

ROY ROGERS WEST URBAN RESERVE AREA

Total Acres	303	Parcel Acres	301
Gross Vacant Buildable Acres	180	Net Vacant Buildable Acres	137

General Description (see attached map)

The Roy Rogers West Urban Reserve Area is a small area west of Tigard that is west of SW Roy Rogers Road and south of SW Scholls Ferry Road. The UGB forms the eastern and northern boundaries; rural reserve land is to the west and undesignated rural land to the south. The land is generally flat and gently slopes to the south/southwest. Access to the area is provided by SW Roy Rogers Road, SW Scholls Ferry Road, SW Bull Mountain Road, and SW Vandermost Road.

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

This small reserve area contains 22 parcels that range in size from 37,000 square feet to 87 acres. Sixteen of the parcels are greater than five acres in size and only one parcel is less than one acre. Four parcels are greater than 20 acres and account for 168 acres or 55% of the parcel land area. The area contains rural residences, agricultural lands, and partially forested parcels. Overall, 19 of the 22 parcels have improvements, with a median value of \$161,880. One rural residence has a building value of \$1.4 million and the Sikh Center of Oregon is located in the reserve area.

GOAL 14 LOCATIONAL FACTORS

Efficient accommodation of identified land needs

This small reserve area is relatively flat with locations of slopes greater than 10% and 25% near the stream corridors that cross the reserve area. These stream corridors divide up the area into several blocks of land that contain mid-sized parcels that could be consolidated into blocks of land for development, especially in the southern portion of the reserve area. SW Scholls Ferry Road and SW Roy Rogers Road provide ease of access and utilities. While an employment use may be possible from a topographic stand point, Tigard has a considerable amount of employment land with better access to highways that reduces the need for any additional employment land for the City. Thus this reserve area is able to accommodate a residential land need.

Orderly and economic provision of public facilities and services

Sanitary Sewer Services

Capacity of existing facilities to serve areas already inside the UGB

The City of Tigard provides sanitary sewer services that feed into the regional sanitary sewer system operated by Clean Water Services (CWS). CWS provides wastewater treatment through the Durham Waste Water Treatment Plant which has capacity to serve lands inside the UGB. CWS is currently working to complete significant capital improvements relating to their conveyance piping that are necessary to serve the land currently within the UGB. These improvements are scheduled to be fully complete in 2020.

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

Sanitary sewer flows from the northern portion of the reserve area will be conveyed in an existing 24-inch CWS trunk line which flows through the north end of the site and connects to the existing River Terrace North Pump Station. From the pump station, sewer flows through large diameter CWS sewer interceptor lines to the Durham treatment plant. Flows from the southern portion of the reserve area will connect to sewer infrastructure proposed for the River Terrace area. They will connect to a future gravity sewer line near SW Roy Rogers Road and SW Bull Mountain Road. These flows will be conveyed to the future River Terrace South Pump Station, and from there to the Durham treatment plant. CWS has indicated that the Durham WWTP has capacity; however, significant additional flows may require plant improvements. In addition, the available capacity of the existing pump stations and sewer lines are unknown.

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

CWS indicated that some interceptor and/or trunk lines that are at or near capacity today are being upgraded to serve the lands within the Cooper Mountain and River Terrace areas. These new facilities may have capacity for additional expansions, but the amount of excess capacity is not known at this time. Other impacts to the wastewater system are local in nature, occurring as facilities are developed. New wastewater mains must be provided to allow development and the laterals off the mains are provided by the development community.

Sanitary Sewer Piping Costs

Sanitary sewer piping costs	Cost (in millions)
12 - 18" pipe (gravity)	\$1.58
Force main	\$0.56
Pump station	\$0.50
Total	\$2.64

Water Distribution Services

Capacity of existing facilities to serve areas already inside the UGB

The Tigard Water District, along with the Cities of Durham, King City and Tigard has an Intergovernmental Agreement, (IGA) with the City of Tigard to serve the nearby areas already

inside the UGB. This is known as the Tigard Water Service Area (TWSA). Information provided by the City of Tigard indicates that the water supply, storage, and piping are sufficient to serve the existing UGB. Minor deficiencies were identified with the Water Treatment Plant; however, there are plans to correct the deficiencies in the near future.

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

Water supply appears to be adequate, or the City of Tigard will be able to provide water as this area is urbanized. The City of Tigard is currently in the process of updating its water master plan. The master plan update will include this reserve area as well as the Roy Rogers East and the Beef Bend South urban reserve areas. The master plan will identify excess capacity within the system and determine if it can be used within the reserve areas. In addition, the City plans to acquire property in the adjacent River Terrace area that can be used for the construction of additional storage to serve the reserve areas.

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

The City of Tigard is currently updating the water master plan which includes planning for the reserve area. Water capacity appears to be adequate and the majority of impacts are local in nature, occurring as facilities are developed. New water mains must be provided to allow development of this reserve area and the laterals off the mains are provided by the development community. The amount of any upsizing that would be needed is not known at this time, but will likely be identified in the master plan update

Water Costs

Water piping/storage/pumping costs	Cost (in millions)
12" and smaller	\$0.32
18" and larger	\$5.41
Storage/pumping	\$1.93
Total	\$7.66

Storm Sewer Services

Capacity of existing facilities to serve areas already inside the UGB

There is no indication of capacity issues with existing stormwater facilities that serve the land inside the UGB.

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

Stormwater will be conveyed, treated, and disposed of within the reserve area, therefore, it is not anticipated that existing facilities would be utilized.

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

Stormwater will be conveyed, treated, and disposed of within the reserve area; therefore, no impacts to existing facilities are anticipated.

Storm sewer conveyance and water quality/detention costs for roadways

Conveyance & water quality/detention costs	Cost (in millions)
Conveyance	\$10.69
Water quality/detention	\$10.51
Total	\$21.20

Transportation Services

Capacity of existing facilities to serve areas already inside the UGB

Roadway: Many of the roads in Tigard have an acceptable volume/capacity ratio (<0.9) for the 2015 pm peak, however there are numerous roads with higher levels of congestion. The following road sections have a congested volume/capacity ratio (<1.0): SW Scholls Ferry Road at SW 121st Ave in both directions; Highway 99W at SW Bull Mt. Road in both directions; SW MacDonald Street at SW Hall Blvd. in both directions; I-5 southbound at SW Carmen Drive; Highway 217 from SW Greenburg Road to SW 72nd Ave in both directions (a portion of the northbound lane at Highway 99W is severely congested); Highway 99W at Highway 217 in both directions; and Highway 99W at I-5 south bound. SW Scholls Ferry Road at SW Tile Flat Road in Beaverton also has a congested volume/capacity ratio in both directions. The following road sections have a severely congested volume/capacity ratio (>1.0): Highway 99W at I-5 northbound; Highway 217 at I-5 southbound; SW Durham Road west of SW Hall Blvd. in both directions; SW Durham Road east of SW Hall Blvd. in the westbound direction; SW Durham Road from SW 79th Ave to SW Upper Boones Ferry Road in both directions (a small segment at SW Upper Boones Ferry Road westbound is congested) and SW Tiedeman Ave at SW Tigard Street southbound. Highway 99W, Highway 217, I-5 and SW Scholls Ferry Road are classified as high injury corridors for automobiles and SW Durham Road is classified as a high injury corridor for bikes.

Transit: Nine TriMet bus routes provide service to Tigard, mainly along the arterial streets in the northern portion of the city near Highways 217 and 99W. WES Commuter Rail stops at the Tigard Transit Center. The majority of the city west of Highway 99W does not have transit service. Two TriMet bus routes provide service near the Murray Scholls Town Center in Beaverton that is a little over a mile east of the reserve area.

Bike: Tigard has over 26 miles of dedicated bike lanes, ten miles of established bikeways and numerous streets considered bike friendly that together create a well connected system that is dispersed throughout the residential areas. Most of the employment areas and the Town Center are served by bike facilities. A small portion of Beaverton's large network of dedicated bike lanes (50 miles), established bikeways (22 miles) and bike friendly streets are located near the reserve area including bike lanes on SW Scholls Ferry Road and SW 175th Ave.

Pedestrian: Most of the residential neighborhoods in Tigard have sidewalks although there are some significant sections of the city that do not, including some near schools. The Town Center and employment areas are also fairly well served by sidewalks, however internal circulation in some business parks is lacking. The Fanno Creek Trail, Pathfinder-Genesis Trail and Tigard Street Trail provide other pedestrian options, mainly near the Town Center. Most of the nearby residential neighborhoods in Beaverton have sidewalks that provide internal circulation with limited connections to other parts of the city.

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

Roadway: The roads in Tigard near the reserve area have an acceptable volume/capacity ratio (<0.9) for the 2015 pm peak. Most of the roads in Beaverton near the reserve area also have an acceptable volume/capacity ratio for the pm peak with the exception of SW Scholls Ferry Road at SW Tile Flat Road which has a congested volume/capacity ratio in both directions. SW Roy Rogers Road which is outside the UGB also has a congested volume/capacity ratio in both directions between SW Beef Bend Road and SW Bull Mt. Road.

Transit: No TriMet bus routes travel close to the reserve area. The closest transit stops are a little over one mile from the reserve area near the Murray Scholls Town Center via SW Scholls Ferry Road.

Bike: The closest bike facility inside the UGB is a dedicated bike lane on one side of the road on SW Roy Rogers Road that extends north past SW Scholls Ferry Road to the new Beaverton high school. An established bikeway on SW Scholls Ferry Road extends east for over a mile to the Murray Scholls Town Center. SW Roy Rogers Road outside of the UGB to the south has a bike lane on one side of the road.

Pedestrian: The new residential neighborhoods in the adjacent River Terrace development have sidewalks that connect to the reserve area. Currently they do not connect across SW Roy Rogers Road to other parts of Tigard. There are sidewalks on the north side of SW Scholls Ferry Road, west of SW Roy Rogers Road near the new high school as well as sidewalks on both sides of SW Scholls Ferry that extend east of SW Roy Rogers Road towards the Murray Scholls Town Center. These sidewalks connect with the Westside Trail that extends quite some distance to the north.

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

Roadway: SW Scholls Ferry Road will see increased traffic as a result of urbanization and may increase congestion issues both east and west of the area, including the SW Tile Flat Road congestion location, although SW Scholls Ferry Road will be improved up to SW Tile Flat Road as development of South Cooper Mt. continues. SW Roy Rogers Road will see increased traffic as well and may increase the congestion issues between SW Beef Bend Road and SW Bull Mt. Road as well as further south to Sherwood. SW Bull Mt. Road may also see increased traffic as drivers look for an alternative east-west connection to Highway 99W, which could negatively impact the current congestion issue at that intersection.

Transit: There would be no impact on existing TriMet bus routes. See transit analysis below.

Bike: The dedicated bike lane on SW Roy Rogers Road would be expected to see additional use, especially to the north where it connects to the bikeway on SW Scholls Ferry Road that extends to the Murray Scholls Town Center. The dedicated bike lane on SW Roy Rogers Road outside of the UGB to the south may also see additional use, depending on the status of the urban reserves to the south and the continued development of River Terrace.

Pedestrian: The sidewalks in the new residential neighborhoods of River Terrace would be expected to see additional use. The level of use would increase once connections across SW Roy Rogers Road to other neighborhoods of River Terrace are completed. Sidewalks that connect to the new high school could see additional use depending on the future school district boundary as only a portion of the reserve area is in the Beaverton School District. The sidewalks that extend east to the Murray Scholls Town Center could also see additional use, although the town center is over one mile away.

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

SW Roy Rogers Road will need to be improved to urban arterial standards and a new arterial is needed to extend SW Bull Mt. Road through the middle of the reserve area, ultimately connecting with SW Scholls Ferry Road at SW Tile Flat Road. SW Roy Rogers Road is considered a ½ street improvement as the other side of the road is the responsibility of the land already inside the UGB. A new collector is needed to connect the new arterial with SW Scholls Ferry Road near the new Beaverton High School.

Facility Class		
Arterials	Type	Cost (in millions)
	Existing/Improved ½	\$11.21
	New	\$66.21
Collectors	Type	Cost (in millions)
	New	\$6.56
Total		\$83.98

Provision of public transit service

TriMet evaluated the reserve area for providing transit service. TriMet could provide services to the reserve area although there is no guarantee of service. Actual service depends on the level of development in the expansion area and in the corridors leading to the reserve area. Service could be provided at 30 minute headways for all day service, five days a week with three additional buses at a capital cost of \$1,200,000 (recurs every 16 years). Annual service cost is \$1,248,000 and grows 2% per year.

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, is 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

Four streams flow through the reserve area, varying in lengths from 300 feet to 3,100 feet, on their way to the Tualatin River. The first stream flows south through the northwest portion of the reserve area for approximately 2,200 feet, isolating this small section of the reserve area. This stream originates in the South Cooper Mt. area to the north and flows mainly through a forested ravine with some adjacent steep slopes. There is a significant amount of riparian and upland habitat associated with the stream, especially along the southernmost section of the stream corridor. Given the streams location at the very top corner of the reserve area and the increased protection levels for steep slopes, streams and habitat areas within the UGB, urbanization of the area can occur with minimal impact to this stream corridor, especially if a street connection is not made across the stream and habitat area. If a stream crossing is made then impacts would occur to the stream and habitat areas.

A second stream flows west through the upper-middle portion of the reserve area for approximately 1,100 feet, joining the first stream just outside the reserve area boundary. This stream also flows through a forested ravine that is mostly composed of steep slopes and riparian and upland habitat has been identified along the stream corridor. Given the increased protection levels for steep slopes, streams and habitat areas within the UGB, urbanization of the area can occur without impacting this stream corridor, similar to how the stream is protected in River Terrace to the east. If road connections are needed from the land inside the UGB to the east or from the western portion of the area, impacts would occur to the stream and habitat areas.

The third stream flows west through the lower-middle portion of the reserve area for approximately 3,100 feet before joining the first stream outside the reserve boundary. This stream flows mainly through a forested canopy although a portion of it is within open pasture land and it appears about 200 feet of the stream is piped. A significant portion of the forested section also contains slopes greater than 25% and there is a pond along the stream corridor that is not identified as a wetland. As expected, riparian and upland habitat has been identified along the stream corridor. The forested section of the stream corridor would have the least impacts given the steep slopes and the habitat areas that would be protected. The area that flows through the pasture land, where a north-south roadway connection would be more likely, may be impacted depending on the transportations connections that occur. Day lighting the piped portion of the stream allows for restoration of this segment.

Finally, a 300 foot section of stream flows within a forested ravine through the very southeast corner of the reserve area. Given the location of the stream and the adjacent steep slopes, urbanization could occur without impacting this short stream segment. Overall urbanization of the area could occur with low to medium impacts to the stream corridors and habitat areas, depending on the number of stream crossings and urban form.

Energy, Economic & Social

It is expected that urbanization of the reserve area will result in new housing or employment uses replacing the existing rural residences. The existing stream corridors and habitat areas divide up the reserve area into discreet blocks of land that could be developed to urban densities. New urban development would generate social impacts on the existing residents of the area in terms of loss of sense of place and rural lifestyle, however some of the blocks of developable land are small and the urban development pattern would be less intense. Directly to the east is the River Terrace area that was included in the UGB in 2002 and is currently being developed. This development activity lessens the loss of the rural lifestyle for the current residents. In addition, the 2011 South Cooper Mt. UGB expansion area is directly to the north across SW Scholls Ferry Road and the new Mountainside High School is open. The combination of this reserve area with the River Terrace and South Cooper Mt. areas provide opportunities to create one urban community with a higher level of amenities such as parks and trails and develop efficiencies in infrastructure financing and delivery of services. There are two main pockets of agricultural activities, one in the north and the other in the south. The potential economic impact of urbanizing this area will outweigh the loss of the economic impact from these agricultural uses. The additional traffic generated through urbanization will impact SW Beef Bend Road, SW Roy Rogers Road, SW Scholls Ferry Road and ultimately Highway 99W which could provide negative energy impacts as these roadways currently are highly traveled. This is especially true when the River Terrace and South Cooper Mt. areas build out. The planned River Terrace Trail is located to the east and the planned South Cooper Mt. Trail is to the north, which provides the opportunity for trail connection points that could reduce some local automobile trips, thereby reducing VMT. Overall this reserve area has medium 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)

To the south is a large block of exclusive farm use (EFU) zoned land that extends beyond the Tualatin River. However, the land directly adjacent to the reserve area is forested and contains a stream corridor that effectively buffers the agricultural activities that are occurring to the south. Urbanization of the reserve area would significantly increase traffic on SW Roy Rogers Road which could impact the movement of both farm equipment and goods, although traffic on SW Roy Rogers Road is currently at a high level. Thus, the proposed urban uses are generally compatible with the nearby agricultural activities occurring on the farm land to the south.

West of the lower portion of the reserve area is EFU zoned land that includes a forested ravine that provides a buffer for the agricultural lands further west. It appears these agricultural lands gain access through SW Vandermost Road and SW Pleasant Valley Road which would see limited additional traffic as the vast majority of the reserve land will funnel traffic towards SW Scholls Ferry Road and SW Roy Rogers Road. There is a very small amount of agricultural land directly adjacent to the reserve area that contains field crops and would be impacted by urbanization of the reserve area. Thus, the proposed urban uses are not compatible with the agricultural activities occurring on this very small amount of farm land directly adjacent to the reserve area. Mitigation

measures on the urban side could be used to reduce the conflicts between the urban uses and agricultural activities. The proposed urban uses are compatible with the agricultural activities occurring on the farm land further to the west of the lower portion of the reserve area.

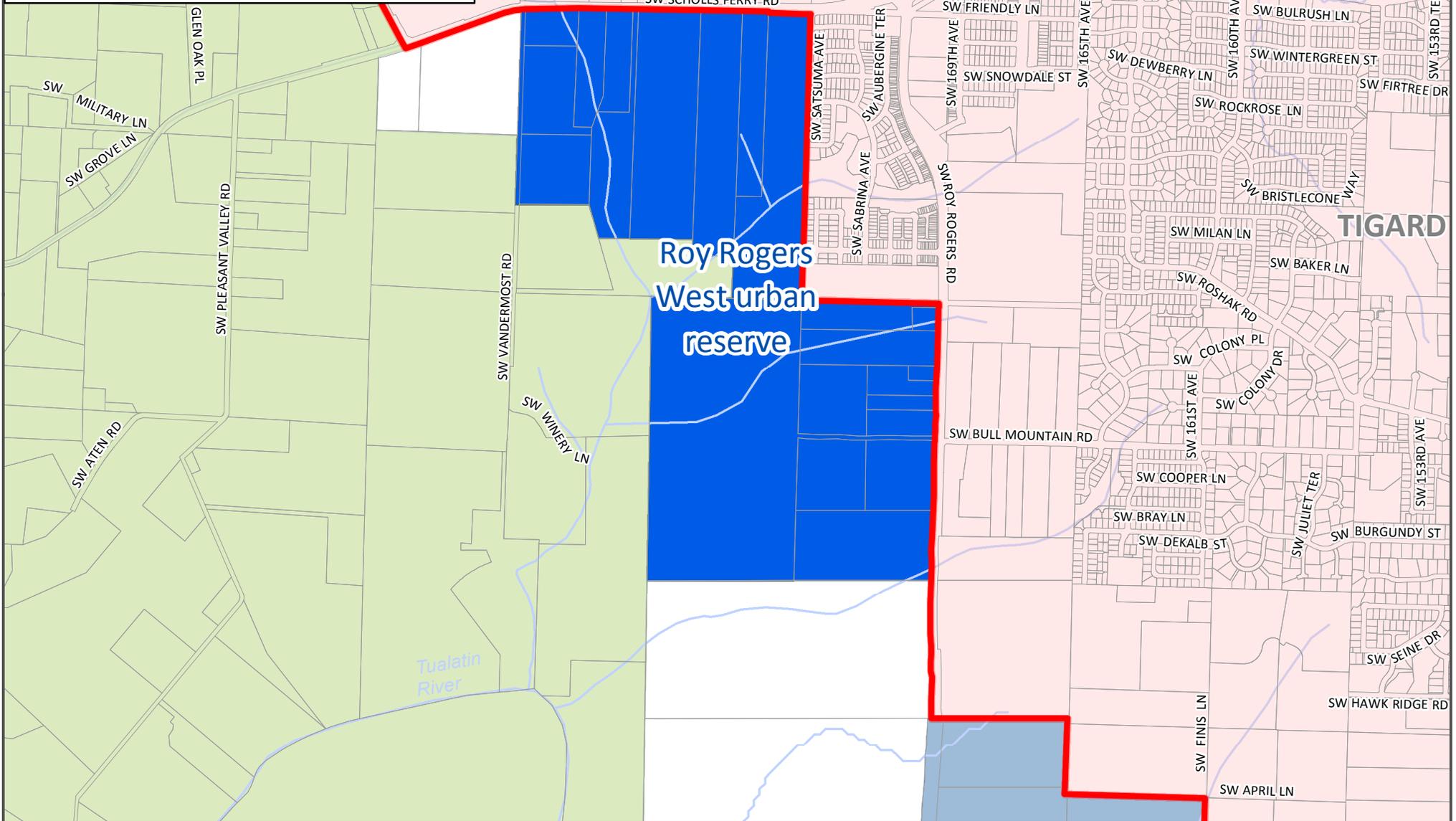
West of the upper portion of the reserve area is a block of Agriculture & Forest (AF-20) zoned land that is mostly in agricultural production with the exception of one area that extends into the notch of the reserve area that is forested. SW Vandermost Road would provide a buffer between the agricultural activities occurring in this location and a new urban area, however the road alone would not make the two uses compatible and there could still be complaints due to noise, odor, dust and the use of pesticides and fertilizer. SW Vandermost Road would see an increase in traffic due to urbanization, but it will be limited as this section of the reserve area is isolated by a stream corridor and the overall development pattern will be small. Future road connections could increase the amount of traffic. Thus the proposed urban uses are not compatible with the nearby agricultural activities occurring on this block of farm and forest land. Mitigation measures on the urban side could be used to reduce conflicts between the urban uses and farm and forest activities occurring on farm and forest land outside the UGB.

Overall, the proposed urban uses have medium compatibility with nearby agricultural and forest activities occurring on farm and forest land outside the UGB; however mitigation measures will be needed to reduce some impacts.



Preliminary Urban Growth Boundary Alternatives Analysis Roy Rogers West

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



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**Preliminary Urban Growth Boundary
Alternatives Analysis
Roy Rogers West**

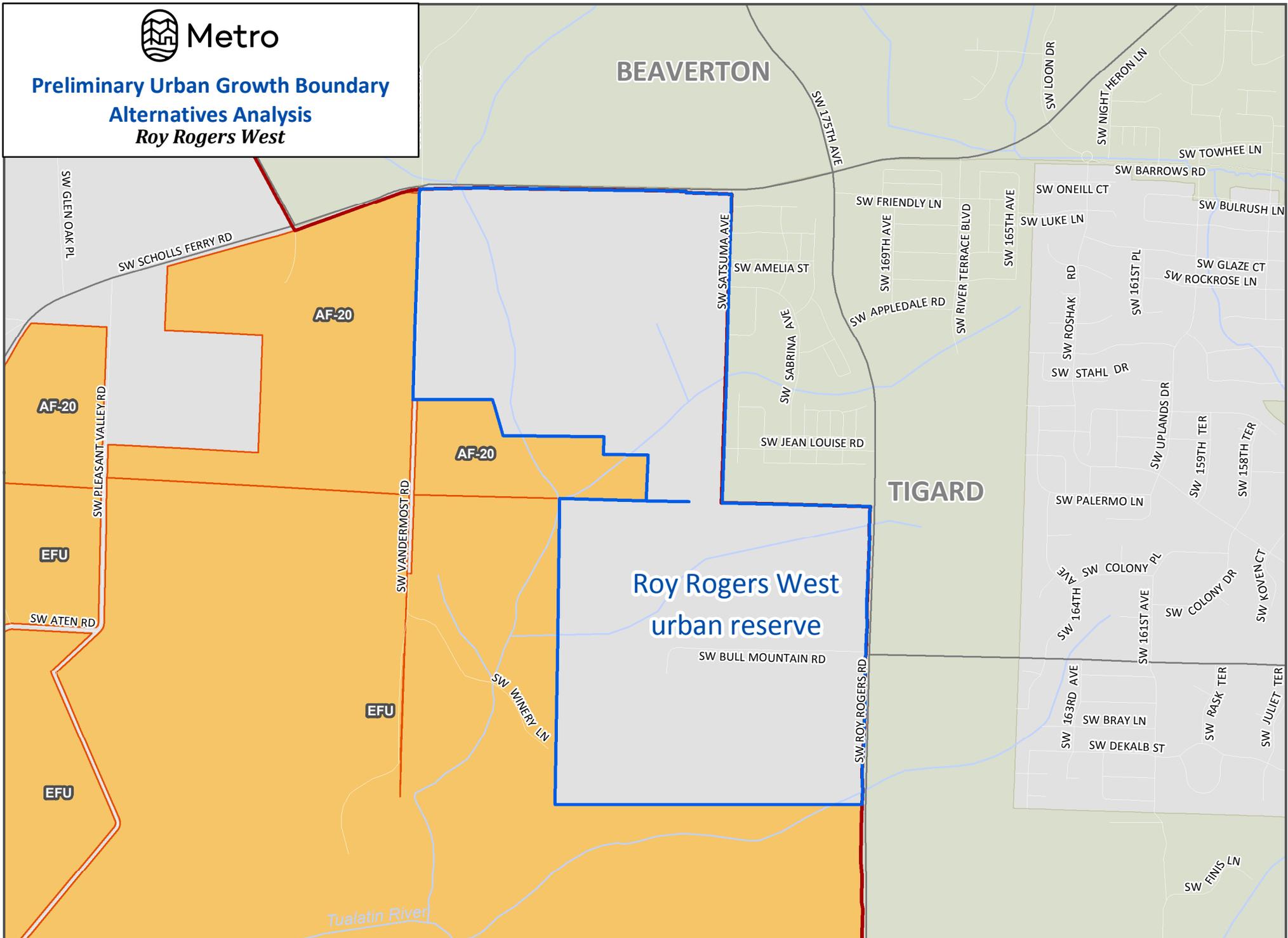


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**Preliminary Urban Growth Boundary
Alternatives Analysis
Roy Rogers West**



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