid-term. These improvements would address the current issue related to morning peak traffic backing up and blocking access to the fire department on the access road that leads to the signalized intersection near Starbucks. Potential longer-term solutions should be analyzed and confirmed as part of future site master planning or design of phased redevelopment projects.

- Expand 170th capacity to three SE lanes (left, through/left, right)
- Emergency access signal (Opticom) at SR 522 & Brookside with mountable left turn; vegetation clearing so that fire trucks and emergency vehicles could turn right and get out quickly to make lefts onto SR 522.
- Adjust signal cycle length
- Add wireless call button in station so that signal activation and traffic clearing can get underway in time with station departure
- Provide and enforce roadway signing and striping (“DO NOT BLOCK FIRE ACCESS”) for the extent of the fire access way.

Police Protection Services and Community Safety and Security

The City and Police Department would actively monitor and plan for anticipated service levels related to each phase of redevelopment at Town center in order to maintain its level of service standards (response time to calls, staffing, and crime reduction strategies). Over time, as population grows, increases in facilities and space, staffing, equipment and vehicles likely would be needed.

In addition, future phases of planning and design of Town Center redevelopment should incorporate crime prevention through environmental design (CPTED) and other measures that focus on public safety and security.

Crime Prevention Through Environmental Design (CPTED) and Natural Surveillance

CPTED identifies areas or elements that may have the potential to attract crime and applies simple CPTED design principles can lead to solutions that can be undertaken to reduce fear and prevent crime in these areas. Some of the key CPTED principles are summarized below.

CPTED does not promote the “fortressing” of properties, quite the contrary. The ability to see what is going on in and around a property should be your priority. Perpetrators of crime are attracted to areas and residences with low visibility. This can be counteracted in the following ways:

- ***Lighting***—Street lights should be well spaced and in working order, alleys and parking areas should also be lit. Lighting should also reflect the intended hours of operation, i.e. lighting of playfields or structures in local parks may encourage after hour criminal activities. Motion-sensing lights perform the double duty of providing light when needed and letting trespasser know that "they have been seen."

- ***Landscaping***—Generally uniformly shaped sites are safer than irregularly shaped sites because there are fewer hiding places. Plants should follow the 3-rule of thumb; hedges no higher than 3 feet, and tree canopies starting no lower than 8 feet. This is especially important around entryways and windows.

- ***Fencing***—Fences should allow people to see in. Even if the fences are built for privacy, they should be of a design that is not too tall and has some visibility.

- ***Windows***—Windows that look out on streets and alleys are good natural surveillance, especially bay windows. These should not be blocked. Retirees, stay at home parents, and people working from home offices can provide good surveillance for the neighborhood during the day.

- ***Natural Access Control***—Homes, businesses, parks and other public areas having distinct and legitimate points for entry and exits is access control. Providing access control needs to be designed to avoid "user entrapment," or not allowing for easy escape or police response to an area. Generally, crime perpetrators will avoid areas that only allow one way to enter and exit, and that have high visibility and/or have a high volume of user traffic. This can be assured by:
  - Park designs with open, uninhibited access and a defined entry point. A good example is a park with transparent fencing around the perimeter, and one large opening in the gate for entry. Putting vendors or shared public facilities near this entrance creates more traffic and more surveillance.
  - Businesses with one legitimate entrance. Avoid recessed doorways.
  - A natural inclination is to place public restrooms away from centers of activity, but they can become dangerous if placed in an uninhabited area. Restrooms that are down a long hallway, or foyer entrances with closed doors, are far away from the entrance of a park, or are not visible from the roadway can become problem areas.
  - Personal residences with front and back doors that are clearly visible and well lit.

- ***Territoriality/Defensible Space***—Territoriality means showing that your community "owns" your neighborhood. While this includes removing graffiti and keeping buildings and yards maintained, it also refers to small personal touches. Creating flower gardens or boxes, putting out seasonal decorations, or maintaining the plants in traffic circles seems simple, but sends a clear message that people in your neighborhood care and won't tolerate crime in their area. These kinds of personal touches work in business communities as well. More complex design efforts can also be undertaken for more dramatic changes. These are some things that should be

considered when planning for future growth:

- Front porches and apartment balconies add to street surveillance.
- Traffic plans that consider the size of the neighborhood. People drive by "feel" more than speed limits, so a wide, two lane residential street can lead to speeding. Traffic circles or increasing the size of curbs can help to calm traffic.
- Institutional architecture that respects the neighborhood identity and does not dwarf the current scale of the neighborhood.
- Clear transitions between private, semi-private and public areas.

City of Lake Forest Park Capital Improvements Planning—Forecast of Future Needs

The City and other public agencies would need to update capital improvements and capital facilities plans to address the adopted Town Center Plan and projected growth through the next 15 to 20 years. This would include defining project and procurement needs, estimating costs, and establishing priorities for capital improvements and facilities that fall into the City's jurisdiction. In some cases, there would be development responsibilities assigned to certain improvements correlating to the impacts and demands generated with each future project-level phase of redevelopment.

Schools

As with all other public service providers, the School District would need to update its operational planning and budgeting to accommodate the adopted Town Center Plan for growth at the Town Center, with multi-family residences that would introduce new K-12 student population over time. As stated previously, because growth would be expected to occur incrementally over time, in multiple phases of redevelopment, the School District and other agencies would have an opportunity to plan ahead to meet the potential future demand of the adopted Town Center Plan.

Parks, Recreation, Open Space, and Trails

Based on the analysis in this EIS, as well as public and agency comment, and further review and analysis of potential standards, the City would adopt specific open space requirements for the Town Center Plan. The Town Center Plan would propose specific types of parks, recreation, open space, and trails improvements and facilities, consistent with those identified in the Town Center Vision and the PROS-T Plan, with special attention given to the priorities and values identified in these plans based on community input.

As part of future master planning and design for each phase of redevelopment, a specific program for open space should be developed—presenting how the full requirements would be met at build-out and sequentially with each phase. Through code requirements and development agreements, the City may elect to require elements of the open space program as part of earlier phases of redevelopment to ensure they are in place to serve residents.

Solid Waste Management

Solid waste management, including emphasis on waste reduction, reuse, and recycling would align with the King County Solid Waste Management Plan as well as the City's local policies and priorities.

Design of multi-family developments, as well as mixed use commercial/office/residential, and separate single use developments all should provide sufficient space and facilities for waste management and recycling (refer to minimum

King County standards for multi-family developments presented in Section 3.3).

Development proponents, property owners, and public entities within the Town Center planning area should continue to provide education and outreach related to the importance of waste reduction, reuse, and recycling.

Other Community Services

With the adoption of the Town Center Plan and the selected alternative for potential redevelopment, the City should continue to coordinate with all community service providers to build awareness about the potential changes that may occur in Town Center over time. While the residential population would increase under any of the alternatives, this would be expected to occur incrementally, over multiple phases of redevelopment, allowing time for planning and implementation of increased services to support the growing population and its needs.

With further master planning and design of redevelopment phases at Town Center opportunities to provide space for community service organizations should be explored and considered. For example, there may be a demand for certain types of services at Town Center that do not exist today, such as a satellite or local post office.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

Given that redevelopment would occur incrementally, in multiple phases over time through the next 15 to 20 years and potentially beyond, no significant unavoidable adverse impacts would be anticipated to public and community services with implementation of any of the alternatives. Service providers would have the opportunity to proactively plan ahead to serve the adopted Town Center Plan and potential new residents who would begin living there in phases over time.

INTRODUCTION

This section of the Analysis and Mitigation Chapter of the Town Center Plan EIS addresses potential impacts and mitigation measures related to utility services:

- Sanitary Sewer
- Water
- Electricity
- Natural Gas
- Telecommunications

ANALYSIS OF ALTERNATIVES

In review of the alternatives, Alternative 3 would create the highest demand for utility services compared to Alternative 1 and Alternative 2. Alternative 1 would create the lowest level of demand for utility services of the alternatives studied. Redevelopment would occur incrementally, in phases over time and services levels should be able to keep pace with each phase of development through a combination of development supported improvements and customer-fee-supported capital improvements.

Sanitary Sewer

Potential impacts of each of the three scenarios were evaluated by estimating future sewer flows for each scenario and then comparing those to the estimated sewer flows for the existing system within the Town Center study area. Several assumptions were necessary in order to produce estimated sewer flows for each scenario:

- Household size for multi-family units.
- The average per capita sewer flow for multi-family households.
- The average sewer flow per square foot of commercial/retail, medical/dental, and office land uses.
- A peaking factor to convert average daily flow to peak hourly flow.
- Average daily rate of infiltration and inflow.

Analysis of existing and future conditions was based on the proposed land use types and quantities for each alternative in Table 2.1 (in Chapter 2.0) including sanitary sewer flow estimates. An average household size of 2.4 people per unit was assumed for proposed multi-family units and was based on the average household size for King County.

In the absence of a comprehensive plan for the Lake Forest Park Sewer Department the comprehensive plan for the nearby Northshore Utility District (NUD) was referenced in this analysis due to its close proximity and similar characteristics of the customers served.

According to the NUD 2006 Wastewater Comprehensive Plan domestic sewer flow rates are listed as 74 gallons per capita. For purposes of analyzing the scenarios under consideration for the Town Center the average domestic per capita daily sewer flow was assumed to be 100 gallons per day per the Washington State Department of Ecology (DOE) Criteria for Sewer Works Design (Orange Book) 2008 edition Table G2-2 for dwellings. Similarly, sewer flow rates for all other land uses were in accordance with Table G2-2 of the Orange Book. Supporting assumptions and calculations are available upon request.

According to Volume II of the Lake Forest Park Comprehensive Plan the City's sewer service has approximately 3,300 customers. Based on this number and the average household size for King County, listed above, it was assumed that the population currently served by City sewer is between 7,500 and 8,000. A graph in the Orange Book, Figure C1-1, illustrates the relationship between peaking factors and the population served by the sewer system. For the population of the study area, the peaking factor was approximately 3.0. So, the estimated average daily sewer flows were multiplied by 3.0 to estimate the peak daily sewer flows for each of the scenarios under consideration for the Town Center. The peak daily sewer flows for each scenario are listed below in Table 4.4.2.

Table 4.4.2 – Comparison of Peak Daily Sanitary Sewer Flow Rates

Scenario	*Peak Daily Sewer Flow (GPM)*
Existing/Current	681
Alternative 1	1062
Alternative 2	1303
Alternative 3	1526

The projected peak flow for each of the future scenarios range from 56 percent higher than current conditions for the Alternative 1 to 124 percent higher than current conditions under Alternative 3. There is currently an 8-inch diameter pipe that conveys sewer flows from the Town Center to the City sewer conveyance system. As previously noted, this pipe is prone to getting plugged up with grease from Town Center discharge. The capacity and current demand of this pipe is unknown. However, similar 8-inch diameter mains exist in the Southern Gateway subarea of Lake Forest Park, each having a capacity of over 1,000 GPM according to a 2013 EIS for the City of Lake Forest Park's Southern Gateway Subarea Plan (SGSP).

Water

A detailed examination of the types of impacts to LFPWD infrastructure is not presently attainable. However, to gain an idea of the type of impacts and necessary infrastructure improvements the LFPWD might be required to make to accommodate the contemplated changes in land use, Mundall Engineering & Consulting prepared an assessment of its water system. The analysis focused on only the largest development, Alternative 3, which includes 1,500 multi-family residential units and some commercial upsizing. In particular the analysis focused on the following topics:

- Adequacy of Water Source and Supply
- Adequacy of Storage
- Adequacy of Distribution System
- Water Quality Impacts
- Other Considerations

Findings are summarized the sections below.

Adequacy of Water Source and Supply

LFPWD is unusual among Class A municipal water providers in King County because it supplies nearly all water from its own groundwater sources and it does not normally treat its water. The District has two well fields, McKinnon Creek and Horizon View with a total of 6 deep wells and 8 shallow artesian wells. District water rights were recently pooled with Washington Department of Ecology to allow withdrawal from any of the wells, subject to operational capacity.

There are some variations in water quality between wells. McKinnon Well #3 (and Well #4 which is not connected presently) has high iron content, so water from this source is blended in controlled amounts during periods of peak demand to avoid nuisance water complaints.

The District presently has total groundwater right allocation of 973GPM. Additionally the District recently signed a 50 year agreement with Seattle Public Utilities which provides up to 3,500GPM (duration up to one week) for emergency use from the Tolt pipeline. The current physical capacity of the SPU-Tolt intertie is limited to 2,100GPM but the District is able to construct another intertie under the same agreement if needed. There are special concerns with blending and this water is only available for emergency and fire suppression needs and not for routine domestic demand.

A cursory calculation of source water required for consumptive needs was conducted.

Average Day Demand—Assumes expected additional 1,500 Multi-Family Dwellings (MFD), ignore non-residential developments as the demands are small compared with residential.

- Recorded SFD Average demand is about 200 GPD in LFPWD.
- Assume 1MFD = 0.75(ERU) Single Family Dwelling (SFD) based on various sources
- ERU Avg. Day due to Alt 3 = 1500 x 0.75 = 1,125 count
- Average demand per MFD unit = 200 GPD x 0.75 = 150 GPD per unit
- Average demand proposed Alt 3 = 150 x 1500 = 225,000 GPD
- Average system demand = 225,000 + 254,000 GPD = 479,000 GPD – no issue with source capacity to supply average day for Alternative 3.
- ERU system count = 1279 + 1,125 = 2,404

Maximum Day Demand—Assumes peaking factor 1.25 for Max Day for MFD (based on Water Research Fdn. 2018)

- Est. Max. Day Demand Alt 3 = 1.25 x 150 x 1500 = 281,250 GPD (195GPM)
- Current (2020) Max. Day System = 550GPM
- Scenario Alt 3 Max. Day System = 550+195GPM = 745GPM < 973GPM water right. Therefore, water rights appear adequate to supply Max. Day Demand with the proposed alternative.

Peak Hour Demand—Peak hour periods are usually morning and evening. There are various ways of estimating peak hour for a given system. Generally, as the size of the system increases, the peaking factor diminishes. In this instance we make a conservative calculation by adding the peak hour demand of Alternative 3 to the existing peak hour established in the District's Comprehensive Plan. For a simplified approach we used a WSDOH formula for peak hour flow. (ref. Eq. 5-3, Table 5-1 of Water System Design Manual 2009).

PHD= (MDD/1440)[CN + F] + 18, assume C=1.6, F=225, MDD=150 GPD/MFD, N=1500
PHD=360GPM + 784GPM (current system 2020) = 1,144GPM
Test for source water rights 1,144GPM > 973GPM so additional equalizing storage may be necessary to meet peak

hour demands of Alt 3 based on water rights. This should be further evaluated by hydraulic modeling.

***Fire Demand*—**Capacity for fire suppression in commercial structures is the dominant demand in the LFPWD network. Fortunately, the District has an emergency intertie agreement with Seattle Public Utilities (SPU) which offers ample capacity to support the District's existing fire suppression need of 3,500GPM for 3 hours. However, there are limitations to this capacity:

1. Presently the District is completing design and permitting for a zone pressure reducing valve that would admit this water from the "Horizon View" 550HGL zone to the "Low Zone 292HGL. Without this zone intertie water is restricted from reaching the Low Zone in adequate quantity for commercial fire suppression needs.

2. There are sections of the transmission main which limit the capacity of the intertie to a maximum of 2,100GPM. In consideration of possible future increases in fire capacity the District has identified a location where an additional intertie with the SPU-Tolt system could be constructed to provide greater capacity and reliability. This intertie would be covered as an additional withdrawal point under the existing emergency intertie agreement with Seattle and would require about 1,600 feet of transmission main to the McKinnon Creek wellfield.

Adequacy of Storage

The District has a total of 4 reservoirs serving three pressure zones. Most of the distribution storage in the system was constructed in the 1960s. The addition of additional demand would place increased burden on the reservoirs and this should be examined for adequacy to meet various demand scenarios. LFPWD has additional source/supply capacity through an intertie with SPU-Tolt but this is only valid for emergency scenarios such as fire.

1. **Equalizing Storage:** Equalizing storage is required to accommodate times when peak capacity exceeds source capacity.

   Adequacy due to Water Rights limitations:
   Without hydraulic modeling the equalizing storage required due to water rights was conservatively estimated to be 25,650 gallons using Equation 9-1 in the WSDOH System Design Manual.

   It is likely that the existing "Low Zone" 292 Reservoir may accommodate this need. However, this should be subjected to hydraulic modeling with the actual diurnal curve expected in the LFPWD network.

   Adequacy due to water quality considerations:
   Water from McKinnon Deep well #3 contains high iron. If this well is blended at more than 25 percent there would be complaints from customers. Assuming this well is off and the District relied on other wells we have roughly 625GPM available for consumptive use resulting in an equalizing storage volume of 77,850 gallons.

   Storage may still be adequate in the "Low Zone" 292 reservoir to cover this need although this should be

hydraulically modeled to confirm adequacy.

2. **Standby Storage:** Standby storage is required in WSDOH design standards to allow for unexpected limitations in the source & supply system such as power outage or pump failure.

   Using the WSDOH standby storage Eq. 9-3 in the Design Manual, which assumes the largest source is out of service and does not include emergency sources, there is approximately 97,600 gallons of standby storage. This standby storage may be adequate with existing system storage although water quality issues must also be considered for this scenario. Note that this would require heavy dependence on McKinnon Well#3 which would be contributing about 1/3 of total supply. The increased iron level would certainly produce customer complaints.

Adequacy of Distribution System

Water distribution networks in the size range of LFPWD are dominated in design by fire protection vs. peak consumptive use. Most of the transmission and distribution network between the Low Zone reservoir and the LFP Towne Center has already been upgraded to 12" main which is adequate for the anticipated future. However, there are a few sections which have been identified in the District's Comprehensive Plan as needing upgrade:

1. Project #SS1 Low Reservoir to McKinnon Creek transmission main 90 feet is planned to be upgraded in 2019 as part of the District's ongoing McKinnon Creek Pumphouse project.
2. Project #D10 Ballinger Way near north entrance to LFP Town Center to 175th Street –520ft 12" ductile iron is identified in the Comprehensive plan but not funded yet.
3. Project #D5 – 175th Street between Ballinger and 47th Ave. NE 469ft 8" ductile iron. The District is seeking funding for this project at present.

If the proposed project would result in larger demand than 3,500 GPM for 3 hours then additional hydraulic modeling should be carried out to assure adequate fire suppression capacity. Buildings would be designed in accordance with International Building Code provisions and would provide fire suppression and prevention details as part of the design as required by code.

Water Quality Impacts

As identified in other sections of this memo, water quality needs to be considered in placing increased peak demands on the system. Depending on the size of development the District should consider developing a new well under existing water rights to replace the capacity offered by McKinnon DW#3 and DW#4 which does not have the nuisance iron problem otherwise there would likely be increased complaints during peak months of the year with increased reliance on McKinnon DW#3 resulting from the contemplated development.

Other Considerations

1. Presently water is supplied to the LFP Towne Center at the Hydraulic Grade Line (HGL) of the "Low Zone" which is 292 feet. This is reduced in pressure by two pressure reducing valve stations owned and operated by the Town Center. Consideration should be given

to bypassing these PRV vaults for the proposed development.

2. With increased demands on the District's Low Zone 292HGL consideration should be made as to the adequacy of the Districts current infrastructure for seismic requirements and standby storage in the event of failure or servicing needs in the Low Zone reservoir.

3. Any of the alternatives would push the District's customer count past a threshold customer count for mandated security standards imposed by the Department of Homeland Security.

Electricity
The Seattle City Light Planning Department conducted a feeder level analysis based on the worst heaviest case load information associated with Alternative 3. Analysis determined that no system improvements would be needed to accommodate load growth associated with the Town Center alternatives.

Natural Gas
Puget Sound Energy does not generate a comprehensive plan of improvement projects. Additionally, Washington State Utilities and Transportation Commission (WUTC) does not define natural gas as an essential service. Therefore, Puget Sound Energy is not required to provide service. Extension of service is based on individual requests. Overall, Puget Sound Energy does not foresee any problems that would limit the supply of natural gas to the City of Shoreline in the future.

Communications/Telephone Services and Facilities
The Washington Utilities Trade Commission regulations require telecommunications providers to provide adequate telecommunications service on demand; and Section 480-120-086 of the Washington Administrative Code (WAC) requires providers to maintain adequate personnel and equipment to handle reasonable demand and traffic. Because telecommunications providers are services paid for by customers that are provided on demand, limits to future capacity and service in the Town Center planning area are not anticipated.

Cable Television, Internet, and Broadband Services and Facilities
Although the demand for cable television is likely to continue to increase as population grows, access to cable television in Lake Forest Park is likely to increase at the same pace as population growth. Broadband cable and fiber optic services area readily available in the planning area to accommodate future growth and development.

MITIGATION MEASURES

Sanitary Sewer
Sewer flows generated by the Town Center currently discharge into the Lake Forest Park sewer system through a manhole located in the westbound transit-only lane of SR 522 just west of NE 170th Place and into an 8-inch diameter sewer main. As previously mentioned, the capacity of the 8-inch sewer main is unknown. If the 8-inch main is assumed to have the same capacity as the 8-inch sewer mains referenced in the SGSP it is reasonable to assume that all future development scenarios for the Town Center would require the pipe to be replaced with a larger pipe having greater sewer flow capacity. A full analysis would be required at

each phase of future redevelopment to determine the details of the pipe upsize.

Water

Based on the qualitative analysis of impacts due to alternative 3, no significant unavoidable impacts are anticipated. Mitigation measures that may be required to accommodate redevelopment under alternative 3 are generally considered to be minor. Some equalizing storage may be needed in the "Low Zone" HGL292ft although this would be most likely if fire suppression needs increased from the present 3,500GPM for 3hours. The additional demand due to the multi-family dwellings may not trigger the need for additional storage. Hydraulic modeling is needed to confirm this.

The existing transmission and distribution network appears to be mostly adequate although a few minor upgrades should be completed including a short section of 12" main on Ballinger in front of the Town Center and a short section of 8" main on 175th opposite the Town Center. One of these is being addressed with the McKinnon Creek pumping station currently under design.

Regardless of the alternative chosen for the Town Center site, full project-specific hydraulic modeling would be needed to fully analyze and confirm impacts and mitigation measures to be anticipated for future redevelopment. In additional to considerations mentioned above, water quality needs to be considered to avoid increased reliance on McKinnon DW#3 and consequent increase in customer complaints. Adequacy of the system should also be considered in light of Federal Department of Homeland Security (DHS) requirements, which are triggered once the LFPWD's customer count crosses the DHS threshold of 1,000 customers.

Electricity

As previously mentioned, Seattle Public Utilities has determined that no system improvements would be needed to accommodate load growth associated with the Town Center alternatives. However, coordination with SPU would be necessary at each phase of future redevelopment at the Town Center.

Natural Gas

Puget Sound Energy does not foresee any problems that would limit the supply of natural gas to the City of Shoreline in the future. Future redevelopment at the Town Center site would require detailed analysis and coordination with PSE to confirm this determination.

Cable Television, Internet, and Broadband Services and Facilities

Access to cable television in Lake Forest Park is likely to increase at the same pace as population growth. Broadband cable and fiber optic services area readily available in the planning area to accommodate future growth and development. It would be prudent to coordinate with Town Center providers at each phase of any future redevelopment.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

No significant unavoidable adverse impacts related to utilities services and facilities would be expected under any of the redevelopment alternatives.

Most utility services, many of which are supported through customer fees, are readily available in the planning area. Some upgrades

in on-site services would be needed, with the potential to extend off-site, and these would need to be evaluated in more detail for each phase of development.

In the case of water service, future capacity of the Lake Forest Park Water District's supply may be limited, and availability and facilities requirements would need to be determined through modelling and analysis of each proposed phase of development in the future. It may be that water services would need to be extended from other providers in the area, which should be addressed in the analysis. Financial assessment to determine potential costs and funding sources for potential water service improvements also should be completed as part of the analysis. It is customary for the costs of extending and expanding utilities to serve private development to be covered by the developer, although various financing plans/strategies, grant opportunities, and partnerships could be explored.

INTRODUCTION

This section of the Analysis and Mitigation chapter presents the results of multimodal transportation and parking analysis that evaluates potential impacts related to changes in planning and land use regulations and the correlating greater intensity of development that could occur as result at the Lake Forest Park Town Center. Potential impacts related to the two action alternatives (Alternative 2 and Alternative 3), as well as the no-action alternative (Alternative 1), are analyzed. Existing transportation conditions, as well as anticipated future transportation conditions under the three alternatives, are documented in Chapter 3.0, Section 3.5.

ALTERNATIVES ANALYSIS

This EIS provides a programmatic level of analysis related to potential changes to existing planning and land use regulations and not project-specific impact analysis. For potential future improvements that may be implemented by property owners, Sound Transit, or others, separate compliance with the State Environmental Policy Act would be required. For example, as discussed in Chapter 1, Sound Transit will be preparing a specific EIS that analyzes potential impacts of implementing the proposed ST3 bus rapid transit (BRT) improvements in SR 522, including a potential commuter park and ride structure at Town Center. While the analysis in this EIS assumes implementation of the BRT project and assumes traffic generation for the commuter park and ride structure in the traffic analysis under all alternatives, future environmental analysis completed by Sound Transit will analyze more specific project-level impacts associated with the BRT project and parking structure.

Methodology and Assumptions for Each Alternative

Just as for the other elements analyzed in this EIS, three planning scenarios for redevelopment were analyzed for multimodal transportation and parking. The planning scenarios of the three alternatives are conceptual and hypothetical. They have been prepared for the purposes of programmatic, non-project analysis for this EIS. Actual plans for redevelopment in the future may differ from these scenarios. With completion of this EIS analysis and gathering of public and agency comments, the City would identify a preferred alternative for the Town Center Plan and update Lake Forest Park Municipal Code (LFPMC) provisions with design standards and guidelines to support implementation of the plan. Subsequently, property owners develop site master plans consistent with the Town Center Plan, as well as plans and designs for each anticipated phase of redevelopment.

The three alternatives were evaluated under future year 2035 conditions, consistent with the Lake Forest Park Comprehensive Plan and transportation planning studies completed in recent years. Future transportation network changes external to the Town Center are the same for all three alternatives. The analysis considers the effects of the alternatives on vehicles, transit, freight, pedestrians, bicycles, parking, and safety. Fehr & Peers Transportation Consultants used the Puget Sound Regional Council (PSRC) regional travel demand model, Main Street Grip Generation Tool, Synchro 10 software, and other technical references and standards to support the analysis in this section.

Methodology and assumptions (including assumed land uses) related to the alternatives

analysis in this EIS are summarized below. Table 4.5.1 summarizes the land uses assumed under each alternative. Refer to the figures in Chapter 2 and Section 4.1 for the potential planning and redevelopment scenarios for each of the three alternatives studied in this EIS.

Alternative 1—No Action

This alternative assumes that there would be no changes to current LFPMC planning and land use regulations for the Town Center, but there would be redevelopment at the site consistent with current adopted regulations. Multi-family and mixed-use redevelopment is assumed, focused in the northern area of the site and built within the height limit of 60 to 60 feet. For transportation modeling purposes, Alternative 1 is assumed to include approximately 700 new multi-family housing units. Commercial square footage would decrease slightly compared to existing conditions, because under this planning scenario, the northern arm of the shopping complex and the Lake Forest Park Bar and Grill would be replaced with mixed-use residential and commercial uses. (Refer to Section 4.1 for a discussion of potential future commercial uses.)

Alternative 1 assumes a new 300-stall commuter parking structure proposed as part of the Sound Transit ST3 Program BRT service coming to the SR 522 corridor would be in place by the 2035 study horizon year. This is one of the three new park and ride structures on the SR 522 corridor that would support future BRT service between the 145th Street light rail station in the I-5 corridor and University of Washington (UW) Bothell, which is anticipated to serve up to 10,000 daily riders. Sound Transit indicates that the BRT system will be in place and serving customers by 2024.

The parking structure would be used by commuters for daily park and ride use. The EIS analysis assumes that Town Center patrons could use parking structure spaces during evening and weekend time periods. Alternative 1 also assumes that the existing medical/dental office building (16,000 SF) near City Hall would be replaced by the parking structure and assumes these could relocate to other spaces on site. For example, the planning scenario assumes some active use/commercial space could be developed along the southern frontage of the parking structure and shows other potential new places for mixed-use space.

There is the potential for greater density to be built under existing planning and land use regulations than assumed for Alternative 1 in this transportation analysis. It is estimated that up to approximately 1,000 multi-family units likely could be built within the allowed building height of 60 to 66 feet, assuming bonus height provisions are applied. If 1,000 multi-family dwelling units were developed, the traffic generated and transportation effects would approach a similar level to the effects analyzed under Alternative 2 (given that Alternative 2 would have a reduced amount of commercial/retail space compared with up to 1,200 dwelling units). That said, the Alternative 1 analysis in this section is based on the quantity of 700 dwelling units associated with the potential redevelopment scenario (see Chapter 2 for further discussion).

Alternative 2—Varied Height and Form

Alternative 2 assumes changes to zoning and land use regulations that allow for up to 1,200 multi-family housing units, 127,500 square feet of commercial/retail space, 41,000 square feet of office space, and 52,000 square feet of City

Hall and civic/community space. Under this alternative, the commuter parking structure is assumed to include 400 spaces, with 100 reserved for retail and City use. The mixed-use redevelopment would vary in height and form up to a 75-foot height limit to the base roofline. Alternative 2 assumes less commercial and office use than Alternatives 1 and 3.

Alternative 3—Uniform Height and Form

Alternative 3 assumes changes to planning and land use regulations in the LFPMC and includes up to 1,500 multi-family housing units, 202,500 square feet of commercial/retail space, 66,000 square feet of office space, and 52,000 square feet of City Hall and civic/community space. Under this alternative, the Sound Transit parking structure is assumed to include 500 spaces, with 200 reserved for retail and City use. The Alternative 3 planning scenario assumes mixed-use buildings more uniform in height, up to an 85-foot height limit to the base roofline, and organized in a more formal gridded, urban block pattern of redevelopment. This alternative proposes the highest intensity of use considered in this EIS with the most multi-family residential units and the most commercial and office space of all the alternatives.

Sound Transit BRT Program Assumptions Under All Alternatives

All three alternatives assume implementation of the Sound Transit BRT program and installation of a park and ride commuter structure at Town Center, with differing capacities in the commuter park and ride structure as discussed above.

Timeframe of Redevelopment under All Alternatives

As stated in other sections of this EIS, it is assumed that redevelopment at Town Center would occur incrementally, in multiple phases within the next 15 to 20 years or more. The transportation analysis is based on a horizon year of 2035 (matching other recent transportation plans and studies for the City), 16 years into the future.

Parking Assumptions Under All Alternatives

As redevelopment occurs over time and new mixed-use buildings are developed, more parking would be integrated into structures and in some cases built below grade where feasible. Most surface parking would transition into structured parking, although some smaller surface parking lots and on-street parallel and angled parking on the access streets would likely be part of redevelopment plans. As a local example, University Village in Seattle has transformed many surface parking areas to structured parking over the last decade.

Table 4.5.1 shows parking spaces to be provided as part of the commuter parking garage. In addition, the analysis in this EIS also assumes that development would include sufficient parking to meet market demand and City requirements for each of the three alternatives using a combination of below-grade and surface parking as discussed above. Developers would be responsible for geotechnical and structural engineering analyses to determine the design parameters of below grade parking and structured parking throughout the site.

Table 4.5.1 Land Use Assumptions for Alternatives

Land Use		Existing	Alternative 1 No Action	Alternative 2 Varied Height and Form	Alternative 3 Uniform Height and Form
Non-Residential (SF)					
	Commercial/Retail/Active Use *(Commercial, Bank, Starbucks)*	192,500	190,500	127,500	202,500
	Office *(Medical/Dental, Windermere)*	40,000	16,000	41,000	66,000
	City Hall / Community Space	20,000	20,000	52,000*	52,000*
Multi-family (units)		0	700	1,200	1,500
Sound Transit Parking Garage Spaces (does not include Town Center structured or surface parking)		0	300	300 shared + 100 retail/City use	300 shared + 200 retail/City use

* Assumes 32,000 GSF expansion of City Hall, Police Department, and additional civic/community space which could be frontage to parking structure, expansion of existing building, or other form of redevelopment.

Transportation Network

The transportation network for the future year alternatives assumes that several improvements included in existing City plans, such as Safe Streets and Safe Highways, would be in place by 2035. Thus, these improvements should be considered as background mitigation measures that would support redevelopment of under any of the alternatives. Specific transportation improvements for the Town Center Plan would be determined upon selection of the preferred alternative and cited in the Town Center Plan for adoption. Transportation network changes external to the Town Center would be the same for all three future alternatives. These plans outline a variety of changes to the transportation network, but only a few affect traffic operations within the planning area and are relevant for this analysis. Based on direction from City staff, the following projects were deemed relevant for this analysis and are assumed to be in place by 2035 as background mitigation measures:

- Install a traffic signal at SR 104/NE 178th Street, which controls two three-way intersections
- Add a southbound left turn lane at SR 522/NE 170th Street with optimized signal timing

Travel Demand Forecasting

Travel demand forecasts for each alternative were developed assuming the future 2035 year and applying two tools: the PSRC regional travel demand model and a more site-specific trip generation tool called MainStreet.

The PSRC regional model was used as part of the City's Safe Highways project to develop 2035 forecasts for the SR 104 and SR 522

corridors. This EIS analysis is consistent with those forecasts but supplements them with more specific data about the expected trip generation of the Town Center under each alternative. These site-specific estimates were developed using the MainStreet trip generation tool, which is designed to more accurately reflect the trip generation and mode choice of mixed-use sites.

Trip generation for the commuter parking structure, shown in Table 4.5.2, was based on typical transit travel patterns in the Puget Sound region. Specifically, 41 percent of the three-hour PM peak period transit ridership is typically assumed to occur during the PM peak hour. Therefore, while all 300 park and ride spaces would likely empty during the PM peak period, it is assumed that 125 outbound trips would occur during the PM peak hour. People that arrive at the park and ride structure during this peak hour period to access Town Center retail are captured under the Town Center land use trips.

Regional Land Use Assumptions

The 2035 land use assumed in the regional travel demand model is based on PSRC's Land Use Vision 2 (LUV2) estimated growth in households and employment. The regional travel demand model reflects the No Action Alternative, which maintains the planning area's current zoning but does assume that some additional growth would occur at the Town Center by 2035. The additional density assumed under the alternatives is factored into the alternatives analysis. The land use inputs used for MainStreet trip generation tool are described below

MainStreet Trip Generation Tool

The MainStreet tool was developed in partnership with the US Environmental Protection Agency and uses state-of-the-practice Institute of Transportation Engineers (ITE) 10th Edition trip generation rates as its base. However, typical ITE rates have been found to overestimate vehicle trips in mixed-use settings.

To more accurately reflect the trip generation of such mixed-use locations, the MainStreet tool modifies the traditional ITE trip generation based on urban form factors including land use mix, density, neighborhood design, and transit service. This more refined method of evaluation avoids overstating vehicle demand and, in turn, roadway mitigation needs.

The MainStreet tool was applied to the planning area for the three alternatives assuming the 2035 future year. Outputs from the tool include the number of trips captured internally within the planning area (i.e. trips that occur within the Town Center site itself, such as home to retail), as well as the number of external trips using non-motorized means (i.e., walking and biking), transit, and private vehicles.

While the site benefits from some internal trip capture, transit, and non-motorized access in existing conditions, the complementary addition of housing and bus rapid transit in the future year alternatives is expected to result in a higher proportion of non-auto trips.

The share of trips that would occur within the site and trips made by transit and non-motorized modes increase slightly with the increasing density of the alternatives (i.e. Alternative 1 has the highest auto mode share and Alternative 3 has the lowest auto mode share).

MainStreet Trip Generation Tool

MainStreet is a tool used to estimate trip generation at mixed-use sites. It considers factors including land use mix, density, neighborhood design, and transit service that are not accounted for by traditional ITE vehicle trip generation rates. This tool more accurately reflects trip-making behavior at mixed-use sites, including:

- More trips occurring within the site itself, such as trips between home and retail destinations, and
- More trips made on foot, by bike, and by transit.

Table 4.5.2 PM Peak Hour Vehicle Trips Generated by Alternatives

Trip Category	Existing	Alternative 1 No Action	Alternative 2 Varied Height and Form	Alternative 3 Uniform Height and Form
Town Center Land Use				
Inbound Vehicle Trips	516	580	625	865
Outbound Vehicle Trips	564	560	565	810
Commuter Parking Structure				
Inbound Vehicle Trips	-	-	-	-
Outbound Vehicle Trips	-	125	125	125
Total				
Total Vehicle Trips	1,080	1,265	1,315	1,800

Source: Fehr & Peers, 2018

Table 4.5.2 summarizes the PM peak hour vehicle trips generated by each alternative. Although there could be some inbound vehicle use of the commuter parking structure during the PM peak hour, the analysis assumes this use under the Town Center land use trips.

Trip Distribution
Trip distribution for the Town Center was estimated using the regional travel demand model and existing turning movement count data. Figures 4.5.1 and 4.5.2 display the assumed distribution pattern for vehicle trips to and from the Town Center during the PM peak period in 2035. Future year trip distribution patterns for the commercial and residential uses at the Town Center were assumed to follow the general patterns observed in existing conditions.

The planned commuter parking structure assumes a modified trip distribution based on details from Sound Transit's planned BRT corridor and park and rides along SR 522. This EIS analysis assumes a greater proportion of commuter structure trips would be distributed to surrounding areas in Lake Forest Park and along SR 104, rather than SR 522, because there are other planned park and rides along SR 522 northeast and southwest of the site.

Traffic Operations Analysis
As with existing conditions, future year traffic operations were analyzed using Synchro 10 software. The existing Synchro network was updated to reflect roadway modifications planned to be in place by 2035 as well as the vehicle volumes forecasted as described in the Travel Demand Forecasting section. Signal timings and coordination were optimized to maximize the efficiency of the system based on the projected future year vehicle volumes (while maintaining the existing phasing and cycle lengths).

Analysis of Potential Impacts
Potential effects caused by the three alternatives assuming 2035 conditions are analyzed below. This includes effects on the pedestrian, bicycle, transit, and vehicular networks, as well as parking and safety.

Alternative 1—No Action
Alternative 1—No Action serves as a baseline for the impact analysis of the Action Alternatives (Alternatives 2 and 3). It represents the operation of the transportation system if no zoning changes were made in the Town Center. However, some redevelopment at the Town Center would still be allowed to occur under Alternative 1. Alternative 1 also includes the regional growth expected to occur by 2035, which influences background traffic volumes along the state routes bordering the Town Center. The following definitions are used to identify deficiencies under the Alternative 1—No Action:

- Auto and Freight: a study intersection operating below its LOS standard (C, D, or E depending on the intersection).

- Transit: a study intersection through which transit routes travel operating below its LOS standard (C, D, or E depending on the intersection).

Figure 4.5.1 Town Center Residential and Commercial Use Trip Distribution

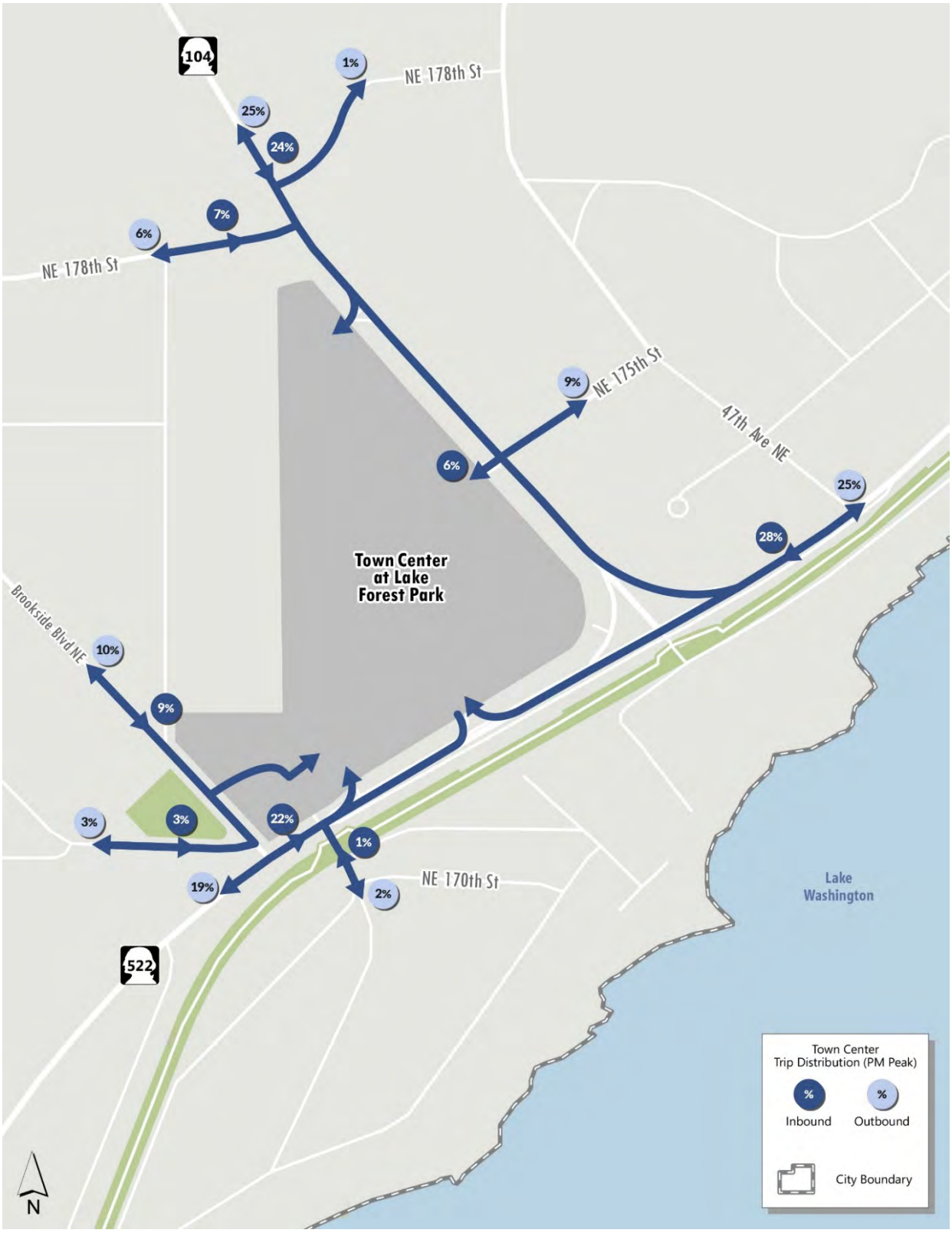


Figure 4.5.2 Town Center Park and Ride Trip Distribution

Alternative 1—No Action Analysis, Continued
Pedestrian, bicycle, traffic operations, transit, parking, and safety impacts are discussed qualitatively below for Alternative 1 on the following pages (and also addressed later under the analysis for Alternatives 2 and 3). As defined above, this EIS identifies deficiencies if future transportation operations are not expected to meet the City's adopted level of service standards.

- **Pedestrian—**Because some redevelopment would be expected to occur under Alternative 1, there would be new pedestrian facilities associated with those projects on the Town Center site. For example, it is assumed that construction of new residential units on the northern portion of the site would include new internal roadways with sidewalks, landscaping, and crosswalks. It is also assumed that crosswalks would be added or enhanced at existing driveways and that sidewalks would be added on NE 170th Street and Fire Station Road to increase comfort for people walking to the Town Center from surrounding neighborhoods. Additionally, the Safe Streets, Safe Highways, and Town Center Connections reports recommend several new sidewalks and crosswalks on streets adjacent to the Town Center that would improve pedestrian access to the Town Center – many of which would be implemented by 2035. Because there would be increased pedestrian infrastructure under Alternative 1, no adverse effects to pedestrians are expected.

- **Bicycle—**Alternative 1 does not assume any new dedicated bicycle lanes or routes on the Town Center site, though cyclists may benefit from the internal roadway connection improvements associated with redevelopment within Town Center. However, the Safe Streets, Safe Highways, and Town Center Connections reports recommend several new bike facilities on streets adjacent to the Town Center that would improve access to the Town Center for people cycling – many of which could be implemented by 2035. While there would be no new dedicated bicycle infrastructure under Alternative 1, bicycle travel is not expected to be adversely affected. It should be noted that current bicycle storage and parking requirements in the LFPMC did not anticipate the potential heavy commuter/transit-oriented focus at this site. Under Alternative 2 and 3, there would be an opportunity to update and expand these requirements to fit anticipated changes in use.

- **Traffic Operations—**By 2035, traffic volumes would increase due to background growth in the city and region as well as new development at the Town Center. The PM vehicle trips in Alternative 1 are projected to increase by a total of 185 trips compared to existing conditions. Due to these traffic volume increases, all study intersections except SR 104/NE 170th Street are expected to have higher delay in the future than is experienced under existing conditions. SR 104/NE 178th Street is signalized in the future alternatives, which decreases delay compared to existing conditions. Table 4.5.3 and Figure 4.5.3 summarize the LOS results for Alternative 1.

Table 4.5.3 2035 Alternative 1 Intersection Level of Service

ID	Intersection	Traffic Control	LOS Standard	Existing Conditions		Alternative 1	
				Delay	LOS	Delay	LOS
1	SR 522 & Brookside Boulevard	SSSC[2]	D	10	B[1]	11	B[1]
2	SR 522 & NE 170th Street	Signal	D	7	A	44	D
3	NE 170th Street & Fire Station Road	SSSC	C	13	B	14	B
4	Brookside Boulevard NE & Fire Station Road	SSSC	C	10	B	11	B
5	SR 522 & Town Center driveway at Bank of America	SSSC[2]	D	21	C	26	D
6	SR 522 & SR 104	Signal	D	62	E[1]	66	E[1]
7	SR 522 & 47th Avenue NE	SSSC[2]	D	23	C	27	D
8	SR 104 & NE 175th Street	Signal	E	26	C	29	C
9	SR 104 & Town Center driveway at Windermere	SSSC	E	25	C	33	D
10	SR 104 & NE 178th Street	Signal	E	117	F	27	C[1]

Notes: 1. Uses HCM 2000 due to phasing or configuration
2. Side street allows right turn out only

The Safe Highways Report published delay and LOS results at these intersections using methodologies prescribed in earlier versions of the Highway Capacity Manual (HCM 2000 and 2010); as such many of the LOS results vary based on newer methodologies.

SSSC = Side street stop controlled
Grey shaded locations exceed level of service thresholds
Source: Fehr & Peers, 2018

- ***Traffic Operations, Continued***—Under Alternative 1, only one intersection – SR 522/SR 104 – would operate below its LOS threshold. The intersection of SR 104/NE 178th Street would improve in the future due to the installation of a signal that would better balance traffic flows, including greatly improved left-turn access. All other intersections would be expected to experience increases in vehicle delay but

operate acceptably. The intersection of SR 522/NE 170th Street would be expected to have a large increase in delay, from seven seconds per vehicle under existing conditions to 44 seconds under Alternative 1, even with the additional left turn lane assumed under all three alternatives. However, it is still expected to meet the LOS D standard. The Town Center driveway at Windermere would also have a large increase in delay due to the increase in eastbound volumes that have to compete with increased SR 522 north and southbound traffic.

As was described in the existing conditions section, the traffic operations analysis uses isolated intersection analysis, which does not directly account for how queueing affects adjacent intersections. Queuing is known to occur in the peak direction along SR 522 and SR 104 and is expected to persist in the future. Delays from peak period queuing can affect operations along the state routes and on the Town Center site. As specific development projects are proposed, they would undergo the City's project-level permitting review process which may include additional traffic and queuing analysis.

Similarly, queues can form in the southbound direction along SR 104 as vehicles wait to turn at the SR 522 signal. SR 104/NE 175th Street currently has northbound queues which can stretch back to SR 522, potentially delaying vehicles trying to turn onto SR 104.

Future circulation improvements within the Town Center may improve queuing on site; however, these queues should be monitored over time to ensure signal timings and queuing storage lengths are appropriate to maintain safe and orderly vehicle operations within the Town Center.

- ***Transit***—Transit traveling along the SR 104 and SR 522 corridors would be affected by the congestion and delay experienced at the study intersections. The BRT system proposes dedicated business access and transit (BAT) lanes on SR 522, which would help to minimize transit delay at intersections. However, buses could still experience some delay caused by increasing volumes of cars entering and exiting the Town Center via the BAT lanes. Buses traveling along SR 104 would experience more delay because they would not have dedicated transit lanes.

  Therefore, the increased delay described in the Traffic Operations section would also affect transit speed and reliability, particularly at the intersection of SR 522/SR 104, which is projected to operate below its LOS standard. Queuing results discussed in the traffic operations section would also affect transit movement near the Town Center and could hinder accessibility of bus stops in the planning area.

Figure 4.5.3 2035 Alternative 1 Level of Service Results

- ***Parking***—The multi-family housing units assumed to be built in the northern section of the Town Center site would eliminate some of the existing surface parking under Alternative 1. However, it is anticipated that developers would maintain or build adequate supply for their new needs and in consultation with City permitting requirements. Because it is expected that developers would continue to provide parking supply as dictated by market need, no adverse parking effects are expected under Alternative 1.

- ***Safety***—Traffic volumes are forecasted to increase at all of the study intersections, which could increase the total number of collisions within the planning area. However, collision rates at the study intersections are not expected to meaningfully change compared to existing conditions. No adverse effects to safety are identified under Alternative 1.

Thresholds of Significance

The transportation impacts of Alternatives 2 and 3 are measured against the transportation conditions of Alternative 1 No Action. This section describes the thresholds that constitute a significant transportation impact. Significant impacts are defined for traffic operations, transit, safety, parking, and bicycle and pedestrian facilities. A significant impact is identified if Alternatives 2 or 3 would cause the following:

- ***Auto and Freight***—A study intersection that operates acceptably under Alternative 1 operating below its LOS standard or an increase in delay of at least 5 seconds at a study intersection already expected to operate below its LOS standard under Alternative 1.

- ***Transit***—At a location through which transit routes travel, a study intersection that operates acceptably under Alternative 1 operating below its LOS standard or an increase in delay of at least 5 seconds at a study intersection already expected to operate below its LOS standard under Alternative 1.

Alternative 2—Varied Height and Form

This section summarizes analysis results and environmental effects of Alternative 2. Alternative 2 assumes varied building height and form across the site, incorporating some redevelopment and a 400-space Sound Transit parking structure. This includes 1,200 multi-family housing units, 127,500 square feet of commercial/retail space, 41,000 square feet of office space, and 52,000 square feet of City Hall and civic/community space.

- ***Pedestrian***—The same pedestrian projects assumed on the surrounding streets in Alternative 1 are also assumed in Alternative 2. Within the Town Center site, Alternative 2 includes redevelopment throughout the site, which would include a more grid-like pattern of internal roadways. The revised layout would create a more comfortable walking environment compared to the large swath of parking that would remain in the southern area of the site under Alternative 1. Pedestrian connectivity would also be enhanced by redeveloping the existing large buildings into smaller buildings. Because the new development is expected to meet City design standards related to pedestrian

facility accommodation, no significant pedestrian impacts are expected under Alternative 2.

- ***Bicycle—***The non-motorized projects assumed on streets adjacent to the Town Center in Alternative 1 would also benefit bicyclists in Alternative 2. The Alternative 2 site plan does not include new dedicated bicycle facilities, but the benefits of the grid and enhanced connectivity described in the Pedestrian section would also benefit bicyclists. Therefore, no significant bicycle impacts are expected under Alternative 2.

- ***Traffic Operations—***Under Alternative 2, all study intersections would have the same or higher traffic volumes than Alternative 1, and there are no changes to the study intersections beyond those assumed in Alternative 1, aside from optimizing the splits and coordinated offsets at the four signalized intersections. PM peak vehicle trips would increase by 50 trips compared to Alternative 1, and no vehicle turning movement is expected to increase by more than 15 vehicles. Nearly all these additional trips would be coming to the Town Center as opposed to leaving. Delay at eight intersections are expected to be similar compared to Alternative 1. Delays would be expected to increase slightly for the remaining two intersections compared to Alternative 1. Table 4.5.4 and Figure 4.5.4 show the LOS results.

  Similar to Alternative 1, the only intersection expected to operate below its LOS standard would be SR 522/SR 103. However, due to only a moderate increase in vehicle trips under Alternative 2, the delay would be expected to increase by only one second compared to Alternative 1. Therefore, this does not constitute a significant impact.

  The predominant queueing issues observed under existing conditions would remain under Alternative 2, though the eastbound queues at SR 522/SR 104 and northbound queues at SR 104/NE 175th Street would shorten slightly due to optimized signal timing. The operations analysis suggests that southbound queueing at SR 522/SR 104 could affect the intersection of SR 104/NE 175th Street and other upstream intersections. The eastbound queue is metered by the signal at NE 170th Street, which would have a longer queue than in Alternative 1. Southbound queues at NE 170th Street would likely affect operations at NE 170th Street/Fire Station Road as well. The eastbound queue exiting the Town Center at NE 175th Street is expected to be longer than in Alternative 1, which would affect operations at internal intersections on the Town Center site.

  As specific development projects are proposed, they would undergo the City's project-level permitting review process which may include additional traffic and queuing analysis.

- ***Transit—***As with Alternative 1, transit would be affected by the congestion and delay at the study intersections, and increased traffic on SR 522 and SR 104 would negatively affect speed and reliability of the transit routes and stops near the Town Center (though the presence of BAT lanes on SR 522 would

help minimize delay). However, only the intersection of SR 522/SR 104 is operating below its LOS threshold in Alternative 2, and the projected increase in delay compared to Alternative 1 does not constitute a significant transit impact.

Table 4.5.4 2035 Alternative 2 Intersection Level of Service

ID	Intersection	Traffic Control	LOS Standard	Alternative 1		Alternative 2	
				Delay	LOS	Delay	LOS
1	SR 522 & Brookside Boulevard	SSSC[2]	D	11	B[1]	11	B[1]
2	SR 522 & NE 170th Street	Signal	D	44	D	44	D
3	NE 170th Street & Fire Station Road	SSSC	C	14	B	14	B
4	Brookside Boulevard NE & Fire Station Road	SSSC	C	11	B	11	B
5	SR 522 & Town Center driveway at Bank of America	SSSC[2]	D	26	D	26	D
6	SR 522 & SR 104	Signal	D	66	E[1]	67	E[1]
7	SR 522 & 47th Avenue NE	SSSC2	D	27	D	27	D
8	SR 104 & NE 175th Street	Signal	E	29	C	30	C
9	SR 104 & Town Center driveway at Windermere	SSSC	E	33	D	34	D
10	SR 104 & NE 178th Street	Signal	E	27	C[1]	27	C[1]

Notes: [1] Uses HCM 2000 due to phasing or configuration
[2] Side street allows right turn out only

The Safe Highways Report published delay and LOS results at these intersections using methodologies prescribed in earlier versions of the Highway Capacity Manual (HCM 2000 and 2010), as such many of the LOS results vary based on newer methodologies.

SSSC = Side street stop controlled
Grey shaded locations exceed level of service thresholds
Source: Fehr & Peers, 2018

Figure 4.5.4 2035 Alternative 2 Level of Service Results

- ***Parking***—Some areas of current parking supply would be redeveloped under Alternative 2. However, it is anticipated that developers would maintain or build adequate supply for their new needs and in consultation with City permitting requirements. Because it is expected that developers would continue to provide parking supply as dictated by market need, no significant adverse parking impacts are expected under Alternative 2.

- **Safety**—Traffic volumes under Alternative 2 would be higher than Alternative 1. Higher volumes can bring the potential for an increased number of collisions. However, there is no indication that collision rates would increase meaningfully compared to Alternative 1. Within the site, the more structured layout of the roadway network and parking spaces could result in a safety benefit. No significant adverse impacts to safety are identified under Alternative 2.

Alternative 3—Uniform Height and Form
Alternative 3 assumes uniform mixed-use building form in a more formal gridded pattern of redevelopment, incorporating a 500-space Sound Transit parking structure. This includes 1,500 multi-family housing units, 202,500 square feet of commercial/retail space, 66,000 square feet of office space, and 52,000 square feet of City Hall and civic/community space.

- ***Pedestrian***—The same pedestrian projects assumed on the surrounding streets in Alternative 1 are also assumed in Alternative 3. Among the alternatives, Alternative 3 would have the most fine-grained grid pattern within Town Center. The revised roadway network would enhance connectivity and provide a more comfortable walking environment than Alternative 1. Because the new development is expected to meet City design standards related to pedestrian facility accommodation, no significant pedestrian impacts are expected under Alternative 3.

- ***Bicycle***—The non-motorized projects detailed in Alternative 1 would also benefit bicyclists in Alternative 3. The Alternative 3 site plan does not include new dedicated bicycle facilities within the site, but the benefits of the grid and enhanced connectivity described in the Pedestrian section would also benefit bicyclists. Therefore, no significant bicycle impacts are expected under Alternative 3.

- ***Traffic Operations***—Alternative 3 has the highest traffic volumes of the future alternatives, with 535 more PM peak trips than Alternative 1. The increased volumes stem from the Town Center driveways and are then distributed along the adjacent state routes. There are no changes to the study intersections beyond what was described in Alternative 1, aside from optimizing the splits and coordinated offsets at the four signalized intersections. All of the study intersections (besides SR 104/NE 178th Street, which is assumed to be converted to a signalized intersection in the future) are expected to have an increase in delay compared to the other alternatives. Table 4.5.5 and Figure 4.5.5 show the LOS results.

Table 4.5.5 2035 Alternative 3 Intersection Level of Service

ID	Intersection	Traffic Control	LOS Standard	Alternative 1		Alternative 3	
				Delay	LOS	Delay	LOS
1	SR 522 & Brookside Boulevard	SSSC[2]	D	11	B[1]	12	B[1]
2	SR 522 & NE 170th Street	Signal	D	44	D	56	E
3	NE 170th Street & Fire Station Road	SSSC	C	14	B	20	C
4	Brookside Boulevard NE & Fire Station Road	SSSC	C	11	B	12	B
5	SR 522 & Town Center driveway at Bank of America	SSSC[2]	D	26	D	31	D
6	SR 522 & SR 104	Signal	D	66	E[1]	67	E[1]
7	SR 522 & 47th Avenue NE	SSSC[2]	D	27	D	29	D
8	SR 104 & NE 175th Street	Signal	E	29	C	59	E
9	SR 104 & Town Center driveway at Windermere	SSSC	E	33	D	48	E
10	SR 104 & NE 178th Street	SSSC	E	27	C[1]	27	C[1]

Notes: [1] Uses HCM 2000 due to phasing or configuration
[2] Side street allows right turn out only

The Safe Highways Report published delay and LOS results at these intersections using methodologies prescribed in earlier versions of the Highway Capacity Manual (HCM 2000 and 2010), as such many of the LOS results vary based on newer methodologies.

SSSC = Side street stop controlled
Grey shaded locations exceed level of service thresholds
Source: Fehr & Peers, 2018

Under Alternative 3, two intersections are not expected to meet their LOS standard – SR 522/NE 170th Street and SR 522/SR 104. At the SR 522/NE 170th Street intersection, the additional land use under this alternative would generate enough trips to degrade operations to LOS E conditions. Therefore, a traffic impact is expected at this location. Similar to Alternatives 1 and 2, the SR 522/SR 104 intersection is expected to operate below its LOS standard. However, the increase in expected average vehicle delay is less than the five second threshold for significance compared to Alternative 1, so this does not constitute a significant impact.

The intersection of SR 104/Town Center driveway at Windermere would have a larger increase in delay than many of the other study intersections, likely due to more eastbound vehicles trying to turn while north and southbound traffic on SR 104 has increased. Similarly, SR 104/NE 175th Street would have increased delay, with an increase in eastbound left turning vehicles that must yield to westbound vehicles, increasing the delay and queuing for the eastbound movement.

The operations analysis suggests that queues in Alternative 3 follow the same patterns as in the other future alternatives, with northbound and southbound queues on SR 104 that could affect eastbound and westbound traffic on SR 522. Eastbound queues at NE 170th Street would meter eastbound traffic at SR 522/SR 104, and southbound queues could affect operations at NE 170th Street/Fire Station Road. The eastbound queues at NE 175th Street are expected to spill back into the Town Center's internal intersections affecting traffic flow on site.

As specific development projects are proposed, they would undergo the City's project-level permitting review process which may include additional traffic and queuing analysis.

- ***Transit***—As described in the traffic operations section, SR 522/NE 170th Street is expected to operate at LOS E conditions, below its LOS standard. A transit impact is expected under Alternative 3 because the increase in delay at SR 522/NE 170th Street would affect transit operations. As with Alternatives 1 and 2, the intersection of SR 522/SR 104 is expected to exceed its LOS standard. However, the delay increase at this specific location does not meet the threshold of significance for a transit impact.

- ***Parking***—Some areas of current parking supply would be redeveloped under Alternative 3. However, it is anticipated that developers would maintain or build adequate supply for their new needs and in consultation with City permitting requirements. Because it is expected that developers would continue to provide parking supply as dictated by market need, no significant adverse parking impacts are expected under Alternative 3.

  With the increased number of residential units and people living at the Town Center, ensuring that parking is right-sized would be important with implementation of either action alternative, but in particular under Alternative 3, given it would have the most amount of residential use and also would increase commercial and office use at the site. To prevent overflow parking in surrounding areas to the Town Center, such as on nearby neighborhood streets, parking utilization and demand should be analyzed on a regular basis and each phase of redevelopment should include a specific study that anticipates the parking demand of proposed use, but also assesses viable options for shared parking across the site. The City may need to implement an adaptive parking management plan in coordination with other property owners at Town Center over time, with future phases of redevelopment.

- ***Safety***—Traffic volumes under Alternative 3 would be higher than both Alternatives 1 and 2. Higher volumes can bring the

potential for an increased number of collisions. However, there is no indication that collision rates would increase meaningfully compared to Alternative 1. Within the site, the more structured layout of the roadway network and parking spaces could result in a safety benefit. No significant adverse impacts to safety are identified under Alternative 3.

MITIGATION MEASURES

This section identifies projects and actions that could be incorporated into Alternatives 2 and 3 to reduce the significance of any transportation impacts.

Traffic and Street Improvements/Incorporated Plan Features

Alternatives 1 through 3 assume that several transportation network improvements included in existing City plans, such as Safe Streets and Safe Highways, would be in place by 2035. Transportation network changes external to the Town Center are the same for all three alternatives. To assess traffic operations and transit, the preceding analysis assumes the following projects are already in place as background mitigation measures:

- A traffic signal at SR 104/NE 178th Street, which controls two three-way intersections; and
- A southbound left turn lane at SR 522/NE 170th Street with optimized signal timing.

Pedestrian and Bicycle Access/Access to Transit

To assess pedestrian and bicycle travel, the preceding impact analysis assumes that several improvements recommended in the Safe Streets, Safe Highways, and Town Center Connections reports would be implemented by 2035, which include new sidewalks, crosswalks, and bike facilities on streets adjacent to the Town Center, but not in the planning area itself. These improvements would improve non-motorized access to and from the Town Center, while proposed improvements associated with each alternative would improve pedestrian and bicycle access within the interior of the site.

Assumed and recommended pedestrian and bicycle improvements within the planning area include the following.

The Town Center Plan would include a recommendation to design the internal circulation system as multimodal streets, so they operate similarly to public streets with delineated spaces for vehicles and pedestrians even though these streets may continue to be privately owned and maintained. This would improve walkability and safety for all modes. Bicyclists could travel at slower speeds with traffic, similarly to how downtown streets with slower speeds operate. This includes consideration of implementing a “festival street” space that could be integrated into the redevelopment plan and would operate primarily for customer circulation and shopping most of the time, but also could be used as space for the Farmers Market and other events and festivals at scheduled times.

Festival Streets are typically designed as at-grade, curbless streets that include special features and design treatments resembling a pedestrian plaza (see photos at the end of this section). The Alternative 2 planning scenario shows an example of how a festival street could be integrated into redevelopment.

Figure 4.5.5 2035 Alternative 3 Level of Service Results

Figures 4.5.6, 4.5.7, and 4.5.8 illustrate potential street cross section configurations that could be considered in future master planning and design of each phase of redevelopment. These cross sections are conceptual and represent potential recommendations that may be included in the Town Center Plan, as well as the Town Center Design Standards and Guidelines.

- Delineated crosswalks circulation/access way crossings and key entry points to buildings should be provided to enhance pedestrian access and safety.

- Continuous sidewalks/pedestrian paths throughout all areas of the site should be provided to connect all land uses and development area (north-south and east-west at intervals no greater in dimension than 300 feet in length).

- Secure bicycle parking areas, sufficient for each type of land use and development in the Town Center planning area should be provided and requirements should be included in the LFPMC amendments and supporting design standards and guidelines.

- Adding sidewalks on NE 170th Street and Fire Station Road on at least one side of the roadway would improve pedestrian connectivity to the Town Center.

- The Town Center Plan would propose a potential shared use path loop around the perimeter of the Town Center, identified in the visioning process as a desirable community recreation feature; the intent was for this path to be primarily for pedestrian and low speed bicycling use.

- The Town Center Plan would recognize the potential benefits of a grade separated crossing at Bothell Way to more seamlessly connecting the Town Center with the Burke Gilman Trail and both sides of the proposed BRT station platforms.

Parking

- Amended LFPMC provisions under either Alternative 2 or Alternative 3 should include the requirement of a parking utilization study/analysis with each phase of redevelopment at Town Center. The analysis should consider shared parking opportunities, reduced demand for parking related to mixed-use transit-oriented development, minimizing impacts to surrounding neighborhoods through active and adaptive parking management, and other potential actions.

- The City may need to implement an adaptive parking management plan in coordination with other property owners at Town Center over time, with future phases of redevelopment.

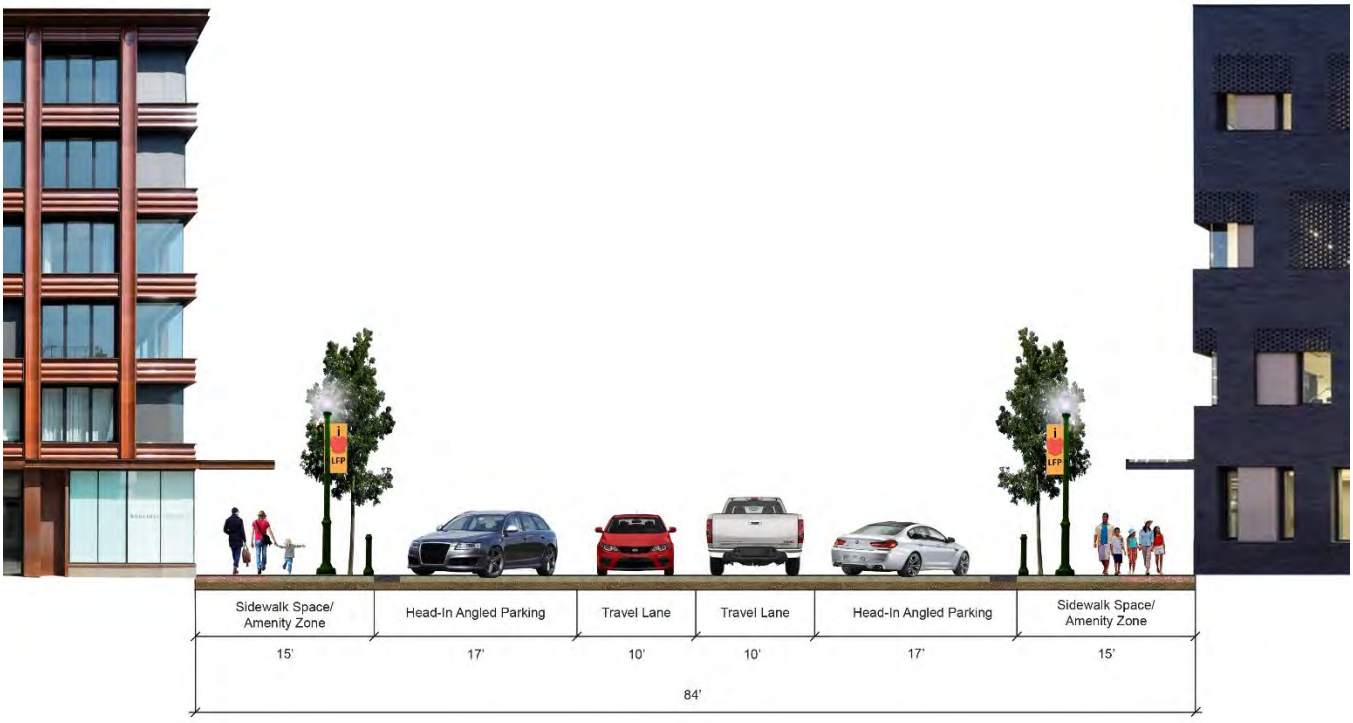
All Modes

- Amendments to the LFPMC and correlating design standards and guidelines developed to support implementation of either action alternative (Alternative 2 or 3) would include a variety of other required and recommended provisions to improve pedestrian and bicycle mobility as well as access to transit. Standards related to the design of streets and parking areas also would be included.

Figure 4.5.6 Conceptual Cross Section for a Local Access Street with On-Street Parallel Parking

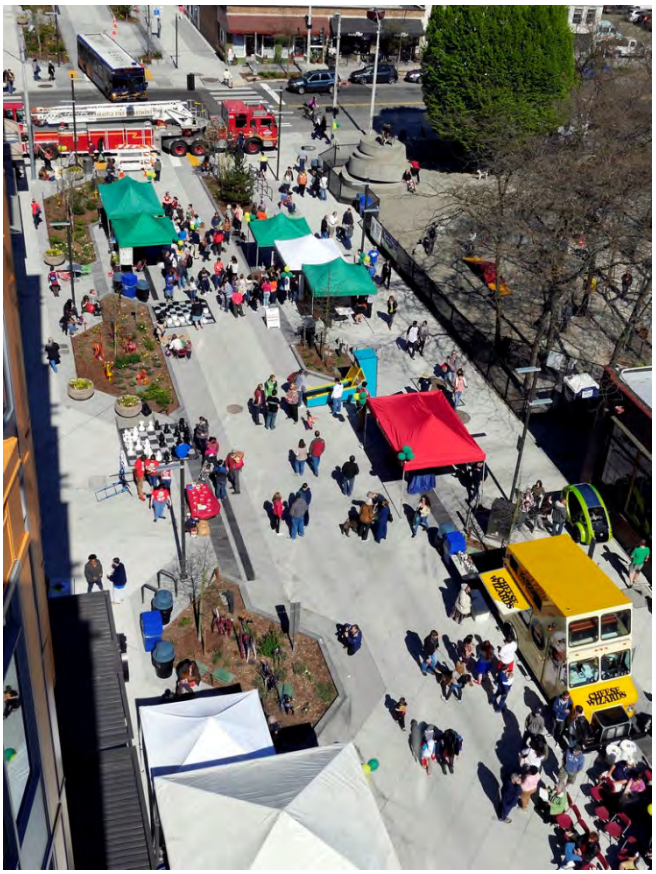
Figure 4.5.7 Conceptual Cross Section for a Local Access Street with No On-Street Parking

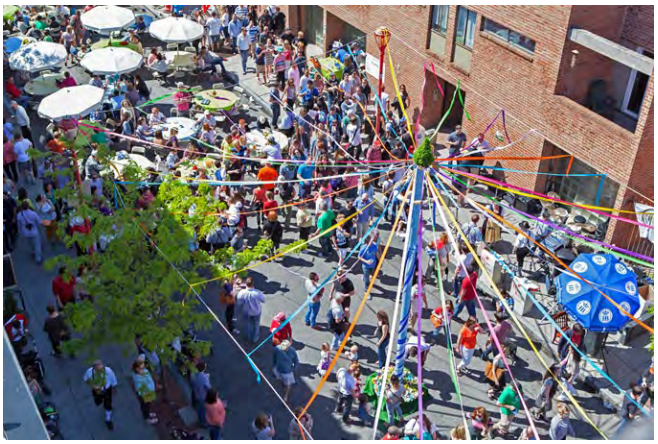
Figure 4.5.8 Conceptual Cross Section for a Festival Street with On-Street Angled Parking



Photographic examples of festival streets are provided below.

Photographic examples of festival streets, continued.





Summary of Transportation Impacts and Related Mitigation

One intersection – SR 522/SR 104 – is expected to fall below its LOS standard under all three future year alternatives. However, because the increase in delay at this intersection under Alternatives 2 and 3 falls within the five second threshold of significance, no significant adverse impact is identified at this location. Under Alternative 3, one additional intersection (SR 522/NE 170th Street) is expected to operate below its LOS standard. This would result in a significant traffic and transit impact.

No pedestrian, bicycle, parking, or safety impacts are expected under either Alternative 2 or 3. Table 4.5.6 summarizes the significant impacts for each alternative.

Table 4.5.6 Summary of Transportation Impacts

Type of Impact	Alternative 1 No Action Deficiencies	Alternative 2 Impacts	Alternative 3 Impacts
Auto/Freight	1 intersection	0 intersections	1 intersection
Transit	1 intersection	0 intersections	1 intersection
Pedestrian	None	None	None
Bicycle	None	None	None
Parking	None	None	None
Safety	None	None	None

To mitigate the impact at the SR 522/NE 170th intersection, the intersection could be re-channelized on the northbound and southbound approaches. The northbound approach could include a left-turn pocket, and the southbound approach could be reconfigured to dual left-turn lanes with a shared through/right lane. This would eliminate the need for the less efficient split phase signal timing previously assumed at this location. With this mitigation measure, traffic operations would be expected to improve to LOS D, meeting its LOS standard. Additional design engineering analysis would be needed for this mitigation measure, as roadway realignment may be needed for the north and south approaches.

As specific development projects are proposed, they would undergo the City's project-level permitting review process, which may include additional traffic and queuing analysis. That process may result in the identification of project-specific mitigation measures. It is recommended that the City continue to monitor traffic operations in the vicinity of the Town Center to determine if any queuing issues materialize and if so, identify potential physical or signal timing improvements. As the Town Center redevelops, the City should monitor traffic operations and queues through observation at the following intersections:

- SR 522/Town Center driveway at Bank of America
- SR 104/SR 522

- SR 104/NE 175th Street
- SR 104/Town Center driveway at Windermere
- SR 522/NE 170th Street
- NE 170th Street/Fire Station Road

In addition, managing demand for auto travel is an important part of limiting traffic congestion. The City could consider transportation demand management (TDM) strategies, which could include subsidies or discounts for non-auto travel, education, and assistance to help travelers identify non-auto commute options, rideshare, and ride match promotion, as well as local incentive and reward programs.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

Overall, implementation of either of the action alternatives, Alternative 2 or 3, would result in increased traffic volumes and demand for transportation facilities (more so than under the no action alternative, Alternative 1). A significant traffic and transit impact was identified under Alternative 3 at the SR 522/NE 170th Street intersection, and mitigation was proposed identified to reduce delay such that the LOS D standard could be met. Because this impact could be mitigated and other improvements and mitigation measures are proposed, no significant unavoidable adverse impacts to auto, freight, transit, pedestrians, bicycles, safety, or parking were identified under any of the alternatives.