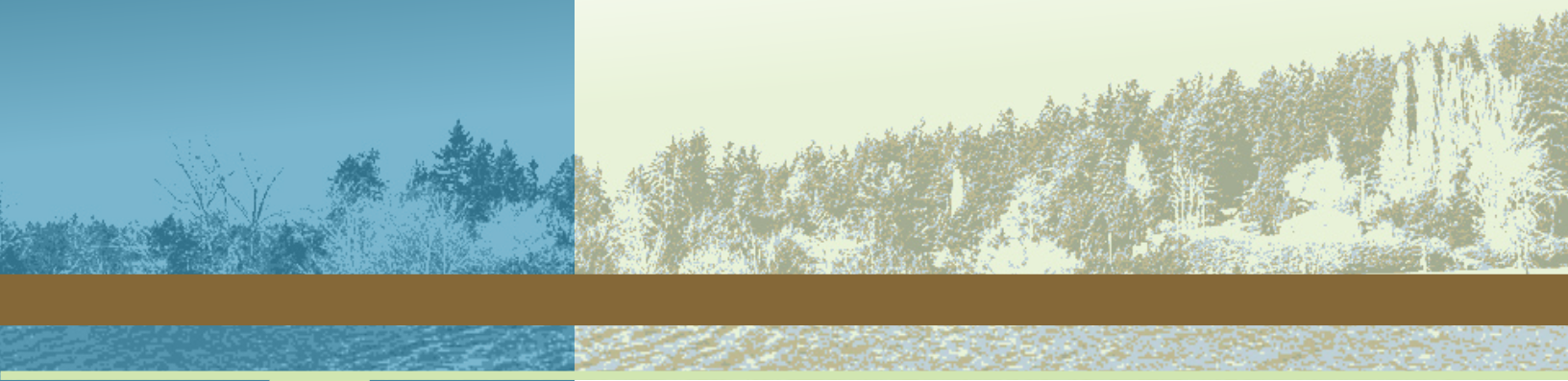
Lake Forest Park
TOWN CENTER
Heart of the Community

AUGUST 2019

Final Environmental Impact Statement

for the Town Center Plan



4 ANALYSIS AND MITIGATION

INTRODUCTION

Alternatives analyzed in this FEIS described and presented in Chapter 2.0 include Alternative 1, No Action and a new alternative, Alternative 4. Alternatives 2 and 3, previously analyzed in the DEIS, have been removed from further consideration in this FEIS. The previous analysis of the DEIS for these alternatives is located in Appendix F for reference purposes.

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 in 2018. Alternative 4 studies a potential redevelopment scenario that could incorporate elements of this Vision.

The planning scenarios studied in the DEIS and in this FEIS were developed for purposes of programmatic analysis; they are theoretical and conceptual representing a non-project level of analysis. Actual redevelopment likely would differ from the concepts shown in this document and would be based on more detailed master planning and design.

Land Use and Zoning

No significant changes to land use are proposed under Alternative 4 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. Redevelopment under Alternative 4 would be 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 Alternative 4 (and Alternative 1, No Action), but the amount of commercial use could potentially be reduced depending on property owner preferences and market influences. New residential use could be added under either alternative, but Alternative 4 studies limiting residential density to 700 dwelling units. Alternative 1, No Action, assumes a continuation of existing Lake Forest Park Municipal Code (LFPMC) provisions, which do not pose a density cap. Density is prescribed by form in the current LFPMC with application of the Town Center Framework Design Guidelines.

Building Forms and Heights— Under either Alternative 4 or Alternative 1, 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 later in this section of the FEIS for each alternative. It should be noted that these illustrations are theoretical and conceptual planning scenarios and not actual project proposals. The 3-D sketch models are intended to provide a theoretical and conceptual depiction of potential height and form; they do not show architectural details. As such the buildings in the models appear simpler and blockier than they would be in reality. It is important to keep this in mind when viewing the models.

Alternative 4 and Alternative 1—No Action study building forms and heights that could be

built under current regulations. However, as stated above, Alternative 4 illustrates a residential density limited to 700 dwelling units, as well as more specific open space and amenity requirements than currently provided for in the LFPMC.

Alternative 4 assumes the same building heights as currently allowed under the LFPMC and applicable to Alternative 1, No Action. The current LFPMC provisions allow a base building height of up to four levels above grade, with the potential to add a fifth level through the Town Center Framework Design Guideline with the provision of community amenities.

Alternative 1—No Action preserves the central and southern legs of the existing Town Center complex, while introducing new residential and neighborhood-scale retail uses in the northern portion of the site. Alternative 1 also showed a new commuter park and ride structure adjacent to City Hall that would provide 300 spaces and the DEIS assumed that residential use could be located above the parking structure, and that commercial/active use could wrap one or more sides of the structure.

Alternative 4 also assumes the 300-car parking structure with commercial/active use along the frontage, but does not analyze residential use above the parking levels. 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. There is also the potential to create expanded community and civic space that could connect with City Hall in the floors above ground level along the frontage of the commuter park and ride structure, as shown in Alternative 4. This is just one potential redevelopment scenario. Others could be explored with future master planning and design of each phase of improvements at Town Center.

Another difference between the Alternative 4 and Alternative 1 scenarios is that Alternative 4 analyzes the potential for expansion of City Hall, a need that was documented in the DEIS. Alternative 4 shows an approximate building expansion area of 12,000 GSF.

As discussed in Chapter 2, under both Alternative 4 and Alternative 1—No Action, building heights of 60 to 66 feet would be allowed after applying bonus density provisions. Roofline variation, peaks, and rooftop features and appurtenances could extend above these heights. Refer to Chapter 2 for more information about assumptions related to Alternative 4 and Alternative 1.

Other buildings with lower heights may also be constructed. For example buildings that are mostly commercial use would typically be one or two levels above grade, as shown in the scenarios for Alternative 4 and Alternative 1. Parking at the site could likely be developed as structured parking, with some continued areas of surface parking, as shown in the scenarios. It is anticipated that redevelopment would mostly occur incrementally in multiple phases over time.

Buildings of taller heights were previously analyzed in the DEIS under Alternative 2—(maximum building height of 75 feet) and under Alternative 3 (maximum height would be 85 feet), but these alternatives are no longer under consideration in this EIS.

Again, it is important to note that Alternative 4 and Alternative 1 scenarios are theoretical and conceptual and represent only two examples of how potential redevelopment could look in the

future. Redevelopment could occur on any portion of the site, over only part of the site, or over the entire site.

Figure 4.1.1 depicts example types of buildings that could be developed under either Alternative 4 or Alternative 1. Figure 4.1.1 is followed by a series of graphic images that illustrate examples of potential redevelopment and building types, as well as open space and amenities, which could occur under either Alternative 4 or Alternative 1—No Action.

Wood frame over concrete podium construction of four or five levels is a building type that is seen throughout the region. Recent examples can be found in the nearby communities of Shoreline, Kenmore, Bothell, Woodinville, Redmond, Burien, and other areas throughout the region. In mixed use buildings, ground floor levels are active, public-oriented uses (commercial, retail, studio, professional office, etc.) and the floors above are residential or office uses. Some buildings in the northern area of Town Center may be primarily residential, as shown in the Alternative 4 and Alternative 1 scenarios.

Bonus Height/Density Potential— Under current regulations, if bonus height provisions are applied under the Town Center Framework Design Guidelines, a building height of five levels above grade (approximately 60 to 66 feet to the roofline could be developed), typically referred to as 4 over 1 construction. These provisions would apply under both Alternative 4 and Alternative 1.

Alternative 4 analyzes a specific list of amenities that could be provided to activate the additional bonus height/density, but both Alternative 4 and Alternative 1—No Action would require a provision of amenities to activate the bonus height level. There are a variety of amenities that could be provided through the incentive-based bonus height criteria, such as:

- Additional open space areas beyond what might be required as base code provisions;
- Permanent locations for indoor and outdoor community gathering spaces (including 3rd Place Commons and the Farmers Market);
- Enhanced qualities to indoor and outdoor community gathering spaces and features such as high quality furnishings, public art, wayfinding and signing, lighting, sustainable water features, and other types of attractive amenities that celebrate Lake Forest Park history and culture, and other elements;
- Development of a town square/commons area that could be part of festival street or new main street for the town center;
- Gathering spaces/open spaces and amenities (indoor and outdoor) for a variety of uses including publicly accessible plaza spaces, rooftop restaurants and viewing decks, play areas, gardens, and other spaces;
- Enhanced native plantings and tree groves and additional low impact development features beyond those already required;
- Expanded natural open space area, boardwalks, and overlooks along Lyon Creek;

- Enhanced access to the Burke Gilman Trail;
- 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;
- A greater variety of shops, businesses, restaurants, cafes, and civic functions;
- And a variety of other possibilities, which could be determined through future master planning, design, and development agreements (see Section 4.3).

Continuing to allow an additional bonus level (fifth level above grade) with the provision of a selection of amenities, would help maximizing redevelopment potential at Town Center, which may result in creating a more community-focused, vibrant, mixed-use center, as well as more housing choices to serve different levels of affordability.

Open Space—Both alternatives would be subject to open space requirements. Under Alternative 4, a new system of open space provisions is studied in this EIS, which should be referenced in considering potential future amendments to the open space provisions for Town Center under the LFPMC. 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 could be updated to fit the form of proposed development selected as the preferred alternative and adopted with the Town Center Vision/Plan. With implementation of Alternative 4 (or also under Alternative 1), 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. Open space and amenity elements could be confirmed as part of development agreements. Examples of open space areas that the community identified in the Town Center visioning process are shown on page 14. Also, refer to Section 4.3 for a detailed list of parks, recreation, open space, and trails possibilities.

The community is extremely interested in enhancing Town Center's function as the heart of Lake Forest Park, including 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, as further described below.

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 4, the Farmers Market could operate in the "festival street" area shown in the planning scenario for redevelopment. It may be that portions of the Farmers Market also could operate within the lower floor of the future commuter park and ride structure (sheltered from weather) as well.

***Third Place Commons*—**The Third Place Commons space at Town Center, which is run by the non-profit organization that also manages the Farmers Market, could continue to be housed at Town Center shopping complex if future redevelopment occurs. Or, with redevelopment, there may be an opportunity to move the commons space to another more permanent location.

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. Planning for the future of Third Place Commons could and should occur under either Alternative 4 or Alternative 1. The City understands the importance of the Commons to the Lake Forest Park community and will seek to ensure that the Commons continues serving as the community's gathering place.

One of the highest priorities identified by the community in the 2018 Town Center Visioning process was retaining the function of Third Place Commons as a civic gathering space within any future redevelopment of the Town Center. The City is strongly committed to this priority and will seek opportunities to work closely with Merlone Geier Partners (the property owner of the Town Center shopping complex) on the Commons continuing to have a permanent home at Town Center.

***King County Library Lake Forest Park Branch*—**The Lake Forest Park branch of the King County Library System could and should continue to operate at the Town Center under either of the redevelopment scenarios, because it is a place of great importance to the community. With full redevelopment of the Town Center over time, there may be opportunities to expand the library space or to find location that is closer to the civic core area of Town Center.

***Burke Gilman Trail*—**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 could occur incrementally in multiple phases over the next 15 to 20 years or more. However, redevelopment could occur more quickly, depending upon property owner preferences, market influences, and other factors.

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). Photos on pages 16=17 depict these conditions.

Setbacks, Screening, Privacy and Views—With redevelopment, setbacks and screening provisions would be required by LFPMC. Under Alternative 1—No Action, the current required setback is 20 feet along all property lines. The City could explore options to expand the width of setbacks, particularly along the west side of Town Center, including in proximity to Lyon Creek. One possible option that could be further explored would be removing interior property line setbacks throughout the Town Center and increasing the width of outer perimeter setbacks instead. Alternative 4 studies the potential to increase the westside setback dimension and setbacks along Lyon Creek. This would provide a better transition between Town Center and adjacent residential properties and more space along the sensitive creek corridor.

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 page 15. This location is studied in Figures 4.1.5a and 4.1.5b, which illustrate potential building heights under both Alternative 4 and Alternative 1.

From this vantage point under Alternative 4, you would be able to see mixed use buildings in the center portion of the site if they were four to five levels in height. However, today, the interface with the park is the alleyway and loading area in the back of commercial buildings.

As shown in Alternative 4, there may be an opportunity to create a better interface with the park and connect people to Lyon Creek through paths and boardwalks. Under the Alternative 1 scenario studied, buildings would not be visible from the park; however, this could change depending on where redevelopment occurs and what building heights are developed. Town Center redevelopment would be visible from other areas along the west side. As such, it will be important for future master planning and design to specifically address (at a more detailed project level) how redevelopment will look and interface with adjacent land uses. It is important to remember that the concepts studied in this non-project EIS are theoretical, so future project-level planning and design will need to address this issue in a more specific, detailed manner.

Architectural treatments of any new buildings at Town Center (colors, textures, façade articulation, potential step backs, and other features) would help to mitigate visual effects. Development and design standards and guidelines for Town Center could be created and could include specific treatments related to architectural and landscape adjacent to single family properties.

When considering setback and step back dimensions, designers have the opportunity to base the design on logical behavioral objectives and a geometric rationale. When considering residential privacy, an important question 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— 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 and 4.1.6b at the end of this section of the EIS. These diagrams show Alternative 4 and Alternative 1 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 Figures 4.1.6a and 4.1.6b 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.

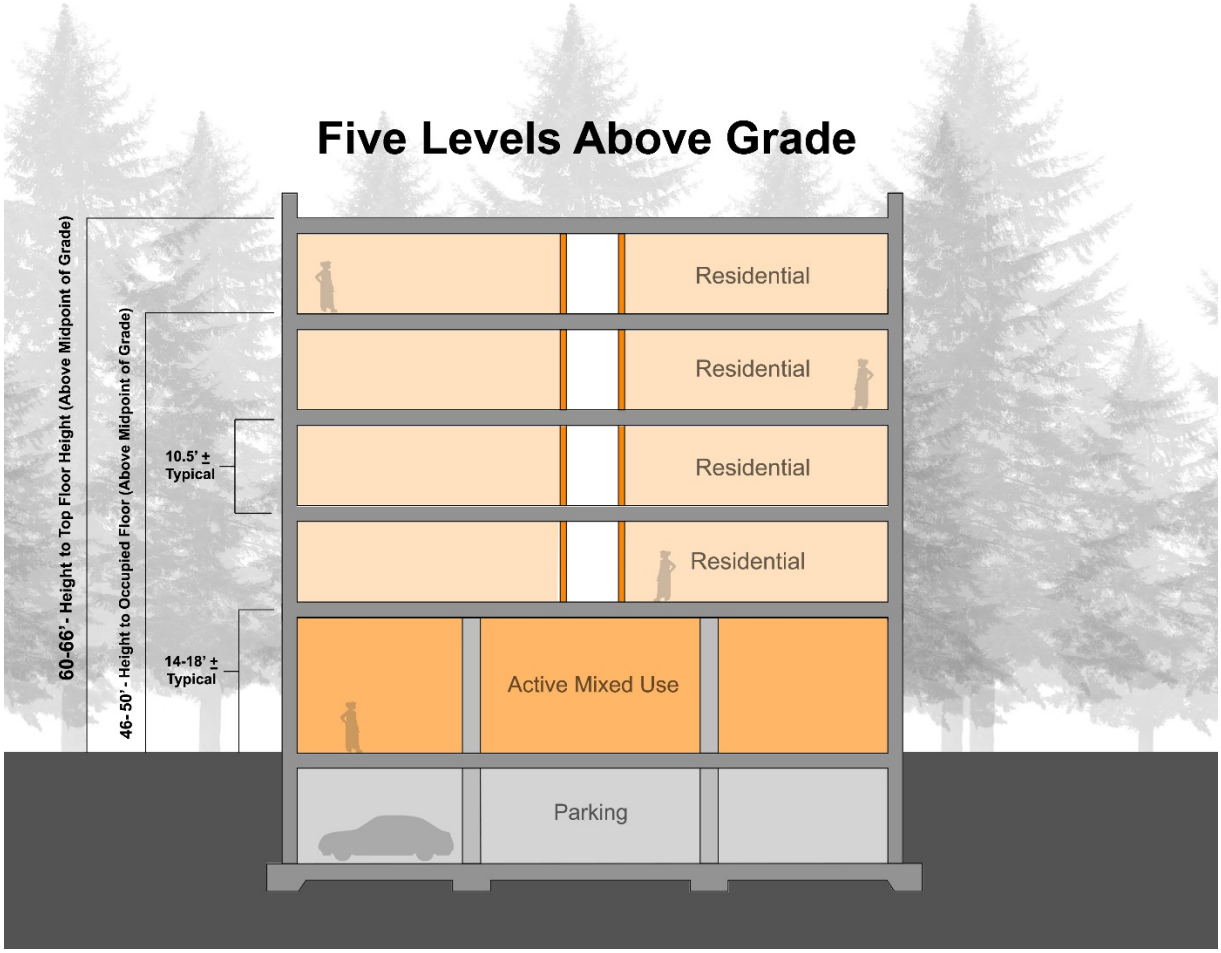
The diagrams at the end of this section, Figures Analysis diagrams illustrating this concept is provided at the end of this section – Figures 4.1.7a and 4.1.7b illustrate the current code-required 20-foot setback along the property line and the other diagram illustrates a 70-foot setback. The location shown is where buildings/homes are closer to the property line. Maximum building heights applicable to Alternative 4 and Alternative 1 are shown in the diagrams.

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 the Figures 4.1.6a-b, this shading would be minimal during the growing season. As the diagrams show, 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 be more effective).

The sun/shade analysis (solar modelling) is also a useful tool to inform optimal relationships of buildings and open spaces at Town Center. For example, it is desirable for public open space areas to have good solar access for most times during the year. Solar modelling can help to determine how areas might be affected by building shadows.

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, so the effects from new buildings may not be discernable.

Figure 4.1.1 Current Maximum Building Heights Allowed at Town Center by the LFPMC with Application of the Town Center Framework Design Guidelines (Applicable to Alternative 4 and Alternative 1—No Action)



The above project is under construction in the Woodinville Schoolhouse District and Wine Walk Row, a partnership of MainStreet Properties Group, HAL Real Estate, and the City of Woodinville, redevelopment will include mixed use development. The 3-acre site will be redeveloped to provide 20,000 SF of retail including shops and restaurants in the restored historic schoolhouse, 8,500 SF of childcare space, 275 multi-family residential units, and 40,000 square feet of public open space including the Market Street promenade which will host special events.

Examples of the types of redevelopment that could be implemented under either Alternative 4 or Alternative 1—a mix of commercial, residential, and civic uses; upper left is The Hangar civic/retail building in Kenmore, which has an adjacent Town Green and plaza area

More examples of redevelopment that could be implemented under either Alternative 4 or Alternative 1—a mix of commercial, residential, and civic uses; up to 5 levels above grade(bottom photo is of Kiwanis Manor in Vancouver BC).

Recently constructed project in Sammamish that incorporates a multi-level grocery store with structured parking









Examples of public open space and amenities that could be provided as part of redevelopment

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.

Town Center Character

With redevelopment, the character of Town Center would change over time. The Town Center Vision, developed in 2018, 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.

The public engagement process has identified Pacific Northwest design as a preferred architectural style for community members and leaders. 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.

Development of specific Town Center Design Standards and Guidelines, along with amended LFPMC provisions could help to emphasize and encourage 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, and employment levels 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 4 or potentially more under Alternative 1, not including any background growth in the City of Lake Forest Park, which would be expected to be low.

Table 4.1.1
Estimated Population Levels at Build-Out

	Alt. 1 No Action*	**Alternative 4**
# of Units	700 or more*	700
Population	1,470 to 1,680 (with 1,000 units)	1,480

** Under Alternative 1—No Action, there would not be a cap on residential density, and as such, greater population levels could occur.*

As stated in Section 3.1, the City of Lake Forest Park's population declined between 2000 and

2010, but it recently reversed course and 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 in the near future. This means that the Town Center would likely become a primary focus for residential population growth in the community and a place that introduces more housing choices beyond the single family homes.

Employment—Estimated employment levels at Town Center with future redevelopment are shown in Table 4.1.2.

Table 4.1.2
Estimated Employment Levels at Build-Out

	Alt. 1 No Action	**Alternative 4**
Employees (FTE)	500	500

Note: This is a planning level estimate of potential employees in the future. Traffic analysis is not based on these numbers, but rather on trip generation assumptions by land use type.

Employment levels vary greatly by type of use, and it is difficult at this time to know how many people may work at Town Center in the future.

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 4 or Alternative 1, 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 these targets may need to be updated.

The Growth Management Act (GMA) requires cities to plan for sufficient areas and densities for growth anticipated to occur in a twenty year period. The King County Growth Management Planning Council sets household and employment growth targets for cities in King County in the Countywide Planning Policies (CPPs). The CPPs are used by King County cities as a framework to ensure certain parameters such as land capacity are planned for in a consistent manner countywide.

With the adoption of the 2015 Comprehensive Plan for Lake Forest Park, the City Council provided for zoning lot size and units/acre criteria at levels that would allow room for at least 551 units to be built within city limits by 2035. Housing Policy H-1.2 of the

Comprehensive Plan says, "Provide adequate supply of land to meet the City's housing growth target, as established in the King County Countywide Planning Policies."

While usage of the term 'target' creates understandable confusion regarding the purpose of the number, there is no policy or regulatory language in the GMA, the CPPs, or the LFP Comprehensive Plan which limits the City to the adopted growth target as a ceiling for housing growth. The intent is exactly the opposite. The target is a minimum land capacity floor that cities and counties planning under the GMA agree to provide to ensure that the projected region-wide growth can be accommodated within the Urban Growth Areas.

In addition, it has been observed that the 2004-2005 (*Sustaining a Livable Lake Forest Park: The Future of Our Town Center* study included a reference to "at least 150-250" units at Town Center (page 30):

"A vibrant Town Center would include on-site multifamily housing. City and regional demand, quantified in the market analysis, supports at least 150-250 multifamily housing units at the Center."

That statement is from Task Force's policy recommendations. It is important to note that the Task Force did not recommend a maximum density and that the Town Center regulations and Design Guidelines Framework that were adopted in 2006 did not have one. The number of units quoted previously was strictly an estimate of the market demand at that time. That was more than 15 years ago and regional economic and market conditions have changed substantially since that time.

Under the current LFPMC, the scale of development is primarily regulated by height (as discussed above). The number of units can expand depending on the size of unit that the developer thinks is most marketable. There has been a significant increase in the demand for multifamily residences in the region over the last decade. While the housing market was strong in 2005, the population growth and housing demand the region is experiencing today are unprecedented.

Aging in Place—Based on comments and information gathered through public engagement during the 2018 Town Center visioning process 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 consider adopting provisions as part of the Town Center Vision/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. By supporting mixed-income residential development, the MFTE program can help to ensure affordability as the community grows. Per Chapter 84.14.020 of the Revised Code of Washington, MFTE is available for 12 years where 20 percent of the units in multi-family buildings are affordable to low to moderate income households. The MFTE can also be available for 8 years in cases where the 20 percent requirement is not met.

***Commuting Patterns*—**Offering the opportunity for more residents to live near the future high capacity transit line and encouraging mixed use development 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.

Mixed use development can provide regional trip reduction benefits. If the same amount of development was built in a location that was not mixed use or proximate to frequent transit, the magnitude of vehicle travel may be higher,

as research consistently shows that mixed use developments generate fewer vehicle trips than other types of land uses. Bringing residents into proximity with shopping and services at Town Center could replace longer trips that previously had to be made outside of Lake Forest Park.

Consistency with Relevant Plans, Studies, and Projects

The Town Center Vision/Plan, if adopted, would encompass policies and recommendations based on the previously prepared 2018 Town Center Vision and aligned with the adopted City of Lake Forest Park Comprehensive Plan (2015), as well as other City plans and initiatives, Lake Forest Park Comprehensive Plan (2015). The Vision/Plan and any future redevelopment should be consistent with and reinforce other adopted City plans where applicable, such as:

- 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

All of these plans have been thoroughly reviewed as part of the EIS analysis. Redevelopment activities at Town Center could present a variety of opportunities to further reinforce and implement relevant local, regional, and state land use policies.

Redevelopment under either Alternative 4 or Alternative 1 would be compatible and would support the Sound Transit ST3 BRT project. Transit-oriented, mixed-use redevelopment should be strongly encouraged to support ridership by bringing more residents, employees, and customers in close proximity to high capacity transit.

MITIGATION MEASURES AND RECOMMENDATIONS

Because no significant adverse effects are anticipated related to land use and character, specific mitigation measures are not required. However, the following recommendations would be beneficial as part of ongoing planning and design at Town Center.

- The City may adopt specific design standards and guidelines 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.

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

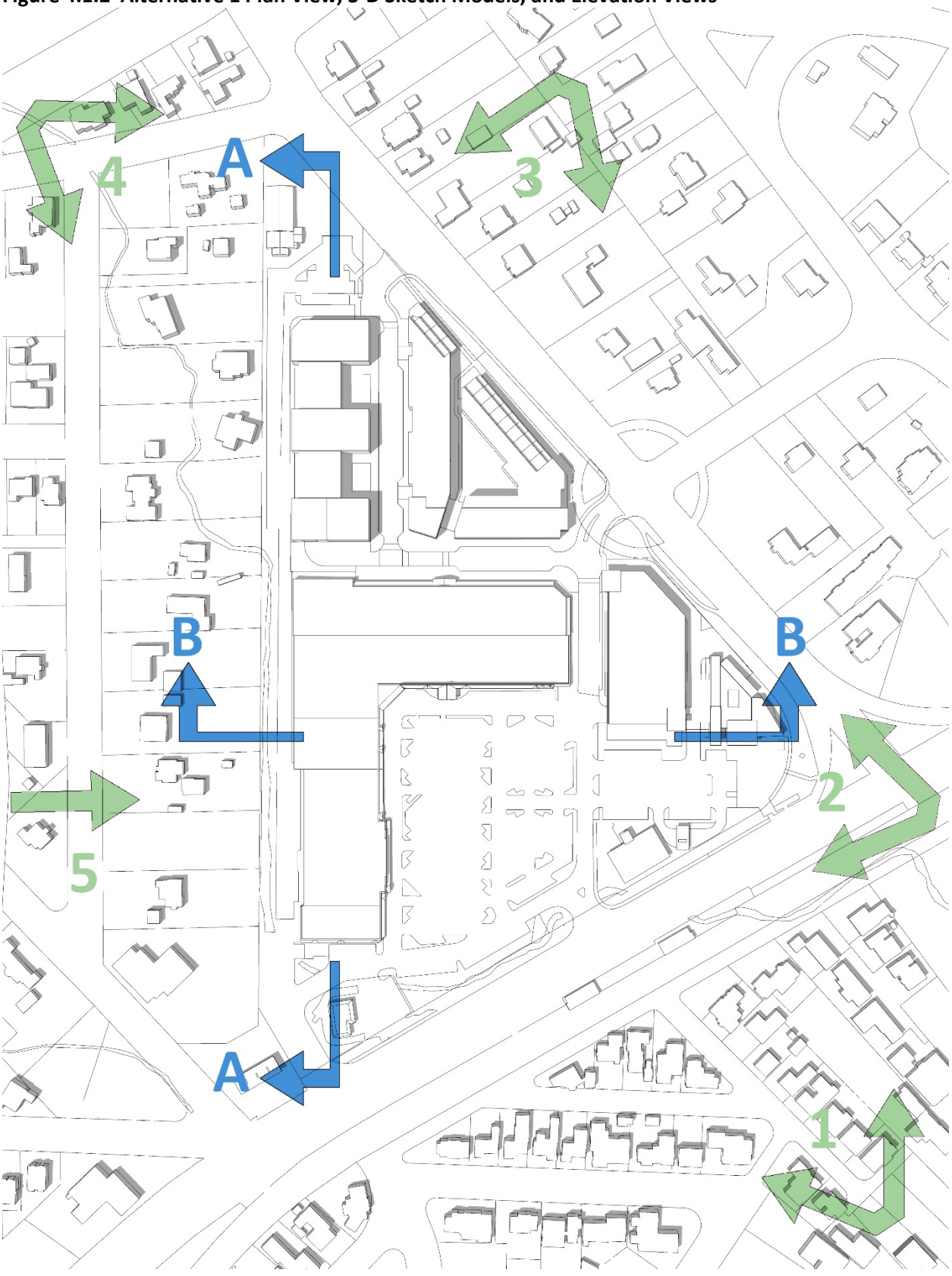
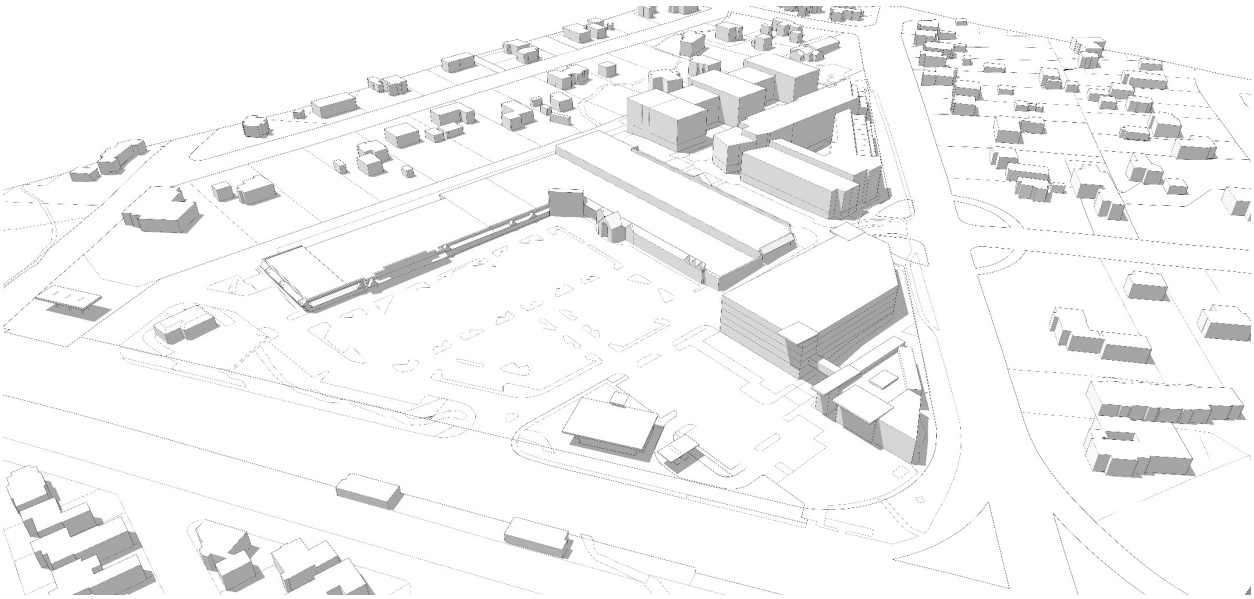


Figure 4.1.2a and 4.1.2b 3-D Sketch Models of Alternative 1—No Action



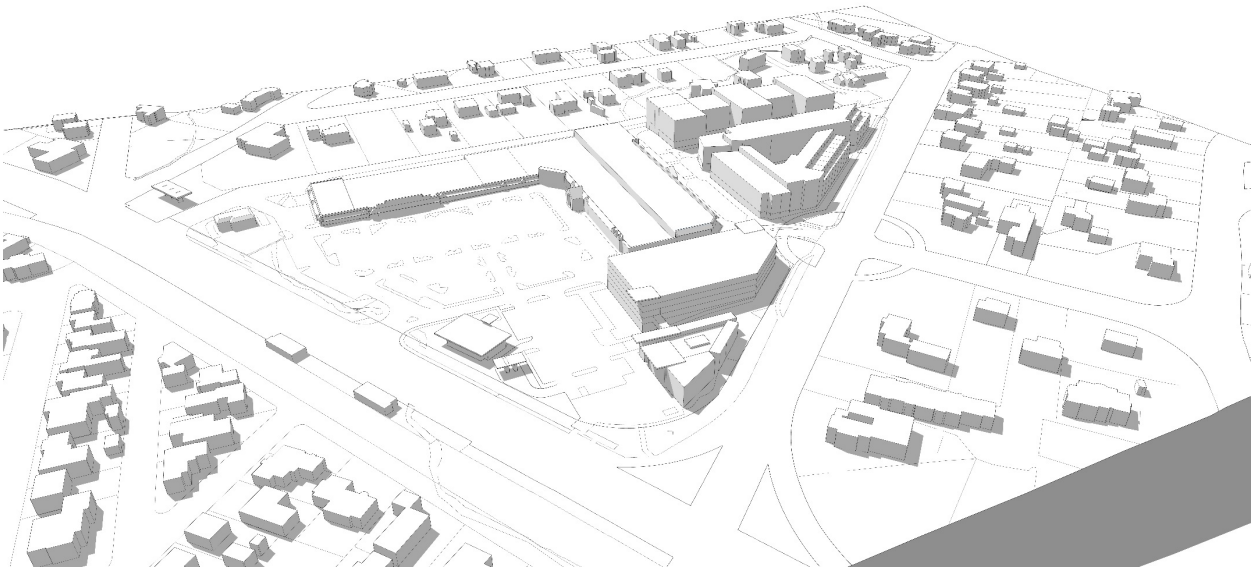
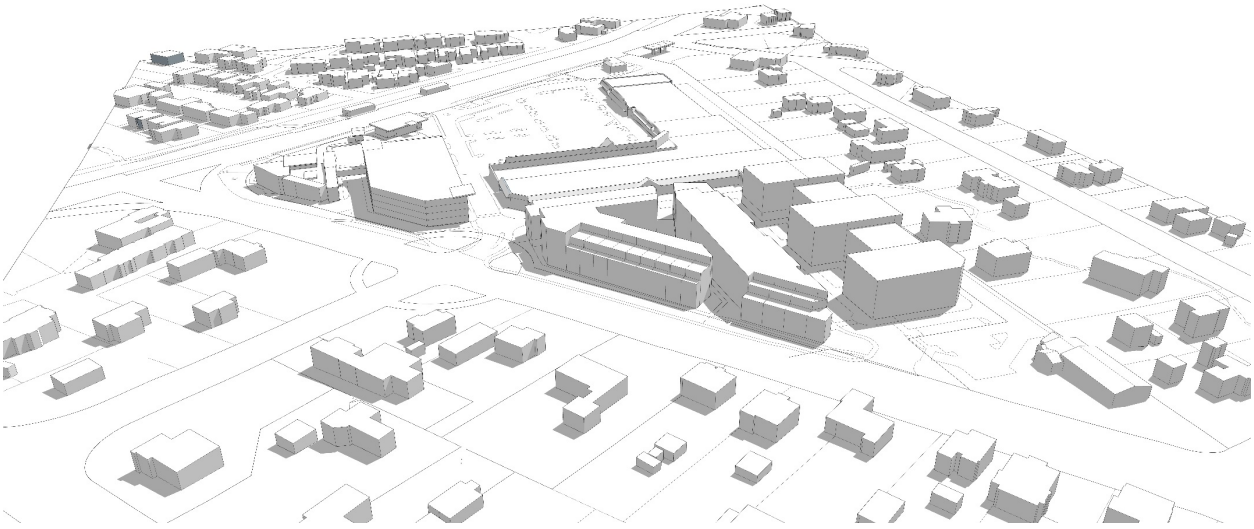


Figure 4.1.2c and 4.1.2d 3-D Sketch Models of Alternative 1—No Action



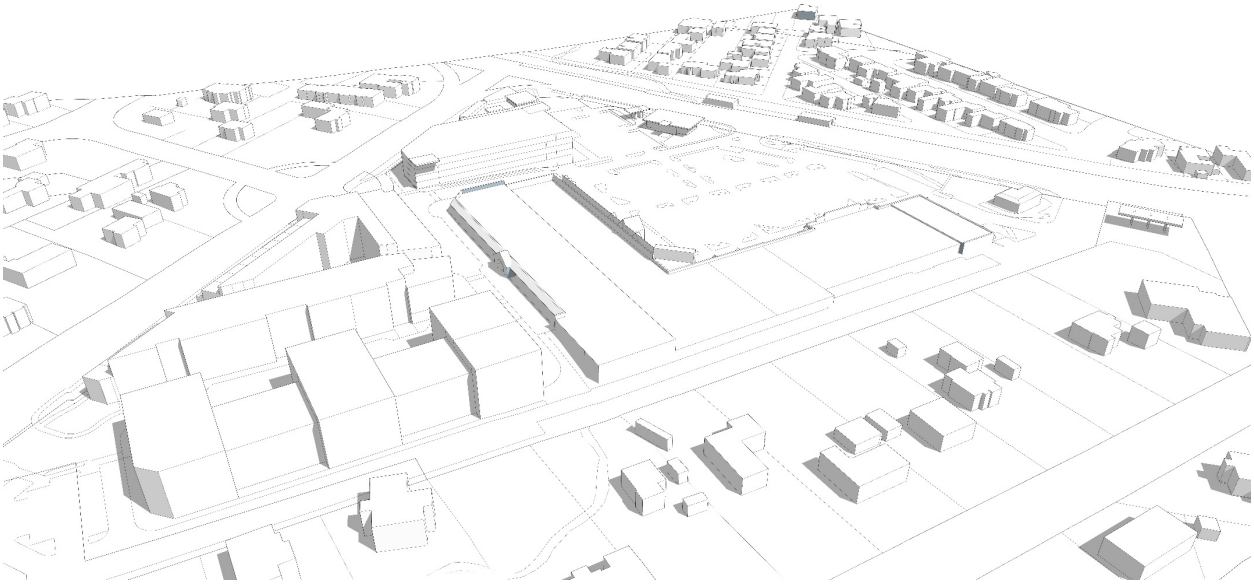


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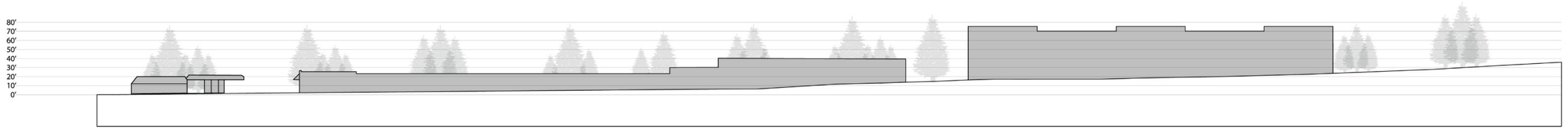
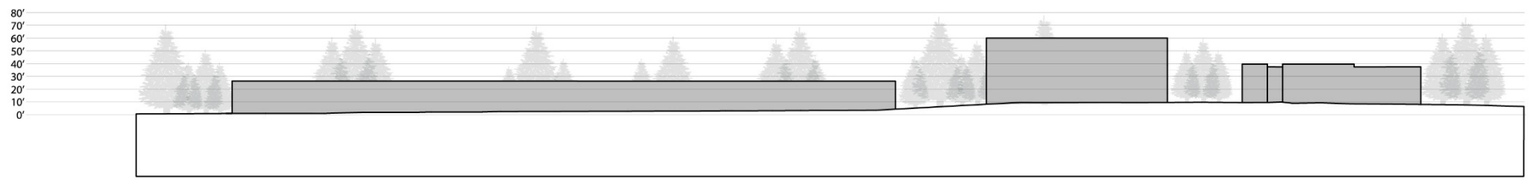
Figure 4.1.2e Alternative 1—No Action Conceptual Elevations



Elevation A
Facing West



Elevation B
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Figure 4.1.3 Alternative 4 Plan View, 3-D Sketch Models, and Elevation Views

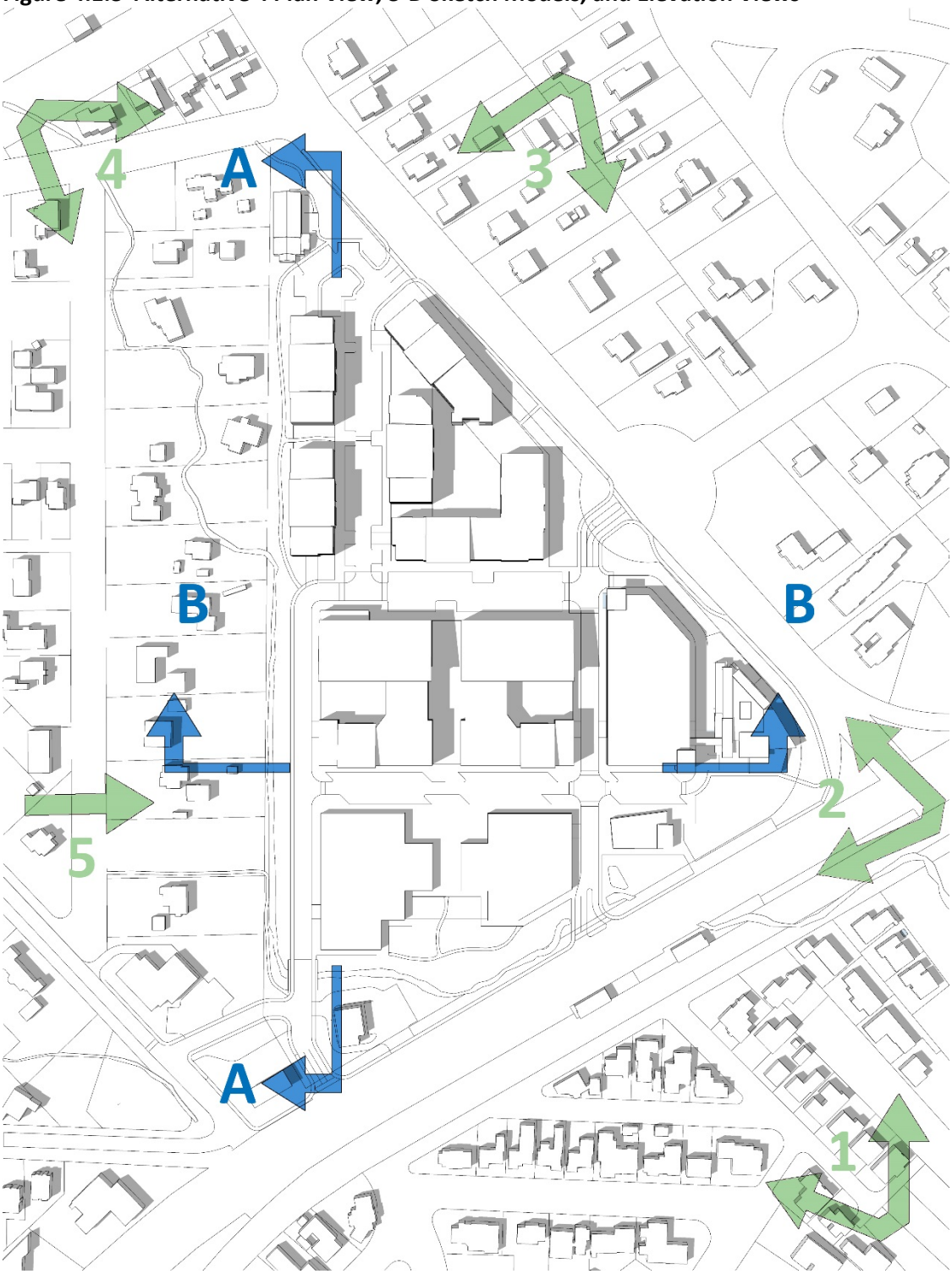
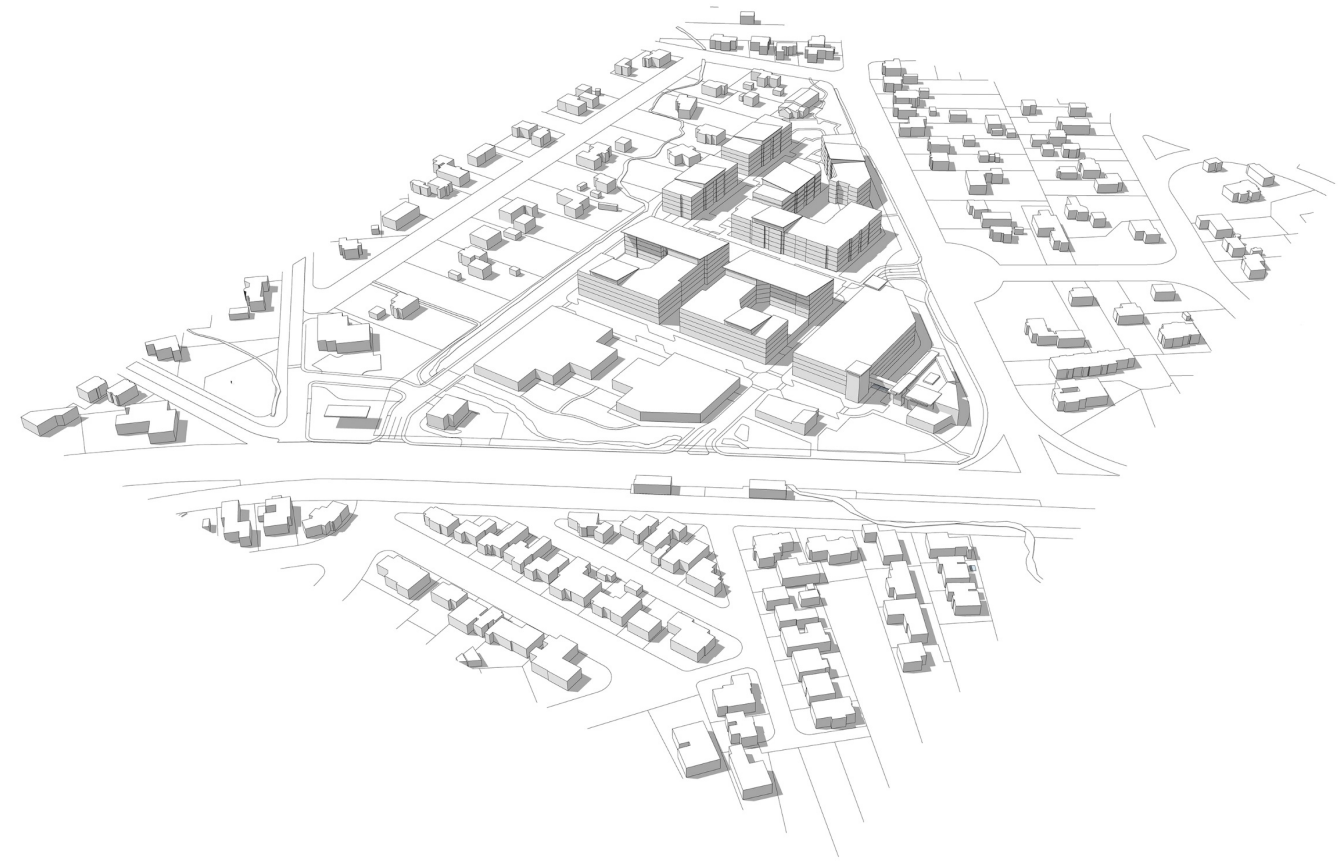


Figure 4.1.3a and 4.1.3b 3-D Sketch Models of Alternative 4



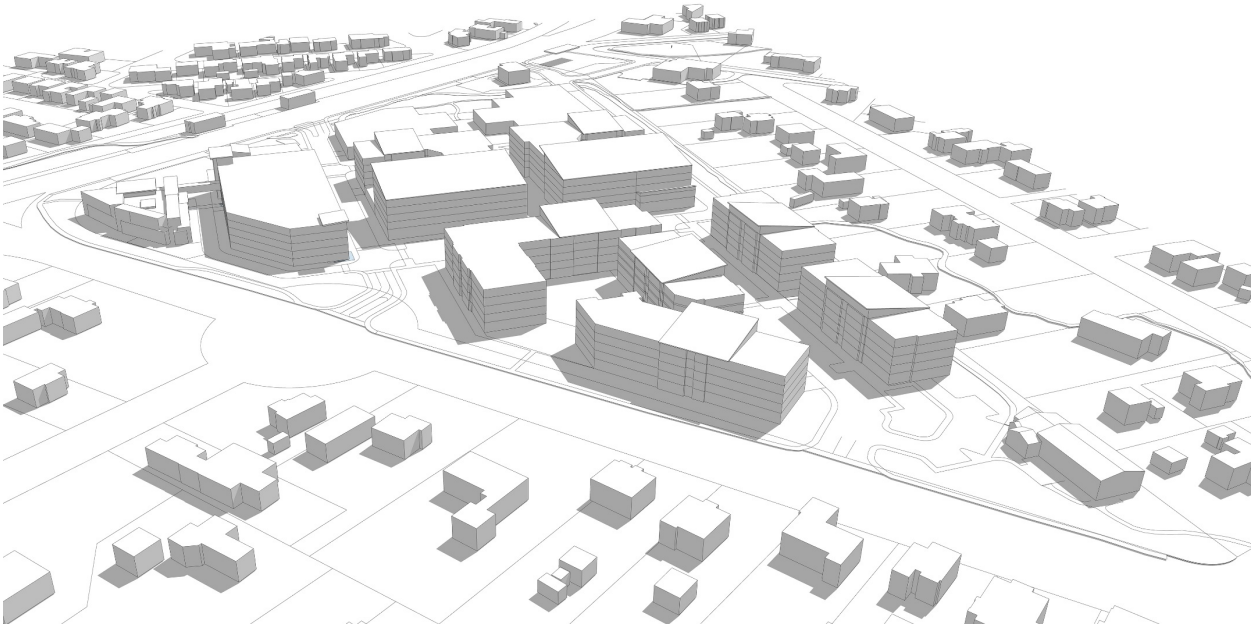


Figure 4.1.3c and 4.1.3d 3-D Sketch Models of Alternative 4

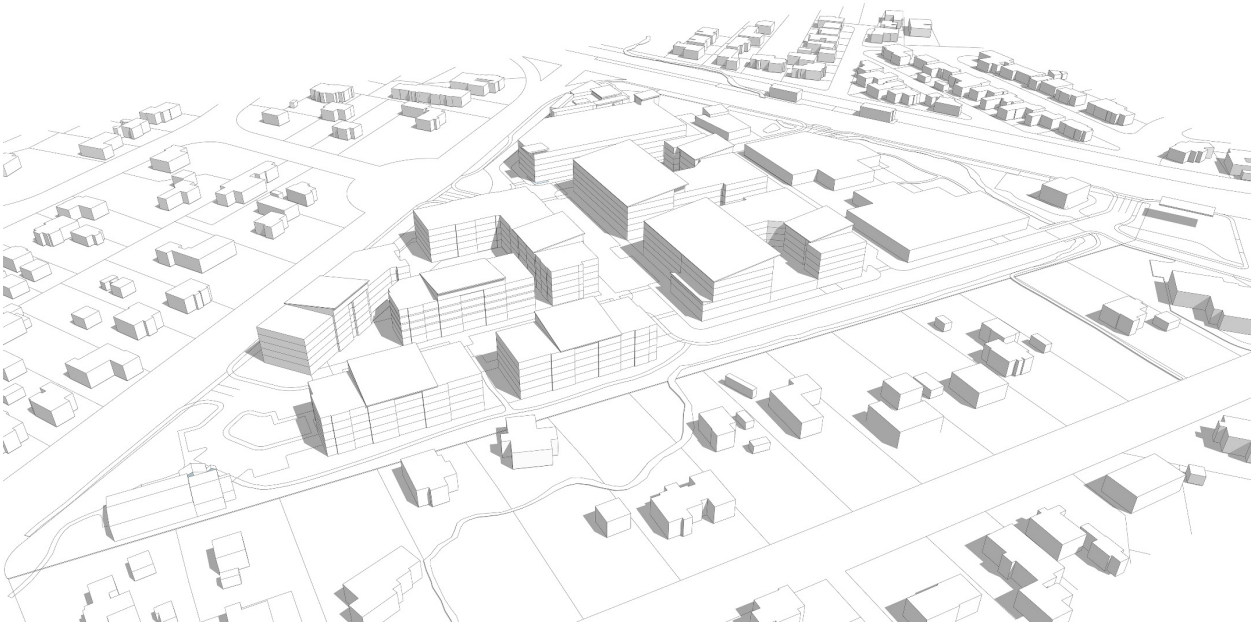


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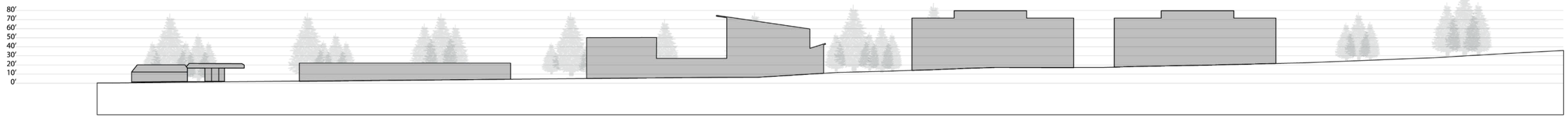
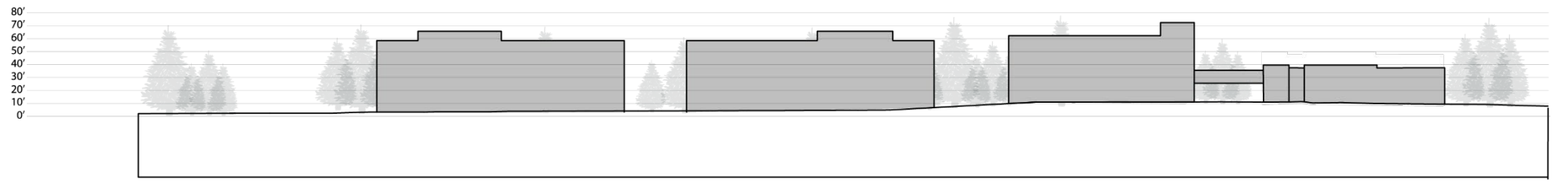
Figure 4.1.3e Alternative 4 Conceptual Elevations



Elevation A
Facing West



Elevation B
Facing North

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MITIGATION MEASURES AND RECOMMENDATIONS, CONTINUED

- 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.

- Consider the potential adoption of 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

No significant unavoidable adverse impacts are anticipated related to land use and character. Implementation of Alternative 4 would change the character of Town Center in a similar manner as Alternative 1, No Action. Alternative 4 would result in some differences compared to Alternative 1, No Action, if it is articulated as adopted amendments to the LFPMC that require:

- Specific open space including a minimum 2-acre open space requirement, focused in four locations of 0.50 acres minimum each (contiguous size);

- Specific amenities that if provided as part of redevelopment with the incentive of potential bonus height (up to five levels above grade maximum—one level above the base height currently allowed of four levels above grade), that could include elements such as (see discussion in Section 4.3, as well as earlier in this section of the FEIS); and

- A maximum residential density of 700 dwelling units.

Sketch Visualization Views of Conceptual Planning Scenarios from Whispering Willow Park and Neighboring Single Family Homesites (#5 View Arrow in Key Map)

Figure 4.1.4a Alternative 1—No Action

Figure 4.1.4b Alternative 4

Figure 4.1.5a Alternative 1—No Action: Sun/Shade Study

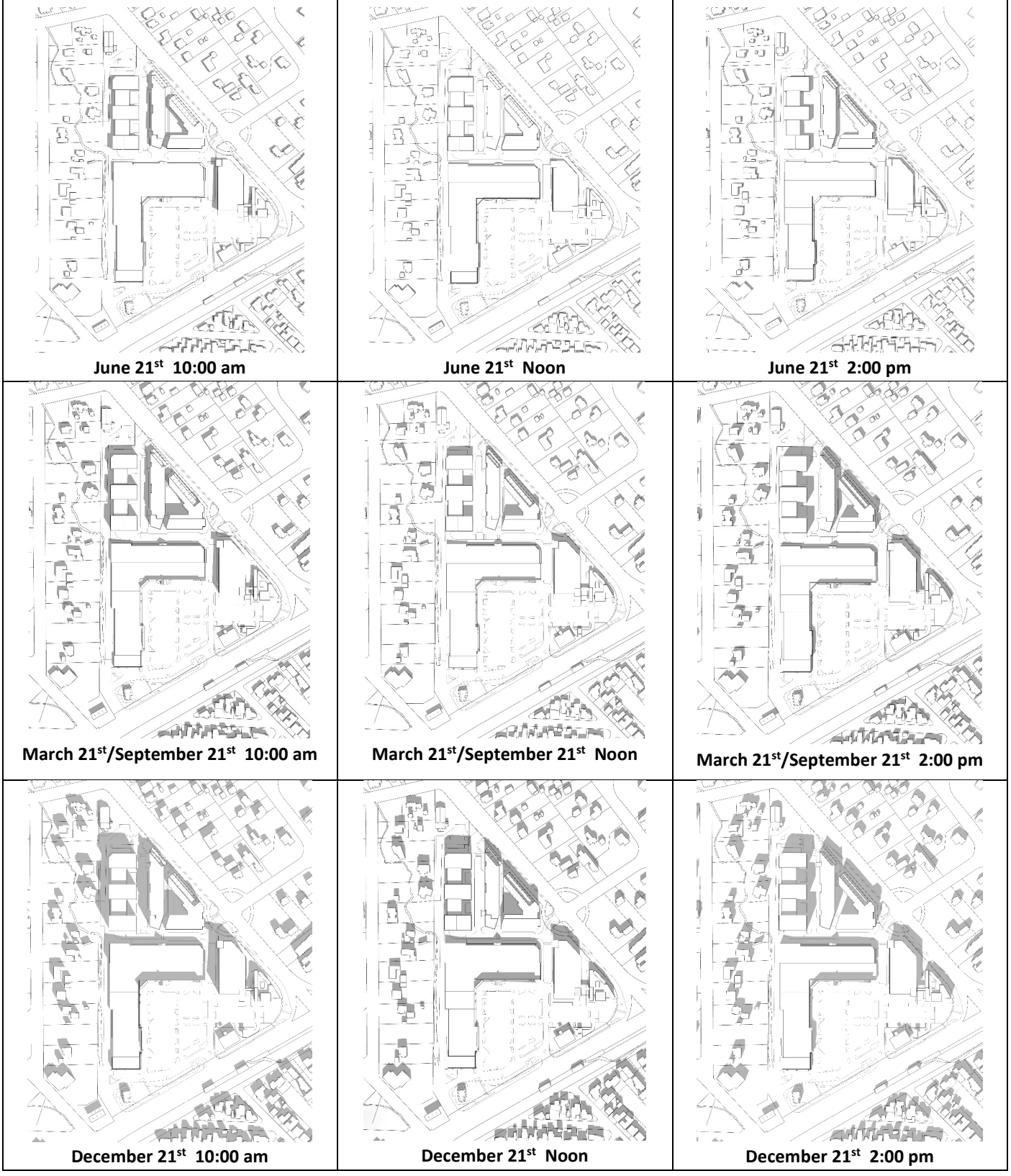
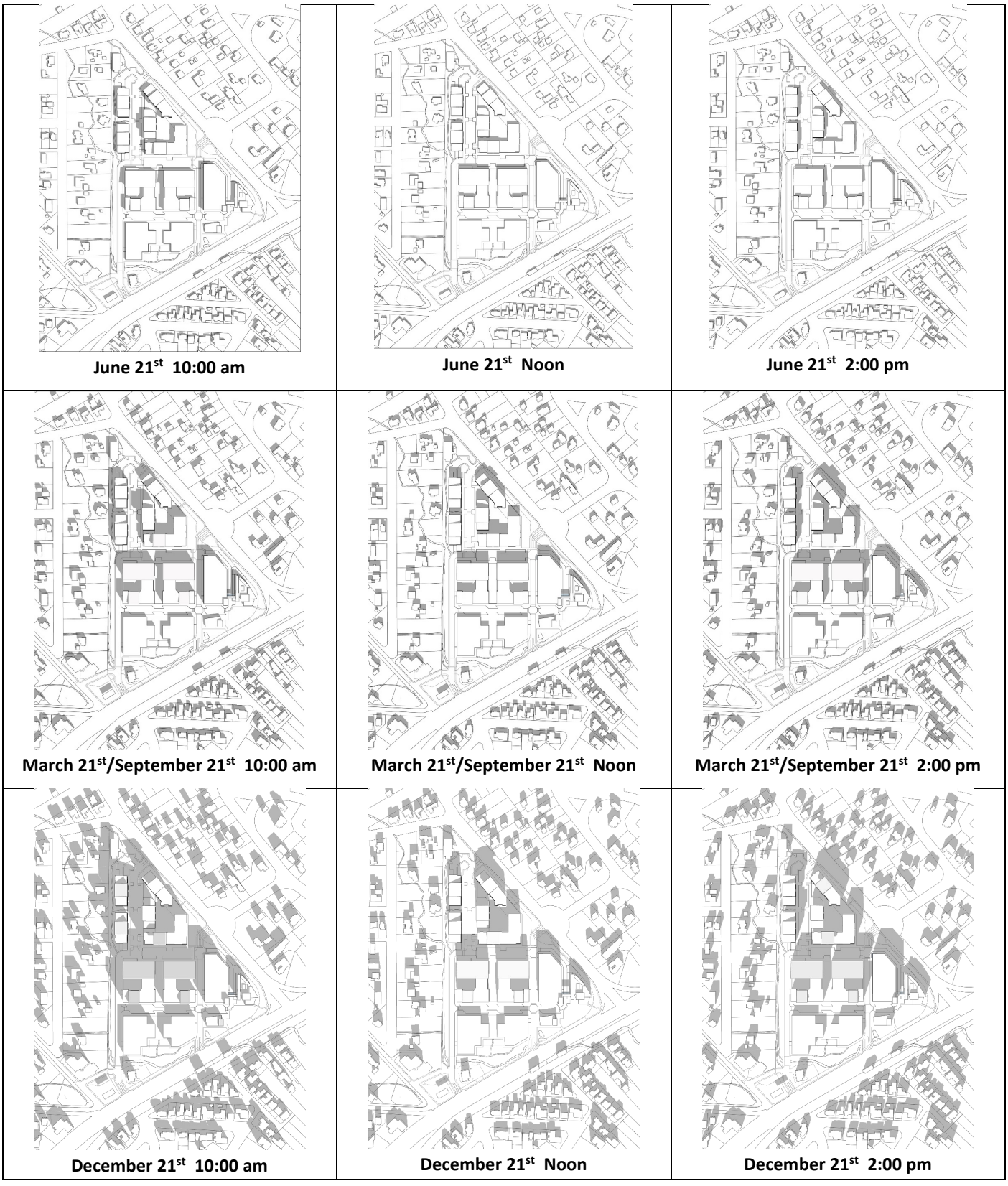
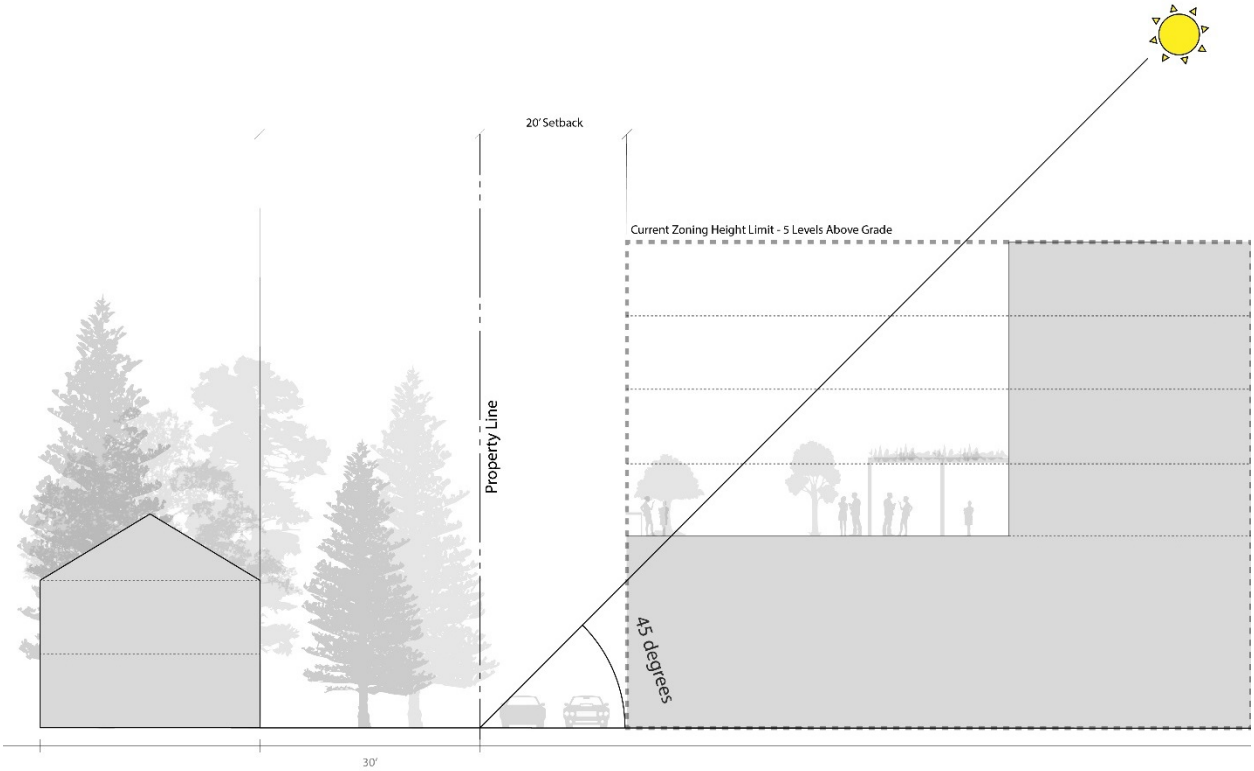
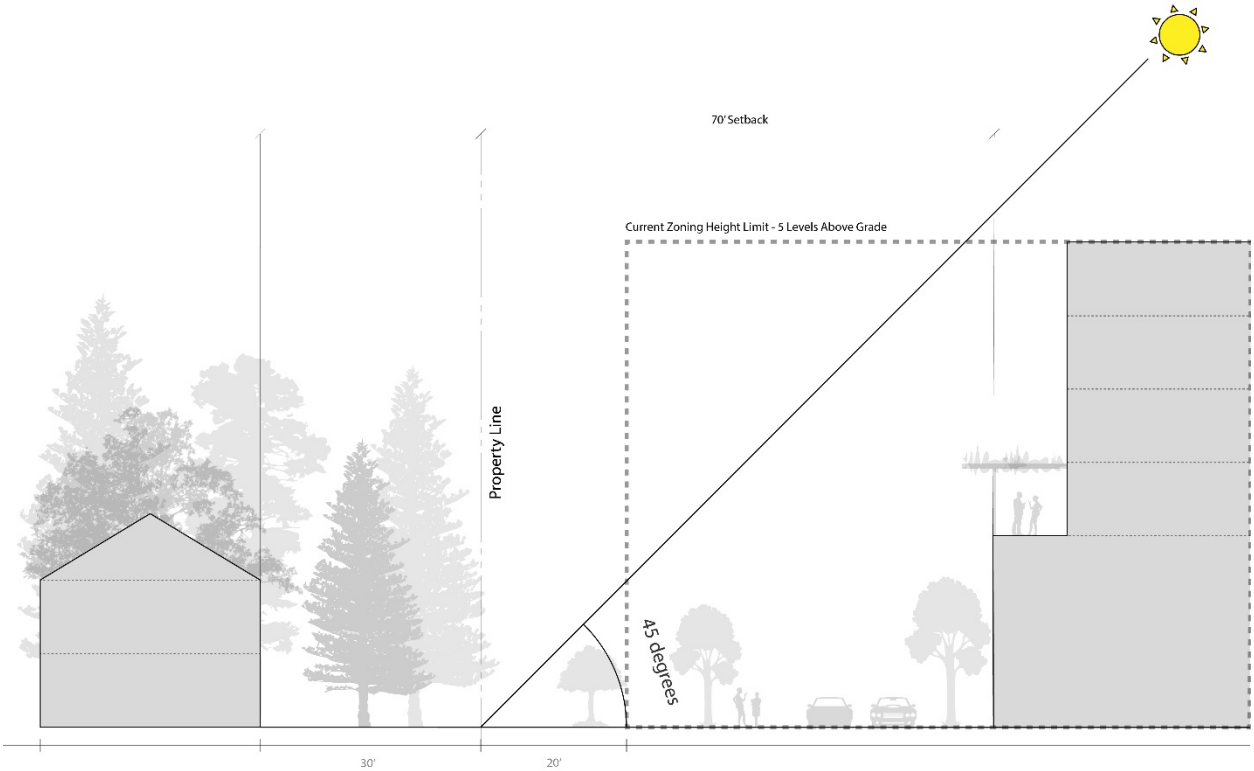


Figure 4.1.5b Alternative 4: Sun/Shade Study



Figures 4.1.6a and 4.1.6b—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 Vision/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.

Future redevelopment at Town Center would be required to be consistent with 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.

Amended planning and land use regulations in the LFPMC (as recommended under Alternative 4) would help to encourage and incentivize the provision of additional open space, trees, as well as various amenities, more so than under current regulations applicable to Alternative 1. Although, is important to recognize that Title 16 of the current LFPMC, Environmental Protection" includes a robust provisions related to:

16.04 Environmental Policy
16.06 State Environmental Act Implementation
16.08 Clearing and Grading
16.14 Tree Canopy Preservation and Enhancement
16.18 Shoreline Master Program
16.20 Flood Damage Prevention
16.24 Drainage Plans
16.25 Water Quality
16.26 Land Use Decisions Procedures

With redevelopment, the potential for beneficial improvements to surface water treatment and other 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, these provisions allow redevelopment to cover the same footprint of the current impervious surface area (as discussed in Section 3.2). With amended code regulations as studied under Alternative 4, the provision of certain types of open space improvements aligned with the community's vision for Town Center could be encouraged and incentivized. The greater the level of redevelopment that occurs, the more likely it is that these beneficial enhancements

across the Town Center site, including the Lyon Creek corridor, will be realized.

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 and Recommendations 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 disturbed and impervious condition could be improved by redevelopment that would upgrade surface water management and water quality treatment, create additional open space and landscaped areas, and expand the tree canopy. Low impact development treatments such as permeable pavements, rain gardens, green roofs, and other improvements could continue to be integrated into redevelopment.

Overall, implementation of either Alternative 4 or Alternative 1, No Action 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 avoid potential impacts through compliance with already existing regulations, as well as recommended best practices.

As stated previously, any redevelopment would be expected to occur incrementally, in phases over time, and with each phase there would be the opportunities to add environmental enhancements.

Alternative 4 likely would result in less population increase compared to Alternative 1, No Action. With the recommendation to create more specific provisions related to open space and amenities that could be incorporated into the LFPMC, Alternative 4 also may result in a greater level of environmental benefits, regulated and incentivized through amended LFPMC provisions and the potential adoption and implementation of a new Town Center Vision/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. Future development could encounter challenging shallow groundwater conditions, particularly in lower portions of the site. Historical reports indicate that the area along the original Lyon Creek alignment (which once was more centrally located on the site) included wetlands and wet soils. Decades ago, prior to current regulations, the site was heavily graded and soils and materials suitable for development were brought into the site to support buildings and paving. Geotechnical analysis and engineering should be completed with each phase of development to determine project-level construction methods.

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 vegetation 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

As a municipal National Pollutant Discharge Elimination System (NDPES) Phase II permittee, the City of Lake Forest Park is 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), which is accepted as equivalent by DOE. The City 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 an area of 5,000 square feet or more of

pollution-generating impervious surfaces that are subject to vehicle use or are used for outdoor storage of waste or chemicals.

A Full Drainage Review would be required with each phase of redevelopment and must adhere to the Core Requirements 1-9 and Special Requirements 1-5 as specified in the KCSWDM, and these would apply under Alternative 4 or Alternative 1. 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.

Since development 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. Alternative 4 studies the potential to decrease impervious area from current conditions, through structured parking on the site and more open space, landscaping, trees, and pervious surfaces.

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 stormwater discharges, compared to the existing built conditions.

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

Storm Event	*Existing (Current Condition)*	*Alt. 1*	*Alt. 4**
2-yr	5.80	5.48	5.48
25-yr	9.75	9.211	9.211
50-yr	10.79	10.19	10.19
100-yr	11.86	11.20	11.20

*Modeling results are similar to Alternative 1, but could result in less impervious surface area that Alternative 1 if open space quantity provisions are implemented.

Stormwater runoff rates under Alternatives 4 and 1 would not be expected to be higher than under current conditions as shown in Table 4.2.1. Projected runoff rates under Alternatives 4 and 1 are lower than existing conditions given that these proposed mixed-use development scenarios could have lower percentages of impervious surfaces areas (pavement and rooftops) than under current conditions. Less land covered by impervious surface areas results in less surface water or stormwater runoff. 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 an 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.

Chapter 16.14 of the LFPMC includes provisions related to tree canopy protection and enhancement. LFPMC 16.14.010 includes the following goals related to protection and enhancement of tree canopy:

A. Provide more diverse, healthier, and greater, predominantly evergreen tree canopy coverage to future generations of residents while protecting and respecting private property rights.

B. Maximize the storm and surface water, wildlife, climate change, human health, and other benefits provided by trees and their understory vegetation, including everything from their canopy to their roots.

C. Mitigate the economic, environmental, and community consequences of tree loss on public and private lands.

D. Implement canopy-based regulatory and permitting strategies that result in at least no net loss in tree canopy coverage and is grounded in a 30-year maturity cycle for trees.

E. Allow property owners to make reasonable use of their property while managing the trees, stands of trees and urban forests and their inter-related benefits.

F. Promote and prefer the retention of viable existing trees and mature tree canopy coverage over removal and replacement through encouraging project designs that utilize existing trees in the landscape, or allow replacement of select native or acceptable substitute tree species (as defined on the city's general tree list) to

maintain the urban forests of Lake Forest Park.

G. Protect exceptional trees that, because of their unique combination of species, age, size, location, and health, constitute an important community resource.

Chapter 16.14 of the LFP MC also sets tree canopy coverage goals for different types of land uses. For commercial sites the canopy coverage goal is 15 percent and is measured by the percentage of canopy provided by existing trees or the projected canopy coverage to be provided by newly planted or immature trees (when such trees reach 30 years of age). The existing tree canopy at Town Center today is less than 15 percent, although not all trees have reached maturity (or projected 30 years of age).

MITIGATION MEASURES AND RECOMMENDATIONS

Because no significant unavoidable adverse effects are anticipated related to surface water and natural conditions specific mitigation measures (beyond compliance with already existing local, state, and federal regulations) are not required. However, the following recommendations would be beneficial as part of ongoing planning and design at Town Center.

Based on the analysis of existing site conditions, it is anticipated that the overall imperviousness of the site could potentially be reduced with redevelopment. The hydrologic analysis conducted for this EIS shows that runoff rates from the site could be reduced from the current values. Because any redevelopment must meet the Core and Special Requirements of the KCSWDM, additional mitigation would not be required to address stormwater runoff from the Town Center site.

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.

In addition, there are a variety of best management practices (BMPs) that would address potential impacts to surface water and natural conditions that may occur with redevelopment in the Town Center planning area. BMPs 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) would 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 provisions (such as open space quantity and quality and various site amenity treatments) 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 recommendations also should be considered.

- 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 consider 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, tree boxes (e.g. Deep Root, Silva Cell)/pavement suspension systems, 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. 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 remove invasive species such as Himalayan blackberry, and English Ivy as part of their landscaping maintenance.

- 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 redevelopment under either Alternative 4 or Alternative 1, No Action, although Alternative 4 may result in more beneficial environmental outcomes if the open space quantity and quality provisions studied in this EIS are implemented.

INTRODUCTION

This section of the "Analysis and Mitigation" chapter of the Town Center Vision/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

Analysis of public and community services for Alternative 1, No Action, and Alternative 4 is provided in this section. The previously studied Alternatives 2 and 3 in the DEIS are no longer under consideration, and the DEIS analysis for those alternatives is now available in Appendix F for reference.

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 500 total full-time-equivalent (FTE) employees across all uses and buildings in the Town Center planning area.

Alternative 4—This redevelopment scenario would generate 1,470 people, the same as the lower range under Alternative 1, No Action (related to 700 dwelling units). 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 slightly more than the current level (approximately 500 total), because this alternative assumes lower vacancy rates and more vibrant commercial uses.

Municipal Services/City Hall

With the anticipated increase in population under either Alternative 1 or Alternative 4 alternatives, there would be additional demand for municipal services. The community and city representatives have stated that there is a lack of facilities and spaces for public and community meetings in Lake Forest Park. 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 and 4 with Estimated Background Growth

Alternative	Potential Increase in Demand at Full Build Out
Alternative 1—No Action	22 to 28 Percent
Alternative 4	22 to 28 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 book storage space in the branch library. The library, however, provides important services for those who lack access to computers. It also serves the important role of providing 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	Approx. +147 to +241
Alternative 4*	Approx. +147

**There could be slightly more demand for services with expansion of City Hall meeting room space.*

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 update 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 five level mixed use and residential buildings. 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.

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 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 and Recommendations 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. About the same level of demand would be generated under Alternative 4 as under Alternative 1, No Action. However, Alternative 4 assumes expanding City Hall space, which would address some of the Police Department needs described further below.

To address 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

Expanded patrol working area
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. About the same level of planning would be needed to serve Alternative 4 as would be needed under Alternative 1, No Action.

Potential population levels and related demand for capital improvements and facilities at Town Center 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 Vision/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

Residential use at Town Center is already allowed under the current LFPMC, and would result in increasing the population in the Town Center planning area (adding multi-family dwelling units). This could occur with or without implementation of Alternative 4, as this is already allowed under Alternative 1, No Action.

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 range 0.3 to 0.4 students per household was used to estimate the potential student population that may be

generated under the alternatives with future build out. Table 4.3.4 shows estimated K-12 student population generated by alternatives.

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 4	210

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. These percentages of total students attending elementary, middle school, high school are assumed as a baseline for this analysis. 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
Elementary School (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 4
Elementary School (K-6)	44.5 to 84.8	44.5
Kellogg Middle School (7-8)	48.9 to 93.2	48.9
Shorecrest High School (9-12)	116.6 to 222	116.6

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.

Shoreline School District's Planning for the Future—The Shoreline School District reports that capacity is available within the district to serve future growth. Enrollment is expected to fluctuate based on the most recent report prepared by Educational Data Solutions, LLC (Fall 2018), which was not yet available at the time the DEIS was published, but was recently provided by the District. Excerpts from this report include the following.

The Shoreline School District is currently looking at several options for addressing space issues in the District over the next several years. Given increasing concerns about space limitations at District schools, has limited the enrollment of students who live outside the District boundary due to space limitations in the District schools. This has also had some impact on enrollment, making it lower. At the elementary level the District once took in hundreds of

students from outside the District boundary area, but the most recent figure from October 2018 shows a total of 74 elementary students attending from an area outside the District.

For these and other reasons (slowing population growth in the region and slowing home sales) the updated forecast in the report is more conservative than one previously published in 2015 and more conservative than a more recent report completed in August 2018 (which was referenced in preparation of the DEIS). The report is still predicting that the District will grow over time, but now is predicting smaller net gains in the near term and better enrollment gains further out. The report references the extension of transit services into the District and the potential for accompanying housing development, which could affect District population and K-12 enrollment. In summary, the report states, "barring a severe economic downturn, or a change in the birth trends, King County and the Shoreline School District specifically are likely to see some continuing enrollment gains over the next decade."

The City of Shoreline, which also is located in this school district, recently rezoned areas around light rail stations to accommodate greater density. These areas could increase in residential density in the future, bringing more students to the area. The district retains several closed facilities that could be reopened if student populations increase in the future.

Recent and pending activities by the School District to address needs within its service area include:

- Opening an additional overflow kindergarten site (North City Elementary) for the 2019-2020 school year;
- Reducing class sizes in grades K-3 through state funding dedicated for that purpose alone;
- Moving 6th graders to middle schools in the fall of 2020, which is primarily to support instructional needs, but will have an added impact of making more classrooms available in the elementary schools for students K-5; and
- Assigning a committee to work on developing a recommendation for elementary school boundaries beginning in the 2020-2021 school year, with a recommendation due to the School Board in late Fall 2019; it is likely that boundaries may change because student growth occurs unevenly across the District while school facilities are fixed in place.

Source: Marla Miller, Deputy Superintendent, Shoreline School District, July 2019

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.

Under Alternative 1, No Action, the current LFPMC allows for residential use at Town Center, and density is prescribed by form with application of the Town Center Framework Design Guidelines. Alternative 4 assumes that residential use would be capped at a maximum of 700 units. As such, the potential demand generated for parks, recreation, open space, and trails under Alternative 4 can be calculated with more predictability than under Alternative 1.

At full build-out of the maximum 700 dwelling units under Alternative 4, there could be 1,470 new residents at Town Center, compared to the same or more under Alternative 1, No Action (2,400 new residents if 1,000 dwelling units were developed given that there currently is not a limit on density).

Comparison to a standard of acres per 1,000 population was analyzed. To determine correlation to this standard, existing parks and open spaces within a ten minute walking distance of town Center were identified from a review of the PROS-T Plan (see table 4.3.7).

More than 11 acres of public parks, open space, trails, and recreation areas are located within walking distance of Town Center, not including the facilities of the Lake Forest Park Civic Club (which are only open to members). It is important to recognize that existing residents in Lake Forest Park are already using these 11 acres of resources. From review of census population data, there are less 2,500 of the City's total population of 13,392 living within walking distance of these parks. That would mean that with 1,470 new residents at Town Center, 3,970 residents would have access to the 11 acres. This would calculate to a ratio of 2 acres per 722 people or 2.77 acres per 1,000 population. This ratio is a better service level than the existing citywide average of 2 acres per 1,000 people and consistent with the PROS-T Plan's objective of increasing the ratio of parks and open space lands per 1,000 people. However, this does meet the need to provide a certain level of open space on-site to serve new residents as well as the community's needs with Town Center as the community's gathering place. And not only is more space needed at Town Center, the right type of useable, publicly accessible parks and open spaces would be needed to serve the demand under Alternative 4, and even more may be needed to serve the demand of Alternative 1, No Action.

Conceptual Parks/Open Space Scenario for Town Center

An example formula for public and private open space based on standards in other town centers of the region was analyzed in the DEIS. However, as DEIS commenters expressed concerns that calculating open space demand based on a per dwelling unit formula could result in an insufficient amount of open space to serve the growing needs of the community and for Town Center to function as the community's central gathering place. It was also

pointed out that the analysis in the DEIS did not adequately consider existing demand of the current population on existing parks, trails, recreation, and open space. The analysis in this FEIS addresses these concerns and considers a new potential concept for serving the demand that may be generated by future residents at Town Center.

The analysis in the FEIS explores a master planning type approach to open space that would result in a minimum of two acres within the interior of Town Center that could be provided in up to four different locations, with each location having a minimum of 0.50 contiguous acres in size. Figure 4.3.1 illustrates possible locations and ideas for these four areas. Each area of open space could have specific performance objectives for design treatments and elements, based on surrounding land uses. The two acres of interior space would be in addition to perimeter setbacks around Town Center, which also could include open space areas and uses (counted in Table 4.3.7).

Figure 4.3.1 shows just one possible scenario of how two acres could be provided in multiple locations across the site. The City would work closely with project applicants on each phase of redevelopment to ensure that sufficient open space is provided to serve the existing and future uses and people associated with the project. Because current provisions in LFPMC do not require or recommend specific sizes and dimensions of open space for Town Center, this approach could be considered and incorporated into potential amendments to the code.

Table 4.3.7 Existing Parks, Recreation, Open Space, and Trails within 10 Minute Walking Distance of Town Center

Parks, Recreation, Open Space, and Trails Resources	Size in Acres
Blue Heron Park	0.50
Whispering Willow Park	0.62
Burke-Gilman Trail in Lake Forest Park (1 Mile Length within Walking Distance of Town Center)	2.00
Lyon Creek Waterfront Preserve	0.89
Existing Rain Gardens and Open Spaces and Perimeter Setback Areas (at Town Center) Likely to be Retained	1.40
Third Place Commons	0.23
Pfingst Animal Acres	3.90
Eagle Scout Park	0.30
Big Tree Park	1.30
Subtotal	***11.14***

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.

If two acres of interior open space were provided with Town Center redevelopment at full build-out, this would increase the quantity of parks, trails, open space, and recreation resources within walking distance to the population of 3,970 (2,500 current residents within walking distance of 11 existing acres, plus 1,470 new residents in Town Center) to 13.11 acres. This then reaches a standard of 2 acres per 610 people or 3.28 acres per 1,000 population.

In addition to open space, additional amenities should be provided as part of redevelopment could help to improve the standard in both quantity and quality of resources provided. As discussed in other areas of the FEIS, code

amendments could include a more specific list of desired amenities for Town Center that, if provided, could activate the bonus height/density of one additional level. The current LFPMC provisions under the Town Center Framework Design Guidelines include the bonus height/density provisions with mixed use development and certain amenities, but a more specific list or menu of potential amenities could be added to make the provisions clearer and meet additional community needs at Town Center.

In addition, a variety of private open spaces and recreation facilities should be provided to serve new residents at Town Center. These might include recreation centers, exercise rooms, playgrounds, barbeque and picnic facilities, and a variety of other private facilities for residents.

In considering the PROS-T analysis and reference to the NRPA survey, it is also important to consider that many town center areas tend to have lower ratios of parks/open space land to population given the typically more 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 20 acres not including the fire station and gas station parcels) and mostly privately owned. With this in mind, it is important to determine a set of standards for open space that can be realistically implemented with Town Center redevelopment. Figure 4.3.1, and the planning scenario for Alternative 4 provide a conceptual "test of fit" analysis of for the two acres of exterior open space, as well as potential amenities that could be provided with redevelopment.

Types of Public Open Space and Amenities

Examples of potential public open space areas and facilities that could be incorporated into Town Center redevelopment phases for general public use are listed below, as well as additional types of private amenities that could be provided. Many of these ideas are directly from the extensive community input gathered as part of the 2018 Town Center visioning process.

- Plazas, commons areas, and other social gathering spaces (outdoor and indoor)
- Native landscapes with GROVES OF TREES bringing residents into view and contact with nature
- Rooftop gardens and decks/areas designed with amenities and open to public use (could be oriented to views of Lake Washington, Mount Rainier, and surrounding forested areas)
- Community gardens and p-patches
- Pedestrian corridors and festival/shared street areas designed for public markets and events
- Children's play areas
- Multipurpose, multigenerational recreational spaces/areas, with places for event such as:
  - Outdoor movie watching
  - Food trucks/picnic spaces
  - Sports courts and outdoor games (pickleball, bocce, large chess and checkers sets, etc.)
  - Places to sit, relax, socialize
  - Year-round festivals and holiday celebrations
  - Things for teens and children of all ages to do
  - Senior activities
  - Community-scale concerts and performances

- Places for pets
- A perimeter loop trail around Town Center, which was a popular recommendation in the 2018 Town Center visioning process
- 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)
- Public art installations
- Entertainment facilities
- Indoor/outdoor community meetings/workshops and events space (including finding a permanent location for the Farmers Market and 3rd Place Commons, which is a high priority for the City of Lake Forest Park and the community)

  Preserving the function of the Third Place Commons, approximately 10,000 square feet of indoor space actively used by the community is extremely important to Lake Forest Park residents. 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 concerns that the facilities are outdated and have limitations in adequately supporting certain types of events. In the 2018 Town Center Visioning process, residents recognized that the Third Place Commons space is privately owned and 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.

  The Farmers Market is also highly valued, and residents are interested in ensuring that there will always be a permanent home for the farmers market at Town Center.

- Enhanced connectivity to the Burke Gilman Trail such as through improved at-grade crossings of SR 522, as well as a grade separated crossing
- And other types of parks and open space areas that could be determined through further planning and design

Other examples of potential private open space areas and facilities for the use of residents, in addition to those mentioned above, could include:

- Courtyards, plazas, and common areas oriented to private use
- Rooftop gardens and decks
- Outdoor exercise areas
- P-patches for residents
- Balconies and patios

Table 4.3.8 provides one theoretical example of how the interior open space areas at Town Center could be provided with redevelopment (assuming full site redevelopment/full build out). These are also conceptualized in figure 4.3.1.

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 would be ideal. 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 should be included. 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. A portion of the rooftop of the commuter parking structure could be devoted to a public garden, viewing area.

The analysis above and examples in Table 4.3.8 serve to demonstrate as a theoretical example how it could be possible to meet and exceed the current citywide average of 2 acres per 1,000 population, providing a sufficient quantity of parks, open space, trails, and recreation facilities, as well as an excellence in the quality of these resources to serve Town Center and community needs.

Table 4.3.8 Theoretical Scenario of Potential On-site Open Space Areas to Show Correlation to Comparable Standards

Type of On-site Space	Estimated Size (Acres)
On-site open space areas open to public use: - Grass and landscaped commons area with children's play areas, open to the public but also for residential area 0.50 acres - Town square plaza as part of festival street area 0.50 acres - Lyon Creek boardwalk and overlooks natural area 0.50 acres - Civic plaza near City Hall 0.50 acres	2.0
Other pedestrian corridors/social gathering areas/entrance plazas	1.0
Private patios and balcony spaces	0.50
Rooftop decks (on parking structure and other structures) open to public use	0.50
Bike station plaza	.10
Other amenities and spaces? Loop trail? (To be determined with future planning and design	
Total	**4.1**

Other Relevant Recommendations of the PROS-T Plan

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:

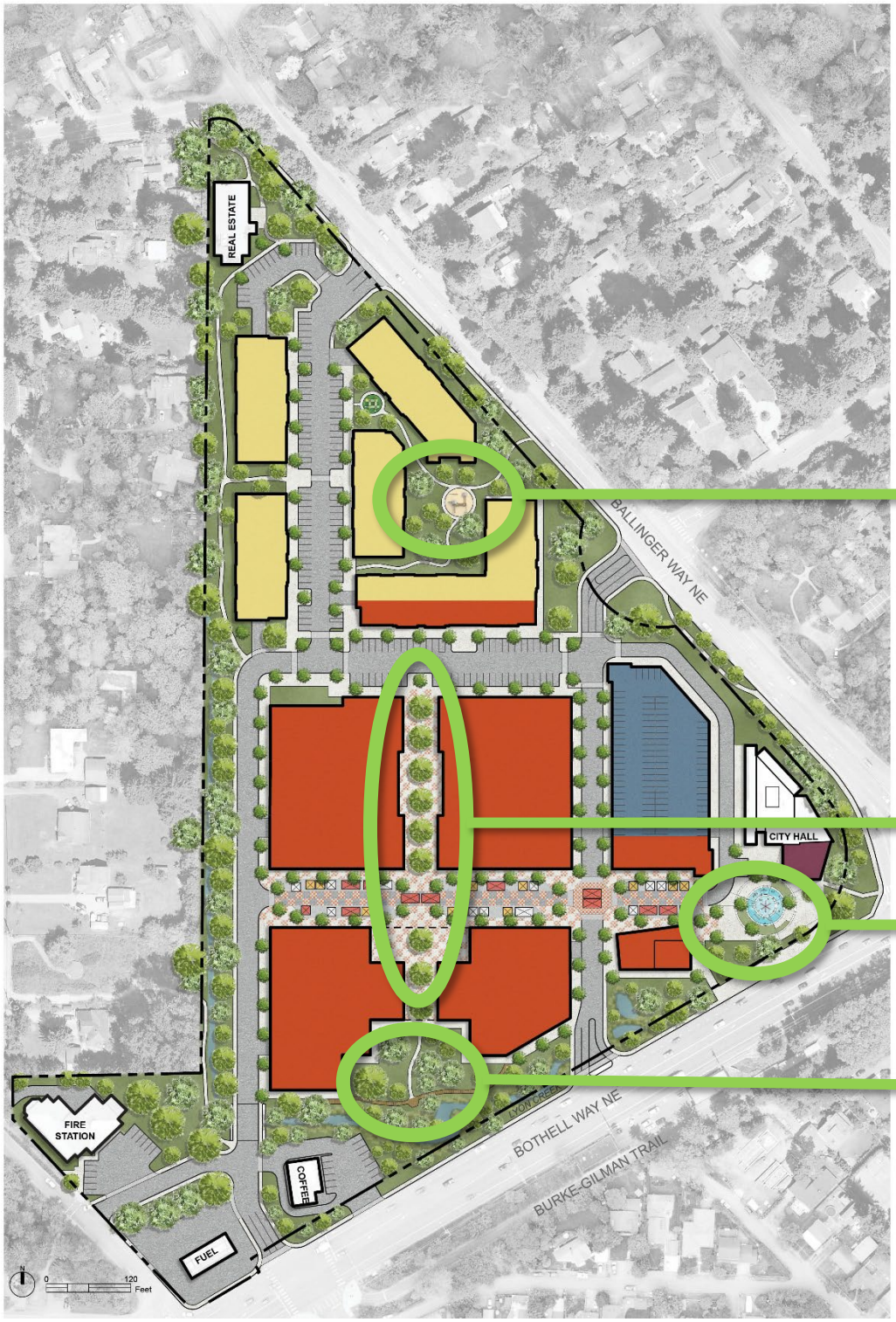
- Trails and connections
- More parks and open space and improvements to existing parks
- A community recreation center—there is a strong interest in a community/ recreation center providing space for public events, meetings, classes, and active recreation programs
- Lake access/investment in lakefront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

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.

Figure 4.3.1 Conceptual Open Space and Amenity Areas in Alternative 4 Scenario



Green commons with play areas and trees, 0.50 acres minimum

Central plaza area/town square, 0.50 acres minimum

Civic plaza space near City Hall, 0.50 acres minimum

Lyon Creek boardwalks, overlooks, and expanded natural area, 0.50 acres minimum

Also shown: Festival street/woonerf area, wider Lyon Creek buffers/setbacks, perimeter loop trail, rooftop gardens/common spaces, additional pedestrian corridors and landscaped areas.

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 at Town Center than current conditions. Alternative 4 would have could potentially generate less solid waste than Alternative 1, No Action since residential density would be capped at 700 units under Alternative 4.

The levels of solid waste generated would be manageable, 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 new residents living at Town Center, there would be an increased demand for a variety of other types of community services. As stated earlier in this section, Alternative 1 would generate an estimated population of 1,470 to 2,400 new residents at Town Center (if more than 700 units were constructed/assuming up to 1,000). Alternative 4, with residential density capped at 700 units, would generate an estimated population of 1,470 new residents.

MITIGATION MEASURES AND RECOMMENDATIONS

Because no significant unavoidable adverse effects are anticipated related to public and community services, specific mitigation measures are not required. However, the following recommendations would be beneficial as part of ongoing planning and design at Town Center.

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 could address the current issue related to 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 Vision/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 Vision/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 Vision/Plan.

Parks, Recreation, Open Space, and Trails

Based on the analysis in this EIS, as well as public and agency comment, the City should consider amending the LFPMC to include specific open space requirements for the Town Center Vision/Plan. These provisions could include specific requirements related to the quantity and quality of open space areas and amenities to be provided. Specific types of parks, recreation, open space, and trails improvements and facilities could be identified, consistent with those identified in the 2018 Town Center visioning process 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 in advance to serve the community and future 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

The City would 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

No significant unavoidable adverse impacts would be anticipated related to public and community services. Service providers would have the opportunity to proactively plan ahead to serve existing and new uses and residents at Town Center. Redevelopment would most likely occur incrementally, in multiple phases over time through the next 15 to 20 years and potentially beyond. Service providers would have the opportunity to plan ahead.

INTRODUCTION

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

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

ANALYSIS OF ALTERNATIVES

Alternative 4 could result in a lower demand for utility services than Alternative 1, No Action due to the cap on residential density at 700 units, as studied in this FEIS. It is likely that redevelopment would occur incrementally, in phases over time, and accordingly, service levels should be able to be planned and designed to keep pace with each phase of development. It is anticipated that a sufficient level of service would continue to be provided to existing and future uses and customers at Town Center through a combination of development supported improvements and customer-fee-supported capital improvements.

Sanitary Sewer

Potential impacts 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 per day. 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 4.4.1 – Comparison of Peak Daily Sanitary Sewer Flow Rates (GPM = Gallons Per Minute)

Scenario	*Peak Daily Sewer Flow (GPM)*
Existing/Current	681
Alternative 1	1062*
Alternative 4	1062*

**Based on an assumed residential density of 700 units, which could be more under Alternative 1 (and as such Alternative 1 could create higher demand). Alternative 4 could result in slightly higher demand shown with the potential expansion of City Hall.*

The projected peak flow for each of the future scenarios range from 56 percent higher than current conditions for Alternative 1 and Alternative 4. 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 studied in the DEIS (Alternative 3) which can be found in Appendix C. 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 973 GPM. Additionally the District recently signed a 50 year agreement with Seattle Public Utilities which provides up to 3,500 GPM (duration up to one week) for emergency use from the Tolt pipeline. The current physical capacity of the SPU-Tolt intertie is limited to 2,100 GPM 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. Service is calculated by "Equivalent Residential Unit" (ERU) factors.

- Recorded Single Family Dwelling (SFD) Average demand is about 200 Gallons Per Day (GPD) in LFPWD.
- Assume 1MFD = 0.75(ERU) 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 = 550 GPM
- Scenario Alt 3 Max. Day System = 550+195 GPM = 745 GPM < 973 GPM 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=360 GPM + 784 GPM (current system 2020) = 1,144 GPM
Test for source water rights 1,144 GPM > 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 3,500 GPM 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" 550 HGL zone to the "HGL Low Zone" of 294 feet (NAVD88 datum). 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 2,100 GPM. 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" 294 Reservoir may accommodate this need. However, this should be subjected to more detailed hydraulic modeling with the actual diurnal curve expected in the LFPWD network as part of each phase of redevelopment.

   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 625 GPM available for consumptive use resulting in an equalizing storage volume of 77,850 gallons.

Storage may still be adequate in the "Low Zone" 294 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 294 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 294 HGL 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.

Electricity

The Seattle City Light Planning Department conducted a feeder level analysis based on the potential heaviest case load (studied in relation to Alternative 3 in the DEIS). Analysis determined that no system improvements would be needed to accommodate load growth associated with the Town Center alternatives. As such, no system improvements would be needed to serve Alternative 4 or Alternative 1.

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 Lake Forest Park 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 with expansion of service made possible by customer-based fee revenues. Broadband cable and fiber optic services area readily available in the planning area to accommodate future growth and development.

MITIGATION MEASURES AND RECOMMENDATIONS

Because no significant adverse effects are anticipated related to utilities, specific mitigation measures are not required. However, the following recommendations would be beneficial as part of ongoing planning and design at Town Center.

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" HGL 294 feet although this would be most likely if fire suppression needs increased from the present 3,500 GPM for 3 hours. The additional demand due to the multi-family dwellings may not trigger the need for additional storage. Hydraulic modeling at the project level should be completed to confirm the needs of each phase of development.

For the purposes of this EIS, expected fire suppression needs for five level mixed use and multi-family buildings were estimated. For a hypothetical five level building fully protected with a fire sprinkler and built per current International Building Code standards, fire flow needs would be expected to be in the range of 1,500 gpm (Construction Type III-A) and 2,000 gpm (Construction Type III-B, V-A or V-B).

As such, there is no indication from the review completed by LFPWD's engineer, Mundall Engineering, that interties with other districts would be required to supplement LFPWD service. LFPWD would only need to consider another physical intertie with Seattle Public Utilities (SPU) if fire flow required for redevelopment was higher than 3,500 gpm. This would not be expected under either of the alternatives.

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.

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. The 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.

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 Lake Forest Park 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 are supported through customer fees and 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 at the project level, for each phase of development.

In the case of water service, future capacity of the Lake Forest Park Water District's supply would need to be analyzed with each phase of redevelopment proposed (project-level analysis). On-site improvements and facilities for connecting to the system would need to be determined through modelling and 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 at the Lake Forest Park Town Center. Potential impacts related to Alternative 4 in comparison to the No Action Alternative, Alternative 1, are analyzed. Alternatives 2 and 3 have been removed from further consideration in this FEIS, but the previous DEIS analysis has been retained and is available Appendix F for reference.

Existing transportation conditions, as well as anticipated future transportation conditions 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 on 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 both 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, potential planning scenarios for redevelopment were analyzed for multimodal transportation and parking. The planning scenarios are conceptual and hypothetical. They have been prepared for the purposes of programmatic, non-project analysis for this EIS.

Actual project-level plans for redevelopment in the future likely would differ from these scenarios. With completion of this EIS analysis and gathering of public and agency comments, the City may move forward to adopt a new Town Center Vision/Plan and/or update Lake Forest Park Municipal Code (LFPMC) provisions with design standards and guidelines to support implementation of the plan. At some point in the future, property owners may develop site master plans, as well as plans and designs for each anticipated phase of redevelopment.

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 both alternatives. The analysis considers the effects of the alternatives on vehicles, transit, freight, pedestrians, bicycles, parking, and safety. The Puget Sound Regional Council (PSRC) regional travel demand model, MainStreet trip generation tool, Synchro 10 software, and other technical references and standards were used 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 the alternatives studied in this FEIS. Refer to Appendix F for the previous DEIS analysis of Alternatives 2 and 3, which now have been removed from further consideration.

Assumptions Related to Alternative 4 and Alternative 1—No Action

Alternative 4 and Alternative 1—No Action study building forms and heights that could be built under current regulations. However, as stated above, Alternative 4 analyzes a potential cap on residential density of up to 700 dwelling units, as well as more specific open space and amenity requirements than currently provided for in the LFPMC.

Alternative 1—No Action preserves the central and southern legs of the existing Town Center complex, while introducing new residential and neighborhood-scale retail uses in the northern portion of the site. Alternative 1 includes a new commuter park and ride structure adjacent to City Hall that would provide 300 spaces and assumes that residential use could be located above the parking structure or other mixed use structures on site, and that commercial/active use could wrap one or more sides of the parking structure. 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. There is also the potential to create expanded community and civic space that could connect with City Hall in the floors above ground level along the frontage of the commuter park and ride, as shown in Alternative 4.

The new 300-stall commuter parking structure is proposed as part of the voter-approved regional 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 4 also assumes the 300-car parking structure with commercial/active use along the frontage, but does not analyze residential use above the parking levels.

Alternative 1 and Alternative 4 assume that the existing medical/dental office building (estimated size of 24,000 GSF) near City Hall would be replaced by the parking structure and that these could relocate to other spaces on site. For example, the planning scenarios show that some active use/commercial space could be developed along the southern frontage of the parking structure, and with redevelopment, there would be other potential new places for mixed use space.

Another difference between the Alternative 4 and Alternative 1 scenarios is that Alternative 4 analyzes the potential for expansion of City Hall, a need that was documented in the DEIS. Alternative 4 shows an approximately building expansion area of 12,000 GSF. The need for

expansion of City Hall, including space for police department functions, City operations, and civic and community meeting space, was identified as an outcome of the 2018 visioning process and this EIS analysis.

Alternative 1—No Action assumes that there would be no changes to current LFPMC planning and land use regulations for the Town Center, but Alternative 4 assumes at least some amendments to the LFPMC would be made to implement the density cap and potentially to include more specific open space and amenity provisions.

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 of the Town Center Framework Design Guidelines are applied. 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 Table 4.5.1 for more information on the land use assumptions for the different alternatives.

Sound Transit BRT Program Assumptions

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 is assumed under both alternatives in the FEIS (and was assumed for the previously studied alternatives in the DEIS).

Timeframe of Redevelopment

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

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 the 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 4
Non-Residential Gros Square Feet (GSF)				
	Commercial/Retail/Active Use *(Commercial, Bank, Starbucks)*	192,500	190,500*	190,500*
	Office *(Medical/Dental, Windermere)***	40,000	16,000	16,000
	City Hall / Community Space	20,000	20,000	32,000***
Multi-Family (Units)		0	700	700
Sound Transit Parking Garage Spaces (does not include Town Center structured or surface parking)		0	300	300

* The EIS assumes that essentially the same amount of active commercial space would occur under both Alternative 1 and Alternative 4 but might be configured differently in future redevelopment plans. Commercial square footage would decrease slightly compared to existing conditions because the Lake Forest Bar and Grill would be removed.

** Alternatives 1 and 4 assume that the existing 24,000 GSF professional office building (medical/dental use focus) is replaced with a new parking structure. These uses could relocate into other space with redevelopment, so this doesn't necessarily mean they would be gone from Town Center. The 16,000 GSF shown is for the Windermere office building.

*** Assumes 12,000 GSF expansion of the existing 20,000 GSF City Hall and Police Department, as well as additional civic/community space.

NOTE: With each future phase of redevelopment, the applicants would need to complete their own independent project-level traffic and parking analysis aligned with their proposed uses and quantities of space and units.

Travel demand forecasts for the alternatives 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 period transit ridership is typically assumed to occur during the PM peak one-hour. Therefore, while all 300 park and ride spaces would likely empty during the PM period, it is assumed that approximately 125 outbound trips would occur during the PM peak hour, as shown in Table 4.5.2. 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.

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.

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 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.

Table 4.5.2 PM Peak Hour Vehicle Trips Generated by the Alternatives

Trip Category	Existing	Alternative 1 No Action	Alternative 4
Inbound Vehicle Trips (Town Center)	516	580	580*
Outbound Vehicle Trips (Town Center	564	560	560*
Inbound Vehicle Trips (Park and Ride)	-	-	-
Outbound Vehicle Trips (Park and Ride)	-	125	125*
Total Vehicle Trips	1,080	1,265	1,265*

Source: Fehr & Peers, 2019

Table 4.5.2 summarizes the PM peak hour vehicle trips generated by each alternative. Inbound trips generated by Town Center land uses during the PM peak one-hour are shown in Table 4.5.2 under Town Center Land Use. Studies have shown that on average, the number of reverse commute trips at park and rides is negligible, so no inbound commuter trips are assumed.[1]

* This analysis assumes that Alternative 4 will generate the same number of PM peak hour vehicle trips as Alternative 1, representing how traffic would operate on a typical day when the community meeting space is not being used during the PM peak hour. The 12,000 GSF City Hall expansion could result in more trips under Alternative 4 than Alternative 1 if community meetings were held around the time of the PM peak hour of travel.

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 and Alternative 4 would be expected to have similar auto mode share characteristics.

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.

[1] Sound Transit Mode of Access/Egress surveys, 2016

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

Transportation Network

Alternatives analysis related to the transportation network assumes that several improvements included in existing City plans, such as Safe Streets and Safe Highways, would be in place by 2035. Future phases of redevelopment Town Center and/or the Sound Transit commuter parking structure could trigger the need for other transportation improvements at Town Center, and these projects would need to complete their own independent traffic and parking studies to determine required project-level improvements.

Transportation network changes external to the Town Center would be the same under both alternatives. Existing City 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 for both alternatives:

- 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

It should be noted however, that the City Council has not yet adopted the Safe Streets and Safe Highways studies as planning documents and that the projects mentioned above are not yet included in the City's Six-Year Transportation Improvement Program.

Travel Demand Forecasting

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 alternatives assuming 2035 conditions are analyzed below. This includes effects on the pedestrian, bicycle, transit, and vehicular networks, as well as parking and safety.

Figure 4.5.1 Town Center Residential and Commercial Use Trip Distribution

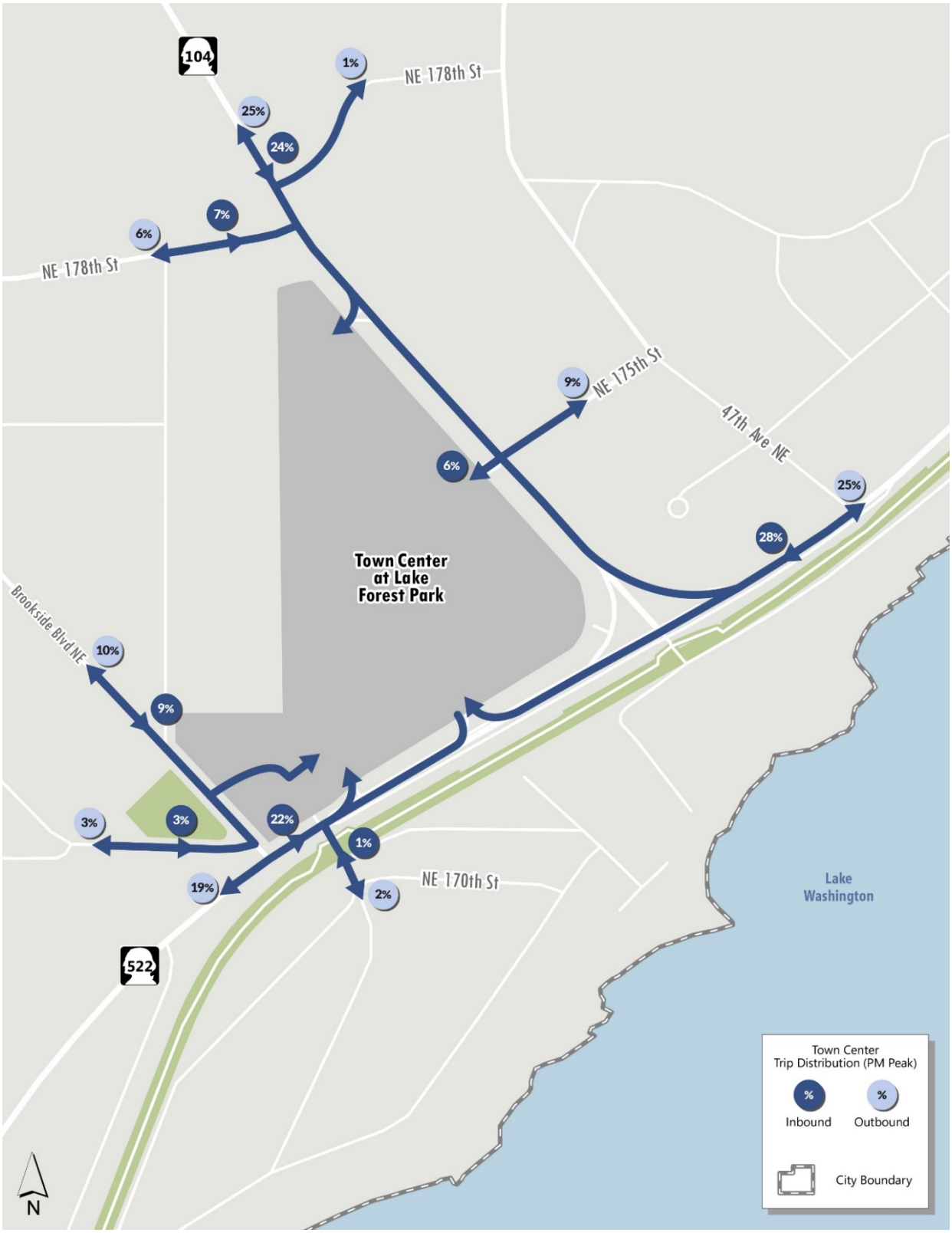


Figure 4.5.2 Town Center Park and Ride Trip Distribution

Alternative 1—No Action Compared to Alternative 4

Alternative 1—No Action serves as a baseline for the impact analysis of the Action Alternative, Alternative 4. Alternative 4 and Alternative 1 would have comparable effects on transportation, but Alternative 1 could potentially generate more demand for transportation facilities than Alternative 4 if greater than 700 units were developed in the future. Alternative 4 studies a potential cap on residential density of 700 units, while Alternative 1 would continue to regulate density by form (as applicable under current LFPMC requirements)

The Alternative 4 and Alternative 1 analysis also includes the regional growth expected to occur by 2035, which influences background traffic volumes along the state routes bordering the Town Center. This EIS identifies deficiencies if future transportation operations are not expected to meet the City's adopted level of service standards. The following definitions are used to identify deficiencies:

- 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).

Pedestrian, bicycle, traffic operations, transit, parking, and safety impacts are discussed qualitatively.

- **Pedestrian—**Because some redevelopment would be expected to occur under Alternative 4 and 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 both Alternative 4 and Alternative 1, no adverse effects to pedestrians are expected.

- **Bicycle—**New bicycle facilities within the Town Center site, as well as bicycling lanes, routes, or trails connecting bicyclists to and from the Town Center site could be developed in the future under either Alternative 4 or Alternative 1. Bicyclists could benefit from the internal roadway connection improvements associated with redevelopment within Town Center. 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. Under either Alternative 4 or 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 may need to be updated to better serve the potential heavy commuter/transit-oriented focus at this site. Under Alternative 4, there would be an opportunity to update and expand requirements to serve these needs.

- **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. This analysis assumes that Alternative 4 would generate the same number of PM peak hour vehicle trips as Alternative 1, representing how traffic would operate on a typical day when the community meeting space is not being used during the PM peak hour. If the meeting space were to be used during or near the PM peak hour, more trips may be generated.

  The PM vehicle trips under Alternative 4 and Alternative 1 would be projected to increase by approximately 185 trips compared to existing conditions. Due to these traffic volume increases, all study intersections except SR 104/NE 170th Street would be 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.

Table 4.5.3 2035 Alternative 4 and Alternative 1 Intersection Level of Service

ID	Intersection	Traffic Control	LOS Standard	Existing Conditions		Alternative 1 and 4*	
				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	SSSC (Existing) / 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, 2019

* As described in Table 4.5.2, this analysis assumes that Alternative 4 would generate the same number of PM peak hour vehicle trips as Alternative 1, representing how traffic would operate on a typical day when the community meeting space is not being used during the PM peak hour. If the meeting space were to be used during or near the PM peak hour, more trips may be generated.

- ***Traffic Operations, Continued***—Under Alternative 4 and Alternative 1, 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. As mentioned above, this analysis assumes the additional civic/meeting space does not generate trips during the PM peak hour. If a large meeting were held during or near the PM peak hour, there could be additional traffic operations impacts.

  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 4 and Alternative 1, even with the additional left turn lane assumed under the 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.

- ***Parking***—The multi-family housing units assumed to be built in the northern section of the Town Center site and mixed use buildings in other locations under Alternative 4 and Alternative 1 would include a mix of surface parking, as well as at-grade and below grade structured parking solutions. It is expected that developers would maintain or build adequate supply for their new needs and in compliance 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 either Alternative 4 or Alternative 1. Refer to the parking monitoring and adaptive parking management recommendations later in this section.

- ***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 either Alternative 4 or Alternative 1.

Thresholds of Significance

The transportation impacts of Alternative 4 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 would be identified if Alternative 4 would be anticipated to cause one of the following conditions:

- ***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. Alternative 4 would not be expected to create worse conditions compared to Alternative 1—No Action on a typical day. If a large meeting were held in the civic/meeting space during or near the PM peak hour, there could be additional traffic operations impacts under Alternative 4.

- ***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.

  As with Alternative 1, transit under Alternative 4 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 under any of the alternatives, and the projected increase in delay of Alternative 4 would be expected to

be comparable to Alternative 1, and therefore would not constitute a significant transit impact.

ASSUMED IMPROVEMENTS AND RECOMMENDED ACTIONS

Because no significant adverse impacts would result from implementation of the Action Alternative (Alternative 4), no mitigation measures would be required. However, assumed improvements and recommended actions to improve multimodal transportation safety and operations, to enhance the sense of place and pedestrian friendliness at Town Center, to minimize the potential for overflow parking, and to encourage connectivity and access to transit are described below.

Traffic and Street Improvements/Incorporated Plan Features

Under either Alternative 4 or Alternative 1, it is assumed 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 the alternatives. As previously discussed, to assess traffic operations and transit, the preceding analysis assumes the following two projects are already in place:

- 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.

It should be noted however, that the City Council has not yet adopted the Safe Streets and Safe Highways studies as planning documents and that the projects mentioned above are not yet included in the City's Six-Year Transportation Improvement Program.

Monitoring and Adaptive Management of Parking

With the increased number of residential units and people living at the Town Center, ensuring that parking is right-sized and well managed would be important under any future alternative.

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.

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. These improvements would enhance non-motorized access to and from the Town Center. In addition, on-site improvements would be needed with each phase of redevelopment throughout the interior of Town Center to enhance pedestrian and bicycle access, safety, and connectivity and to achieve the pedestrian-friendly character that the community desires there.

Additional recommendations related to the Town Center street system and pedestrian and bicycle facilities are described below.

- ***Multimodal Streets—***It is highly recommended that the internal circulation system at Town Center be designed as multimodal streets, so they operate similarly to public streets with delineated spaces for vehicles, pedestrians, and bicyclists, even though these streets may continue to be privately owned and maintained. This would improve walkability and safety for all modes. Sharrows could be provided on low speed, low volume streets to improve bicycling and bicyclists could travel at slower speeds with traffic, similarly to how downtown streets with slower speeds operate.

- ***Festival Street/Shared Street/Main Street—***As previously mentioned in Section 4.3 and other locations in this EIS, there is the potential to create a main street environment at Town Center that might include an enhanced shared street or festival street design approach. A "festival street" space, similar to the Dutch shared street concept, "Woonerf," could be integrated into the redevelopment plan, operating for customer circulation, parking, and shopping most of the time, but closed to traffic for special events, the Farmers Market, parades, and various festivities.

  Festival Streets are typically designed as at-grade, curbless streets that include enhanced paving, furnishings, lighting, public artwork, and other special features and design treatments resembling a pedestrian plaza (see photos at the end of this section). The Alternative 4 planning scenario shows an example of how a festival street could be integrated into redevelopment.

- ***Suggested Street Cross Sections—***As the Town Center Plan moves toward a project-level analysis, additional design and engineering evaluation of pedestrian and bicycle facilities would be necessary. 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 for consideration by property owners and developers. These ideas could be integrated into Town Center specific design standards and guidelines if created.

- ***Signed, Marked, and Delineated Crosswalks and Pedestrian Circulation Areas through Parking and Across Access Ways***—These are needed throughout Town Center and across adjacent and connecting streets, as well as at key entry points to buildings should be provided to enhance pedestrian access and safety.

- ***Continuous Sidewalks/Pedestrian Paths—*** Pedestrian connectivity should be provided throughout all areas of the site to connect all land uses and development area (north-south and east-west at intervals no greater in dimension than 300 feet in length, but the system need not be gridded).

Sidewalks should be provided along all frontages and connecting streets, including on NE 170th Street and Fire Station Road on at least one side of the roadway would improve pedestrian connectivity to the Town Center.

- ***Covered, Secure Bicycle Parking Areas***—A sufficient quantity of covered, secure bicycle parking should be provided for each type of land use and development in the Town Center planning area.

- ***Shared Use Loop Path—*** Redevelopment plans should explore the potential for a shared use path loop around the perimeter of the Town Center, identified in the visioning process as a desirable community recreation feature. The interest was for this path to be primarily for pedestrian and low speed bicycling use.

- ***Better Connectivity to the Burke Gilman Trail, Planned Bus Rapid Transit, and Local Bus Service***—Town Center property owners, developers, Sound Transit, King County, King County Metro, WSDOT, and others should work to improve connectivity between Town Center and the Burke Gilman Trail, as well as to the planned bus rapid transit stops on either side of SR 522 and local bus stops as well. A grade separated crossing of SR 522 should be explored through analysis of planning and design options and securing funding for implementation. A grade separated crossing, as well as improved at grade crossings at intersections of Bothell Way would benefit all property owners and transit and transportation agencies by improving multimodal safety and more seamlessly connecting pedestrians and bicyclists between Town Center with the Burke Gilman Trail and both sides of the proposed BRT station platforms.

Parking

- A parking utilization study/analysis and management planning and strategies should be required as part of 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.

- Property owners and the City should strongly consider implementing 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 could include design standards and guidelines developed to support implementation of transit oriented development and pedestrian and bicycle friendly site development, as well as street design that would enhance convenience and connectivity for all modes. More detailed design standards and guidelines related to the design of streets and parking areas than currently provided in the LFPMC could be added.

Figure 4.5.3 2035 Alternative 4 and Alternative 1 Level of Service Results

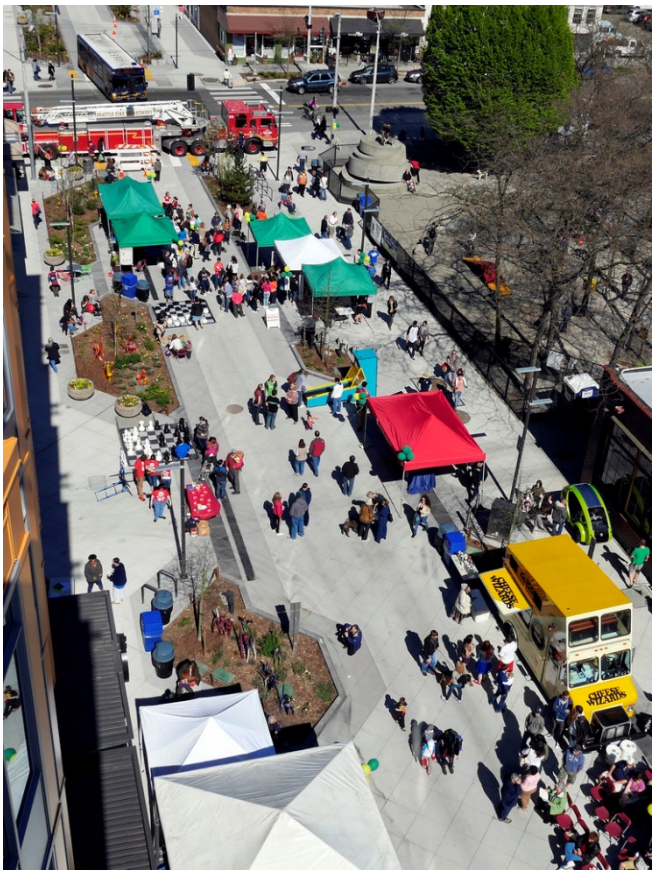
Figure 4.5.4 Conceptual Cross Section for a Local Access Street with On-Street Parallel Parking

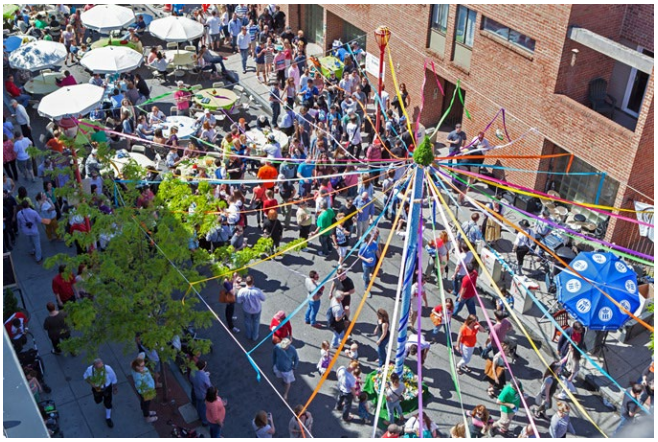
Figure 4.5.5 Conceptual Cross Section for a Local Access Street with No On-Street Parking

Figure 4.5.6 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.





MITIGATION MEASURES

Summary of Transportation Impacts

As mentioned previously in the chapter, Alternative 4 assumes a 12,000 GSF City Hall expansion that is not included under Alternative 1. This could result in more trips under Alternative 4 than Alternative 1 if community meetings were held around the time of the PM peak hour of travel, which could result in significant adverse impacts. To mitigate any potential impact to traffic operations, the City could manage the meeting space to ensure that it is not used during peak travel times.

One intersection – SR 522/SR 104 – is expected to fall below its LOS standard under ***both future year alternatives*** (as shown in Table 4.5.6 below). Because Alternative 4 would not result in any additional delay to traffic or transit compared to the No Action Alternative on a typical day, no significant adverse impact is identified at this location.

Alternative 4 would not result in any changes to pedestrian, bicycle, parking, and safety compared to Alternative 1; therefore, no pedestrian, bicycle, parking, or safety impacts are expected under Alternative 4.

As analyzed in the DEIS, Alternative 3 would have been the only action alternative resulting in an impact that would require mitigation, and as such would be avoidable. This was related to the SR 522/NE 170th Street intersection, and mitigation was proposed to reduce delay such that the LOS D standard could be met. Because this impact could be mitigated, no significant unavoidable adverse impacts would have been expected to occur. However, as noted previously in this FEIS, Alternative 2 and Alternative 3 have been removed from further consideration. The DEIS analysis for these alternatives is provided in Appendix F for reference purposes.

Table 4.5.4 Summary of Transportation Impacts Analysis

Type of Impact	Alternative 1 No Action Deficiencies	Alternative 4
Auto/Freight	1 intersection	1 intersection when meeting space not in use
Transit	1 intersection	1 intersection
Pedestrian	None	None
Bicycle	None	None
Parking	None	None
Safety	None	None

As specific development projects are proposed, they would undergo the City's project-level permitting review process, which would include additional traffic and queuing analysis, as well as parking analysis. That process may result in the identification of additional 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

With the mitigation measures summarized above in place, no significant unavoidable adverse impacts to auto, freight, transit, pedestrians, bicycles, safety, or parking were identified under Alternative 4.

However, the assumed improvement needs and recommended additional actions summarized earlier in this section of the FEIS would be important to implement to improve multimodal transportation safety and operations, to enhance the sense of place and pedestrian friendliness at Town Center, to minimize the potential for overflow parking, and to enhance connectivity and access to transit.