



Overlake Village South Infrastructure Planning Report: Final Draft

City of Redmond
August 25, 2016



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INTRODUCTION

OVERVIEW

Purpose

The purpose of the Overlake Village South Infrastructure Planning study is to prepare an interdisciplinary infrastructure plan that includes the types, conceptual design for, and conceptual locations of transportation, water/sewer, stormwater and park and trail infrastructure needed to serve future growth as called for in the Overlake Neighborhood Plan. This plan builds on the 2011 Overlake Village Street Design Guidelines, which addressed infrastructure needs for the portion of Overlake Village north of NE 24th St.

Study Area

The Overlake Village South study area is bounded by NE 24th Street to the north, NE 20th Street to the south, 148th Avenue NE to the west and Bel-Red Road to the east (NE 24th Street NE 20th Street and the east travel lane of 148th Avenue NE are within the study area; the rest of 148th Avenue NE and Bel-Red Road are outside the study area. The study area is shown in Figure 1.

Intended Outcome

The intended outcome is to have an infrastructure plan including a water and sewer system build-out plan, land use strategies, and tools for addressing stormwater in the public and private realms that are consistent with the Overlake Village vision and provide clear guidance to City staff, property owners, and developers as the City processes redevelopment applications and makes capital investment decisions.



Figure 1. Study Area

RELATIONSHIP TO OTHER PLANS

There are several planning studies that have been previously prepared by others and have influenced the development of the Overlake Village South Infrastructure Planning study. These studies are briefly mentioned in this section and highlighted in Figures 2 – 10.

City of Redmond Comprehensive Plan

“The Comprehensive Plan is a broad statement of the community’s vision for the future and contains policies primarily to guide the physical development of the city as well as certain aspects of its social and economic character.” The Overlake Neighborhood Plan is part of the Comprehensive Plan and forms the principal policy basis for this work.

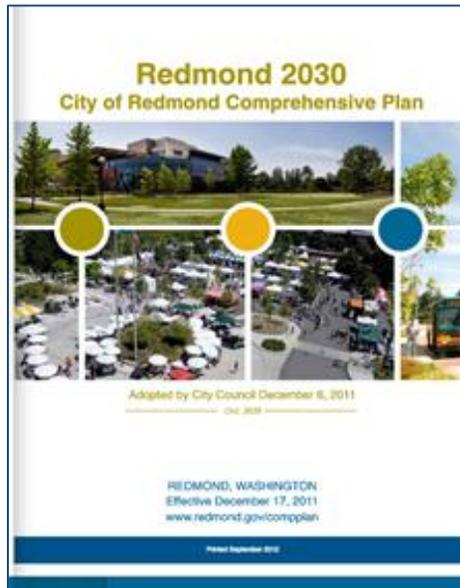


Figure 2. City of Redmond Comprehensive Plan

Sound Transit East Link Extension

As part of ST2, Sound Transit is extending light rail from Seattle to Bellevue and Redmond with station stops in Redmond at Overlake Village (Overlake Village Station) and the Overlake Transit Center (Redmond Technology Center Station). Light rail service is expected to begin at these stations in 2023.



Figure 3. Overlake Village Station Rendering

Redmond Transportation Master Plan

The 2013 Transportation Master Plan presents a strategic framework that is guiding transportation decisions and investments for the next 18 years in support of Redmond’s long-term vision. It includes strategies to prepare for light rail, improve travel choices and mobility, and increase neighborhood connections, among others.

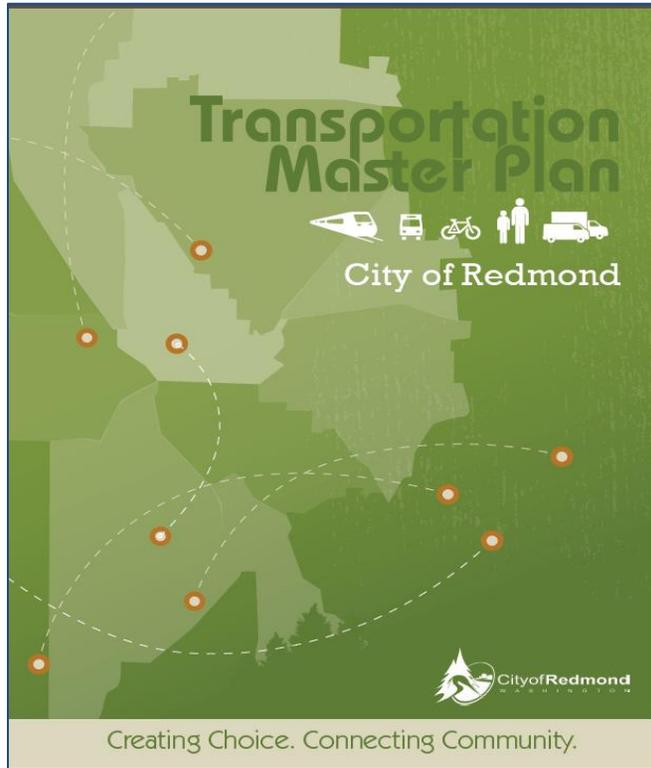


Figure 4. Redmond Transportation Master Plan

Overlake Village Stormwater and Park Facilities Implementation Plan

The Overlake Village Stormwater and Park Facilities Implementation Plan advance strategies to integrate stormwater facilities with parks, green spaces, and pathways

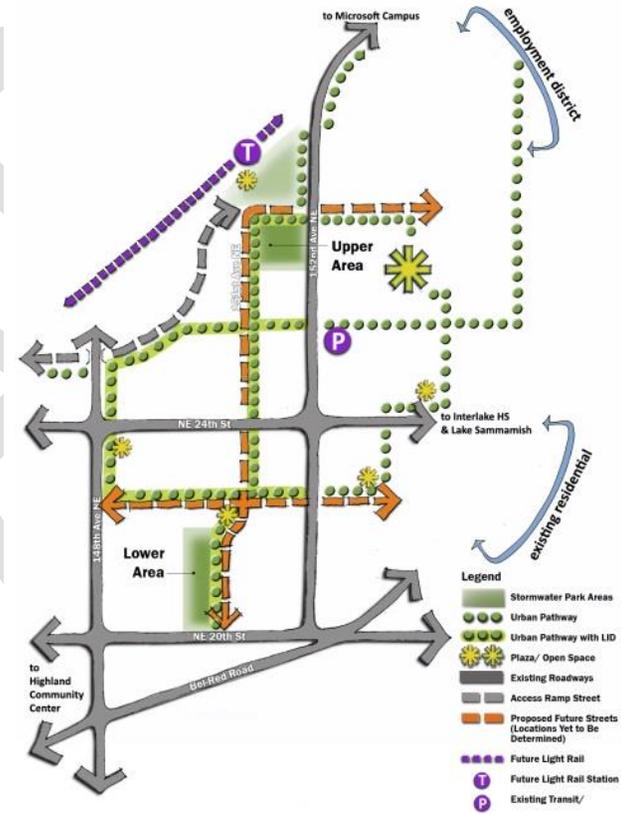


Figure 5. Stormwater & Park Facilities Plan

Overlake Master Plan & Implementation Strategy

The Overlake Master Plan & Implementation Strategy identifies Overlake Village as a vibrant, pedestrian-friendly urban neighborhood with a range of housing, retail, and service uses.



Figure 6. Overlake Master Plan

Overlake Village Street Design Guidelines

The Overlake Village Street Design Guidelines (OVSDG) identifies street standards necessary for development of a successful new neighborhood that includes the planned Overlake Village light rail transit station.



Figure 7. Overlake Village Street Design Guidelines

Redmond Water Resources Strategic Plan

The Water Resources Strategic Plan defines and communicates the City's approach to water resources protection for surface water, groundwater and stormwater. It lays out the mission, goals, objectives, strategies and tactics for water resources efforts in the City and how they support the overall City vision and other City functional areas. It includes a 3 year action plan.

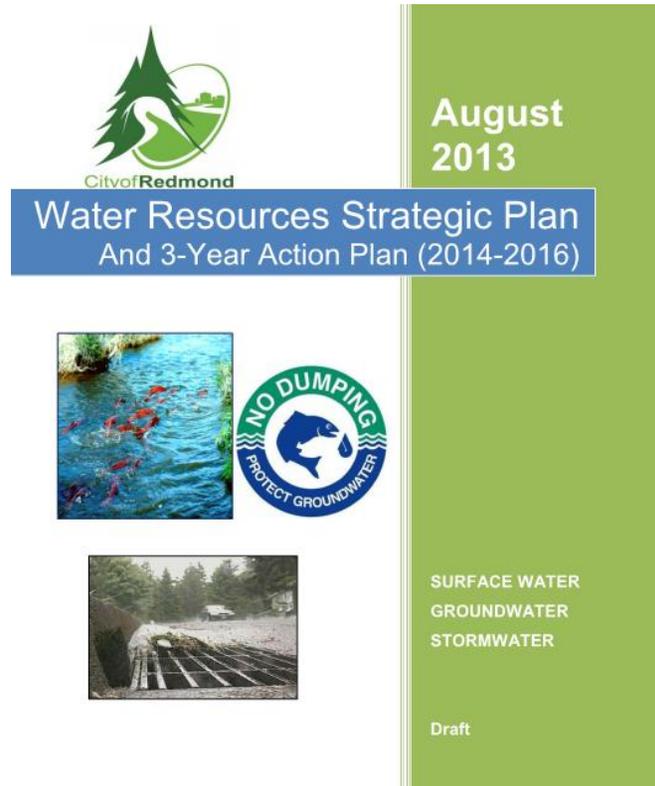


Figure 10. Redmond Water Resources Strategic Plan

OVERLAKE VILLAGE VISION

Overlake Village is envisioned as a vibrant, mixed-use urban center that functions as the core of the Overlake Neighborhood. Residents and employees enjoy a wide variety of restaurants and retail offerings, a diverse array of other amenities and services, and safe and convenient access to their jobs. Improved transit, bicycle and pedestrian connections, including a light rail station at the north end of 152nd Avenue NE., allow residents and visitors greater access to local and regional goods, services and employment. Residences have been added near stores and services, and many more people live in the area. Redevelopment has brought retail storefronts closer to the street, making the area more hospitable to transit, pedestrians and bicycling. The neighborhood's core, 152nd Avenue NE, is a pleasant place to walk or sit, and people stroll on the street during the day and evening. A system of plazas, parks and open spaces has been developed, providing residents, employees and visitors with opportunities to gather, recreate and enjoy the natural environment and abundant landscaping. A network of walkways and trails provides connections among these spaces and to others within the neighborhood and nearby areas. The Overlake Village vision is illustrated in Figure 11 (illustration provided by the City).



Figure 11. Visualization of Overlake Village Vision in 20XX

OVERLAKE VILLAGE CHARACTER

The Overlake Village character was established during previous planning work. It is described in the OVSDG and is reflected in the images and associated text copied from that document in Figures 12 and 13 below:



Mixed-Use Residential Neighborhood

Overlake Village is envisioned as a place for people to live and work in close proximity to the transit station and existing employment centers such as the Microsoft campus.



18-hour Street-Oriented Retail

Ground-floor street-oriented retail along 152nd Avenue NE is the focus of the district. Uses that will attract people on a daily and weekly basis, including restaurant, entertainment, and other retail uses, will serve the entire district. The retail street is the heart of Overlake Village.



Transit-Supportive

The public plaza is the Overlake Village's central destination and the 'front door' for visitors arriving by light rail. The plaza is an open and flexible paved area surrounded by active storefront shops and restaurants. Circulation and land use are focused around the station and promote the use of transit.

Figure 12. Overlake Village Character
(from the OVSDG)



Green Amenities

The public park is envisioned as a vibrant urban public space flanked by the urban pathway and retail activity. A combination of plaza and green space or lawn, the park will be the 'living room' of the neighborhood. It should accommodate both large civic events and small intimate gatherings.



Sustainability

Overlake Village regional stormwater facilities—collocated with parks and plazas—and street-side rain gardens are elements of a stormwater facilities system that integrates the control and treatment of rainwater runoff with neighborhood park, recreation, and green spaces.



Innovation

Overlake Village's innovation theme builds upon Redmond's history of technology and innovation. This is reflected in the forward-looking approach to bicycle transportation. Protected bikeways provide safe and comfortable access to the station and to the retail street for riders of all skill levels.

Figure 13. Overlake Village Character
(from the OVSDG)

FRAMEWORKS

INFRASTRUCTURE PLAN PRINCIPLES

The project team and stakeholders developed the following infrastructure plan principles during the initial stages of this planning study and have been used as a guide to develop the infrastructure plan and implementation strategy.

- Overlake Village is a lively people place
- Infrastructure supports those who work, live or visit Overlake Village today and in the future
- Infrastructure investments are coordinated in time and space with other City investments and the investments of other jurisdictions and private development in support of the vision
- Stormwater facilities, parks, urban pathways, and green spaces are integrated and connected to one another
- Bioretention and infiltration facilities are sufficient to ensure the success of the regional stormwater management system
- The water and sewer systems support the land use vision and are planned in a coordinated way with other infrastructure systems.
- Overlake Village develops with a fine-grained transportation network that creates a quality pedestrian and bicycle environment and supports mobility and circulation for all modes, borrowing from street typologies already developed for northern Overlake Village whenever possible
- 152nd Avenue NE is an active streetscape for walking, biking and access into Overlake Village
- NE 24th St is an aesthetically pleasing gateway into Overlake Village with a high-quality pedestrian environment, incorporating features such as wide sidewalks and safe and convenient crossings, while retaining existing motor vehicle capacity
- Street designs incorporate appropriate facilities for transit, consistent with the Transit Strategic Plan (adoption anticipated in 2017)
- Overlake Village provides comfortable and convenient non-motorized connections for circulation within the Village and across busy arterials and other barriers to surrounding areas
- On-street parking is managed to support adjacent ground-floor uses, while off-street parking is generally located in structures and is prioritized for longer term employee and resident parking
- Transportation improvements support the Overlake Village land use vision and “link it all together”
- People will say “Wow” because they are favorably impressed with the caliber of public realm urban amenities and private development in Overlake Village

LAND USE

Land use in Overlake Village South is planned to transition from the commercial retail uses that are predominant today (see Figure 14) to mixed use developments that are consistent with the neighborhood vision for a vibrant mixed use urban center (see Figure 15).

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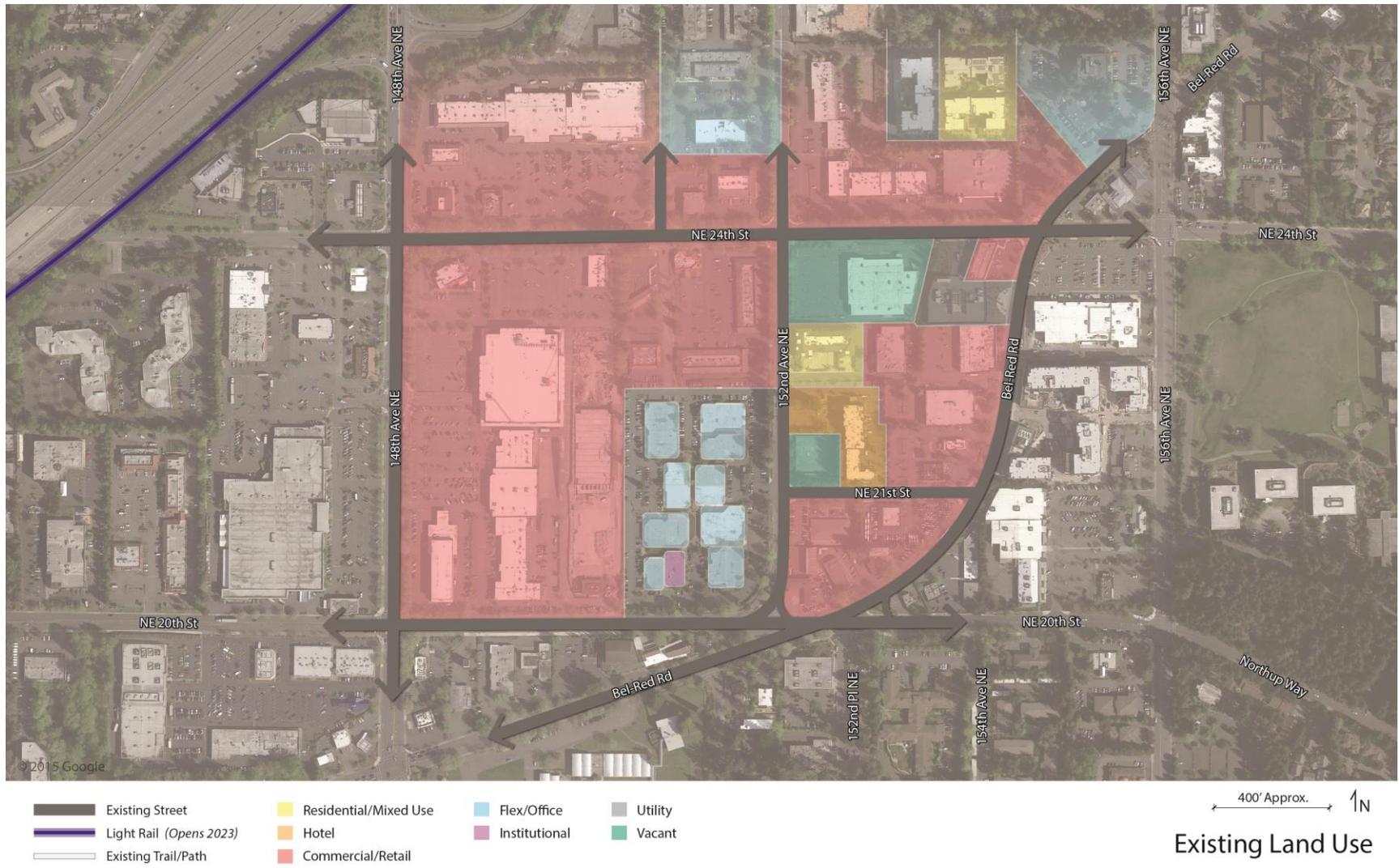


Figure 14. Existing Land Use

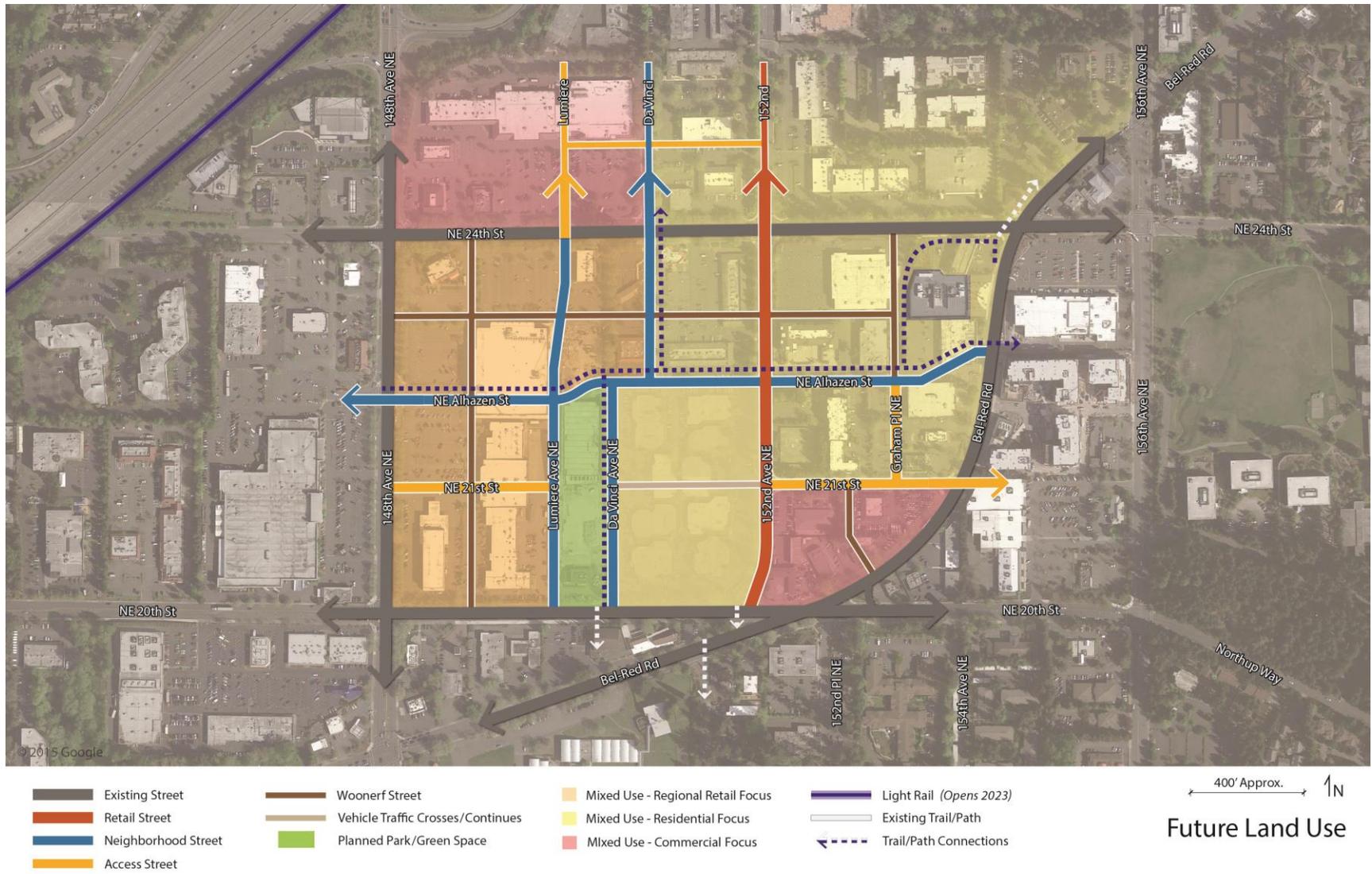


Figure 15. Future Land Use

CIRCULATION

The circulation framework shown in Figure 16 builds on the circulation concepts developed in the OVSDG for streets north of NE 24th Street. Circulation proposed for Overlake Village South reflects refinements to previous planning work and incorporates input received from City staff and project stakeholders during the course of this study. The circulation accommodates motorized and non-motorized modes of transportation based on future land use conditions and 2030 traffic projections. Circulation objectives are stated in the Infrastructure Plan Principles.

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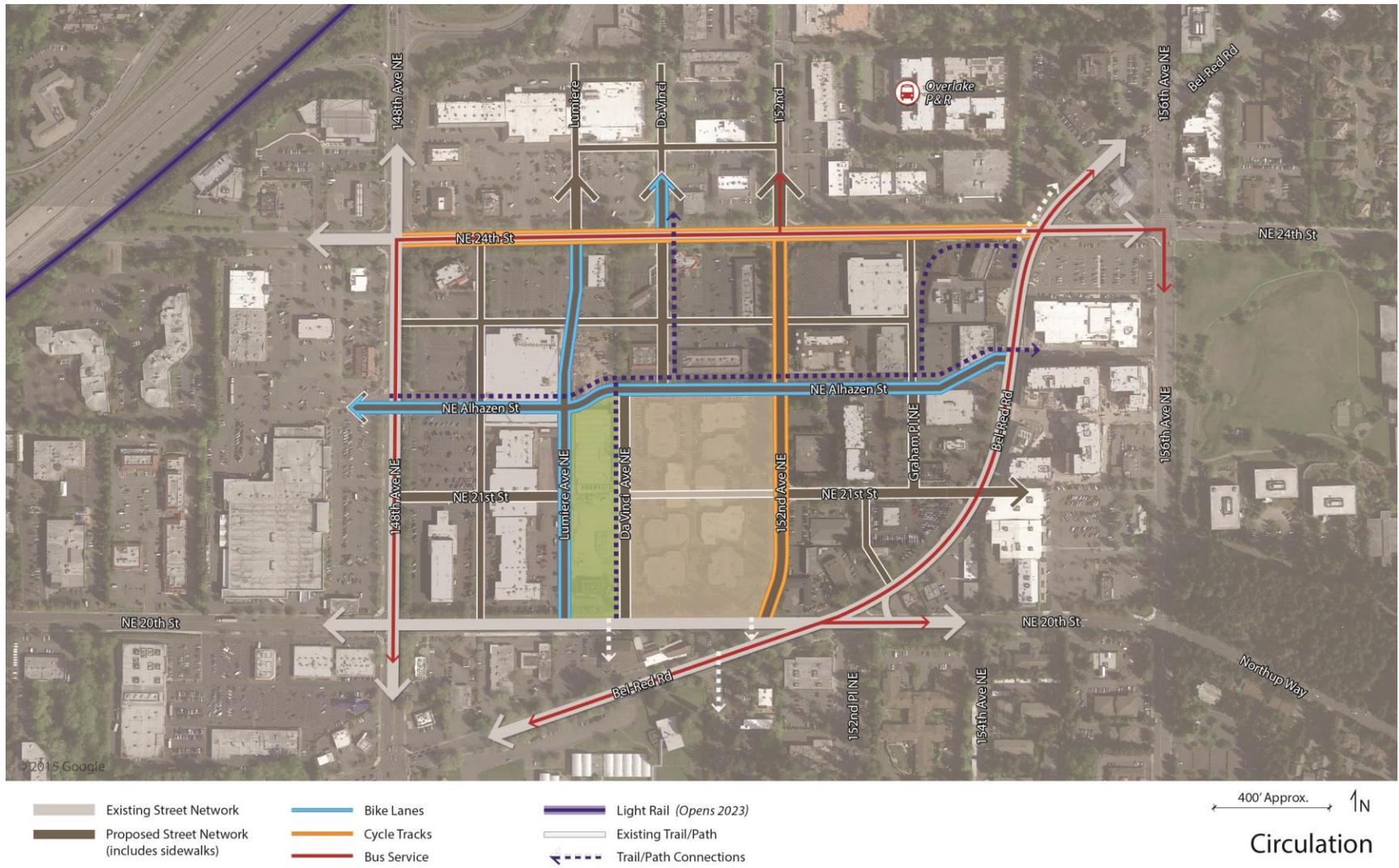


Figure 16. Circulation

STREET REQUIREMENTS

OVERVIEW

Street Requirements is a guide to the horizontal layout of the various roadway features contained within the public right-of-way for each of the different street types in Overlake Village. These features are described below and illustrated in Figures 17 – 26.

The street requirements apply to the following areas:

Right-of-Way

Right-of-way is the publicly owned area between private property lines. It includes transportation infrastructure for pedestrian, bicycle, and transit vehicle circulation and surface or subsurface infrastructure such as utilities. Some pedestrian and utility infrastructure may also be accommodated in easements instead of right-of-way depending on site-specific characteristics.

Roadway

The roadway is measured from face-of-curb to face-of-curb within the right-of-way. It includes travel and turn lanes and may include curbside parking and bike lanes. For Woonerf streets, a curb may not separate the roadway from the sidewalk. In this case, the transition between the two areas will generally be marked by other features such as bollards, different hardscape surface materials, or in other ways.

Landscape/Bioretenion

The landscape/bioretenion area is located immediately behind the curb and may be separated completely from the sidewalk area (hardscape) as an exclusive space for landscape/bioretenion treatments (no hardscape surfaces) or it may be incorporated into the sidewalk area as a series of bioretention cells, traditional landscaping, or a combination of each, interspersed between hardscape surfaces along the length of the street.

Sidewalks

Sidewalks are measured from the landscape strip to the edge of development. Sidewalks and landscape strips/bioretenion areas may also be located partially or entirely within easements depending on site-specific characteristics. Wide sidewalks are provided on both sides of all Overlake Village streets. The sidewalk area may include the urban pathway which is located on one side of the standard section for Neighborhood Streets. The urban pathway provides a distinctive pedestrian route with a variety of experiences, including both movement and lingering areas.

STREET TYPES

Each street within the Overlake Village South study area is assigned a street type. Each street type reflects the street's intended character, transportation function, and adjacent land uses. Figure 17 illustrates the preferred street network in the Overlake Village South study area and highlights the different street types contained within the network. The Retail, Neighborhood and Access Streets retain the same characteristics in the Overlake Village South study area as they have in the Overlake Village North study area. A detailed description of the street characteristics is contained in the OVSDG. Excerpts from the OVSDG are included in this section as an aide to the reader and are shown in italics. A 5% level design of the street network and associated estimate of probable costs is contained in the Appendix.

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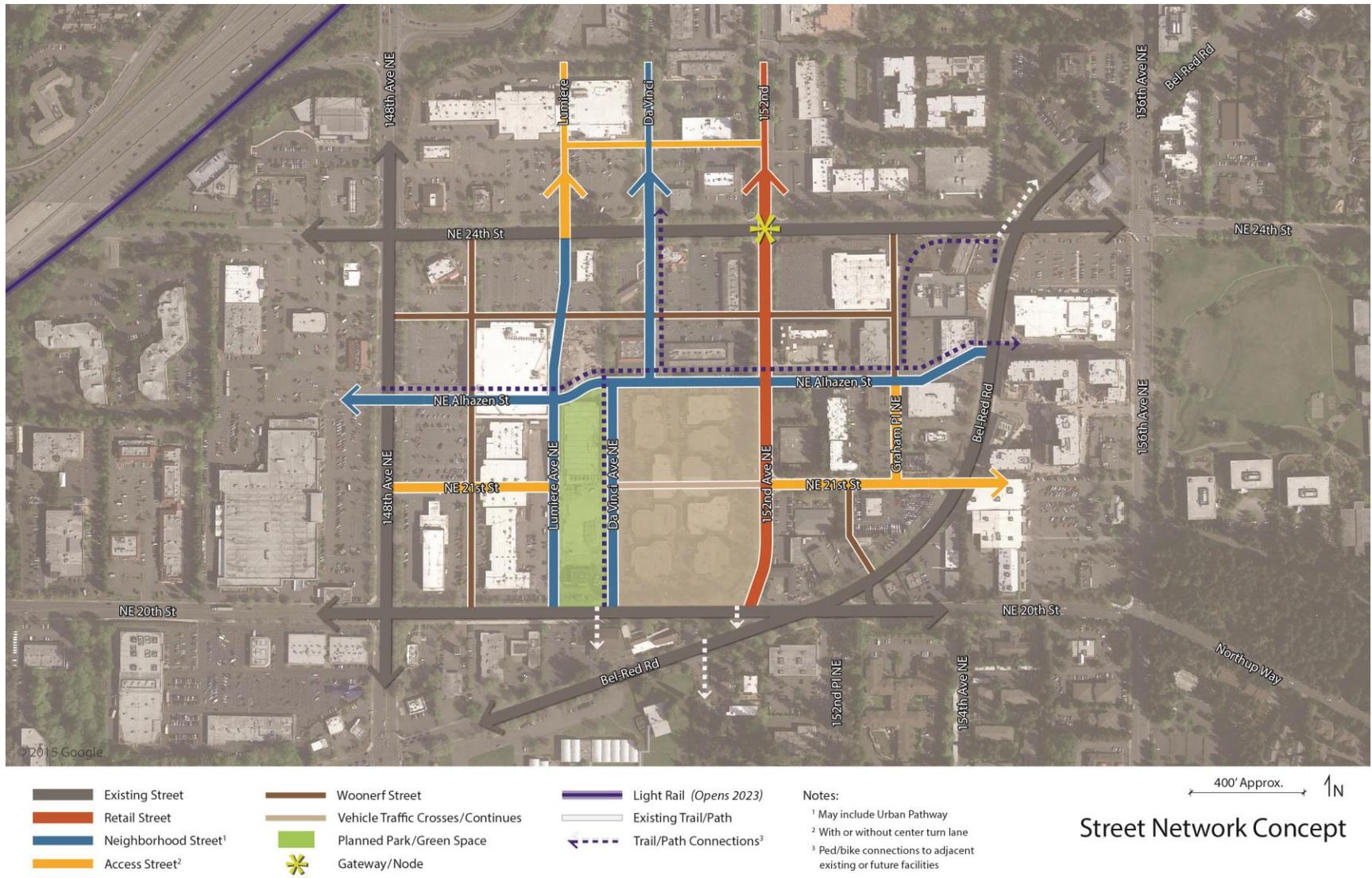


Figure 17. Street Network Concept

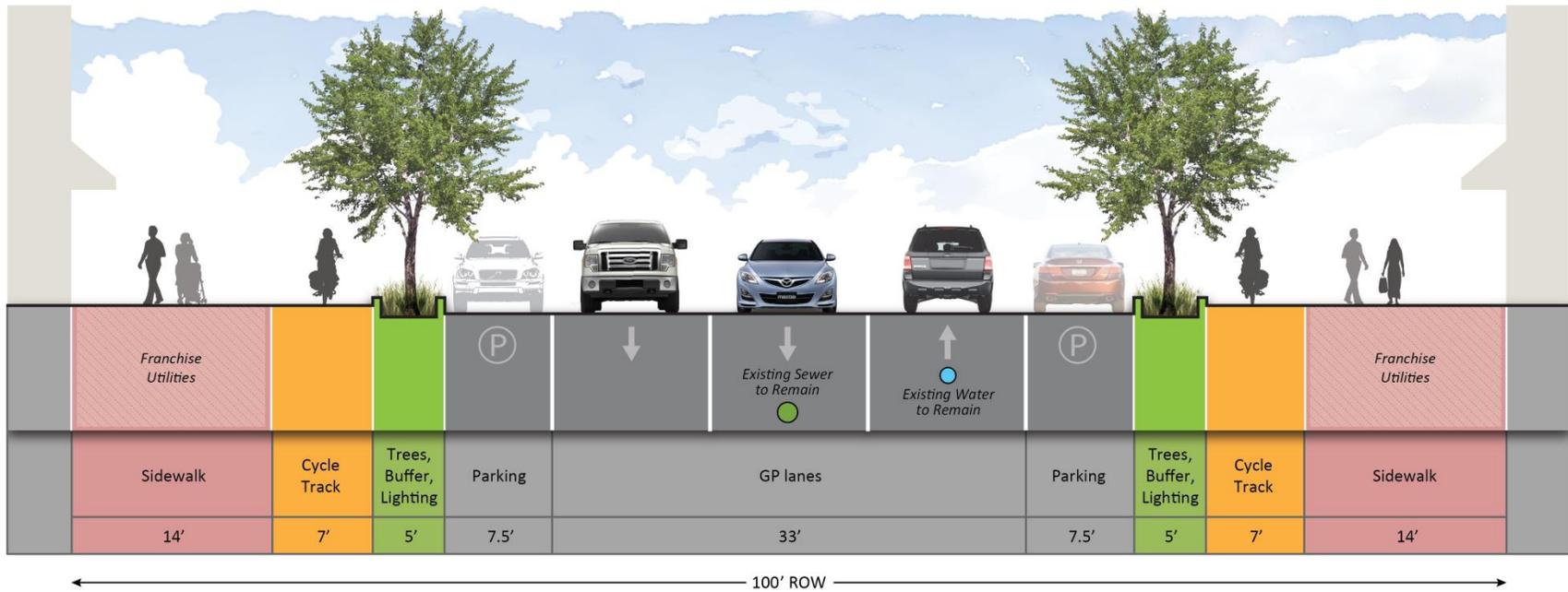
RETAIL STREET

Retail Street Description

The Retail Street—152nd Avenue NE—is the most important street in Overlake Village. The gracious Retail Street includes substantial space for all travel modes with strong support for pedestrians and cyclists. The Retail Street is magical—the design theme and elements create a “wow” experience. Not just a place to move through, this unique and memorable environment is the active 18-hour heart and the focus of Overlake Village development. The other streets in Overlake Village should complement, not compete with, the Retail Street.

The Retail Street Character extends from the north study area across NE 24th Street to the south study area and retains its unique character and function to the southern margin of Overlake Village at NE 20th Street. The center turn lane, a standard feature of the Retail Street, is removed south of NE Alhazen Street to minimize the roadway width where it’s not needed based on land use and traffic analysis results. The Retail Street standard section is shown in Figure 18 and the typical block plan is shown in Figure 19.

Retail Street Standard Section



Note: Fire hydrants should not be placed on the retail street unless other options are not available, in which case they should be placed in the Door Zone at setbacks per City Standards. See OVSDG for further guidance.

Figure 18. Retail Street Standard Section

Retail Street Standard Section Features

1. **Wide sidewalks** provide strolling and seating areas for viewing and resting as well as ample space for movement to and from the light rail station.
2. **Cycle tracks** are located between curbside parking and pedestrian through-zones and provide an attractive and comfortable ride for bicyclists of all skill levels.
3. **Curbside parking** is located along both sides of the street and provides essential front door parking for retailers.

Variations from the Standard

1. The Retail Street section varies from the standard south of NE Alhazen Street where the center turn lane is removed.

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Retail Street Typical Block Plan
(from the OVSDG)

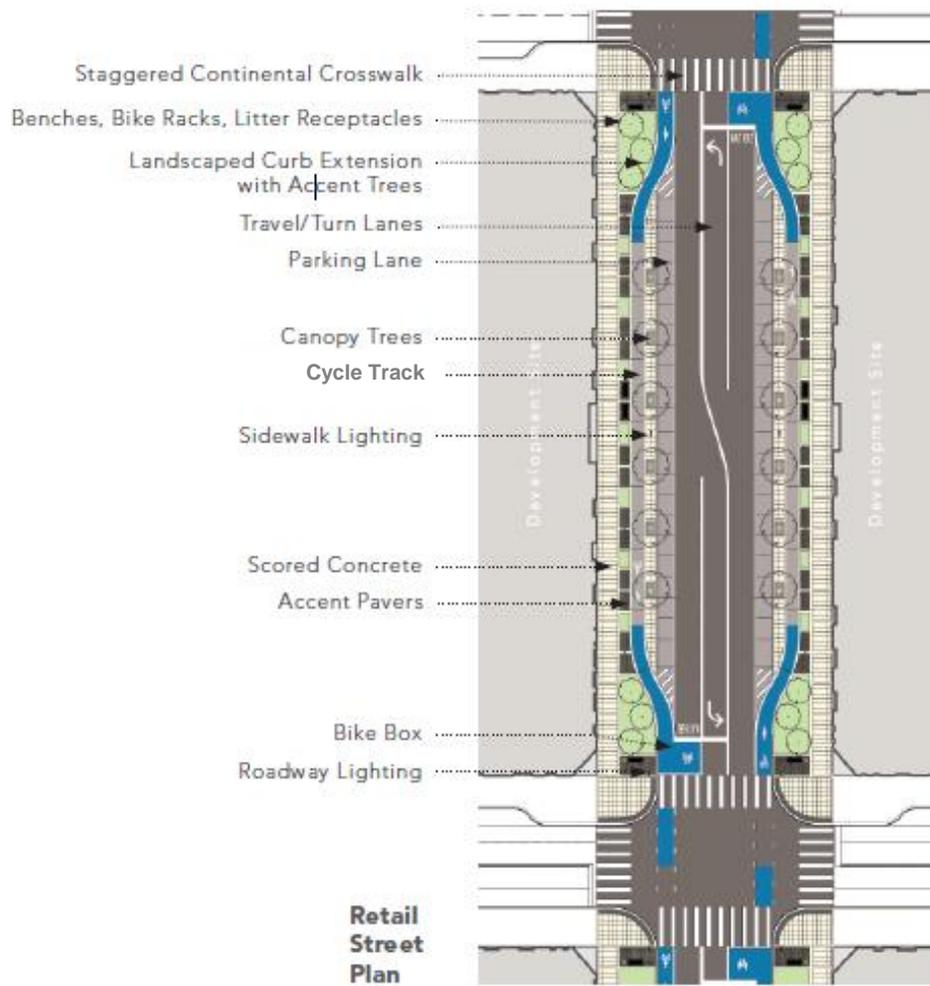


Figure 19. Retail Street Typical Block Plan

NEIGHBORHOOD STREETS

Neighborhood Street Description

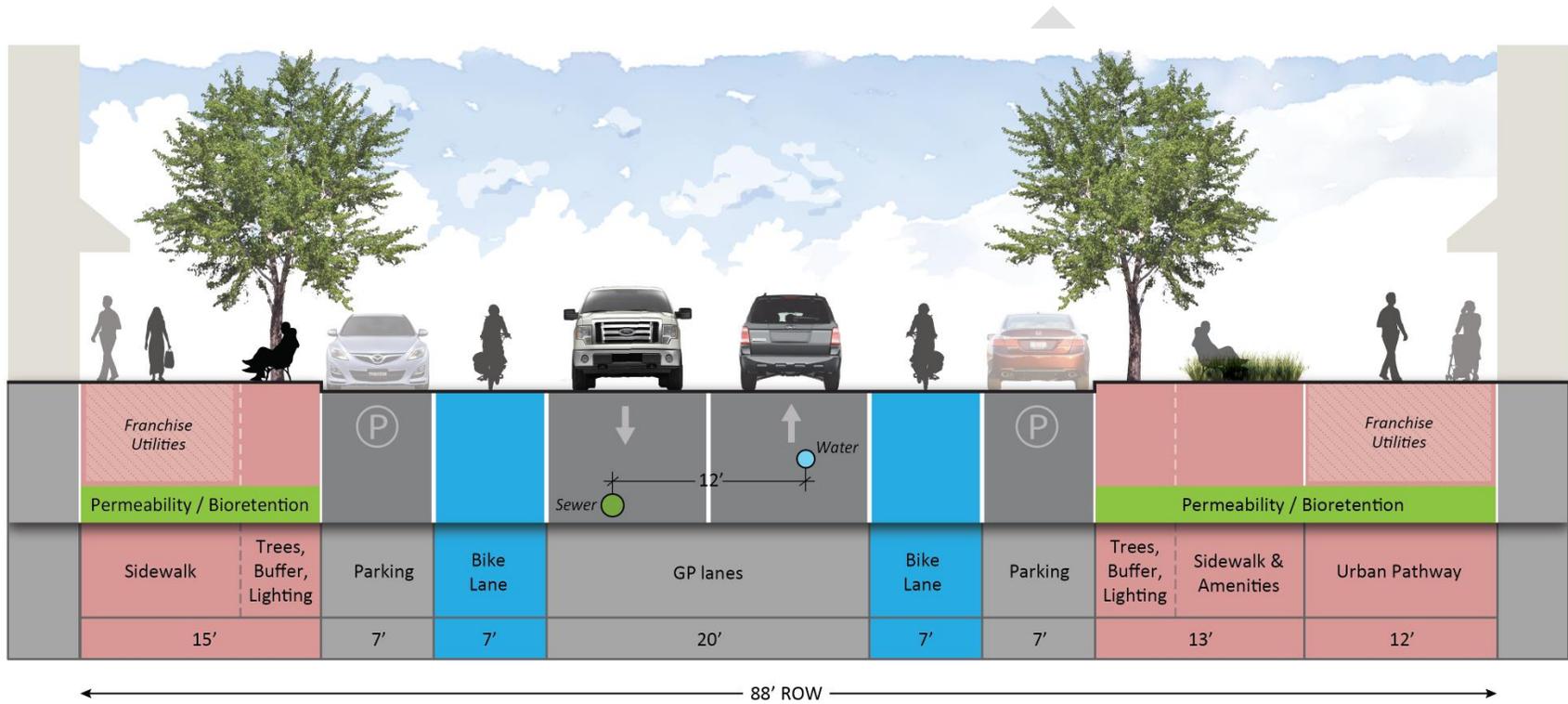
The Neighborhood Streets create green roadway connections between Overlake Village open spaces and other areas throughout the neighborhood. These streets pass through mixed use areas that are predominantly regional retail uses west of DaVinci Avenue NE and predominantly residential uses to the east. *The Neighborhood Street is defined by sustainable elements that address the community's environmental concerns for this area, specifically improving water quality and reducing vehicle-miles traveled.*

The three Neighborhood Streets in the Overlake Village South study area include:

1. DaVinci Avenue NE between NE 20th and NE 24th Streets
2. Lumiere Avenue NE between NE 20th and NE 24th Streets
3. NE Alhazen Street between 148th Avenue NE and Bel-Red Road.

The Neighborhood Street standard section is shown in Figure 20 and the typical block plan is shown in Figure 21.

Neighborhood Street Standard Section



Note: Fire hydrants to be placed in the Door Zone and lighting to be placed in the Door Zone or Furnishings/Landscape Zone as appropriate per the OVSDG and at setbacks per City Standards

Figure 20. Neighborhood Street Standard Section

Standard Section Features

1. **An urban pathway** provides a distinctive and unobstructed area for leisurely pedestrian and bicycle through movements. Concrete banding provides clear delineation between the urban pathway and furnishings/landscape zone in order to reduce modal conflicts (see OVSDG). The width of the urban pathway may be reduced when it is adjacent to an existing or planned street.
2. **Enhanced bike lanes** include a striped buffer zone that accommodates car door opening without creating conflicts with bicyclists. The lanes are located to provide direct connections between residential and employment uses that are farther than a comfortable walking distance from the station.
3. **Bioretention areas** provide an opportunity to integrate Overlake Village's stormwater runoff and infiltration needs in an environmentally sensitive manner.

Variations from the Standard

1. DaVinci Avenue NE varies from the standard between NE 20th and NE 24th Streets in that it does not include bicycle lanes, which are instead provided on Lumiere Avenue NE due to connectivity issues associated with the "offset T" on DaVinci Ave NE at NE Alhazen Street.
2. Lumiere Avenue NE varies from the standard between NE 20th and NE 24th Streets as a result of adding bicycle lanes as described above. In addition, Lumiere Avenue NE does not contain an urban pathway.
3. NE Alhazen Street varies from the standard between Lumiere and 148th Avenues NE as a result of a wider roadway section to accommodate traffic volumes approaching 148th Avenue NE, a principal arterial on the west boundary of Overlake Village.

Neighborhood Street Typical Block Plan
(from the OVSDG)

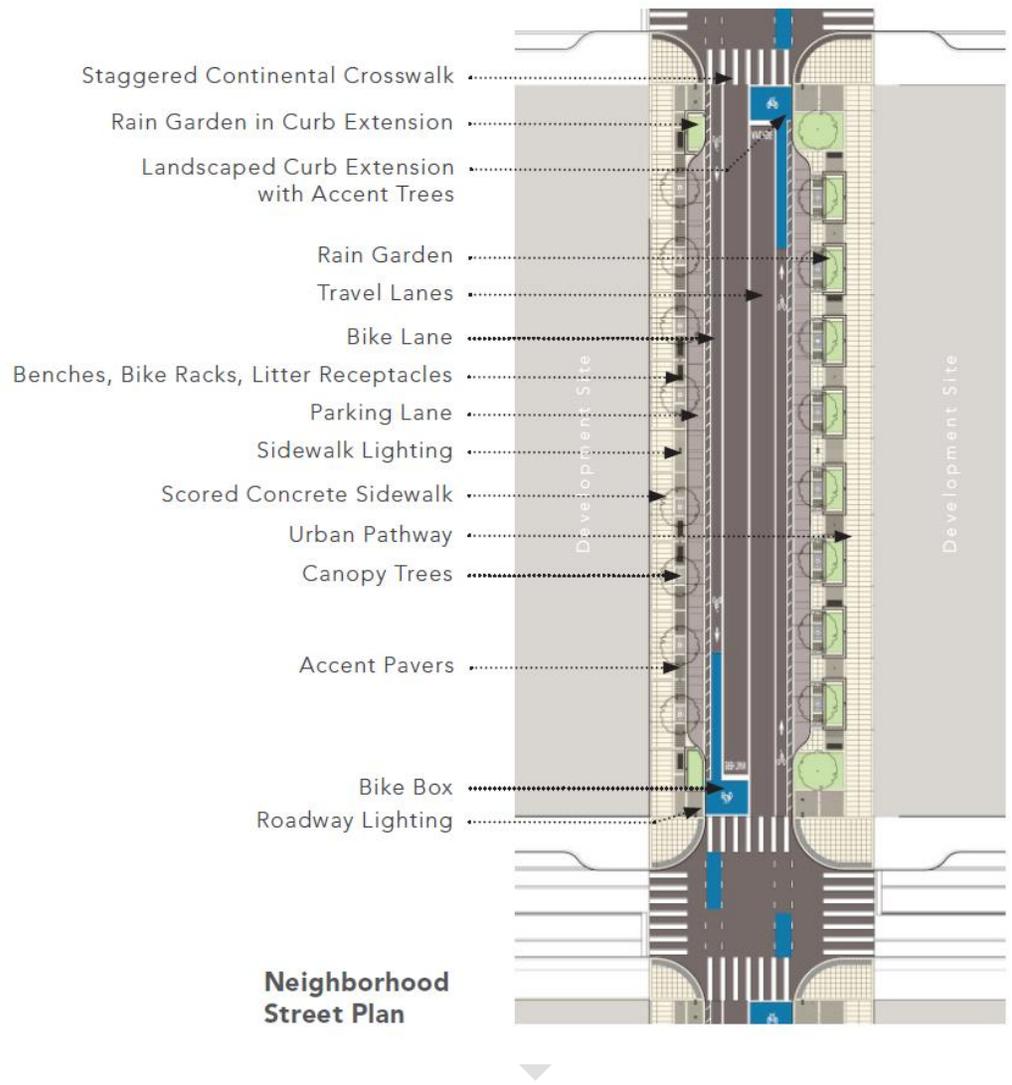


Figure 21. Neighborhood Street Typical Block Plan

ACCESS STREETS

Access Street Description

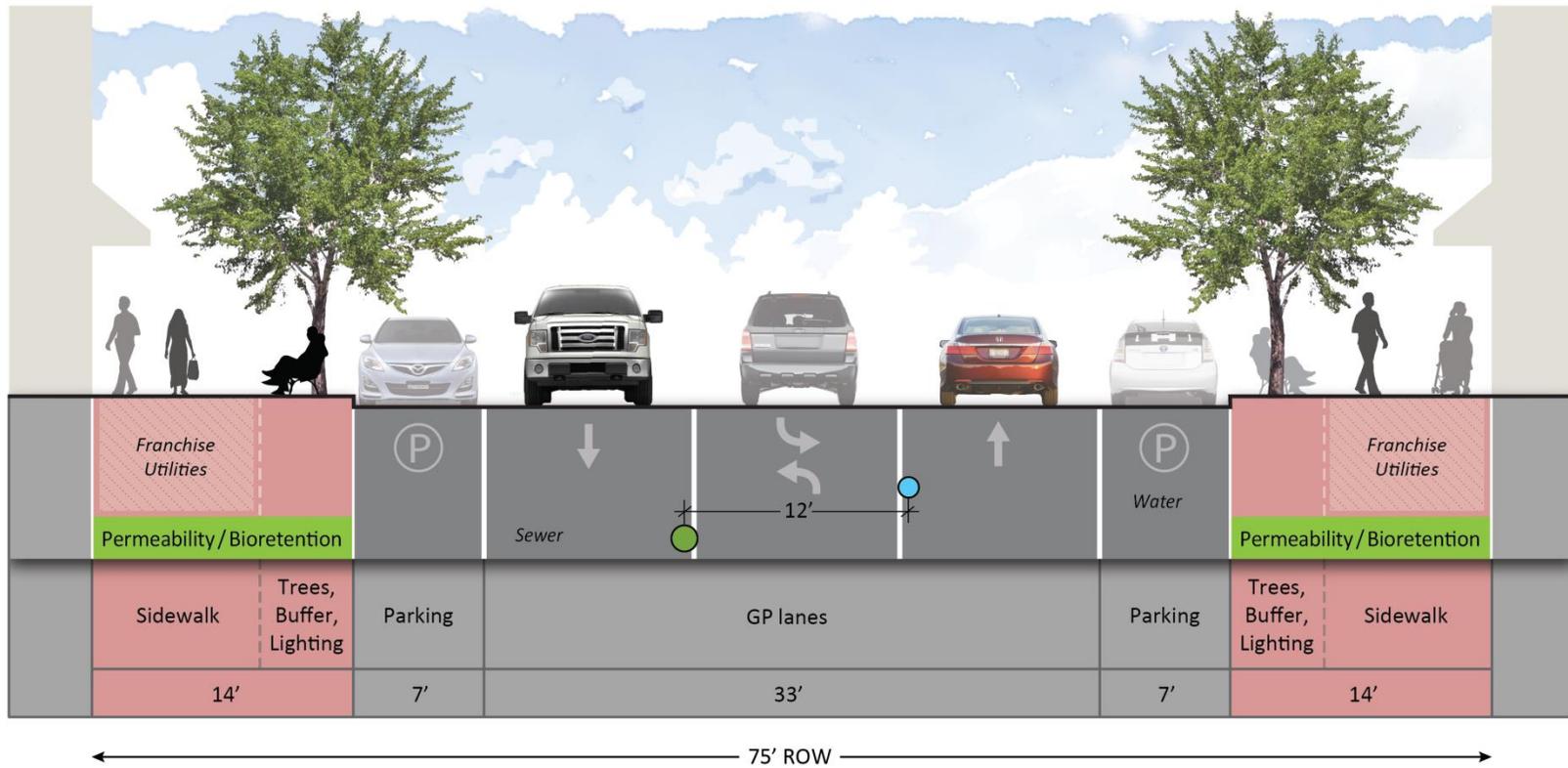
Access Streets are essential routes for the loading service and parking access functions required for all development parcels. They provide this function together with the Woonerf Streets. In addition to accommodating service access needs in Overlake Village, Access Streets should be pedestrian-friendly, with sidewalks wide enough to allow for café seating, street furniture and lighting.

The two Access Streets in the Overlake Village South study area include:

1. NE 21st Street between 148th Avenue NE and Bel-Red Road
2. NE Graham Place between NE 21st and NE Alhazen Streets

The Access Street standard section is shown in Figure 22 and the typical block plan is shown in Figure 23.

Access Street Standard Section



Note: Lighting and fire hydrants to be placed in the Furnishings/Landscape Zone per the OVSDG and at setbacks per City Standards

Figure 22. Access Street Standard Section

Standard Section Features

1. **Sidewalks** accommodate pedestrian movements and a limited amount of seating. Sidewalks should also serve as entrances to lobbies of upper-floor residential or employment uses.
2. **Service/parking entries** accommodate development parcels located along Access Streets. Providing for service access is critical to the success and desirability of development parcels.
3. **Curbside loading** allows short-term parking for delivery and pick-up services.

Variations from the Standard

1. NE 21st Street varies from the standard between 148th and Lumiere Avenues NE and between 152nd Avenue NE and Bel-Red Road. Based on traffic analysis results, the center turn lane has been removed in these locations

Access Street Typical Block Plan
(from the OVSDG)

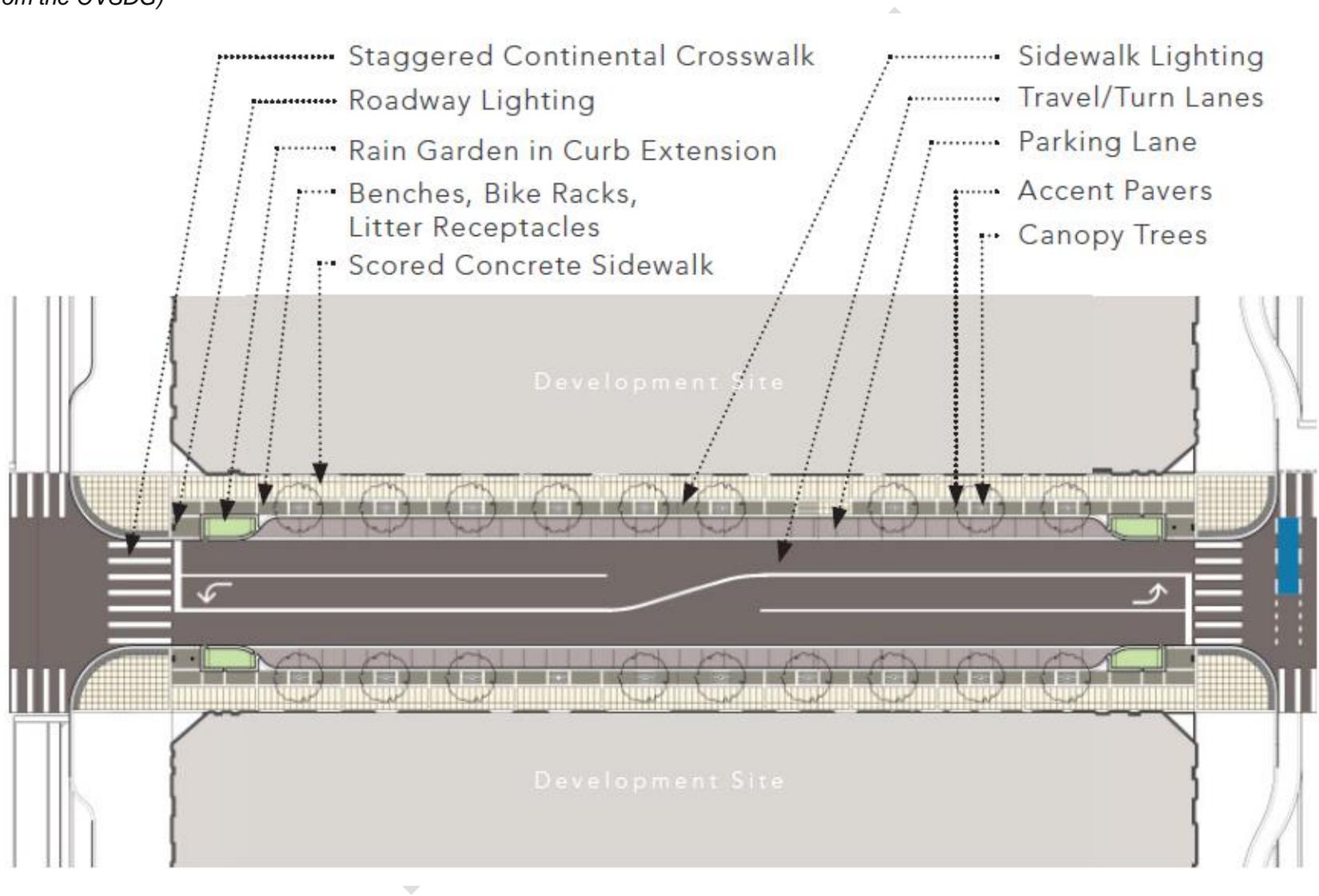


Figure 23. Access Street Typical Block Plan

WOONERF STREETS

Woonerf Street Description

“Woonerf” is a Dutch term that describes a circulation facility that can serve a number of different functions usually with narrower space requirements. Woonerf streets are located in new rights-of-way and contain a 36-foot shared space intended principally for private or local non-motorized uses and limited underground utilities. Woonerf streets can provide access for vehicles and pedestrians and can function like an alley for service, delivery, and parking access, or like a plaza primarily used for pedestrian activity. Woonerf streets will always provide non-motorized connectivity, but may not provide continuous connectivity for vehicles, depending on the land use context and circulation needs. Woonerf streets will need to be designed to maintain a continuous ADA-compliant walk route. Woonerf Streets may accommodate loading/unloading uses only if emergency vehicle ingress and egress is not impeded. Stormwater is managed using a variety of bioretention treatments located in 8-foot-wide and variable length bioretention areas.

There is no standard section defined for the Woonerf street; each section will be designed according to its unique context. Street elements will be designed to create the envisioned shared space environment. Woonerf streets should avoid three linear strips of space (car, bioretention, pedestrian). A hypothetical block plan for Woonerf streets is shown in Figure 24 and illustrates the potential variability for the Woonerf street to accommodate service access, pedestrian/bicycle accommodations, and landscaping or bioretention features. The specific design details will be determined in conjunction with future redevelopment.

Woonerf Street Hypothetical Block Plan

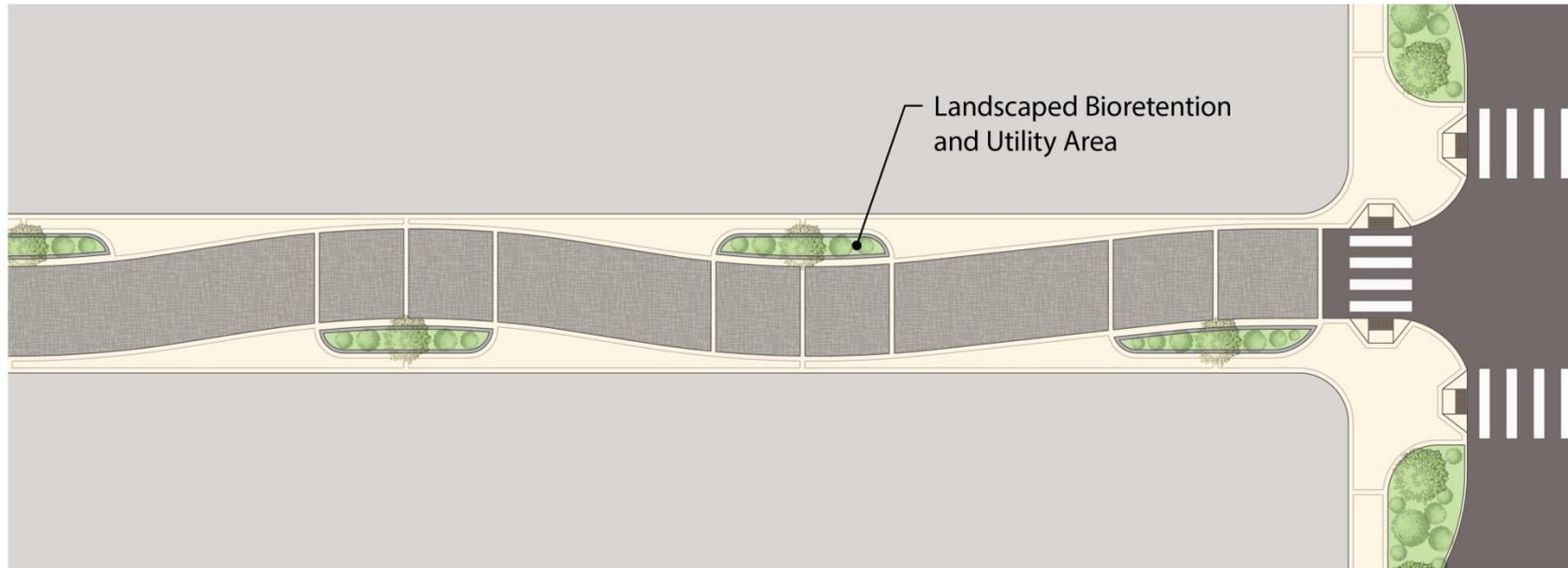


Figure 24. Woonerf Street Typical Hypothetical Block Plan

Typical Woonerf Features

1. **Low-speeds and low-volumes** are accommodated with a Woonerf Street design. The Woonerf Street is not intended for general traffic or through movements.
2. **Local circulation** is provided for service access at mid-block locations or through public or private property.
3. **Preferred vehicle service access** to help keep trucks off streets and minimizes curb-cuts.

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EXISTING STREETS

Existing Streets Description

There are four streets defined as Existing Streets that bound the Overlake Village South study area shown on Figure 17. The Existing Streets include: NE 24th Street on the north, NE 20th Street on the south, 148th Avenue NE on the west and Bel-Red Road on the east. These streets are all either minor or principal arterials that provide access to or through the Overlake Village neighborhood. While Existing Streets were all considered by the project from a traffic analysis perspective, the scope of work only considered full cross section improvements for NE 24th Street, specifically looking at options to improve the non-motorized environment and the overall aesthetic quality of the corridor, which is a gateway into Overlake Village. For this reason, NE 24th Street is the only Existing Street described in detail below.

Other improvements identified or considered for Existing Streets during this study include an added northbound traffic lane on 148th Avenue NE and pedestrian/bicycle crossing concepts at the NE 20th Street/152nd Avenue NE/Bel-Red Road intersection at the southern margin of Overlake Village. See the Appendix of this report for the traffic analysis memorandum and the 5% level design drawings that discuss and show the added lane on 148th Avenue NE. The Appendix also includes several sketch level concepts for crossing the NE 20th Street/152nd Ave NE/Bel-Red Rd intersection.

NE 24th Street Description

NE 24th Street is a five lane minor arterial connecting Overlake Village with Bellevue at 148th Avenue NE on the west and Bel-Red Road on the east. It bisects Overlake Village and carries the largest volume of traffic compared to other streets in the neighborhood excluding other Existing Streets. It naturally serves as a gateway into Overlake Village from both the east and west and provides a strong opportunity to incorporate gateway treatments at the NE 24th Street/152nd Avenue NE intersection. In the future cross section, pedestrian and bicycle accommodations are provided on both sides of the street, separated from travel lanes by a continuous planting strip. The intersection with 152nd Avenue NE serves as a gateway into the neighborhood, particularly to the light rail station and station plaza located to the north. The intersection with DaVinci Avenue NE (151st Avenue NE) is designed for pedestrian/bicycle only crossings to provide a safe, convenient crossing of this busy arterial for non-motorized users and a direct connection to the west end of the light rail station.

The NE 24th Street standard section is shown in Figure 25 and the preferred street plan and profile is shown in Figure 26.

NE 24th Street Standard Section



Figure 25. NE 24th Street Standard Section

Standard Section Features

1. **Cycle tracks** on both sides of the street accommodate connections to north/south bicycle facilities on Lumiere and 152nd Avenues NE and to other trail and pathway facilities within Overlake Village that also connect to regional facilities.
2. **Landscape strips** on both sides of the street retain mature existing trees to the extent possible and add new trees to replace existing trees in other locations. Lower level landscape plantings are also contained within the landscape strip.

Variations from the Standard

Variations from the standard occur regularly throughout the corridor, as noted below:

3. The left turn pocket transitions to a landscaped median zone approaching DaVinci Avenue NE from both the east and west.
4. The landscape strip, particularly on the north side of the street varies in width based on existing conditions.

NE 24th Street Preferred Concept Plan & Profile

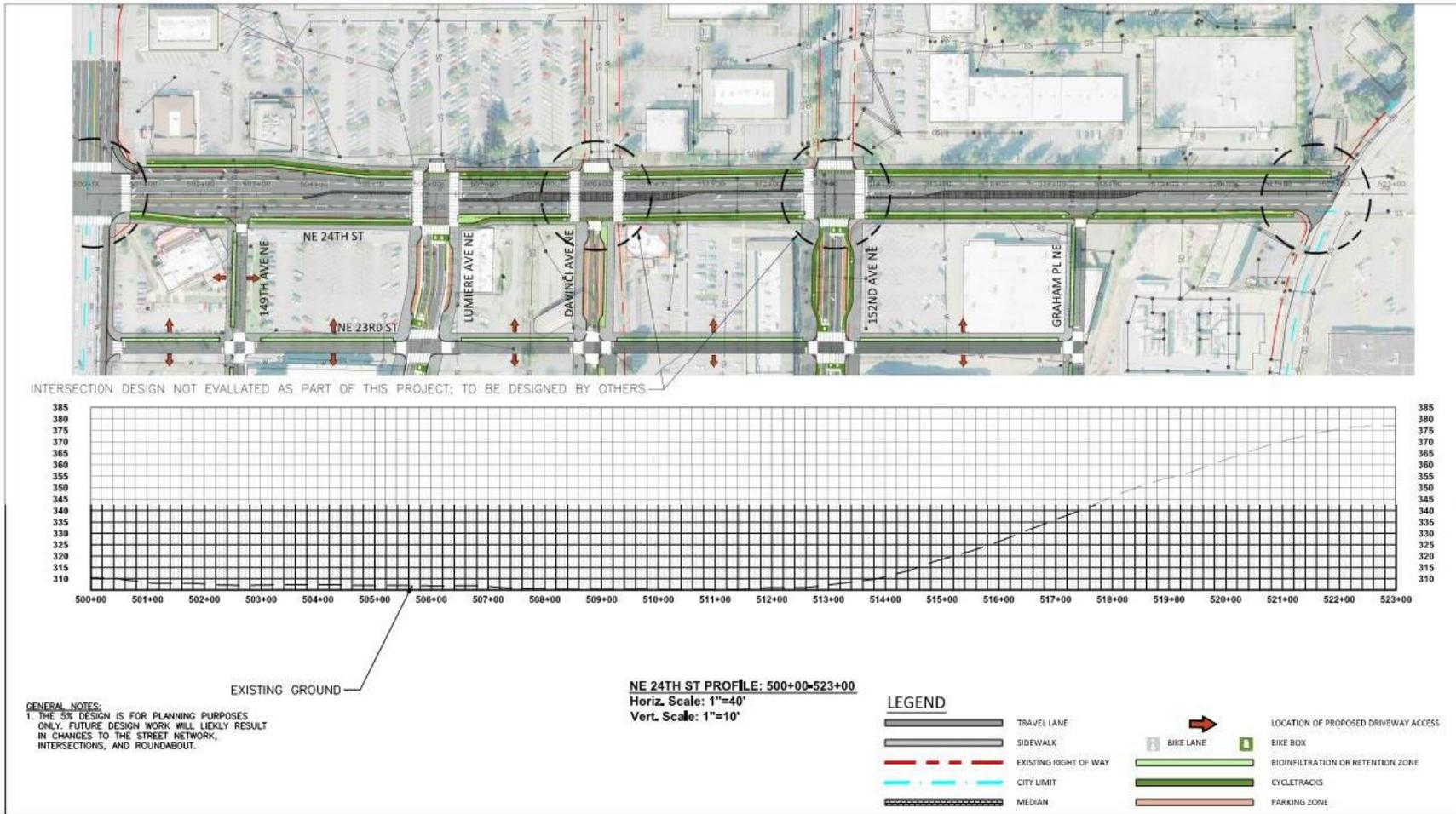


Figure 26. NE 24th Street Preferred Concept Plan & Profile

INFRASTRUCTURE PLAN

Many of the infrastructure plan characteristics described in the OVSDG for the north study area also apply to the south study area. Where appropriate, excerpts from the OVSDG are included in this section as an aide to the reader.

RIGHTS-OF-WAY

The typical mid-block rights-of-way have been sized to provide adequate capacity for all modes of travel and to accommodate sufficient space for landscaping, bioretention, and street furniture.

Right-of-way widths are sized to accommodate the function and character of each street and to minimize the reconstruction of existing streets to the greatest extent possible. In some cases Woonerf streets may be private and so not require right-of-way acquisition. As described earlier in the report, they will still be required to provide access for connectivity. The typical mid-block right-of-way widths for the various street types are reflected in Figure 27.

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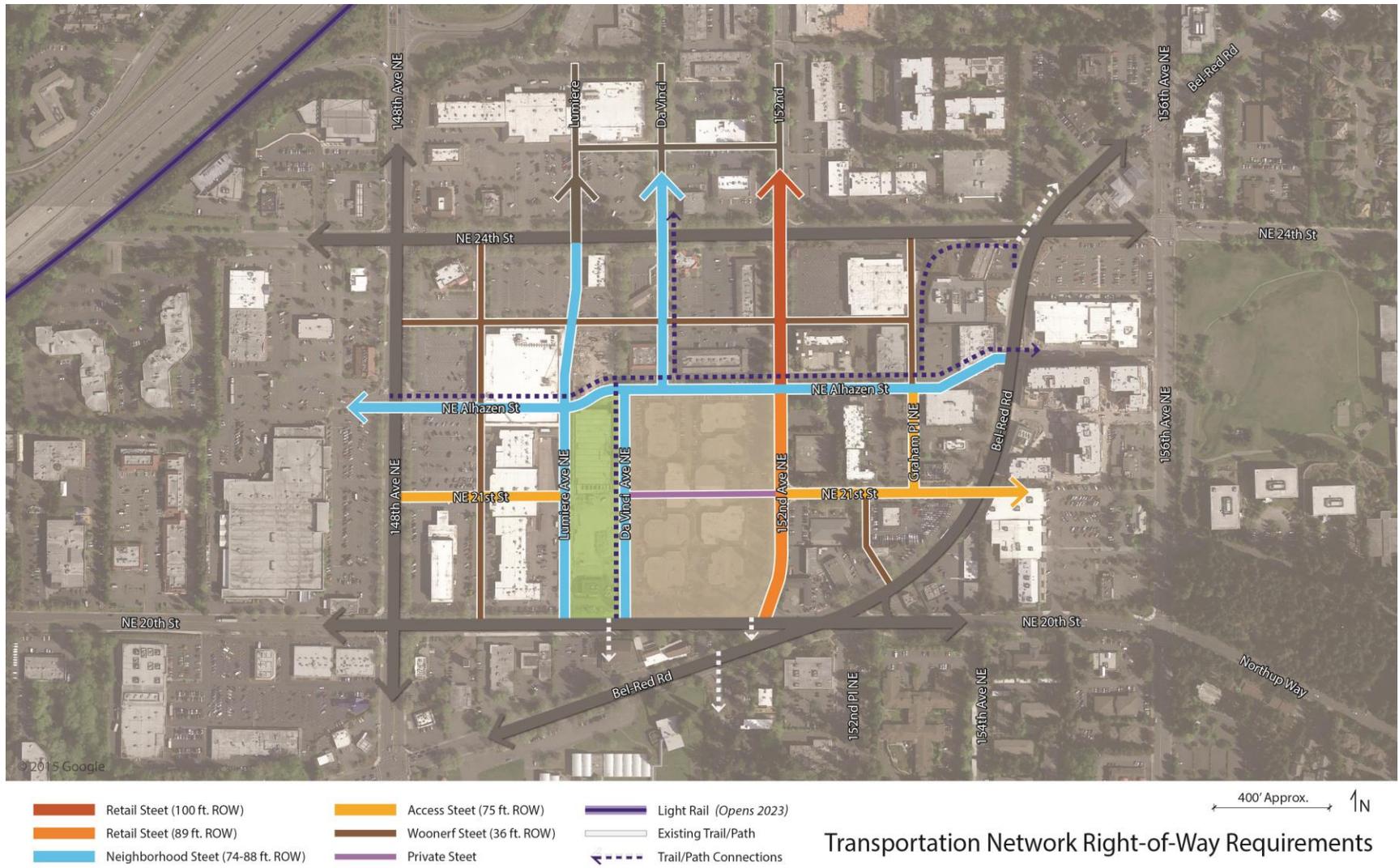


Figure 27. Rights-of-Way

CHANNELIZATION AND INTERSECTION CONTROL

The roadway channelization and traffic control devices shown in Figure 28 are supported by the traffic analysis based on 2030 forecasted traffic volumes and land use conditions. Notable channelization and intersection control conditions are listed below:

The NE 24th Street/DaVinci Avenue NE intersection has been converted to a pedestrian/bicycle only crossing of NE 24th Street to facilitate non-motorized movements along DaVinci Avenue NE between the western end of the light rail station and areas south of NE 24th Street.

The NE 24th Street/152nd Avenue NE intersection accommodates all modes of travel, but has special treatments to promote pedestrian and bicycle safety and mobility at this busy intersection location. This intersection is in further design by others. Due to the rapid advancement of pedestrian and bicycle standards, it is likely that pedestrian/bicycle design concepts shown in this study will be modified to incorporate state of the art thinking at the time they are constructed.

Bicycle facilities have been removed from DaVinci Avenue NE and added to Lumiere Avenue NE to address bicycle mobility challenges on DaVinci Avenue NE caused by the “offset T” intersection at NE Alhazen Street. Bicyclists will use NE 24th Street bicycle facilities to transition from buffered bike lanes on Lumiere Avenue NE in the south study area to those on DaVinci Avenue NE in the north study area.

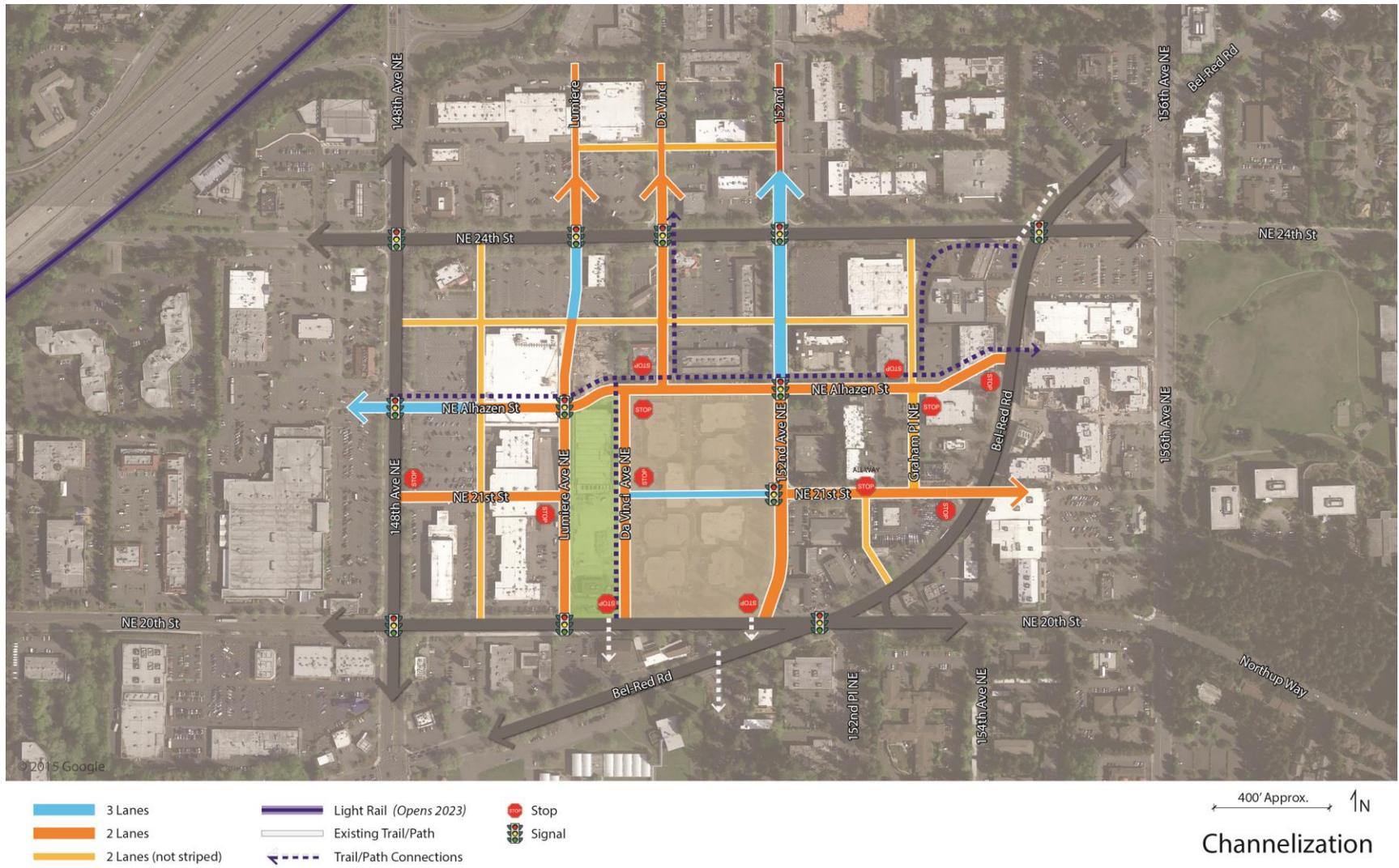


Figure 28. Channelization and Intersection Control

CURBSIDE PARKING

Curbside parking is planned on both sides of Retail, Neighborhood and Access Streets. Curbside parking is not planned on Woonerf or Existing Streets.

Curbside parking is preferred in locations where ground-floor pedestrian oriented uses or residential uses are required.

Short-term parking is preferred in close proximity to ground-floor pedestrian-oriented uses. Loading zones will be evaluated in future phases to accommodate the needs of surrounding development.

Curbside parking is discouraged adjacent to selected public open spaces to ensure visibility between the street and open space. However, final decisions related to curbside parking adjacent to open spaces will be made in future phases.

For this study, the 5% design reflects curbside parking on both sides of all Retail, Neighborhood and Access Streets. Curbside parking is not shown on Woonerf or Existing streets.

Curbside parking preferences are shown in Figure 29.

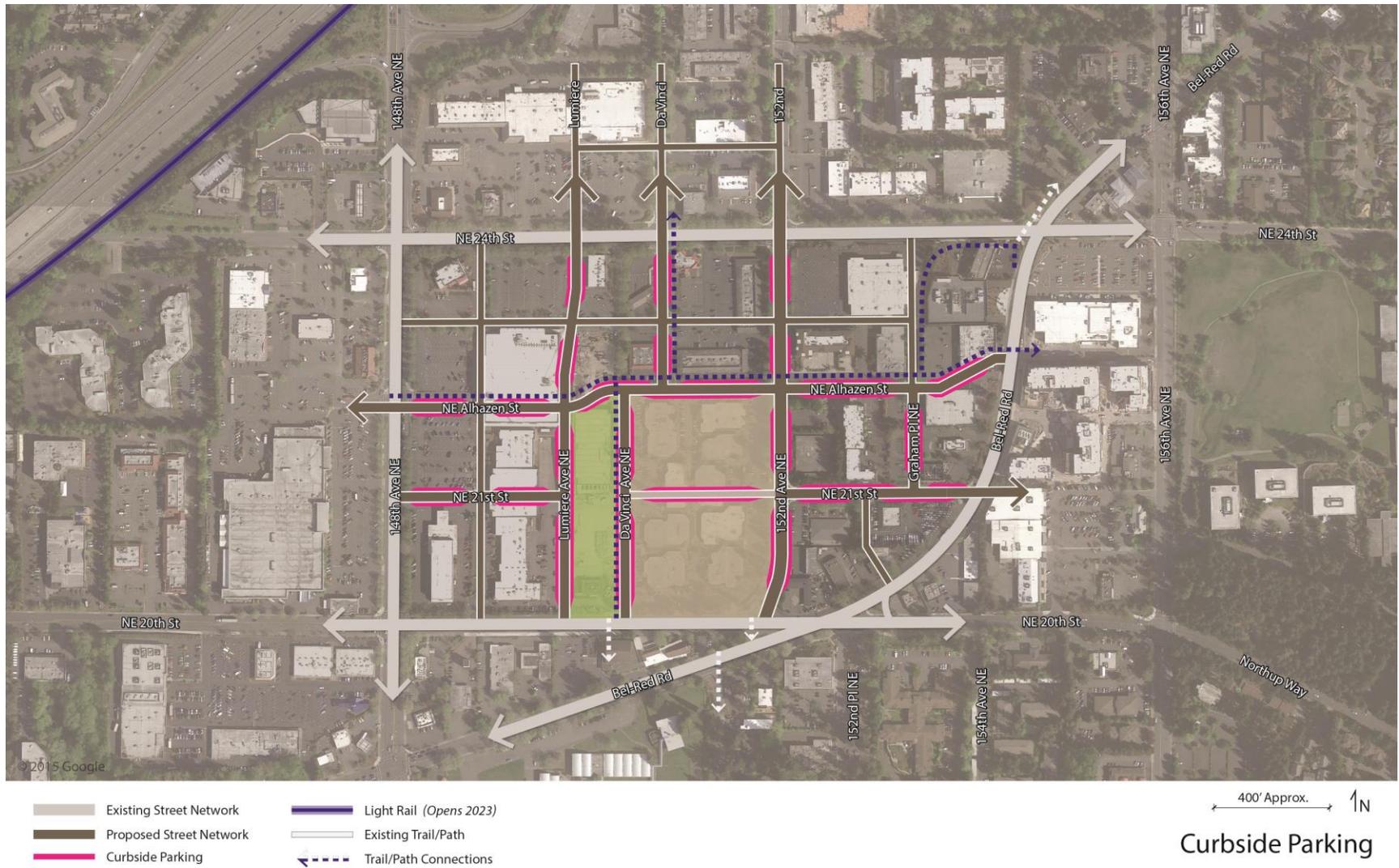


Figure 29. Curbside Parking

VEHICULAR ACCESS AND LOADING ZONES

Vehicular access to development sites is discouraged along key frontages to reduce conflicts between automobiles and pedestrians and bicyclists, creating a safer and more pleasant experience for walking and biking.

Along frontages where vehicular access is discouraged, curb-cuts are inappropriate.

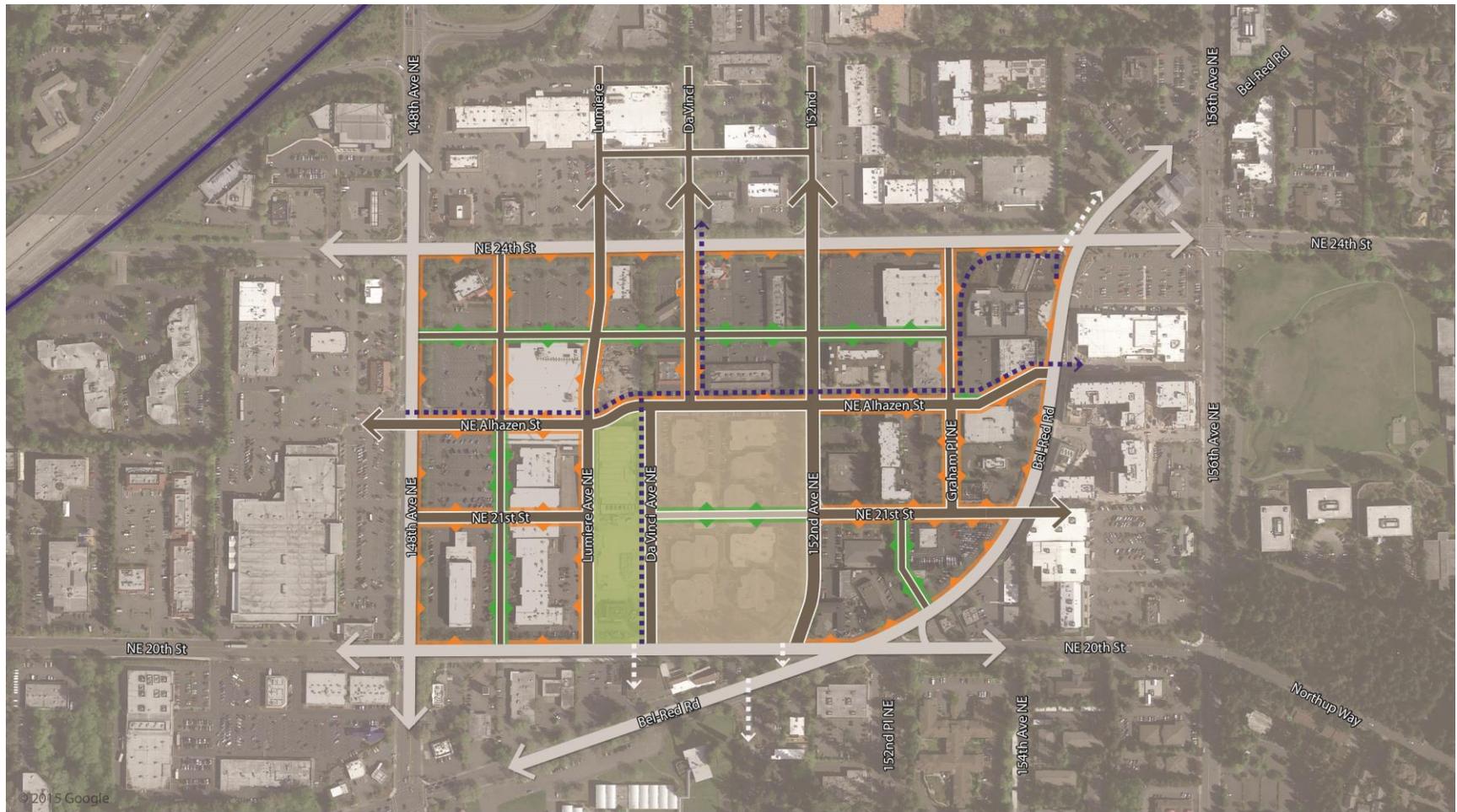
Along frontages where loading zones are discouraged, curbside loading and service parking should also be discouraged between 8 am and 5 pm on all days.

Vehicular access and loading zones should occur along Access or Woonerf streets to the greatest extent possible.

Loading zones can be accommodated on Woonerf streets where such zones do not conflict with emergency access needs.

Access and loading zone accommodations and restrictions are shown in Figure 30.

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- | | | | |
|-------------------------|--------------------------|-------------------------|------------------------|
| Existing Street Network | Vehicle Access Permitted | Light Rail (Opens 2023) | Trail/Path Connections |
| Proposed Street Network | Vehicle Access Limited | Existing Trail/Path | |

400' Approx. 1N

Vehicle Access

Note 1: Where there is no symbol, vehicle access is not allowed
 Note 2: Refer to KCC Limited Edition Master Plan for approved vehicle access to KCC Limited Edition site



Figure 30. Vehicular Access and Loading Zones

TRANSIT

The Overlake Village South study area will benefit from light rail and bus rapid ride service routes and station stops in the north study area and from local bus service routes on existing streets at the margins of the south study area as shown in Figure 31 and described below.

Sound Transit

Sound Transit's East Link light rail is scheduled to begin serving the Overlake Village Station at the north end of the Retail Street by 2023. Much of the study area is within ½ mile of the light rail station.

King County Metro Transit

King County Metro Transit serves Overlake Village with bus rapid ride and local service routes as shown in Figure 31. Although local service routes serve the margins of the south study area, there are no routes currently planned to pass through the south study area.

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Figure 31. Transit

BICYCLE

The Overlake Village bicycle system has been located and designed to provide a viable alternative to auto travel and to significantly increase bike ridership. The system provides access routes between the light rail station platform and the Overlake Village destinations that cyclists will use on a daily or weekly basis. Bicycle accommodations in the south study area complement and extend the reach of bicycle accommodations in the north study area. Due to the rapid advancement of bicycle standards, it is probable that design concepts shown at intersections in this study will be modified to incorporate state of the art thinking at the time they are constructed. Bicycle facilities are shown in Figure 32 and discussed briefly below.

Cycle Tracks

A cycle track links retail uses along 152nd Avenue NE with the Sound Transit station. Cycle tracks are the safest type of bicycle facility and have the potential to attract the greatest number of cyclists of all needs and abilities.

Bicycle Lanes

Bicycle lanes are located to connect the station with neighborhoods and employment uses. Bicycle lanes are an enhanced route within the roadway and are sized to buffer cyclists from moving vehicles and parked cars' opening doors.

Bike Boxes

Most bike/auto conflicts occur at intersections. Bike boxes increase cyclists' visibility by providing a protected zone behind the stop bar and in the travel lane where bicyclists can wait in view of drivers. Bike boxes can reduce "right-hook" traffic accidents.

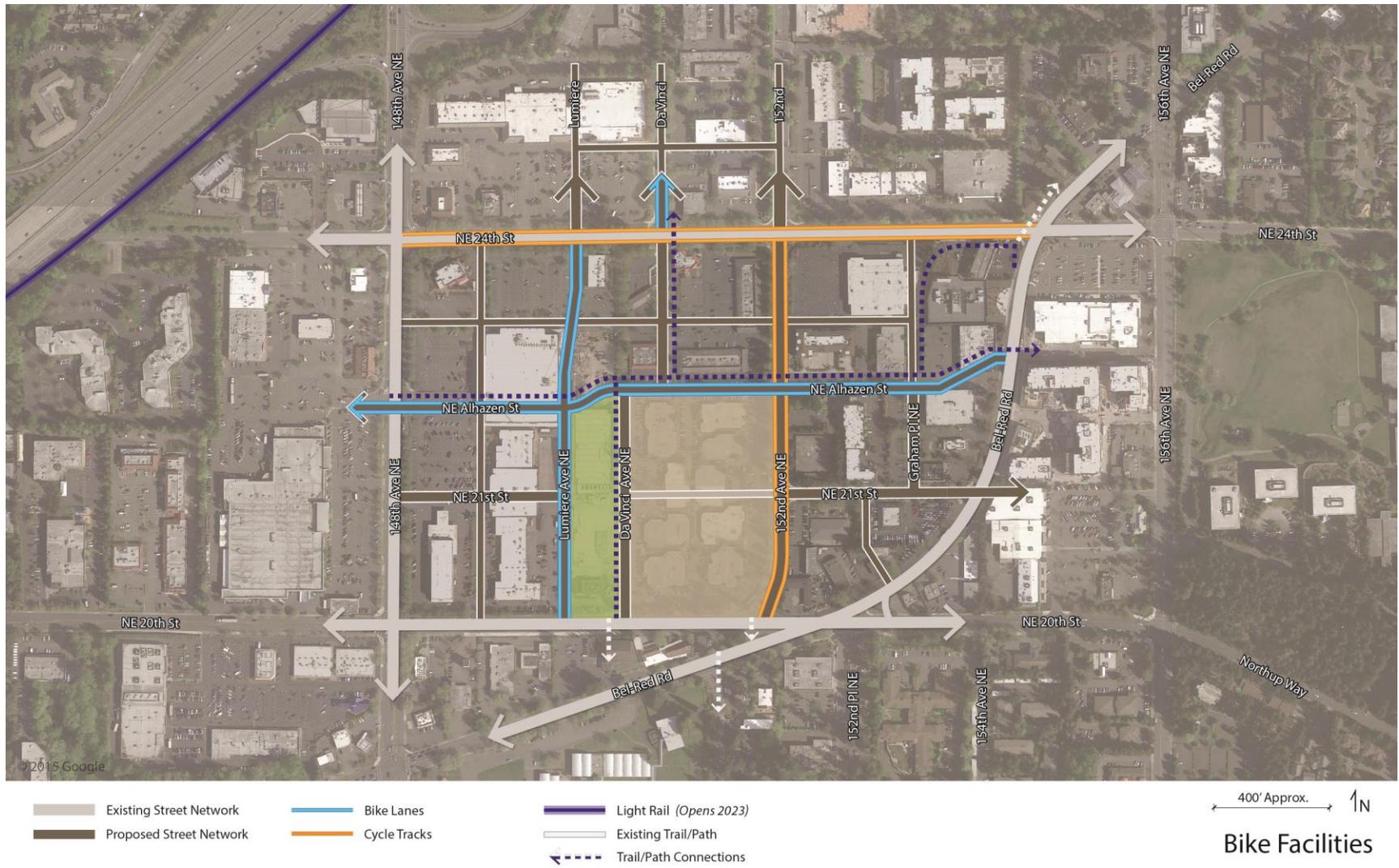


Figure 32. Bicycle Facilities

PEDESTRIAN

Sidewalks are located along both sides of all streets in Overlake Village. In addition, the standard section for Neighborhood Streets includes an urban pathway that provides a distinctive and unobstructed area for leisurely pedestrian and bicycle through movements. Concrete banding provides clear delineation between the urban pathway and furnishings/landscape zone in order to reduce modal conflicts (see OVSDG). Pedestrian facilities are shown in Figure 33.

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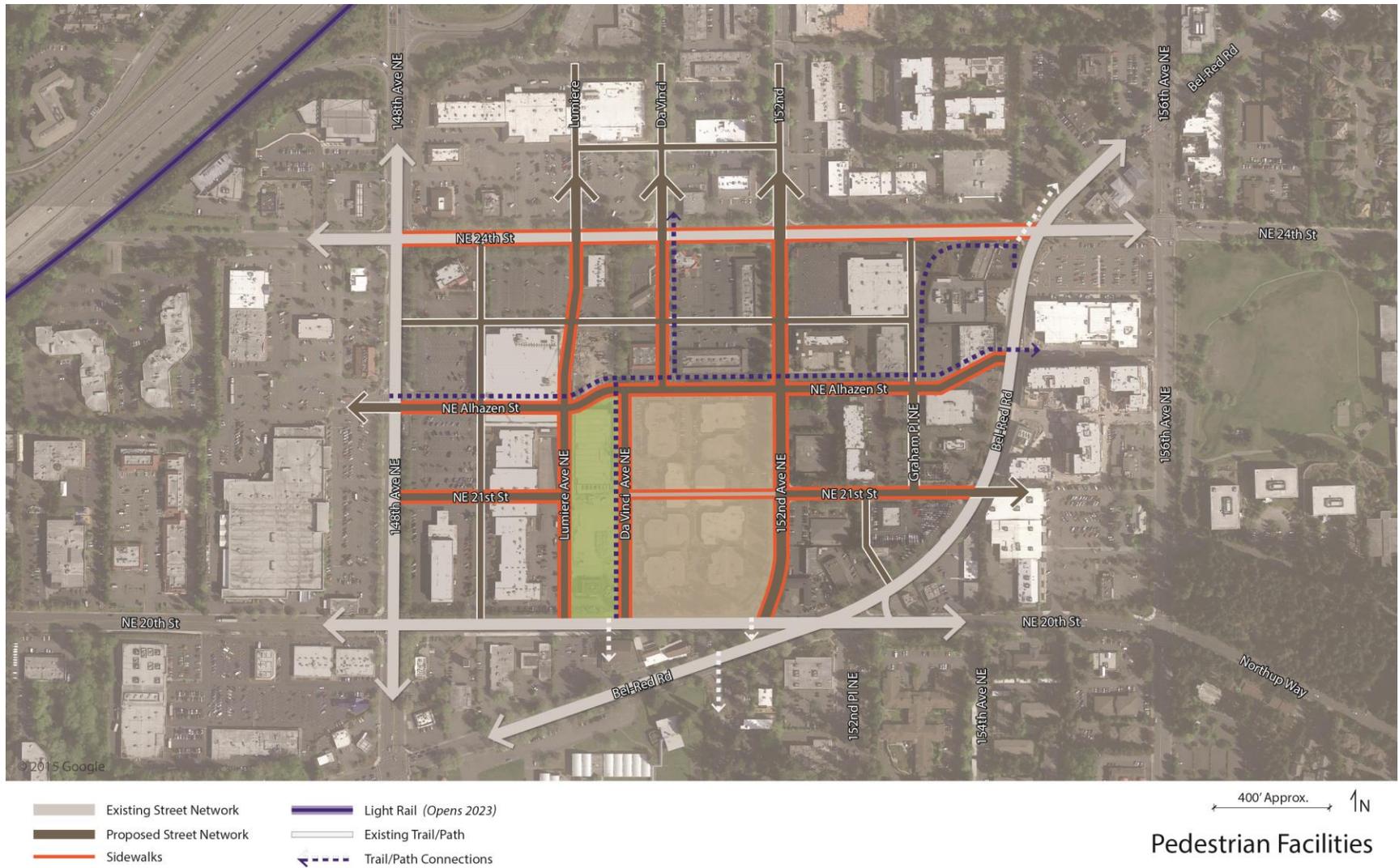


Figure 33. Pedestrian Facilities

STORMWATER

Stormwater from most public and private streets in Overlake Village will be treated and infiltrated using bioretention systems. These systems will be designed and sized to compliment treatment that is provided by existing and planned regional facilities in Overlake Village including the South Detention Vault in Overlake Village South. On streets where space is a constraining factor or in areas with poorly draining soils, Filterra systems would be used instead of bioretention systems. On the Retail Street an enclosed vault system is preferred over bioretention/landscaped areas or Filterra to be consistent with design guidelines established in the OVSDG.

Stormwater from Overlake Village drains to Sears Creek, a small tributary of a major salmon bearing stream system known as the Kelsey Creek Watershed. The watershed is primarily located in Bellevue and discharges to the Mercer Slough and Lake Washington. In accordance with the Overlake Village Stormwater and Park Facilities Conceptual Design Implementation Plan, the City completed construction of the South Detention Vault in July 2015 to manage stormwater that drains to Sears Creek. The South Detention Vault is the first of three regional stormwater facilities that will be constructed in Overlake Village. As private and public redevelopment continues in Overlake Village, more stormwater runoff will be treated locally prior to being discharged to the Overlake South Detention Vault and the other regional facilities. Consistent with this strategy, a menu of stormwater management facilities have been selected for public and private parcels in Overlake Village to meet the following objectives:

- Comply with state and city requirements for stormwater management
- Protect surface water quality
- Address local flooding
- Protect and recharge groundwater
- Provide landscaping amenities to the street

Stormwater Management for Streets and Sidewalks

Stormwater from most public and private streets will be infiltrated using bioretention systems. Bioretention systems are engineered facilities sized for specific water quality treatment and flow control objectives that include a storage component, plants, and a specialized soil. Bioretention systems can come in a variety of configurations (cells, swales, or planters) and provide a green amenity to the surroundings. Bioretention systems are sized and spaced based on requiring a minimum bioretention area for every unit of land area infiltrated. In Overlake Village South, at least 2.5 percent of bioretention area would be needed for every unit of land area infiltrated.

On streets where space is a constraining factor or in areas with poorly draining soils, Filterra systems would be used instead of bioretention systems. Filterra systems are similar to bioretention systems, but are solely used for water quality treatment. Filterra systems can take on multiple configurations and are typically located in landscaped areas, parking lots, or streetscapes. Water is treated within the Filterra

system using a specialized filter media and then discharged into the public storm drain system. Because Filterra systems can only provide water quality treatment, they would be installed in combination with a shallow infiltration facility below the sidewalk. Similar to bioretention systems, the spacing of Filterra systems along the street would be dictated by how much land area each associated shallow infiltration system can infiltrate.

Figure 34 shows which streets would use standard bioretention and Filterra systems. Figures 35 and 36 show typical layouts for bioretention and Filterra systems, respectively.

The City also has plans to construct urban pathways in Overlake Village as part of the reconfigured street network. The urban pathways will provide dual benefits by enhancing mobility and serving as a stormwater treatment facility. Stormwater runoff from streets will be routed to stormwater chambers constructed underneath the urban pathway where it will be detained and infiltrated into the native soil (Figure 37).

Stormwater Management for Private Development

Most stormwater from private development will be infiltrated using bioretention systems. In order to successfully infiltrate stormwater, each development site will be required to set aside 5 percent of land area for bioretention systems. Land set aside for bioretention systems can serve multiple purposes, such as landscaping or open space. Site-specific studies may show that the stormwater objectives that need to be met using bioretention can be met with less than 5 percent of land area. In some cases, stormwater runoff from private development may also be infiltrated using the urban pathway described above. Other potential stormwater management techniques for private development include green roofs, drywells, and on-site detention.

Green roofs (Figure 38) create green space for tenants, reduce stormwater runoff volume through evapotranspiration, provide peak flow rate attenuation, increase building insulation, increase the roof lifespan, create wildlife habitat and provide an aesthetic amenity.

A dry well (Figure 39) is an underground structure that infiltrates stormwater runoff. Stormwater is routed through pre-treatment then routed into the dry well itself. Water is stored within the dry well, with perforations throughout the body of the dry well allowing water to seep out and infiltrate into native soil.

On-site detention (Figure 40) is a stormwater storage and release system. Water is piped into a vault or chamber and a flow restrictor in the system restricts flows to specifically engineered levels. Stormwater is subsequently discharged into the public storm drain system.

Storm Drainage Network Improvements

Overlake Village has an underground storm drainage pipe network designed around the current parcel and roadway layout. As the subarea is redeveloped, it is anticipated that most of this network will be demolished and a new storm drainage system will be installed around the reconfigured roadway and parcel layout.

As a safety mechanism in the event of overflow, clogging, or failure, all stormwater management facilities will need to be connected to the new storm drainage network. The storm drainage network will ultimately discharge to one of the regional facilities in the subarea.

A detailed description of the stormwater analysis and design considerations for Overlake Village is contained in the stormwater report located in the Appendix.

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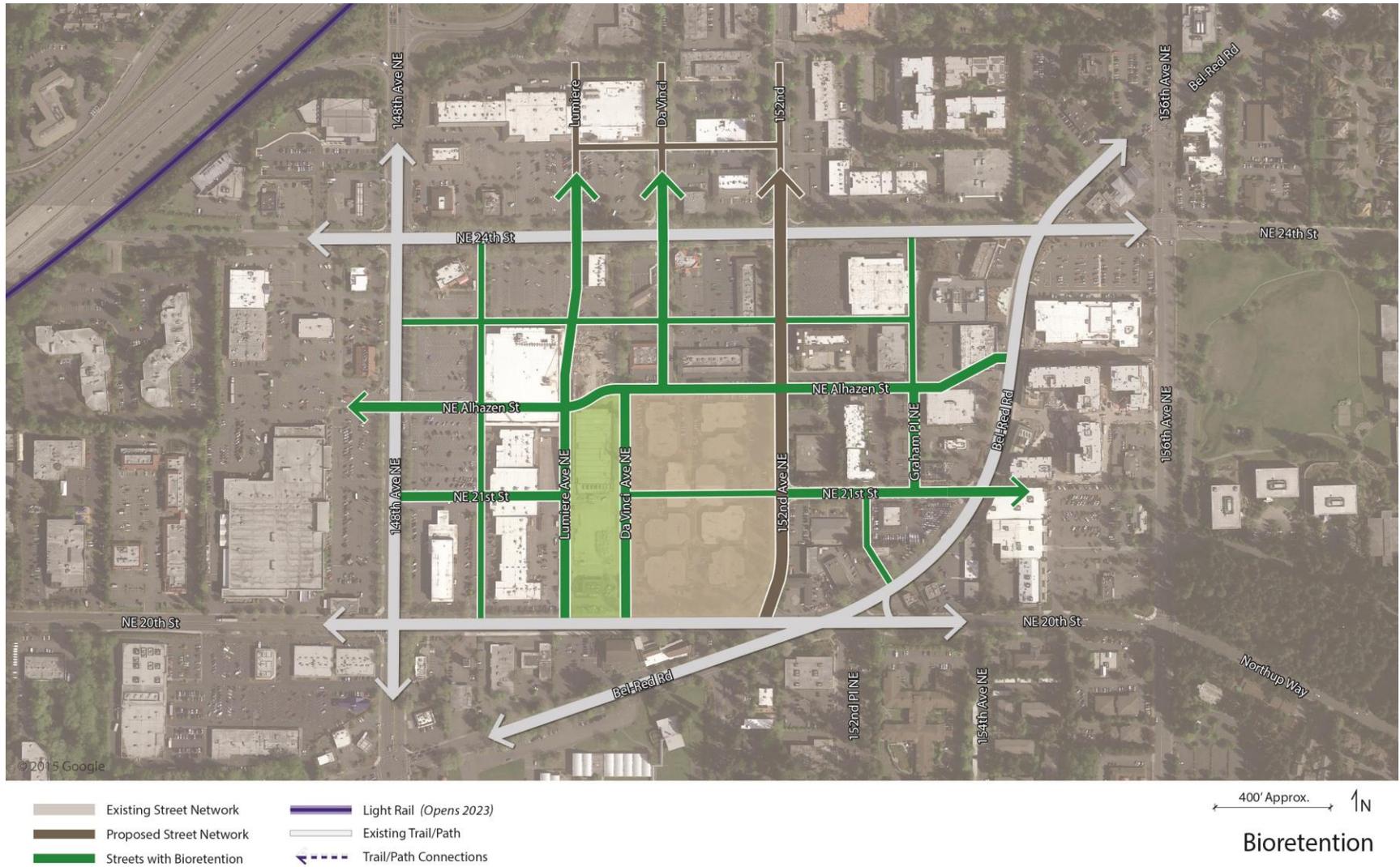


Figure 34. Streets with Bioretention



Figure 35. Typical Bioretention System Configurations



Figure 36. Typical Filterra System Configuration

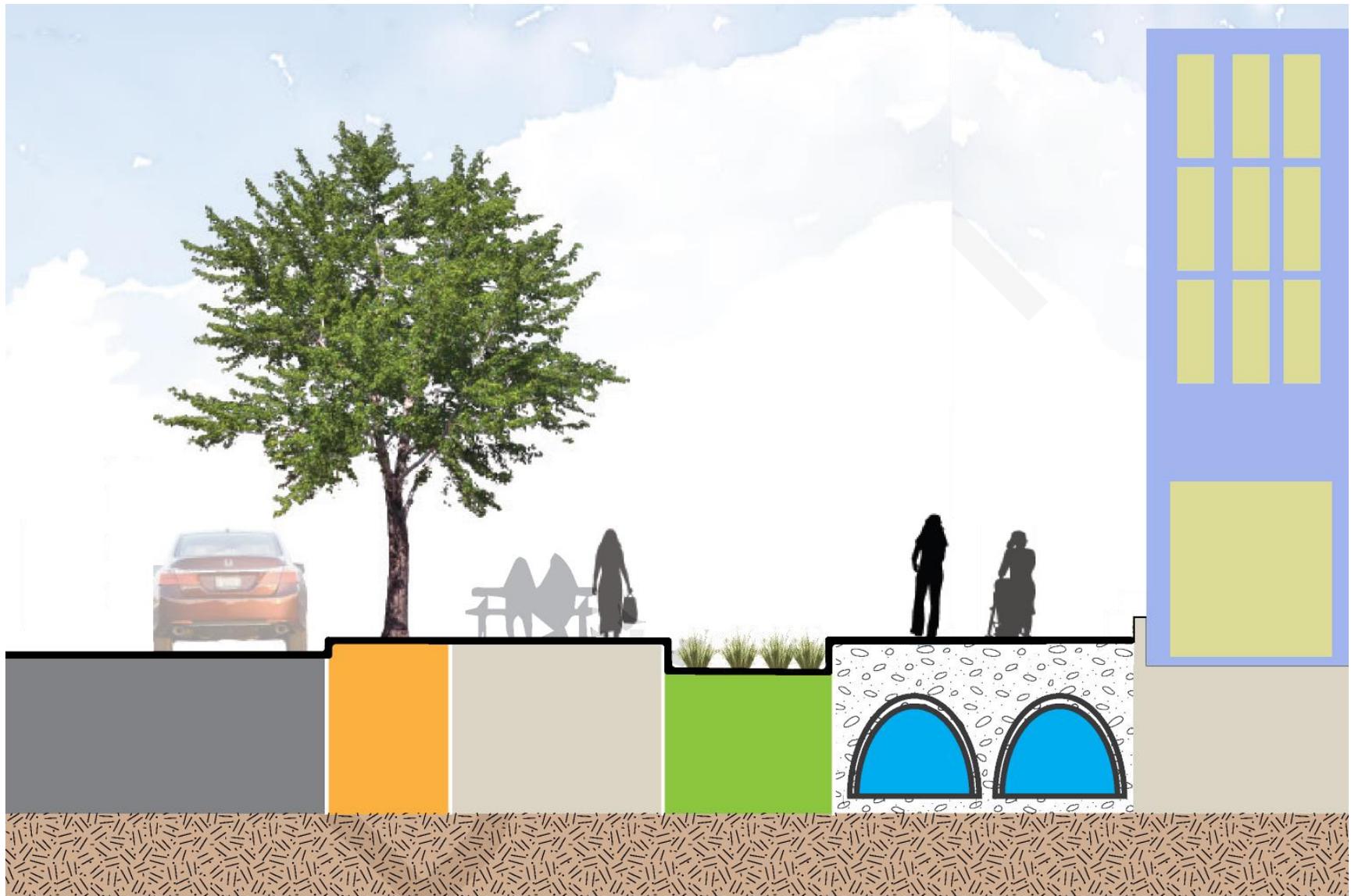


Figure 37. Typical Urban Pathway Configuration



Figure 38. Typical Green Roof System Configuration

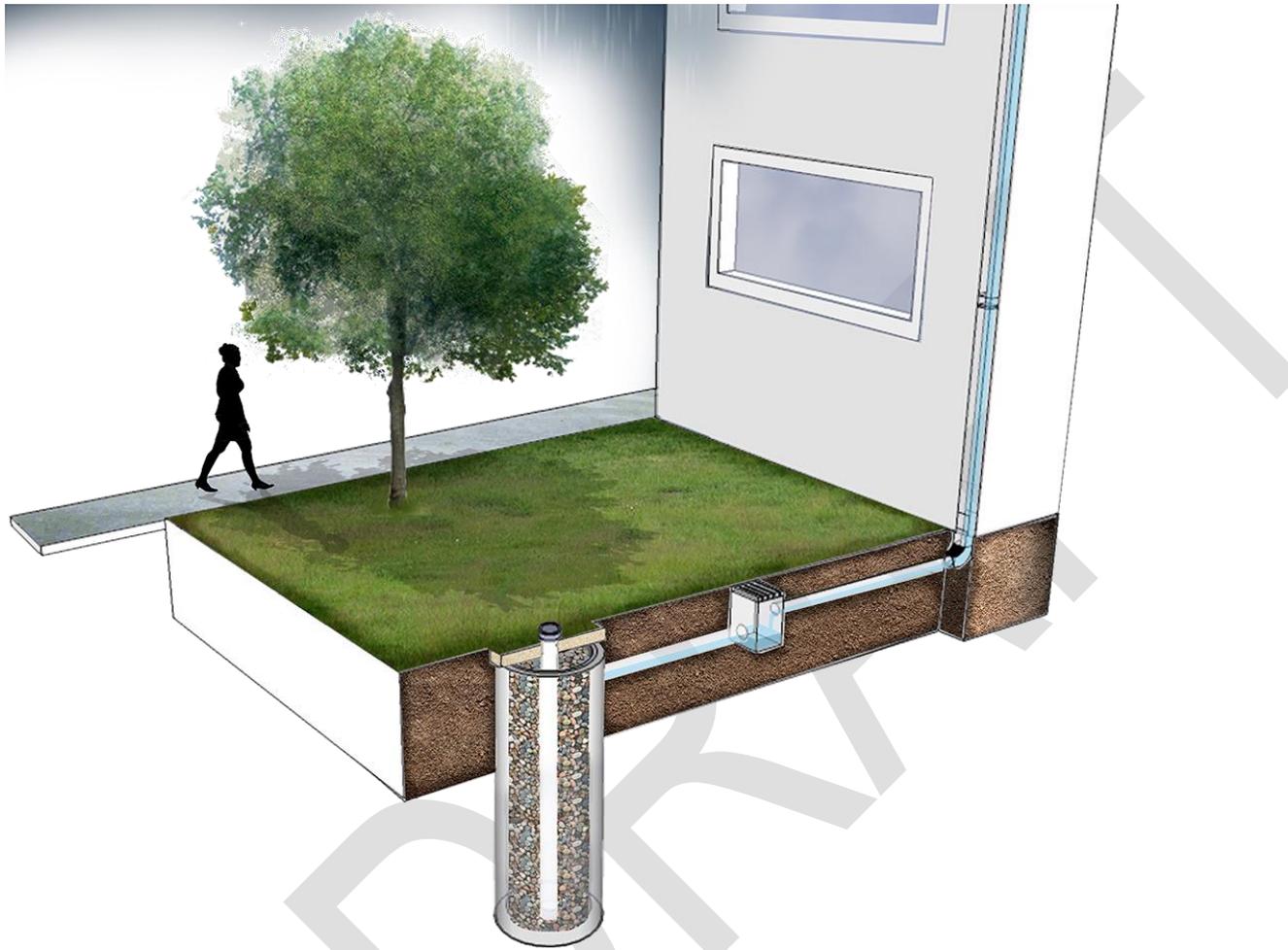


Figure 39. Typical Dry Well System Configuration



Figure 40. Typical On-Site Detention System Configuration

WATER AND WASTEWATER

This section summarizes the methodology used to determine water and wastewater demands for the Overlake Village South study area. Proposed street layouts were used as the basis for future redevelopment in Overlake Village South. Initially, TAZ data for the area was used to size the water and wastewater system, however it was later determined that the TAZ did not fully represent the potential population of the study area at full build out. Instead of using the TAZ data, the assumption of 6 story buildings with multifamily housing above commercial and/or retail on the ground floor was made to estimate the number of inhabitants and/or employees for the build out of each future parcel. This assumption is a more accurate representation of the full build out population. It is based on current development plans for the area for a few parcels. The number of inhabitants and/or employees per square foot is described in Table 1 below.

Table 1. Study Area Distribution

Type of Use	Distribution per Acre
Multi-Family Units	85 Units/Acre
Retail/Commercial Area	21,220 SF/Acre

After calculating the number of inhabitants and/or employees within each future parcel, the water and wastewater demands for each parcel were determined using the values shown in Table 2.

Table 2. Study Area Demands

Type of Use	Demand (Water and Sewer)	Source
Single Family Residence	177 Gal/Day	“City of Redmond 2011 Water System Plan”
Multi-Family Residence	126 Gal/Day/Household	“City of Redmond 2011 Water System Plan”
Retail Commercial Areas	2,000 Gal/Acre/Day	“City of Redmond Design Requirements Water and Wastewater System Extensions”

Type of Use	Demand (Water and Sewer)	Source
Industrial	2,000 Gal/Acre/Day	“City of Redmond Design Requirements Water and Wastewater System Extensions”
I/I	1,100 Gal/Acre/Day	“City of Redmond Design Requirements Water and Wastewater System Extensions”

Existing Wastewater System

The existing wastewater system in the Overlake Village South study area includes an 18” gravity main along 152nd Ave NE and NE 20th Street that ties into a 24” gravity sewer along 149th Ave NE at existing MH 894. Due to the planned improvements in Overlake Village South and areas to the north, the City of Redmond requested that the existing 18” sewer main along 152nd Ave NE remain and work in parallel with a proposed 18” sewer main along proposed Da Vinci Ave NE. Existing sewer system piping is shown on Figure 41.

Proposed Wastewater System

Sewer lines were laid out in the proposed street layout such that every parcel in the Overlake Village South study area had at least one sewer line adjacent to the parcel. If the proposed parcel could feasibly tie into more than one of the proposed sewer lines, the parcel’s proposed sewer demand was divided among the potential sewer lines for pipe sizing. All proposed sewer lines east of 152nd Ave NE will tie into the existing 18” sewer main. All proposed sewer lines west of 152nd Ave NE will tie into the proposed 18” sewer main along DaVinci Ave NE with the exception of two sewer lines on Lumiere Ave NE and 149th Ave NE south of NE Alhazen Ave Street. The two sewer lines on Lumiere Ave NE and 149th Ave NE south of NE Alhazen Street will tie into a proposed 24” sewer main on NE 20th Street. The proposed 24” sewer main on NE 20th Street will replace part of the existing 18” sewer main in order to have capacity for the existing 18” and proposed parallel 18” sewer mains. See Figure 41 for the proposed sewer system layout in the Overlake Village South study area.

Existing Water System

The Overlake Village South existing water system consists of a 10” waterline along 152nd Ave NE and two joint use waterlines along Bel-Red Road and 148th Avenue NE. The 148th Avenue NE joint use waterline is owned by the City of Redmond and maintained by the City of Bellevue. The Bel-Red Road joint use waterline is owned by the City of Bellevue and maintained by the City of Redmond. Existing water system piping is shown on Figure 42.

Proposed Water System

The proposed water system comprises 12" waterlines in each proposed street in the Overlake Village South area with the exception of a 10" waterline along 152nd Ave NE, which is to remain. 12" waterlines are required due to City of Redmond commercial area fire flow design requirements. There are Redmond/Bellevue joint use waterlines along Bel-Red Road and 148th Ave NE that will both need improvements; the Cities of Redmond and Bellevue will need to negotiate terms. The joint use waterlines are both located outside the study area, however some improvements to these waterlines will need to be made in order to adequately serve the study area. See Figure 42 for the proposed water system layout in the study area.

Proposed Water and Wastewater System Costs

The opinion of probable construction costs for the Overlake Village South water and wastewater systems was broken up by street section. The estimate only includes the costs for the water and wastewater system improvements (including appurtenances) and does not account for the costs associated with street improvements. Tabula was used as a basis for all material estimates. For a summary of cost assumptions made for the Overlake Village South water and wastewater improvements, see Table 3 below.

Table 3. Cost Assumptions

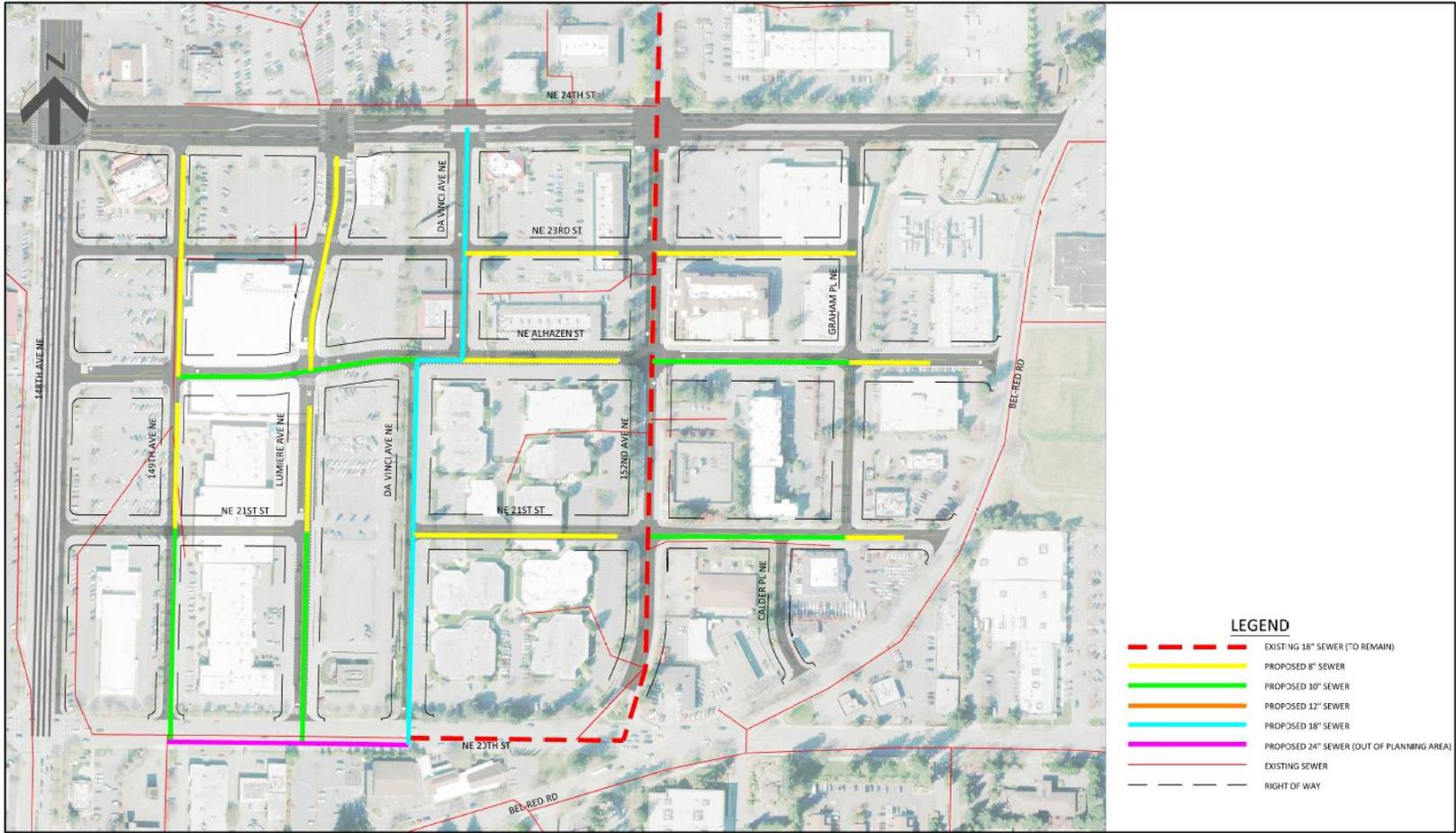
Material	Estimated Cost
8" Gravity Sewer	\$400/LF
10" Gravity Sewer	\$410/LF
18" Gravity Sewer	\$500/LF
24" Gravity Sewer	\$590/LF
12" Waterline	\$250/LF

After applying these cost assumptions to the proposed Overlake Village South improvements, an opinion of probable construction cost was completed for each street section. See Table 4 for the total combined construction cost estimate for the Overlake Village South water and wastewater improvements. Note that this estimate includes a separate cost for water and wastewater improvements in 148th Ave NE, Bel-Red Road, and NE 20th Street which are outside the project area and are not in the scope for road improvements in this project. The opinion of probable construction cost for road improvements will not include the water and sewer improvements outside of the project area.

Table 4. Opinion of Probable Construction Costs for Water and Wastewater Improvements in Overlake Subarea

Improvement Type	Estimated Cost Inside of Planning Area	Estimated Cost Outside of Planning Area	Total Estimated Cost
Water System	\$3.25M	\$1.11M	\$4.35M
Wastewater System	\$3.04M	\$0.31M	\$3.35M

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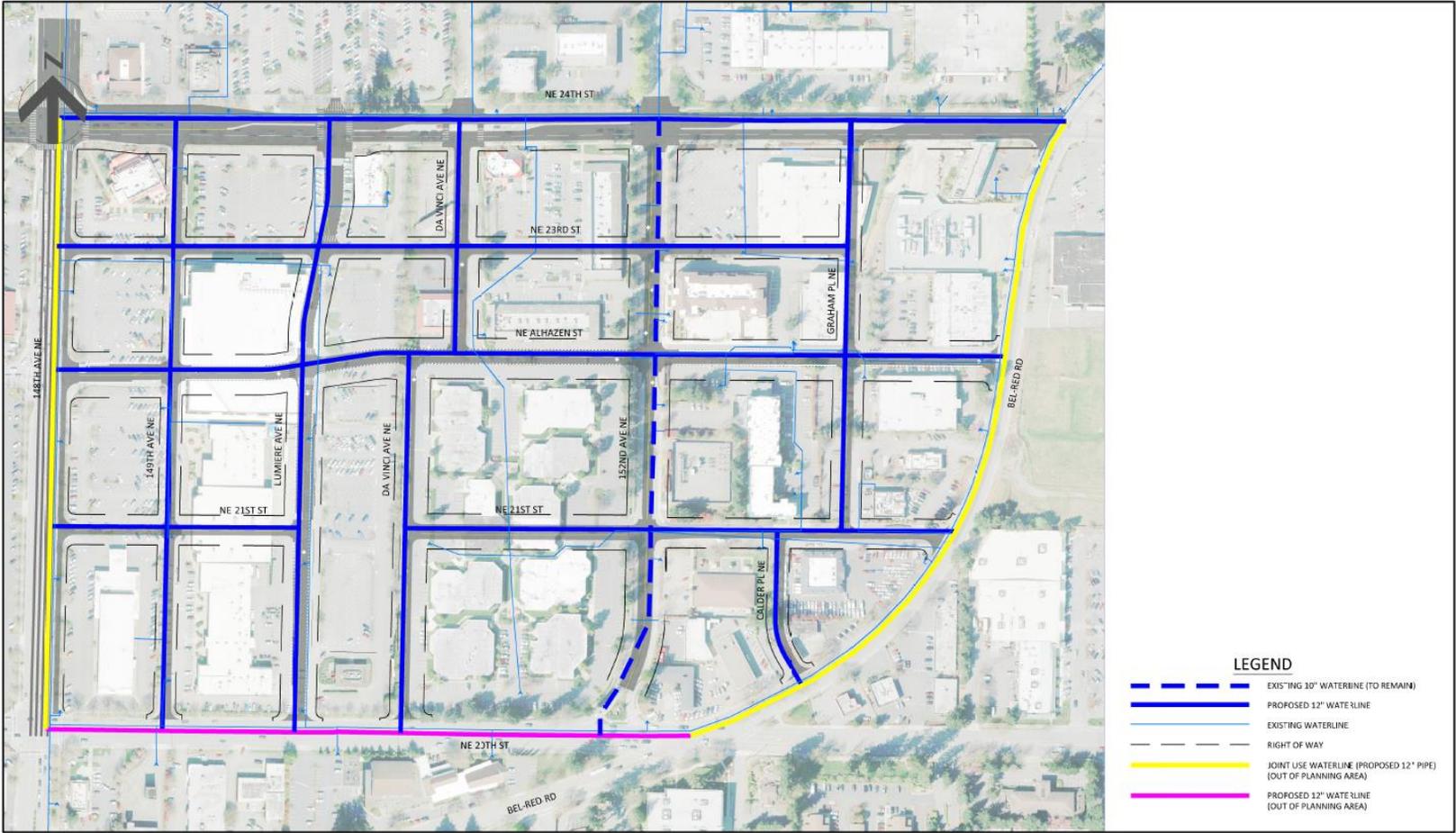


OVERLAKE VILLAGE SOUTH
UTILITIES SUPPORT

PROPOSED SEWER MAP

DATE	6/6/2016
FIGURE	2

Figure 41. Proposed Sanitary Sewer System Layout



0 100 200 400
SCALE IN FEET



OVERLAKE VILLAGE SOUTH
UTILITIES SUPPORT
PROPOSED WATERLINE MAP

DATE	6/6/2016
FIGURE	1

Figure 42. Proposed Water System Layout

DESIGN DETAILS

OVERVIEW

All streets in the Overlake Village South study area will use applicable design details developed for Overlake Village as part of the 152nd Avenue NE Corridor Study project as described in the OVSDG. Although, the Woonerf Street was not specifically described in the OVSDG it should also incorporate details from the OVSDG as appropriate (i.e. sidewalk details, sidewalk elements, roadway lanes, roadway details, etc.) and be consistent with the Woonerf Street typical block plan shown in this report.

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IMPLEMENTATION STRATEGY

The implementation strategy provides the City and property owners with guidance about what gets built in what order by whom and how it's likely to be funded. The strategy is based on a set of principles developed by the City as outlined below:

How infrastructure is built:

- Phases are built around priority projects and logical dependencies. Dependencies should be clearly shown by location and include information on how the dependency impacts phasing.
- The impact of water and wastewater improvements on the phasing of transportation improvements should be clearly stated.
- Phases are somewhat flexible to allow for evolution of market conditions
- Infrastructure is developed efficiently (e.g., don't build street and then tear up to build water/wastewater system)

How infrastructure is paid for:

- City funds, contributes to, or provides credits against impact fees for projects that have system-wide benefit, and/or are critical to unlocking redevelopment potential
- Developers fund or contribute to projects that have mostly private/local benefit
- Cost sharing is consistent with citywide growth-pays-for-proportionate-share-of-growth policy
- Cost sharing aligns with findings of economic analysis

OVERVIEW

Priority Projects

The priority projects will “unlock” redevelopment potential, stimulate subarea investment, and support development over time. Priority projects include the typical transportation system improvements located at the street surface such as roadways, curbs, gutters, sidewalks, signal and lighting systems, signage, landscaping and street furniture as well underground improvements such as electrical conduit and cables feeding power to the signal and lighting systems and publicly owned infrastructure for the stormwater, water, and sewer systems. Priority projects will be constructed in a phased approach and may include both public and private funding and partnerships.

Five priority projects have been identified for the Overlake Village South study area:

1. Retail Street (152nd Avenue NE)
2. DaVinci Avenue NE
3. NE Alhazen Street from 152nd Avenue NE to Graham Place NE
4. NE Alhazen Street from DaVinci Avenue NE to 152nd Avenue NE (north half)
5. NE 24th Street Improvements

The remaining streets that make up the Overlake Village south study area will be privately funded and constructed by owners and developers of adjacent properties. Figure 43 highlights the priority projects.

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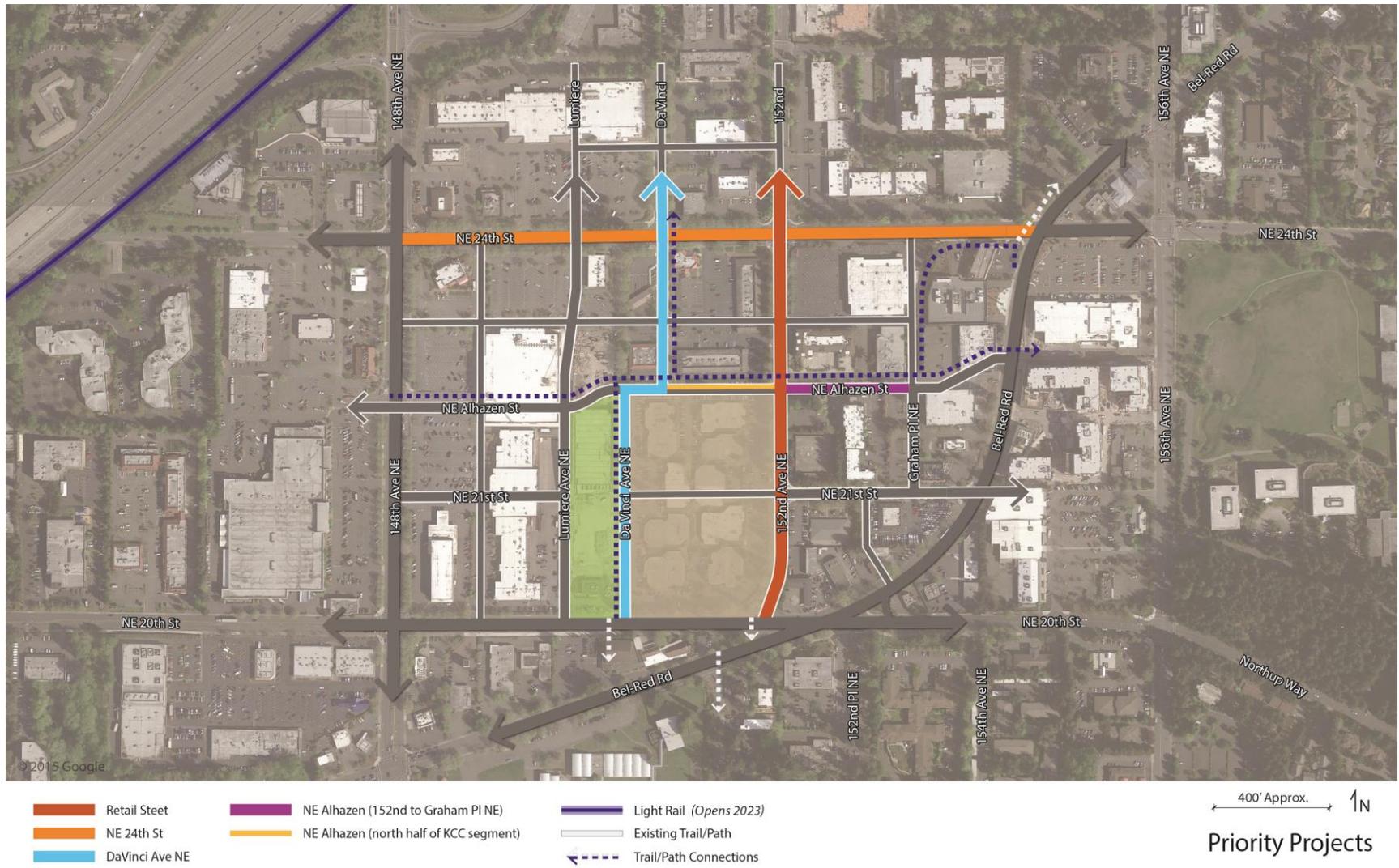


Figure 43. Priority Projects Overview

RETAIL STREET PROJECT

The retail street project will complete roadway improvements on 152nd Avenue NE so that a complete multi-modal corridor exists from the south margin of Overlake Village at NE 20th Street to the north margin of Overlake Village at SR-520 and the future light rail station.

Project Description

This project will construct the retail street concept from NE 24th Street to NE 20th Street. It is assumed that intersection improvements at either end will be constructed by others. The retail street concept will transition from two through lanes and a center turn lane north of NE Alhazen Street to two through lanes and no center turn lane south of NE Alhazen Street.

Project Phasing

This project should be completed ahead of other projects in Overlake Village South since it is the key defining street in the neighborhood on both sides of NE 24th Street. Although unlikely based on the current funding environment and competing City priorities, it would be desirable to complete this project by the time light rail begins to serve Overlake Village in 2023. It is more likely that improvements will be phased in conjunction with private development sometime after light rail has started serving Overlake Village. The existing 10" watermain and 18" sewer mains will not be replaced. If street improvements are phased based on development, the street segment south of NE Alhazen Street would most likely be constructed when the KCC Limited Edition site develops. It would be best to have the segment north of NE Alhazen Street constructed ahead of or concurrently with the segment to the south to provide the greatest degree of continuity along the corridor and with improvements already in design and construction north of NE 24th Street.

Project Cost Estimate and Funding

Table 5 identifies an estimated project cost and likely funding sources for the 152nd Avenue NE (Retail Street) improvements. A more detailed estimate is contained in the Appendix.

Table 5. Retail Street Project: Cost Estimate and Funding

Project Component	Estimated Cost w/out ROW	Estimated ROW Cost	Total Estimated Cost	Principal Funding Sources
152 nd Avenue NE	\$10M	\$11M	\$21M	City of Redmond, Grants, developer contributions

Notes:

1. Estimates are escalated from year 2016 at 3% per year to 2025.
2. Estimates are rounded to the nearest \$1M.
3. Water and wastewater upgrades are not required or included in costs.
4. Planning, design and construction engineering and administration costs are included in estimates.

DAVINCI AVENUE NE PROJECT

The DaVinci Avenue NE project will complement the retail street improvements on 152nd Avenue NE by providing a second arterial in Overlake Village that ultimately extends from the south margin of Overlake Village at NE 20th Street to the north margin of Overlake Village at SR-520 and the future light rail station. Along with 152nd Avenue NE it will serve the planned KCC Limited Edition development and accommodate future development of the park above the south detention vault.

Project Description

The DaVinci Avenue NE project will construct a non-standard (i.e. no bike lanes) Neighborhood Street between NE 20th to NE 24th Streets. A 10" watermain and 18" sewer main will be constructed concurrently with the street improvements. DaVinci Avenue NE has two distinct segments that may be constructed at different times due to its "offset T" intersection at NE Alhazen Street.

Project Phasing

The DaVinci Avenue NE project is likely to be developer driven but should be constructed after the Retail Street project. The street segment south of NE Alhazen Street would most likely be built ahead of the segment to the north and concurrently with development of the KCC Limited Edition site. It may be desirable for the City to construct the segment north of NE Alhazen Street concurrently with the south segment in order to stimulate development and for the sake of efficiency. If this does not occur, it may still be desirable for the City to construct the north segment at a later date in order to stimulate development.

Project Cost Estimate and Funding

Table 6. DaVinci Avenue NE Project: Cost Estimate and Funding

Project Component	Estimated Cost w/out ROW	Estimated ROW Cost	Total Estimated Cost	Principal Funding Sources
DaVinci Avenue NE	\$13M	\$24M	\$37M	City of Redmond, grants, developer contributions

Notes:

1. Estimates are escalated from year 2016 at 3% per year to 2025.
2. Estimates are rounded to the nearest \$1M.
3. Planning, design and construction engineering and administration costs are included in estimates.

NE ALHAZEN STREET PROJECT (North Half of KCC Limited Edition Segment)

Construction of the north half of this block will complement construction of the south half of the block in conjunction with development of the KCC Limited Edition site.

Project Description

This project will construct the north half of a standard Neighborhood Street between DaVinci Avenue NE and 152nd Avenue NE. It is assumed that the project will be coordinated to occur concurrently with construction of the south half of the block and that a new 12” watermain and 8” sewer main will be constructed with the street improvements. For purposes of estimating, the water and sewer costs are split 50/50.

Project Phasing

Ideally this project would occur concurrently with construction of the south half of the street, which will be constructed in conjunction with development of the northern portion of the KCC Limited Edition site. If concurrent construction is not feasible, KCC Limited Edition will construct temporary half-street improvements and this project can occur later.

Project Cost Estimate and Funding

Table 7. NE Alhazen Street Project (North half of KCC Limited Edition Segment) Cost Estimate and Funding

Project Component	Estimated Cost w/out ROW	Estimated ROW Cost	Total Estimated Cost	Principal Funding Sources
NE Alhazen Street (North half from DaVinci to 152 nd Ave NE)	\$1.5	\$3.5M	\$5M	City of Redmond, grants

Notes:

1. Estimates are escalated from year 2016 at 3% per year to 2025.
2. Estimates are rounded to the nearest \$0.5M.
3. Planning, design and construction engineering and administration costs are included in estimates.

NE ALHAZEN STREET PROJECT (152nd Avenue NE to Graham Place NE)

This project will extend this key Neighborhood Street to the east of 152nd Avenue NE and promote additional trail and pathway connections between Overlake Village South and areas to the north and east. Construction of this street connection may also provide the impetus for development in Overlake Village South east of 152nd Avenue NE.

Project Description

The NE Alhazen Street Project from 152nd Avenue NE to Graham Place NE will construct a standard Neighborhood Street section between 152nd Avenue NE and Graham Place NE. A 12" water main and 10" sewer main will be constructed concurrently with the street improvements.

Project Phasing

This project should be constructed by the City only after other priority projects have been completed. Construction of this block may be desired to stimulate development in areas east of 152nd Avenue NE.

Project Cost Estimate and Funding

Table 8. NE Alhazen Street Project (152nd Avenue NE to Graham Place NE) Cost Estimate and Funding

Project Component	Estimated Cost w/out ROW	Estimated ROW Cost	Total Estimated Cost	Principal Funding Sources
NE Alhazen Street (152 nd Avenue NE to Graham Place NE)	\$3M	\$7M	\$10M	City of Redmond, grants

Notes:

1. Estimates are escalated from year 2016 at 3% per year to 2025.
2. Estimates are rounded to the nearest \$1M.
3. Planning, design and construction engineering and administration costs are included in estimates.

NE 24TH STREET PROJECT

The NE 24th Street project will improve multi-modal mobility along this significant east/west corridor and enhance the intersections at 148th Avenue NE and Bel-Red Road to create gateways into Overlake Village.

Project Description

The NE 24th Street project will construct 6' cycle tracks on both sides of the street, separated from travel lanes by a continuous 6.5' planting strip. A 9' sidewalk will be located adjacent to the cycle tracks. An existing right turn only lane on the south side of the street between 148th and 149th Avenues NE will be extended to Lumiere Avenue NE. A second westbound left turn lane will be added at 148th Avenue NE. Gateways will be constructed at each end of the corridor to complement the primary neighborhood gateway at 152nd Avenue NE. While not designed as part of this project, gateways could be iconic streetscape elements, art or landscaping. Plazas would not be an appropriate gateway due to the high volume of vehicle traffic in the corridor. The DaVinci Avenue NE intersection will be constructed as a pedestrian/bicycle-only crossing to provide safe, convenient crossing of this busy arterial for non-motorized users. A signalized intersection will be constructed at Lumiere Avenue NE. Although most improvements are expected to occur behind the curbs and at intersections, a new 12" watermain is proposed in the north half of the street and should be constructed in conjunction with other project improvements. The project impacts three existing building structures along the corridor and requires temporary or permanent acquisitions on both sides of the street.

Project Phasing

The NE 24th Street project should be constructed after the Retail Street project. The project could be constructed in phases based on planned development or it could be constructed as one large CIP project. The new 12" watermain should either be constructed concurrently with or ahead of other project improvements to avoid or minimize ripping up improvements behind the curb to accommodate connections to the new watermain.

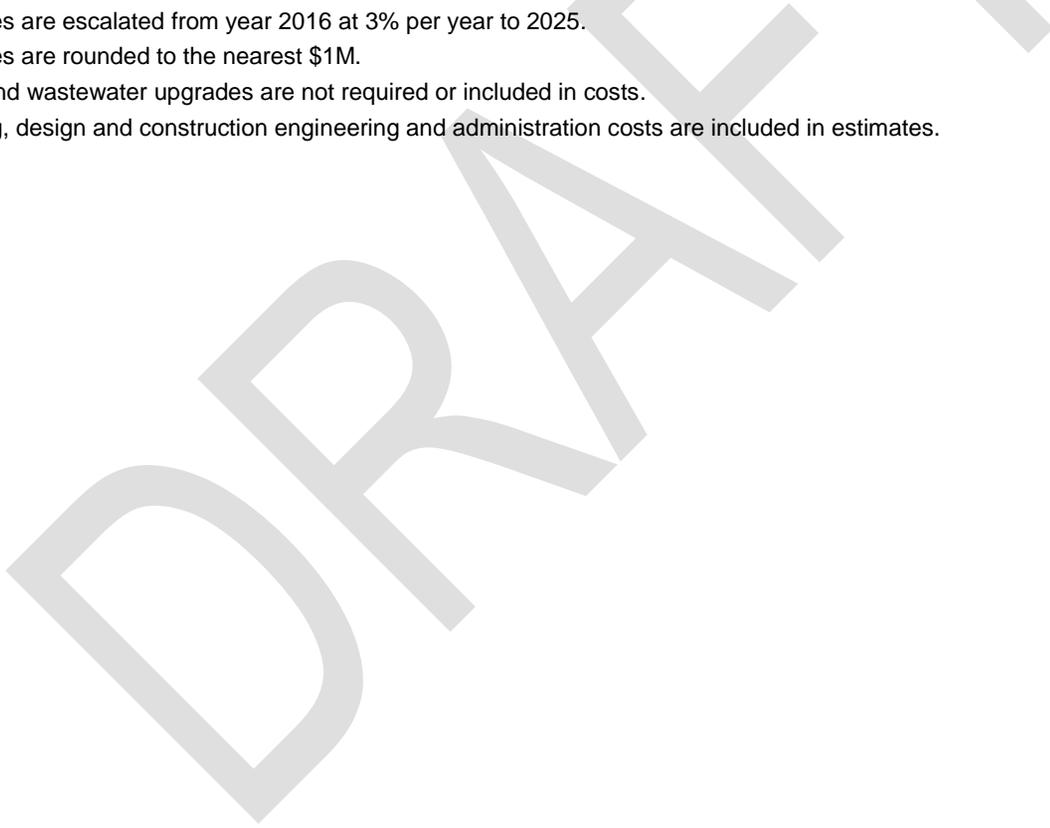
Project Cost Estimate and Funding

Table 9. NE 24th Street Project: Cost Estimate and Funding

Project Component	Estimated Project Cost w/out ROW	Estimated ROW Cost	Total Estimated Cost	Principal Funding Sources
NE 24 th Street	\$19M	\$16M	\$35M	City of Redmond, grants, developer contributions

Notes:

1. Estimates are escalated from year 2016 at 3% per year to 2025.
2. Estimates are rounded to the nearest \$1M.
3. Water and wastewater upgrades are not required or included in costs.
4. Planning, design and construction engineering and administration costs are included in estimates.



APPENDICES

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APPENDIX 1 – 5% Design

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APPENDIX 2 – Cost Estimate Summary by Street Segment

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APPENDIX 3 – Overlake South Traffic Analysis

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APPENDIX 4 – NE 20th St Concepts

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APPENDIX 5 – Stormwater Infrastructure Report

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