

BORING URBAN RESERVE AREA

Total Acres	2,718	Parcel Acres	2,562
Gross Vacant Buildable Acres	1,217	Net Vacant Buildable Acres	924

General Description (see attached map)

The Boring Urban Reserve Area is an irregular shaped area that is split lengthwise by the Springwater Corridor Trail and includes the business district of the community of Boring. It is served by Highway 212 and SE 282nd Ave, is 2,718 acres in size and has good access to Highway 26 through the Highway 212 interchange. The western portion of the area north of Highway 212 includes two steep forested buttes, Tower and Zion, which dominate the landscape. Relatively flat areas are located south of Highway 212 and west of SE 282nd Ave. An intrusion of rural reserve land follows the Springwater Corridor in the North Fork Deep Creek Canyon from SE 262nd Ave/SE Kelso Road to the center of the business district. The North Fork Deep Creek, along with a few tributaries generally flow west towards the canyon area along the Springwater Corridor Trail. A few tributaries to Johnson Creek flow north and west through the area north of Highway 212.

Parcelization, Building Values, Development Pattern (see attached aerial photo)

This large urban reserve area contains 1,040 parcels that range in size from a tenth of an acre to 53 acres. Ninety percent of the parcels are less than five acres in size and only seven are greater than 20 acres. Overall, 842 of the 1,040 parcels have improvements, with 267 improvements valued more than \$250,000 and 47 improvements valued greater than \$500,000. Six of the structures are valued over one million dollars which includes two residences, three commercial structures and one church. The median value of all structures is \$182,520 excluding any publicly owned buildings. Four distinct land uses define the reserve area: forested rural residential development on the buttes, small to mid-sized rural residential between SE 282nd Ave and the Springwater Corridor, pockets of agricultural land and the community of Boring that includes both residential and employment uses. A Clackamas County Sanitary Sewer Treatment Facility is located along SE Richey Road, a PGE substation is located off of SE 282nd Ave, and two Boring Water District storage facilities are located in the urban reserve. The urban reserve area also includes the Boring Middle School, Naas Elementary School, and a portion of the Mountain View Golf Course. The Springwater Corridor Trail is owned by the City of Portland and Clackamas County and power lines run in a portion of the corridor.

GOAL 14 LOCATIONAL FACTORS

Efficient accommodation of identified land needs

A large portion of the urban reserve is either developed or limited by natural features such as steep slopes. Most of the central area of the Boring community is built out, however there is a significant pocket of vacant land in the commercial/business area that could provide additional employment uses. There are two large pockets of agricultural land near SE Kelso Road that provide the opportunity for either residential or employment uses. While an employment use in these areas would be at the edge of the future urbanized area, the location has good access to Highway 26 and it may provide a better buffer than residential use for the significant agricultural activity that is nearby. There are two other vacant land areas on either side of SE Haley Road, west of SE 282nd Ave that provide the opportunity for residential use based on parcel size and adjacent uses. There are additional small pockets of land throughout the area that could provide for future residential use depending on the efficiency of providing urban services and the ability to consolidate parcels.. Therefore this area is able to efficiently accommodate both residential and employment land needs.

Orderly and economic provision of public facilities and services

Sanitary Sewer Services

Capacity of existing facilities to serve areas already inside the UGB

The nearby area within the existing UGB is served by individual septic systems. Clackamas Water and Environment Services (WES) operates a sewer treatment plant in Boring that is capable of continued operation serving the low-density area but is not sized for urban densities. This treatment plant treats wastewater from approximately 700 water users.

Capacity of existing facilities to serve areas proposed for addition to the UGB

The Boring sewer treatment plant would need to increase its capacity exponentially in order to serve urban levels of density. Discharge from the plant follows the North Fork Deep Creek drainage to the Clackamas River. Expansion of the treatment plant is not viable due to the limited flow in the drainage. Accordingly, sewer would likely need to be provided by the City of Gresham, four and half miles away. Gresham does not have any facilities proximate to the reserve area.

Impacts to existing facilities that serve nearby areas already inside the UGB

Nearby facilities do not serve areas already inside the UGB.

Sanitary Sewer Piping Costs

Sanitary sewer piping costs	Cost (in millions)
Less than 12" pipe (gravity)	\$6.96
12 - 18" pipe (gravity)	\$3.71
Force main/bore	\$2.17
Pump station	\$1.35
Total	\$14.19

Water Distribution Services

Capacity of existing facilities to serve areas already inside the UGB

The Boring Water District provides service to most of the reserve area and provides service to a very small amount of land inside the UGB. If they were to serve additional land inside the UGB, 1.5 miles of pipe would need to be upgraded. The highest use recorded was in 2017 at 49% of maximum capacity. Two reservoirs, totaling 800,000 gallons serve the gravity customers. A 100,000 gallon reservoir serves customers on a pumped system (roughly 150 customers). The existing pipe network size works for their coverage area. The main network is comprised of asbestos concrete pipe that is nearing the end of its useful life. The district is working to fund replacement of the older pipes. The Sunrise Water Authority provides water to some of the nearby land within the UGB although the district boundary is about two miles from the reserve area.

Capacity of existing facilities to serve areas proposed for addition to the UGB

The current water use is approximately 700 water customers and the District still has about half of its supply available. The magnitude of increase to serve urban densities would be a significant challenge for a provider of this size. A new well coming online in 5 years will add 5.0 to 8.0 MGD. This will be the district's fifth well. Sand filtration is the only treatment. There is a possibility that the area could obtain water services from Gresham, which is roughly 4.5 miles to the northwest, although that would be very costly.

Impacts to existing facilities that serve nearby areas already inside the UGB

The district runs a two inch line to serve a very small area inside the UGB. There are no interties to other providers to provide for an alternate source in case of emergency, although they do have a backup generator to support the plant. The district believes the well in 5 years and possibly another in 15 years could support a limited urbanized reserve area.

Water Costs

Water piping/storage/pumping costs	Cost (in millions)
12" and smaller	\$17.62
18" and larger	\$5.07
Storage/pumping	\$12.32
Total	\$35.01

Storm Sewer Services

Capacity of existing facilities to serve areas already inside the UGB

No nearby existing facilities serve areas already inside the UGB.

Capacity of existing facilities to serve areas proposed for addition to the UGB

There are no existing facilities to serve the reserve area.

Impacts to existing facilities that serve nearby areas already inside the UGB

There is no impact to existing conveyance, detention or treatment facilities. New facilities will be built commensurate with development.

Storm sewer conveyance and water quality/detention costs for roadways

Conveyance & water quality/detention costs	Cost (in millions)
Conveyance	\$30.2
Water quality/detention	\$29.89
Total	\$60.09

Transportation Services

Capacity of existing facilities to serve areas already inside the UGB

Roadway: All roadways that serve nearby areas inside the UGB have an acceptable volume/capacity ratio (<0.9) for the 2015 pm peak except for a very short section of eastbound Highway 212 at SE 242nd Ave that has a congested volume/capacity ratio (<1.0).

Transit: There is no transit service in the nearby area inside the UGB. The closest bus line is TriMet's Route 84 Powell Valley/Orient Drive which provides weekday rush-hour service between Gresham Central Transit Center and SE 282nd and Orient Drive which is approximately 1.4 miles away.

Bike: There are no bike facilities in the nearby areas inside the UGB. There are a few streets that are considered bike with caution streets (SE 242nd and SE 222nd Aves) and Highway 212 has wide

shoulders. Inside the UGB in Gresham is the Springwater Corridor and Highway 26 has wide shoulders.

Pedestrian: There are no sidewalks in the nearby areas inside the UGB and the closest residential sidewalks in Gresham are two mile away. The Springwater Corridor Trail in Gresham is the closest trail in the UGB to the urban reserve area.

Capacity of existing facilities to serve areas proposed for addition to the UGB

Roadway: All roadways that serve the urban reserve area have an acceptable volume/capacity ratio (<0.9) for the 2015 pm peak except for a very short section of eastbound Highway 212 at SE 242nd Ave that has a congested volume/capacity ratio (<1.0).

Transit: There is no transit service near the reserve area.

Bike: The Springwater Corridor runs north-south through the center of the reserve area however there are no other bike facilities adjacent to or within the reserve area. Highway 26 is classified as having wide shoulders and there are numerous roadways classified as bike with caution and a couple classified as helpful connections.

Pedestrian: The Springwater Corridor runs north-south through the center of the reserve area. There are no other pedestrian facilities adjacent to or within the reserve area.

Impacts to existing facilities that serve nearby areas already inside the UGB

Roadway: Highway 26 will be expected to see additional traffic and currently it has an acceptable volume/capacity ratio (<0.9) for the 2015 pm peak. Highway 212 would also be expected to see additional traffic which could impact the very short section of eastbound Highway 212 at SE 242nd Ave that has a congested volume/capacity ratio (<1.0).

Transit: There is no transit service to nearby areas already inside the UGB. See transit analysis below.

Bike: The Springwater Corridor is the only facility that serves the nearby area and would see increased use.

Pedestrian: The Springwater Corridor is the only facility that serves the nearby area and would see increased use.

Need for new transportation facilities and costs (see attached transportation map)

The portions of SE 282nd Ave and SE Highway 212 that border the reserve area will need to be improved to urban arterial standards. Both roadways are considered to be a ½ street improvements as the property on the other side of the roadway that is within the Boring-Highway 26 urban reserve would be responsible for that portion of the improvements. SE Highway 212 west of Boring SE Richey Road and SE Kelso Road will need to be improved to urban arterial standards. The following roads will need to be improved to urban collector standards: SE Church road, SE 257th

Ave, SE Stewart Lane, SE Fireman Way, SE Gillespie Court/SE Zion Hill Drive, SE School Ave, SE 272nd Ave, SE Sunshine Valley Road/SE Victoria Street, SE 258th Place/SE 257th Drive, SE Telford Road, and SE Haley Road. In addition, five new collectors will need to be built.

Facility Class		
Arterials	Type	Cost (in millions)
	Existing/Improved ½	\$37.78
	Existing/Improved	\$119.12
Collectors	Type	Cost (in millions)
	Existing/Improved	\$200.00
	New	\$111.57
	Total	\$468.47

Provision of public transit service

This area withdrew from the TriMet service district, thus no analysis of transit service was completed.

Prior to land being included in the UGB a more detailed concept plan, consistent with the requirements of Metro’s Urban Growth Management Functional Plan Title 11, will be required. This concept plan process will develop more refined public facility and service needs and cost estimates.

Comparative environmental, energy, economic and social consequences (ESEE analysis)

Environmental

North Fork Deep Creek flows west through the community of Boring for just shy of a mile, mostly through an intact riparian corridor. About one and half miles of very small tributaries also flow through this area, mostly through residential development; 1,600 feet of the tributaries flow through agricultural land. Riparian habitat is identified along the stream corridors with some upland habitat near the eastern edge of the reserve area. Two additional tributaries to North Fork Deep Creek totaling approximately 6,100 feet flow south through the southwest corner of the urban reserve area, on the north side of Highway 212. These streams flow through pasture land and wooded parcels and there are locations where the streams appear to be altered by structures or dammed to create ponds. Riparian habitat is identified along the stream corridors with some upland habitat identified along the wooded portions of the streams. A two and half acre wetland identified through the National Wetland Inventory is located along North Fork Deep Creek at the eastern edge of the urban reserve area. The existing established riparian corridor of North Fork Deep Creek and the tributaries could be enhanced as a result of the urbanizing the area, as urban water quality and habitat regulations would require increased protection levels for the resources.

The area between 282nd Ave and the Springwater Corridor contains a few tributaries to Johnson Creek that flow north and total approximately two miles. A significant portion of these small streams flow through a forested riparian corridor and the remaining portion traverses open fields. Riparian habitat is identified along the stream corridors with some upland habitat identified along

the wooded portions of the streams. In numerous locations it appears that the streams have been altered to create ponds. Urbanization of the area may protect and even enhance the existing forested riparian corridor due to increased urban water quality and habitat regulations. A 2,000 foot stream section in the vicinity of SE Sunshine Valley Road and SE 250th Place flows west out of the urban reserve area to connect with other streams, ultimately flowing into Johnson Creek to the north. This stream is located in a forested portion of the large rural residential lots and both riparian and upland habitat is identified along the stream.

The proximity of flat, developable land adjacent to most of the streams within the urban reserve area indicates a potential impact from urbanization of this area, with the exception of North Fork Deep Creek and the forested segments of the streams near the Springwater Corridor. Restoration of degraded stream edges and enhancement of the wetland buffer will provide protection from urbanization. The tributaries that mostly flow through the residential areas may be impacted by future development as they generally flow through the remaining developable portions of the properties, although the existing housing pattern and lot consolidation concerns may reduce options for future development that could limit impacts. Urbanization of the agricultural lands provides the opportunity to restore and enhance the riparian corridor of the streams that flow along the edges of the fields. There are some significant locations of upland habitat identified in the butte areas, although most of it is also located on slopes greater than 25% which would limit the amount of urbanization that could occur. Overall urbanization of the area could occur with moderate to high impacts to the stream corridors, habitat areas and the wetland depending on building and lot consolidation opportunities given the existing development pattern on relatively small lots and the opportunity to enhance riparian corridors on agricultural lands.

Energy, Economic & Social

This urban reserve area is generally made up of four distinct land uses: forested rural residential development on the buttes, small to mid-sized rural residential between SE 282nd Ave and the Springwater Corridor, pockets of agricultural land and the community of Boring that includes both residential and employment uses.

It is expected that urbanization of the reserve area will result in new housing replacing the existing rural residences in most instances. This will result in significant social consequences due to a loss of a rural lifestyle for existing rural residents. This would occur in both the residential area between SE 282nd Ave and the Springwater Corridor and the residential portion of Boring. The presence of stream corridors and associated habitat areas will create pockets of the new development that may soften the impact. New residential development combined with new retail/commercial opportunities in the center of Boring will provide new civic, entertainment and socializing opportunities for all residents. The land on the buttes would see limited additional development due to the forested steep slopes and the expense of providing urban services for a limited number of additional houses, resulting in less social consequences for those existing residents.

While there is the potential for loss of existing jobs through redevelopment of the existing commercial/employment center of Boring, the ability to generate a significant amount of additional jobs through more intense commercial/employment uses may be positive for the Boring

community. The agricultural activity within the reserve area is minimal. The loss of the economic impact from these agricultural uses would not be considerable and the potential economic impact of urbanization on these relatively flat lands will outweigh this loss.

Access to the reserve area would remain the same and the increased VMT from urbanization of the area would be significantly larger than current levels, although good access to Highway 26 via Highway 212 and SE Kelso Road and to the Gresham Regional Center and the Springwater Industrial area may reduce the impact compared to other areas that have limited transportation connections to centers or employment areas. In addition the potential for employment development is relatively high, which could further reduce the VMT impact of existing and future residents. Finally, the Springwater Corridor trail is an existing connection to these potential employment areas that provides the opportunity for non-single occupancy vehicle travel, lessening the overall VMT consequences. Overall this analysis area has high economic, social and energy consequences from urbanization.

Compatibility of proposed urban uses with nearby agricultural and forest activities occurring on farm and forest land outside the UGB (see attached resource land map)

There are three separate locations where farm and/or forest land is contiguous to the urban reserve area. The first location is a small block of EFU land across SE 282nd Ave near Highway 26. While this is a relatively small area it is almost entirely in nursery production. Additional traffic along SE 282nd to and from Gresham could impede the movement of farm equipment and SE 282nd Ave would not provide an appropriate buffer between urban and agricultural uses and issues related to safety, liability and vandalism and complaints due to noise, odor, dust and the use of pesticides and fertilizer could still occur. The second location is east of SE 282nd Ave in the vicinity of SE Viva Lane and consists of one 80 acre parcel that is part of the larger Holmund Nursery to the east. Additional traffic along SE 282nd to and from Gresham could impede the movement of farm equipment, however since this parcel has field access from the remainder of the nursery that is headquartered off of Highway 212 there is alternative ways to move equipment. Even though the frontage of the EFU land along SE 282nd Ave is not very long, the street would not provide an appropriate buffer between urban and agricultural uses and issues related to safety, liability and vandalism and complaints due to noise, odor, dust and the use of pesticides and fertilizer could still occur. The third location is an extensive block of EFU land south of SE Kelso Road and east of the urban reserve area along both sides of SE Church Road. The agricultural land south of SE Kelso Road is in nursery production and extends over a mile south in some locations. Additional traffic along SE Kelso Road to and from Highway 26 could impede the movement of farm equipment and goods as that is the most direct route to the highway from this extensive agricultural area. This is especially true if the large parcels in the urban reserve developed in residential use. SE Kelso Road would not provide an appropriate buffer to between urban and agricultural uses and issues related to safety, liability and vandalism and complaints due to noise, odor, dust and the use of pesticides and fertilizer could still occur. The EFU land adjacent to SE Church Road is in nursery and field crop use and is also more intermixed with pockets of residences. However there is some large single owner operations occurring that would be impacted by increased traffic on SE Church Road, which also provides good access to Highway 26. Most of the EFU land directly adjacent to the urban

reserve is in residential use and would provide a bit of a buffer between the new urban area and the agricultural activities further east.

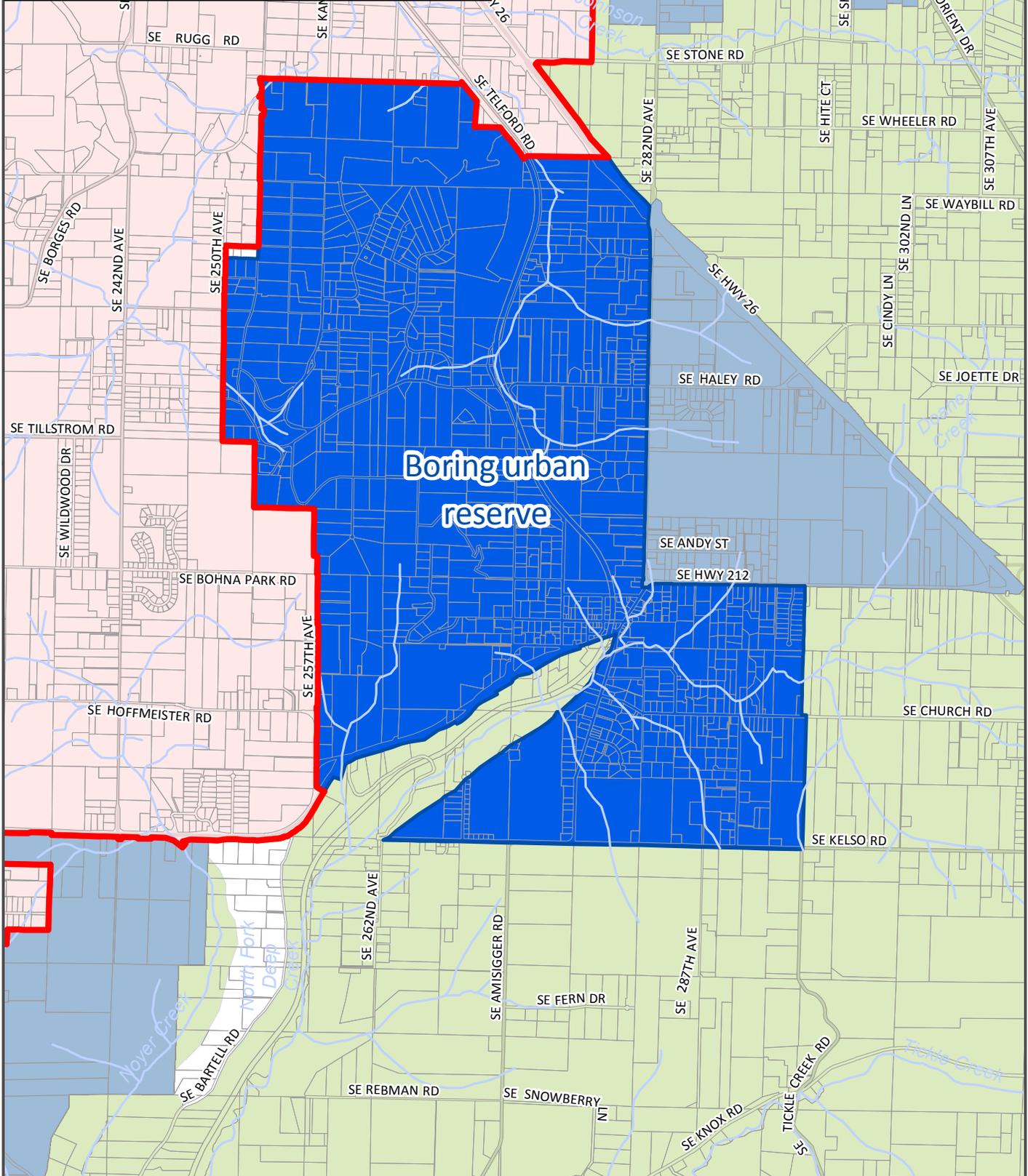
The nearby agricultural and forest activities occurring on farm and forest land would be impacted by urbanization of the reserve area, especially in the southern portion of the area. Thus, the proposed urban uses would have low compatibility with the nearby agricultural and forest activities occurring on farm and forest land.



Metro

Preliminary Urban Growth Boundary Alternatives Analysis Boring

- Inside the Urban Growth Boundary
- Rural reserve
- Other urban reserve
- Stream routes



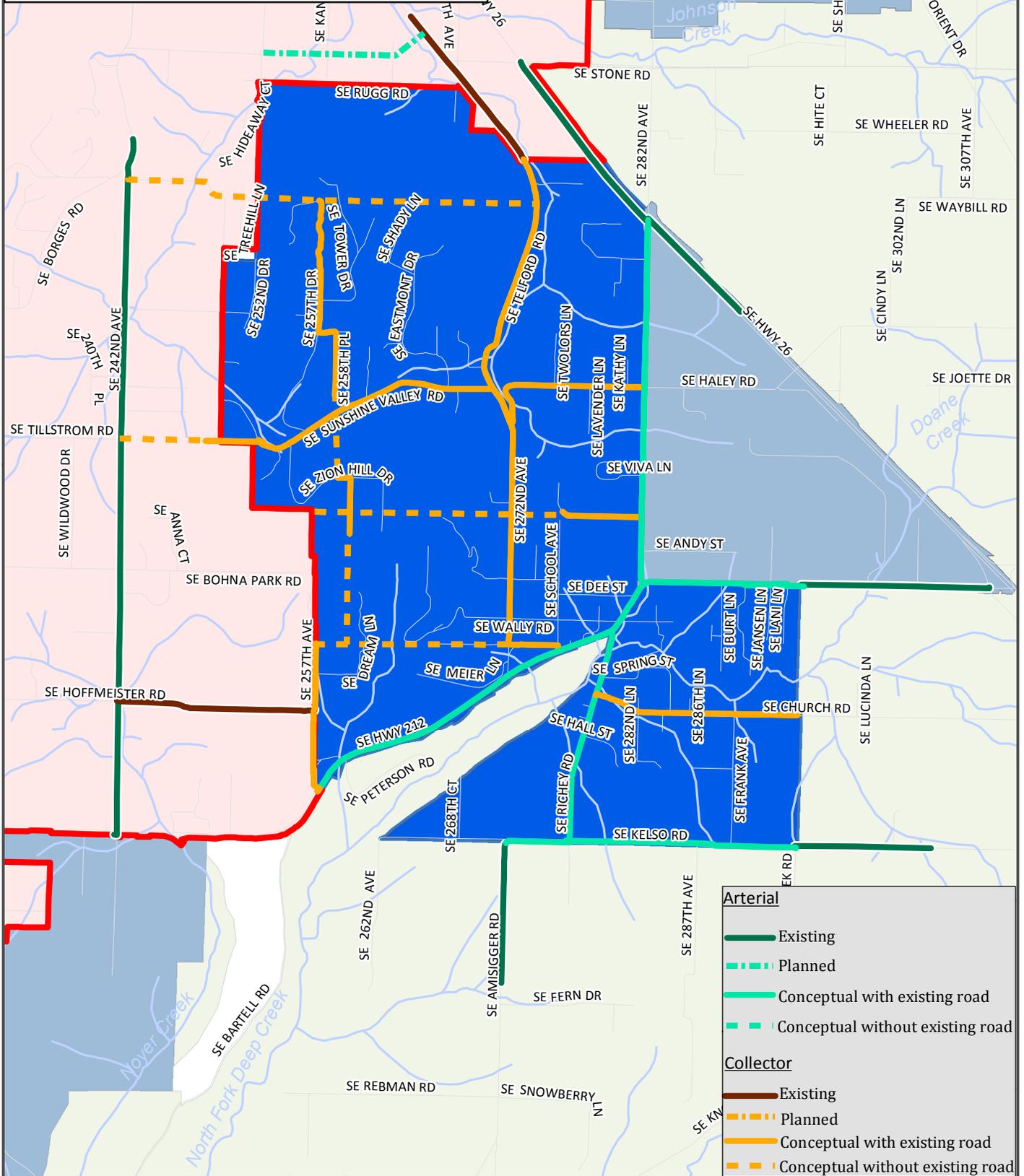
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Metro

Preliminary Urban Growth Boundary Transportation Analysis Boring

- Inside the Urban Growth Boundary
- Rural reserve
- Other urban reserve
- Stream routes



Arterial

- Existing
- Planned
- Conceptual with existing road
- Conceptual without existing road

Collector

- Existing
- Planned
- Conceptual with existing road
- Conceptual without existing road

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