

FROG POND EAST & SOUTH MASTER PLAN



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A VISION AND IMPLEMENTATION PLAN FOR TWO
NEW NEIGHBORHOODS IN EAST WILSONVILLE

DRAFT - OCTOBER 2022



The October 2022 Draft Frog Pond East & South Master Plan is an in-progress draft. It is subject to change prior to the preparation of the hearings-ready draft. Some sections and graphics have placeholders for content to be revised or added at a later date.

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A VISION FOR FROG POND IN 2035

The Frog Pond Area in 2035 is an integral part of the Wilsonville community, with attractive and connected neighborhoods. The community's hallmarks are the variety of quality homes; open spaces for gathering; nearby services, shops and restaurants; excellent schools; and vibrant parks and trails. The Frog Pond Area is a convenient bike, walk, drive, or bus trip to all parts of Wilsonville.

FROG POND AREA PLAN VISION STATEMENT
ADOPTED BY THE WILSONVILLE CITY COUNCIL
NOVEMBER 16, 2015





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INTRODUCTION



PURPOSE - WHAT THIS PLAN IS ABOUT

A VISION AND GUIDING BLUEPRINT

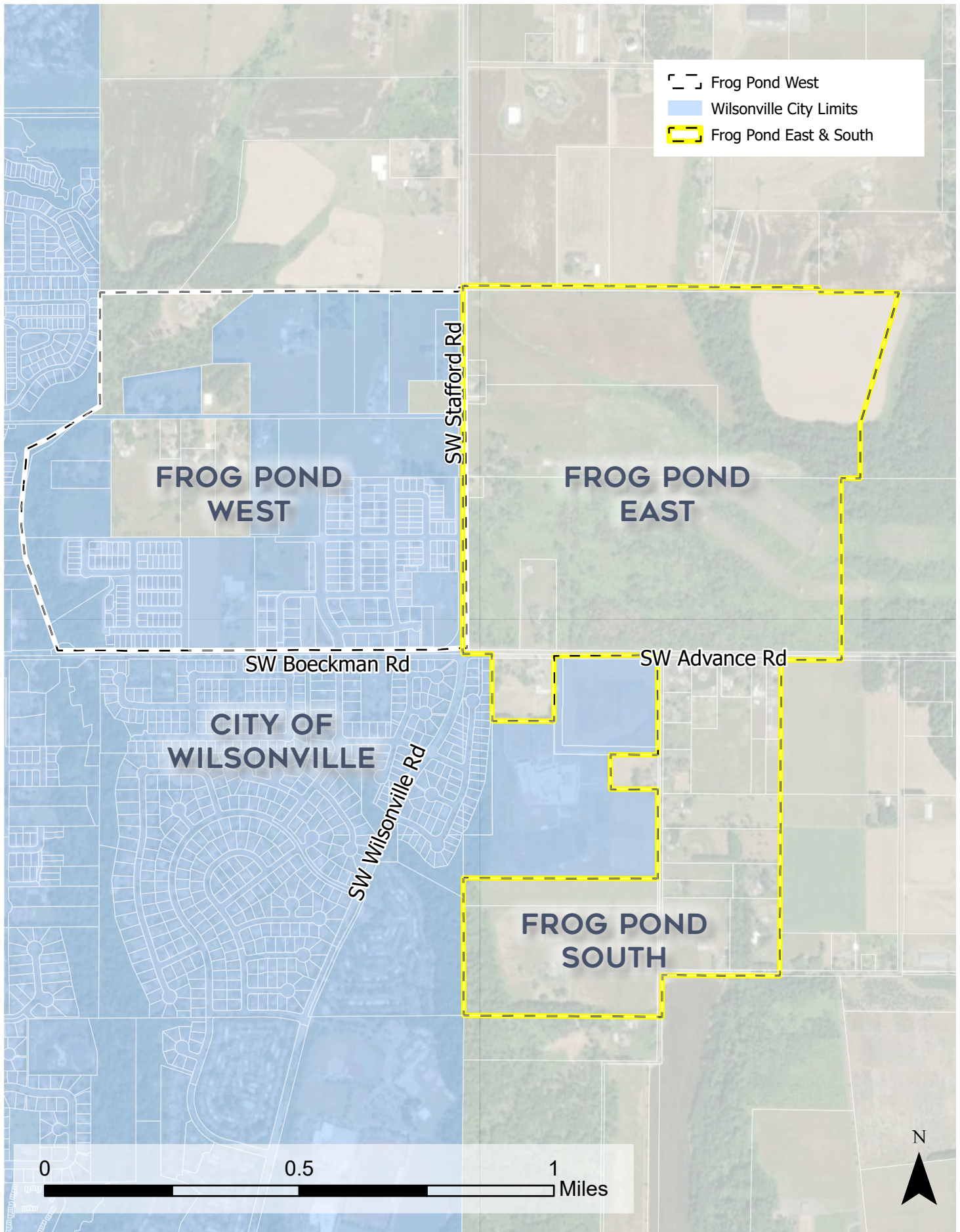
The Frog Pond East & South Master Plan (Master Plan) is a vision and guiding blueprint for the development of two new neighborhoods in East Wilsonville. It includes:

- The overall vision and intended outcomes for the Frog Pond East and South neighborhoods
- Background information on Frog Pond's context and setting
- An affordable housing analysis, with a focus on equitable housing strategies
- A market analysis of neighborhood commercial opportunities
- Design concepts to create a connected, livable community
- Neighborhood-specific plans for land use, streets, pedestrian connections, bike routes, parks and open spaces, and natural resource areas
- Transportation and utility infrastructure analysis, plans and cost estimates
- Implementation strategies for land use regulations and infrastructure funding

KNITTING TOGETHER A COMMUNITY

Frog Pond East and South will build out over a 10-20-year timeframe and occur in multiple phases and individual developments. North of Advance Road, the East Neighborhood is 172 acres in size and comprised of only 8 tax lots. The relatively large parcel sizes will use the plan to lay out phased developments that fit together in an intentional way over the years. South of Advance Road, the South neighborhood is different: its 121-acre area has 31 tax lots and about 14 existing homes. New development in the South neighborhood will need to blend seamlessly with the homes that remain, Meridian Creek Middle School, and the future 10-acre Community Park. The Master Plan plays a key role to ensure that all of the individual developments add up to connected and cohesive new neighborhoods that are an integral and treasured part of Wilsonville.

Figure 1. Frog Pond East & South Master Plan Area





SCOPE AND REGULATORY ROLE - HOW THE PLAN WILL BE USED

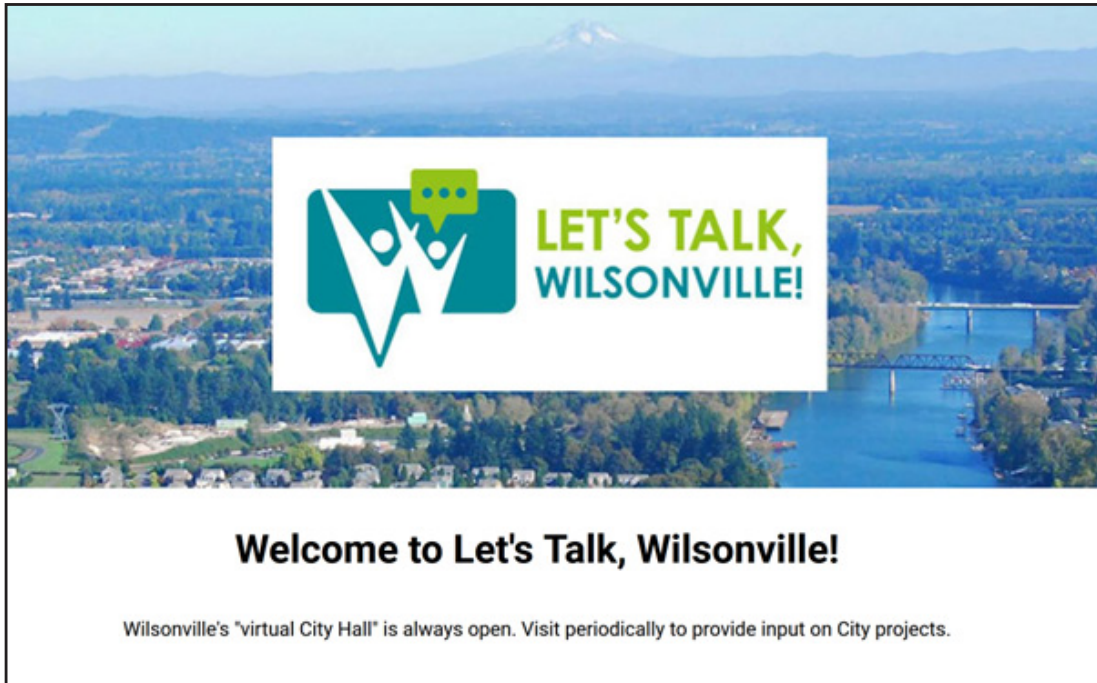
This Master Plan guides the 305 acre Frog Pond area that was added to the Urban Growth Boundary (UGB) in 2018, located east of SW Stafford Road and north and south of SW Advance Road East Wilsonville. See Figure 1.

The Frog Pond East & South Master Plan is a “supporting document” of the Wilsonville Comprehensive Plan (Plan), with the regulatory force and effect of the Plan. The Master Plan fits within the City’s three-part regulatory structure for development review:

- The Comprehensive Plan provides the policies and high-level intent for the Frog Pond area.
- The Master Plan establishes the overall vision and intended outcomes for the area; geographically-specific plans for land use, transportation, parks and open space, and other community elements; and implementing strategies for zoning, infrastructure development and funding.
- The Development Code (Code) establishes the specific zoning, standards, and procedures for development.

Development reviews that include housing will be subject to the Code’s clear and objective development standards as required by state law. For development applications that are reviewed through a discretionary process, the Master Plan serves a regulatory role.





The City's online engagement platform, Let's Talk, Wilsonville!, was used throughout the project.

THE PLANNING PROCESS – HOW THE PLAN WAS CREATED

Outreach summary to be included in revised version.

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VISION





VISION VISION

CONTINUING PRIORITIES FROM THE AREA PLAN AND FROG POND WEST

The vision for Frog Pond's three neighborhoods was first crafted as part of the Frog Pond Area Plan (see inside cover), and implemented for Frog Pond West. The key elements from that vision will continue as part of Frog Pond East and South.

As with Frog Pond West, Frog Pond East and South will create:

- **A great neighborhood** that is a connected part of Wilsonville.
- **A cohesive place** where individual private developments and public realm improvements fit seamlessly together into a coordinated whole.
- **A neighborhood with walkable and active streets**, a variety of housing, extensive walking and biking routes, an excellent school, and quality parks, open spaces, and natural areas.
- **Quality development and community design** that is an attractive and valued addition to the City.
- **Easy access to nature, parks and open spaces** for all neighborhood residents.

PLACEHOLDER IMAGE



VISION VISION

ADDITIONAL PRIORITIES FOR FROG POND EAST AND SOUTH

This Master Plan builds on previous work and incorporates the priorities as described below.

INCLUSIVE COMMUNITY ENGAGEMENT

The planning process invited all community members to participate and specifically reached out to people who do not typically participate in land use planning. There were many ways to participate: two focus groups to engage Spanish speakers; focus groups to involve renters and potential first-time home buyers; multiple open houses, community forums and tabling events; a design workshop; and 3 online surveys. All in all, the City took an inclusive approach to involve a broad spectrum of the Wilsonville community.

IMPLEMENTATION OF THE CITY'S EQUITABLE HOUSING STRATEGY PLAN

Frog Pond East and South will be an important part of the City of Wilsonville's efforts to meet future housing needs and provide equitable housing options for residents. The City's 2020 Equitable Housing Strategic Plan (EHSP) recognized this and called for the Master Plan to establish achievable goals/targets for affordable housing in the area and integrate affordable housing into the master plan. This Master Plan identifies potential targets and strategies for affordable housing and how they may be applied as Frog Pond East and South develop.

MIDDLE HOUSING

To help implement the City's Equitable Housing Strategic Plan and Oregon House Bill 2001 adopted by the Oregon Legislature in 2019, in 2021 the City amended the Development Code to allow townhouses, duplexes, triplexes, and fourplexes - "middle housing" - in all zones that permit single-family detached dwellings. The amendments included updates to siting and development standards for single-family and middle housing throughout Wilsonville, and new regulations specific to Frog Pond West. This Master Plan takes middle housing implementation further by including strategies and regulations that will deliver a range of middle housing types throughout Frog Pond East and South.



HOUSING VARIETY AND AFFORDABILITY

This Master Plan is built on two principles for housing implementation:

- **Housing variety throughout** - The plan creates opportunities for a wide variety of housing choices in each neighborhood and subdistrict. This concept focuses on mixing and integrating different housing choices throughout the Frog Pond neighborhoods rather than having separate areas for separate housing unit categories.
- **Affordable housing integration** - The planned variety of housing - together with minimum density, housing mix requirements, and other code standards – will provide opportunities for the development of housing types targeted toward home buyers and renters with incomes of 80-150% area median income (AMI). This is the market-based and zoning-based strategy of the plan. Additionally, the land use, transportation, open space, and infrastructure elements of the plan set the stage for affordable housing initiatives that City may wish to undertake in the future.

Please see the Residential Land Use section for more information on how the above priorities are implemented.

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CONTEXT & SETTING





CONTEXT AND SETTING

REGIONAL AND CITY CONTEXT

Figure 4 and Figure 3 show the planning area in the context of nearby regional areas and East Wilsonville. Highlights are summarized below.

SURROUNDING AREAS

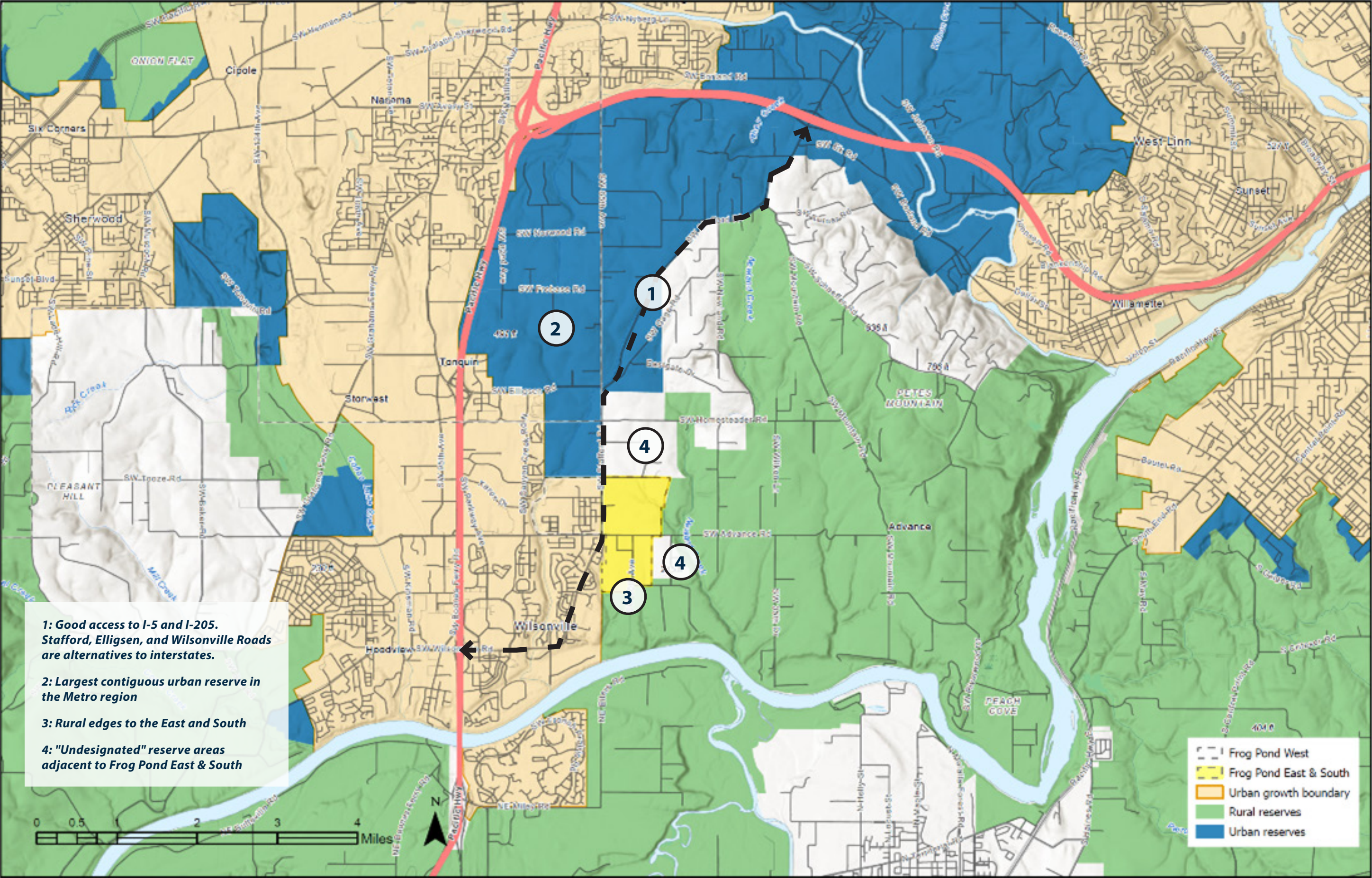
Regional access - The Frog Pond area has good access to I-5 and I-205. This proximity is convenient for regional travel, but poses congestion challenges because SW Stafford, SW Elligsen and SW Wilsonville Roads are alternate routes to the interstates.

Proximity to future Urban Growth Boundary expansion areas - Frog Pond is located at the southern end of the largest contiguous urban reserve area (the SW Stafford Basin) in the Portland Region.

Rural edge – The planning area is adjacent to lands designated “rural reserves” and “undesigned” by Metro. There will be a rural and agricultural edge to the East and South Neighborhoods for decades to come.

Gateways to Wilsonville – SW Stafford Road is a gateway into Wilsonville from the currently rural Stafford Road area and I-205 corridor. SW Advance Road is a gateway into Wilsonville for the large rural area of Clackamas County located eastward to Pete’s Mountain.

Figure 3. Regional Context



1: Good access to I-5 and I-205. Stafford, Elligsen, and Wilsonville Roads are alternatives to interstates.

2: Largest contiguous urban reserve in the Metro region

3: Rural edges to the East and South

4: "Undesignated" reserve areas adjacent to Frog Pond East & South



CONTEXT AND SETTING

EAST WILSONVILLE

Close proximity to local destinations:

- 1.7 miles to Wilsonville's Town Center and eastside employment areas (about 8 minutes by bicycle)
- 2.3 miles to Wilsonville's Old Town (about 12 minutes by bicycle)
- 1.6 miles to Memorial Park (about 8 minutes by bicycle)

Limited connectivity to adjacent areas of Wilsonville – Proximity to nearby destinations is good as noted above, but connectivity is limited. The Frog Pond area is reliant on SW Boeckman Road, SW Wilsonville Road, and SW Stafford Road. Existing and new trails, shown in Figure 4, will help supplement the street network and increase connectivity by foot and bike.

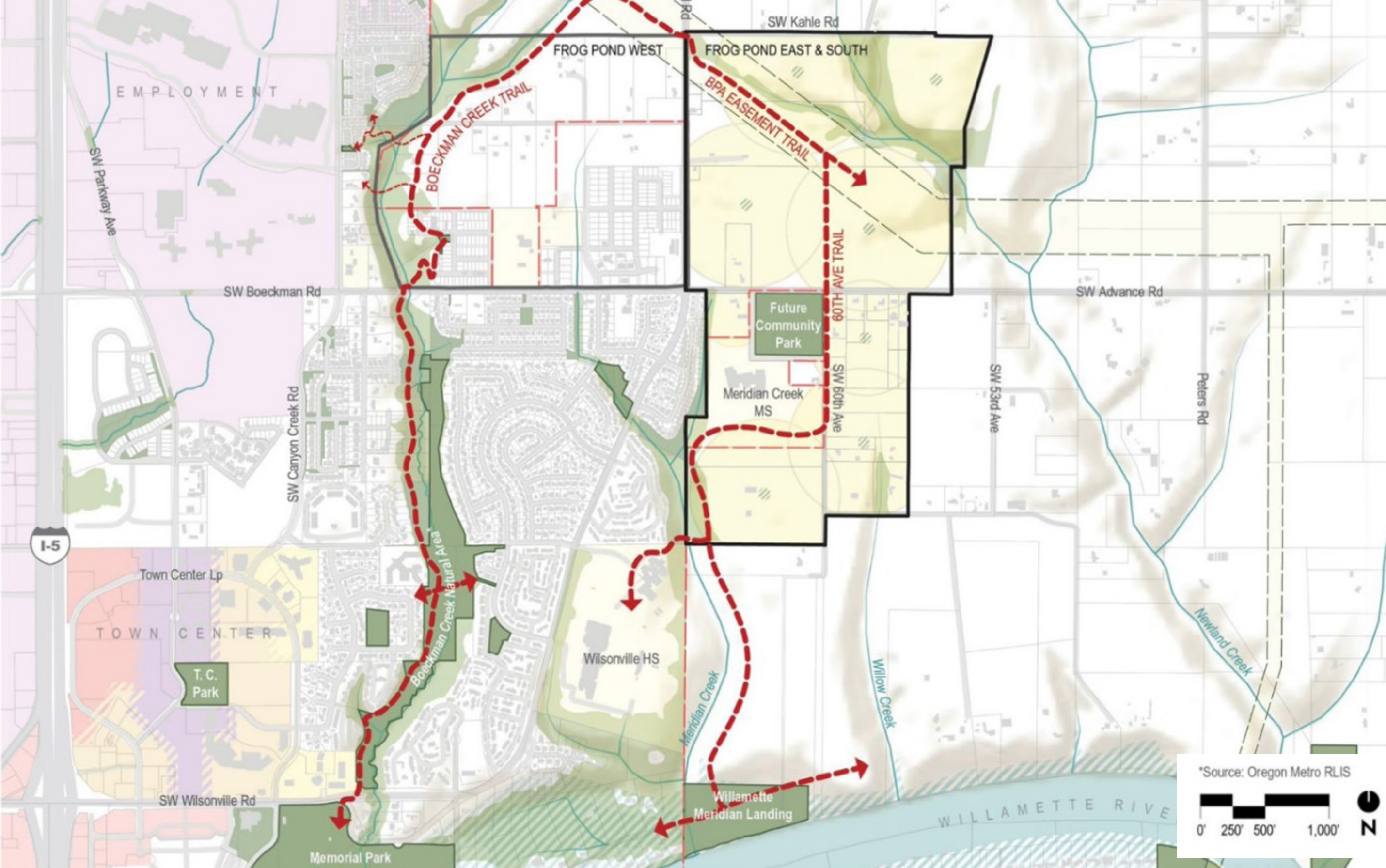
Proximity to City and regional greenspaces – The Frog Pond Area is near many City and regional greenspaces that add to the high quality of life in the Wilsonville, including: the SW Boeckman Creek Natural Area, Town Center Park, the Willamette River, Memorial Park, Corral Creek Natural Area, Graham Oaks Natural Area, Coffee Creek Wetlands, Weber Farm Natural Area, Mollala River State Park, and more.

Proximity to natural and city open space – The nearby open spaces – Newland Creek, Meridian Creek, the BPA easement, a future neighborhood park, a future community park, and Meridian Creek Middle School – are great amenities. Future residents in the East and South neighborhoods will always be “just a block or two” from the nearest open space.

A significant barrier and/or opportunity of the BPA Easement – On the plus side, the BPA easement is open area and can be used for recreation, community gardens, parking and other uses. Negatives include the towers, potential electrical “buzz”, and limitations for planting and structures.

Potential for internal connectivity – There is excellent potential for safe, direct and convenient street and path connectivity within and between the three Frog Pond neighborhoods.

Figure 4. Conceptual Trails Map





CONTEXT AND SETTING

FROG POND AREA

Frog Pond East and South are part of the larger Frog Pond Area, which totals about 500 acres in size. Contextual land uses and community destinations within the Frog Pond Area include:

Frog Pond West Neighborhood - Frog Pond West is rapidly developing. Planned for about 625 homes, about half of the area was approved for development between 2018 and 2022. The residential uses are primarily single family detached homes, affordable to families with incomes that exceed 120% of Wilsonville's median family income.

Future Frog Pond West neighborhood park and school - A new neighborhood park and elementary school are in the planning stages in Frog Pond West. These community uses will be a quarter mile west of SW Stafford Road, a 5-minute walk from the west edge of the East and South neighborhoods.

Meridian Creek Middle School and Future Community Park - The middle school property was the first Frog Pond land to annex and develop after inclusion in the Urban Growth Boundary in 2013. The 10-acre future community park site is also annexed. These existing and future community uses will be important civic uses within the Frog Pond South neighborhood.



CONTEXT AND SETTING



Frog Pond East, northern area looking NE from the Frog Pond Grange. BPA easement and natural resources visible.



Frog Pond East and South visible, Frog Pond West development underway in foreground. Meridian Creek Middle School and future Community Park site visible.



CONTEXT AND SETTING

SETTING - FROG POND EAST AND SOUTH

The Frog Pond East and South area is comprised of rural residential uses and open lands. Figure 5 shows the setting in 2022. Some portions of the plan area are expected to be unbuildable or otherwise not develop during the next 20 plus years. This includes developed homes sites that either have historic homes or high value recently constructed homes. In addition it includes natural areas, the BPA Easement, and existing right-of-way. . Key existing conditions include:

- Total acreage: 305 acres
- Parcels: 31
- Existing Homes: 20
- After deducting for developed areas and future streets, the net buildable area is estimated to be 138.5 acres (54% of the total area)
- The historic Frog Pond Grange is located on SW Stafford Road.
- Significant trees are scattered throughout the planning area, including white oak, ponderosa pine, redwood, giant sequoia, and Douglas fir, among others.
- Meridian Creek Middle School lies in Frog Pond South.
- Creek areas abut and cross the study area; these spaces will be protected by the City's Significant Resource Overlay Zone (SROZ).



Meridian Creek Middle School and neighborhoods along SW Wilsonville Road visible.

Figure 5. Existing Conditions



An aerial architectural rendering of a residential development, showing a mix of building footprints, green spaces, and streets. A large, bold teal number '4' is overlaid on the left side of the image. The text 'Placeholder Image' is centered near the top.

Placeholder Image

HOUSING & MARKET CONDITIONS



HOUSING AND MARKET CONDITIONS

AFFORDABLE HOUSING NEEDS AND OPPORTUNITIES

The Frog Pond East and South areas are important for the City of Wilsonville's efforts to meet future housing needs and provide equitable housing options for residents. The City's 2020 Equitable Housing Strategic Plan (EHSP) recognized this, and called for the Frog Pond East and South Master Plan to establish targets for affordability, specifically:

As part of the master planning requirements for Frog Pond East and South, the City will establish goals or targets for accessibility to services/amenities, unit types, and unit affordability levels. The targets for affordability levels (number of units and depth of affordability for those units) should be reasonably achievable, allowing for sufficient market-rate development to support key infrastructure investments. This approach will provide a methodology and framework that can be applied in other growth areas beyond Frog Pond.

- Wilsonville Equitable Housing Strategic Plan

The EHSP also directs the Frog Pond East and South master planning effort to:

- Integrate affordable housing into the overall master plan, with access to amenities
- Identify specific properties that could help meet affordable housing targets
- Evaluate relationships to the infrastructure funding plan
- Engage affordable housing developers and other stakeholders to refine strategies

These elements were a key part of the Frog Pond East and South planning process.

HOUSING AFFORDABILITY IN WILSONVILLE

The estimated range of home prices by housing type and unit size in Frog Pond East and South is shown in Figure 7. The estimated income needed to afford these purchase prices, given standard lending assumptions is shown in Figure 8 as a percentage of the MFI for a four-person household in Clackamas County. This information was derived from 2021 data on recent home transactions for newer housing in Wilsonville and surrounding areas.



HOUSING AND MARKET CONDITIONS

Housing affordability is generally referred to in terms of “Median Family Income” (MFI) and the price at which households at a given income level can spend 30% of their income on housing. The housing needs of individuals and families at different income levels differ, as do the approaches to delivering new housing for them, as shown in Figure 6.

Figure 6. Approaches to delivering New Housing by Income Range

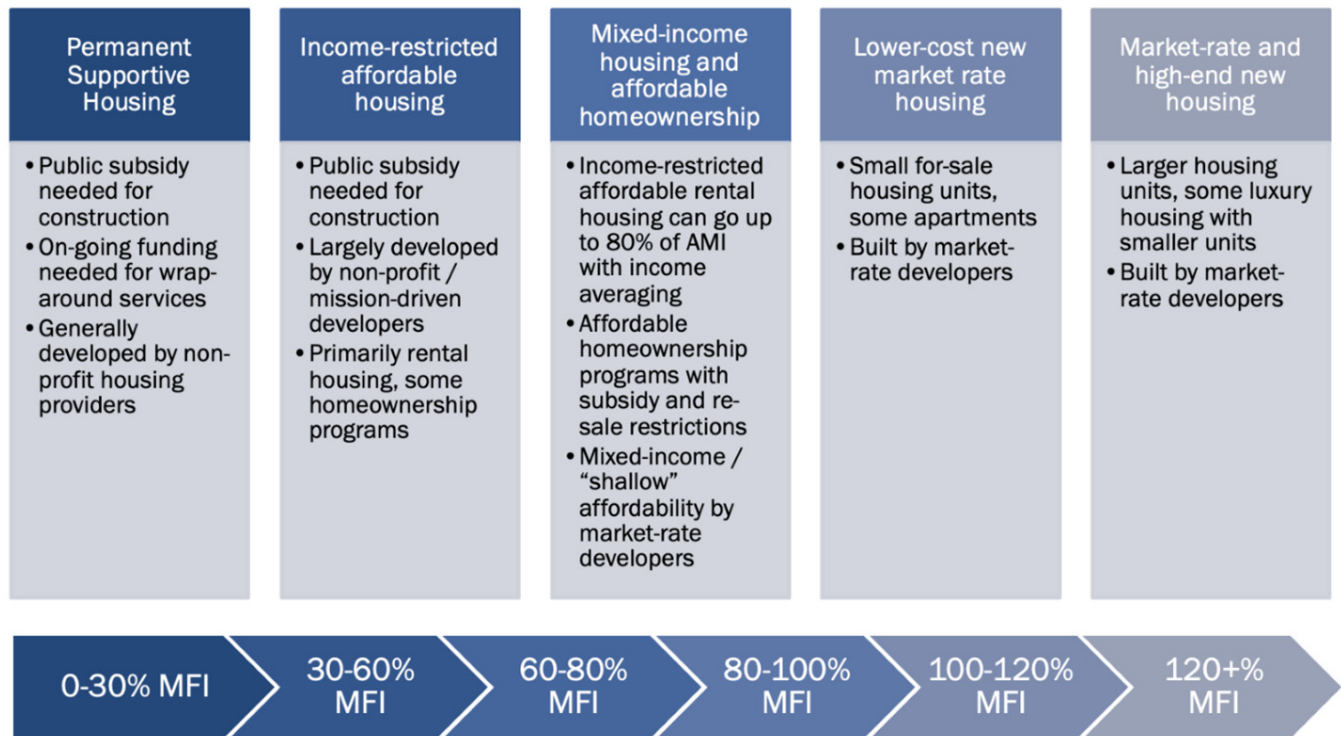


Figure Source: ECONorthwest

MARKET TRENDS

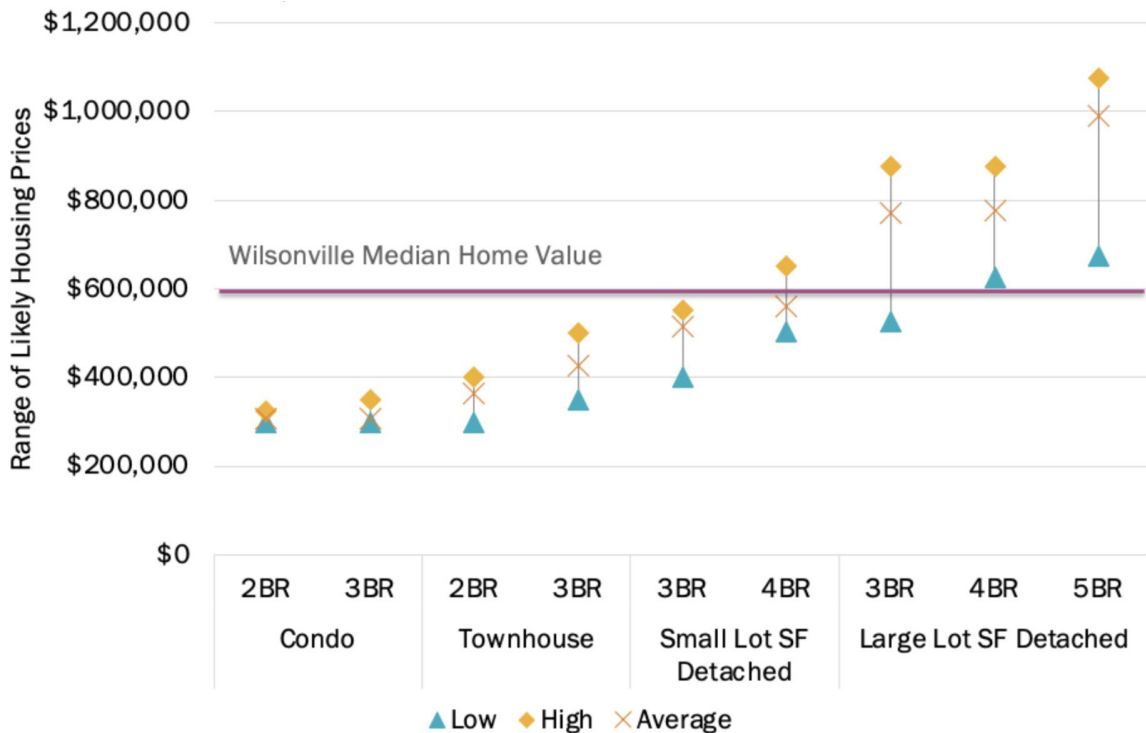
Housing prices will likely continue to escalate over the coming years, increasing the expected home values over time. In addition, recent increases in interest rates have impacted housing affordability for many and will continue to impact affordability unless rates fall to levels at or below the rates at the date of this analysis in October 2021. Based on these trends, estimates of the following ranges for affordability of new for-sale housing in Frog Pond East and South are as follows:



HOUSING AND MARKET CONDITIONS

- New large-lot detached housing in Wilsonville will more expensive than most existing homes in the City and likely be affordable only to households earning more than 120% of MFI, with many affordable only to households earning more than 150% of MFI.
- New small lot detached homes (on less than 4,500 SF lots) may sell for close to the median value of existing homes and are likely to be affordable mostly to households earning between 100% and 130% of MFI.
- New condominiums and townhouses will almost certainly sell for less than the median value of existing homes in Wilsonville and are likely to be affordable to households earning between roughly 70% and 100% of MFI depending on unit size.

Figure 7. Typical Sales Prices for Recently Built Housing by Housing Type, Wilsonville and Surrounding Area (October 2021)

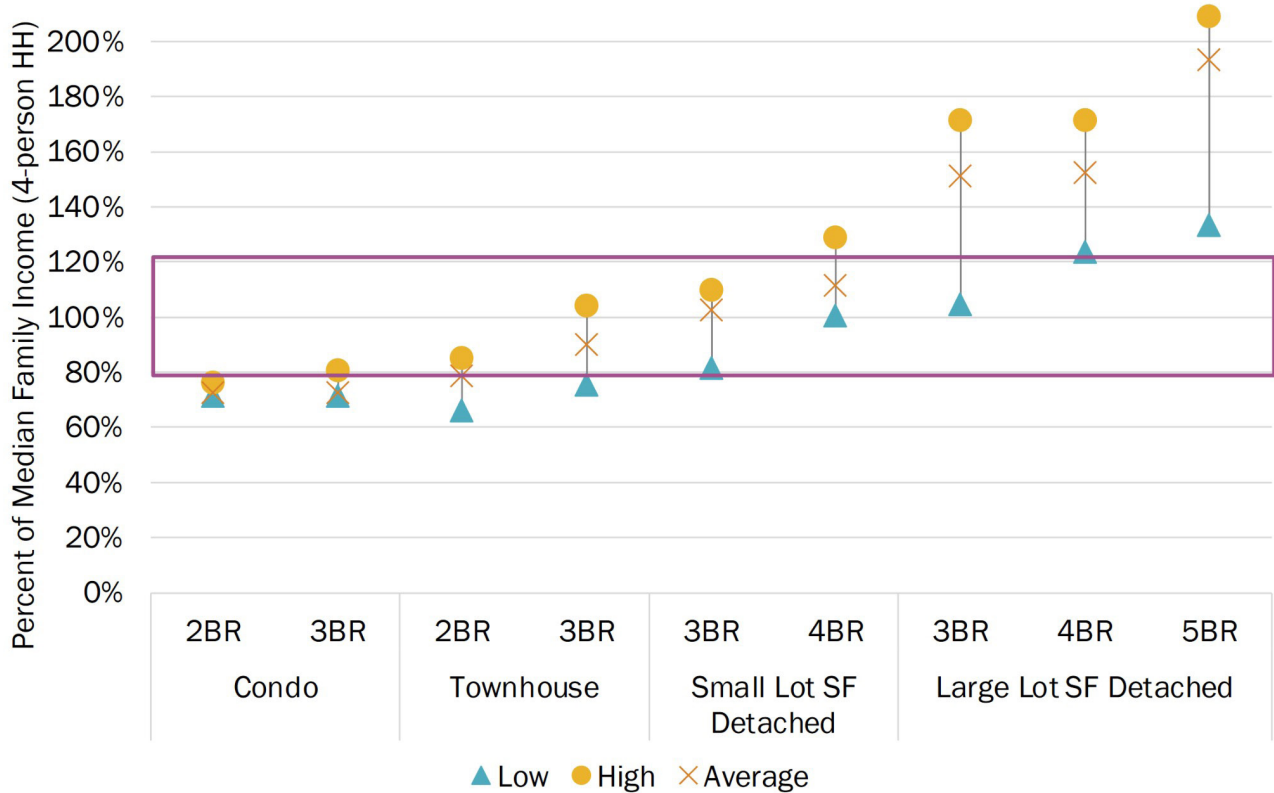


Source: ECONorthwest Analysis of Redfin Data, October 2021



HOUSING AND MARKET CONDITIONS

Figure 8. Housing Affordability as a Percent of Median Family Income by Housing Type for Recently Built Housing, Wilsonville and Surrounding Area (October 2021)



Source: ECONorthwest Analysis of Redfin Data, October 2021

AFFORDABLE HOUSING RECOMMENDATIONS FOR FROG POND EAST & SOUTH

The City can support development of affordable and mixed-income housing in a number of ways, much of which will be the subject of citywide discussion in 2023-2024 as Wilsonville completes a Housing Needs Analysis and Housing Production Strategy required by the State of Oregon. Several strategies were also identified in the City’s Equitable Housing Strategic Plan. The following strategies are likely to have the greatest impact for Frog Pond East and South.

- Zone for All Housing Types:** Enable a full range of housing types in Frog Pond East and South, including multifamily, to expand first time homebuyer opportunities and to make it possible to build affordable rental housing using common federal and state sources of funding for subsidized housing.



HOUSING AND MARKET CONDITIONS

- **Acquire Land for Affordable Housing:** Attempt to find willing sellers for suitable properties for affordable housing within Frog Pond East and/or South, to ensure an opportunity to build affordable housing in the area. This would likely require funding, particularly if the City intends to offer the land for affordable housing development for little or no cost to make affordable housing development more viable. With private developers also seeking to secure land or options to purchase property, the sooner the City acts, the better its chances.
- **Partner with a Community Land Trust:** A community land trust (CLT) such as Proud Ground could help deliver affordable homeownership housing in Frog Pond East and South. If the City is unable to secure land for affordable housing, it could explore other ways to support a CLT in building affordable homes, such as direct subsidy (e.g., using Metro Bond money), SDC waivers, or tax abatements (see further discussion below).
- **Waive, Reduce, or Defer SDCs for Affordable Units:** The cost of SDCs and other infrastructure costs for greenfield development, while often a critical part to paying for needed infrastructure, can become prohibitive for affordable housing. Options to reduce SDC cost impacts on affordable housing are being explored as part of the infrastructure funding plan for Frog Pond East and South to ensure that overall infrastructure needs can be met while minimizing impacts on housing affordability (see section X).
- **Incentivize Smaller and Lower-Cost Middle Housing:** There are several incentives that could be effective tools to support middle housing development that is affordable to middle-income households, including tax exemption programs and a tiered SDC system.

ACCESSIBLE AND VISITABLE HOUSING

With substantial new housing construction coming for Frog Pond East and South, the City can encourage units designed to be accessible or visitable to better meet the needs of individuals with mobility limitations in the community. The City can apply some of the same incentives noted above to apply to accessible or visitable units, such as tax abatements, fee reductions, or allowances to build additional units.



HOUSING AND MARKET CONDITIONS

NEIGHBORHOOD COMMERCIAL MARKET FINDINGS

A vibrant center of neighborhood commercial activity serving residents and visitors has been envisioned for the Frog Pond area since the drafting of the 2015 Frog Pond Area Plan. There are examples of retail centers in other communities that serve as good examples for the Frog Pond area, as described in this section.

This information is informed by a market analysis and several interviews with retail developers and brokers to understand the opportunities and constraints of the Frog Pond location for future retail, as well as to determine any unmet community needs that could be satisfied in Frog Pond East and South. Figure 9 depicts the "Primary Market Area" that a commercial node in Frog Pond East would serve, along with nearby multifamily developments and commercial uses. Key points include:

- Developers generally agree that Wilsonville is an attractive market, primarily due to its demographics and balance of population and jobs.
- There is limited excess demand for retail in the region, given the availability of leasable space in the Town Center and elsewhere.
- The City's focus should be on establishing a commercial hub that provides some goods and services for local residents while creating a center of activity, sense of place, and social hub for the Frog Pond neighborhoods.

PLACEHOLDER IMAGE



HOUSING AND MARKET CONDITIONS

PROJECT EXAMPLES

Retail is typically built in a series of standard formats. While each site has a unique context, retail developments are generally consistent in terms of anchor tenants, size (square footage), trade area, and other features. The most appropriate type of retail would be a corner store, convenience center, or neighborhood center, described below.

Table 1. Types of Retail Centers

| RETAIL CENTER TYPE | GROSS RETAIL AREA (SF) | DWELLINGS NECESSARY TO SUPPORT | AVERAGE TRADE AREA | ANCHOR TENANTS |
|---------------------|------------------------|--------------------------------|--------------------|----------------------------|
| Corner Store | 1,500 - 3,000 | 1,000 | Neighborhood | Corner store |
| Convenience Center | 10,000 - 30,000 | 2,000 | 1 mile radius | Specialty food or pharmacy |
| Neighborhood Center | 60,000 - 90,000 | 6,000 - 8,000 | 2 mile radius | Supermarket and pharmacy |
| Community Center | 100,000 - 400,000 | 20,000 + | 5 mile radius | Junior department store |

Sources: Urban Land Institute, Leland Consulting Group

CASE STUDIES AND PRECEDENTS

This section includes brief case studies summarizing different projects whose stories have some relevance to the Frog Pond Area. All of the projects are greenfield projects (built on land that was mostly previously undeveloped); were built within a surrounding suburban context; were thoughtfully planned with an emphasis on quality of place and community; and were intended as neighborhood-serving commercial centers surrounded by housing, quality streets, open spaces, and other features. While each is unique, these case studies have takeaways for the City to consider for the implementation of commercial development in Frog Pond.

LCG selected six commercial developments to study based on stakeholder interview input, industry expertise, and background research. Three of these are smaller, unanchored commercial centers, one is a commercial main street, and two are larger anchored centers with main street elements (provided primarily as points of comparison). Specific takeaways from LCG's case study research include: Many developers seek to build and lease commercial and employment space within several years of land acquisition; for them, if the commercial market is weak at the time of initial residential construction, the potential of having some vacant land for upwards of 20 years after development represents an opportunity cost. The land could have been zoned for another use (typically housing) and been rented or sold in earlier years and renters and homeowners could have had homes to live in.



HOUSING AND MARKET CONDITIONS

- From a policy and place-making point of view, if a city or other authority is seeking to ensure adequate land for long-term commercial and employment development, and associated jobs, a longer timeline for buildout of commercial uses still meets the long term purpose of creating a neighborhood destination and reducing need to make trips out of the neighborhood for provided services.
- Creating a strong sense of place is possible with a small amount of commercial development when it is carefully and deliberately built.
- A commercial main street is one important amenity that can make the rest of the community more desirable. While commercial space needs exposure to high-traffic arterials, pedestrian-oriented places should be created on main streets that are perpendicular to the arterials. It is often not comfortable for pedestrians to walk and talk or dine outside, along arterial roads, so creating a pedestrian-friendly environment is easier on perpendicular streets.
- Commercial development takes time in locations without large populations and traffic counts. Housing is often faster to build out, followed by commercial and employment areas.



HOUSING AND MARKET CONDITIONS

COMMERCIAL AREA RECOMMENDATIONS

Recommendations from the market analysis are shown below. Additional details are provided in Appendix D.

BUILDING SQUARE FEET. Up to 44,000 square feet.

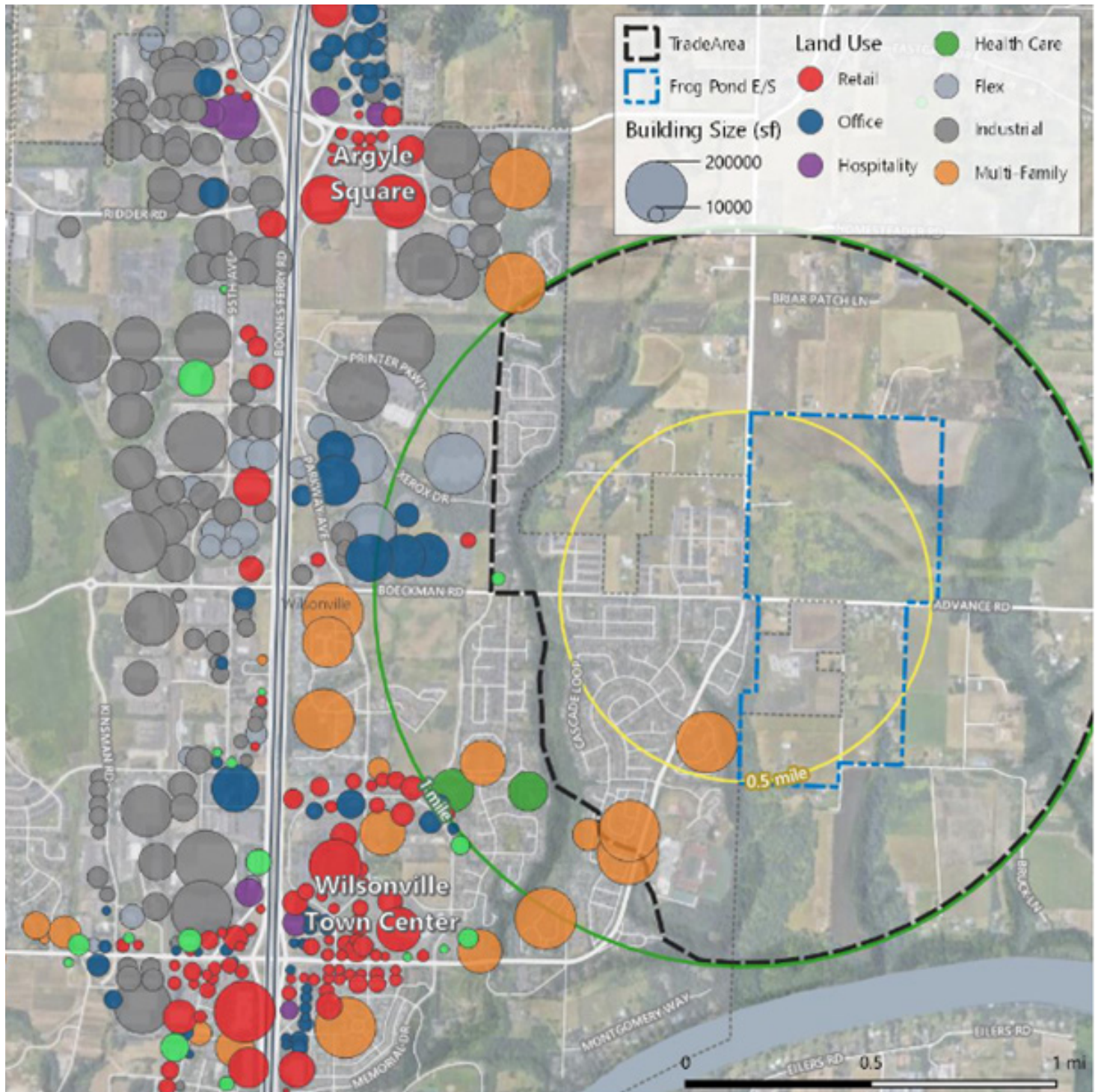
SITE ACREAGE. Up to 4.0 acres

LIKELY TENANT MIX. Commercial development today is flexible and accommodates a wide range of activities, including food and beverage, retail, general commercial, professional services/office, healthcare, fitness, daycare, banks, and more. Development should likewise be flexible to accommodate a range of potential tenants.

DEVELOPMENT TYPE. “Main Street, with buildings on both sides of the planned Brisband Street extension on the east side of Stafford Road. Buildings can be split up to address parking challenges. The main street approach can an authentic experience that promotes placemaking, creates a community amenity, and can have a positive impact on the surrounding residential uses and other commercial spaces. Vertical mixed use (residential above commercial uses) can also add vibrancy and a clientele base to the area.

URBAN DESIGN. For a main street development, pedestrian-oriented design that invites nearby residents and visitors to enjoy the area on foot is key. This can be achieved through the location of parking (behind buildings rather than in front), ample sidewalks and sidewalk furnishings, open space features such as plazas, and a visually engaging building façade.

Figure 9. Frog Pond Primary Market Area



Source: Leland Consulting Group

Placeholder Image

5

COMMUNITY
DESIGN CONCEPTS



COMMUNITY DESIGN CONCEPTS

FROM DESIGN CONCEPTS TO A COMMUNITY

As described previously in this report, the master plan process began with community outreach, mapping of Frog Pond's context and existing conditions, and research regarding affordable housing and neighborhood commercial opportunities. With that information in hand, the process then explored the design-related questions for the plan:

- What are the **current and future neighborhood destinations** that will serve as special places and neighborhood gathering places?
- What are the **opportunities to connect** those neighborhood destinations?
- What is the **transportation framework** of streets, trails, bikeways, walking routes and transit that will create a connected community?
- Where should a **neighborhood commercial center** be located?
- What are the opportunities for **subdistricts** – smaller areas of cohesive building form – within each of the neighborhoods.

Design sketches and precedent imagery were prepared, then the questions and related issues were: reviewed in work sessions with the Planning Commission and City Council; shared online; and discussed with the community in outreach meetings during the Spring 2022 engagement activities described in the Planning Process section of this report. There was strong support for each of the key design concepts – neighborhood destinations, strong connections, a connected transportation framework, a neighborhood commercial center, and subdistricts – that became the basis for the Plan¹. Common themes in the feedback from the community included:

- The neighborhood commercial center and future East Neighborhood Park have especially good potential for community gathering and neighborhood destinations.
- There was broad support for the neighborhood commercial center being located at the SW Brisband option, with a walkable Main Street design (pedestrian friendly streetscape, buildings close to the street and parking behind, sidewalk cafes, etc.).
- Participants had many ideas for desirable uses in the commercial center and its role in the community: e.g. ethnic food, family-owned small businesses, a setting that will draw families.
- Streets, trails, bikeways and walking routes should emphasize safety, especially for the routes to and from Meridian Creek Middle School.
- People saw the value of a plan for the BPA Corridor (e.g. including trails, potential use for parking), but were cautious about safety and noise.

1 See Technical Appendix A: Community Engagement Summary A-1



COMMUNITY DESIGN CONCEPTS

The diagrams and images on the following pages illustrate the Master Plan’s design concepts that emerged from this process. The community’s feedback was used to create the Master Plan recommendations described later in this report.

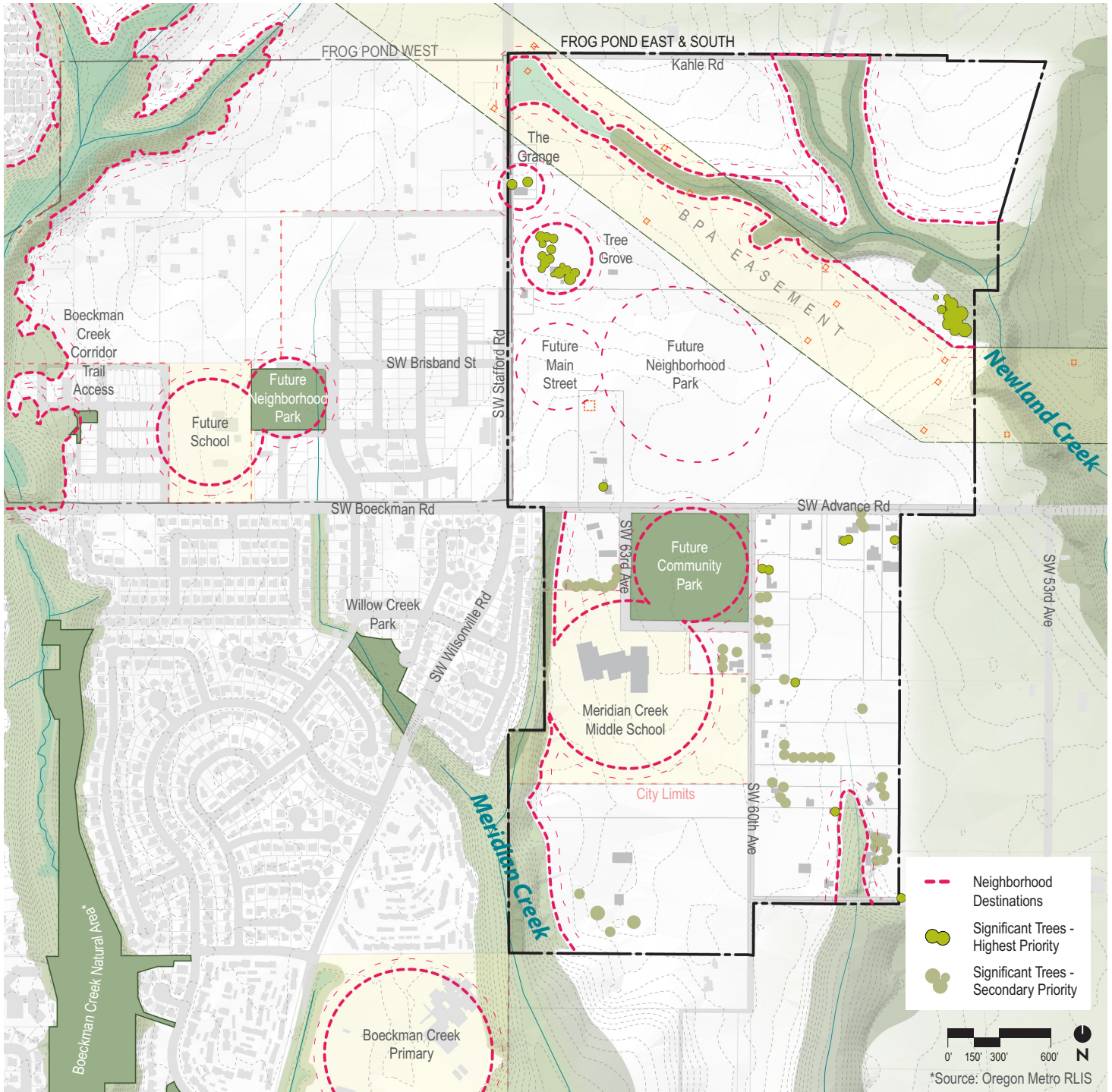
NEIGHBORHOOD DESTINATIONS

Figure 10 illustrates existing and future locations in all three Frog Pond Neighborhoods, which have the potential to be community gathering destinations or key visual amenities, or both. They include:

- The Frog Pond Grange
- Newland Creek and Meridian Creek natural areas
- Significant tree groves
- A future neighborhood park in the East Neighborhood
- Meridian Creek Middle School and the future community park
- Primary School and Neighborhood Park in Frog Pond West
- SW Boeckman Creek Primary School and Wilsonville High School (just off the map to the southwest)
- Boeckman Creek Natural Area and Corridor Trail
- Future Main Street Commercial Area

PLACEHOLDER IMAGE

Figure 10. Neighborhood Destinations





COMMUNITY DESIGN CONCEPTS

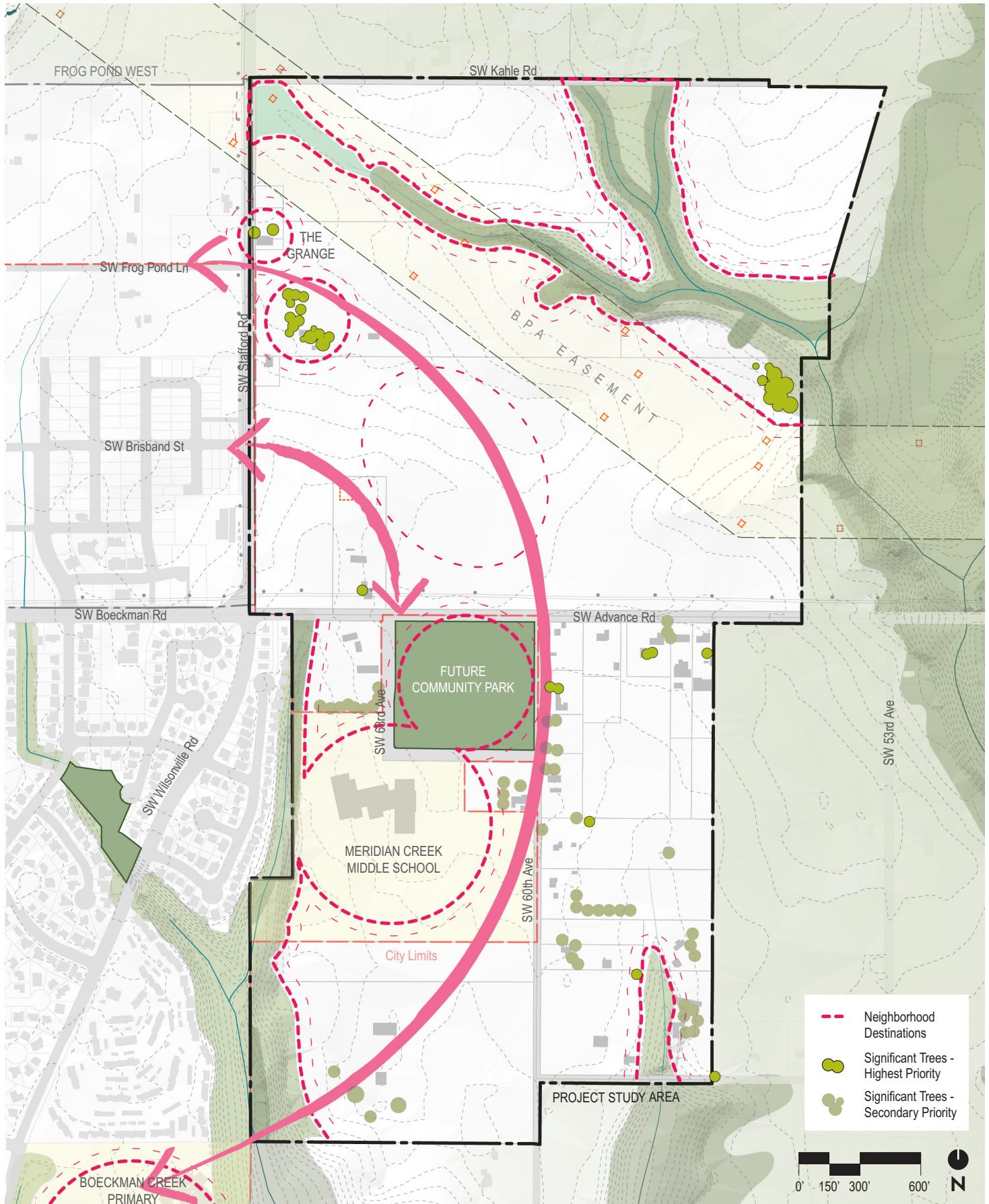
CONNECTIONS BETWEEN DESTINATIONS

This conceptual diagram (Figure 11) illustrates the area’s potential for connections between neighborhood destinations. The Master Plan is an opportunity to organize and coordinate land use, transportation, and open space to support these connections.

This Plan aims to enable direct and convenient trips between these destinations by all modes of travel, focusing on walking and rolling. This conceptual diagram is guiding to the Master Plan regarding street alignments, pedestrian routes, trails, and street crossings. As such it is fundamental to the vision to create a walkable and connected community.



Figure 11. Connections Between Neighborhood Destinations





COMMUNITY DESIGN CONCEPTS

STREETS AND TRAILS TO CONNECT THE COMMUNITY

Figure 12 illustrates how the areas streets and trails are planned to create a connected Frog Pond Community. It was one of several options that were explored and ultimately led to the street and trail recommendations of the Master Plan. The streets and trails shown are the minimum “framework” of connections, with developers building additional local-level streets and trails that will connect key destinations and build out the neighborhood transportation network.

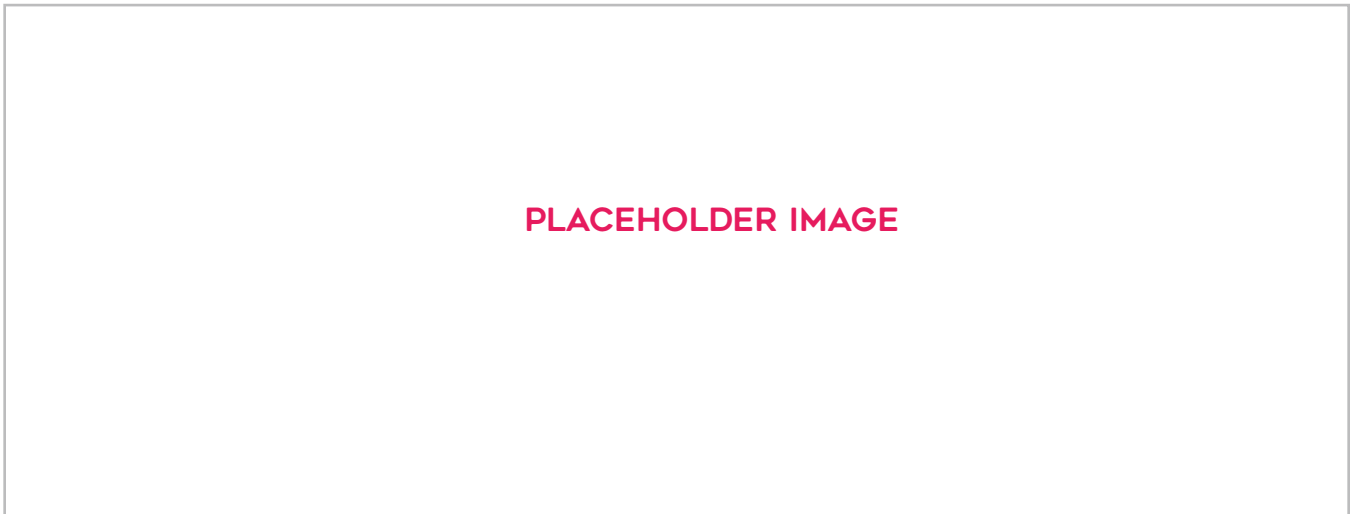
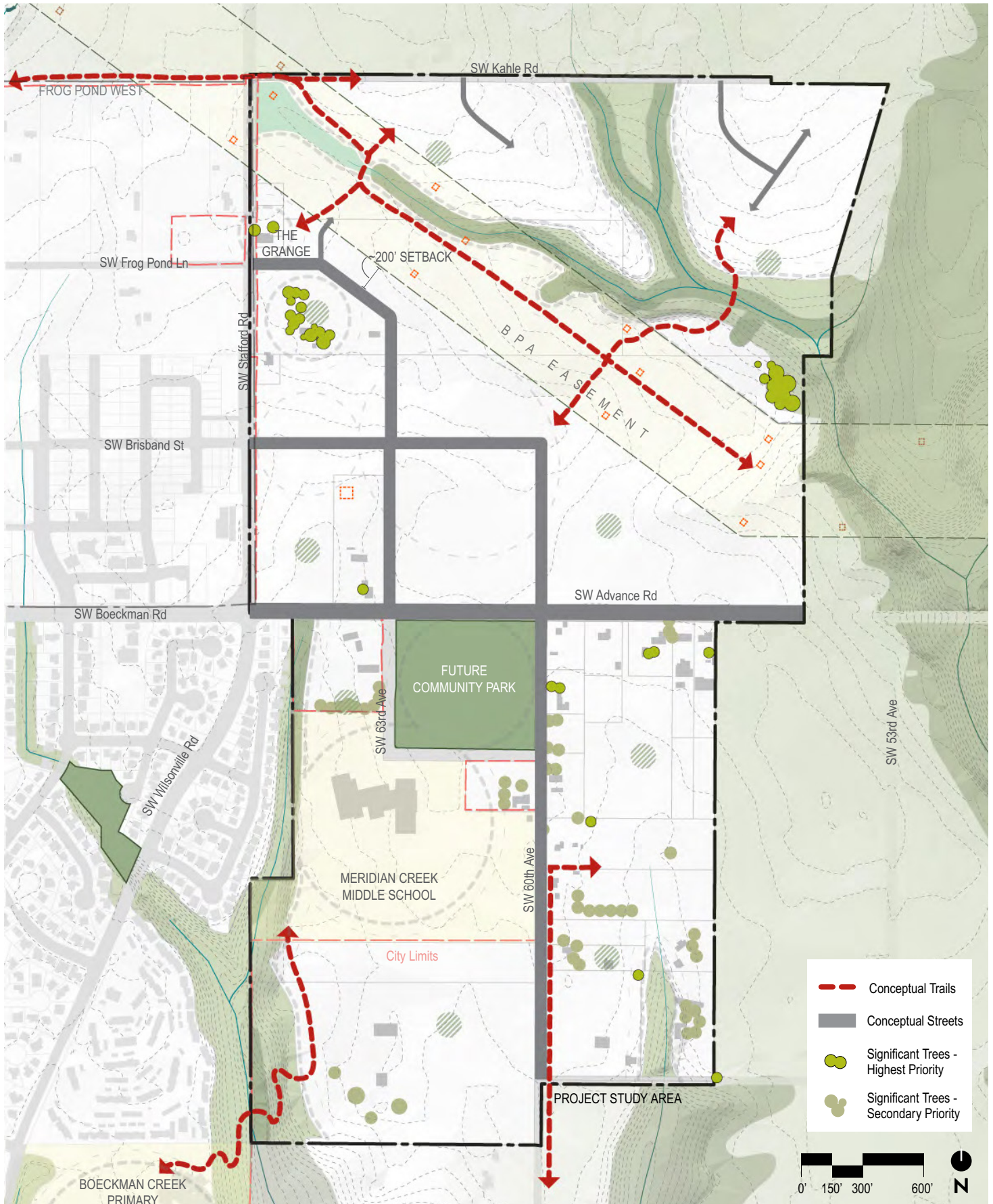


Figure 12. Street and Trail Connections





COMMUNITY DESIGN CONCEPTS

NEIGHBORHOOD CENTERS

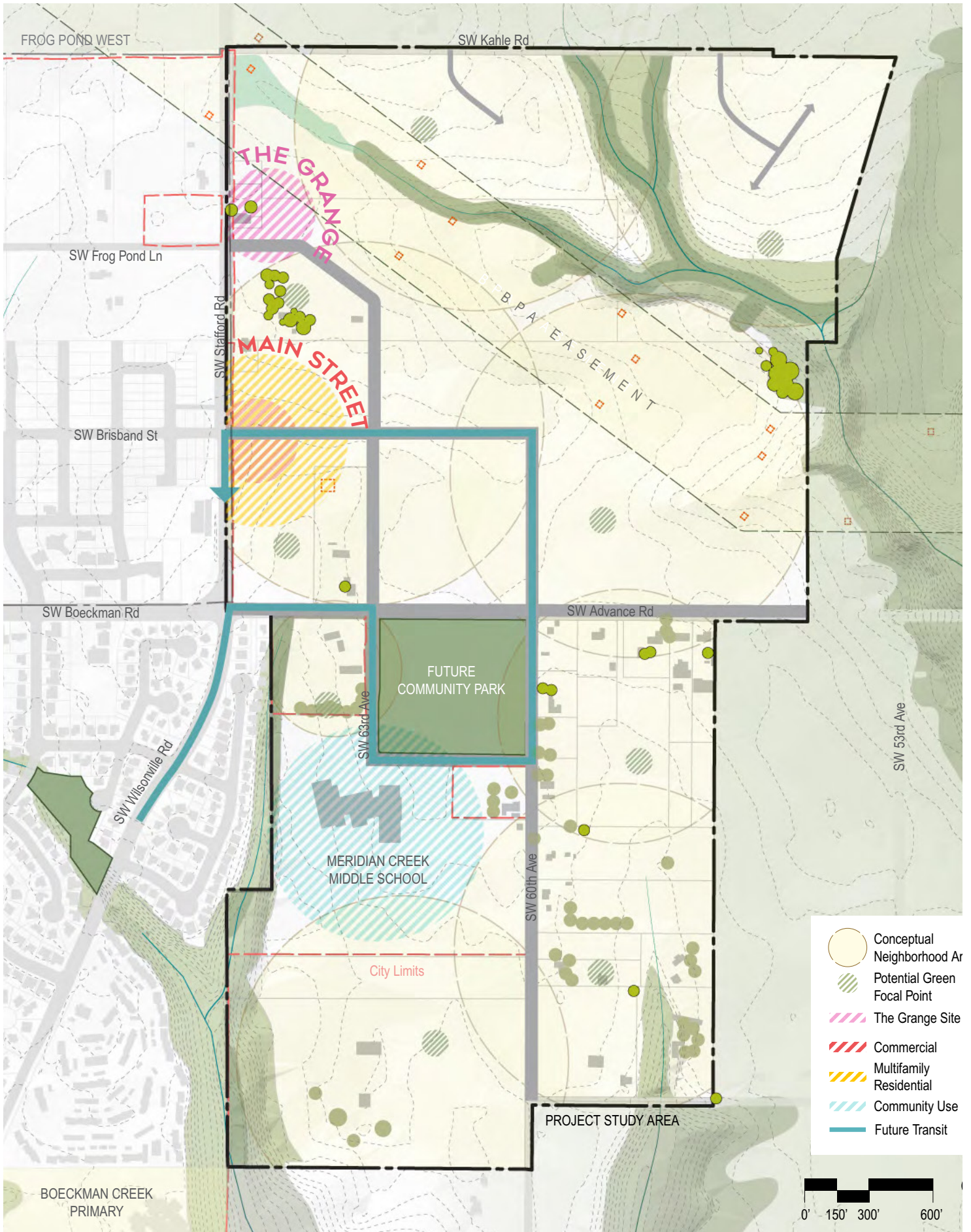
This diagram below illustrates the idea of neighborhood centers within the planning area. There are three types of centers shown, each with their unique scale and role in creating the vibrant, connected community envisioned for Frog Pond East and South:

- **Main Street** – A potential 3-acre Main Street commercial center with shops, restaurants, local services and community gathering spaces. Residential uses would be allowed within mixed-use buildings. Whether mixed use will be vertically or horizontally located is yet to be determined.
- **Frog Pond Grange** – A historic gathering place that is envisioned as a location for future civic or community use.
- **Green Focal Points** – The green focal points are small open spaces between neighborhood destinations. They might be a signature tree, a viewpoint, a storm water facility, or a small open space that is part of a development. These points are represented by green dots in the center of neighborhood bubbles, and are further defined in later diagrams.



Neighborhood Food Hall in Northwest Crossing, Bend

Figure 13. Initial Diagram of Conceptual Neighborhood Centers





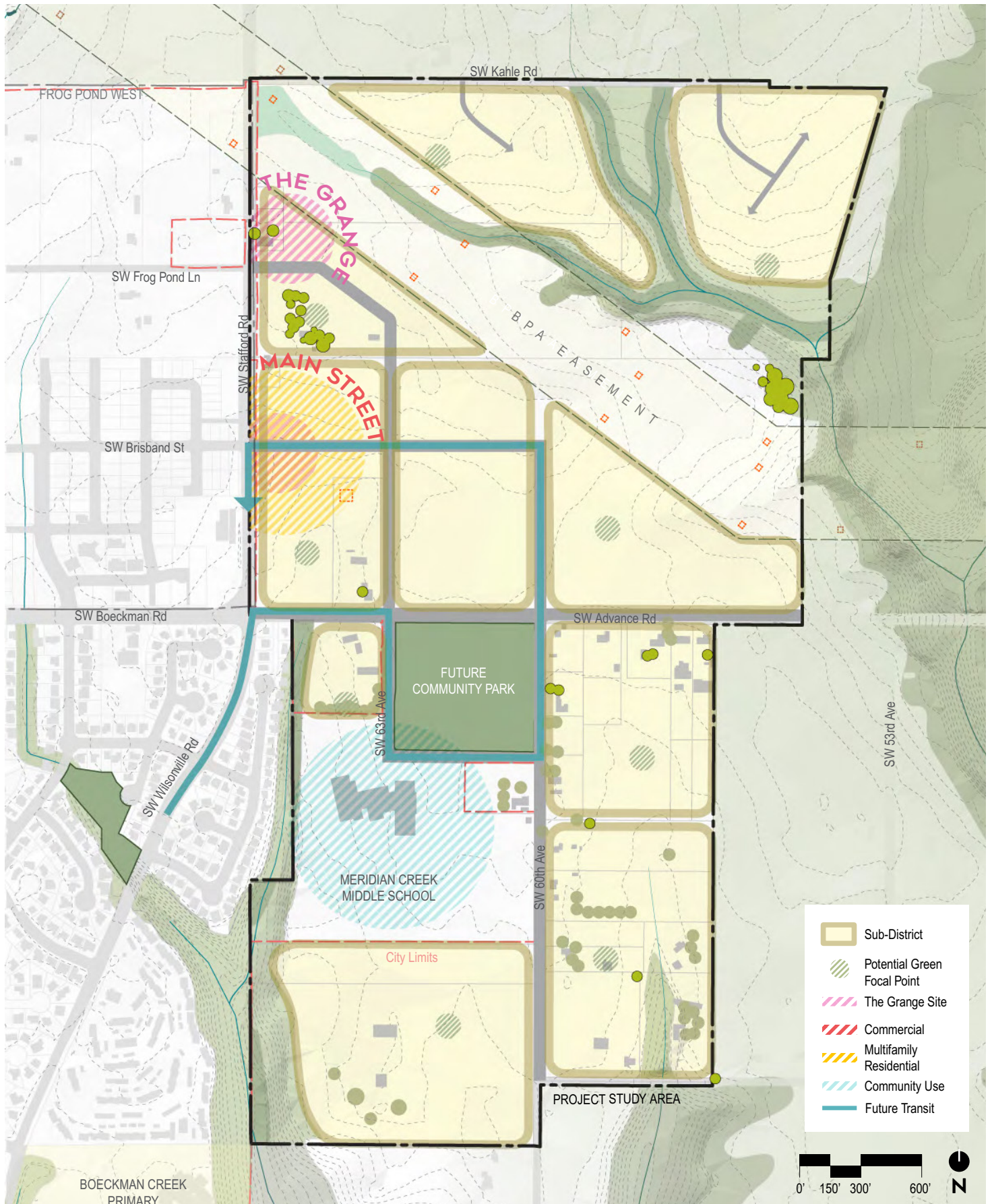
COMMUNITY DESIGN CONCEPTS

SUBDISTRICTS

Figure 14 shows the concept of “subdistricts” within Frog Pond East and South. The subdistricts are intended as “neighborhoods within neighborhoods” – areas with cohesive building form, public realm features, and other characteristics that give them identity. There are nine subdistricts planned for Frog Pond East and South. Each will have a “green focal point” that is central in the subdistrict and/or aligned with a key feature such as a tree grove. The focal points, together with the neighborhood destinations, will provide many community gathering places in Frog Pond East and South.

PLACEHOLDER IMAGE

Figure 14. Initial Diagram of Conceptual Subdistricts





COMMUNITY DESIGN CONCEPTS

IMPLEMENTING THE DESIGN CONCEPTS

The design concepts discussed above are the foundation of the Master Plan's intent to create a strong sense of place and identity in Frog Pond East and South. The Master Plan is shown in Figure 15. The following section summarizes how the Master Plan's key features and intended outcomes implement the design concepts. Additional descriptions are provided in the Land Use and Public Realm chapters of this report.

NEIGHBORHOOD DESTINATIONS WITHIN FROG POND EAST AND SOUTH

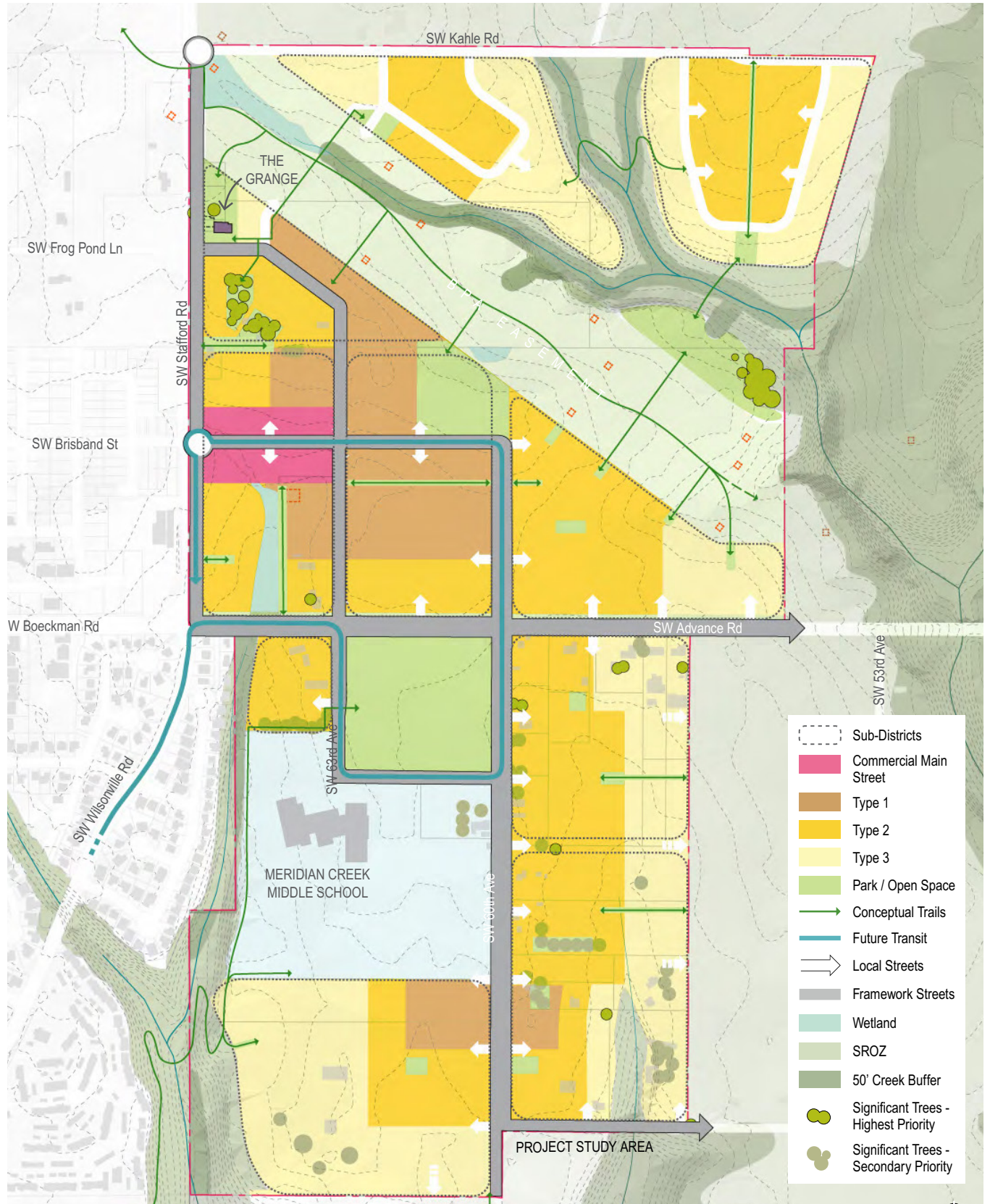
The SW Brisband Main Street as a neighborhood-scale commercial and mixed-use center

- Park/gathering space at the Frog Pond Grange
- A Future Frog Pond East Neighborhood Park
- The Frog Pond South Community Park
- Meridian Creek Middle School
- "Green focal points" within each subdistrict
- Meridian Creek and Newland Creek natural areas
- Significant tree groves

FORM BASED DESIGN AND TRANSECT

- More compact housing is in "Type 1" urban form areas (see Chapter 6 for more description of the urban form types)
- Adjacent areas are less compact and result in a transect or transition to even less compact housing form
- The East Neighborhood has its Type 1 housing in the central area adjacent to the Brisband Main Street, future Frog Pond East Neighborhood Park and BPA Easement
- The South Neighborhood has a small node of Type 1 housing located south of the Meridian Middle School property.
- In both neighborhoods, Type 2 and 3 housing form "feathers out" from the Type 1 areas.

Figure 15. Frog Pond East & South Master Plan



A WIDE VARIETY OF HOUSING CHOICES

- Opportunities for a wide spectrum of housing choices: townhomes, quadplexes, tri-plexes, duplexes, cottage clusters, cottage developments, small-lot detached homes, medium and larger lot detached homes, accessory dwelling units, apartments/condos, tiny homes and co-housing
- Requirements for a mix of housing choices in each subdistrict
- Housing capacity for an estimated minimum of 1587 dwellings (See Chapter 6 for housing and land use metrics)

THE SW BRISBAND MAIN STREET

- A 4-5 acre neighborhood commercial center designed as a walkable Main Street
- Up to 44,000 square feet of commercial
- Mixed use (residential above commercial) as an option
- Streetscape features, site design, and building orientation that make the Main Street highly walkable and support its role as a destination for the local community

PARKS AND OPEN SPACE

- Two future parks: the future Frog Pond East Neighborhood Park and future Community Park in Frog Pond South
- Retention of significant trees and integration of them into neighborhood destinations
- The BPA corridor as an opportunity to provide open space, trails, and parking and storm water features for adjacent land uses
- Significant Resource Overlay Zone areas: Meridian Creek, Newland Creek, and the unnamed creek in the southern part of the study area.
- “Green focal points” – small gathering spaces within each subdistrict

TRANSPORTATION CHOICES AND CONNECTIONS

- Framework streets – the existing and future streets that will form the backbone of a connected community
- A street demonstration plan – the illustrated vision for a fully connected and walkable block pattern. The framework streets are generally existing or extensions of existing streets and will be in the location shown. Other streets demonstrate the intent of block layout and connectivity, but refinements in the layout may occur during the development review process



COMMUNITY DESIGN CONCEPTS

- Tailored street cross sections for Stafford, Brisband Main Street, Advance Road, and the extension of 60th Avenue
- A plan for the SMART Transit service to circulate through the neighborhoods and connect key destinations
- Trails and pedestrian paths that connect the Frog Pond East and South neighborhood destinations and other Wilsonville trails and destinations
- A bicycle network comprised of protected and/or dedicated bike lanes on larger streets and “sharrows” on selected local streets
- Accessibility for all community members and users of the transportation connections

SUBDISTRICTS

- The Master Plan includes subdistricts that were selected based on their context and potential for placemaking
- The plan illustrates 6 subdistricts in the East Neighborhood and 4 subdistricts in the South Neighborhood
- The subdistricts are intended as “neighborhoods within the neighborhoods”, each with a planned number and variety of housing and a cohesive look and feel
- Each subdistrict includes a green focal point that is central in the subdistrict and/or aligned with a key feature such as a tree grove to serve as an important placemaking tool, creating a strong public realm and opportunity for community gathering.

Placeholder Image



LAND USE



LAND USE

RESIDENTIAL LAND USE AND URBAN FORM

KEY OUTCOMES

The Land Use Plan includes residential areas intended to create three key outcomes:

- **A variety of housing choices** throughout the East and South Neighborhoods
- **Opportunities for affordable housing choices** integrated into the neighborhoods
- A planned **“transect”** of housing form in order to create a cohesive neighborhood that maximizes the amenities available to residents while creating an urban form sensitive to the local context.

VARIETY THROUGHOUT

The Master Plan creates opportunities for a wide variety of housing choices in each neighborhood and subdistrict. This concept focuses on mixing and integrating different housing choices throughout each subdistrict and block rather than having separate areas for separate types of housing units.

The plan defines and maps three types of urban form for housing – Types 1, 2, and 3 – that define the look and feel of the different subdistricts within the neighborhoods. The focus of this typology is urban form: the bulk, height and spacing of buildings. Each urban form type allows for a full array of housing choices.

For example, a detached home may exist in any of the urban form types, but for Type 1 it would have a smaller footprint and, be closer to adjoining homes, and for Type 3 it would have a larger footprint and be farther apart from adjoining homes. Building height will also tend to be taller where Type 1 is designated with height trending down in areas with Type 2 and Type 3 building form. A multi-family building also may exist in any of the urban forms, but for Type 1 the building would be taller and wider with more units per building and closer to adjoining buildings, and for Type 3 it would be shorter and smaller (similar to the size of a larger single-family home) with fewer units per building, and buildings would be further apart, likely interspersed with single-family homes.



LAND USE

TYPE 1 RESIDENTIAL URBAN FORM

Type 1 residential urban form is the most compact and urban of the three forms:

- Buildings 2-4 stories tall close to the street
- Buildings are closely spaced from each other
- Townhouse, condo/apartment buildings, and similar are not limited in width allowing larger buildings that may even occupy an entire block face
- Lot area per building for detached homes will be small with less yard space than in Type 2 and Type 3
- Townhouses, closely spaced detached homes, and multi-family buildings are expected to be common housing choices provided; cottages or similar small-unit housing is also likely to be built





LAND USE

TYPE 2 RESIDENTIAL URBAN FORM

Type 2 residential urban form is less compact than Type 1 but more compact than Type 3:

- Buildings are intended to be 2 stories, with 3 stories allowed under applicable State law for certain housing categories
 - Moderate setbacks from the street
 - Building separation is generally 10 feet,
 - Building width is moderately limited, to maintain a building bulk consistent among multi-family, middle housing, and single-family detached housing choices
- Detached home lot size is approximately double that of Type 1 allowing for larger home footprints and larger yards than Type 1
 - Small to medium sized single-family detached homes and townhouses are expected to be common housing choices, with duplexes, triplexes, quadplexes, cottage clusters, and smaller multi-family buildings also likely to be built.





LAND USE

TYPE 3 RESIDENTIAL URBAN FORM

Type 3 is the least compact residential urban form, characteristics include:

- Buildings primarily 1-2 stories in height, with 3 stories allowed for certain housing categories consistent with applicable State law
 - Buildings are set back from the street
 - Width of buildings is limited to create smaller buildings, which limits the number of units in multifamily or middle housing structures
 - Building separation generally more than 10 feet
- Lot size for detached single-family homes generally 1.5 times that of Type 2 and 3 times that of Type 1, allowing for larger homes and yards
 - Medium to large single-family detached homes along with smaller townhouse and duplex buildings are expected to be common housing choices, cottage clusters would be well-suited to this Type, and triplexes, quadplexes, and small multi-family buildings may also be built





LAND USE

To help ensure housing variety within and throughout Frog Pond East and South, the City will use the following strategies to guide Wilsonville Development Code standards:

- Create housing categories that reflect Wilsonville’s housing needs: the categories would allow flexibility for developers and ensure provision of a wide variety of housing choices while meeting similar housing needs (such as accessibility and cost)
- Limit each subdistrict and development to a maximum percentage of any one housing category;
- Establish standards that ensure a variety of housing categories;
- Please see the Implementation section of this report for more information about code strategies for housing variety.

AFFORDABLE HOUSING INTEGRATION

The Master Plan sets the stage for affordable housing choices in the East and South neighborhoods. Two strategies are included. First, the variety of housing is intended to provide opportunities for home buyers and renters with incomes of 80-150% area median income (AMI). This is the market-based and zoning-based strategy of the Plan.

To help ensure integration of market-rate affordable housing within Frog Pond East and South the City will use the following strategies in the implementing Development Code:

1. To prevent the oversupply of higher-cost housing, limit each development to a percentage of housing categories that typically would only be affordable to households making more than 150% of median family income.
2. To ensure provision of market-rate housing that meets a variety of housing need require each development provide a minimum percentage of attached middle housing and a minimum percentage of a combination of cottages, ADUs, and other similar units that provide both relatively affordable housing choices and housing choices adaptable for accessible living.

The second strategy addresses households earning below 80% of area median income. The City may choose to proactively facilitate and/or support the development of affordable housing targeted at these households. As described in the Affordable Housing Recommendations section of this report, housing development that serves households with these incomes requires public subsidy; those initiatives for the City may include:

- Acquire Land for Affordable Housing



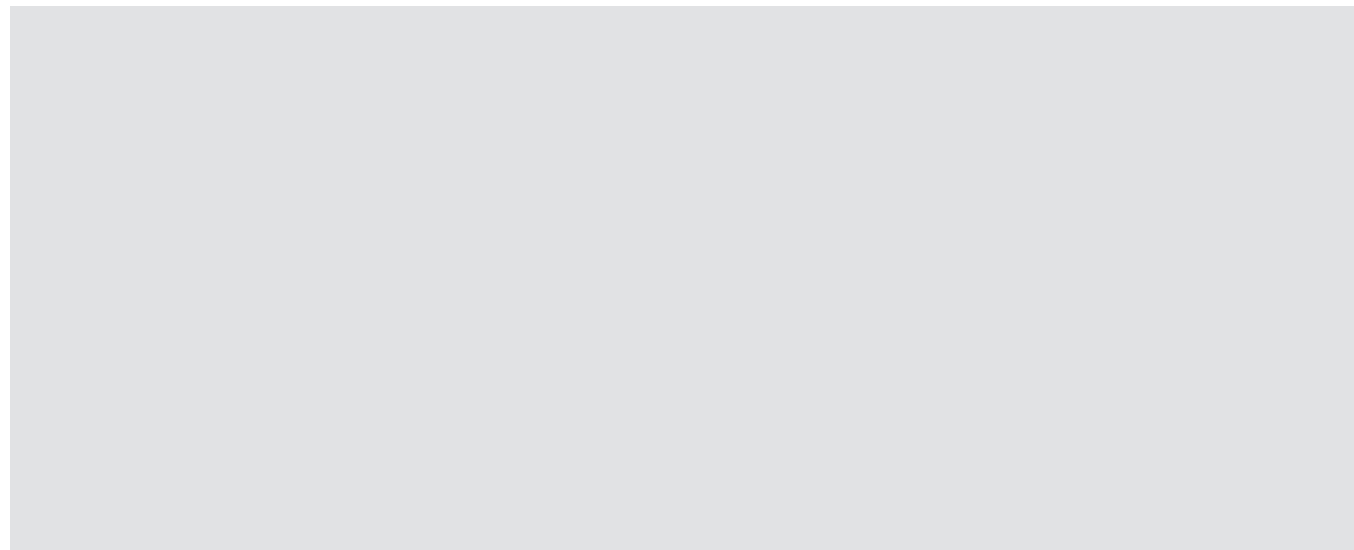
LAND USE

- Partner with a Community Land Trust
- To the extent feasible, minimize fees paid by developers while still paying for infrastructure
- Incentivize Smaller and Lower-Cost Middle Housing

The above-listed measures are options available to the City Council and subject to their direction and funding. The role of the Master Plan is to provide the land base and zoning allowances that would support such initiatives. In addition, development standards will avoid barriers for subsidized affordable housing developments, providing exemptions from variety and similar requirements if needed. Minimum design and siting standards shall continue to apply.

FORM BASED DESIGN AND TRANSECT

As described above, the Master Plan uses a form-based approach to housing. More compact housing is located in the Type 1 areas. Adjacent areas are less compact and result in a transect or transition to even less compact housing form. The East Neighborhood has its Type 1 housing in the central area adjacent to the Brisband Main Street, future Frog Pond East Neighborhood Park and BPA Easement. The South Neighborhood has a small node of Type 1 housing located south of the Meridian Middle School property. In both neighborhoods, Type 2 and 3 housing “feathers out” from the Type 1 areas.



Transect Image



LAND USE

USE OF SUBDISTRICTS

The Master Plan includes subdistricts as a tool used for neighborhood planning. The subdistricts of Frog Pond East and South are “neighborhoods within the neighborhoods” because they have a planned number and variety of housing types with a cohesive look and feel. Each includes a green focal point that is central in the subdistrict and/or aligned with a key feature such as a tree grove to serve as an important placemaking tool, creating a strong public realm and opportunity for community gathering.

The subdistrict concept for Frog Pond East and South builds off concepts used in Frog Pond West and Villebois planning. In Frog Pond West, subdistricts are used to identify the different residential lot sizes and are primarily used for zoning implementation rather than urban design. Villebois used a system of sub-geographies called Specific Area Plans (SAPs). Villebois’ SAPs had an important urban design and housing variety aspect. They were centered on walkable distances focused around gathering spaces and included a variety of housing types in each. With an urban design focus and planned housing variety, the subdistricts for Frog Pond East and South will be more similar to Villebois SAPs than Frog Pond West subdistricts. Each subdistrict in Frog Pond East and South was determined based on its context and placemaking opportunities.

HOUSING METRICS

The following summarizes the estimated housing capacity for each neighborhood and subdistrict.

Table 2. Housing Estimates

| | ESTIMATED TOTAL DWELLING UNITS | UNITS IN TYPE 1 URBAN FORM AREAS | UNITS IN TYPE 2 URBAN FORM AREAS | UNITS IN TYPE 3 URBAN FORM AREAS | ESTIMATED NET RESIDENTIAL LAND* | ESTIMATED NET DENSITY |
|---|---|--|--|--|--|--------------------------|
| Frog Pond East & South Neighborhoods | 1,587 | 390 | 886 | 312 | 119.2 acres | 13.3 du/acre |
| East Neighborhood | 1,089 | 306 | 634 | 150 | 75.84 | 14.4 du/acre |
| South Neighborhood | 498 | 84 | 252 | 162 | 40.1 | 11.5 du/acre |

*(20% assumed for ROW and other set asides)



LAND USE

Table 3. Residential Development Metrics

| RESIDENTIAL FORM | GROSS ACRES | BUILDABLE ACRES (ESTIMATED) |
|-------------------------|--------------|-----------------------------|
| Type 1 Residential Form | 20.5 | 19.5 |
| Type 2 Residential Form | 86.9 | 73.8 |
| Type 3 Residential Form | 67.0 | 55.7 |
| TOTAL | 174.4 | 149.0 |

NEIGHBORHOOD COMMERCIAL

The neighborhood commercial center concept was originally articulated as part of the Frog Pond Area Plan. The Area Plan noted:

“The overall vision for the neighborhood commercial center is that it is a place that provides local goods and services within easy access of the local neighborhoods, has a high quality and pedestrian-oriented design, and serves as a gathering place for the community. Due to its small scale and local orientation, it will not compete with other commercial areas in Wilsonville.”

The above-cited vision for the center endures; it is a critical component of creating a vibrant community in the Frog Pond Area and thus is part of this Master Plan. Based on an updated market analysis, the center is approximately five acres in size and up to 44,000 square feet of retail with or without mixed use residential development above. The location along SW Brisband Street was selected because of its visibility from SW Stafford Road, centrality along the west edge of the East Neighborhood, and potential for a Main Street configuration. The vision for the center, its location and its design concept were discussed with the community – it was broadly supported as an important element of the Master Plan.

The commercial development program listed below was discussed with Planning Commission and City Council during work sessions and shared with the public during outreach.

Table 4. Commercial Development Recommendations

| PLAN ELEMENT | COMMERCIAL DEVELOPMENT PROGRAM RECOMMENDATION |
|----------------------|--|
| Building Square Feet | Up to 44,000 square feet (or 56,000 square feet if the City can attract a pharmacy or medium sized grocer) |
| Site Acreage | Up to 4.0 acres (or 5.1 acres if the City can attract a pharmacy or medium sized grocery) |

1 Frog Pond Area Plan, page 37



LAND USE

PLAN ELEMENT

COMMERCIAL DEVELOPMENT PROGRAM RECOMMENDATION

Likely Tenant Mix

Food and beverage, retail, general commercial, professional services/office, healthcare, fitness, daycare, banks, and more. Specific retail tenants may include cafes and restaurants, a specialty food product store, a pharmacy, and other miscellaneous stores like laundromats, salons, hobby/boutique stores, and medical, professional, and financial offices.

Development Type

Main Street, with buildings on both sides of the planned SW Brisband Street or SW Frog Pond Lane extension on the east side of SW Stafford Road. Minimal setbacks, parking located behind buildings, and pedestrian orientation are important features. Main Street retail provides the greatest experience and offers an opportunity for the commercial area to be prosperous over a longer timeframe. Main street retail feels “fresher” for longer than conventional retail centers and would be more accessible to a greater number of people traveling by car, foot, and bike.

Adjacent and Supporting Uses

Higher density residential, including apartments, townhomes, and live/work spaces, surrounding the commercial center would improve viability of commercial spaces.

Figure 16. Neighborhood Commercial Examples





LAND USE

SITE DESIGN

The Brisbane Main Street neighborhood commercial area will create a destination for local and regional residents, accessible by walking, rolling, biking, and transit. Off-street parking will be tucked behind buildings, prioritizing a people-oriented environment along the Main Street itself. These parking lots can also provide future development capacity for additional housing. The site study shows vertical mixed-use buildings oriented to create a visible presence from SW Stafford Rd. The potential roundabout intersection will be thoughtfully designed to ensure easy navigation by pedestrians and to slow down cars. Key pedestrian entry points to the Main Street from SW Stafford Rd. will be marked with gateway markers or signage.

Within the two blocks of the Main Street, there is an opportunity to create small plazas or gathering areas that provide a focal point and allow people to comfortably linger and spend time. The demonstration plan shows small plazas located between buildings for outdoor dining or merchandise display.

Figure 17. Neighborhood Commercial Demonstration





LAND USE

PARKS, CIVIC USES, AND OPEN SPACES

Parks and open spaces are a valued part of every neighborhood in Wilsonville, including Frog Pond's neighborhoods. The Frog Pond East and South neighborhoods include the following parks, civic and open spaces:

- The proposed Frog Pond East Neighborhood Park
- The previously planned 10-acre Community Park
- Area around Frog Pond Grange as a civic and community destination and landmark
- Green Focal Points in each subdistrict
- The BPA Easement open space
- Significant Resource Overlay Areas along Meridian Creek, Willow Creek, and Newland Creek
- Meridian Creek Middle School

Please see the Public Realm section of this report for further description of the above and how they are part of the overall Parks and Open Space Plan.

Placeholder Image



PUBLIC REALM



PUBLIC REALM

The public realm is the combination of all public spaces, including streets, alleys, parks, plazas, and other publicly accessible areas, that define the experience of living in or visiting a city or neighborhood. A well-designed and cohesive public realm will be an essential part of the success and livability of this new area of Wilsonville. The Master Plan provides guidance about how the public realm can be designed to work together with existing site qualities and future development to create healthy, connected, sustainable, and beautiful neighborhoods for diverse families to thrive.

PRINCIPLES

The design of the public realm in Frog Pond East and South will achieve several key principles.

PRESERVED AND RESTORED NATURAL RESOURCES. Existing natural resources, including trees, wetlands and creek corridors, will be preserved and restored within and around new development. Streets, parks, and public spaces provide opportunities to protect existing trees. Additionally, incorporating stormwater planters and green infrastructure supports watershed health by cleaning and slowing runoff.

INTEGRATED PARKS AND GREEN SPACES. Parks and green spaces are a vital part of creating healthy, active, and livable neighborhoods. Parks and smaller open spaces within neighborhoods will be centrally located and visible and accessible to all. In addition to a 10-acre community park and a 3-acre neighborhood park, each walkable sub-district includes its own “green focal point”, which could be a pocket park, playground, community garden, plaza, or other gathering place.

COMMUNITY DESIGN THAT CELEBRATES AND ENHANCES NEIGHBORHOOD CHARACTER. Streets and trails will be laid out to emphasize views of natural features of the site like forested creek corridors, parks, or destinations. Unique and historical elements like the Frog Pond Grange are integrated thoughtfully into overall neighborhood design. For example, the Grange site provides co-located gathering space, green space, and visibility and direct access to the trails and open space of the BPA corridor. Additionally, more detailed elements of the public realm like lighting, street trees, and signage are cohesive with the existing fabric of Wilsonville, particularly the adjacent Frog Pond West area.



PUBLIC REALM

PLACES FOR GATHERING AND CIVIC LIFE FOR A DIVERSE COMMUNITY. The public realm will support a broad range of social activities, including opportunities to gather formally and informally. Meeting places like neighborhood commercial areas, parks, schools, and even sidewalks will be designed to provide space for varied social and cultural activities.

CONVENIENT, SAFE, AND LOW-STRESS TRANSPORTATION OPTIONS. A connected network of streets and trails prioritizes the safety and comfort of the most vulnerable road users. Streets will be designed to encourage and prioritize walking, biking, rolling, transit, and other low-carbon modes of travel. Street and block layout make it easy for residents to access schools, parks, and neighborhood services without a car.

PLACEHOLDER IMAGE



PRESERVING TREES & NATURAL RESOURCES

The master plan study area contains significant natural resources, including creek and wetland corridors, forested uplands, and clusters of mature trees. Preservation of these areas is a priority not only for their ecological importance, but for their intrinsic value to neighborhood character, health, and quality of life for current and future Wilsonville residents. As development progresses, natural features will be incorporated sensitively within public infrastructure and private development.

Some areas of the site around creek corridors are protected under Wilsonville's Significant Resource Overlay Zone (SROZ). Other sensitive natural resources, such as wetlands, may be documented through pre-development studies of individual properties and should be incorporated and protected through the City's SROZ regulations and "Habitat Friendly Development Practices".

Figure 18 shows SROZ areas and the inventory of significant trees in the planning area.

TREE PRESERVATION

The preliminary tree inventory is intended to inform preservation strategies at the Master Plan level. It was completed on January 26, 2022 by Morgan Holen Associates, followed by additional inventory of trees by AKS and Morgan Holen Associates in April 2022. The tree inventory identified potentially significant trees and groves based on species, size, and general condition. Within or outside this analysis, some trees may need closer examination to verify their significance and potential for preservation. Specifically, a portion of the treed area in the SROZ on the south side of SW Kahle Road has undetermined natural value with testimony received that many of the trees in the area are agricultural trees. If further study reveals this area does not qualify as a resource to be included in the SROZ and is developable, the area will be assigned the Type 3 Residential Urban Form matching nearby areas.

While preservation of individual trees or groves will ultimately be implemented during the design and construction of public and private development, the Master Plan identifies opportunities for preservation of significant trees in public open spaces, street rights-of-way, and within private development sites. Wilsonville's existing natural resource preservation policy and tree protection code provide a supporting framework for tree preservation in this area.

The Master Plan's tree inventory map identifies trees that are highest priority to preserve, meaning that these should be preserved within infrastructure, development, or green space to the greatest extent possible. Preservation of these trees may be achieved through development standards. Trees noted as

Figure 18. Natural Resource and Tree Inventory Map





PUBLIC REALM

secondary priority will be preserved if possible, especially if they are healthy and growing within an area that is a suitable location for green space or infrastructure that can accommodate preserved trees. While older, mature trees provide greater carbon sequestration and shade, smaller and less mature trees are also important to preserve because their root systems are not yet fully established, meaning that they can be more resilient to the impacts from surrounding development as they mature.

Public infrastructure and private development will preserve trees through thoughtful design and layout of streets and blocks, as seen on SW Willow Creek Drive and SW Brisband Street in Frog Pond West, or by locating green space strategically to preserve significant trees. Site design for individual buildings or homes can also incorporate tree preservation.



Protected tree the Right-Of-Way in Frog Pond West



PUBLIC REALM



An existing mature tree on SW Brisband Street in Frog Pond West was preserved within the design of a street corner.



Private development can preserve significant trees within central open spaces or green spaces.



A mature white oak tree was preserved within parking lot landscaping for Wilsonville High School.



PUBLIC REALM

INCORPORATING NATURAL AREAS

Three major creek corridors intersect the study area: Meridian Creek in the southwest, Newland Creek at the northeast, and Willow Creek at the southeast. In addition to protections within the Development Code and State law, these creeks and their forested surroundings provide an opportunity for developers to enhance these environmental resources as well as the quality-of-life experience for future residents. Site design and layout of development and streets will provide physical and visual access to significant creek corridors, particularly where public trail connections are planned to enter neighborhoods. In these locations, small usable open spaces like pocket parks will ensure public access to creek corridors and trails. Additionally, public street connections will to the greatest extent possible terminate at natural resource corridors or run alongside them to ensure views and access.



Example of development adjacent to natural area



PARKS AND OPEN SPACES

Access to green space, outdoor recreation opportunities, and public gathering space is a fundamental component of healthy neighborhoods and communities. The Master Plan includes a series of parks and open spaces of different sizes to be located centrally and distributed equitably throughout the East and South neighborhoods. The map illustrates two primary parks. The first is a 10-acre community park adjacent to Meridian Creek Middle School, which is owned by the City for development as a park. The second is a 3-acre neighborhood park to be located centrally in the East Neighborhood.

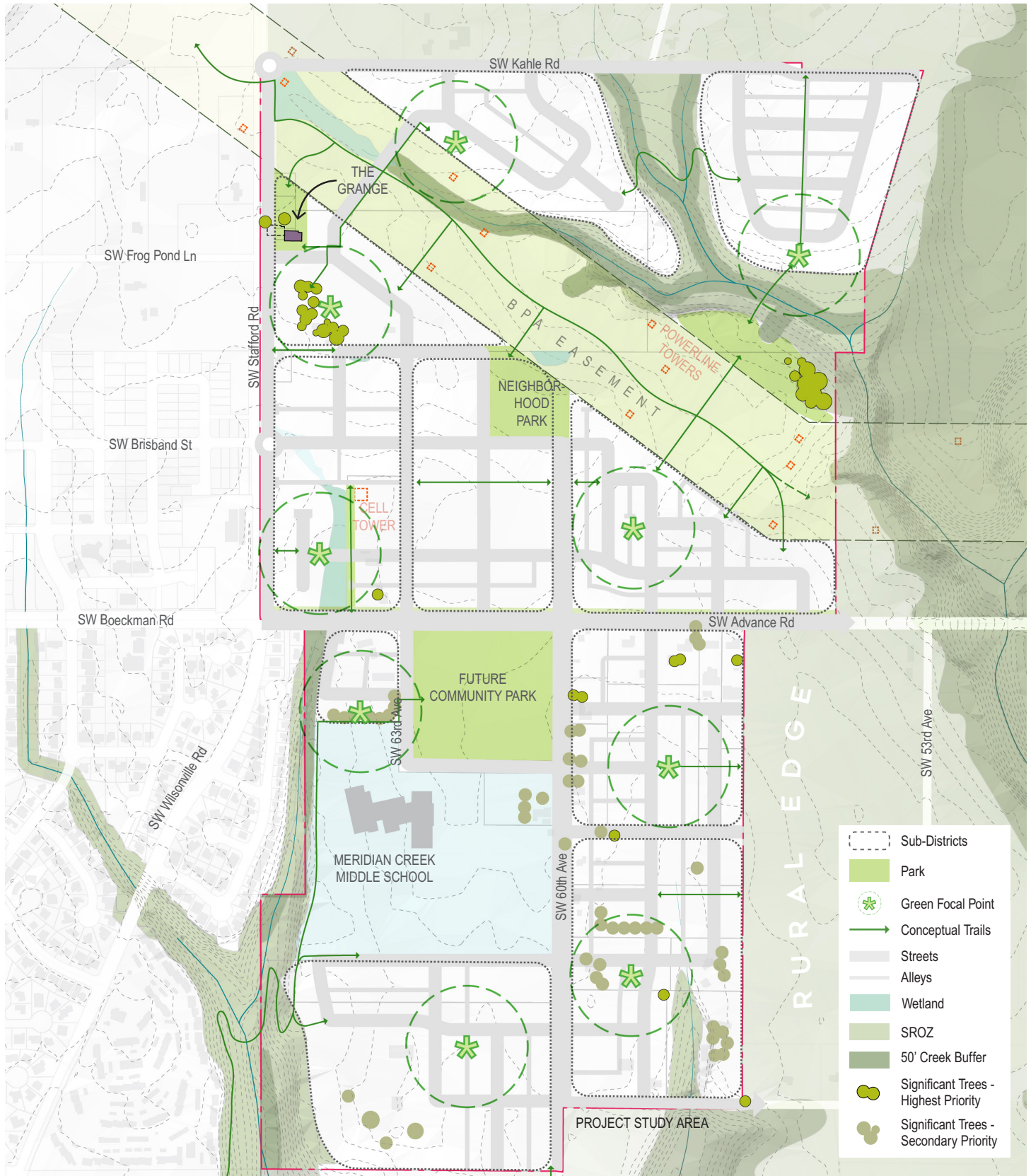
Additionally, the historic Grange building and site represent a unique opportunity to capture a piece of the site's history while enhancing this civic gathering place to support ongoing use by the community. The Grange building may need to be relocated slightly depending on the future design of SW Stafford Rd. Two significant trees are located around the Grange, and these could be incorporated and preserved as part of a small public open space that connects to the BPA easement. In the future, this site is intended to include multiple amenities like a trailhead into the BPA easement, interpretive signage, community gardens, or environmental learning opportunities.

At the time of the Master Plan ownership of the Grange building has not shared future plans. This Master Plan assumes the Grange will continue a similar use as it is under the current ownership, with small community gatherings and programming inside and outside the building. The City may pursue purchase if the building comes up for sale in the future or partnership with current or future owners to preserve the building and provide a key civic gathering space for the community.



A tract of undevelopable open space just north of the BPA easement presents another opportunity for public access to nature. This 3-acre area is contiguous with the Newland Creek natural area and contains a stand of significant trees. It can serve as a natural open space with trail access from the BPA easement and neighborhoods to the north.

Figure 19. Park and Open Space Framework





PUBLIC REALM

Beyond these primary public open spaces, the map shows an intent to provide “green focal points” in central locations to each sub-district of the planning area, ensuring that each neighborhood has a small destination or gathering place that gives it character. These green focal points are flexible in location, but the map indicates general areas that are central to each sub-district.

Parks and open spaces will occupy prominent locations within each neighborhood where they are clearly accessible and invite the public in. They will be well-connected to a system of pedestrian and bike pathways, including off-street trails that connect to the BPA easement and trails through natural areas.

EAST NEIGHBORHOOD PARK

A three-acre neighborhood park will be located centrally in the East Neighborhood to provide a prominent destination and gathering place for surrounding residents. The City of Wilsonville’s 2018 Parks and Recreation Master Plan describes a half mile to one mile distance to parks and outdoor recreation as a reasonable distance for residents to be able to access their local park by walking or biking. While the Frog Pond South neighborhood will be served by the future Community Park, The Frog Pond East neighborhood is three quarters of a mile across and has no specifically planned park facility in the Parks and Recreation Master Plan. Therefore, a neighborhood park in this area is intended to be centrally located to the Frog Pond East Neighborhood.

Wilsonville’s neighborhood parks are generally small in size, acting as a combination of a playground and a park designed primarily for spontaneous, non-organized recreation activities. Public outreach revealed strong support and appreciation for Wilsonville’s parks and the type of programming provided. Input received from community members supported a neighborhood park that is similar to others in Wilsonville. In Frog Pond East, the neighborhood park will be designed for a variety of activities, including daily use by local residents for walking, playing, and spending time outdoors. Outreach particularly emphasized the desire for shade, accessibility, and playgrounds for children. Given its proximity to a future neighborhood commercial area, it also offers the opportunity to accommodate seasonal events and programming that can bring local residents together: for example, markets, cultural festivals, or movies in the park.

The park and open space framework map shows the future East Neighborhood Park located directly adjacent to the BPA easement in order to create a significant public connection to the easement area, making the park feel like a more generous open space. Multi use paths through the BPA easement will connect directly into the neighborhood park as an entry point to the larger network of planned pedestrian and bicycle routes.



PUBLIC REALM

GREEN FOCAL POINTS

In addition to the planned Community Park in Frog Pond South and the Neighborhood Park in Frog Pond East, several “green focal points” are identified in central locations within each walkable sub-district of the planning area. These are flexible in location and size but are intended to serve as central neighborhood destinations or gathering places that contribute to neighborhood character and identity. In addition to being centrally located, these focal points will be integrated into the neighborhood with front doors facing them, where possible, and provide clear and inviting access for public use.

Many different kinds of uses and activities are envisioned for these green focal points. Examples include community garden plots, small playgrounds or splash pads, nature play areas, pocket parks or plazas, and central green courtyards within housing developments. These smaller open spaces also provide opportunities to preserve mature and significant trees and provide visible stormwater treatment.



A neighborhood park can give character to its surrounding neighborhood and preserve existing mature trees. Homes facing the park make the space feel cohesive and integrated within the neighborhood.

The size of the park and its proximity to a neighborhood commercial area could allow it to become a central gathering place where programming, events, and daily activities bring local residents together



Play areas for children will be an important feature of the future East Neighborhood Park





PUBLIC REALM





STREET & BLOCK LAYOUT

The Street and Block Demonstration Plan illustrates a potential layout of streets, blocks, and multi-use paths that would achieve the intent of providing connected, convenient, safe, and low-stress transportation options for Frog Pond East and South. The location of framework streets either exists today or will be direct continuation of existing streets as shown on the Street and Block Demonstration Plan. The remaining street locations are shown for demonstration purposes and actual street layout beyond the framework streets will be determined at the time of development review, based on standards contained in the Development Code and Public Works Standards.

A clear hierarchy of street connections is established with SW Advance Road and SW 60th Avenue acting as collector streets, SW Brisband Street as a Main Street, and all other streets as local streets. A roundabout intersection is planned where SW Brisband Street crosses SW Stafford Road, an arterial street. SW Brisband Street extends directly to the east from SW Stafford Road to intersect with SW 60th Avenue, creating a simple block layout along the planned “Main Street” corridor. SW Frog Pond Lane extends into the study area as a local street and provides connections into the local street network of the East Neighborhood, including a street that crosses the BPA easement toward SW Kahle Road to the north.

Street and block layout will be designed to maximize walkability with short blocks and alley-loaded development that reduces vehicular crossings of sidewalks. Street and block design will also protect natural resources, trees, and public view corridors. For example, a cluster of significant trees just south of the Grange can be preserved within a block of development that is clustered around its edges. The demonstration plan shows public streets intentionally connecting to public trailheads along the length of the BPA easement.

A future transit route is planned to enter the study area from SW Wilsonville Road onto SW Advance Road, head south between the future community park and the middle school, turn north on SW 60th Avenue, and exit the study area from SW Brisband Street (the Main Street) back onto SW Stafford Road. Transit service will be important to residents of this area, helping them meet their daily needs and obligations without relying on a car.

In some areas where vehicular access constraints create long blocks, such as along SW Stafford Road, green pedestrian connections are required at regular intervals to allow people to move into and through the neighborhood more easily.



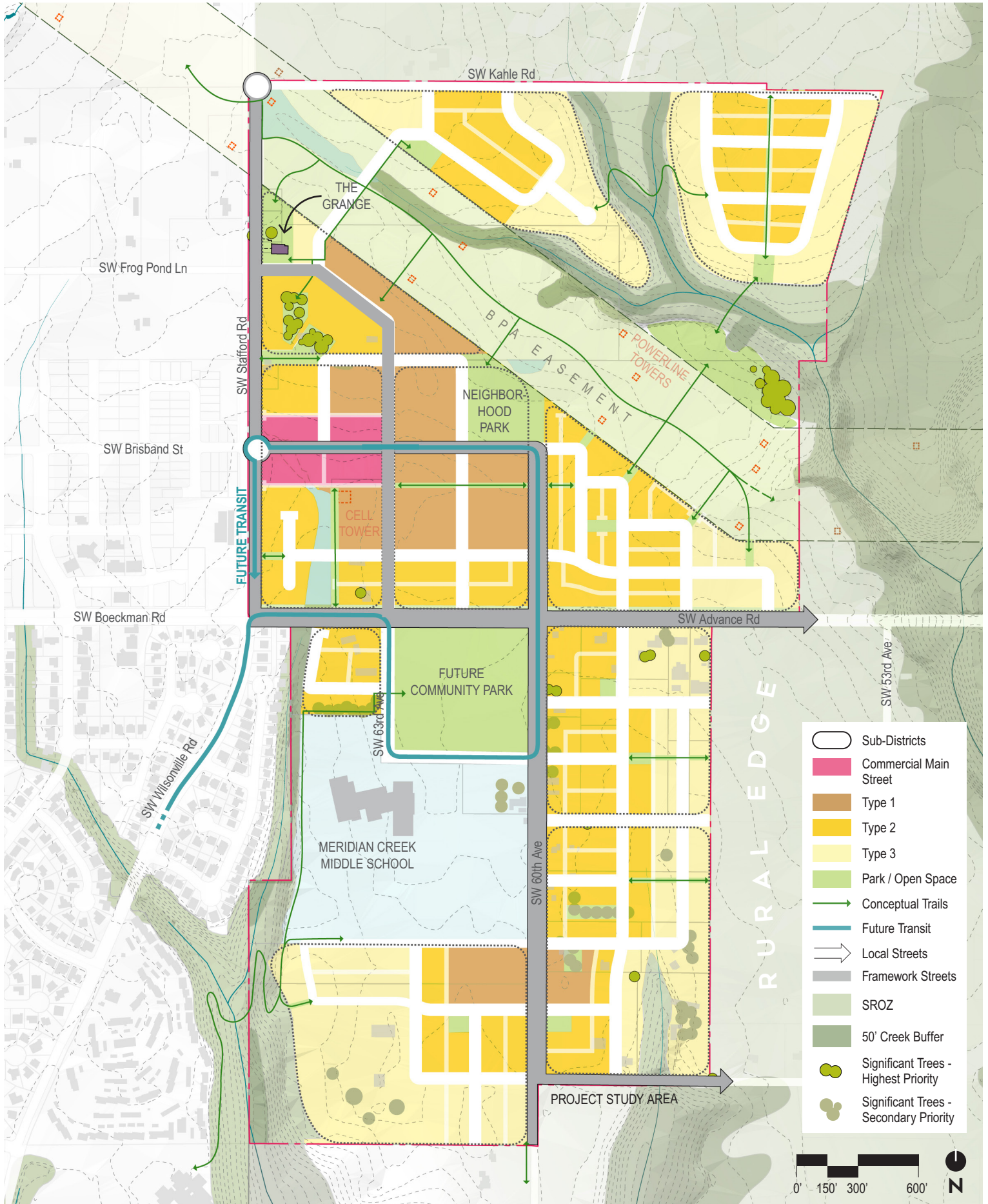
PUBLIC REALM

The Street and Block Demonstration Plan with land uses (Figure 20) shows the intended arrangement of development types and forms within overall street and block layout. Type 1 areas, which allow larger building forms, are focused centrally to the study area. It is important that Type 1 development areas are permeated by public streets and accessways to ensure integration within the neighborhood. A portion of Type 1 is shown directly adjacent to the BPA easement. This may allow multi-dwelling development in this area to take advantage of a portion of the BPA easement for parking.

The Street Demonstration Plan indicates intent for the relationship between development and major streets in the area. Blocks with development along SW Stafford Road, an arterial street, are oriented so that lots back onto the street in order to minimize impacts to those residents from road noise. A block of cottage cluster housing just south of the Grange could protect the existing stand of trees through flexible siting and orientation of buildings toward a central green space while reducing impacts from the adjacent busy road. Blocks along SW Advance Road, a collector street, are oriented to show homes facing the community park across the street. The blocks of commercial along the SW Brisband Main Street show the intent to orient buildings to the Main Street and place off-street parking and vehicular access behind buildings to create a walkable environment. The Street Design section illustrates these relationships in more detail.

PLACEHOLDER IMAGE

Figure 20. Street and Block Demonstration Plan with Land Uses





ACTIVE TRANSPORTATION

The Master Plan area will provide a complete and connected network of routes that prioritize non-car users, including cyclists, pedestrians, and those with wheelchairs or other mobility devices. Within public rights-of-way, facilities will include bike lanes, shared street markings, and wide sidewalks. A series of off-street multi-use path connections are planned to extend from the public street network into open spaces and natural areas. This combination of on-street and off-street facilities will provide multiple options for non-car users to access destinations like schools, parks, and the neighborhood commercial area.

Results from surveys and in-person outreach show a strong preference for separate off-street or physically buffered bicycle infrastructure. While this aims to maximize opportunities for separate off-street or physically buffered bicycle infrastructure shared streets and on-street facilities are still present where separated facilities are not feasible or to provide additional travel options beyond separated bicycle infrastructure.

The bicycle circulation concepts map indicates an intended hierarchy of on-street facilities for cyclists that connects to an off-street system of paths. Primary connections are shown along SW Advance Road and SW 60th Avenue, transitioning to shared street markings along the SW Brisband Main Street and key local streets in the study area that connect to destinations.

All local streets, with or without shared street markings, will be designed to focus on pedestrians and cyclists, with low speeds, street trees and planters, and alley-loaded development to minimize pedestrian-vehicle conflicts.

Crossings of SW Stafford Road and SW Advance Road will be carefully designed to prioritize safe routes to schools, parks, and other destinations within the larger Frog Pond area. Providing marked and signaled crossings as frequently as possible will mitigate out-of-direction travel for pedestrians and avoid pedestrians crossing at unmarked locations where they are more vulnerable to injury by vehicles.



PUBLIC REALM



Off-street multi use paths connect bicycles and pedestrians to destinations without relying on street connections

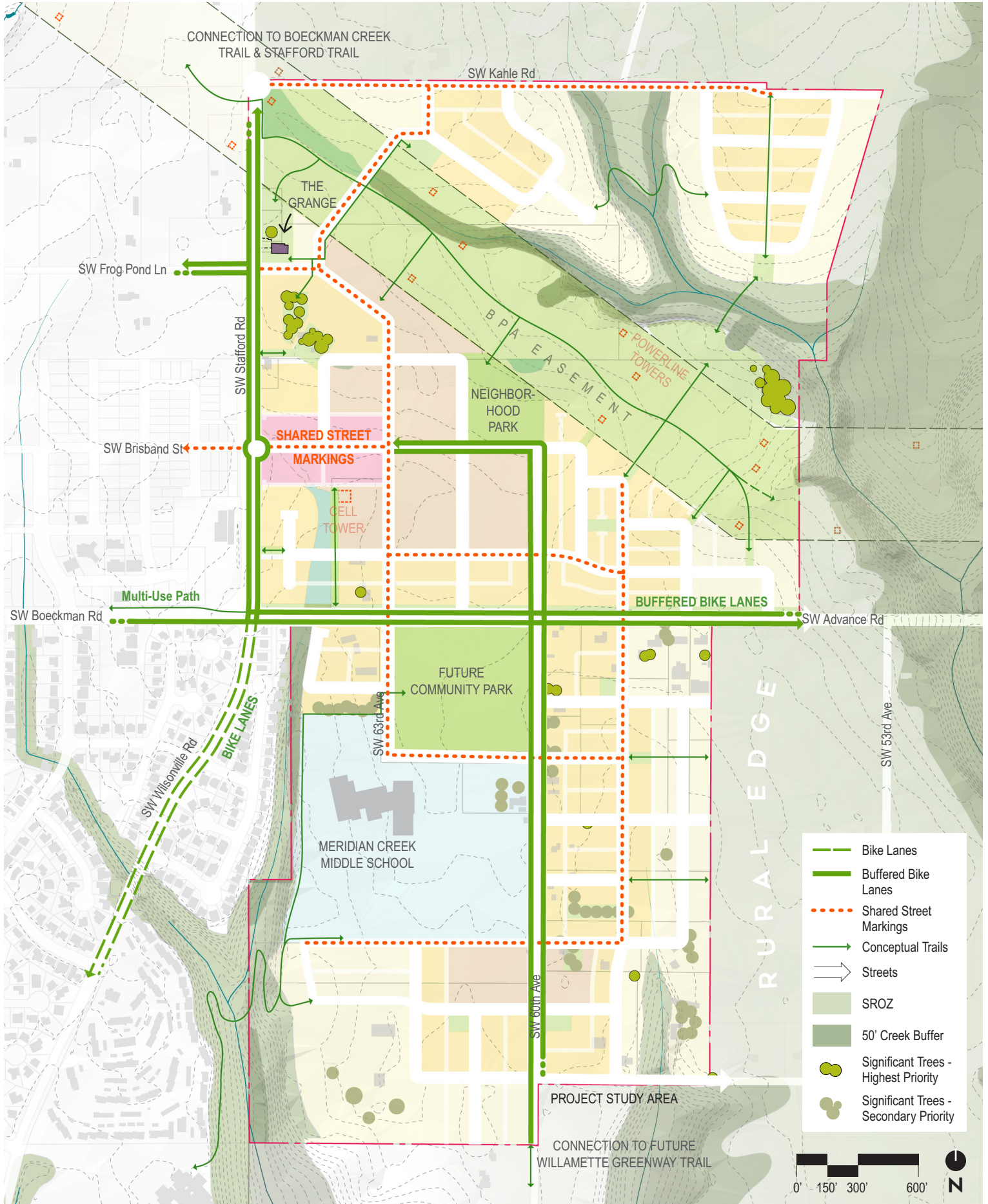


Sharrow marking on local street indicates a priority for cyclists and slows car traffic



Buffered or protected bike lanes provide safe and comfortable on-street cycling facilities

Figure 21. Active Transportation Concept



STREET DESIGN

All streets and off-street active transportation connections will be designed with the goal of creating convenient, safe, and low-stress transportation options, particularly for the most vulnerable road users. Design of streets should focus on safety, comfort, and ease for non-car users of roads, with a focus on providing multiple low-stress routes and street designs that are tailored to the multimodal circulation network within the study area.

way streets (SW Advance Road and SW 60th Avenue north of SW Advance Road) are key entry points to the neighborhoods and important connections for cyclists and pedestrians. These streets will include buffered or protected bike lanes and wide sidewalks and will be up to three lanes wide, with a planted median where a center turn lane is not needed. On-street parking may also be included in some locations

Collector street design will be implemented for SW 60th Avenue South of SW Advance Road. This cross-section will include two travel lanes, buffered or protected bike lanes, and wide, ADA-accessible sidewalks.

Local streets will be designed to focus on pedestrians and cyclists, with low speeds, street trees and planters, and alley-loaded development where possible to minimize pedestrian-vehicle conflicts and provide an appealing streetscape without garages. Key local streets that connect to destinations will include shared street markings to emphasize a priority for cyclists on the road. Local street design will continue the established pattern in Frog Pond West.

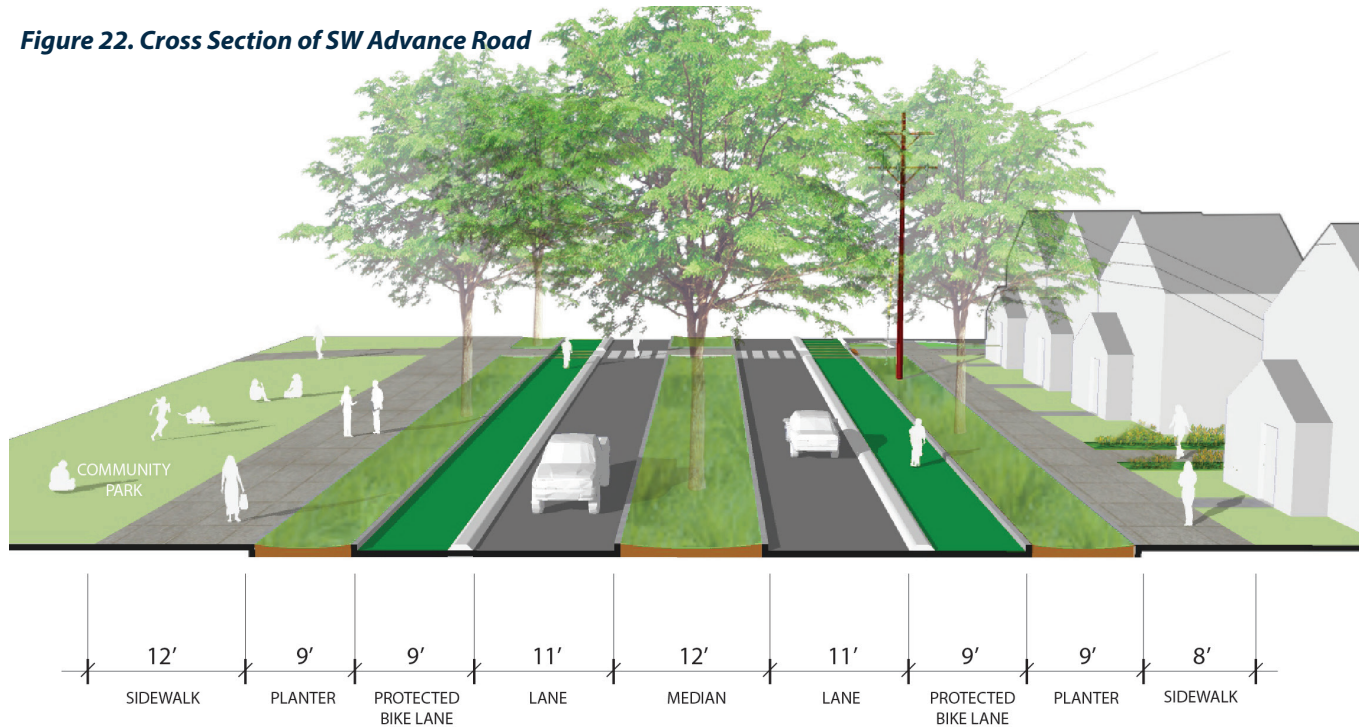
In addition to streets, mid-block public pedestrian connections will enhance neighborhood accessibility and permeability. Typical off-street pedestrian connections between blocks of development will be at least 10 feet wide and will include 8-foot planted areas on either side for a total width of 26 feet.

The following pages describe design intent for several important streets that will pass through the study area: SW Advance Road, SW 60th Avenue, and SW Brisband Street, which will serve as a neighborhood Main Street in the East Neighborhood.



PUBLIC REALM

Figure 22. Cross Section of SW Advance Road

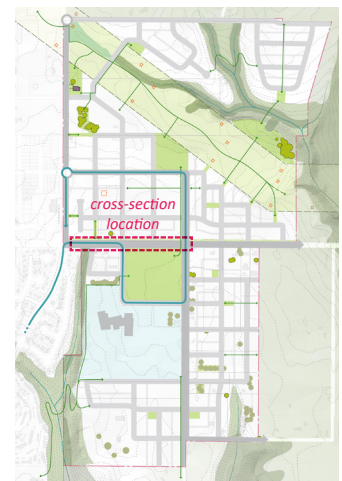


SW ADVANCE ROAD

This cross-section shows a concept for SW Advance Road, a collector street, where it passes the future community park. It includes generous sidewalks, buffered bike lanes, wide planter strips that support tree health, and a planted median to create a comfortable and inviting environment for pedestrians. On-street parking, while not shown in the image above, may also be added on either side of the street but will need to be designed carefully to avoid conflicts with cyclists. Planted areas in the right-of-way also offer opportunities for capturing and infiltrating stormwater.

Future development on the north side of the street, across from the future community park, is planned so that front doors face the park. This, combined with homes fronting the park on its east and west sides, will create a sense of community, enclosure, and integration of the park within the neighborhood.

This concept for SW Advance Road will create a continuous streetscape with SW Boeckman Road where it continues west of SW Stafford Road. Existing high-voltage power poles on the north side of the street can be incorporated within a wide planter strip.

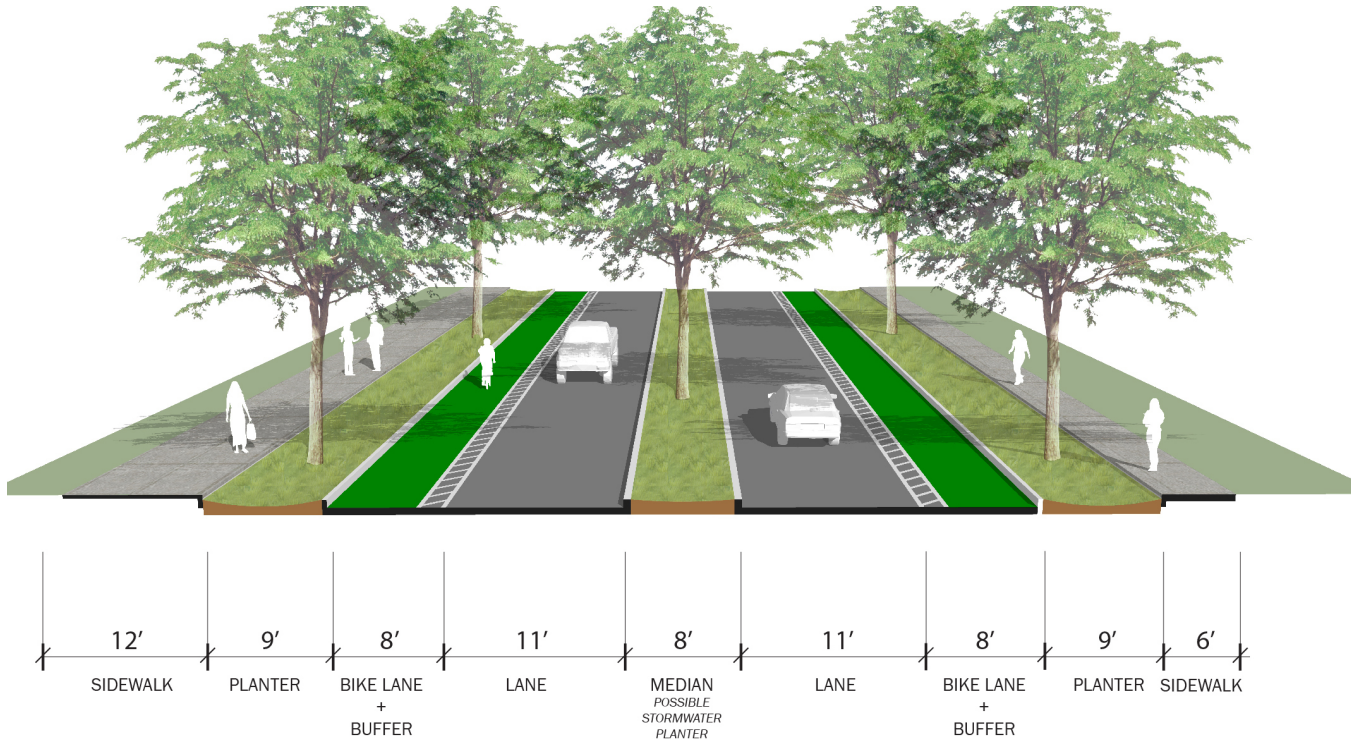


KEY MAP



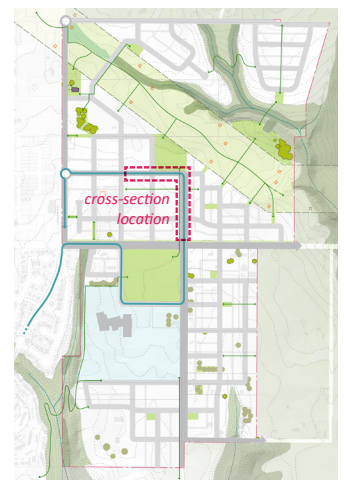
PUBLIC REALM

Figure 23. Cross Section of SW 60th Avenue



SW 60TH AVENUE

This cross-section shows a concept for SW 60th Avenue north of SW Advance Road. This street will function as a key entry point to the East Neighborhood and will connect to the SW Brisband Main Street. A planted median allows for turn lanes at intersections may also include stormwater. A 12-foot sidewalk on the west side of the street provides a comfortable pedestrian connection between the Community Park to the south and Neighborhood Park to the north.

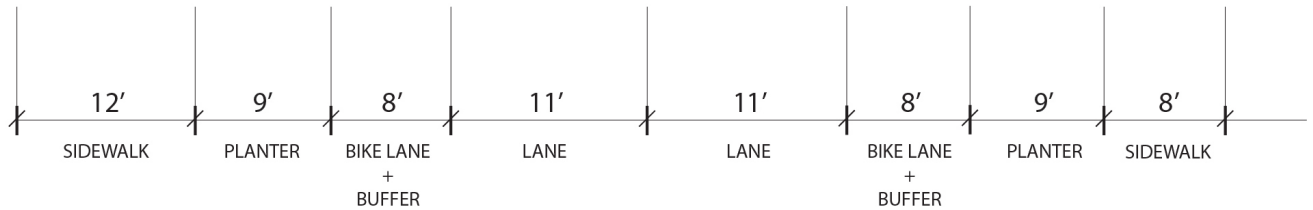
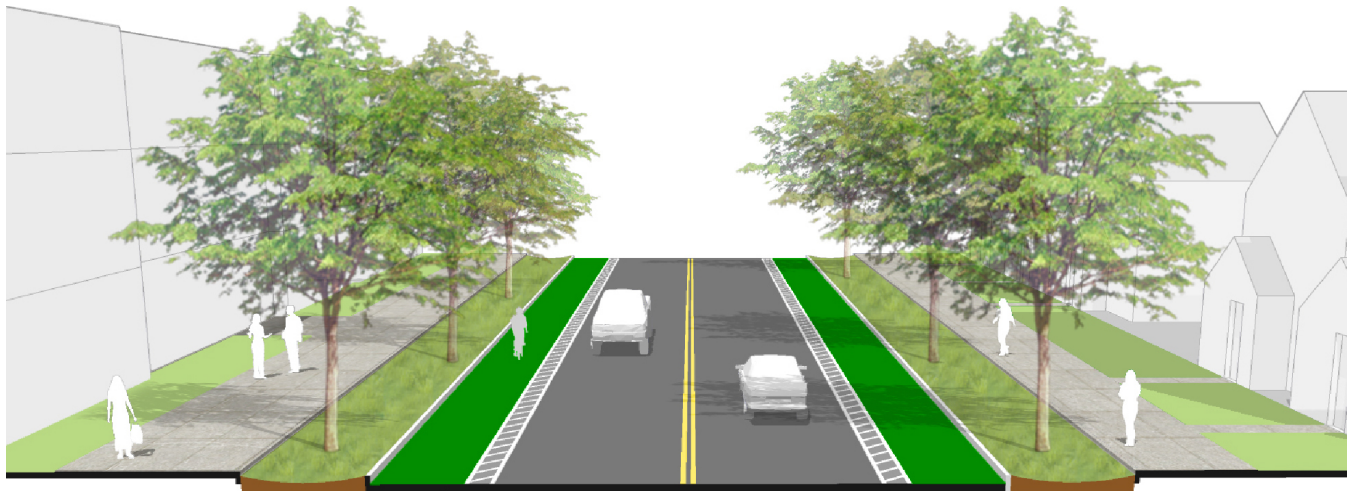


KEY MAP



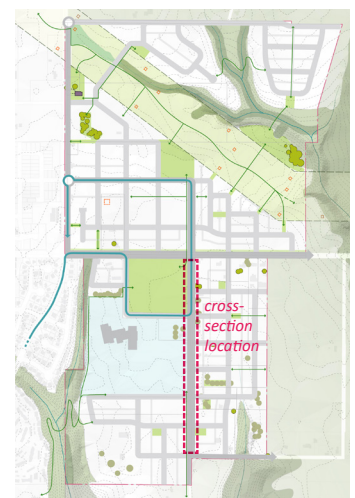
PUBLIC REALM

Figure 24. Cross Section of SW 60th Avenue Collector



SW 60TH AVENUE COLLECTOR

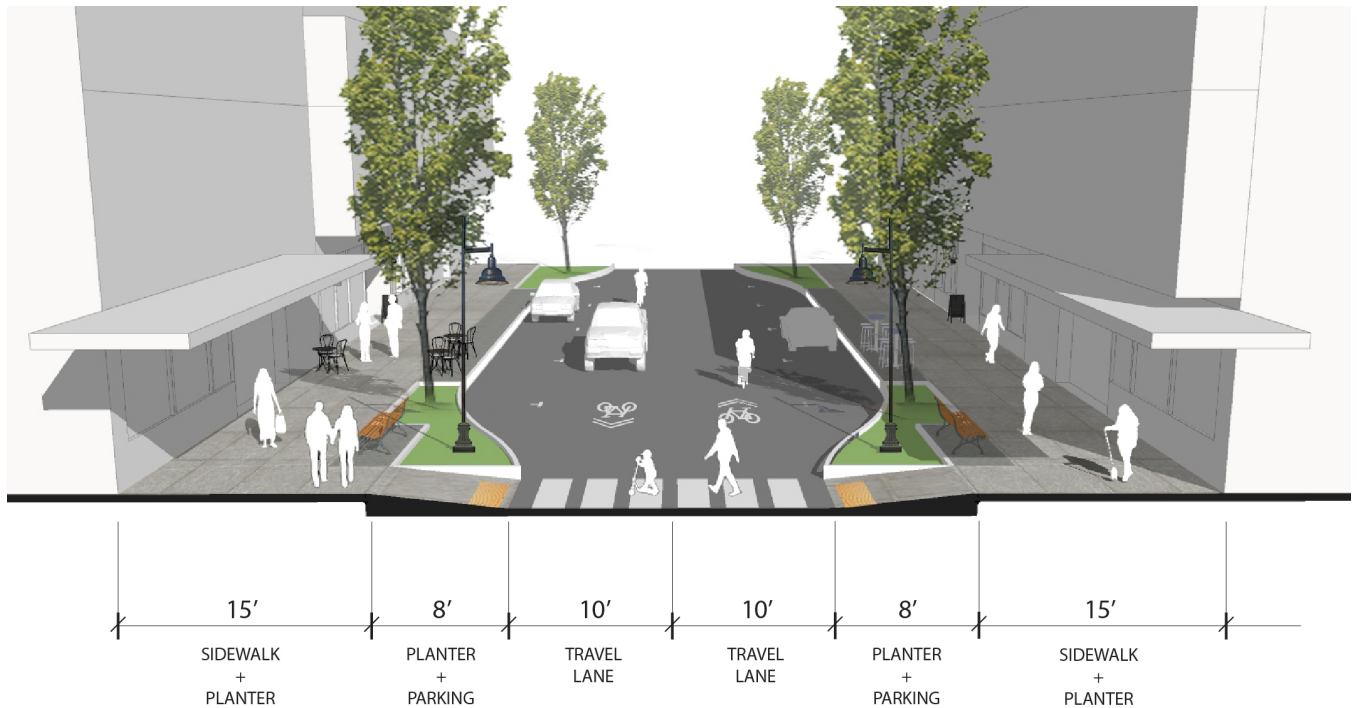
This cross-section shows a concept for SW 60th Ave., a collector street, south of SW Advance Rd. Since various building forms and residential densities are expected to be located along SW 60th Ave., this cross-section illustrates an intent to provide more sidewalk space along the west side of the street, adjacent to the Community Park. The wider sidewalk will ensure a pleasant and spacious walking environment for pedestrians and lessen the visual presence of any larger buildings. The cross-section may also include a center turn lane and planted median if needed, but a narrower street width is more desirable to shorten crossing distances and create a more pedestrian-oriented scale for this key north-south connection between the Middle School, Community Park, and Neighborhood Park.



KEY MAP

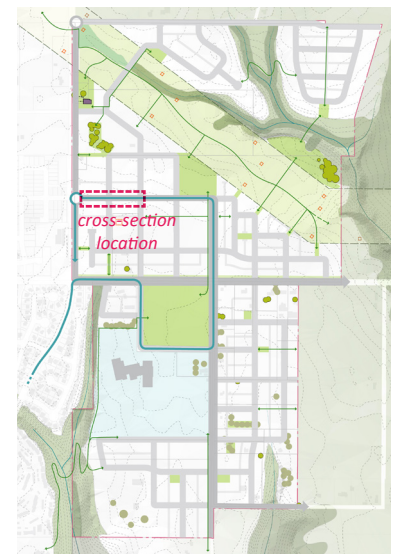


Figure 25. Cross Section SW Brisband Main Street



SW BRISBAND MAIN STREET

This cross-section shows a concept for SW Brisband Street, which will function as a neighborhood commercial “Main Street” within the Frog Pond East Neighborhood. The cross-section is based on the Wilsonville Town Center Plan and Transportation System Plan cross-section for a Main Street, with two travel lanes shared by cyclists and cars. On-street parking is provided interspersed with stormwater planters in curb extensions, and generous sidewalks allow for a furnishing zone with public and private seating. Buildings, whether commercial or vertical mixed-use, are intended to line the sidewalk and create a pleasant environment to stroll, visit local businesses, and socialize.



KEY MAP



STREET TREE PLAN

The concept for street trees in the Frog Pond East and South Neighborhoods is intended to beautify and unify the neighborhood while providing a variety of tree species. The following Street Tree Plan provides guidance tied to the street typology for Frog Pond East and South that will integrate with the street tree palette established in Frog Pond West.

PRIMARY STREETS

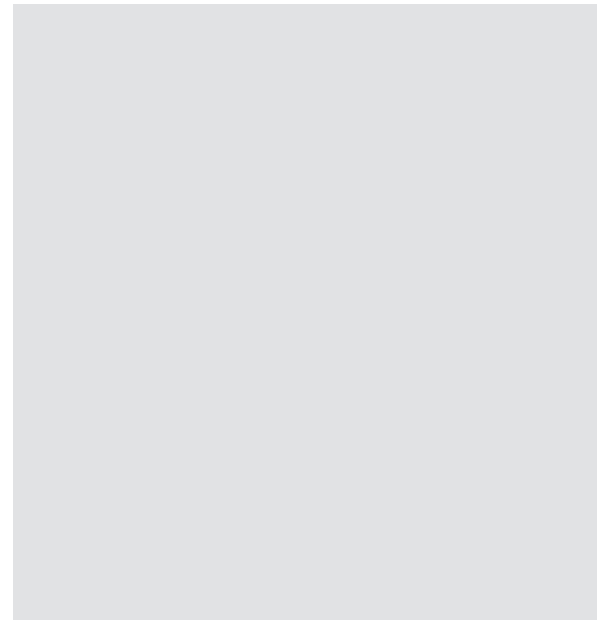
The Primary Streets in the new neighborhood should provide a clear identity to the community, and serve as a wayfinding structure, with street tree continuity serving as a useful tool.

The proposed trees for these Primary streets come partly from the City of Wilsonville's recommended tree list for "trees over 50 feet mature height" with updates to exclude some species that do not meet current practice or are known to be invasive or prone to disease or breakage.

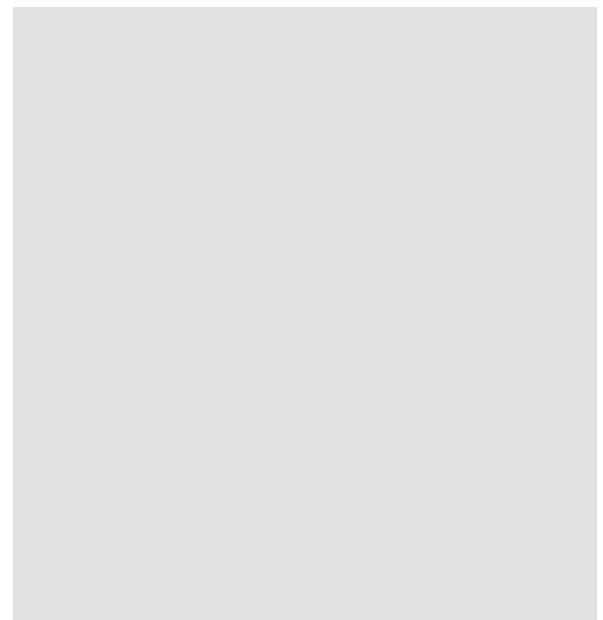
It should be noted that other species with similar characteristics may be considered, as identified and proposed by a professional landscape architect.

The Primary Street Tree List is as follows:

- Green Column Black Maple (*Aer nigrum* 'Green Column')
- Columnar Tulip Tree (*Liriodendron tulipifera* 'Fastigiatum')
- Bloodgood London Plane Tree (*Platanus x acerifolia* 'Bloodgood')
- Scarlet Oak (*Quercus coccinea*)
- Northern Red Oak (*Quercus rubra* Borealis)
- Green Vase Zelkova (*Zelkova serrata* 'Green Vase')
- Autumn Gold Gingko (*Gingko biloba* 'Autumn Gold')
- David Odom Afterburner Tupelo (*Nyssa sylvatica* 'David Odom')

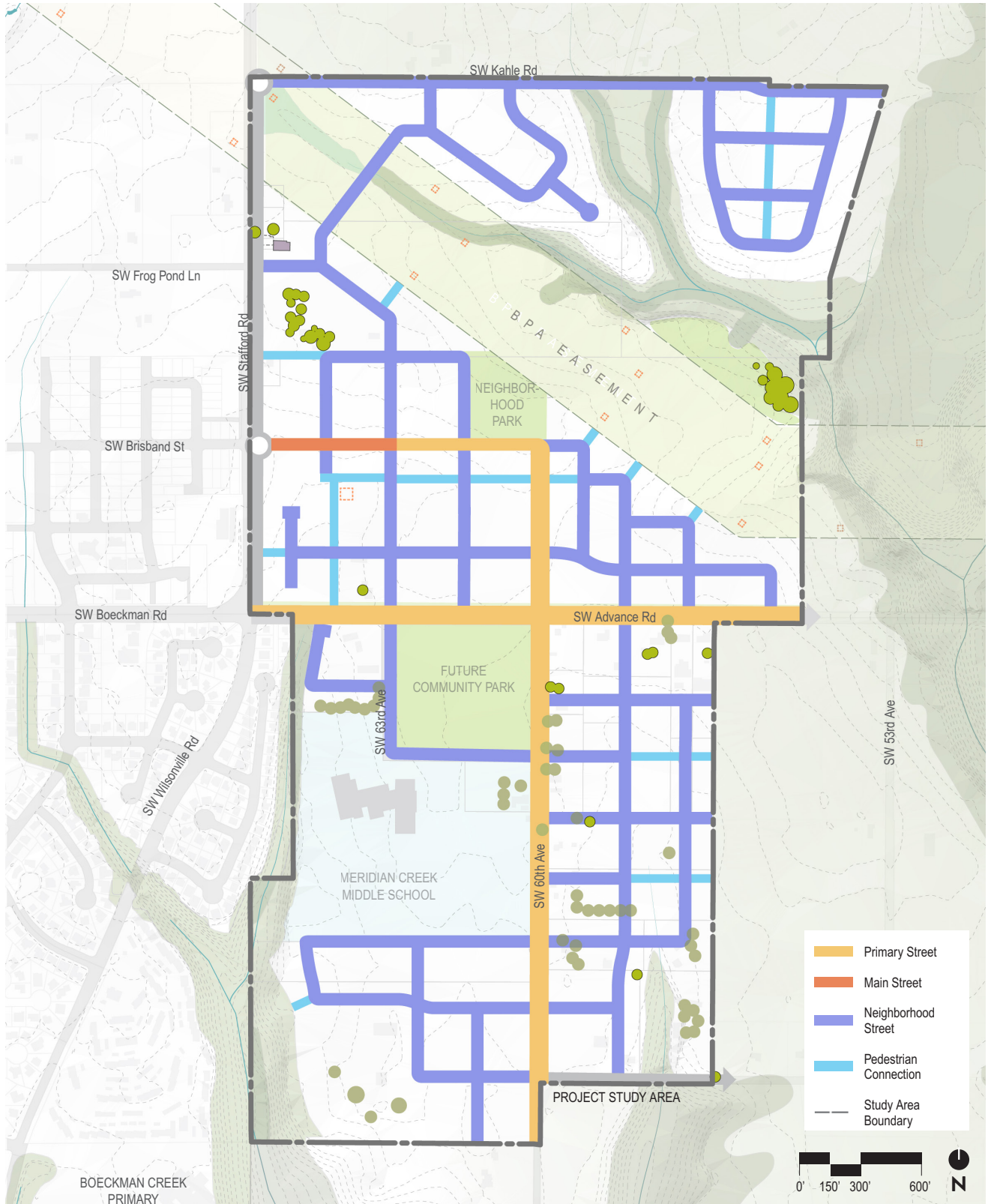


Tree Image



Tree Image

Figure 26. Street Tree Plan





PUBLIC REALM

The proposed 8' planting strips on Primary streets will help ensure these trees grow to form large canopy structures over the streets, providing future value to adjacent homes.

As required by the City's Public Works Standards, root barriers should be used in all situations to protect the sidewalk infrastructure from root damage.

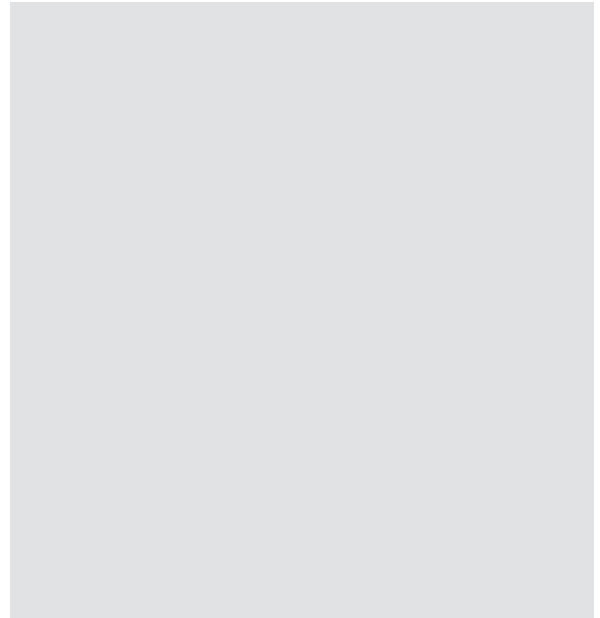
To provide strong continuity, a Primary Street should be planted with the same species for its entire length. No specific tree is proposed for a given Primary Street but each of these streets should be planted on both sides with a species unique to that street, selected from the list of 8 possibilities.

SW BRISBAND MAIN STREET

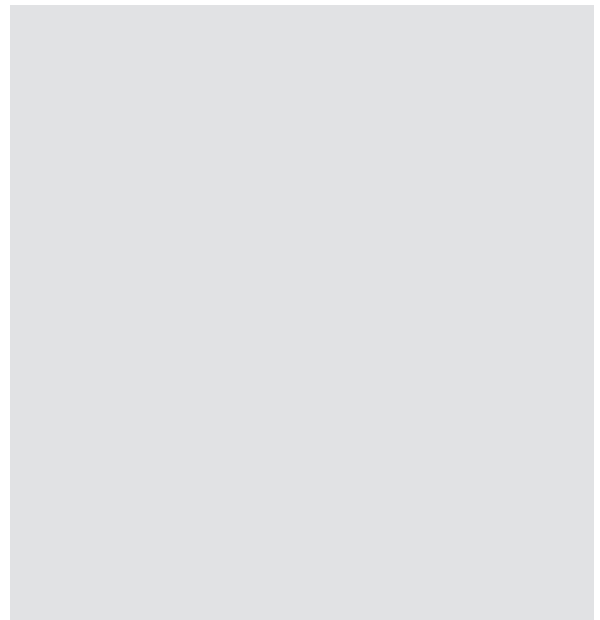
The Main Street should include street trees that provide shade and visual interest while also avoiding conflicts with buildings and leaf litter and other debris. To this end, a list of candidate trees with narrow canopies of a maximum of 25 feet are proposed. The two-block Main Street should have the same street tree on either side of each block. Each of the street trees on this list have spring blossoms or fall color that will provide beauty and identity to this center of the neighborhood.

The Main Street Tree List is as follows:

- Saratoga Ginkgo (Ginkgo biloba 'Saratoga')
- Lavalie Hawthorne (Crataegus x lavaleii)
- Rising Fire American Hornbeam (Carpinus caroliniana 'Uxbridge')
- Street Keeper Honey Locust (Gleditsia triacanthos 'Draves')
- Stellar Pink Dogwood (Cornus kousa x florida)
- Paperbark Maple (Acer griseum)



Tree Image



Tree Image



NEIGHBORHOOD STREETS

Neighborhood Streets should strive for variety. For example, east-west streets would have one tree from the recommended list and north-south streets should have another. An even finer grain of species distribution is recommended, if possible, at the city's discretion.

The Neighborhood Street Tree List is as follows:

- Katsura Tree (*Cercidiphyllum japonicum*)
- Yellow Wood (*Cladrastis kentukea*)
- Halka Honeylocust (*Gleditsia triacanthos* 'Halka')
- Skycole Honeylocust (*Gleditsia triacanthos* 'Skycole')
- Chinese Pistache (*Pistacia chinensis*)
- Accolade Elm (*Ulmus* 'Morton' Accolade)
- Maygar Ginkgo (*Ginkgo biloba* 'Maygar')
- Village Green Zelkova (*Zelkova serrata* 'Village Green')

Both sides of a street should be planted with the same tree species. A single subdivision's streets should not be planted with a single tree species. Underneath the BPA powerlines, a shorter neighborhood street tree should be used, subject to BPA requirements.

PEDESTRIAN CONNECTIONS

Pedestrian Connections would feature a columnar species, reflecting the narrow space in these connections and ensuring that there are views through the length of them, helping with safety and wayfinding.

Five trees are proposed for Pedestrian Connections:

- Common Hornbeam (*Carpinus betulus* 'Fastigiata')
- Columnar English Oak (*Quercus robur* 'Fastigiata')
- Columnar Musashino Zelkova (*Zelkova serrata* 'Musashino')
- Princeton Sentry Ginkgo (*Ginkgo biloba* 'Princeton Sentry')
- Tricolor Beech (*Fagus sylvatica* 'Roseo-marginata')

To the extent possible, existing groves of Ponderosa Pine, Oregon White Oak, and Douglas Fir should be incorporated into the neighborhood, as street trees or common area tracts or within pedestrian connections. These existing groves have been identified through the Master Plan tree inventory and are shown in the Street Tree Plan diagram.



PUBLIC REALM

PUBLIC LIGHTING PLAN

The Public Lighting Plan is intended to provide effective lighting of public streets and places to enhance neighborhood livability, night-time vitality and safety. The lighting recommendations focus on providing an even, consistent coverage, softening contrast ratios at edges and improving visibility by avoiding excess illumination and brightness. Most of these neighborhoods will be part of the Lighting Overlay Lighting Zone LZ 2: Low-density suburban neighborhoods and suburban commercial districts, industrial parks and districts, as specified in Chapter 4.199 of the City's Planning and Land Development Regulations. Dark-sky-friendly fixtures are required, as well as LED bulbs. All lights will be 3000k color and have 7-pin adapters. The City will own and maintain all lighting and PGE will provide power. Design details should follow City of Wilsonville Public Works Standards.



Double-sided Lighting Fixture in Frog Pond West

LIGHTING PLAN HIERARCHY

A subtle hierarchy in lighting is proposed, as shown in Figure 27. These categories of street lighting are tied to the Street Types Plan and unique requirements of pedestrian connections, trailheads, and paths.

ARTERIAL STREETS

- This includes the SW Stafford Road corridor as outlined in the Frog Pond West Master Plan and is intended to be the brightest standard to maximize safety for vehicles and bicycles.
- The selected street light for City arterials may be the XSP2™ LED Street/Area Luminaire – Double Module – Version C, or equivalent per City's Cobrahead light standard at the time of construction.
- Design should follow City of Wilsonville Public Works Standards Chapter 201.9.01 Roadway and Intersection Lighting.



PUBLIC REALM

KEY INTERSECTIONS

The following general recommendations apply to three key intersections: SW Frog Pond Lane and SW Stafford Road, SW Brisband Road and SW Stafford Road, and the intersection of SW Stafford, SW Boeckman, SW Wilsonville, and SW Advance Roads:

- These three areas act as transition zones between urban-scale arterial lighting and more neighborhood-scale lighting types.
- Placement of fixtures should be carefully considered to ensure the two types do not conflict visually .
- The intersections should be more brightly-lit, acting as a wayfinding ‘beacon’ when approaching them.
- Coordinate lighting with future landscaped gateway features at the intersections, including a distinct gateway and identity at the SW Brisband Main Street entry from SW Stafford Road.

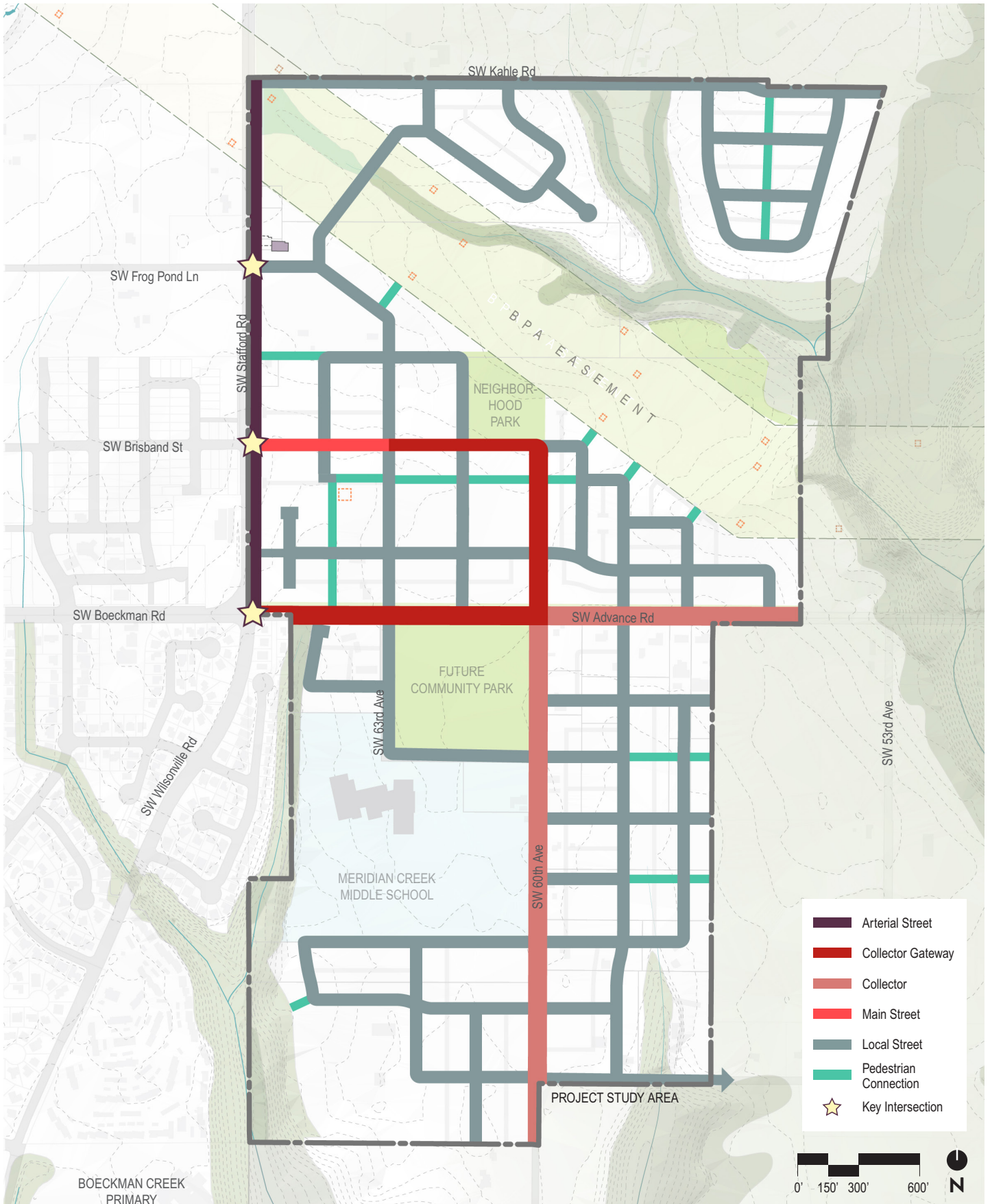
WAY STREETS

- This includes segments of SW Advance Road and SW 60th Avenue as they enter the neighborhood from adjoining major streets.
- To identify these streets as ‘Gateways’ into the neighborhood, a closer spacing than Local Street Lighting (to be determined through a lighting design plan at the time of development) is recommended and brighter illumination for these stretches of street.
- These streets should feature similar light fixtures as Arterial Streets, with shorter poles.

MAIN STREET

- The Main Street should include a closer spacing, similar to a Local Street lighting design, in order to provide an intimate scale and warm, inviting pedestrian environment to support nighttime activity .
- Poles and fixtures should match the preferred ornamental standard used elsewhere in Frog Pond, but with a maximum mounting height of 16 feet to provide lighting at the pedestrian scale
- Light poles should include the ability to attach banners or other decorative elements.
- Consider installing power access for tree lighting along with the infrastructure for street lighting.

Figure 27. Lighting Plan





PUBLIC REALM

LOCAL STREETS

- Local streets should provide minimum light levels for safe circulation, while contributing to the visual appeal of streetscapes.
- Light placement should avoid negative effects on adjacent housing
- Dark sky friendly light fixtures should be used .
- A consistent lighting standard should be used throughout the neighborhood to knit together individual subdivisions. .
- Use the following ornamental light standard: StressCrete King Aurora Pendant (40W LED).

PEDESTRIAN CONNECTIONS, TRAILHEADS AND PATHS

Consistent pedestrian lighting is an important contributor to the neighborhood's identity and can define a hierarchy of travel routes.

- Trails and paths should be uniformly illuminated
- In-ground up-lighting should be avoided
- Trailhead parking areas should be illuminated
- Coordinate lighting locations and pole heights with tree locations and landscape areas and constructed elements
- Design should follow City of Wilsonville Public Works Standards Chapter 201.9.02 Shared-Use Path Lighting. Key components include:
 - › The City Engineer may reduce the lighting standards or not require lighting of shared-use paths in designated natural resource and wildlife areas.
 - › Lighting provided along shared-use paths shall be pedestrian scale with a mounting height no greater and no less than 10 feet. A clearance of 10 feet shall be provided from the path surface for street lighting overhanging a shared-use path. Pedestrian level lighting, such as bollards, shall not be permitted.
- Use the following ornamental light standard: Phillips Hadco Westbrooke (Ledgine CXF 15)



Single-sided Lighting Fixture in Frog Pond West



PUBLIC REALM

- The SROZ area, buffers and the trailhead areas will be in Lighting Zone LZ 1, as specified in Chapter 4.199 of the City’s Planning and Land Development Regulations, which apply to “Developed areas in City and State parks, recreation areas, SROZ wetland and wildlife habitat areas; developed areas in natural settings; sensitive night environments; and rural areas. This zone is intended to be the default condition for rural areas within the City.”

GATEWAYS, MONUMENTS, AND SIGNAGE

Development of the Frog Pond East and South area presents several opportunities and issues for gateways, monuments, and signage. The key issues and opportunities are:

- The entrance into Wilsonville along SW Stafford Road will “move” from the intersection of SW Stafford-Wilsonville-SW Advance-SW Boeckman Roads to SW Stafford Road at SW Kahle Road. Additionally, the entrance to Wilsonville from the east will move to SW Advance Road at the Urban Growth Boundary.
- The new SW Brisband Main Street will create a new major entry and connection point into Frog Pond East from Frog Pond West and SW Stafford Road. If intersection design includes a roundabout, the center of the roundabout can include art, signage, or other identity elements that mark the entry to the Main Street.
- The extension of SW Frog Pond Lane into Frog Pond East provides a minor entry point into Frog Pond East. Design of this entry point can integrate with the future landscape and design of the Grange site to create a unique identity for this area.
- The crossroads of SW Advance Road and SW 60th Avenue forms a key connection point between the East and South neighborhoods.
- The internal developments in Frog Pond should not reflect a pattern of multiple subdivisions. Rather, they should be increments of a larger community that knit together phase-by-phase.

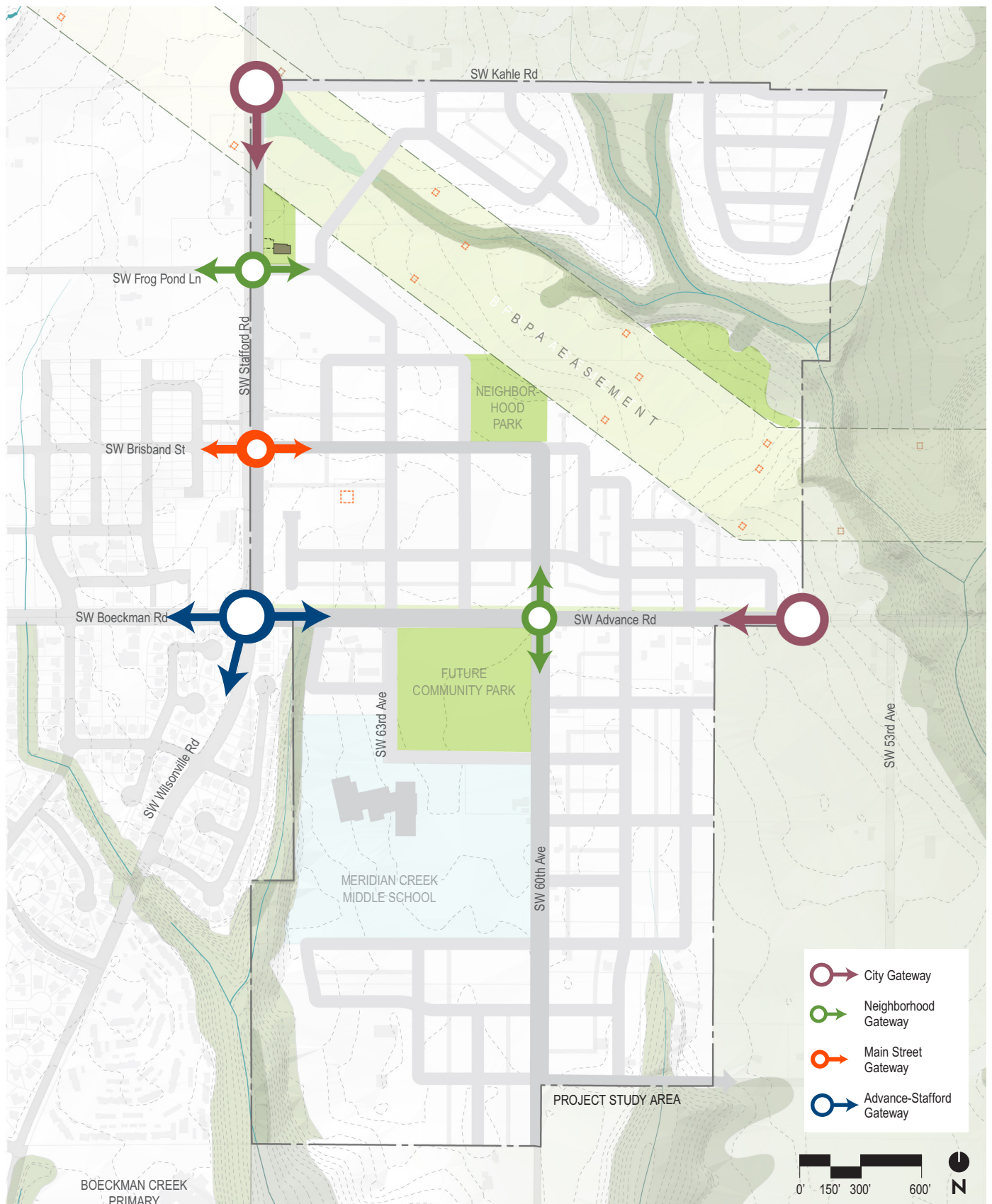
The following recommendations for gateways, monuments, and signs are intended to address the issues listed above and help knit the Frog Pond area together seamlessly into a cohesive neighborhood with a clear identity.

GATEWAYS

There are four types of Gateways planned for the Frog Pond Area:

1. City Gateway
2. SW Advance-SW Stafford Gateway

Figure 28. Gateways Map





PUBLIC REALM

- 3. Main Street Gateway
- 4. Neighborhood Gateways

The locations, roles, and design elements for each gateway type are described in Table 5 and illustrated in Figure 28.

Table 5. Gateway Types, Roles, and Design Elements

| GATEWAY TYPE | LOCATION(S) AND ROLE | DESIGN ELEMENTS |
|---------------------------------------|--|---|
| City Gateway | <p>SW Stafford Road at SW Kahle Road, southbound</p> <p>SW Advance Road at UGB</p> <p>Role: Welcome visitors to Wilsonville, facilitate transition from rural to urban setting</p> | <p>Landscaping and signage reflect character of planning area</p> <p>Design should be consistent with other key entries into the City</p> |
| Neighborhood Gateways | <p>SW Frog Pond Lane at SW Stafford Road</p> <p>Crossroads of SW Advance Road and SW 60th Avenue</p> <p>Role: To mark the primary entries into Frog Pond East and South</p> | <p>Use brick monuments to blend with SW Boeckman property frontage wall in Frog Pond West</p> <p>Monuments should be properly scaled, respectful of their context</p> <p>Simple form, integrated with landscape</p> <p>Large lettering not as important as landscape and civic element</p> <p>Neighborhood gateway at SW Frog Pond Lane presents an opportunity to integrate with design and landscape of the Grange site</p> |
| SW Advance-SW Stafford Gateway | <p>NW corner of the SW Advance-SW Stafford Road intersection</p> <p>Role: Enhancement of key corner to prioritize pedestrian experience, and announce entry into neighborhood</p> | <p>Trees and tall landscaping will mark the corner and de-emphasize powerlines.</p> <p>Landscaping to include seasonal variety, color, texture, and trees (away from the powerlines).</p> <p>Opportunity for public art, in coordination with the design of the northeast side of the intersection.</p> <p>Design should support the corner as an active pedestrian cross-road and safe route to Meridian Creek school.</p> |
| Main Street Gateway | <p>Intersection of SW Brisband St at SW Stafford Road</p> | <p>Opportunity for public art or other landmark. Generous pedestrian walkways providing access to Main Street. Buildings oriented toward streets.</p> <p>Sidewalk paving patterns for the Main Street can extend out to the curb along SW Stafford Road, marking pedestrian entry into the Main Street environment.</p> |



PUBLIC REALM

The City will lead the implementation of the City Gateway projects as part of the infrastructure funding plan and implementation. The Neighborhood Gateways are expected to be collaborative projects with developers when those intersections are improved.

MONUMENTS AND SIGNS

As noted throughout this Master Plan, it is likely that Frog Pond East and South will develop incrementally. The intent is to avoid a pattern of individual subdivisions with different names, monuments, and identities within the neighborhood. Rather, the vision is to knit each incremental project together to form a unified whole. Accordingly, the following principles and standards are required for monuments within Frog Pond East and South:

- Frog Pond will continue as a unifying name for the neighborhoods.
- Monument signs will be limited to Neighborhood Gateway locations and emphasize the Frog Pond neighborhood identity.
- Individual subdivision signs (except temporary real estate sales signage) and monuments will not be permitted.
- “Sign caps” identifying the Frog Pond neighborhood will be utilized on street signs.

Signage at non-residential developments (e.g. parks and schools) will be consistent with Neighborhood Gateway signage and the City of Wilsonville Signage and Wayfinding Plan to further tie the area together and integrate the neighborhood cohesively into the broader City of Wilsonville as a whole.



Placeholder Image



IMPLEMENTATION



IMPLEMENTATION

COMPREHENSIVE PLAN IMPLEMENTATION

The Frog Pond East and South area will be regulated by Wilsonville's Comprehensive Plan when this Master Plan is adopted. The sections below describe the amendments and actions needed to update the Comprehensive Plan in order to implement the land use regulations contained herein.

ADOPT THE FROG POND EAST AND SOUTH MASTER PLAN AS A "SUPPORTING DOCUMENT"

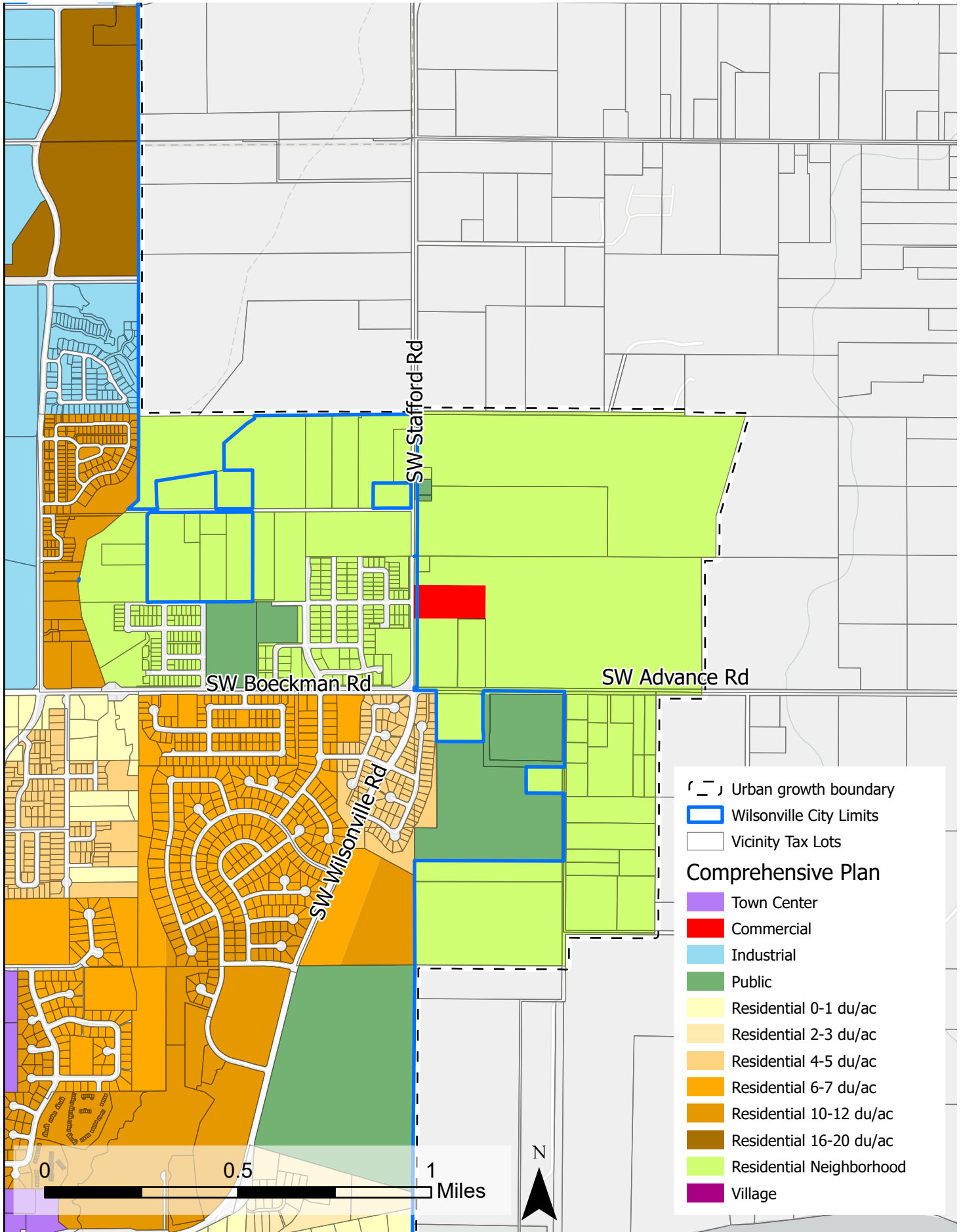
The Master Plan will be adopted as a "supporting document" of the Comprehensive Plan. As such, it will have the "...force and effect of the Plan",¹ meaning the Master Plan's regulatory authority is applicable in instances where "consistency with the Comprehensive Plan" or other reference to the Frog Pond East and South Master Plan occurs in law or code. The Master Plan also serves a key role in establishing requirements for development that are implemented through Wilsonville's Development Code.

AMEND THE COMPREHENSIVE PLAN'S LAND USE MAP

Figure 29 illustrates the proposed Comprehensive Plan Map for Frog Pond East and South, in the context of adjacent plan designations. Frog Pond East and South primarily consist of the "Residential Neighborhood" designation, mirroring Frog Pond West. This designation is designed to effectuate the goals, policies, and regulatory elements of this Master Plan.

1 Wilsonville Comprehensive Plan, page Intro-5.

Figure 29. Comprehensive Plan Map





IMPLEMENTATION

APPLY THE EXISTING GOALS, POLICIES AND IMPLEMENTATION MEASURES OF THE COMPREHENSIVE PLAN

The inclusion of the Frog Pond East and South area on the Wilsonville City Comprehensive Plan map means that applicable Goals, Policies and Implementation Measures of the Comprehensive Plan will apply as development occurs. The Plan's provisions that are specific to the Frog Pond East and South Area are in the Residential Neighborhood section of the Comprehensive Plan's Land Use and Development chapter. Policy 4.1.7.a establishes the Residential Neighborhood designation and states its purpose:

"The purpose of the Residential Neighborhood designation is to:

- a.** *Implement legislative Area Plans and Master Plans for new neighborhoods in Wilsonville.*
- b.** *Create attractive and connected residential neighborhoods.*
- c.** *Regulate and coordinate development to result in cohesive neighborhoods that include: walkable and active streets; a variety of housing appropriate to each neighborhood; connected paths and open spaces; parks and other non-residential uses that are focal points for the community; and, connections to and integration with the larger Wilsonville community.*
- d.** *Encourage and require high quality architectural and community design.*
- e.** *Provide transportation choices, including active transportation options.*
- f.** *Preserve and enhance natural resources so that they are an asset to the neighborhoods, and there is appropriate visual and physical access to nature."*²

The Frog Pond East and South Master plan is consistent with the above purpose statement.

ADOPT ADDITIONAL POLICIES AND IMPLEMENTATION MEASURES

This Master Plan includes recommendations and concepts that have not been previously considered in Wilsonville's Comprehensive Plan. The following are amendments to the Comprehensive Plan being considered concurrently with this Master Plan so there is policy-level support for their implementation through the Development Code or other follow-up actions.

2 See Comprehensive Plan starting page D-36.



IMPLEMENTATION

IMPLEMENTATION MEASURE 4.1.7.D

Implementation of the Frog Pond East and South Master Plan will include the following:

- 1.** Designation and mapping of subdistricts. Subdistricts are smaller geographic areas within each neighborhood where specific regulations may be applied to implement the Master Plan.
- 2.** Clear and objective Development Code standards that:
 - a.** Set minimum density requirements at the subdistrict or tax lot level.
 - b.** Establish height, setback and other development standards for the Type 1, Type 2, and Type 3 Urban Forms described and mapped in the Frog Pond East and South Master Plan.
 - c.** Require a variety of housing and include minimum and maximum amounts of specific housing types at the subdistrict or tax lot level.
 - d.** Require middle housing.
- 3.** Zoning provisions that provide an alternative path of discretionary review to provide flexibility for development while still achieving the intent of the Master Plan and Development Code.
- 4.** Define categories of housing for use in implementing housing variety standards.
- 5.** Coordination with the owners of the Frog Pond Grange to coordinate and support continued use and development of the Grange as a community destination.
- 6.** Coordination with the Bonneville Power Administration (BPA) on land use and development within their easement in the East Neighborhood.
- 7.** A future study of design options for the creek crossings shown on the Park and Open Space plan in this Master Plan. This work will address potential structured crossings.
- 8.** The City may initiate a Main Street study to evaluate specific designs and implementation for the SW Brisband Main Street.
- 9.** Adoption of an infrastructure funding plan. Development of the funding plan will evaluate potential use of scaled infrastructure fees as a tool to support middle housing and more affordable housing choices.



IMPLEMENTATION

ZONING IMPLEMENTATION

ZONING MAP AMENDMENTS AND IMPLEMENTATION

Table 6 lists the zone districts that will implement each of the Comprehensive Plan designations identified within the Planning Area.

Table 6. Implementing Zoning Designations

| COMPREHENSIVE PLAN DESIGNATION | IMPLEMENTING ZONE |
|--------------------------------|--|
| Residential Neighborhood | Residential Neighborhood (RN) |
| Commercial | Planned Development Commercial (PDC) |
| Public | Public Facilities (PF) |
| All, where applicable | Significant Resource Overlay Zone (SROZ) |

Zoning will be applied concurrent with the annexation and development review process for individual properties.

CODING FOR VARIETY AND PRIORITY HOUSING TYPES

Providing a variety of housing types, and particular housing types, throughout the East and South neighborhoods are important intended outcomes for the Master Plan. There are many examples of how variety and specific housing is designed and delivered in master planned communities such as Northwest Crossing in Bend and like Villebois here in Wilsonville. In those communities, a master developer defines and maps the planned housing types at a very site-specific level such as individual lots or blocks. Master planned communities can also implement specific and strategic phasing of infrastructure and housing types.

The Frog Pond East and South Master Plan aspires to have the detailed variety of a master planned community like Villebois even though it does not have the oversight of a single master developer. There is an opportunity to require and encourage housing that is a priority for the City. Examples include: home ownership opportunities for households of modest income (80-120% of AMI), middle housing units, dwellings that provide for ground floor living (full kitchen, bath and master bedroom on the main floor), and dwellings that provide for ADA³ accessibility.

The standards for Frog Pond’s housing variety will also recognize and accommodate development realities:

3 Americans with Disabilities Act (1990).



IMPLEMENTATION

- The neighborhoods will develop incrementally. There may be several larger projects where a developer prepares a master plan for relatively large areas (e.g. 20+ acres). However, there will also be many smaller developments that will occur by different developers, on varied parcel sizes, and at different points of time. The code's variety standards must work for the likely range of differently scaled projects.
- Flexibility will be needed for evolving market and housing needs over time.
- All standards that address housing must be clear and objective. A discretionary review path can be provided as an alternative to provide developers additional flexibility.

Below is a list of potential strategies for requiring variety throughout Frog Pond East and South. These show the intent of the implementing standards and are subject to refinement or change as the development code is prepared.

Strategy 1: Permit a wide variety of housing types.

Amend the RN Zone to allow the following types in Frog Pond East and South:

- Single-Family Dwelling Units⁴
- Townhouses
- Duplex, Triplex, and Quadplex
- Cluster Housing
- Multiple-Family Dwelling Units
- Cohousing
- Manufactured Homes⁵
- Accessory dwelling units

Strategy 2: Define "categories" of housing units to be used for implementing variety standards.

Each category would provide a range of housing units to choose from when meeting the variety standards. The categories will be based on the policy objectives of the Council for equitable housing opportunities. They will also include specific housing types desired by the City (e.g. accessory dwelling units). The categories will be defined as part of the development code.

Strategy 3: Establish minimum density requirements.

Establish the minimum number of dwelling units required in each subdistrict (or on each pre-existing tax lot). The base density will be an important factor in the variety of attached housing forms.

4 Tiny homes are included in this use type

5 Manufactured dwellings are subject to the definitions and requirements of ORS 443.



IMPLEMENTATION

Note: The housing capacity estimates prepared for the Master Plan could be used as the basis for the minimums.

Strategy 4: Create development standards for lots and structures that regulate built form according to the mapped Type 1, Type 2, and Type 3 urban form typologies.

This strategy uses form-based standards to create the transect of most compact urban form in Type 1 areas to least compact urban form in Type 3 areas. For each of the Urban form types, define standards for:

- Minimum lot size
- Minimum lot width/street frontage
- Maximum height setbacks for front, side, and rear yards, and garages
- Minimum building spacing
- Maximum lot coverage
- Maximum building width

Strategy 5: Establish minimum housing variety standards by subdistrict and development area.

For each subdistrict (or existing tax lots within subdistricts), define:

- The minimum number of categories required. This standard ensures variety at the subdistrict or tax lot level.
- The maximum percent of net development area for a category. This standard ensures no single category dominates a subdistrict.
- The minimum percent of net development area for categories that represent housing choices not traditionally provided by the market and Council housing objectives such more affordable and accessible housing choices.

Strategy 6: Encourage variety at the block level.

Block level variety provides a very distinctive built form. Code provisions for block level variety will be evaluated by the City.



IMPLEMENTATION

INFRASTRUCTURE PLANS

TRANSPORTATION

TRANSPORTATION ANALYSIS AND IMPROVEMENTS

A comprehensive traffic analysis was performed to determine existing and future transportation conditions for the Frog Pond East and South neighborhoods and to identify needed transportation facility improvements. The analysis focused on the major intersections both within the project vicinity and within Wilsonville at large, including the two I-5 interchange areas (i.e., Wilsonville Road and Elligsen Road). The study area includes 15 total intersections, including 4 key gateway intersections to the neighborhoods.⁶

The analysis found that, in 2040, all but three of the study intersections are expected to continue to meet standards and targets assuming the completion of the High Priority Projects stated in Wilsonville's Transportation System Plan. Those three intersections are located along Stafford Road and are the gateway intersections to the Frog Pond East neighborhood. They were analyzed as stop controlled intersections. The following transportation improvements are recommended for these intersections.

- SW Stafford Road/SW Kahle Road: Install a single-lane roundabout
- SW Stafford Road/SW Frog Pond Lane: Install a raised median to prohibit minor street through and left turns and install an enhanced pedestrian crossing with a center refuge median.
- SW Stafford Road/SW Brisband Street: Install a single-lane roundabout

Additional transportation projects were identified for the East and South neighborhood to enhance safety. They include:

- Install a roundabout at Advance Road/60th Avenue. The installation of a roundabout at this location will create a gateway between the high-speed rural traffic and the new desired slower urban speeds. The roundabout will provide for slower speeds and improved neighborhood access and visibility.
- Install various pedestrian and bicycle improvements on Stafford Road and Advance Road, as shown in Figure 31.

6 See Appendix I: Transportation Analysis: Existing and Future Conditions, DKS Associates, September 2022

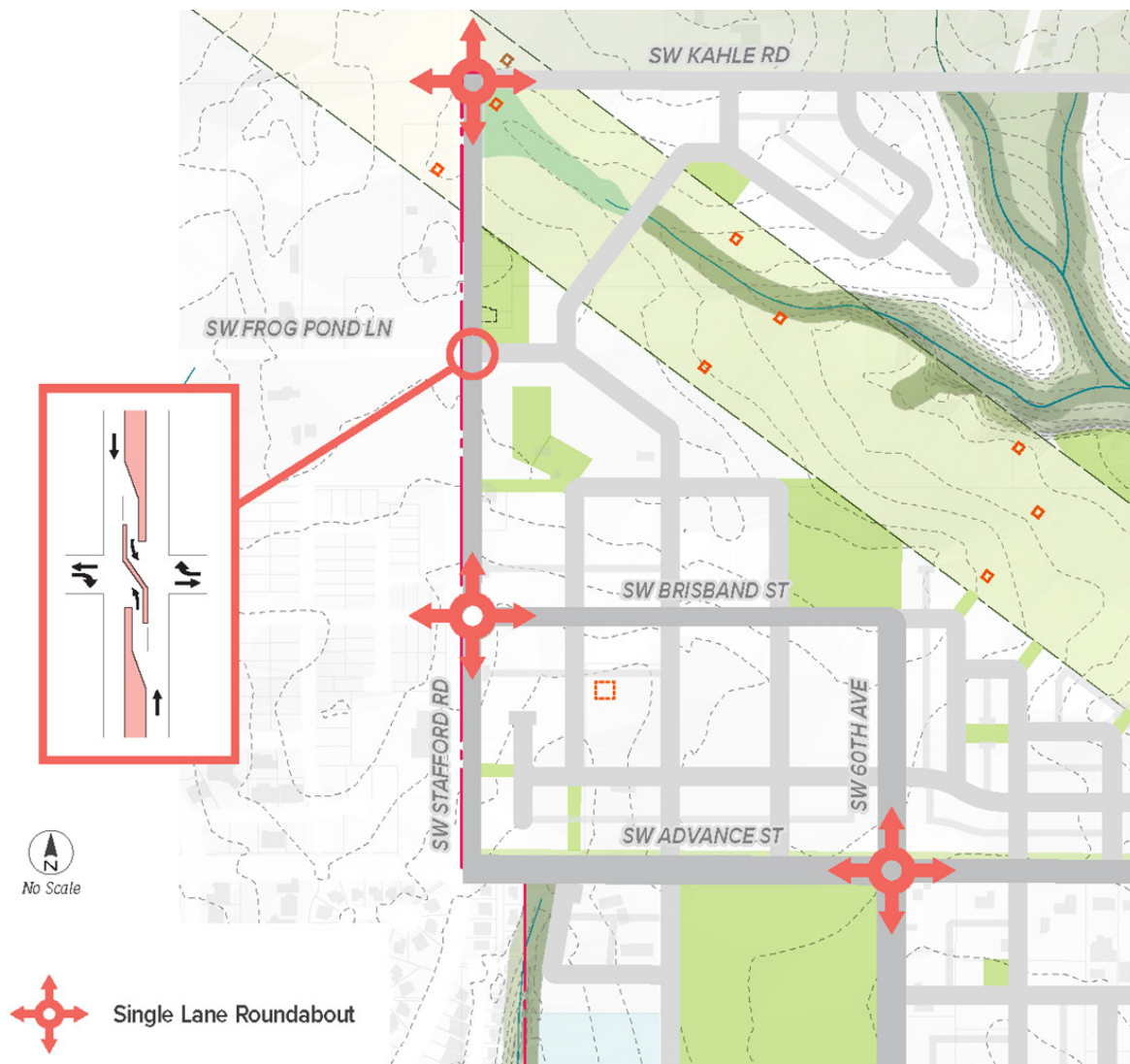


IMPLEMENTATION

STREET CLASSIFICATIONS

Figure 32 illustrates the recommended functional classifications for streets in Frog Pond East and South. The classifications for SW Stafford Road (Major Arterial), SW Advance Road (Collector), and SW 60th Avenue south of SW Advance Road (Collector) are consistent with the Frog Pond Area Plan's transportation network and classifications. The northerly extension of SW 60th Avenue from SW Advance Road into the East Neighborhood is recommended to be a Gateway Collector. SW Brisband Street is recommended to be a Neighborhood Collector. Please see the Street Design section of this report for recommended cross-sections.

Figure 30. Traffic Control Recommendations





IMPLEMENTATION

Figure 31. Pedestrian Improvements on SW Stafford Rd and SW Advance Road

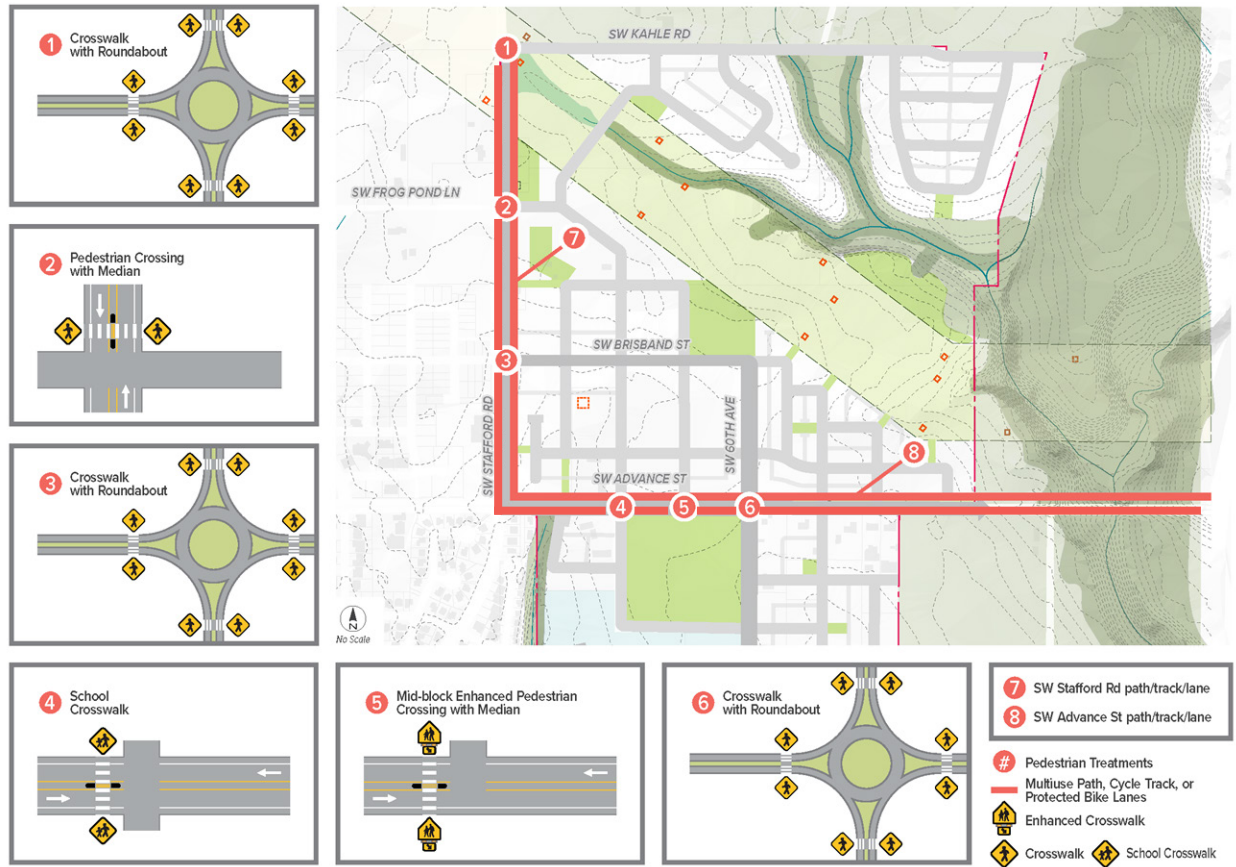
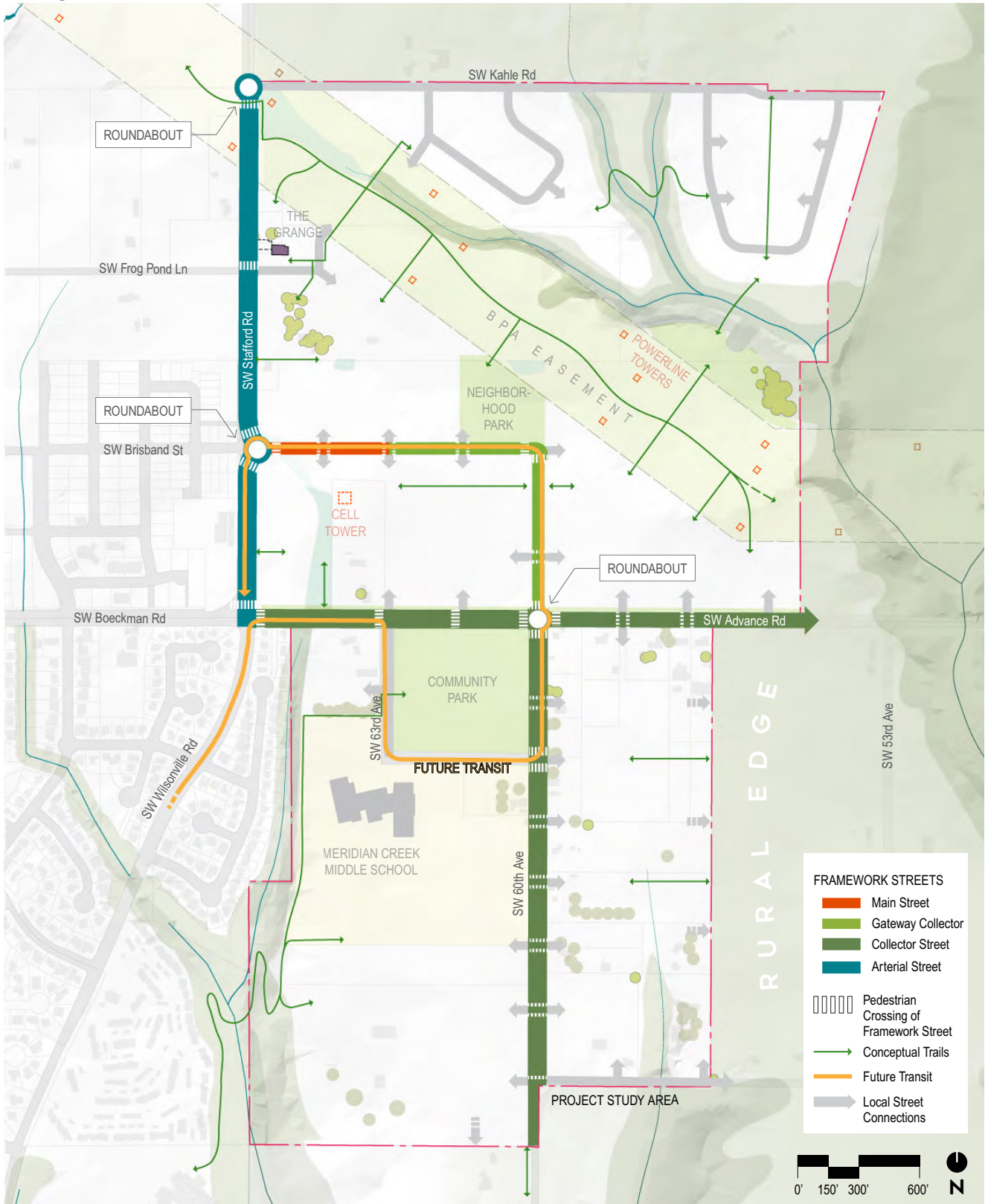


Figure 32. Street Classifications





IMPLEMENTATION

WATER SYSTEM

A water system analysis and plan were prepared to identify water system improvements required for the planned growth of the Frog Pond East and South neighborhoods.⁷ The analysis built upon previous water system planning conducted for the Frog Pond Area Plan, and updated it to coordinate with this Master Plan's land uses and transportation network. Frog Pond East and South will be served by extensions within Wilsonville's water pressure Zone B. The analysis focused on the distribution system; water treatment and storage are addressed in the City's 2016 Water System Master Plan.

Figure 33 illustrates the Master Plan's water system layout for the East and South neighborhoods, including off-site improvements needed to serve the area. A looped system consisting of 12-inch and 8-inch distribution mains is proposed for supply of domestic water to Frog Pond East and South.

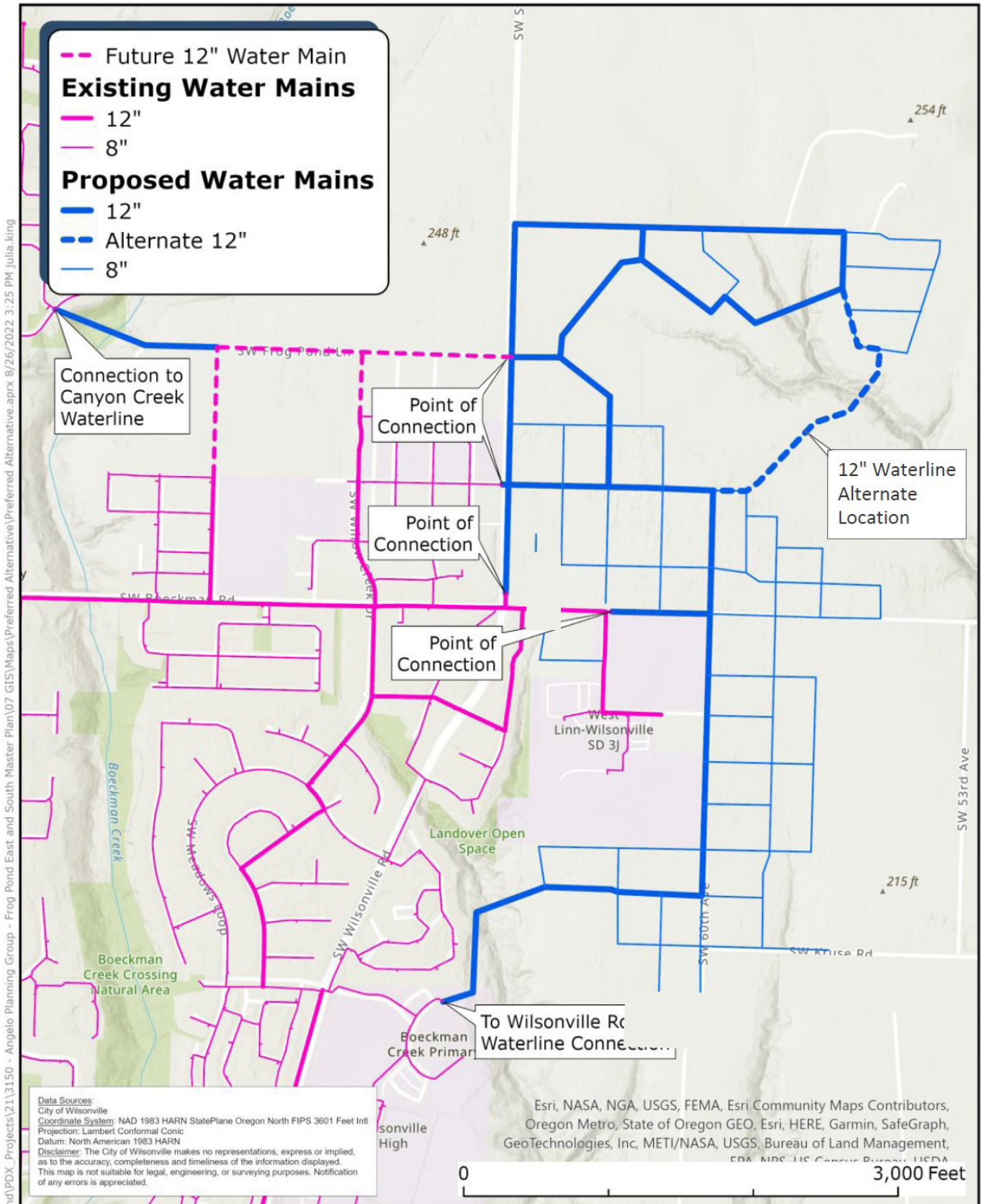
- The existing 12-inch waterline in Boeckman Road is the primary backbone connection for Frog Pond East and South to the City's water supply and storage system.
- The 12-inch main network provides a redundant capacity of 1,500 gallons per minute (gpm) for fire flow to all areas.
- In accordance with City Public Works Standards, 12-inch mains are also required for the commercial main street area proposed along SW Brisband Road in Frog Pond East.
- For all residential zones, 8-inch mains are required, with all lines interconnected as a network to prevent dead ends.

The northernmost neighborhoods in Frog Pond East along SW Kahle Road will be connected to the City's existing water system with a 12-inch loop that connects to the south side of the BPA easement in two locations. The loop can be constructed across the BPA easement either in the proposed road extending northeast from Frog Pond Lane, or across the BPA easement further to the east via the proposed pedestrian bridge over the main fork of the Newland Creek. The decision on where to route the loop will depend on what areas are developed first and whether a pedestrian bridge is built that would support the waterline. In either scenario the 12-inch mainline along SW Stafford Road and SW Kahle Road will be required.

Wilsonville's Water System Master Plan recommends two additional connections to the existing distribution system to reliably serve buildout of Frog Pond East and South. The first is a 12-inch connection to the Canyon Creek Road waterline via a crossing of Boeckman Creek at the west end of Frog Pond Lane. The second is a crossing of Meridian Creek with a 12-inch main, south of the Meridian Creek

⁷ See Appendix F: "Proposed Infrastructure Plans – Water, Wastewater, Stormwater Systems" Murraysmith, September 6

Figure 33. Proposed Water System



| | | |
|---|--|-------------------------------------|
|  | <p>Frog Pond East and South Master Plan</p> | <p>Proposed Water System</p> |
|---|--|-------------------------------------|

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IMPLEMENTATION

Middle School, installed in conjunction with development of Frog Pond South. Both creek crossings are assumed to be below grade directionally drilled pipelines. Alternatively, they could be installed on future pedestrian bridges if the City decides to build those structures.

SANITARY SEWER SYSTEM

A wastewater system analysis and plan were prepared to identify wastewater system improvements required for the planned growth of the Frog Pond East and South neighborhoods.⁸ The analysis drew from previous wastewater system planning conducted for the Frog Pond Area Plan, recent design work for the Boeckman Road trunk sewer and Boeckman Creek interceptor improvements, and the City's 2017 Public Works Standards. Waster water system improvements were coordinated with this Master Plan's land uses and transportation improvements.

Figure 34 illustrates the Master Plan's wastewater system layout for the Frog Pond East and South neighborhoods. The layout is based on five sewer basins, one for each of the four lift stations required and one that flows by gravity out of the Frog Pond area. The four lift station basins will each require an 8-inch gravity pipe to convey wastewater to the lift station and a 4-inch force main discharge to the downstream basin.

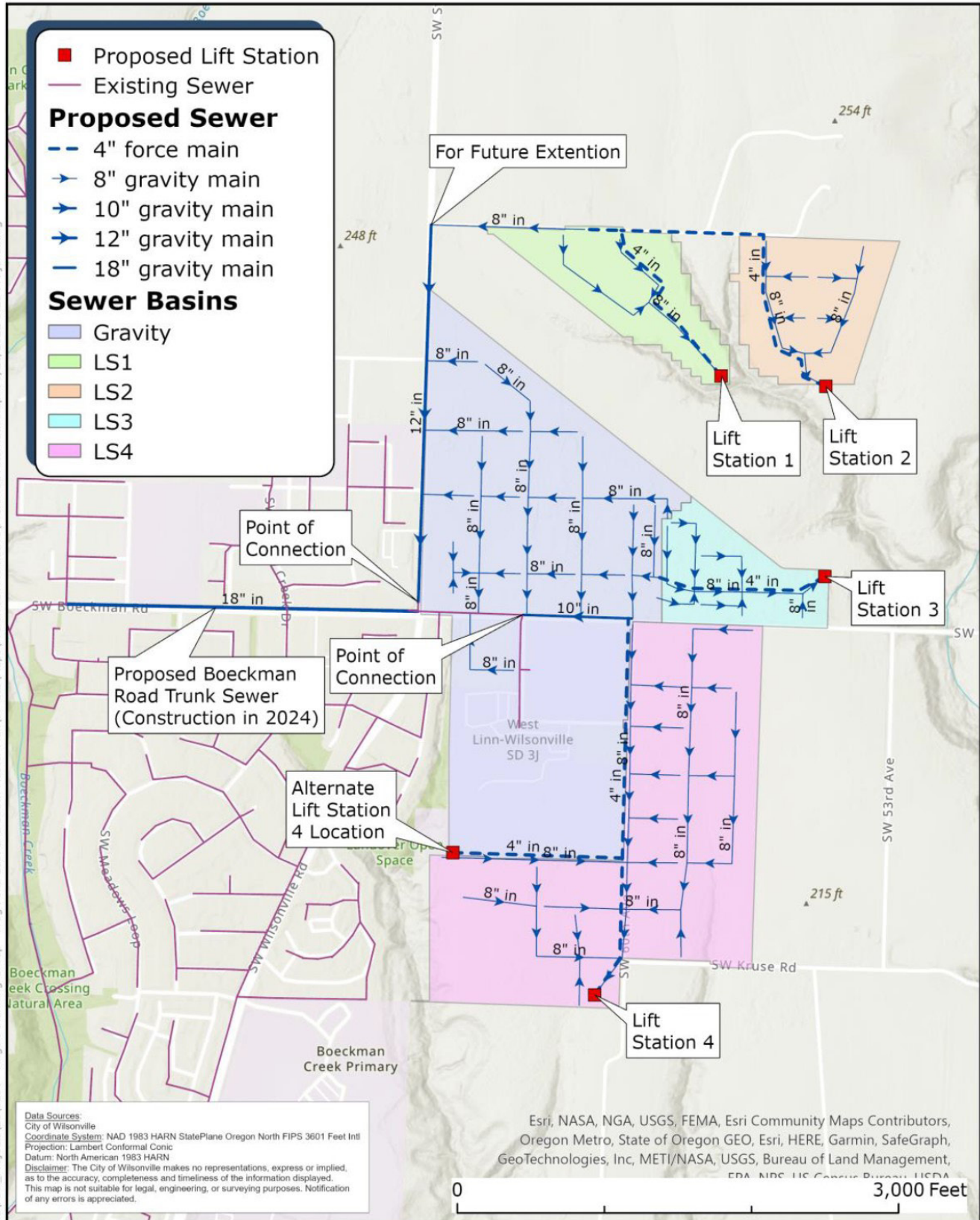
The main trunk traveling north-south on SW Stafford Road conveys sewage from both lift station 1 and 2 and a portion of the gravity basin. This pipe has the capacity to serve the area as an 8-inch line; however, this pipe is identified in the Wilsonville Wastewater Collection System Master Plan as a 12-inch line in order to serve future development to the north.

Extension of the main trunk in SW Boeckman Road eastward on SW Advance Road is needed to convey sewage from both lift stations 3 and 4 and a portion of the gravity basin. A 10-inch size is required to provide capacity necessary for projected development.

All wastewater from Frog Pond East and South is to be conveyed to the wastewater treatment plant through connection to the existing Boeckman Road Trunk Sewer, which flows west to the existing Boeckman Creek Interceptor Sewer and the Memorial Park Pump Station. As of the writing of this report, the Boeckman Road Trunk Sewer is being upsized to 18-inch diameter as part of improvements to SW Boeckman Road, including Boeckman Dip Bridge, with completion anticipated for 2024. This improvement is sufficient to serve the Frog Pond East and South area as well as future development anticipated to the north.

8 See Appendix F: "Proposed Infrastructure Plans – Water, Wastewater, Stormwater Systems" Murraysmith, September 6

Figure 34. Proposed Sewer System



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|---|--|-------------------------------------|
|  | <p>Frog Pond East and South Master Plan</p> | <p>Proposed Sewer System</p> |
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IMPLEMENTATION

STORM WATER MANAGEMENT

A stormwater system analysis and plan were prepared to identify stormwater system improvements required for the planned growth of the Frog Pond East and South neighborhoods.⁹ The City of Wilsonville will be the regulatory authority for design and construction of stormwater facilities for the area, in accordance with the City's current National Pollution Discharge Elimination System (NPDES) permit.

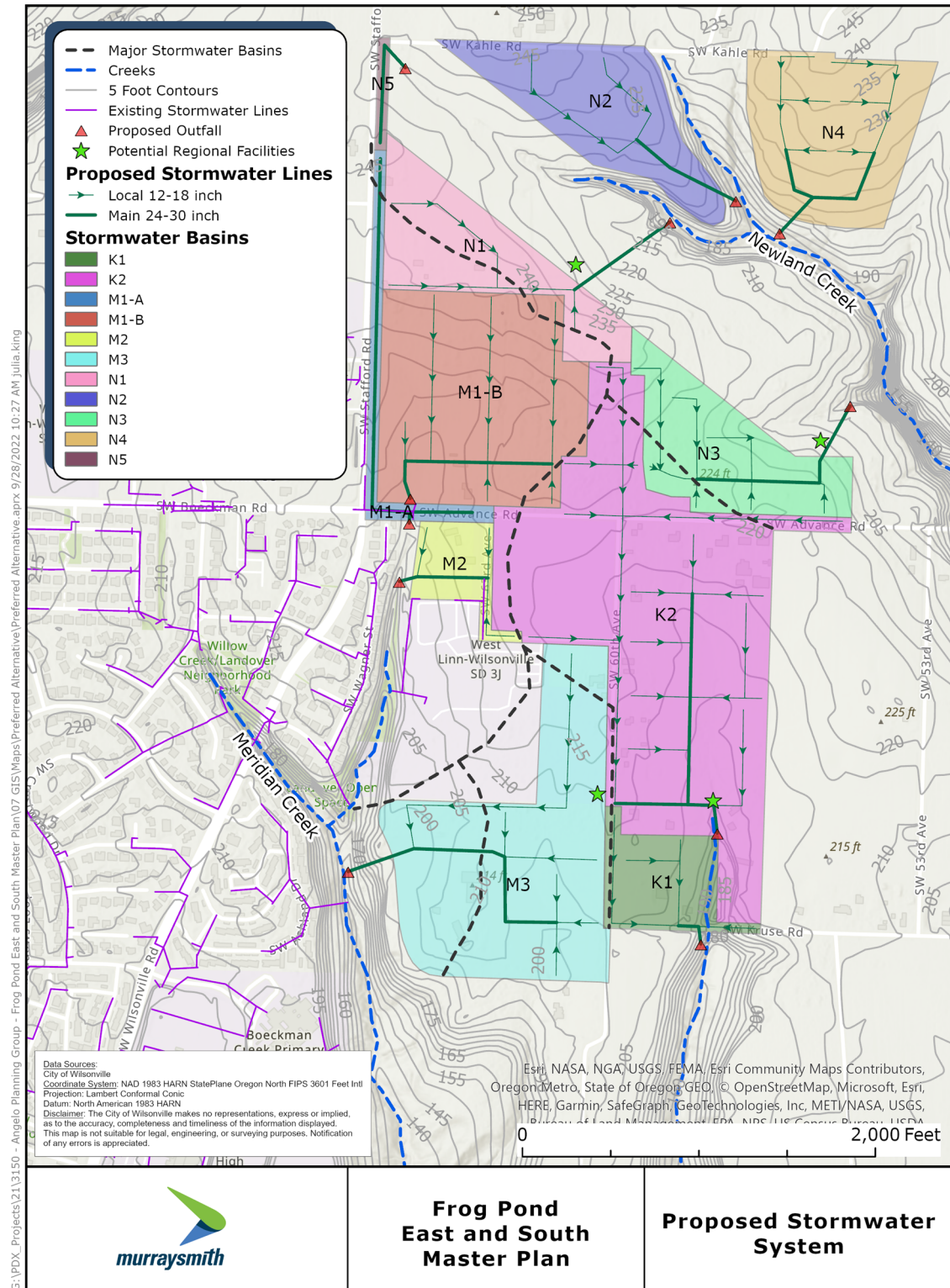
Permitting agencies require that collected stormwater runoff remain within its natural drainage basin. Natural drainage basins for Frog Pond East are Newland Creek in the northeast portion and Meridian Creek in the southwest portion. The western half of Frog Pond South discharges into Meridian Creek, with a small area draining into to an unnamed tributary to the southwest that drains directly into the Willamette River.

The City's NPDES permit and design standards require the implementation of Low Impact Development Approaches (LIDA) to the maximum extent feasible. This generally involves the construction of decentralized, integrated water quality treatment and flow control facilities near to the location where runoff is generated, for example, in streets, parking lots and on building roofs. Experience with Frog Pond West shows there is significant competition for space along street frontages to provide LIDA along with other necessary improvements such as driveways, on-street parallel parking, street trees, fire hydrants, etc., which may not be compatible with LIDA facilities. This is anticipated to be particularly acute in Frog Pond East and South, where a varying mix of residential types and higher than typical densities are proposed. Accordingly, the City will consider implementing LIDA in the following locations within Frog Pond East and South:

- Collector and arterial streets where no on-street parking is permitted;
- Local street intersections, alleys, greenways, and other midblock opportunities (e.g. curb extensions);
- Parks and open space buffers;
- Tracts of land between buildings and roadways/other buildings within a development;
- Edge of BPA right-of-way where interference with overhead powerlines is not expected.

9 See Appendix F: "Proposed Infrastructure Plans – Water, Wastewater, Stormwater Systems" Murraysmith, September 6

Figure 35. Proposed Stormwater System



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**Frog Pond
East and South
Master Plan**

**Proposed Stormwater
System**

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IMPLEMENTATION

Where decentralized LIDA is not feasible, a combination of approaches - LIDA for treatment and downstream facilities for flow control, or regional facilities for treatment and flow control - may be considered. Regional facilities could be located in a publicly owned space such as a park where they may be integrated with passive recreational activities.

Figure 35 shows the proposed preliminary stormwater system coordinated with the Master Plan's street layout and land uses. For conveyance, the plan designates a stormwater main for each drainage basin, extending from the outfall into the basin. Storm mains will be constructed with the other key infrastructure needed to support development. Developments will be required to provide full stormwater management prior to connecting and discharging into the storm main.

For stormwater management, implementing only LIDA to meet stormwater requirements is unlikely to be feasible for higher density development. Alternative stormwater managements methods will be required. For Frog Pond East and South, the City will use a stormwater management hierarchy to provide additional guidance that will have three levels in the following order of preference.

1. All stormwater management is provided in onsite vegetated LIDA facilities.
2. Stormwater management is provided in a combination of onsite vegetated LIDA facilities and decentralized regional LIDA facilities.
3. All stormwater management is provided in vegetated regional facilities.

Figure 35 schematically shows the location of potential regional facilities. The map is a visual representation of storm water facility coverage and not an indication of where facilities are required to be placed, which is dependent on individual development proposals.



IMPLEMENTATION

INFRASTRUCTURE FUNDING

As of the writing of this Master Plan, an Infrastructure Funding Plan is in-progress. It will be completed and adopted prior to annexation and development reviews for properties in Frog Pond East and South. The Infrastructure Funding Plan is an integral part of the implementation of this Master Plan. It's primary purpose is to ensure that there are sufficient funds and explicit, actionable plans for how growth is paid for and infrastructure is delivered.

That Infrastructure Funding Plan will evaluate costs and revenues transportation, water, sanitary sewer, storm water, and park improvements. The Funding Plan will identify potential funding gaps and strategies for filling the gaps. Multiple funding options will be evaluated, including a scaled system development charge approach and application of the City's infrastructure fee approach that is in use in Frog Pond West. The City's priority is to ensure adequate funding available at the time the improvement is needed.