

Engineering Department Land Use Application Review Comments & Conditions



Home of the Tualatin River National Wildlife Refuge

To: Hugo Agosto, Associate Planner
From: Craig Christensen P.E., Civil Engineer
Project: Rock Creek Industrial (LU 2023-017)
Date: March 6, 2024

Engineering staff has reviewed the information provided for the above referenced private development project. Final construction plans will need to meet the standards established by the City of Sherwood Engineering Department and Public Works Department, Clean Water Services (CWS) and Tualatin Valley Fire & Rescue (TVF&R), in addition to requirements established by other jurisdictional agencies providing land use comments. City of Sherwood Engineering Department comments are as follows:

General Information

The proposed development consists of 2 parcels of land (approximately 8.17 acres and 20.00 acres) which are zoned Employment Industrial. The subject proposal is to consolidate the 2 parcels into 1 parcel and construct a single building with parking. The site is located east of SW Tonquin Road in the Tonquin Employment Area.

Transportation

Currently the subject parcel has public street access to SW Tonquin Road via a driveway at the southern end of the subject properties and No Name Road at the northern end of the subject properties. Currently a new street is under construction (SW Commerce Court) which will provide public street access for the subject development. Upon completion, SW Commerce Court will connect to SW Oregon Street. Currently Ice Age Drive is under design and once constructed with SW Industry Way will provide alternate routes of transportation at which time the intersection of SW Commerce Court and SW Oregon Street will become a right-in/right-out intersection in compliance with the Washington County Access Management Plan. No access to SW Tonquin Road is being proposed for the subject development nor will be granted by Washington County.

The proposed building will be located southeast of the SW Commerce Court cul-de-sac. There are 2 driveways proposed at the cul-de-sac to provide access to the proposed building and surrounding parking area. There is also a separate parking lot proposed to the west of SW Commerce Court. This western parking lot will have driveway access to the SW Commerce Court cul-de-sac with a second driveway having access to SW Commerce Court at the north end of the subject property and within No Name Road. A vacation process has begun for No Name Road which would revert No Name Road back to the property from which it was originally obtained which appears to be the subject property of this development in the area of the proposed northern driveway.

The proposed plan for No Name Road is provide driveway access to the subject property and the property to the north of the subject property for a combined access to SW Commerce Court. In order for this to occur, filling of the grade over No Name Road will need to occur with the fill slopes extending into the property north of the subject property. A written approval from the neighbor to the north will need to be provided to the city prior to issuing any grading permit that shows grading into the property north of the subject property.

The vacation of No Name Road will need to be complete prior to acceptance of public improvements. Prior to the vacation being completed, a sanitary sewer and storm sewer easement shall be dedicated to the city of Sherwood over the entirety of No Name Road.

SW Tonquin Road along the subject property frontage consists of two 12-foot wide travel lanes with no bike lane, curb or sidewalk. SW Tonquin Road is a Washington County Arterial. Washington County and City of Sherwood arterial half street sections for a 2-lane roadway require a 12-foot wide driving lane with a 6-foot wide bike lane. City of Sherwood requires a 5-foot wide landscape strip and a 6-foot wide sidewalk. Washington County minimum half street right-of-way width for an arterial is 45 feet. Right-of-way will be required to be dedicated to create a 45-foot wide half street right-of-way along the subject property frontage of SW Tonquin Road.

A regional trail has been designated in this area and after discussions between the city and county it has been determined that it would be best to keep the regional trail near SW Tonquin Road rather than traversing through developable industrial property. Terrain was also taken into consideration when making this decision.

Due to the wetlands on the west side of SW Tonquin Road it is likely that expansion of SW Tonquin Road westward of where it currently lies will be limited. Therefore, the city and county are in discussions to use a non-standard street section along SW Tonquin Road. This non-standard street section will likely push the back of sidewalk/regional trail to 45 feet from center line. This will significantly increase the cut into the rock slopes and wall height (up to 17' height) to construct.

SW Tonquin Road fee-in-lieu analysis

The following are factors that need to be considered when deciding to condition the widening improvements onto the developer.

1. Although the property has frontage along SW Tonquin Road, the subject property will not have direct access to SW Tonquin Road.
2. Construction of SW Tonquin Road will need a road closure of significant duration to construct (estimating about 3 months). With SW Tualatin-Sherwood Road under construction and Ice Age Drive still over 2 years out from completion, closing of SW Tonquin Road at this time could create significant traffic issues for SW Tualatin-Sherwood Road and for SW Morgan Road which would likely be used by locals regardless of designated detour route.
3. The SW Tonquin Road/SW Oregon Street intersection has traffic flow issues during peak daytime hours. Due to this, the intersection of SW Tonquin Road/SW Oregon Street is due to be reconstructed/replaced with a new round-about. The taper lengths of this new round-about will likely extend southward beyond the northern end of the subject property, thus requiring some of the new widening improvements to be removed and reinstalled.
4. Construction of frontage improvements along SW Tonquin Road along the frontage of the subject property is not a high priority since the subject property is on the edge of the city limits with the area to the south and east being within the urban reserves. Currently SW Tonquin Road provides adequate transportation connectivity between Sherwood and Wilsonville in its current state. Construction of street widening at this time would only provide for bicycle and pedestrian traffic along this section of SW Tonquin Road which would then end in the side of a cut bank with no place for the bicyclers and

pedestrians to go since there are no further bike lanes or sidewalks southeast of the subject property making the improvements a path to nowhere.

A higher priority is construction of a new round-about at the SW Tonquin Road/SW Oregon Street intersection which is currently needed due to traffic capacity issues at the intersection. Increasing traffic at this intersection is to be expected with the development of the Tonquin Employment Area and other projects that are under construction or approved for construction in the downtown area. By not conditioning the widening improvements along the subject property street frontage of SW Tonquin Road, building TDTs and transportation SDCs will not need to be credited for a pathway to nowhere and instead could be used for higher priority projects.

Due to analysis above the subject development is not conditioned to install street widening improvements along the subject property frontage of SW Tonquin Road and instead will be required to make a fee-in-lieu payment for 125% of the estimated amount to widen SW Tonquin Road to a local street section standard with combined regional trail as provided by an Oregon registered professional engineer and as approved by the City of Sherwood city engineer and Washington County county engineer. This engineer's estimate shall consist of the following costs involved with a half-street widening of the subject property's frontage of SW Tonquin Road to an 18-foot wide half street width, 5-foot wide planter strip, 12-foot wide regional trail, 1-foot wide buffer and an 8-foot wide PUE prior to wall placement:

1. Excavation for street widening improvements including bank/rock excavation to install wall.
2. Construction of wall to the height necessary at 38 feet from the centerline of SW Tonquin Road.
3. Placement of geotextile fabric.
4. Installation of base rock (10-inches total thickness).
5. Installation of curb and gutter.
6. Installation of asphalt (4-inches total thickness)
7. Installation of concrete sidewalk (12-feet wide).
8. Installation of street lights necessary to provide street lighting along SW Tonquin Street (photometric analysis required to establish number of street lights).
9. Storm sewer, manholes and catch basins as needed along the entire subject property frontage.
10. Fee-in-lieu at \$1.50/square foot of new impervious area associated with the items above for costs of storm water quality treatment and storm hydro-modification.
11. Installation of street trees and root barriers.

Since the construction of SW Tonquin Road Street widening improvements will be completed in the future by others (likely via a capital improvement project), a 33-foot wide slope and wall easement will be necessary at the back of the dedicated right-of-way line along the frontage of the subject property to provide for this future construction work. This easement shall be dedicated to Washington County.

Since the widening of SW Tonquin Road will be occurring in the future and since the subject development will likely have constructed its site improvements (wall, parking lot, building, etc.)

prior to this widening of SW Tonquin Road, it will be required that the developer record an agreement absolving the city, county or any agents thereof of liability for any damages that may occur within the subject property due to the beforementioned construction work.

All street construction, right-of-way dedications and PUE dedications for SW Commerce Court will need to have obtained Final Engineering Acceptance from the City of Sherwood engineering department prior to Final Engineering Acceptance of public improvements associated with the subject development. Since construction of SW Commerce Court is to current standards, no street improvements to SW Commerce Court will be required except as necessary to provide driveway access to the subject property.

Condition: Prior to Grading Permit, any grading work to be performed in neighboring properties shall have written approval by the neighbor. This shall be submitted to the Sherwood engineering department for approval.

Condition: Prior to issuance of any Permits from the Building Department, Site Plan Approval or Approval of the Engineering Public Improvement Plans, the developer shall record an agreement absolving the city, county or any agents thereof of liability for any damages that may occur within the subject property due to the construction of street widening and utility improvements within SW Tonquin Road meeting the approval of the Washington County and Sherwood engineering departments.

Condition: Prior to Approval of the Engineering Public Improvement Plans, the developer shall design all driveway accesses onto SW Commerce Court to meet the approval of the Sherwood engineering department.

Condition: Prior to Approval of the Engineering Public Improvement Plans, the developer shall design to close off access to No Name Road meeting the approval of the Sherwood and Washington County engineering departments.

Condition: Prior to Approval of the Engineering Public Improvement Plans, the developer shall make a fee-in-lieu payment at 125% of an Oregon state professional engineer's estimate to cover the following:

1. Cost to excavate for street widening improvements including bank/rock excavation to install wall.
2. Cost to construct of wall to the height necessary at 38 feet from the centerline of SW Tonquin Road.
3. Cost for placement of geotextile fabric.
4. Cost to install base rock (10-inches total thickness).
5. Cost to install of curb and gutter.
6. Cost to install asphalt (4-inches total thickness)
7. Cost to install concrete sidewalk (12-feet wide).
8. Cost to install street lights necessary to provide street lighting along SW Tonquin Street (photometric analysis required to establish number of street lights).
9. Cost to install storm sewer, manholes and catch basins as needed along the entire subject property frontage.
10. Fee-in-lieu at \$1.50/square foot of new impervious area associated with the items above for costs of storm water quality treatment and storm hydro-modification.

11. Cost to install street trees and root barriers.

The engineer's estimate will need to meet the approval of the Sherwood city engineer and the Washington County county engineer.

Condition: Prior to Acceptance of Public Improvements, SW Commerce Court shall have received acceptance of public improvements by the Sherwood engineering department.

Condition: Prior to Acceptance of Public Improvements, No Name Road shall be vacated with public easements in place as required (public storm sewer, public sanitary sewer, etc.) meeting the approval of the Sherwood engineering department.

Condition: Prior to Acceptance of Public Improvements, the developer is required to dedicate right-of-way along the subject property frontage of SW Tonquin Road to create a 45-foot-wide half street right-of-way section meeting the approval of the Washington County engineering department.

Condition: Prior to Acceptance of Public Improvements, the developer is required to dedicate an 8-foot-wide PUE adjacent to the back side of the newly dedicated right-of-way along the subject property frontage of SW Tonquin Road meeting the approval of the Sherwood engineering department.

Condition: Prior to Acceptance of Public Improvements, the developer is required to dedicate a 33-foot wide slope and wall easement to Washington County adjacent to the back side of the newly dedicated right-of-way along the subject property frontage of SW Tonquin Road meeting the approval of the Washington County and Sherwood engineering departments.

Sanitary Sewer

Currently the subject properties don't have direct access to public sanitary sewer. As part of the development north of the subject properties, a new public sanitary sewer is being constructed within No Name Road and SW Commerce Court that will serve the subject properties. The public sanitary sewer under construction will need to be accepted by the Sherwood engineering department prior final acceptance of public improvements for the subject development. No water meter will be issued to the subject property until this public sanitary sewer has received city acceptance.

Currently SW Tonquin Road has no sanitary sewer within adjacent to the subject property frontage. Eventually the urban reserves area southeast of the subject property will have the need for the public sanitary sewer to be extended along the subject property frontage, however, construction of this public sanitary sewer extension at this time has its difficulties. SW Tonquin Road will likely need to be closed for the construction work for access (12 feet of roadway width for trenching and 12-feet of roadway width for truck loading) and worker safety. The proposed sanitary sewer will need to be open trenched due to boulders encountered with previous sanitary sewer work within SW Tonquin Road. Also, the new sanitary sewer will be below the flood plain elevation making work slower. The estimated road closure time for this work is approximately one month.

The urban reserves area to the southeast currently has not received long range planning necessary to get the property brought into the urban growth boundary. So it is likely that the improvements would lose lifespan while waiting for these items to happen (potentially 10-20 years). Any adjustment in grade elevations within this section of SW Tonquin Road will result in having to make adjustments to the manholes due to the future street improvements within SW Tonquin Road.

The developer has proposed extending the public sanitary sewer from its existing location in the SW Commerce Court cul-de-sac to the southern property line of the subject property to provide service to the urban reserves area to the south. This extension would not be able to serve the entirety of the urban reserve area as the current sanitary sewer is 8 inches in diameter and is at an elevation that is too high in elevation to serve the lower areas of the urban reserves to the south. Also, city policy is to have public sanitary sewer within public streets for access to and maintenance thereof.

Due to analysis above the subject development is not conditioned to install public sanitary sewer improvements along the subject property frontage of SW Tonquin Road and instead will be required to make a fee-in-lieu payment for 125% of the estimated amount to install said public sanitary sewer extension noted above as provided by an Oregon registered professional engineer and as approved by the City of Sherwood city engineer. This engineer's estimate shall consist of the following:

1. Cost to install an 8-inch diameter sanitary sewer and manholes from its current termination point within the SW Commerce Court cul-de-sac to the southern property line of the subject property.

This meets the intent of the "to and through" requirements of the Sherwood municipal code.

Condition: Prior to Final Approval of Engineering Plans, the subject development shall design to provide public sanitary sewer service to the subject property meeting the approval of the Sherwood Engineering Department.

Condition: Prior to Approval of the Engineering Public Improvement Plans, the developer shall make a fee-in-lieu payment at 125% of an Oregon state professional engineer's estimate to cover the following:

1. Cost to install an 8-inch diameter sanitary sewer and manholes from its current termination point within the SW Commerce Court cul-de-sac to the southern property line of the subject property.

The engineer's estimate will need to meet the approval of the Sherwood city engineer.

Condition: Prior to Acceptance of Public Improvements, sanitary sewer under construction within No Name Street and SW Commerce Court shall have received acceptance of public improvements by the Sherwood engineering department.

Condition: Prior to Acceptance of Public Improvements, the developer shall dedicate maintenance access easements to the city of Sherwood at the northern end of the subject property along the south side of No Name Road meeting the approval of the Sherwood engineering department.

Condition: All private sanitary piping shall be installed in compliance with the current Oregon Plumbing Specialty Code.

Storm Sewer

Currently the subject properties don't have direct access to public storm sewer system but does have access to existing culvert pipes beneath SW Tonquin Road adjacent to the subject property. As part of the development north of the subject properties, a new public storm sewer is being constructed within No Name Road and SW Commerce Court that will serve the subject properties. The subject properties will need to discharge site storm runoff to the new storm sewer system. The public storm sewer under construction will need to be accepted by the

Sherwood engineering department prior to final acceptance of public improvements for the subject development.

On-site storm water runoff water quality treatment and hydro-modification is required conforming with Clean Water Service standards.

See transportation section above for comments concerning fee-in-lieu of installing storm sewer improvements and storm water runoff water quality treatment and hydro-modification within SW Tonquin Road.

Condition: Prior to Approval of the Engineering Public Improvement Plans, the developer shall design to connect to the existing public storm sewer at a location meeting the approval of the Sherwood engineering department.

Condition: Prior to Approval of the Engineering Public Improvement Plans, the developer shall design for a private on-site water quality treatment/hydro-modification facilities meeting the approval of the Sherwood engineering department.

Condition: Prior to Approval of the Engineering Public Improvement Plans, a Final Stormwater Drainage Report in compliance with Clean Water Services standards shall be provided meeting the approval of the Sherwood engineering department.

Condition: Prior to Acceptance of Public Improvements, the developer shall record a Private Stormwater Facility Access and Maintenance Covenant meeting the approval of the Sherwood engineering department.

Condition: Prior to Acceptance of Public Improvements, the developer shall submit an O&M plan for private on-site water quality treatment/hydro-modification facilities meeting the approval of the Sherwood engineering department.

Condition: Prior to Acceptance of Public Improvements, storm sewer under construction within No Name Street shall have received acceptance of public improvements by the Sherwood engineering department.

Condition: All private stormwater piping shall be installed in compliance with the current Oregon Plumbing Specialty Code.

Water

Currently the subject properties don't have direct access to public water. As part of the development north of the subject properties, a new public water line is being constructed within SW Commerce Court that will serve the subject properties. The public water under construction will need to be accepted by the Sherwood engineering department prior to final acceptance of public improvements for the subject development. No water meter will be issued to the subject property until this public water system has received city acceptance.

Currently SW Tonquin Road has no water line within adjacent to the subject property frontage. Eventually the urban reserves area southeast of the subject property will have the need for the public water to be extended along the subject property frontage, however, construction of this public water extension at this time has its difficulties. SW Tonquin Road will likely need to be closed for the construction work for access (12 feet of roadway width for trenching and 12-feet of roadway width for truck loading) and worker safety. Since the water extension in question is not currently in the Sherwood water master plan, credits for oversizing of the water line would not be available. A water line within SW Tonquin Road would likely need to have a diameter of 12 inches to adequately supply water to the urban reserve area to the southeast. Since

oversizing credits are not available, installation of a water line at this time would have a diameter of 8 inches which would then need to be upsized in the future thus wasting most of the original investment into the water line.

The estimated road closure time for this work is approximately three weeks.

The urban reserves area to the southeast currently has not received long range planning necessary to get the property brought into the urban growth boundary. So it is likely that the improvements would lose lifespan while waiting for these items to happen (potentially 10-20 years). Any adjustment in grade elevations within this section of SW Tonquin Road will result in having to make adjustments to the fire hydrants and valve risers.

The developer has proposed extending the public water line from its existing location in the SW Commerce Court cul-de-sac to the southern property line of the subject property to provide service to the urban reserves area to the south. This extension would not be able to serve the entirety of the urban reserve area as the current water line is 8 inches in diameter which would not be adequate for servicing the urban reserve area to the south. Also, city policy is to have public water lines within public streets for access to and maintenance thereof.

Due to analysis above the subject development is not conditioned to install public water improvements along the subject property frontage of SW Tonquin Road and instead will be required to make a fee-in-lieu payment for 125% of the estimated amount to install said public water line extension noted above as provided by an Oregon registered professional engineer and as approved by the City of Sherwood city engineer. This engineer's estimate shall consist of the following:

1. Cost to install an 8-inch diameter water line from its current termination point within the SW Commerce Court cul-de-sac to the southern property line of the subject property (including fittings and restraining).
2. Cost to install 2 fire hydrants along the subject property frontage (including fittings and restraining).

This meets the intent of the "to and through" requirements of the Sherwood municipal code.

Condition: Prior to Final Approval of Engineering Plans, the subject development shall design to provide public water service to the subject property meeting the approval of the Sherwood Engineering Department.

Condition: Prior to Approval of the Engineering Public Improvement Plans, the developer shall make a fee-in-lieu payment at 125% of an Oregon state professional engineer's estimate to cover the following:

1. Cost to install an 8-inch diameter water line from its current termination point within the SW Commerce Court cul-de-sac to the southern property line of the subject property (including fittings and restraining).
2. Cost to install 2 fire hydrants along the subject property frontage (including fittings and restraining).

The engineer's estimate will need to meet the approval of the Sherwood city engineer.

Condition: Prior to Acceptance of Public Improvements, the water system under construction within SW Commerce Court shall have received acceptance of public improvements by the Sherwood engineering department.

Condition: All private water piping shall be installed in compliance with the current Oregon Plumbing Specialty Code.

Grading and Erosion Control

The subject development will result in ground disturbance of greater than 5 acres of area. Therefore a DEQ NPDES 1200C permit is required. Currently there is an active DEQ NPDES1200C for the subject properties for mass grading. Updated plans will need to be submitted to accommodate revisions due to the subject development.

There is an active City of Sherwood grading and erosion control permit for the subject properties for mass grading. A new City of Sherwood grading and erosion control permit will be required to accommodate the site changes from the original permit.

Condition: Prior to issuance of any Permits from the Building Department, Site Plan Approval or Approval of the Engineering Public Improvement Plans, applicant shall obtain approval on the revisions to the DEQ NPDES 1200C permit or obtain a new DEQ NPDES 1200C permit.

Condition: Prior to issuance of any Permits from the Building Department, Site Plan Approval or Approval of the Engineering Public Improvement Plans, applicant shall obtain a City of Sherwood grading and erosion control permit.

Other Engineering Issues

A prescreen for environmentally sensitive areas was submitted to Clean Water Services for the subject development. Clean Water Services determined that the subject development will not significantly impact the sensitive areas near the subject properties.

There are overhead franchise utilities along the northeast side of SW Tonquin Road along the subject properties' frontage. The power lines on these poles exceeds 50,000 volts and therefore per the Sherwood Municipal Code the power lines may remain overhead.

Currently there are no Sherwood Broadband facilities along the subject properties' frontage of SW Tonquin Road. Since street widening improvements are not being constructed at this time, a fee-in-lieu of constructing Sherwood Broadband improvements will be required.

Condition: Prior to Final Approval of Public Improvement Plans, the applicant shall obtain any necessary permits required from WACO for construction access to Washington County streets.

Condition: Prior to Final Approval of the Public Improvement Plans, a Stormwater Connection Permit shall be obtained from Clean Water Services.

Condition: Prior to Final Approval of Public Improvement Plans, an Engineering Compliance Agreement shall be executed with Sherwood Engineering Department. Performance and payment bonds and insurance riders must be submitted to the City.

Condition: Prior to Final Approval of Public Improvement Plans, a fee-in-lieu payment will be made for Sherwood Broadband utilities (vaults and conduit) from its current termination point within the SW Commerce Court cul-de-sac to the southern property line of the subject property.

Condition: Prior to Final Acceptance of Public Improvements, all public improvements shown within the approved engineering plans shall be in place and approved by the Sherwood Engineering Department.

Condition: Prior to Final Acceptance of Public Improvements, the 2 subject parcels shall be consolidated into 1 parcel.

Condition: Prior to Grant of Occupancy, final acceptance of the constructed public improvements shall be obtained from the Sherwood Engineering Department.

Notice: It is the applicant's responsibility to apply for System Development Charge/TDT credits in compliance with the Sherwood Municipal Code. The developer will need to obtain a credit voucher for credits to be applied against SDCs/TDTs. Any building permits SDCs/TDTs paid prior to issuance of credits will not be refunded. Developer shall take this into consideration when obtaining building permits.

END OF ENGINEERING CONDITIONS OF APPROVAL