



**U.S. Department of Housing and Urban
Development**

451 Seventh Street, SW
Washington, DC 20410
www.hud.gov

espanol.hud.gov

Environmental Assessment Determinations and Compliance Findings for HUD-assisted Projects 24 CFR Part 58

**This is a suggested format that may be used by Responsible Entities to document completion of an
Environmental Assessment.**

Project Information

| | |
|--|---|
| Project Name: | Troutdale Apartments |
| Responsible Entity: | Multnomah County, Department of County Human Services |
| Grant Recipient (if different than Responsible Entity): | Home Forward 135 SW Ash Street, Portland, OR 97204 |
| State/Local Identifier: | OR/Multnomah County |
| Certifying Officer Name and Title: | Peggy Samolinski Youth and Family Services Division Director |
| Consultant (if applicable): | Jonathan Rigg, Dudek 605 NE 21 st Avenue Portland, Oregon 97232 503.956.1444 |
| Direct Comments to: | Peggy Samolinski Youth and Family Services Division Director Multnomah County Dept. of Human Services cdbg@multco.us 209 SW 4th Avenue, Suite 200 Portland, OR 97204 |

Project Location:

The Troutdale affordable housing project site is currently a vacant lot, which is approximately 3.58 acres located in Troutdale, Oregon. The site, which occupies tax lots 2501, 2502, and 2601, is bounded by 257th on the west, SW Kendall to the east, SW 2nd to the south, and adjacent buildings to the north. The property is located near historic downtown Troutdale, Oregon in Multnomah County (see **Figure 1**). The project site was never known to have a formal address.

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:

The property is currently owned by Multnomah County and an intergovernmental agreement (IGA) was executed on Feb 10th, 2021, which stipulates that at financial closing the title will be transferred from Multnomah County to Home Forward for the purpose of building affordable housing.

Home Forward intends to develop the proposed project parcel into a three-building affordable housing complex with a total of eighty-five (85) units. Approximately 10 units would be studios, 32 units would be one-bedroom apartments, 31 units would be two-bedroom apartments, and 12 units would be three-bedroom apartments.

Building A would have twenty-three (23) units composed of 13 one-bedroom, 7 two-bedroom, and 3 three-bedroom units and Building B would have thirty-six (36) units composed of 4 studio, 14 one-bedroom, 12 two-bedroom, and 6 three-bedroom units. Building C would have twenty-six (26) units composed of 6 studio, 5 one-bedroom, 12 two-bedroom, and 3 three-bedroom units.

The proposed project will include a total of forty-two (42) single units and forty-three (43) family units. All units at the Troutdale Apartments would be reserved for families and individuals earning at or below 60% of the area mean income (AMI).

The layout of the complex includes two courtyards/play areas. Each of these are protected from traffic noise from SW 257th Drive by the residential structures. The play area near Building A will have nature inspired area with artificial turf and an activity area for children. A conceptual plan view of the proposed project that identifies the three residential buildings, courtyards, play areas, and parking is provided in **Figure 2**.

The topographical conditions at this site vary substantially and will require construction of several retaining walls. Buildings B and C are cut into the slope north of SE 4th Street, and a retaining wall would be constructed along the south part of the property. The driveway access from 4th Street will also be sloped down to meet the grade of the parking areas. Finally, because the property is elevated above SW 257th Drive, stairs will be required for access to SW 257th Drive.

Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:

The **Purpose** of the Troutdale Apartments project is to provide affordable housing in an underserved area of Multnomah County.

The **Need** for the Troutdale Apartments project is driven by these facts:

- Every Home Forward property has a lengthy waitlist for affordable, safe, and well-managed housing options;

- There is a lack of quality affordable housing options for small and large households in Multnomah County and Troutdale, where there is access to good schools and community amenities;
- Portland metro area is experiencing increasing rents and home prices and associated displacement of low-income households; and
- New housing units and new residents will bring vitality to the Troutdale site and the surrounding neighborhood.

Existing Conditions and Trends [24 CFR 58.40(a)]:

According to the Phase I Environmental Site Assessment (ESA) completed by PBS Environment and Engineering, Inc. in July 2016, the project site is currently an undeveloped vacant lot. The project site was historically occupied by the David F. Buxton farmstead, one of the original landowners of Troutdale. The first portion of the farmstead was constructed in 1862, with an original log cabin near Sandy Boulevard/Historic Columbia River Highway, at least one residence built near the spring located in the southwest portion of the property, and other structures built in the northern portion. The subject property was divided and sold following Buxton's death in 1910 and the last house on the project site burned down in 1981, prior to the construction of NE257th Drive. The project site has been vacant for approximately 50 years.

Land uses surrounding the project parcel is as follows:

East: SW Kendall Ave, Multnomah County Sheriff's Office; Troutdale Municipal Courthouse
 West: SW 257th Drive; Restaurants (Troutdale Station Food Carts), and Self Storage
 North: Commercial (Plaid Pantry) and Restaurants; E Columbia River Highway
 South: Residential (single family homes); Troutdale Public Works Building, Helen Althaus Park, SW 4th Street

Funding Information

| Grant Number | HUD Program | Funding Amount |
|---------------------|--|-----------------------|
| B-23-CP-OR-1232 | HUD Community Project Funding Grant | \$3,000,000 |
| NA | OHCS National Housing Trust Fund (HTF) | \$4,000,000 |
| NA | Home Forward MTW Cap Grant Funds | \$3,000,000 |

Estimated Total HUD Funded Amount:
\$10,000,000.00

Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]:
\$53,601,319.00

Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

| Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6 | Are formal compliance steps or mitigation required? | Compliance determinations |
|---|---|---|
| STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6 | | |
| Airport Hazards 24 CFR Part 51 Subpart D | Yes No <input type="checkbox"/> <input checked="" type="checkbox"/> | The project site is not located adjacent to any military or municipal airports. The nearest municipal airport is the Troutdale Airport, located approximately 1.2 miles northwest of the project site (see Attachment 1; see Environmental Review Record [ERR] 1). |
| Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501] | Yes No <input type="checkbox"/> <input checked="" type="checkbox"/> | The Coastal Barrier Resources Act does not apply to this project because no coastal barrier resources protected under this policy occur in Oregon (see Attachment 2; see ERR 2). In addition, because the proposed residential project is located approximately 76.6 miles from the coast, it is unlikely to affect coastal resources (USFWS 2019). |
| Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a] | Yes No <input type="checkbox"/> <input checked="" type="checkbox"/> | The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map indicates that the project site does not occur on a floodplain. According to the map, the project site is in Zone X, an area outside of the Special Flood Management Areas and at a higher elevation than the 0.2% annual chance flood areas (FEMA 2020) (FIRM Panel 41051 C0217J Effective February 2019; see (Attachment 3; see ERR 3)). |
| STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5 | | |

| | | |
|---|---|---|
| <p>Clean Air</p> <p>Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93</p> | <p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p> | <p>Air Quality in the Portland region currently meets all federal air quality health standards (Oregon DEQ, 2022). According to the EPA Green Book and NEPAassist, accessible at https://www.epa.gov/nepa/nepassist, the proposed project site, located in Multnomah County, OR, is in a maintenance zone for CO and 1-hour ozone. However, the EPA designated Portland, another city within Multnomah County, as “attaining” for CO and ozone in 1997. The maintenance period for CO ended in 2017 while the maintenance period for ozone ended in 2015. Because the maintenance periods for both CO and ozone are concluded, federal projects in Multnomah County are no longer subject to General Conformity requirements, codified in Oregon Administrative Rules Chapter 340, Division 250. This means that the City of Troutdale does not have to demonstrate that direct and indirect emissions from the project, in this case CO emissions and ozone precursor emissions, will be de minimis. Mitigation measures are to be employed for short-term construction related activities. The project is in compliance with the Clean Air Act (see Attachment 4; see ERR 4).</p> |
| <p>Coastal Zone Management</p> <p>Coastal Zone Management Act, sections 307(c) & (d)</p> | <p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p> | <p>No adverse impacts to Oregon’s designated coastal zones would occur as a result of the proposed development. The proposed project is approximately 76.6 miles from the coast (see Attachment 5; see ERR 5).</p> |
| <p>Contamination and Toxic Substances</p> <p>24 CFR Part 50.3(i) & 58.5(i)(2)</p> | <p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p> | <p>A Phase I ESA conducted by Hahn and Associates in July 2022 and found no recognized environmental conditions (RECs), historical RECs, or controlled RECs on the project site. No hazardous substances or petroleum products were observed on site. Underground storage tanks and aboveground storage tanks, such as vent pipes or fill pipes, were not observed on the project site. No vapor mitigation concerns were identified. Examination or sampling of individual building components or fixtures were not within the scope of the Phase I ESA. No PCB- containing transformers were observed onsite.</p> |

| | | |
|---|---|---|
| | | <p>While the Phase I ESA did not find any RECs, Hahn and Associates provided recommendations for the following site conditions (see ERR 6):</p> <ul style="list-style-type: none"> • There is the potential for water wells and a septic system to be present onsite in association with previous residences. As a result, future redevelopment plans should consider this possibility during site clearing and grading activities. Care should be taken to identify and manage the above noted features if encountered. • There is the potential for water well to be present onsite in association with previous residences. As a result, of future development encounters a water well, it should be decommissioned according to applicable regulations. • There is a monitoring well that was observed on the site. If the monitoring well is to be removed by project development it should be decommissioned according to applicable regulations. • Based upon the history of agricultural usage at the site, it is possible that low-level hazardous substances impacts may be present in soils at the subject property. For any soils that are slated for excavation and removal, it is recommended that a Clean Fill Determination is performed on the soils per Oregon Department of Environmental Quality criteria to determine appropriate management decisions. |
| <p>Endangered Species</p> <p>Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402</p> | <p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p> | <p>The USFWS's Information for Planning and Consultation (IPaC) database was also reviewed to determine the presence of and potential for special-status species to occur onsite. Five species classified as Endangered or Threatened by the U.S. Fish and Wildlife Service (USFWS) were identified as possibly occurring on the project site, including three bird species, one insect species, and one type of flowering plant: the Northern Spotted Owl (<i>Strix occidentalis</i></p> |

| | | |
|---|---|---|
| | | <p><i>caurina</i>), Streaked Horned Lark (<i>Eremophila alpestris strigata</i>), Yellow-billed Cuckoo (<i>Coccyzus americanus</i>, Monarch Butterfly, and Nelson's Checker-mallow.</p> <p>According to the IPaC database, although the general habitat ranges of these five species overlap with the project location, their critical habitat areas do not intersect with the project site (USFWS 2020a) (see Attachment 6).</p> <p>Due to the urban and commercial setting surrounding the project site, no federally listed special-status plant or wildlife species are expected to be present on site. Dudek completed a <i>Summary of Biological Findings Memorandum</i> for the proposed project site in April 2022. The report conducted a literature review and field reconnaissance survey to determine if the site has a potential to support habitat for special-status plant and wildlife species. The report determined that based on the high level of disturbance onsite and the development surrounding the site, there is low potential for any of these species to occur on the proposed project area. Rare plant surveys are not recommended due to the disturbed nature of the site. However, the report recommends avoiding development near the perennial stream at the southwest corner of the site to avoid obtaining permits from regulatory agencies and providing mitigation (see Attachment 7).</p> <p>Therefore, the proposed project would not impact wildlife movement, migration, or nursery sites (see ERR 7 and OR ESA & MFA ERR Guidance Form).</p> |
| <p>Explosive and Flammable Hazards</p> <p>24 CFR Part 51 Subpart C</p> | <p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p> | <p>Explosive or flammable hazardous materials would not be present at the project site, which is currently a vacant lot. A diesel fuel tank is located at the adjacent Multnomah County Sheriff's Department station. The tank would be separated from the proposed project area by a concrete masonry wall. Home Forward confirmed with HUD that with the concrete masonry wall in place, the project will be in compliance with 24 CFR 51.205 (see Attachment 8). Another aboveground storage</p> |

| | | |
|---|---|--|
| | | <p>tank was identified at the Comcast service building on the east side of NE 257th Avenue. This storage tank is separated from the project area by a concrete masonry wall as well. Furthermore, the tanks are not within the line of sight of the project area where the concrete masonry wall ends. Therefore, the proposed development would not expose residents or the surrounding community to dangerous explosive or flammable hazards (see ERR 8).</p> |
| <p>Farmlands Protection</p> <p>Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658</p> | <p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p> | <p>The USDA's Web Soil Survey (WSS) map was used to identify soil types on the proposed project site. According to the WSS service, soils onsite are primarily composed of Quafeno loam (93.8%) and Urban land-Quatama complex (6.2%). The USDA classifies Quafeno loam as indicative of prime farmland, while Urban land-Quatama complex is not. Finding soils onsite that support agriculture reflects the that the project site was historically used for farming and pastureland. Although soils onsite support agriculture, the area proposed for development would not be suitable for farming given the surrounding urban land uses (see Attachment 9; see ERR 9).</p> |
| <p>Floodplain Management</p> <p>Executive Order 11988, particularly section 2(a); 24 CFR Part 55</p> | <p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p> | <p>Floodplain management would not be adversely impacted by the proposed project because the project site does not occur on a floodplain or floodway. According to FEMA Flood Insurance Rate Map Panel 41051 C0217J, the project would be in an Area of Minimal Flood Hazard (FEMA 2020) (see Attachment 3; see ERR 10).</p> |
| <p>Historic Preservation</p> <p>National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800</p> | <p>Yes No</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/></p> | <p>Dudek completed a Cultural Resources Survey Report for the proposed project site in December 2022 (see Attachment 10). The cultural resources inventory conducted in the report included a literature review, archival research, and an archaeological field survey. No historic built environment resources or archaeological resources were identified within the project area. The cultural resources survey resulted in the identification of one multicomponent archeological site and the boundaries of the site were subsequently delineated with shovel probes. Multnomah County recommended that the site not be eligible for listing in the National</p> |

| | | |
|---|---|--|
| | | <p>Register of Historic Places due to the lack of historical associations and diminished integrity of the site, which should exclude the site from consideration as a historic property. Therefore, Multnomah County recommended a finding of no historic properties affected for the project and the preparation of an inadvertent discovery plan for the project in the event that unanticipated archaeological resources are encountered during construction (MM-CUL-1).</p> <p>Pursuant to 36 Code of Federal Regulations (CFR) 800.4(d), the Oregon State Historic Preservation Office (SHPO) concurred with the County's finding of <i>no historic properties affected</i> for the proposed development on January 6, 2023. After receiving SHPO concurrence, the City submitted supplemental archaeological survey information to the Oregon SHPO on June 14, 2023, to account for improvements to sidewalks along the project's northern property boundary. No new cultural or archaeological resources were identified in the supplemental surveys and the Oregon SHPO concurred with <i>no historic properties</i> determination on July 12, 2023 (see Attachment 11). As described in MM-CUL-1, construction activities would cease and an archaeologist would be contacted in the event that historic or cultural resources were discovered on the project site during construction ground-disturbing activities (see ERR 11).</p> |
| <p>Noise Abatement and Control</p> <p>Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B</p> | <p>Yes No</p> <p><input checked="" type="checkbox"/> <input type="checkbox"/></p> | <p>Construction Noise. A temporary increase in noise and vibration levels would be expected during the renovation and construction phase of the project. Noise would be generated by construction equipment and the delivery of materials, among other activities. Increases in ambient noise levels would be restricted to daytime hours and would remain within applicable thresholds as long as the contractor implements the construction noise mitigation measures outlined in the Troutdale Housing Development Noise Technical Report completed by Michael Minor & Associates in July 2022</p> |

| | | |
|--|--|--|
| | | <p>(MM-NOI-1 and MM-NOI-2) (see Attachment 12).</p> <p>Operational Noise. The proposed project is not expected to have a negative impact on ambient noise levels during the operational phase. Sources of ambient noise produced by the project during the operational phase would be related to residential land uses. These noise sources may stem from people, car doors slamming, recreational activities, trash collection, and outdoor common areas, among others.</p> <p>The DNL Calculator found on the HUD Exchange web site is typically used to predict exterior noise levels at the project site from the nearby roadways, rail activity, and aircraft. However, due to the complexity of the topographical conditions at this site, and the proximity to two major roadways, on-site noise monitoring was used for this noise analysis. The on-site monitoring was used to calculate the actual measured DNL and compare the measurements to the HUD standards. The measurements would include any noise attenuation from topographical conditions and provide a more accurate understanding of the existing noise environment on this complex site.</p> <p>Existing and future noise levels at this location are dominated by traffic on SW 257th Drive. Noise from other major roadways, like the E Columbia River Highway, are acoustically shielded by existing structures and only contribute minimal noise to the site. Noise levels at those residential units nearest to SW 257th Drive would have exterior noise levels that are above the HUD exterior standard of 65 dBA DNL, with levels ranging from 66 dBA DNL to 70 dBA DNL.</p> <p>Subpart B of 24 CFR Part 51 states that sites at which environmental or community noise exposure exceeds the DNL of 65 dBA are considered to be noise-impacted. However, the</p> |
|--|--|--|

| | | |
|-----------------------------|---|---|
| | | <p>design of the proposed development already includes features to reduce the impact of traffic-related noise on residential units to within HUD's threshold. These design features include exterior wall assembly with 5/8-inch gypsum on 2x6 structural framing, certified R-23 insulation, ½-inch plywood sheath with vapor barriers and fiber cement siding, as well as high quality windows with sound transmission class (STC) ratings of at least 28 (MM-NOI-3). Inclusion of these design features would reduce interior noise levels to a predicted range between 38 and 42 dBA DNL, which is below the HUD interior threshold of 45 dBA DNL. Residences would also be equipped with <i>Heat Recovery Ventilator</i> systems, providing for a "windows closed" scenario that would keep indoor air quality high and minimize noise while apartment windows are closed (MM-NOI-4).</p> <p>The overall design of the complex includes two exterior shared uses areas that are also well shielded from SW 257th Drive traffic noise. The shared outdoor uses include one with a play area near Building A, and a second open courtyard mostly surrounded by Buildings B and C. Worst case peak hour noise levels at the play area near Building A were predicted at 48 dBA Leq. The open area by Building B and C has a worst case peak hourly noise level of 54 dBA Leq. These levels are fully compatible with exterior uses like parks and school grounds.</p> <p>Noise from business operations and other support noise sources are negligible and are not predicted to result in any exceedance of the DEQ standards.</p> <p>The vibration analysis did not identify any long-term increase in vibration levels from the project.</p> <p>Therefore, the proposed project, as designed, will meet the requirements in the HUD standards for an acceptable residential development in an area with existing noise levels above 65 dBA DNL (see ERR 12).</p> |
| Sole Source Aquifers | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | The subject property is not located on nor does it affect a sole source aquifer designated by the |

| | | |
|---|---|---|
| <p>Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149</p> | | <p>EPA. According to the EPA Sole Source Aquifer Map, the Troutdale Aquifer System Area SSA is the nearest aquifer to the project site. Based on the project description, the proposed development would host activities that are unlikely to have an adverse impact on groundwater resources. As a result, the project is in compliance with Sole Source Aquifer requirements (see Attachment 13; see ERR 13).</p> |
| <p>Wetlands Protection</p> <p>Executive Order 11990, particularly sections 2 and 5</p> | <p>Yes No</p> <p><input type="checkbox"/> <input checked="" type="checkbox"/></p> | <p>The National Wetlands Inventory map regulated by USFWS and accessible at https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper, was used to determine the presence of wetlands on the project site. No wetlands were found on the project site. The nearest wetland, according to the National Wetlands Inventory map, is the Sandy River, a riverine habitat adjacent to the Lewis and Clark State Recreation Site, approximately 0.4 miles east of the project site (USFWS 2020b) (see Attachment 14). The portion of the Sandy River closest to the subject property is not classified as a Wild and Scenic River. The Sandy River is not distinguished as a Wild and Scenic River for about 3 miles southeast of the proposed project site.</p> <p>However, a Wetland Determination Report for the project site completed by PBS in November 2021 used the US Army Corps of Engineers' wetland delineation methodology to identify an Unnamed Perennial Stream in the southwest corner of the project site (see Attachment 15). Hydrology sources for the stream appeared to be direct precipitation, groundwater discharge, and possibly upgradient runoff. The Cowardin classification for this stream is riverine, lower perennial, unconsolidated bottom, permanently flooded, and the hydrogeomorphic classification is riverine flow-through. Since the stream is naturally occurring and has year-round flow it meets the criteria for consideration as a jurisdictional water of the state.</p> <p>In addition to the Wetland Determination Report, a Summary of Initial Biological Findings completed by Dudek in April 2022 determined</p> |

| | | |
|--|---|---|
| | | that water in the stream appeared to move offsite and that a rare plant survey is unnecessary since the site is already disturbed (see Attachment 7). The project is designed to avoid the stream; therefore no mitigation or permits from regulatory agencies are needed. As a result, the proposed project is in compliance with E.O. 11990 (see ERR 14). |
| Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c) | Yes No <input type="checkbox"/> <input checked="" type="checkbox"/> | According to the National Park Service's Interactive Map of NPS Wild and Scenic Rivers, accessible at https://www.nps.gov/orgs/1912/plan-your-visit.htm , the proposed project site does not contain any rivers protected under the Wild and Scenic Rivers Act. The Sandy River, located approximately 3.30 miles southeast of the project site, is the closest Wild and Scenic waterway to the project site (U.S. National Park Service 2019) (see Attachment 16; see ERR 15). |
| ENVIRONMENTAL JUSTICE | | |
| Environmental Justice Executive Order 12898 | Yes No <input type="checkbox"/> <input checked="" type="checkbox"/> | <p>Construction: Adverse impacts to air quality and noise during project construction would be temporary and localized and would be avoided, reduced, or mitigated through incorporation of design features, compliance with applicable regulations and policies, and implementation of mitigation measures. Therefore, project construction would not have disproportionate adverse impacts to minority or low-income populations.</p> <p>Operation: Once constructed, the proposed project would provide 94 units of affordable housing to low-income occupants. The EPA's EJScreen tool was used to evaluate environmental and demographic data for the project site and determine whether the project would have disproportionate adverse environmental impacts on future residents and the surrounding community. Environmental factors are measured using eleven environmental indicators (EI) while demographic factors are measured using seven demographic indicators (DI). An EJScreen report</p> |

| | | |
|--|--|---|
| | | <p>for the subject property was run using a 0.125-mile radius centered around the project site.</p> <p>Results of the assessment indicate that the proposed project would not have any aggregate Environmental Justice issues based on the factors evaluated by the EJScreen tool. The project area EI values were higher for nine sources compared to the state average. The project area scored slightly higher than the state average in air quality EIs, including Ozone, 2017 Air Toxics Cancer Risk, and 2017 Air Toxics Respiratory HI. Higher EI values for the project area are expected in these categories as the EPA classifies Multnomah County as “attaining” for ozone and CO, and the maintenance periods for these criteria pollutants ended in 2017 and 2015, respectively. Since the site is currently undeveloped and does not have any buildings, the higher EI values for Lead Paint, USTs, and Wastewater Discharge are from adjacent properties within 0.125 miles of the project site. Higher project site values for Superfund Proximity, RMP Facility Proximity, and Hazardous Waste Proximity can similarly be attributed to neighboring land uses.</p> <p>The composite demographic index for the proposed project is 37%, only 9% higher than the State average. The DI for People of Color, Low Income, Linguistically Isolated and Less Than High School Education were also slightly higher for the project area compared to the State average.</p> <p>Based on the EJScreen assessment for this site, regardless of the population group served by the proposed development, the local population will not be affected disproportionately by environmental issues. The proposed project would have a beneficial impact to the City’s low income population by providing affordable housing to low income and very low income families (see Attachment 17; see ERR 16).</p> |
|--|--|---|

Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 & 1508.27] Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

Impact Codes: Use an impact code from the following list to make the determination of impact for each factor.

- (1) Minor beneficial impact
- (2) No impact anticipated
- (3) Minor Adverse Impact – May require mitigation
- (4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
|--|-------------|--|
| LAND DEVELOPMENT | | |
| Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design | 2 | The proposed project site is on land zoned as MU- 1 for Downtown Mixed-Use according to a map of the City of Troutdale Zoning Districts (City of Troutdale Zoning District Map 2022) The area has a Commercial land use designation (City of Troutdale Comprehensive Land Use Plan 2019) The immediate neighborhood is a mixture of multi-family residential, commercial retail/office, and public facility uses. |
| Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff | 3 | <p>Soil Suitability. Onsite soil conditions were evaluated using the USDA Soil Survey tool, accessible at https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. According to the Soil Survey, the site is composed of Quafeno loam on 3 to 8 percent slopes (approximately 94% of site) and Urban land- Quatama complex on 8 to 15 percent slopes (about 6% of site). The USDA's Soil Data Access for Prime and other Important Farmlands classifies areas containing Quafeno loam as prime farmland and areas composed of Urban-land Quatama as not prime farmland. Although 94% of the site is composed of soil suitable for agricultural use, the urban and developed land cover in adjacent areas would prevent the project site from being used as farmland.</p> <p>Slope and Drainage. In 2016, PBS prepared a Phase I ESA that reviewed the U.S. Geological Survey (USGS) Quadrangle 7.5-minute series topographic map to determine elevation at the project site.</p> |

| | | |
|---|---|---|
| | | <p>According to the USGS map, the site ranges from approximately 150 feet above mean sea level on the south portion to approximately 100 feet on the north portion. There is a moderate slope to the northwest, with a steep drop-off to the west along NE 257th Drive and a steep drop-off to the north from SW 4th Street.</p> <p>Based on topography, the direction of shallow modeled in the Phase I ESA, unconfined groundwater flow is expected to be towards the north; therefore, properties to the south are upgradient of the subject property. The project would not include any substantial alterations to drainage conditions (see Attachment 18).</p> <p>Erosion and Stormwater Runoff. Erosion due to stormwater runoff at the project site would be minimized due to the lack of exposed soils. With the majority of the project site paved or covered by the proposed structure and landscaping, risk of erosion is minimal. Stormwater runoff would flow into storm drains and retained onsite. Stormwater retention capacity is designed to accommodate up to a 10-year storm even; therefore, no offsite impacts from stormwater runoff would occur.</p> <p>Stormwater runoff could become contaminated with chemicals typically used during construction through the daily use, transportation, and storage of these materials. Therefore, implementation of industry-standard construction BMPs are required to reduce and eliminate potential contamination and stormwater and non-stormwater discharges from the construction site. The project would comply with erosion control measures during the construction phase to minimize erosion and stormwater pollution. Best management practices (BMPs) adopted from the Multnomah County Stormwater Quality Management Plan would be incorporated during and after the construction phase of the project (MM-LAND-1 and MM-LAND-2). Other low-impact drainage BMPs would include maintaining existing drainage pathways and impervious areas, and retaining natural areas where possible. Runoff from the project site is not anticipated to exceed the capacity of stormwater drainage systems or contribute to stormwater pollution.</p> |
| Hazards and Nuisances including Site Safety and Noise | 3 | <p>Hazardous Materials. A Phase I ESA conducted by Hahn and Associates in July 2022 found no recognized environmental conditions (RECs), historical RECs, or controlled RECs on the project site. No hazardous substances or petroleum products were observed on site. Underground storage tanks and aboveground storage tanks, such as vent pipes or fill pipes, were not observed on the project site. No vapor mitigation concerns were identified. Examination or</p> |

| | | |
|--------------------|---|--|
| | | <p>sampling of individual building components or fixtures were not within the scope of the Phase I ESA. No PCB- containing transformers were observed onsite.</p> <p>Site Safety. The project would be constructed consistent with the current Multnomah County requirements for lighting and other features related to site safety. No impacts related to hazards, nuisance, or site safety would occur.</p> <p>Noise. A temporary increase in noise would occur during the construction phase of the proposed project. Increases in ambient noise levels would be restricted to daytime hours and would remain within applicable thresholds as long as the contractor follows the construction noise mitigation measures outlined in the Troutdale Housing Development Noise Technical Report completed by Michael Minor & Associates in July 2022. Construction would adhere to local noise control ordinances, which permit construction activity Monday through Friday between 7:00am and 9:00pm, Saturdays between 8:00am and 7:00pm, and on Sundays between 10:00am and 7:00pm. Construction outside these hours would require a noise variance from the City of Troutdale. There are no local, state, or federal regulations governing vibration resulting from short term construction activity.</p> <p>Operational noise sources would include project-generated traffic, onsite businesses, and recreational spaces. Noise from business operations and other support noise sources are negligible and are not predicted to result in any exceedance of the DEQ standards. Noise from any exterior fans, ventilation systems, or other shared sources of potential noise would include the use of modern, low noise systems, and would meet all DEQ property line noise requirements. Traffic along SW 257th Drive is the primary noise source at the project site. Results of the noise study indicate that external noise levels nearest to SW 257th Drive would be 66- 70 dBA DNL, exceeding HUD thresholds. However, current building designs already include features that would reduce interior noise levels to within HUD's threshold of 45 dBA DNL. These features encompass exterior wall assembly/composition, windows with a minimum STC rating of 28, and inclusion of an HVAC system within each residential unit (MM-NOI-3 and MM-NOI-4).</p> <p>The vibration analysis did not identify any long-term increase in vibration levels from the project.</p> |
| Energy Consumption | 2 | <p>According to the Oregon Department of Energy, the average annual residential electricity in Multnomah County was 9,582 kWh in 2020. Electricity to the City of Troutdale is provided by Portland General Electric (PGE) at 335 NE Roberts Ave., Gresham, OR 97030.</p> |

| | | |
|--|--|--|
| | | <p>PGE sources electricity from a mix of water power, wind, solar, natural gas, and a small amount of coal. PGE is working to eliminate coal from their energy source mix by 2035 and plan to reduce their greenhouse gas emissions by 80% by 2030. Electricity is delivered to customers via PGE transmission lines and the regional power grid. Although the proposed project would contribute to the regional use of energy, the increase is not expected to produce an adverse impact. Furthermore, the proposed project would pursue Platinum status through Earth Advantage, a green home certification program in Oregon.</p> |
|--|--|--|

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
|---|-------------|--|
| SOCIOECONOMIC | | |
| Employment and Income Patterns | 1 | The proposed project has the potential to create temporary employment opportunities during the construction phase. Income patterns in the community would benefit from conversion of the currently vacant lot into an affordable housing community. The goal of these services is for residents to successfully retain their housing, make progress in their recovery, and become independent. |
| Demographic Character Changes, Displacement | 1 | Because the proposed project would be built in an area already occupied by residential and commercial land uses, the development would not adversely affect community character. The project would have a beneficial impact on the City of Troutdale because it proposes converting the currently vacant lot into affordable housing units. Therefore, the proposed development would not result in the displacement of existing businesses or residences in the area. Increasing affordable housing units supports the housing priorities detailed in the Troutdale Town Center Plan by creating accommodations for individuals experiencing homelessness. In addition, all units at the Troutdale Apartments would be reserved for families and individuals earning at or below 60% of the area mean income (AMI). As a result, the proposed project would have a positive impact on community character while remaining compliant with existing land use designations and design. |

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
|--|-------------|-------------------|
| COMMUNITY FACILITIES AND SERVICES | | |

| | | |
|-------------------------------------|---|---|
| Educational and Cultural Facilities | 2 | <p>Negative impacts on educational facilities in the City are not foreseen. Given the availability of educational institutions in the area, adverse impacts to schools are not anticipated.</p> <p>The project is located near multiple educational facilities, including the following:</p> <ul style="list-style-type: none"> • Troutdale Elementary School, approximately 0.8 miles southeast of the project site • Walt Morey Middle School, approximately 0.8 miles northeast of the project site • Reynolds High School, approximately 1.3 miles northeast of the project site • Arata Creek School, approximately 1.9 miles southeast of the project site • Under the Trees Forest Preschool, approximately 1.9 miles south of the project site |
| Commercial Facilities | 2 | <p>No adverse impacts to surrounding commercial facilities are anticipated. The project site is bordered by residential, retail, and commercial uses. The businesses located on the southern and eastern project boundaries would not be impacted by the proposed development.</p> |
| Health Care and Social Services | 2 | <p>Increases in the local population could increase demand for health care and social services in the community.</p> <p>The project site is situated near numerous health care facilities, including the following:</p> <ul style="list-style-type: none"> • Legacy Mount Hood Medical Center, about 2.5 miles south of the subject property at 24800 SE Stark St, Gresham, OR 97030 • Primary Care: Adventist Health Portland, approximately 1.2 miles south of the project site at 1700 SW 257th Dr, Troutdale, OR 97060 • Columbia View Family Health Center, about 1.8 miles south of the project site at 2800 SW 257th Dr, Troutdale, OR 97060 • Legacy-Go Health Urgent Care, approximately 2.8 miles southwest of the subject property at 22262 NE Glisan St, Gresham, OR 97030 • Kaiser Permanente Rockwood Medical Office, about 4.6 miles southeast of the subject property at 19500 SE Stark St, Portland, OR 97233 <p>Adverse impacts on healthcare and social services are not anticipated due to the relatively small size of the project and availability of service providers near the proposed development.</p> |
| Solid Waste Disposal / Recycling | 2 | <p>Waste disposal at the project site would be serviced by Waste Management Northwest (WM). WM provides garbage, recycling,</p> |

| | | |
|--|---|--|
| | | compost and yard waste collection for residential, commercial, and construction customers in Washington, Oregon, Idaho, and British Columbia. Landfills used by WM are engineered with overlapping environmental protection systems and are subject to highly regulated monitoring and reporting requirements. No indications of improper solid waste disposal were observed on the subject property during the site reconnaissance. Scattered paper and plastic debris was noted along the western property boundary, on NE 257 th Drive. |
| Waste Water / Sanitary Sewers | 2 | <p>Wastewater and sewage generated by the proposed development during the operational phase would be serviced by the City of Troutdale. The Wastewater Services Division provides pollution control services by collecting, treating, and disposing of an average of 1.4 million gallons of sanitary sewage daily utilizing over 50 miles of sewer mains, 8 pump stations, and a 3 million gallon per day treatment facility. Treated wastewater is discharged to the Sandy River and inert solids are land-applied to agricultural fields that are not growing crops for human consumption.</p> <p>According to the Phase 1 ESA, there is the potential for water wells, and possibly a septic system, to be present at the subject property in association with the previous residences.</p> |
| Water Supply | 2 | <p>The City of Troutdale would provide water to the subject property. The City of Troutdale water well located in the approximate area of the subject property notes that productive groundwater was first found 287 feet below ground surface. The City's Water Division supplies, treats, stores, and distributes an average of 1.6 million gallons of water daily to over 15,000 Troutdale residents and about 200 Troutdale businesses. Water is obtained from six wells ranging in depth from 485-615 feet. Water is then stored in four reservoirs, with a total capacity of six million gallons, and distributed through more than 63 miles of water mains to 4,500 customers.</p> <p>A freshwater spring is located in the southwest portion of the site and remnant piping, or other equipment may remain from historical use of the spring as a municipal water source. This water source should be protected during construction.</p> |
| Public Safety - Police, Fire and Emergency Medical | 2 | <p>The project site is in proximity to public safety providers, as follows:</p> <ul style="list-style-type: none"> • City of Troutdale Police Department, approximately 0.4 miles east of the subject property at 141 SE Dora Ave, Wood Village, OR 97060 • Multnomah County Sheriff's Office, about 0.3 miles east of the subject property at 234 SW Kendall Ave, Troutdale, OR 97060 |

| | | |
|----------------------------------|---|---|
| | | <ul style="list-style-type: none"> Gresham Fire Station 75, about 1.1 miles south of the project site at 600 SW Cherry Park Rd, Troutdale, OR 97060 Gresham Fire Station 72, approximately 3.1 miles south of the subject property at 500 NE Kane Dr, Gresham, OR 97030 Gresham Fire & Emergency Services Station 74, about 3.6 miles west of the property site at 1520 NE 192nd Ave, Portland, OR 97230 <p>Because existing police and fire departments sufficiently serve the project area, the development is not expected to increase demand for public safety services in the community.</p> |
| Parks, Open Space and Recreation | 2 | <p>Recreational spaces in proximity to the project site include the following:</p> <ul style="list-style-type: none"> Glen Althaus City Park, immediately south of subject property. Glenn Otto Community Park, approximately 0.9 miles east of the subject property at 1102 E Historic Columbia River Hwy, Troutdale, OR 97060 McMenamins Edgefield Golf Course, about 1 mile southwest of the project site at 2126 SW Halsey St, Troutdale, OR 97060 Depot City Park, approximately 0.5 miles east of the subject property at 473 E Historic Columbia River Hwy, Troutdale, OR 97060 Lewis and Clark State Recreation Site, about 1.3 miles east of the project site at 1 Jordan Rd, Troutdale, OR 97060 Donald L Robertson City Park, approximately 1.1 miles west of the subject property at 24300 NE Halsey St, Wood Village, OR 97060 <p>Given the relatively small size of the proposed project, an adverse impact to parks, open spaces, and recreational areas is not anticipated.</p> |
| Transportation and Accessibility | 2 | <p>The proposed project is within walking distance of several bus stops located along SW 257th Drive and at the intersection of E. Columbia River Highway with NW Graham Road/SW 257th Drive. The nearest bus stop is located approximately 0.05 miles northwest of the project site at the intersection of E. Columbia River Highway with NW Graham Road/SW 257th Drive and is serviced by bus line 81. Two other bus stops are located at this intersection and are serviced by bus line 77. Another bus stop is located approximately 0.11 miles southwest of the project site along SW 257th Drive and is serviced by bus route 81. These bus routes could take residents to stores,</p> |

| | | |
|--|--|---|
| | | <p>restaurants, and other amenities located near the proposed project site.</p> <p>Pre-existing urban development and readily available public transit near the project site would reduce transportation and accessibility issues, such as limited parking and traffic. Because few residents are likely to own multiple vehicles, there would be ample parking for visitors and staff.</p> |
|--|--|---|

| Environmental Assessment Factor | Impact Code | Impact Evaluation |
|--|-------------|---|
| NATURAL FEATURES | | |
| Unique Natural Features, Water Resources | 3 | <p>The project site does not encompass any unique natural features. Federally protected natural resources, such as rivers, wetlands, coastal zones, and endangered species, are not present on the project site or adjacent properties. Therefore, the proposed project would not result in the alteration of water resources that could potentially result in substantial erosion or siltation on or off site or result in downstream flooding. Groundwater recharge at the project site could be reduced, but recharge would still occur in vegetated green spaces on the project site.</p> <p>Mitigation measures employing BMPs would be required during and after construction to minimize potential adverse contributions to stormwater pollution (MM-LAND-1 and MM-LAND-2).</p> |
| Vegetation, Wildlife | 2 | <p>Although the proposed project is within the ranges one mammal, three birds, one fish, two insects, and three plants of special-status, none of these species are found on the project site because it is developed and in an urbanized area. According to the U.S. Fish and Wildlife Service's IPaC database, the project site is outside of critical habitat areas for the endangered or threatened species that have these areas defined (USFWS 2020a) (see ERR 5).</p> |
| Other Factors | | |

Additional Studies Performed:

Archaeological Resources Survey Report for Home Forward's Troutdale HUD Project, Multnomah County, Oregon. Prepared by Dudek, July 2022.

Summary of Biological Findings Memorandum. Prepared by Dudek, April 2022.

Troutdale Housing Development Noise Technical Report. Prepared by Michael Minor & Associates, July 2022.

Phase I Environmental Site Assessment. Prepared by PBS Engineering and Environmental Inc., July 2016.
Wetland Determination Report for the SW 257th Drive Property. Prepared by PBS Engineering and Environmental Inc., November 2021.

Phase I Environmental Site Assessment. Prepared by Hahn and Associates, July 2022.

Comcast AST Assessment, Troutdale Apartments. Prepared by Dudek, May 2023.

Field Inspection (Date and completed by):

Archaeological Resources Survey Report for Home Forward's Troutdale HUD Project, Multnomah County, Oregon. Prepared by Dudek, July 2022.

Summary of Biological Findings Memorandum. Prepared by Dudek, April 2022.

Troutdale Housing Development Noise Technical Report. Prepared by Michael Minor & Associates, July 2022.

Phase I Environmental Site Assessment. Prepared by PBS Engineering and Environmental Inc., July 2016.
Wetland Determination Report for the SW 257th Drive Property. Prepared by PBS Engineering and Environmental Inc., November 2021.

Phase I Environmental Site Assessment. Prepared by Hahn and Associates, July 2022.

Comcast AST Assessment, Troutdale Apartments. Field inspection March 2023. Prepared by Dudek, May 2023.

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]:

City of Troutdale. 2022. "City of Troutdale Zoning Districts." Accessed December 2022.

https://www.troutdaleoregon.gov/sites/default/files/fileattachments/community_development/page/8481/zoning_districts_troutdale_8_5x11.pdf

City of Troutdale. 2022. "Comprehensive Land Use Plan." Accessed December 2022.

<https://www.troutdaleoregon.gov/commdev/page/comprehensive-land-use-plan>

City of Troutdale. 2022. "Wastewater Services." Accessed December 2022.

<https://www.troutdaleoregon.gov/publicworks/page/wastewater-services>

City of Troutdale. 2022. "Town Center Plan." Accessed December 2022.

<https://www.troutdaleoregon.gov/commdev/page/town-center-plan>

City of Troutdale. 2022. "Water." Accessed December 2022.

<https://www.troutdaleoregon.gov/publicworks/page/water#:~:text=The%20water%20comes%20from%20six,the%20Regional%20Water%20Providers%20Consortium.>

Environmental Protection Agency (EPA). April 2022. "EJScreen: Environmental Justice Screening and Mapping Tool." Accessed December 2022. <https://ejscreen.epa.gov/mapper/>

EPA. March 2022. "NEPAssist." Accessed December 2022.

<https://nepassisttool.epa.gov/nepassist/nepamap.aspx>

Federal Emergency Management Agency (FEMA). 2022. "Community Status Book." Accessed December 2022. <https://www.fema.gov/flood-insurance/work-with-nfip/community-status-book>

Oregon Coastal Management Program. 2022. "Oregon's Coastal Zone." Accessed December 2022.
<https://www.oregon.gov/lcd/OCMP/Pages/Coastal-Zone.aspx>

Oregon Department of Energy. November 2020. "Multnomah County." Accessed December 2022.
<https://energyinfo.oregon.gov/2020-counties/2020/11/1/multnomah-county>

Oregon Department of Environmental Quality. 2022. "Air Quality." Accessed December 2022.
[Department of Environmental Quality : Air Quality in the Portland Region : Air Quality : State of Oregon](#)

Portland General Electric (PGE). 2022. "How We Generate Energy." Accessed December 2022.
<https://portlandgeneral.com/about/who-we-are/how-we-generate-energy>

US Department of Agriculture (USDA). 2019. "Web Soil Survey." Accessed December 2022.
<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>

US Fish and Wildlife Service (USFWS). 2020a. "IPaC Information for Planning and Consultation." Accessed December 2022. <https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper>

USFWS. 2020b. "National Wetlands Inventory." Accessed December 2022.
<https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper>

US National Park Service. 2021. "Interactive map of NPS Wild and Scenic Rivers." Accessed December 2022. <https://nps.maps.arcgis.com/apps/View/index.html?appid=ff42a57d0aae43c49a88daee0e353142>.

Waste Management Northwest. 2022. "Landfill Network." Accessed December 2022.
<https://www.wmnorthwest.com/landfill/index.html>

List of Permits Obtained:

Public Outreach [24 CFR 50.23 & 58.43]:

The Draft Environmental Assessment will be made available for public review to comment on the Multnomah County CDBG page by visiting <https://www.multco.us/cdbg> or in person at the Multnomah County Department of County Human Services office, located at 209 SW 4th Avenue, Suite 200, Portland, OR 97204 starting on 7/21/2023 and comments will be accepted until 5:00pm concluding on 8/7/2023. Finding of No Significant Impact (FONSI) and Request Release of Funds (RROF) was posted in the local Gresham Outlook newspaper for one day on 7/21/2023 to begin the fifteen (15) day comment period.

Cumulative Impact Analysis [24 CFR 58.32]:

The proposed project would not contribute to a significant cumulative impact under the National Environmental Policy Act because it would consist of an urban development project consistent with the site's General Plan land use and zoning designations and would be located near existing transit services. State and

local planning guidelines encourage the development of urban housing in areas served by transit and near commercial and cultural amenities because this type of development contributes less to cumulative effects on the environment in comparison to development of previously undisturbed sites in more remote locations with fewer transit connections, many of which contain native vegetation and wildlife species.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]

Site identification has proven to be a major obstacle in providing affordable housing units. Residential sites available at reasonable cost are extremely limited, and sites that do not meet cost and land use criteria are generally eliminated as alternatives. Home Forward identifies potential properties for affordable housing based on feasibility, location, affordability, and ownership/site control of a potential project site. In addition to the Developer's site selection criteria, physical and social constraints are also considered in identifying and rejecting alternatives. Based on the Developer's site selection criteria and constraints that limit identification of alternative affordable housing project sites, no other build alternatives are analyzed or included in this environmental document.

No Action Alternative [24 CFR 58.40(e)]:

The No Action Alternative would not build any additional housing at the project site. There are no benefits to the physical or human environment by not taking the federal action associated with this project. Physical impacts to the environment would occur in urban areas whether units are subsidized with federal funds or built at market rates. If an affordable project were not constructed on this site, the social benefits of providing new affordable housing opportunities on an urban infill parcel would not occur.

The proposed project must acquire all required permits and approvals prior to construction; therefore, the proposed project would be consistent with all land use plans, policies, and regulations for the project site. Not building on this site could potentially result in more housing constructed outside of the urban area in agricultural and undeveloped areas, contributing to urban sprawl, regional traffic congestion, and regional air quality issues.

Summary of Findings and Conclusions:

Home Forward is proposing the construction of a new 3-building affordable housing complex that would add 94 residential units to the City of Troutdale's housing stock. In several areas, implementation of best management practices during construction, along with any other conditions required for County approval of the project, would not only result in the project having no significant impact on the quality of the human environment but would have a beneficial impact in several areas, such as improving the availability of affordable housing units, reducing the risks of homelessness and instability for the project's future residents, and reducing overcrowding and excessive housing cost burdens among lower-income households in need of both housing and supportive services.

Because the project is within a developed urban area, the project would be adequately served by utilities and public services. The project would conform to all applicable federal, state, and regional regulations associated with land use compatibility, air emissions, water quality, geologic hazards, and related environmental resources addressed herein. Based on the analyses of environmental issues contained in this document, the proposed project would not have significant environmental impacts.

Mitigation Measures and Conditions [40 CFR 1505.2(c)]

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Air Quality – Fugitive Dust

MM-AIR-1

Mitigation measures are to be employed for short-term construction related activities. Contractors must comply with requirements under OAR-340-208 *Visible Emissions and Nuisance Requirements* that state that reasonable precautions to prevent particulate matter (dust) from becoming airborne must be taken during construction activities. Such reasonable precautions may include but not be limited to the use, where possible, of water or chemicals for control of dust during demolition, construction operations, road grading, or land clearing.

Historic Preservation (Cultural Resources)

MM-CUL-1

An inadvertent discovery plan should be prepared for the project and provided to the construction crew for use during ground-disturbing activities within the APE. Should Home Forward or their construction contractor encounter unanticipated archaeological resources during the project, all ground-disturbing activity near the find shall be halted, and a professional archaeologist should be notified, who will ensure compliance with relevant state and federal laws and regulations. If evidence of human burials is encountered, all ground-disturbing activity in the vicinity shall be halted immediately, Home Forward will be responsible for notifying the SHPO, the Multnomah County Sheriff's Office, and the appropriate Tribes.

Noise Abatement and Control

MM-NOI-1

Construction activities associated with the proposed project improvements are expected to result in noise levels that range from 70 to 95 dBA at sites 50 feet from the activities. These noise levels, although temporary in nature, could be annoying. Therefore, the following construction noise abatement measures would be included in the project specifications:

- Construction activities are allowed Monday through Friday between 7:00 am and 9:00 pm, Saturdays between 8:00 am and 7:00 pm, Sunday between 10:00 am and 7:00 pm. Construction outside these hours would require a noise

variance as described in the City of Troutdale Municipal Code, Chapter 8.24.070.

- All equipment used shall have sound-control devices no less effective than those provided on the original equipment. No equipment shall have un-muffled exhaust.
- All equipment shall comply with pertinent equipment noise standards of the U.S. Environmental Protection Agency.

If a specific noise impact complaint is received during construction of the project, the contractor may be required to implement one or more of the following noise abatement measures at the contractor's expense, as directed by the project manager:

- Locate stationary construction equipment as far from nearby noise-sensitive properties as feasible.
- Shut off idling equipment.
- Reschedule construction operations to avoid periods of noise annoyance identified in the complaint.
- Notify nearby residents whenever extremely noisy work will be occurring.
- Install temporary or portable acoustic barriers around stationary construction noise sources.

MM-NOI-2

During high vibration-producing activities such as soil compacting and demolition, there is a potential for vibration being noticeable in nearby structures. Vibration mitigation could include limiting the hours when the vibration-producing equipment can be used near sensitive receivers. By restricting and monitoring vibration-producing activities, vibration impacts from construction can be kept to a minimum.

MM-NOI-3

All windows in residential units should be equipped with windows having a minimum Sound Transmission Class (STC) rating of 28.

MM-NOI-4

Typical new construction of multi-family homes with windows closed provides a minimum of 25 dB exterior to interior noise reduction. To help reduce indoor noise levels residential units would be equipped with a forced air heating ventilation air conditioning (HVAC) unit that allows for a "windows closed" condition (i.e., windows do not need to be left open for ventilation).

Unique Natural Features, Water Resources

MM- LAND-1

Required Erosion Control for Private Development:

The goal of this BMP is to control/reduce amount of erosion and sediments discharged to the receiving waters. Increased turbidity/sedimentation on channel bottoms impairs water quality and fish habitat.

The Planning Division of the Multnomah County Department of Community Services applies the Grading and Erosion Control Standards (GEC) for most “ground-disturbing activities” through plan review and inspections. The County Planning Division requires Hillside Development (HD) or GEC Permits for grading, clearing or fill on any sites within its jurisdictional authority.

HD and GEC Permits standards require temporary and permanent erosion control and water quality protection during construction stages and for long term site stability and mitigation. Inspections are performed by Planning staff for large grading projects and Right-of-Way inspectors perform inspections for the “minimal impact” projects. Each inspection receives either a pass or fail.

An erosion control review is required by the County whenever:

- > 10,000 square feet of ground disturbing activity, or
- Areas disturbed < 200 feet from top of bank of watercourse, or Predevelopment slopes are > 10 % , or
- Post construction; unsupported slopes > 33% that exceed five feet in height. A Hillside Development review is typically required for all construction within a mapped slope hazard zone. This applies to existing undeveloped sites as well as newly developing sites.

MM-LAND-2

Regulate Stormwater Discharge:

The goals of this BMP are to implement localized design standards to adequately address stormwater discharge issues. The County has minimal development review responsibility, yet reviews development for compliance with certain local guidance documents and standards regarding stormwater discharge. County code requires that stormwater runoff attributed to new and re-development is managed on-site for a storm of ten-year, 24 hour design frequency or, is to be discharged to a watercourse in or adjacent to the property at pre-developed rates.

The County has development review authority in the Interlachen Residential Area. When conducting hillside development and erosion control permit review, the Land Use Planning Program of the Department of Community Services uses the current City of Portland Erosion and Sediment Control Manual and the Stormwater Management Manual. The Multnomah County Zoning Code makes reference to the Portland guidance manuals.

In the unincorporated pockets within the Portland Permit Area connection to the right-of-way and drainage discharge to the right-of way is reviewed by Road Engineering. When conducting development review activities, the County refers to their drainage design standards (Chapter 5 of the Design Construction Manual), which references portions of the City of Portland's water quality design standards for new development. Portland Planning also provides drainage review.

The County Design and Construction Manual will be updated during the permit term to reflect priorities for Low Impact Development techniques. For this BMP, the County will review stormwater regulations, design standards, and criteria, as issued by the City of Portland and other jurisdictions, and consider them for use as guidance to regulate both stormwater discharge associated with new and redevelopment activities; review new development permit applications for appropriate stormwater quality and quantity controls in the Interlachen area.

| Law, Authority, or Factor | Mitigation Measure |
|---------------------------|--------------------|
| | |
| | |
| | |
| | |

Determination:

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]

The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]

The project may significantly affect the quality of the human environment.

Preparer Signature: Fanny Adams Date: 7/12/2023

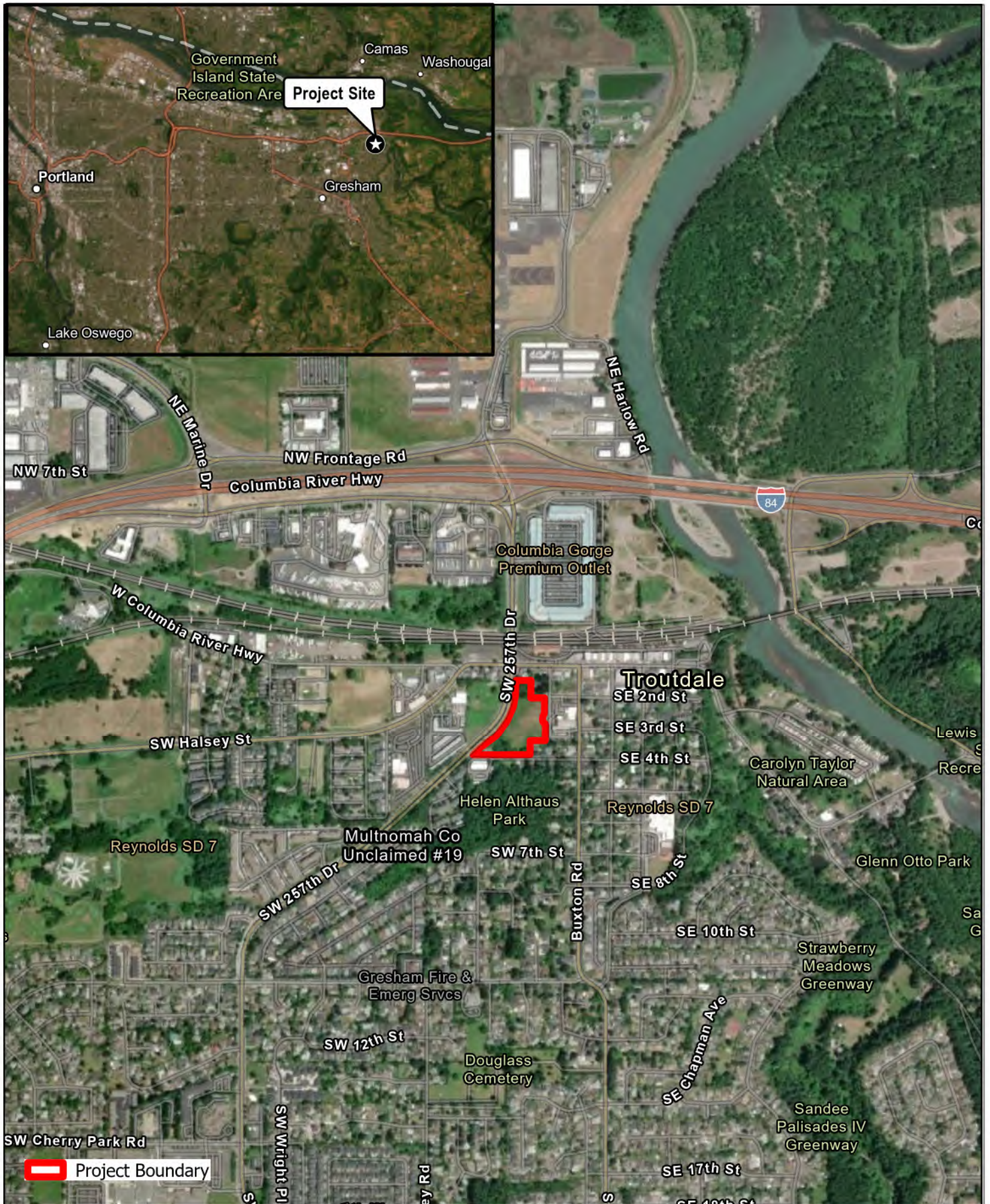
Name/Title/Organization: Fanny Rodriguez-Adams/Program Specialist Senior/Multnomah County Youth & Family Services Division Housing Stability Team

Certifying Officer Signature: Peggy Samolinski Date: 7/12/2023

Name/Title: Peggy Samolinski/Division Director/Multnomah County Youth & Family Services Division

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

Figure 1. Project Location



Source: ESRI Basemap

DUDEK

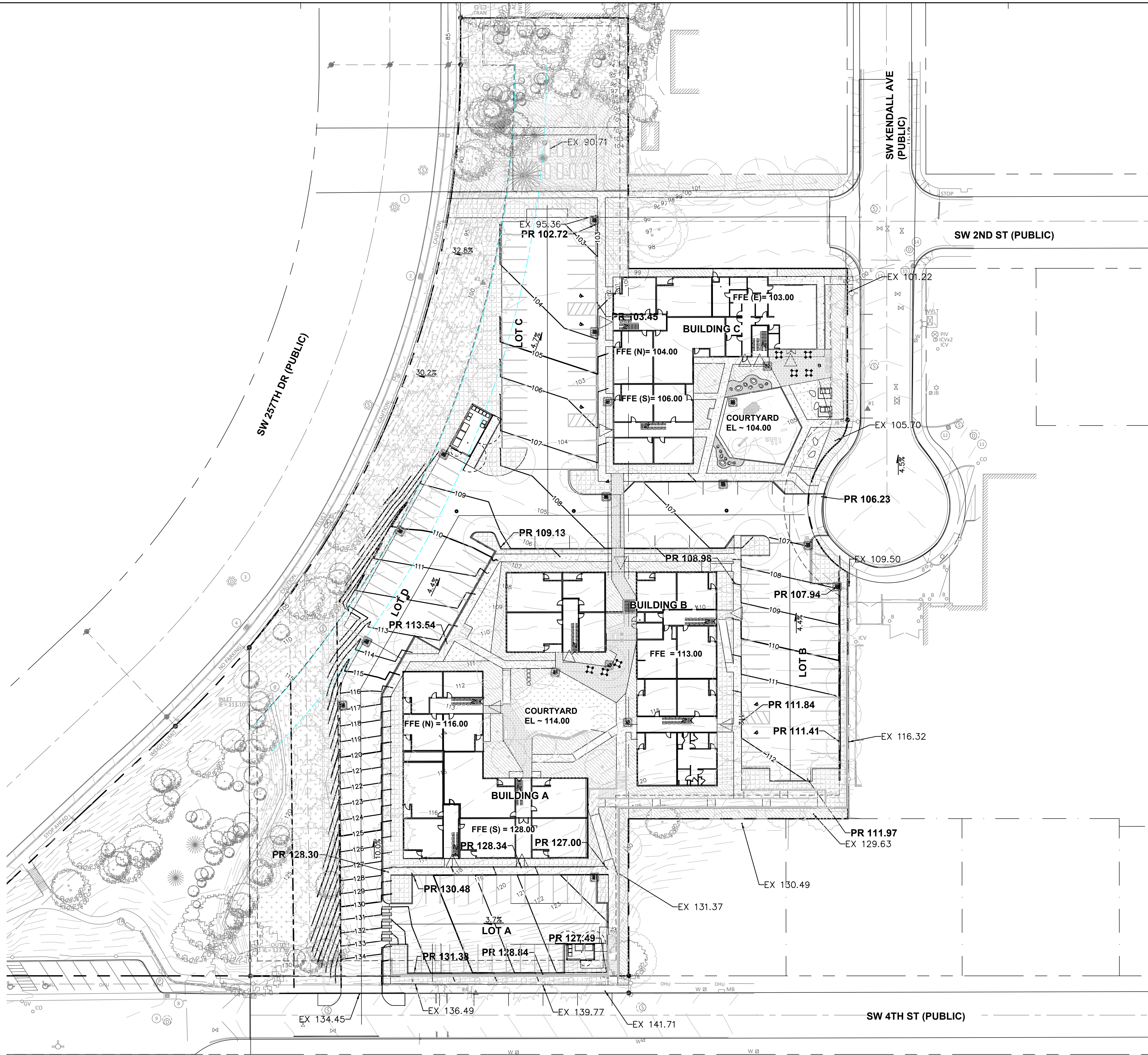


0 500 1,000
Feet

Figure 1
Location Map
Troutdale Apartments

Figure 2. Proposed Project Conceptual Plan

1/10/2022 11:18:49 AM



mwa architects
70 NW COUCH STREET
SUITE 401
PORTLAND, OR 97209
P 503 973 5151
F 503 973 5060
MWAARCHITECTS.COM

REGISTERED PROFESSIONAL ENGINEER
8291
PRELIMINARY
OREGON
JANUARY 12, 2009
JOHN WELLS HANSEN
EXPIRES: 6/30/2024



EMERIO
ENGINEERING • SURVEYING • DESIGN
14800 WILLAMETTE ROAD, SUITE 200
BEAVERTON, OREGON 97008
TEL: (503) 646-8812
FAX: (503) 638-9582
www.emeriodesign.com

| REVISION NO | DATE |
|-------------|------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

TROUTDALE HOUSING

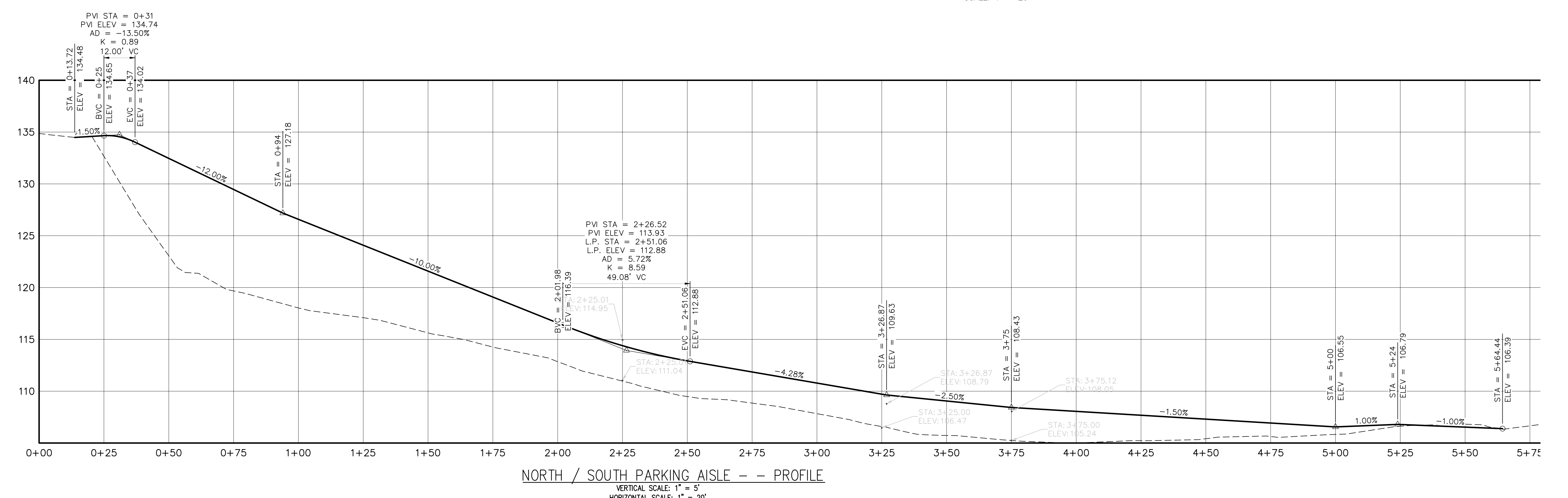
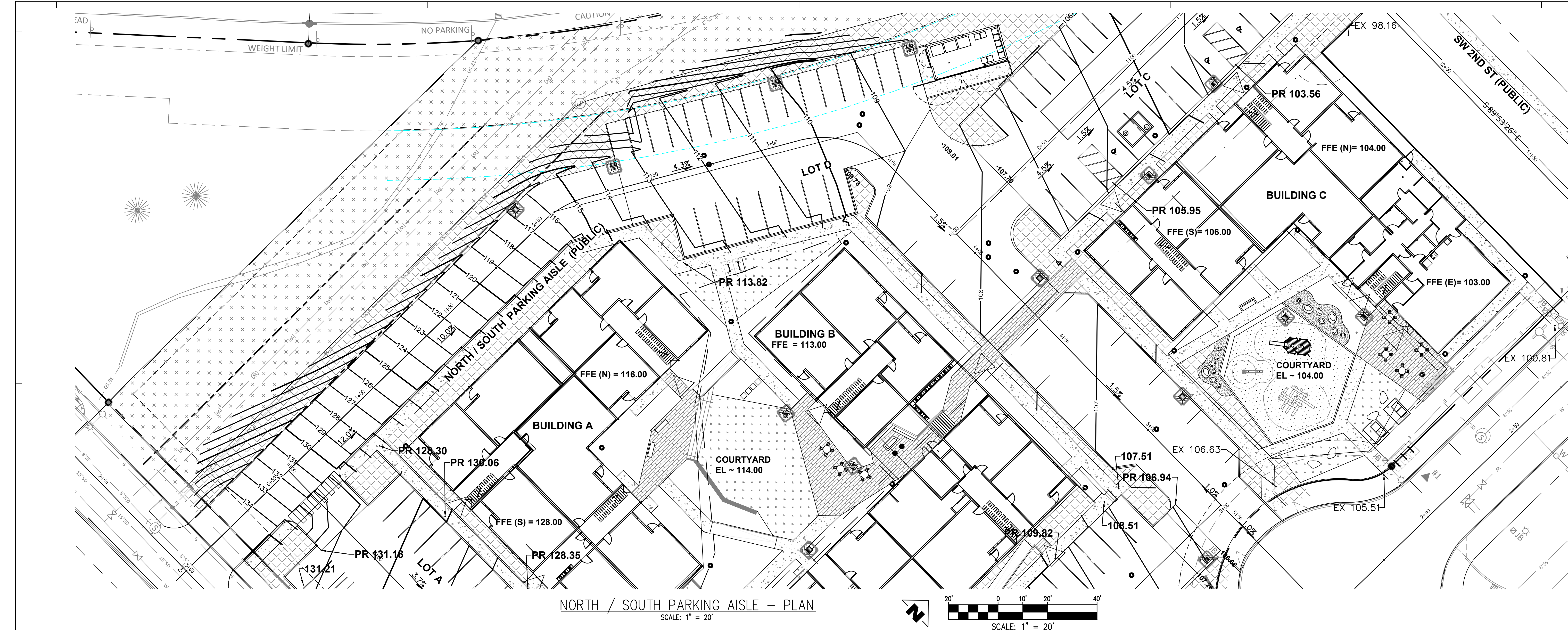
SW KENDALL CT &
SW 2ND ST
TROUTDALE, OR 97060
ISSUANCE
SD PRICING SET
DATE
01/17/22
SCALE

PROJECT NUMBER
202109.00
DRAWN BY

DRAWING TITLE
SITE GRADING PLAN

SHEET NUMBER

C2.00



mwa architects
70 NW COUCH STREET
SUITE 401
PORTLAND, OR 97209
P 503 973 5151
F 503 973 5060
MWAARCHITECTS.COM

REGISTERED PROFESSIONAL ENGINEER
8291
STATE OF OREGON
PRELIMINARY
STEVEN WELLS HANKS
EXPIRES: 6/30/2024

homeforward

EMERIO
ENGINEERING • SURVEYING • DESIGN
14800 WILLAMETTE ROAD, SUITE 200
SEASIDE, OREGON 97138
TEL: (503) 746-8812
FAX: (503) 638-8882
www.emeriodesign.com

| REVISION NO | DATE |
|-------------|------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

TROUTDALE HOUSING

SW KENDALL CT &
SW 2ND ST
TROUTDALE, OR 97060

ISSUANCE
SD PRICING SET

DATE
01/17/22

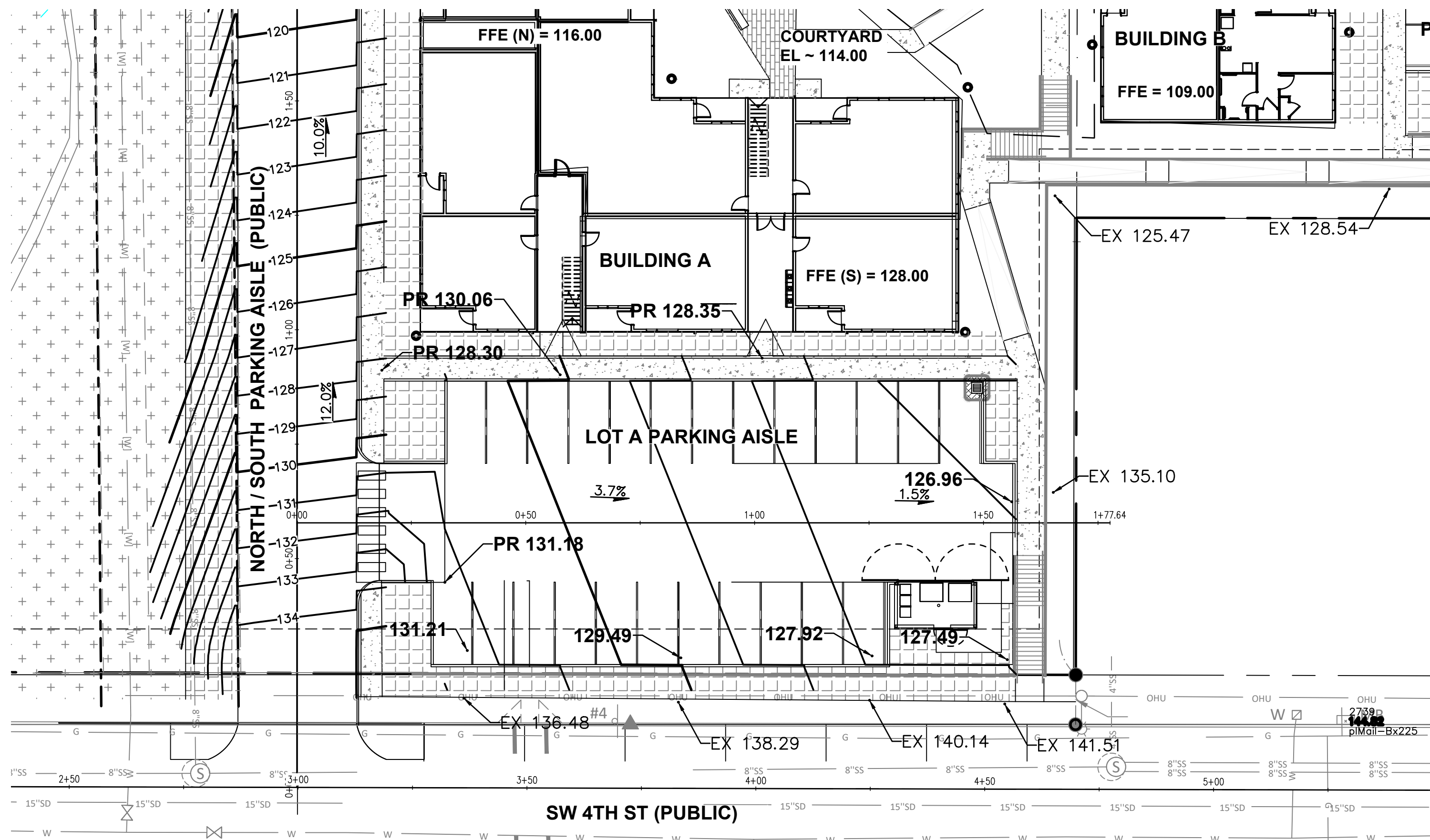
SCALE

PROJECT NUMBER
202109.00

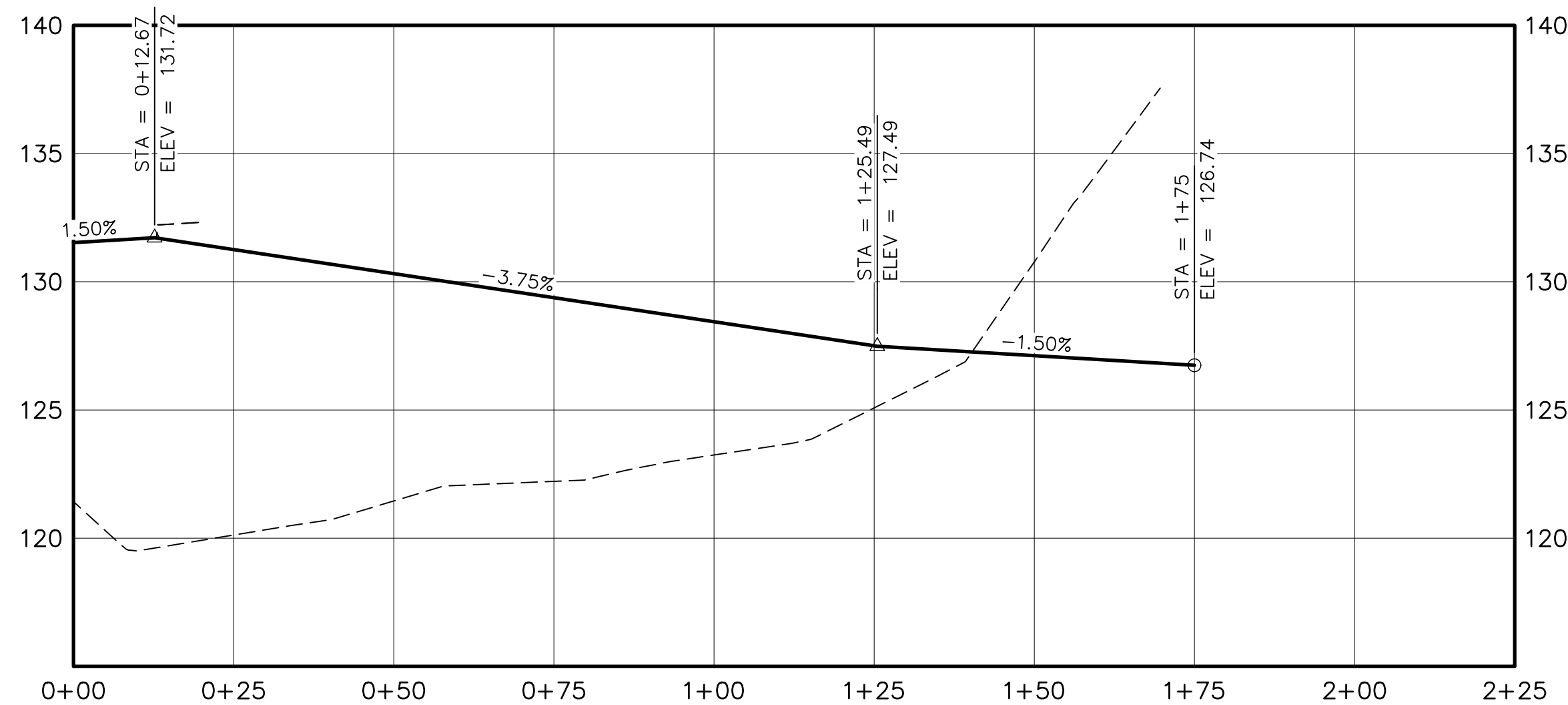
DRAWN BY

DRAWING TITLE
**NORTH - SOUTH
PARKING AISLE
GRADING PLAN**

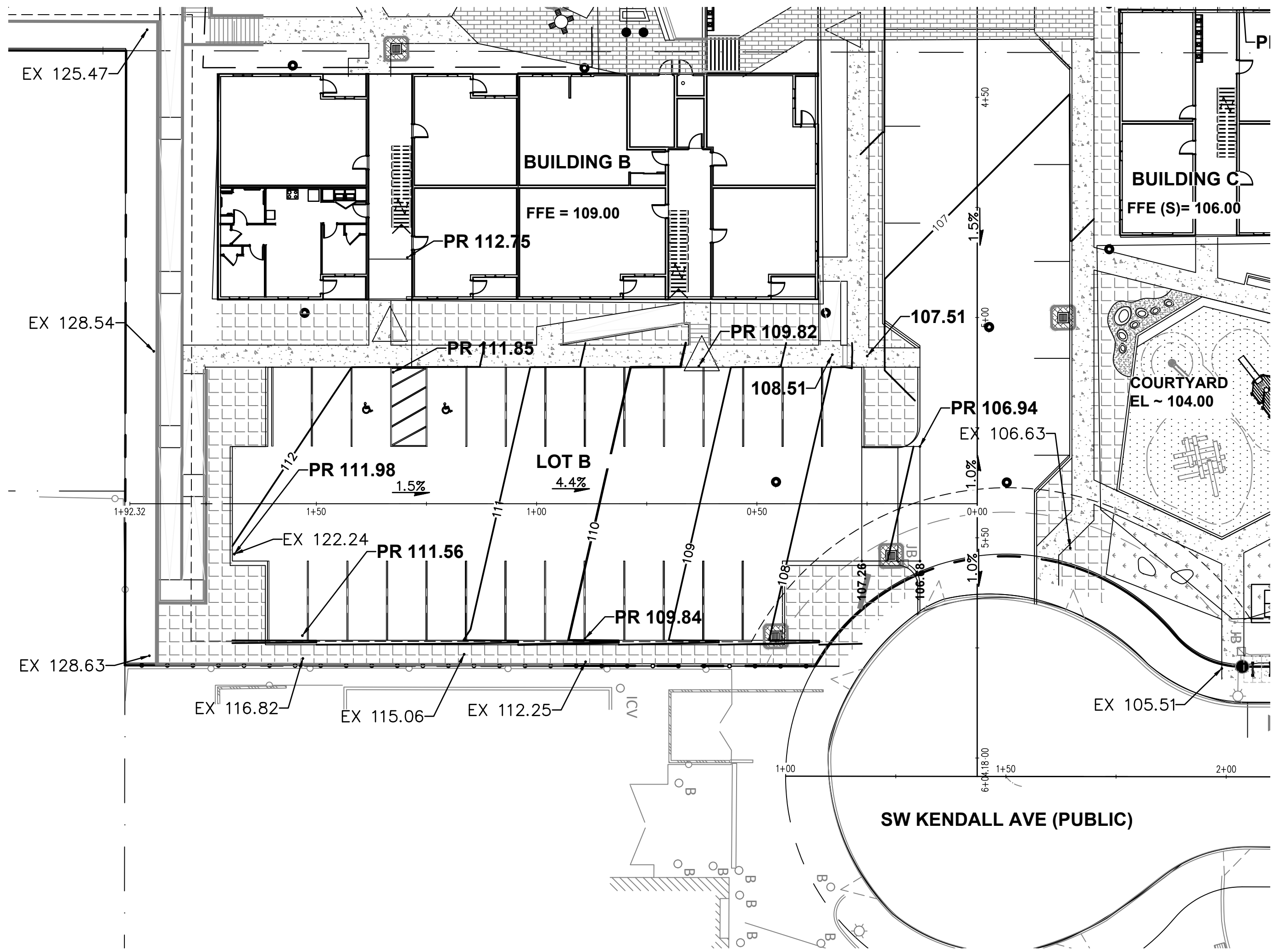
SHEET NUMBER
C2.01



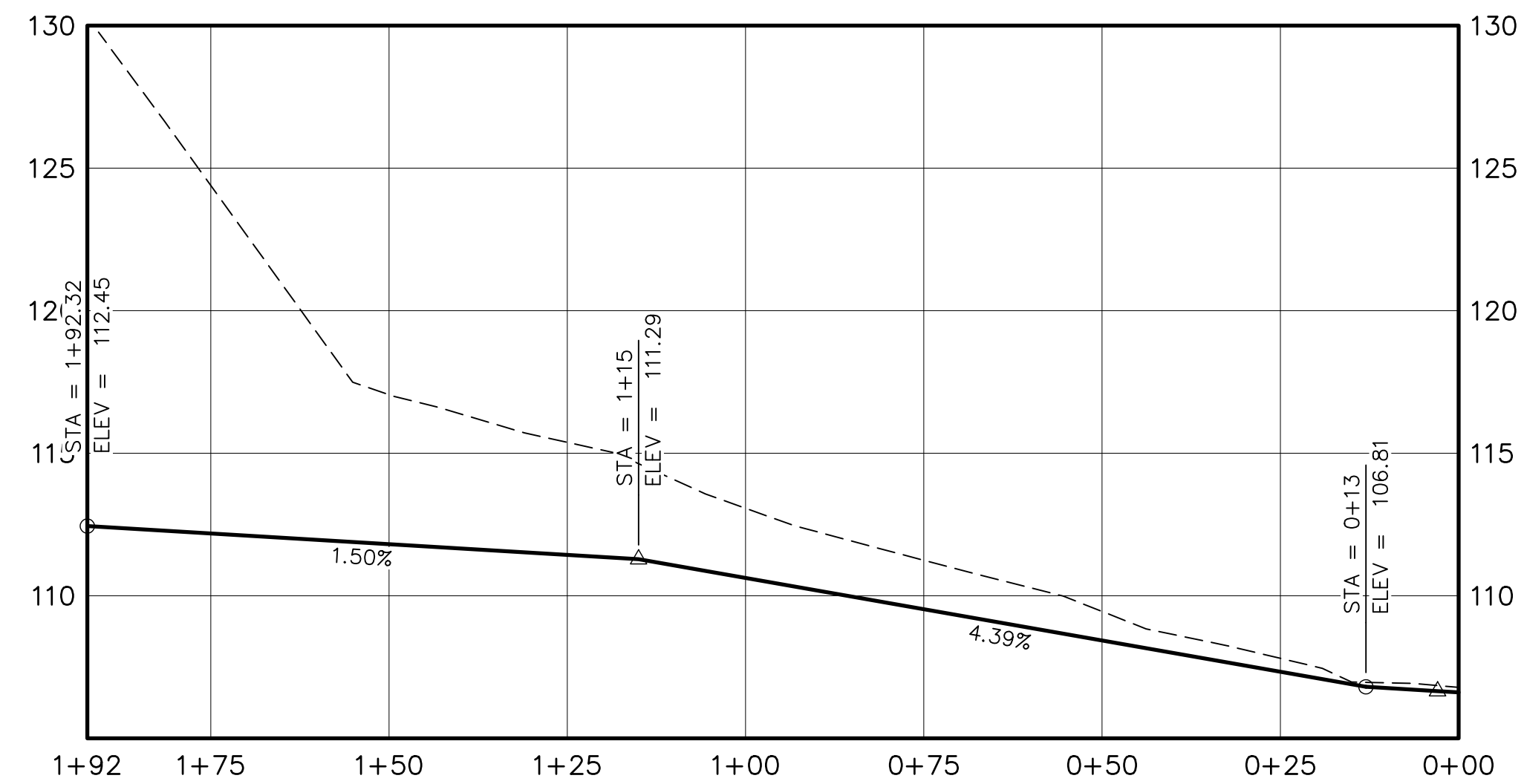
LOT A PARKING AISLE - PLAN
SCALE: 1" = 20'



LOT A PARKING AISLE - PROFILE
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'



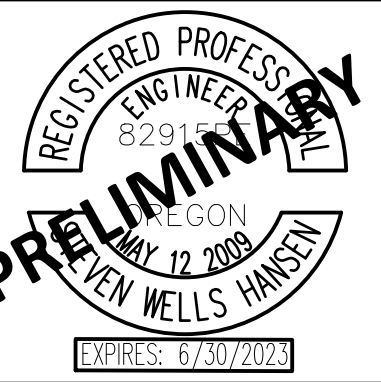
LOT B PARKING AISLE - PLAN
SCALE: 1" = 20'



LOT B PARKING AISLE - PROFILE
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'



mwa architects
70 NW COUCH STREET
SUITE 401
PORTLAND, OR 97209
P 503 973 5151
F 503 973 5060
MWAARCHITECTS.COM



| REVISION NO | DATE |
|-------------|------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

TROUTDALE HOUSING

SW KENDALL CT &
SW 2ND ST
TROUTDALE, OR 97060
ISSUANCE
SD PRICING SET
DATE
01/17/22
SCALE

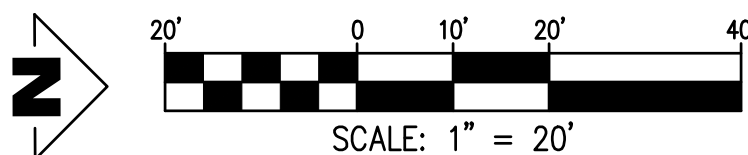
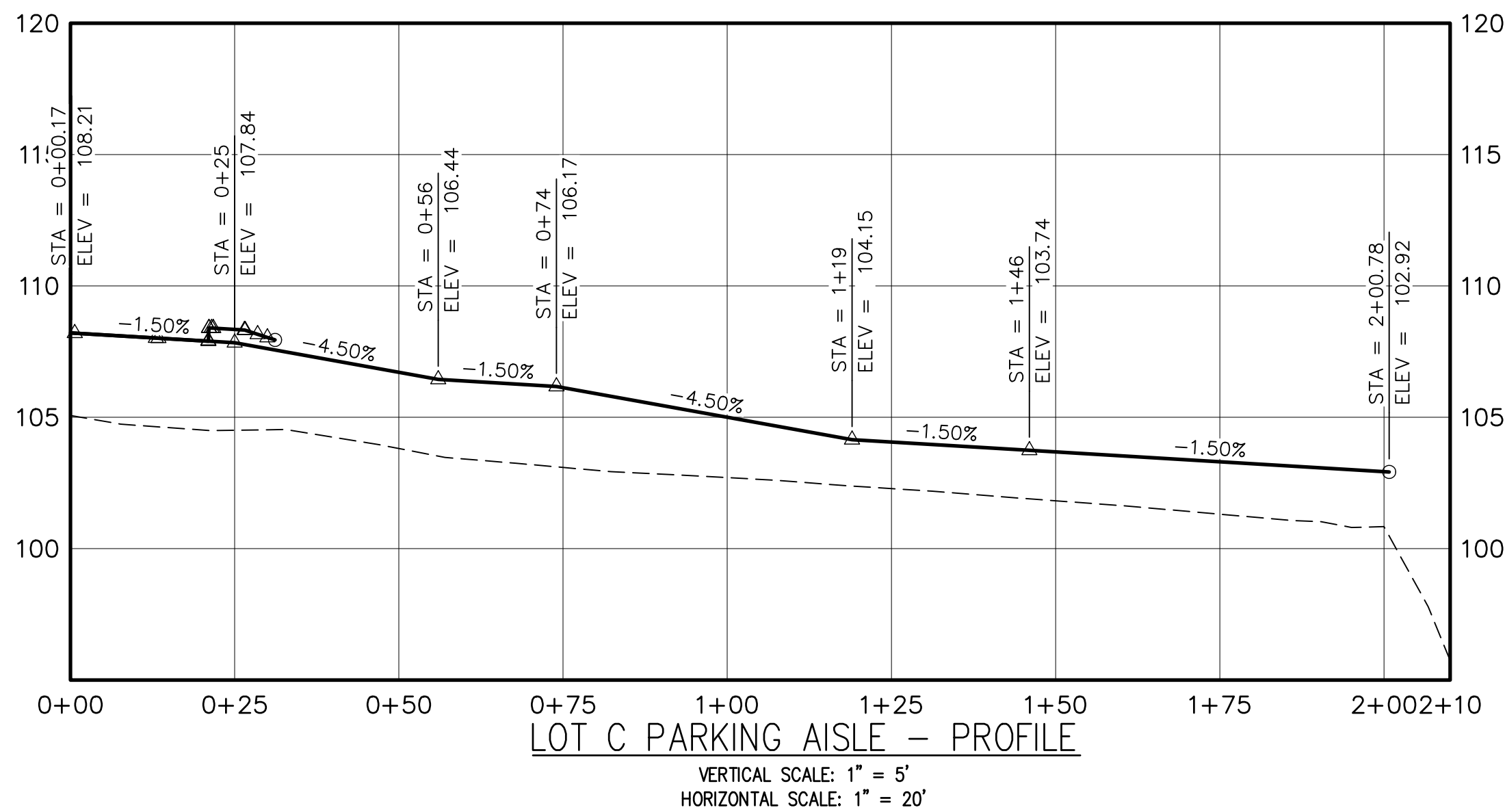
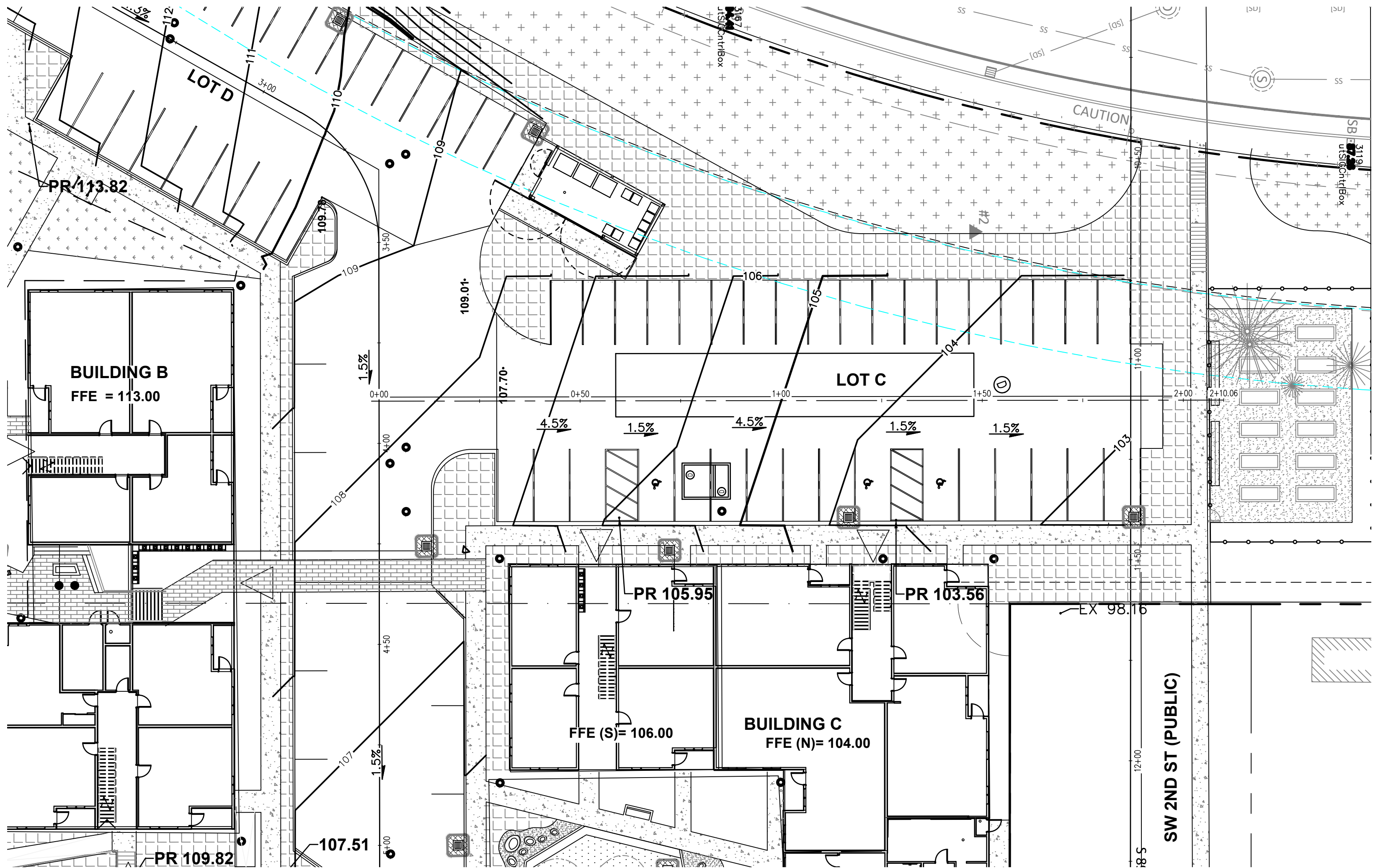
PROJECT NUMBER
202109.00
DRAWN BY

DRAWING TITLE
**LOTS A & B
GRADING PLAN**

SHEET NUMBER

C2.02

1/10/2022 11:18:49 AM



mwa architects
70 NW COUCH STREET
SUITE 401
PORTLAND, OR 97209
P 503 973 5151
F 503 973 5060
MWAARCHITECTS.COM



EMERIO
ENGINEERING • SURVEYING • DESIGN
14800 SW HALLAMSBOROUGH ROAD, SUITE 200
BEVERLY HILLS, CA 90212
TEL: (310) 346-8812
FAX: (310) 346-8882
www.emeriodesign.com

| REVISION NO | DATE |
|-------------|------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

TROUTDALE HOUSING

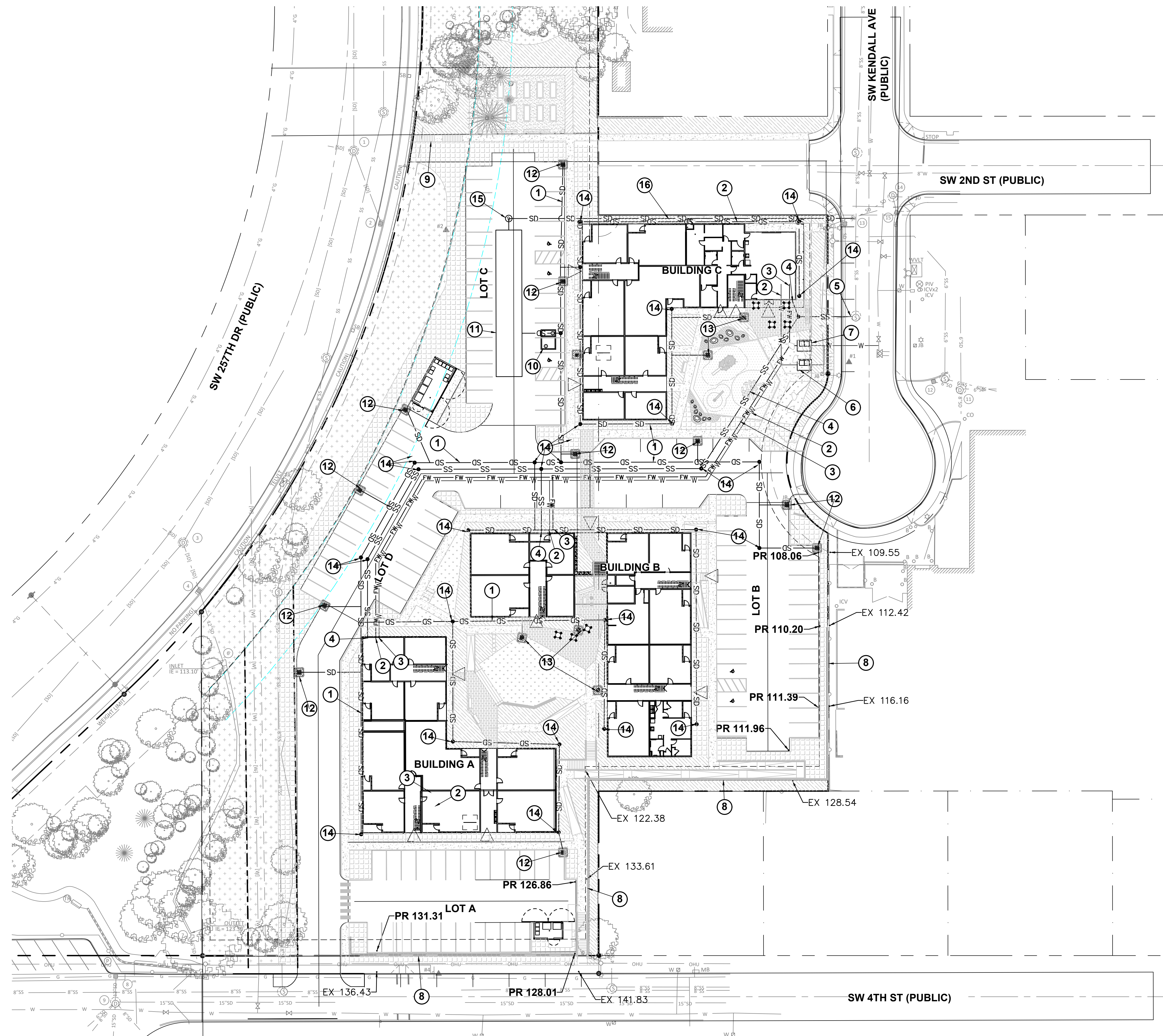
SW KENDALL CT &
SW 2ND ST
TROUTDALE, OR 97060
ISSUANCE
SD PRICING SET
DATE
01/17/22
SCALE

PROJECT NUMBER
202109.00
DRAWN BY

DRAWING TITLE
LOT C GRADING
PLAN

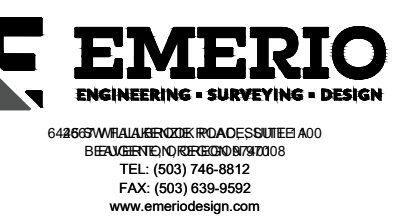
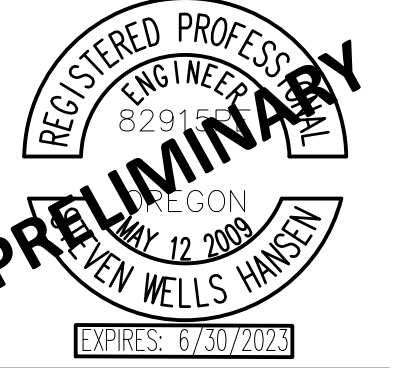
SHEET NUMBER

C2.03



CONSTRUCTION NOTES

- ① 6" STORM DRAIN LATERAL (S=1.0% MIN)
- ② 4" DOMESTIC WATER LINE
- ③ 6" FIRE WATER LINE
- ④ 6" SANITARY LATERAL (S=1.0% MIN)
- ⑤ 8" SANITARY CONNECTION TO EXISTING MANHOLE
- ⑥ 4" WATER METER IN OLDCASTLE 687-WA VAULT
- ⑦ 6" FIRE WATER DCVA WITH FDC IN OLDCASTLE 687-WA VAULT
- ⑧ RETAINING WALL
- ⑨ ACCESS PATH / STAIRS TO SW 257TH DR
- ⑩ INSTALL CONTECH 8'X11' PEAK DIVERSION STORMFILTER WITH 12 CARTRIDGES.
- ⑪ INSTALL ADS STORMTECH SC-740 DETENTION SYSTEM UNDER PARKING LOT. DETENTION SYSTEM TO CONSIST OF 3--ROWS OF 12 CHAMBERS AT 89'LX15.75'WX3.5'D
- ⑫ INSTALL 24" LYNCH STYLE CATCH BASIN AND DISCHARGE TO STORM SEWER.
- ⑬ INSTALL 12" LYNCH STYLE CATCH BASIN AND DISCHARGE TO STORM SEWER.
- ⑭ INSTALL CLEANOUT.
- ⑮ 48" OVERFLOW MANHOLE
- ⑯ 6" PVC OVERFLOW STORM LINE. S=1.0% MIN



REVISION NO. _____ DATE _____

TROUTDALE
HOUSING

SW KENDALL CT &
SW 2ND ST
TROUTDALE, OR 97060

ISSUANCE
D PRICING SET

DATE
11/17/22

SCALE

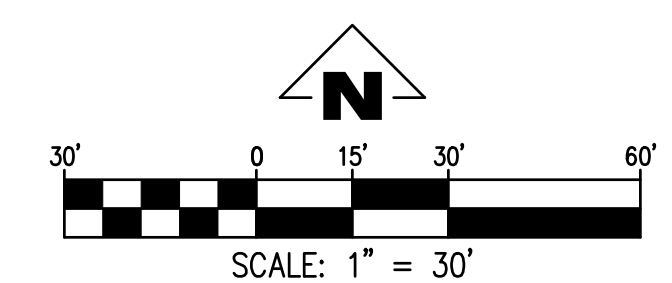
| | |
|----------------|----------|
| PROJECT NUMBER | 02109.00 |
| DRAWN BY | |

DRAWING TITLE

SITE LAYOUT

HEET NUMBER

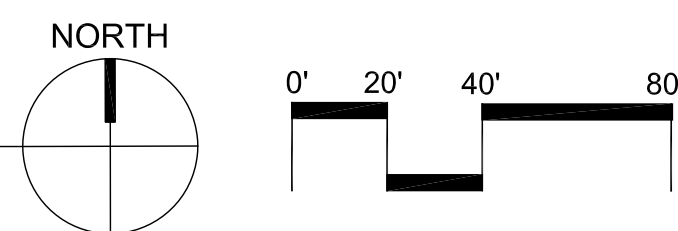
C3.00





01 RENDERED SCHEMATIC LANDSCAPE PLAN

1" = 40'-0"



PRECEDENT IMAGES



1 COVERED PATIO WITH TABLES AT COMMUNITY ROOM



2 DOUBLE BARBECUE



2 ORGANIC SEATING IN LAWN



4 NATURE INSPIRED PLAY



6 CONCRETE SEATAWALL AT LAWN EDGE



7 ANGULAR PATIOS IN CENTRAL COURTYARD



5 TABLE SEATING AT PATIO



6 CONCRETE SEATAWALL AT LAWN EDGE



7 ANGULAR PATIOS IN CENTRAL COURTYARD



8 BOULDER GARDEN AT PLAYGROUND



9 CUSTOM FIREPIT AND BENCH



10 LUSH PLANTINGS IN CENTRAL COURTYARD



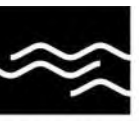
11 COMMUNITY GARDEN



12 OAK SAVANNAH ON HILLSIDE



13 DENSELY PLANTED TOP OF HILLSIDE



mwa architects

70 NW COUCH STREET
SUITE 401
PORTLAND, OR 97209
P 503 973 5151
F 503 973 5060
MWAARCHITECTS.COM

STAMP

PRELIMINARY

OWNER LOGO



CONSULTANT LOGO



REVISION NO

DATE

TROUTDALE HOUSING

SW KENDALL CT &
SW 2ND ST
TROUTDALE OR 97060

ISSUANCE
SD PRICING SET

DATE
01.17.22

SCALE
1" = 40'-0"

PROJECT NUMBER
202109.00

DRAWN BY
DE

DRAWING TITLE

RENDERED
SD LANDSCAPE
PLAN

SHEET NUMBER

L1.00

Disclaimer: Images found on plan are fairly used for the greater good of the public. Images found on plan are to show general representations of design ideas only and will not be replicated as shown. They are not for profit and use of images in no way interferes with owners rights to the images.

ENVIRONMENTAL REVIEW RECORDS (ERRS)

ERR No. 1. Airport Hazards



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Airport Hazards (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/airport-hazards>

- 1. To ensure compatible land use development, you must determine your site’s proximity to civil and military airports. Is your project within 15,000 feet of a military airport or 2,500 feet of a civilian airport?**

☒ No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within the applicable distances to a military or civilian airport.*

☐ Yes → *Continue to Question 2.*

- 2. Is your project located within a Runway Potential Zone/Clear Zone (RPZ/CZ) or Accident Potential Zone (APZ)?**

☐ Yes, project is in an APZ → *Continue to Question 3.*

☐ Yes, project is an RPZ/CZ → *Project cannot proceed at this location.*

☐ No, project is not within an APZ or RPZ/CZ

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within either zone.*

- 3. Is the project in conformance with DOD guidelines for APZ?**

☐ Yes, project is consistent with DOD guidelines without further action.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documentation supporting this determination.*

☐ No, the project cannot be brought into conformance with DOD guidelines and has not been approved. → *Project cannot proceed at this location.*

If mitigation measures have been or will be taken, explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

[Click here to enter text.](#)

→ *Work with the RE/HUD to develop mitigation measures. Continue to the Worksheet Summary below. Provide any documentation supporting this determination.*

Worksheet Summary

The proposed project site is not within 15,000 feet of a military airport or 2,500 feet of a civilian airport. The nearest municipal airport is the Troutdale airport, approximately 1.2 miles northwest of the project site.

See Attachment 1.

ERR No. 2. Coastal Barrier Resources

Coastal Barrier Resources (CEST and EA)

| General requirements | Legislation | Regulation |
|---|---|------------|
| HUD financial assistance may not be used for most activities in units of the Coastal Barrier Resources System (CBRS). See 16 USC 3504 for limitations on federal expenditures affecting the CBRS. | Coastal Barrier Resources Act (CBRA) of 1982, as amended by the Coastal Barrier Improvement Act of 1990 (16 USC 3501) | |
| References | | |
| https://www.hudexchange.info/environmental-review/coastal-barrier-resources | | |

Projects located in the following states must complete this form.

| | | | | | |
|-------------|-----------|---------------|----------------|----------------|----------------|
| Alabama | Georgia | Massachusetts | New Jersey | Puerto Rico | Virgin Islands |
| Connecticut | Louisiana | Michigan | New York | Rhode Island | Virginia |
| Delaware | Maine | Minnesota | North Carolina | South Carolina | Wisconsin |
| Florida | Maryland | Mississippi | Ohio | Texas | |

1. Is the project located in a CBRS Unit?

☒ No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within a CBRS Unit.*

☐ Yes → *Continue to Question 2.*

Federal assistance for most activities may not be used at this location. You must either choose an alternate site or cancel the project. In very rare cases, federal monies can be spent within CBRS units for certain exempted activities (e.g., a nature trail), after consultation with the Fish and Wildlife Service (FWS) (see [16 USC 3505](#) for exceptions to limitations on expenditures).

2. Indicate your selected course of action.

☐ After consultation with the FWS the project was given approval to continue
 → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map and documentation of a FWS approval.*

☐ Project was not given approval
Project cannot proceed at this location.

Worksheet Summary

According to Coastal Barrier Resources System (CBRS) information accessed at <https://fwsprimary.wim.usgs.gov/CBRSMapper-v2/>, there are no units of the CBRS in Oregon and the project site is not located within a CBRS Unit. Therefore, the project is in compliance with HUD's CBRS regulations and no mitigation is warranted. Therefore, this project is in compliance with the Coastal Barrier Resources Act. See Attachment 2.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

ERR No. 3. Flood Insurance

Flood Insurance (CEST and EA)

| General requirements | Legislation | Regulation |
|---|---|---|
| Certain types of federal financial assistance may not be used in floodplains unless the community participates in National Flood Insurance Program and flood insurance is both obtained and maintained. | Flood Disaster Protection Act of 1973 as amended (42 USC 4001-4128) | 24 CFR 50.4(b)(1) and 24 CFR 58.6(a) and (b); 24 CFR 55.1(b). |
| Reference | | |
| https://www.hudexchange.info/environmental-review/flood-insurance | | |

1. Does this project involve mortgage insurance, refinance, acquisition, repairs, construction, or rehabilitation of a structure, mobile home, or insurable personal property?

☐ No. This project does not require flood insurance or is excepted from flood insurance. →
Continue to the Worksheet Summary.

☒ Yes → *Continue to Question 2.*

2. Provide a FEMA/FIRM map showing the site.

The Federal Emergency Management Agency (FEMA) designates floodplains. The [FEMA Map Service Center](#) provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs). For projects in areas not mapped by FEMA, use the best available information to determine floodplain information. Include documentation, including a discussion of why this is the best available information for the site. Provide FEMA/FIRM floodplain zone designation, panel number, and date within your documentation.

Is the structure, part of the structure, or insurable property located in a FEMA-designated Special Flood Hazard Area?

☒ No → *Continue to the Worksheet Summary.*

☐ Yes → *Continue to Question 3.*

3. Is the community participating in the National Flood Insurance Program or has less than one year passed since FEMA notification of Special Flood Hazards?

☐ Yes, the community is participating in the National Flood Insurance Program.

For loans, loan insurance or loan guarantees, flood insurance coverage must be continued for the term of the loan. For grants and other non-loan forms of financial assistance, flood insurance coverage must be continued for the life of the building irrespective of the transfer of ownership. The amount of coverage must equal the total project cost or the maximum coverage limit of the National Flood Insurance Program, whichever is less

Provide a copy of the flood insurance policy declaration or a paid receipt for the current annual flood insurance premium and a copy of the application for flood insurance.

→ *Continue to the Worksheet Summary.*

- ☐ Yes, less than one year has passed since FEMA notification of Special Flood Hazards.
If less than one year has passed since notification of Special Flood Hazards, no flood Insurance is required.

→ *Continue to the Worksheet Summary.*

- ☐ No. The community is not participating, or its participation has been suspended.
Federal assistance may not be used at this location. Cancel the project at this location.

Worksheet Summary

According to FEMA FIRM #41051C0217J, effective on February 1, 2019, accessed at <https://msc.fema.gov/portal/home>, the project site is located within unshaded Zone X (Area of Minimal Flood Hazard). Thus, the project site is designated as an area outside the 100- and 500-year flood zones and the flood potential for the project site is minimal (see Attachment 3). According to the National Flood Insurance Program (NFIP) Community Status Book accessed at <https://www.fema.gov/flood-insurance/work-with-nfip/community-status-book>, the project site is located in Community ID #410184B which is a participating community in the NFIP. However, as no structures or insurable property are located within a Special Flood Hazard Area, flood insurance is not required under the NFIP. While flood insurance may not be mandatory in this instance, HUD recommends that all insurable structures maintain flood insurance under the NFIP. The project is in compliance with flood insurance requirements.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

ERR No. 4. Air Quality



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Air Quality (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/air-quality>

- 1. Does your project include new construction or conversion of land use facilitating the development of public, commercial, or industrial facilities OR five or more dwelling units?**

☒ Yes → *Continue to Question 2.*

☐ No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Provide any documents used to make your determination.*

- 2. Is your project’s air quality management district or county in non-attainment or maintenance status for any criteria pollutants?**

Follow the link below to determine compliance status of project county or air quality management district:

<https://www.epa.gov/green-book>

☒ No, project’s county or air quality management district is in attainment status for all criteria pollutants

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

☐ Yes, project’s management district or county is in non-attainment or maintenance status for one or more criteria pollutants. → *Continue to Question 3.*

- 3. Determine the estimated emissions levels of your project for each of those criteria pollutants that are in non-attainment or maintenance status on your project area. Will your project exceed any of the *de minimis* or *threshold* emissions levels of non-attainment and maintenance level pollutants or exceed the screening levels established by the state or air quality management district?**

☐ No, the project will not exceed *de minimis* or threshold emissions levels or screening levels

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Explain how you determined that the project would not exceed de minimis or threshold emissions.*

☐ Yes, the project exceeds *de minimis* emissions levels or screening levels.

→ *Continue to Question 4. Explain how you determined that the project would not exceed de minimis or threshold emissions in the Worksheet Summary.*

- 4. For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.**

[Click here to enter text.](#)

Worksheet Summary

Multnomah County, where the proposed project is located, is in attainment of all criteria air pollutants. According to an email from Karen Williams for a housing project in Portland, the maintenance plan period for CO and ozone concluded in 2017. See Attachment 4.

ERR No. 5. Coastal Zone Management

Coastal Zone Management Act (CEST and EA)

| General requirements | Legislation | Regulation |
|--|--|-----------------|
| Federal assistance to applicant agencies for activities affecting any coastal use or resource is granted only when such activities are consistent with federally approved State Coastal Zone Management Act Plans. | Coastal Zone Management Act (16 USC 1451-1464), particularly section 307(c) and (d) (16 USC 1456(c) and (d)) | 15 CFR Part 930 |
| References | | |
| https://www.onecpd.info/environmental-review/coastal-zone-management | | |

Projects located in the following states must complete this form.

| | | | | | |
|-----------------|----------|---------------|--------------------------|----------------|----------------|
| Alabama | Florida | Louisiana | Mississippi | Ohio | Texas |
| Alaska | Georgia | Maine | New Hampshire | Oregon | Virgin Islands |
| American Samona | Guam | Maryland | New Jersey | Pennsylvania | Virginia |
| California | Hawaii | Massachusetts | New York | Puerto Rico | Washington |
| Connecticut | Illinois | Michigan | North Carolina | Rhode Island | Wisconsin |
| Delaware | Indiana | Minnesota | Northern Mariana Islands | South Carolina | |

1. Is the project located in, or does it affect, a Coastal Zone as defined in your state Coastal Management Plan?

☐ Yes → Continue to Question 2.

☒ No → Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within a Coastal Zone.

2. Does this project include activities that are subject to state review?

☐ Yes → Continue to Question 3.

☐ No → Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination.

3. Has this project been determined to be consistent with the State Coastal Management Program?

☐ Yes, with mitigation. → Continue to Question 4.

☐ Yes, without mitigation. → Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination.

☐ No, project must be canceled.

Project cannot proceed at this location.

4. Explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

→ *Continue to the Worksheet Summary below. Provide documentation of the consultation (including the State Coastal Management Program letter of consistency) and any other documentation used to make your determination.*

Worksheet Summary

According to the Oregon Coastal Management Program map accessed at <https://www.oregon.gov/lcd/OCMP/Pages/Coastal-Zone.aspx>, the project site is not located within the Coastal Zone. Therefore, the proposed undertaking is in compliance with HUD's Coastal Zone Management Act regulations and no mitigation is warranted. The project is in compliance with the Coastal Zone Management Act (see Attachment 5).

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

ERR No. 6. Contamination and Toxic Substances



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Contamination and Toxic Substances (Multifamily and Non-Residential Properties) – PARTNER

<https://www.hudexchange.info/programs/environmental-review/site-contamination>

1. How was site contamination evaluated? ¹ Select all that apply.

- ☒ ASTM Phase I ESA
- ☐ ASTM Phase II ESA
- ☐ Remediation or clean-up plan
- ☐ ASTM Vapor Encroachment Screening
- ☐ None of the above

→ Provide documentation and reports and include an explanation of how site contamination was evaluated in the Worksheet Summary.

Continue to Question 2.

2. Were any on-site or nearby toxic, hazardous, or radioactive substances found that could affect the health and safety of project occupants or conflict with the intended use of the property? (Were any recognized environmental conditions or RECs identified in a Phase I ESA and confirmed in a Phase II ESA?)

- ☒ No → Explain below.

The proposed project site is currently occupied by an empty field. The Phase I ESA conducted by Integrated Property Analysis, Inc. in August 2022 did not find any recognized environmental conditions (RECs) onsite. No hazardous materials or petroleum products were observed.

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.

¹ HUD regulations at 24 CFR § 58.5(i)(2)(ii) require that the environmental review for multifamily housing with five or more dwelling units or non-residential property include the evaluation of previous uses of the site or other evidence of contamination on or near the site. For acquisition and new construction of multifamily and nonresidential properties HUD strongly advises the review include an ASTM Phase I Environmental Site Assessment (ESA) to meet real estate transaction standards of due diligence and to help ensure compliance with HUD’s toxic policy at 24 CFR §58.5(i) and 24 CFR §50.3(i). Also note that some HUD programs require an ASTM Phase I ESA.

☐ Yes → Describe the findings, including any recognized environmental conditions (RECs), in Worksheet Summary below. Continue to Question 3.

3. Can adverse environmental impacts be mitigated?

☐ Adverse environmental impacts cannot feasibly be mitigated → HUD assistance may not be used for the project at this site. Project cannot proceed at this location.

☐ Yes, adverse environmental impacts can be eliminated through mitigation.
→ Provide all mitigation requirements² and documents. Continue to Question 4.

4. Describe how compliance was achieved. Include any of the following that apply: State Voluntary Clean-up Program, a No Further Action letter, use of engineering controls³, or use of institutional controls⁴.

If a remediation plan or clean-up program was necessary, which standard does it follow?

- ☐ Complete removal
☐ Risk-based corrective action (RBCA)

→ Continue to the Worksheet Summary.

Worksheet Summary

A Phase I Environmental Site Assessment, Approximately 3.58-Acre Undeveloped Property, Vicinity of SW Kendall Avenue and SW 4th Street, Troutdale, Multnomah County, Oregon. Hahn and Associates, Inc. (HAI Project No. 9813). July 22, 2022

The Phase I ESA did not identify any Recognized Environmental Conditions or any on-site or nearby toxic, hazardous, or radioactive substances found that could affect the health and safety of project occupants or conflict with the intended use of the property.

While the Phase I ESA did not find any RECs, Hahn and Associates provided recommendations for the following site conditions (see ERR 6):

- There is the potential for water wells and a septic system to be present onsite in association with previous residences. As a result, future redevelopment plans should consider this possibility during

² Mitigation requirements include all clean-up actions required by applicable federal, state, tribal, or local law. Additionally, provide, as applicable, the long-term operations and maintenance plan, Remedial Action Work Plan, and other equivalent documents.

³ Engineering controls are any physical mechanism used to contain or stabilize contamination or ensure the effectiveness of a remedial action. Engineering controls may include, without limitation, caps, covers, dikes, trenches, leachate collection systems, signs, fences, physical access controls, ground water monitoring systems and ground water containment systems including, without limitation, slurry walls and ground water pumping systems.

⁴ Institutional controls are mechanisms used to limit human activities at or near a contaminated site, or to ensure the effectiveness of the remedial action over time, when contaminants remain at a site at levels above the applicable remediation standard which would allow for unrestricted use of the property. Institutional controls may include structure, land, and natural resource use restrictions, well restriction areas, classification exception areas, deed notices, and declarations of environmental restrictions.

site clearing and grading activities. Care should be taken to identify and manage the above noted features if encountered.

- There is the potential for water well to be present onsite in association with previous residences. As a result, if future development encounters a water well, it should be decommissioned according to applicable regulations.
- There is a monitoring well that was observed on the site. If the monitoring well is to be removed by project development it should be decommissioned according to applicable regulations.
- Based upon the history of agricultural usage at the site, it is possible that low-level hazardous substances impacts may be present in soils at the subject property. For any soils that are slated for excavation and removal, it is recommended that a Clean Fill Determination is performed on the soils per Oregon Department of Environmental Quality criteria to determine appropriate management decisions.

ERR No. 7. Endangered Species Act



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Endangered Species Act (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/endangered-species>

1. Does the project involve any activities that have the potential to affect species or habitats?

☐ No, the project will have No Effect due to the nature of the activities involved in the project.

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.

☐ No, the project will have No Effect based on a letter of understanding, memorandum of agreement, programmatic agreement, or checklist provided by local HUD office.

Explain your determination:

[Click here to enter text.](#)

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.

☒ Yes, the activities involved in the project have the potential to affect species and/or habitats.

→ Continue to Question 2.

2. Are federally listed species or designated critical habitats present in the action area?

Obtain a list of protected species from the Services. This information is available on the [FWS Website](#).

☒ No, the project will have No Effect due to the absence of federally listed species and designated critical habitat.

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination. Documentation may include letters from the Services, species lists from the Services’ websites, surveys or other documents and analysis showing that there are no species in the action area.

☐ Yes, there are federally listed species or designated critical habitats present in the action area.

→ Continue to Question 3.

3. Recommend one of the following effects that the project will have on federally listed species or designated critical habitat:

☐ No Effect: Based on the specifics of both the project and any federally listed species in the action area, you have determined that the project will have absolutely no effect on listed species or critical habitat.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination. Documentation should include a species list and explanation of your conclusion, and may require maps, photographs, and surveys as appropriate.*

☐ May Affect, Not Likely to Adversely Affect: Any effects that the project may have on federally listed species or critical habitats would be beneficial, discountable, or insignificant.

→ Partner entities should not contact the Services directly. *If the RE/HUD agrees with this recommendation, they will have to complete Informal Consultation. Provide the RE/HUD with a biological evaluation or equivalent document. They may request additional information, including surveys and professional analysis, to complete their consultation.*

☐ Likely to Adversely Affect: The project may have negative effects on one or more listed species or critical habitat.

→ Partner entities should not contact the Services directly. *If the RE/HUD agrees with this recommendation, they will have to complete Formal Consultation. Provide the RE/HUD with a biological evaluation or equivalent document. They may request additional information, including surveys and professional analysis, to complete their consultation.*

Worksheet Summary

Dudek completed a *Summary of Biological Findings Memorandum* for the proposed project site in April 2022. The report conducted a literature review and field reconnaissance survey to determine if the site has a potential to support habitat for special-status plant and wildlife species. The report determined that based on the high level of disturbance onsite and the development surrounding the site, there is low potential for any of these species to occur on the proposed project area. Rare plant surveys are not recommended due to the disturbed nature of the site. However, the report recommends avoiding development near the perennial stream at the southwest corner of the site to avoid obtaining permits from regulatory agencies and providing mitigation.

USFWS's IPaC database was also used to identify federally protected species at the project site. Five species classified as Endangered or Threatened were identified as possibly occurring on the project site. However, given the urban and commercial setting surrounding the project site, no federally listed special-status plant or wildlife species are expected to be present on site due to lack of suitable habitat. See Attachments 6 & 7).

ERR No. 8. Explosive and Flammable Hazards



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those "Partners" (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Explosive and Flammable Hazards (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/explosive-and-flammable-facilities>

1. Is the proposed HUD-assisted project itself the development of a hazardous facility (a facility that mainly stores, handles or processes flammable or combustible chemicals such as bulk fuel storage facilities and refineries)?

☒ No

→ Continue to Question 2.

☐ Yes

Explain:

→ Go directly to Question 5.

2. Does this project include any of the following activities: development, construction, rehabilitation that will increase residential densities, or conversion?

☐ No → If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.

☒ Yes → Continue to Question 3.

3. Within 1 mile of the project site, are there any current *or planned* stationary aboveground storage containers that are covered by 24 CFR 51C? Containers that are NOT covered under the regulation include:

- Containers 100 gallons or less in capacity, containing common liquid industrial fuels OR
- Containers of liquified petroleum gas (LPG) or propane with a water volume capacity of 1,000 gallons or less that meet the requirements of the 2017 or later version of National Fire Protection Association (NFPA) Code 58.

If all containers within the search area fit the above criteria, answer "no." For any other type of aboveground storage container within the search area that holds one of the flammable or explosive materials listed in Appendix I of 24 CFR part 51 subpart C, answer "yes."

☐ No

→ Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide all documents used to make your determination.

☒ Yes

→ Continue to Question 4.

4. Visit HUD's website to identify the appropriate tank or tanks to assess and to calculate the required separation distance using the [electronic assessment tool](#). To document this step in the analysis, please attach the following supporting documents to this screen:

- Map identifying the tank selected for assessment, and showing the distance from the tank to the proposed HUD-assisted project site; and
- Electronic assessment tool calculation of the required separation distance.

Based on the analysis, is the proposed HUD-assisted project site located at or beyond the required separation distance from all covered tanks?

☐ Yes

→ Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.

☒ No

→ Go directly to Question 6.

5. **Is the hazardous facility located at an acceptable separation distance from residences and any other facility or area where people may congregate or be present?**

Please visit HUD's website for information on calculating Acceptable Separation Distance.

☐ Yes

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.

Provide map(s) showing the location of the project site relative to residences and any other facility or area where people congregate or are present and your separation distance calculations.

☐ No

→ Continue to Question 6.

Provide map(s) showing the location of the project site relative to residences and any other facility or area where people congregate or are present and your separation distance calculations.

6. **For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Mitigation measures may include both natural and manmade barriers, modification of the project design, burial or removal of the hazard, or other engineered solutions. Describe selected mitigation measures, including the timeline for implementation, and attach an implementation plan. If negative effects cannot be mitigated, cancel the project at this location.**

Note that only licensed professional engineers should design and implement blast barriers. If a barrier will be used or the project will be modified to compensate for an unacceptable separation distance, provide approval from a licensed professional engineer.

Worksheet Summary

Provide a full description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers

- Any additional requirements specific to your program or region

Include all documentation supporting your findings in your submission to HUD.

The following resources were reviewed to identify AST locations, contents, volumes, and distance from subject property:

- Site visit observations, April 26, 2022
- *EDR Radius Map Report, Undeveloped Property, SW 4th Street/SW 257th Avenue, Troutdale, OR 97060.* April 25, 2022. Note: custom report, AST database searched to a distance of 1 mile.
- Oregon State Fire Marshal Community Right-to-Know website, Hazardous Substance Information System (HSIS), online search tool, reviewed June 29, 2022
(<https://oregon.hazconnect.com/GISViewer/T2GISViewer.aspx>)

Overview:

The EDR Radius Map Report identified ASTs at 7 unique facilities within one mile.

During the site visit, one AST was observed at the adjacent Troutdale Police facility. This AST was not listed on the EDR Radius Map Report.

These 8 AST Facilities were assigned Facility IDs A-H by HAI. Two of these facilities did not have ASTs that are covered by 24 CFR 51C.

The resources available for review did not provide precise volumes for the ASTs. For facilities listed on the HSIS database, a range of volumes was provided for each material at a facility. HAI used the maximum quantity of the volume range for each AST for the purpose of calculating the Acceptable Separation Distances (ASDs). For the Troutdale Police AST, the volume was estimated based on the observed physical dimensions of the AST.

All of the AST facilities and ASTs are listed in the ASTs.xlsx spreadsheet. Maps and Acceptable Separation Distance (ASD) calculation PDFs for the 6 ASTs that contain materials listed 24 CFR 51C are attached.

Troutdale Police Facility:

A diesel-fuel AST was observed near the property boundary between the subject property and the adjacent Troutdale Police facility. The AST appeared to be associated with a backup electricity generator.

Based on the ASD tool calculations, this AST was not adequately separated from the site for thermal radiation (people or buildings). Additional mitigation in the form of a Concrete Masonry Unit (CMU) wall has been evaluated by Mr. Nelson Rivera, an Environmental Engineer with HUD, as detailed below.

Ms. Nora Mattingly of Home Forward stated that a CMU wall with a height of 10 to 12 feet is to be constructed at the boundary between the subject property and the adjacent Troutdale police facility, and also provided information confirming that the Troutdale Police AST has a capacity of 472 gallons. Ms. Leslie Crehan, also of Home Forward, further stated that with the CMU wall in place, the Troutdale Police AST will not be visible from any ground floor (at grade) spaces that are “places of congregation.”

Based on the above information provided by Home Forward, Mr. Rivera confirmed that with the CMU wall in place, the subject property facility will be in compliance with mitigation requirements following 24 CFR 51.205.

Comcast Cable Communications:

The Comcast facility was listed in the EDR Radius Map report as having a diesel-fuel AST with a maximum capacity of 5,000-9,999 gallons.

Based on the ASD tool calculations, **this AST was not adequately separated** from the site for thermal radiation for people. This AST was adequately separated from the site for thermal radiation for buildings. Additional mitigation appears to be necessary. An evaluation of the site design and local topography by an engineer may provide the required mitigation.

Other AST Facilities:

In addition to the Troutdale Police and Comcast ASTs, four ASTs within one mile were identified that contained materials explicitly listed in Appendix I of 24 CFR 51C. These four ASTs were located at four facilities. Based on the ASD tool calculations, these four ASTs were adequately separated from the site.

Conclusion:

Based on the ASD calculation tool and the information provided above, two of the ASTs identified within one mile of the proposed development are not adequately separated from the proposed development. Therefore, mitigation measures and/or evaluation by an engineer appears to be necessary.

Comcast AST Assessment for Troutdale Apartments:

An AST Assessment for the proposed project was conducted by Audrey Herschberger, PE, of Dudek in May 2023 to evaluate whether natural or manmade barriers are in place which would be adequate to mitigate impacts following U.S. Code of Federal Regulations (CFR) Title 24 Section 51.205, which states that application of the ASD can be eliminated or modified if a barrier is constructed surrounding the hazard, at the site of the project, or in between the potential hazard and the proposed project.

Although the Comcast facility has an 8-foot-high concrete block wall surrounding the property that separates the project site from the ASTs, a 3-foot gap located in the wall could create a potential unobstructed pathway between the AST and the project site.

As stated in the ASD Guidebook, if the ASD is not achievable, but there is no clear line of sight between the proposed project and the AST, mitigation may not be required. Under 24 CFR 51, Subpart C, if there is a natural or man-made abatement between the proposed project and the AST that impedes a clear view, the abatement can serve as mitigation. During the AST Assessment, Ms. Herschberger collected line-of-sight photographs from the western edge of the project site, in view of the wall gap and the AST area. Based on these images, there is no clear line of sight to the AST from the project site. Therefore, the concrete block wall provides adequate separation and no additional mitigation is required (**see Attachment 8**).

ERR No. 9. Farmlands Protection

Farmlands Protection (CEST and EA)

| General requirements | Legislation | Regulation |
|---|--|--------------------------------|
| The Farmland Protection Policy Act (FPPA) discourages federal activities that would convert farmland to nonagricultural purposes. | Farmland Protection Policy Act of 1981 (7 U.S.C. 4201 et seq.) | 7 CFR Part 658 |
| Reference | | |
| https://www.hudexchange.info/environmental-review/farmlands-protection | | |

1. Does your project include any activities, including new construction, acquisition of undeveloped land or conversion, that could convert agricultural land to a non-agricultural use?

☒ Yes → Continue to Question 2.

☐ No

Explain how you determined that agricultural land would not be converted:

→ Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documentation supporting your determination.

2. Does “important farmland,” including prime farmland, unique farmland, or farmland of statewide or local importance regulated under the Farmland Protection Policy Act, occur on the project site?

You may use the links below to determine important farmland occurs on the project site:

- Utilize USDA Natural Resources Conservation Service’s (NRCS) Web Soil Survey <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>
- Check with your city or county’s planning department and ask them to document if the project is on land regulated by the FPPA (zoning important farmland as non-agricultural does not exempt it from FPPA requirements)
- Contact NRCS at the local USDA service center <http://offices.sc.egov.usda.gov/locator/app?agency=nrscs> or your NRCS state soil scientist http://soils.usda.gov/contact/state_offices/ for assistance

☒ No → Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.

☐ Yes → Continue to Question 3.

3. Consider alternatives to completing the project on important farmland and means of avoiding impacts to important farmland.

- Complete form **AD-1006**, "Farmland Conversion Impact Rating" http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1045394.pdf and contact the state soil scientist before sending it to the local NRCS District Conservationist.
(NOTE: for corridor type projects, use instead form **NRCS-CPA-106**, "Farmland Conversion Impact Rating for Corridor Type Projects: http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1045395.pdf.)
- Work with NRCS to minimize the impact of the project on the protected farmland. When you have finished with your analysis, return a copy of form AD-1006 (or form NRCS-CPA-106 if applicable) to the USDA-NRCS State Soil Scientist or his/her designee informing them of your determination.

Document your conclusion:

- ☐ Project will proceed with mitigation.

Explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide form AD-1006 and all other documents used to make your determination.*

- ☐ Project will proceed without mitigation.

Explain why mitigation will not be made here:

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide form AD-1006 and all other documents used to make your determination.*

Worksheet Summary

The USDA's Web Soil Survey (WSS) map was used to identify soil types on the proposed project site. According to the WSS service, soils onsite are primarily composed of Quafeno loam (93.8%) and Urban land-Quatama complex (6.2%). The USDA classifies Quafeno loam as indicative of prime farmland, while Urban land-Quatama complex is not. Finding soils onsite that support agriculture reflects the that the project site was historically used for farming and pastureland. Although soils onsite support agriculture, the area proposed for development would not be suitable for farming given the surrounding urban land uses. See Attachment 9.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

ERR No. 10. Floodplain Management



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

OMB No. 2506-0177
(exp. 9/30/2021)

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Floodplain Management (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/floodplain-management>

1. Does [24 CFR 55.12\(c\)](#) exempt this project from compliance with HUD’s floodplain management regulations in Part 55?

☐ Yes

Provide the applicable citation at 24 CFR 55.12(c) here. If project is exempt under 55.12(c)(6) or (8), provide supporting documentation.

Click here to enter text.

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Continue to the Worksheet Summary.

☒ No → *Continue to Question 2.*

2. **Provide a FEMA/FIRM map showing the site.**

The Federal Emergency Management Agency (FEMA) designates floodplains. The [FEMA Map Service Center](#) provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs).

Does your project occur in a floodplain?

☒ No → *Continue to the Worksheet Summary below.*

☐ Yes

Select the applicable floodplain using the FEMA map or the best available information:

☐ Floodway → *Continue to Question 3, Floodways*

☐ Coastal High Hazard Area (V Zone) → *Continue to Question 4, Coastal High Hazard Areas*

☐ 500-year floodplain (B Zone or shaded X Zone) → *Continue to Question 5, 500-year Floodplains*

☐ 100-year floodplain (A Zone) → *The 8-Step Process is required. Continue to Question 6, 8-Step Process*

3. **Floodways**

Is this a functionally dependent use?

☐ Yes

The 8-Step Process is required. Work with HUD or the RE to assist with the 8-Step Process.
→ *Continue to Worksheet Summary.*

- ☐ No → *Federal assistance may not be used at this location unless an exception in 55.12(c) applies. You must either choose an alternate site or cancel the project.*

4. Coastal High Hazard Area

Is this a critical action such as a hospital, nursing home, fire station, or police station?

- ☐ Yes → *Critical actions are prohibited in coastal high hazard areas unless an exception in 55.12(c) applies. You must either choose an alternate site or cancel the project.*

- ☐ No

Does this action include new construction that is not a functionally dependent use, existing construction (including improvements), or reconstruction following destruction caused by a disaster?

- ☐ Yes, there is new construction of something that is not a functionally dependent use.
New construction must be designed to FEMA standards for V Zones at 44 CFR 60.3(e) (24 CFR 55.1(c)(3)(i)).

→ *Continue to Question 6, 8-Step Process*

- ☐ No, this action concerns only existing construction.

Existing construction must have met FEMA elevation and construction standards for a coastal high hazard area or other standards applicable at the time of construction.

→ *Continue to Question 6, 8-Step Process*

5. 500-year Floodplain

Is this a critical action?

- ☐ No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

- ☐ Yes → *Continue to Question 6, 8-Step Process*

6. 8-Step Process.

Is this 8-Step Process required? Select one of the following options:

- ☐ 8-Step Process applies.

This project will require mitigation and may require elevating structure or structures. See the link to the HUD Exchange above for information on HUD's elevation requirements.

→ *Work with the RE/HUD to assist with the 8-Step Process. Continue to Worksheet Summary.*

- ☐ 5-Step Process is applicable per 55.12(a)(1-3).

Provide the applicable citation at 24 CFR 55.12(a) here.

[Click here to enter text.](#)

→ *Work with the RE/HUD to assist with the 5-Step Process. Continue to Worksheet Summary.*

- ☐ 8-Step Process is inapplicable per 55.12(b)(1-4).

Provide the applicable citation at 24 CFR 55.12(b) here.

[Click here to enter text.](#)

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

Worksheet Summary

According to FEMA FIRM map for the site, the project area is in Zone X, an area outside of the Special Flood Management Areas and at a higher elevation than the 0.2% annual chance flood areas (FIRM Panel 41051 C0217J Effective February 2019; see Attachment 3).

ERR No. 11. Historic Preservation



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

OMB No. 2506-0177
(exp. 9/30/2021)

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Historic Preservation (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/historic-preservation>

Threshold

Is Section 106 review required for your project?

- ☐ No, because a Programmatic Agreement states that all activities included in this project are exempt. (See the [PA Database](#) to find applicable PAs.)

Either provide the PA itself or a link to it here. Mark the applicable exemptions or include the text here:

[Click here to enter text.](#)

→ *Continue to the Worksheet Summary.*

- ☐ No, because the project consists solely of activities included in a No Potential to Cause Effects memo or other determination [36 CFR 800.3(a)(1)].

Either provide the memo itself or a link to it here. Explain and justify the other determination here:

[Click here to enter text.](#)

→ *Continue to the Worksheet Summary.*

- ☒ Yes, because the project includes activities with potential to cause effects (direct or indirect). → *Continue to Step 1.*

The Section 106 Process

After determining the need to do a Section 106 review, HUD or the RE will initiate consultation with regulatory and other interested parties, identify and evaluate historic properties, assess effects of the project on properties listed on or eligible for the National Register of Historic Places, and resolve any adverse effects through project design modifications or mitigation.

Step 1: Initiate consultation

Step 2: Identify and evaluate historic properties

Step 3: Assess effects of the project on historic properties

Step 4: Resolve any adverse effects

Only RE or HUD staff may initiate the Section 106 consultation process. Partner entities may gather information, including from SHPO records, identify and evaluate historic properties, and make initial assessments of effects of the project on properties listed in or eligible for the National Register of Historic Place. Partners should then provide their RE or HUD with all of their analysis and documentation so that they may initiate consultation.

Step 1 - Initiate Consultation

The following parties are entitled to participate in Section 106 reviews: Advisory Council on Historic Preservation; State Historic Preservation Officers (SHPOs); federally recognized Indian tribes/Tribal Historic Preservation Officers (THPOs); Native Hawaiian Organizations (NHOs); local governments; and project grantees. The general public and individuals and organizations with a demonstrated interest in a project may participate as consulting parties at the discretion of the RE or HUD official. Participation varies with the nature and scope of a project. Refer to HUD's website for guidance on consultation, including the required timeframes for response. Consultation should begin early to enable full consideration of preservation options.

Use the [When To Consult With Tribes checklist](#) within [Notice CPD-12-006: Process for Tribal Consultation](#) to determine if the RE or HUD should invite tribes to consult on a particular project. Use the [Tribal Directory Assessment Tool \(TDAT\)](#) to identify tribes that may have an interest in the area where the project is located. Note that only HUD or the RE may initiate consultation with Tribes. Partner entities may prepare a draft letter for the RE or HUD to use to initiate consultation with tribes, but may not send the letter themselves.

List all organizations and individuals that you believe may have an interest in the project here:

State Historic Preservation Office (SHPO); concurrence with finding of No Historic Properties Affected was received on January 6, 2023 (see Attachment 11).

→ *Continue to Step 2.*

Step 2 - Identify and Evaluate Historic Properties

Provide a preliminary definition of the Area of Potential Effect (APE), either by entering the address(es) or providing a map depicting the APE. Attach an additional page if necessary.

The Troutdale affordable housing project site is currently a vacant lot, which is approximately 3.58 acres located in Troutdale, Oregon. The site, which occupies tax lots 2501, 2502, and 2601, is bounded by 257th on the west, SW Kendall to the east, SW 2nd to the south, and adjacent buildings to the north.

See APE Figure (attached).

Gather information about known historic properties in the APE. Historic buildings, districts and archeological sites may have been identified in local, state, and national surveys and registers, local historic districts, municipal plans, town and county histories, and local history websites. If not already listed on the National Register of Historic Places, identified properties are then evaluated to see if they are eligible for the National Register. Refer to HUD's website for guidance on identifying and evaluating historic properties.

In the space below, list historic properties identified and evaluated in the APE.

Every historic property that may be affected by the project should be listed. For each historic property or district, include the National Register status, whether the SHPO has concurred with the finding, and whether information on the site is sensitive. Attach an additional page if necessary.

[Click here to enter text.](#)

Provide the documentation (survey forms, Register nominations, concurrence(s) and/or objection(s), notes, and photos) that justify your National Register Status determination.

Was a survey of historic buildings and/or archeological sites done as part of the project?

If the APE contains previously unsurveyed buildings or structures over 50 years old, or there is a likely presence of previously unsurveyed archeological sites, a survey may be necessary. For Archeological surveys, refer to HP Fact Sheet #6, [Guidance on Archeological Investigations in HUD Projects](#).

☒ Yes → *Provide survey(s) and report(s) and continue to Step 3.*

Additional notes:

Cultural Resources Survey Report for the Home Forward's Troutdale HUD Project, Multnomah County, Oregon, Dudek, December 2022

The cultural resources inventory for the proposed project included a cultural resources literature review and archival research and an archaeological field survey (pedestrian survey and 24 shovel probes). No historic built environment resources were previously identified within the APE, nor as part of this undertaking. No previously recorded archaeological resources are located within the 3.6-acre area of potential effects (APE). The cultural resource survey resulted in the identification of one multicomponent archaeological site (14273-01). The horizontal boundaries of the identified archaeological site were delineated with shovel probes. Multnomah County recommended the site to be not eligible for listing in the National Register of Historic Places (NRHP) due to a lack of historical associations and diminished integrity and, thus, should not be considered a historic property. SHPO concurred with Multnomah County's determination that the archaeological site not be eligible for listing in the NRHP and finding of *no historic properties affected* for the proposed project on January 6, 2023 (see Attachment 11).

After receiving SHPO concurrence, the City submitted supplemental archaeological survey information to the Oregon SHPO on June 14, 2023, to account for improvements to sidewalks along the project's northern property boundary. No new cultural or archaeological resources were identified in the supplemental surveys and the Oregon SHPO concurred with *no historic properties affected* determination on July 12, 2023 (see Attachment 11).

☐ No → *Continue to Step 3.*

Step 3 - Assess Effects of the Project on Historic Properties

Only properties that are listed on or eligible for the National Register of Historic Places receive further consideration under Section 106. Assess the effect(s) of the project by applying the Criteria of Adverse Effect. ([36 CFR 800.5](#)) Consider direct and indirect effects as applicable as per HUD guidance.

Choose one of the findings below to recommend to the RE or HUD.

Please note: this is a recommendation only. It is **not** the official finding, which will be made by the RE or HUD, but only your suggestion as a Partner entity.

☒ No Historic Properties Affected

Document reason for finding:

☒ No historic properties present.

☐ Historic properties present, but project will have no effect upon them.

☐ No Adverse Effect

Document reason for finding and provide any comments below.

Comments may include recommendations for mitigation, monitoring, a plan for unanticipated discoveries, etc.

[Click here to enter text.](#)

☐ Adverse Effect

Document reason for finding:

Copy and paste applicable Criteria into text box with summary and justification.

Criteria of Adverse Effect: [36 CFR 800.5](#)]

[Click here to enter text.](#)

Provide any comments below:

Comments may include recommendations for avoidance, minimization, and/or mitigation.

[Click here to enter text.](#)

Remember to provide all documentation that justifies your National Register Status determination and recommendations along with this worksheet.

ERR No. 12. Noise



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Noise (EA Level Reviews) – PARTNER

<https://www.hudexchange.info/programs/environmental-review/noise-abatement-and-control>

1. What activities does your project involve? Check all that apply:

- ☒ New construction for residential use

NOTE: HUD assistance to new construction projects is generally prohibited if they are located in an Unacceptable zone, and HUD discourages assistance for new construction projects in Normally Unacceptable zones. See 24 CFR 51.101(a)(3) for further details.

→ Continue to Question 2.

- ☐ Rehabilitation of an existing residential property

NOTE: For major or substantial rehabilitation in Normally Unacceptable zones, HUD encourages mitigation to reduce levels to acceptable compliance standards. For major rehabilitation in Unacceptable zones, HUD strongly encourages mitigation to reduce levels to acceptable compliance standards. See 24 CFR 51 Subpart B for further details.

→ Continue to Question 2.

- ☐ None of the above

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.

2. Complete the Preliminary Screening to identify potential noise generators in the vicinity (1000’ from a major road, 3000’ from a railroad, or 15 miles from an airport).

Indicate the findings of the Preliminary Screening below:

- ☐ There are no noise generators found within the threshold distances above.

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing the location of the project relative to any noise generators.

- ☒ Noise generators were found within the threshold distances.

→ Continue to Question 3.

3. Complete the Noise Assessment Guidelines to quantify the noise exposure. Indicate the findings of the Noise Assessment below:

- ☐ Acceptable (65 decibels or less; the ceiling may be shifted to 70 decibels in circumstances described in §24 CFR 51.105(a))

Indicate noise level here:

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide noise analysis, including noise level and data used to complete the analysis.*

☒ Normally Unacceptable: (Above 65 decibels but not exceeding 75 decibels; the floor may be shifted to 70 decibels in circumstances described in 24 CFR 51.105(a))

Indicate noise level here: The DNL Calculator found on the HUD Exchange web site is typically used to predict exterior noise levels at the project site from the nearby roadways, rail activity, and aircraft. However, due to the complexity of the topographical conditions at this site on-site noise monitoring was used for this noise analysis. Two measurement locations were selected, one in the southern area, and a second in the northern part of the property. The on-site noise monitoring was performed over 65 continuous hours from Wednesday March 23 at 3:00 pm to Saturday March 26 at 8:00 am. Noise levels at site M-1 ranged from 54.0 dBA Leq at night to 63.4 dBA Leq during daytime hours, and the DNL was measured at 66.4 dBA. Noise levels at site M-2 ranged from 60.0 dBA Leq at night to 69.1 dBA Leq during daytime hours, for a DNL of 71.2 dBA. Noise levels at those residential units nearest to SW 257th Drive will have exterior noise levels that are above the HUD exterior standard of 65 dBA DNL, with levels ranging from 66 dBA DNL to 70 dBA DNL.

If project is rehabilitation:

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis.*

If project is new construction:

Is the project in a largely undeveloped area¹?

☒ No

☐ Yes → ***The project requires completion of an Environmental Impact Statement (EIS) pursuant to 51.104(b)(1)(i).***

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis.*

☐ Unacceptable: (Above 75 decibels)

Indicate noise level here:

If project is rehabilitation:

HUD strongly encourages conversion of noise-exposed sites to land uses compatible with high noise levels. Consider converting this property to a non-residential use compatible with high noise levels.

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis, and any other relevant information.*

If project is new construction:

¹ A largely undeveloped area means the area within 2 miles of the project site is less than 50 percent developed with urban uses or does not have water and sewer capacity to serve the project.

The project requires completion of an Environmental Impact Statement (EIS) pursuant to 51.104(b)(1)(i). Work with HUD or the RE to either complete an EIS or obtain a waiver signed by the appropriate authority.

→ Continue to Question 4.

- 4. HUD strongly encourages mitigation be used to eliminate adverse noise impacts. Work with the RE/HUD on the development of the mitigation measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.**

☒ Mitigation as follows will be implemented:

The development uses several mitigation measures at the site, including a setback from the busy roadways, high quality with better than normal noise reduction characteristics for windows and doors, and includes a *Heat Recovery Ventilator* (HRV) system in each unit that provides additional ventilation to keep the indoor air quality high, even with the windows closed. As a result of the structural noise reduction, the interior noise levels at the units with the highest exterior noise levels, are predicted to range from 38 to 42 dBA DNL, which is below the HUD interior requirement of 45 dBA DNL.

The overall design of the complex includes two exterior shared uses areas that are also well shielded from SW 257th Drive traffic noise. Worst case peak hour noise levels at the play area near Building A were predicted at 48 dBA Leq. The open area by Building B and C has a worst case peak hourly noise level of 54 dBA Leq. These levels are fully compatible with exterior uses like parks and school grounds.

Complete details on noise monitoring and results along with site drawings, wall and window specifications are provided in the *Noise Technical Report, Troutdale Housing Development*, Michael Minor & Associates, July 2022.

→ Provide drawings, specifications, and other materials as needed to describe the project's noise mitigation measures.

Continue to the Worksheet Summary.

☐ No mitigation is necessary.

Explain why mitigation will not be made here:

→ Continue to the Worksheet Summary.

Worksheet Summary

See attached *Noise Technical Report, Troutdale Housing Development*, Michael Minor & Associates, July 2022 (Attachment 12).

ERR No. 13. Sole Source Aquifers

Sole Source Aquifers (CEST and EA)

| General requirements | Legislation | Regulation |
|---|--|-----------------|
| The Safe Drinking Water Act of 1974 protects drinking water systems which are the sole or principal drinking water source for an area and which, if contaminated, would create a significant hazard to public health. | Safe Drinking Water Act of 1974 (42 U.S.C. 201, 300f et seq., and 21 U.S.C. 349) | 40 CFR Part 149 |
| Reference | | |
| https://www.hudexchange.info/environmental-review/sole-source-aquifers | | |

1. Does your project consist solely of acquisition, leasing, or rehabilitation of an existing building(s)?

- ☐ Yes → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*
- ☒ No → *Continue to Question 2.*

2. Is the project located on a sole source aquifer (SSA)¹?

- ☒ No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination, such as a map of your project (or jurisdiction, if appropriate) in relation to the nearest SSA and its source area.*
- ☐ Yes → *Continue to Question 3.*

3. Does your region have a memorandum of understanding (MOU) or other working agreement with EPA for HUD projects impacting a sole source aquifer?

Contact your Field or Regional Environmental Officer or visit the HUD webpage at the link above to determine if an MOU or agreement exists in your area.

- ☐ Yes → *Provide the MOU or agreement as part of your supporting documentation. Continue to Question 4.*
- ☐ No → *Continue to Question 5.*

4. Does your MOU or working agreement exclude your project from further review?

- ☐ Yes → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination and document where your project fits within the MOU or agreement.*

¹ A sole source aquifer is defined as an aquifer that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. This includes streamflow source areas, which are upstream areas of losing streams that flow into the recharge area.

☐ No → *Continue to Question 5.*

5. Will the proposed project contaminate the aquifer and create a significant hazard to public health?

Consult with your Regional EPA Office. Your consultation request should include detailed information about your proposed project and its relationship to the aquifer and associated streamflow source area. EPA will also want to know about water, storm water and waste water at the proposed project. Follow your MOU or working agreement or contact your Regional EPA office for specific information you may need to provide. EPA may request additional information if impacts to the aquifer are questionable after this information is submitted for review.

☐ No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide your correspondence with the EPA and all documents used to make your determination.*

☐ Yes → *Work with EPA to develop mitigation measures. If mitigation measures are approved, attach correspondence with EPA and include the mitigation measures in your environmental review documents and project contracts. If EPA determines that the project continues to pose a significant risk to the aquifer, federal financial assistance must be denied. Continue to Question 6.*

6. In order to continue with the project, any threat must be mitigated, and all mitigation must be approved by the EPA. Explain in detail the proposed measures that can be implemented to mitigate for the impact or effect, including the timeline for implementation.

| |
|--|
| |
|--|

→ *Continue to the Worksheet Summary below. Provide documentation of the consultation (including the Managing Agency's concurrence) and any other documentation used to make your determination.*

Worksheet Summary

According the EPA's Sole Source Aquifer Locations Map, accessed at <https://www.epa.gov/dwssa/map-sole-source-aquifer-locations>, there are no sole source aquifers in or near the proposed project site (see Attachment 13). The proposed project is in compliance with the Safe Water Drinking Act.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

ERR No. 14. Wetlands



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Wetlands (CEST and EA) – Partner

<https://www.hudexchange.info/environmental-review/wetlands-protection>

1. Does this project involve new construction as defined in Executive Order 11990, expansion of a building’s footprint, or ground disturbance?

The term "new construction" includes draining, dredging, channelizing, filling, diking, impounding, and related activities and construction of any structures or facilities.

☐ No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

☒ Yes → *Continue to Question 2.*

2. Will the new construction or other ground disturbance impact a wetland as defined in E.O. 11990?

☒ No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map or any other relevant documentation to explain your determination.*

☐ Yes → *Work with HUD or the RE to assist with the 8-Step Process.* *Continue to Question 3.*

3. Does Section 55.12 state that the 8-Step Process is not required?

☐ No, the 8-Step Process applies.

This project will require mitigation and may require elevating structure or structures. See the link to the HUD Exchange above for information on HUD’s elevation requirements.

→ *Work with the RE/HUD to assist with the 8-Step Process. Continue to Worksheet Summary.*

☐ 5-Step Process is applicable per 55.12(a).

Provide the applicable citation at 24 CFR 55.12(a) here.

[Click here to enter text.](#)

→ *Work with the RE/HUD to assist with the 5-Step Process. This project may require mitigation or alternations. Continue to Worksheet Summary.*

☐ 8-Step Process is inapplicable per 55.12(b).

Provide the applicable citation at 24 CFR 55.12(b) here.

[Click here to enter text.](#)

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to Worksheet Summary.

☐ 8-Step Process is inapplicable per 55.12(c).

Provide the applicable citation at 24 CFR 55.12(c) here.

[Click here to enter text.](#)

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to Worksheet Summary.

Worksheet Summary

According to the National Wetlands Inventory map regulated by USFWS and accessible at <https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper>, there are no wetlands on the proposed project site (see Attachment 14).

A Wetland Determination Report for the project site completed by PBS in November 2021 used the US Army Corps of Engineers' wetland delineation methodology to identify an Unnamed Perennial Stream in the southwest corner of the project site (see Attachment 15). Hydrology sources for the stream appeared to be direct precipitation, groundwater discharge, and possibly upgradient runoff. A Summary of Initial Biological Findings completed by Dudek in April 2022 determined that water in the stream appeared to move offsite and that a rare plant survey is unnecessary since the site is already disturbed (see Attachment 6). Dudek recommended that development plans avoid the stream to negate the need for mitigation and permits from regulatory agencies. In current site plans for the proposed development, the stream remains undeveloped. As a result, the proposed project is in compliance with E.O. 11990.

ERR No. 15. Wild and Scenic Rivers

Wild and Scenic Rivers (CEST and EA) – PARTNER

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

| General requirements | Legislation | Regulation |
|---|---|-----------------|
| The Wild and Scenic Rivers Act provides federal protection for certain free-flowing, wild, scenic and recreational rivers designated as components or potential components of the National Wild and Scenic Rivers System (NWSRS) from the effects of construction or development. | The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287), particularly section 7(b) and (c) (16 U.S.C. 1278(b) and (c)) | 36 CFR Part 297 |
| References | | |
| https://www.hudexchange.info/environmental-review/wild-and-scenic-rivers | | |

1. Is your project within proximity of a NWSRS river as defined below?

Wild & Scenic Rivers: These rivers or river segments have been designated by Congress or by states (with the concurrence of the Secretary of the Interior) as wild, scenic, or recreational

Study Rivers: These rivers or river segments are being studied as a potential component of the Wild & Scenic River system.

Nationwide Rivers Inventory (NRI): The National Park Service has compiled and maintains the NRI, a register of river segments that potentially qualify as national wild, scenic, or recreational river areas

☒ No

→ If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Provide documentation used to make your determination, such as a map identifying the project site and its surrounding area or a list of rivers in your region in the Screen Summary at the conclusion of this screen.

☐ Yes, the project is in proximity of a Nationwide Rivers Inventory (NRI) River.

→ Continue to Question 2.

2. Could the project do *any* of the following?

- Have a direct and adverse effect within Wild and Scenic River Boundaries,
- Invade the area or unreasonably diminish the river outside Wild and Scenic River Boundaries, or
- Have an adverse effect on the natural, cultural, and/or recreational values of a NRI segment.

Consultation with the appropriate federal/state/local/tribal Managing Agency(s) is required, pursuant to Section 7 of the Act, to determine if the proposed project may have an adverse effect on a Wild & Scenic River or a Study River and, if so, to determine the appropriate avoidance or mitigation measures.

Note: Concurrence may be assumed if the Managing Agency does not respond within 30 days; however, you are still obligated to avoid or mitigate adverse effects on the rivers identified in the NWSRS

- ☐ No, the Managing Agency has concurred that the proposed project will not alter, directly, or indirectly, any of the characteristics that qualifies or potentially qualifies the river for inclusion in the NWSRS.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Provide documentation of the consultation (including the Managing Agency's concurrence) and any other documentation used to make your determination.*

- ☐ Yes, the Managing Agency was consulted and the proposed project may alter, directly, or indirectly, any of the characteristics that qualifies or potentially qualifies the river for inclusion in the NWSRS.

→ *The RE/HUD must work with the Managing Agency to identify mitigation measures to mitigate the impact or effect of the project on the river.*

Worksheet Summary

According to the National Park Service's Interactive Map of NPS Wild and Scenic Rivers, accessible at <https://www.nps.gov/orgs/1912/plan-your-visit.htm>, the proposed project site does not contain any rivers protected under the Wild and Scenic Rivers Act (see Attachment 16).

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

ERR No. 16. Environmental Justice



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-1000

This Worksheet was designed to be used by those “Partners” (including Public Housing Authorities, consultants, contractors, and nonprofits) who assist Responsible Entities and HUD in preparing environmental reviews, but legally cannot take full responsibilities for these reviews themselves. Responsible Entities and HUD should use the RE/HUD version of the Worksheet.

Environmental Justice (CEST and EA) – PARTNER

<https://www.hudexchange.info/environmental-review/environmental-justice>

HUD strongly encourages starting the Environmental Justice analysis only after all other laws and authorities, including Environmental Assessment factors if necessary, have been completed.

1. Were any adverse environmental impacts identified in any other compliance review portion of this project’s total environmental review?

☒ Yes → *Continue to Question 2.*

☐ No → *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

2. Were these adverse environmental impacts disproportionately high for low-income and/or minority communities?

☐ Yes

Explain:

→ *The RE/HUD must work with the affected low-income or minority community to decide what mitigation actions, if any, will be taken. Provide any supporting documentation.*

☒ No

Explain:

The proposed project site is currently vacant and does not possess any RECs or hazardous materials. The noise study for the proposed project indicated the project site would experience high noise levels due to high traffic volume along SW 257th Drive. However, implementation of mitigation measures would reduce adverse noise impacts at the project site to below HUD thresholds.

→ *If the RE/HUD agrees with this recommendation, the review is in compliance with this section. Continue to the Worksheet Summary below.*

Worksheet Summary

Home Forward intends to develop the proposed project site into a ninety-four (94) unit complex. The layout of the complex includes two courtyards/play areas. Each of these are protected from traffic noise from SW 257th Drive by the building structures. The Play Area near building A will have nature inspired area with artificial turf and an activity area for children.

Noise. A temporary increase in noise and vibration levels would be expected during the renovation and construction phase of the project. Noise would be generated by construction equipment and the delivery of materials, among other activities. Increases in ambient noise levels would be restricted to daytime hours and would remain within applicable thresholds as long as the contractor implements the construction noise mitigation measures outlined in the Troutdale Housing Development Noise Technical Report completed by Michael Minor & Associates in July 2022 (**MM-NOI-1 and MM-NOI-2**) (see **Attachment 12**).

During the operational phase of the proposed project, noise levels at those residential units nearest to SW 257th Drive would have exterior noise levels that are above the HUD exterior standard of 65 dBA DNL, with levels ranging from 66 dBA DNL to 70 dBA DNL. However, the design of the proposed development already includes features to reduce the impact of traffic-related noise on residential units to within HUD's threshold. These design features include exterior wall assembly with 5/8-inch gypsum on 2x6 structural framing, certified R-23 insulation, ½-inch plywood sheath with vapor barriers and fiber cement siding, as well as high quality windows with sound transmission class levels of 28 to 33 (**MM-NOI-3**). Inclusion of these design features would reduce interior noise levels to a predicted range between 38 and 42 dBA DNL, which is below the HUD interior threshold of 45 dBA DNL. Residences would also be equipped with *Heat Recovery Ventilator* systems, providing for a "windows closed" scenario that would keep indoor air quality high and minimize noise while apartment windows are closed (**MM-NOI-4**). Therefore, the proposed project, as designed, will meet the requirements in the HUD standards for an acceptable residential development in an area with existing noise levels above 65 dBA DNL.

Erosion/ Drainage/ Storm Water Runoff: Construction activities may temporarily increase impacts from erosion, drainage, and stormwater runoff. However, with the implementation of best management practices per the guidance of the Planning Division of the Multnomah County Department of Community Services (see **MM-LAND-1** and **MM-LAND-2**), the potential temporary impacts would be minimized and kept on-site to the greatest extent possible. Therefore, no disproportionate impacts to low income and/or minority communities would occur as a result of erosion, drainage, and stormwater runoff.

ERR No. 17. Oregon ESA & MSA

Endangered Species Act & Magnuson-Stevens Act

Guidance for HUD Projects in Oregon

Prepared in collaboration with the U.S. Fish and Wildlife Service and the National Marine Fisheries Service

| General Requirements | Legislation | HUD Regulations |
|---|--|----------------------------------|
| Section 7(a)(2) of the Endangered Species Act mandates that actions that are authorized, funded, or carried out by Federal agencies do not jeopardize the continued existence of plants and animals that are listed, or result in the adverse modification or destruction of designated critical habitat. | The Endangered Species Act of 1973; 16 U.S.C. 1531 et seq. | 24 CFR 58.5(e) 24 CFR 50.4(e) |
| Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires Federal agencies to consult with NOAA Fisheries on any action that they authorize, fund, or undertake that may adversely affect essential fish habitat (EFH). | Magnuson-Stevens Fishery Conservation and Management Act; 16 U.S.C. 1801 | |

The purpose of this document is to assist the U.S. Department of Housing and Urban Development (HUD) and their responsible entities¹ (REs) in meeting their compliance and documentation obligations under the Endangered Species Act (ESA) and the Magnuson-Stevens Fisheries Conservation and Management Act (MSA). The ESA is administered jointly by the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) [collectively, “the Services”], while the MSA is administered solely by the NMFS. Nearly all HUD projects, including HUD funded, financed, subsidized, or guaranteed projects constitute a federal action requiring project review for compliance with the ESA and MSA.

The ESA requires all federal agencies to use their authorities to help conserve “*listed species*” (i.e., those listed as “*threatened*” or “*endangered*” under the ESA). Therefore, as HUD staff or designated REs, you are responsible for minimizing the effects of your actions on ESA-listed species, designated critical habitat, and habitats identified in recovery plans. An ESA effects analysis must consider all effects to ESA-listed species and designated critical habitat caused by a proposed action. Few HUD actions occur within designated critical habitat, where direct injury or harm to ESA-listed species or critical habitat is likely to occur or easy to discern. More often, however, some types of HUD projects have the potential to effect ESA-listed species and their critical habitats that are far removed from the actual project location.

The MSA requires federal agencies to evaluate the effect of their actions on habitats used by a range of marine species that are commercially harvested. These habitats are identified as “essential fish habitat” (EFH).² In many cases, projects that have the potential to affect critical habitat designated under the ESA have similar effects on EFH, particularly with respect to Chinook and coho salmon, which are regulated species under both the ESA and MSA. Project assessment for ESA and MSA impacts are typically conducted concurrently, as the species and habitats regulated by both acts tend to overlap.

This document is intended to describe the circumstances under which a finding of “*no effect*” on ESA- and MSA-regulated species, their critical habitats, and EFH occurring in Oregon might be appropriate. A project that reaches a finding of “*no effect*” does not require coordination with, or approval from, the USFWS and NMFS, and documenting a finding of “*no effect*” satisfies the ESA/MSA review obligations by HUD. Note that, a finding of “*no effect*” would preclude NMFS or USFWS issuing liability protection for violations of the ESA,

¹ A Responsible entity is a unit of local government (state, county, city) designated by HUD under 24 Code of Federal Regulations (CRF) Part 58.

² Essential Fish Habitat (EFH) has been designated for Pacific salmon (Chinook, coho, and pink salmon), coastal pelagic species, groundfish, and highly migratory species.

and is based on the premise the project would not result in the take³ of an ESA-listed species or result in adverse effects to critical habitat/EFH. However, if this determination is made in error, or if take does occur, HUD or the RE bears liability for such take.

HUD or the RE is solely responsible for making a finding of effect for a project and cannot defer responsibility to an external party. USFWS and NMFS rarely issue any correspondence for a “no effect” finding, except when there is strong disagreement about that finding. If you make a “no effect” finding for your project, document the circumstances and reason for your decision in a memo to the project file, as this will aid HUD should the project be reviewed internally or by another party. The worksheets presented in Part A and Part B of this document should be included in a project’s Environmental Review Record to document what finding of effect was reached. Since USFWS and NMFS manage and regulate different species and habitats, it is entirely possible to reach a different finding of effect for each Service.

Making an appropriate effects determination for both the ESA and MSA is an essential part of carrying out HUD’s obligation to use its federal authority to help conserve listed species. While there are a great number of HUD activities that will have “no effect” on federally-listed species, designated critical habitat, and EFH, there are a number of activities that will require further analysis, documentation, and consultation with USFWS and/or NMFS. As there are minor variations in process, this guidance is separated into multiple parts:

- Part A** Describes the “no effect” determination process for species and habitats under USFWS’ jurisdiction;
- Part B** Describes the “no effect” determination process for species and habitats under NMFS’ jurisdiction;
- Part C** Describes the process to initiate consultation with USFWS and/or NMFS if you are unable to reach a “no effect” finding for your project, and provides contact information for staff that can provide technical assistance in initiating the ESA consultation process;
- Part D** Includes a glossary of terminology frequently used when discussing the ESA and MSA.

Part A: Consultation with the U.S. Fish and Wildlife Service (USFWS)

USFWS’ trust resources are found in a wide range of habitats throughout Oregon, including forests, wetlands, bogs, rivers, lakes, reservoirs, coastal dunes, estuaries, grasslands, prairies, shrub-steppe, and mountains. USFWS species listed or proposed for listing under the ESA that are found in Oregon include plants, insects, mollusks, crustaceans, birds, mammals, reptiles, and amphibians. Project concerns for ESA-species under USFWS’ jurisdiction largely focus on preventing the destruction or loss of sensitive habitats (e.g., wetlands, prairie, oak savanna) that support ESA-listed species for all or part of their life history. Additional concerns include minimizing the adverse effects from construction and operation (e.g., noise, light, vibrations) that could temporarily or permanent impact habitats occupied by ESA-listed species, reducing the suitability of such habitats and/or disrupting essential life-stage activities of a listed species (e.g., nesting, feeding, migration). The following two steps will assist you in making a finding of effect for your project.

Step 1: Obtain Species List & Determine Critical Habitat

You must obtain a species list for the entire action area of your project. The action area encompasses all of the effects of the project, not just those that occur within the construction footprint. Project effects that extend beyond the project site itself and may include noise, air pollution, water quality, stormwater discharge, and visual disturbances. Additionally, effects to habitat must be considered, including the project’s effects on

³ “Take” of a listed species is defined as, “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” [50 CFR 402.02]

roosting, feeding, nesting, spawning and rearing habitat, overwintering sites, and migratory corridors.

Go to <https://ipac.ecosphere.fws.gov/> and log in or create an account to generate an official species list for the project area. Please note that this list includes listed, *proposed* and *candidate species* and designated and *proposed* critical habitats; consideration of project effects on *candidate species* is optional, unless the project's effects are very large (in this case, contact the local USFWS field office). However, *proposed species* or critical habitats may become listed as endangered or threatened species during the period of construction; a project with a protracted development schedule may opt to address *proposed species* as a way to reduce the potential need to reinitiate consultation with the USFWS, should the status of the *proposed species* or critical habitat be upgraded to threatened or endangered. If you have questions, contact the appropriate USFWS field office⁴ to discuss the species list for your area.

Step 2: Determine Effect

Question 1: Will the project's effects overlap with federally-listed or proposed species or designated or proposed critical habitat covered by USFWS?

Consider all effects of the project within the action area. The action area encompasses all the effects of the project, including those that occur beyond the boundaries of the property (such as noise, air pollution, water quality, stormwater discharge, visual disturbance).

- ☐ **NO, the project and all effects are outside the range of ESA-listed or proposed species and designated or proposed critical habitat covered by USFWS.** Therefore, the project will have **No Effect** on ESA-listed or proposed species or designated critical habitat.
 - Record your finding of **No Effect** on species or habitats covered by USFWS, and include this documentation in your Environmental Review Record.
 - Attach a statement explaining how you determined that your project's effects do not overlap with species or habitat covered by USFWS.
 - Section 7 Consultation with NMFS may still be necessary. CONTINUE TO PART B.
- ☐ **YES, project effects may overlap with ESA-listed or proposed species or designated or proposed critical habitat covered by USFWS.** Therefore, your project could affect ESA-listed species and habitat.
 - Continue to Question 2.

Question 2: Will the project occur on a previously developed site?⁵

- ☐ **YES, the project site has been, or currently is, developed.** Therefore, the project will have **No Effect** on ESA-listed or proposed species and/or designated or proposed critical habitat.
 - Record your finding of **No Effect** and maintain this documentation, including the official species list and map of your project location, include in your Environmental Review Record.
 - Attach a statement to your determination explaining how your project's effects do not impact species or habitat covered by USFWS.
 - Section 7 Consultation with NMFS may still be necessary. CONTINUE TO PART B.
- ☐ **NO, the project occurs on land that is not currently or has not been previously developed.**
 - Continue to Question 3.

⁴ <https://www.fws.gov/office/oregon-fish-and-wildlife/contact-us>

⁵ Previously developed land typically includes land that has had structures or other features of the built environment (e.g., parking areas, roads, buildings) constructed upon it such that the land does not offer suitable habitat for wildlife. Land that was previously used for agricultural or timber production are **not** considered "previously developed."

Question 3: Is the project activity listed in Table 1 (following page) and does it meet all of the required parameters?

- ☐ **YES, the activity is listed in Table 1 and meets all of the required parameters.** Therefore, the project will have **No Effect** on ESA-listed or proposed species and/or designated or proposed critical habitat.
- Record your finding of **No Effect** and maintain this documentation, including the official species list and map of your project location, in your Environmental Review Record.
 - Attach a statement to your determination explaining how your project met the required parameters in Table 1.
 - Section 7 Consultation with NMFS may still be necessary. CONTINUE TO PART B.
- ☐ **NO, the project description does not match the activities in Table 1 and all of the specified criteria listed.**
- Continue to Question 4.

Question 4: Do you have some other basis for a *No Effect* determination, for example a biological assessment or other documentation from a qualified professional?⁶

- ☐ **YES, the project has professional documentation for a finding of *No Effect*.**
- Record your finding of **No Effect** and maintain this documentation, including the official species list and map of your project location, and include in your Environmental Review Record.
 - Attach the biological assessment or other professional documentation.
 - Section 7 Consultation with NMFS may still be necessary. CONTINUE TO PART B.
- ☐ **NO, the project does not have professional documentation for a finding of *No Effect* and *May Affect* a listed species and/or critical habitat.**
- The project **May Affect** listed or proposed species, or designated or proposed critical habitat. Consultation with the USFWS may be required. CONTACT THE USFWS TO DETERMINE THE APPROPRIATE EFFECTS DETERMINATION AND LEVEL OF CONSULTATION REQUIRED. Contact info is located in Part C.
 - Section 7 Consultation with NMFS may still be necessary. CONTINUE TO PART B.

Table 1: Potential *No Effect* Categories and Required Criteria

Purchase building or property:

- Does not change footprint of existing structures.
- Does not create new impervious surface area, either constructed or reconstructed.
- Does not involve ground disturbing activities.⁷

⁶ A “qualified professional” is a biologist trained in the assessment of habitat requirements of the ESA-listed species that overlap with your project’s action area.

⁷ Studies or surveys that do not require soil/ground disturbance are allowed. Wetland delineation, soil infiltration testing, and geotechnical drilling/boring are permitted.

Landscaping maintenance / improvement:

- Access and staging, source sites, and disposal sites have been assessed as part of the action.
- Disposal sites are approved for materials to be received. Waste materials are recycled or otherwise disposed of in an EPA approved sanitary or hazardous waste disposal site.
- Does not remove vegetation or trees within 150 feet of an aquatic resource.⁸
- New plantings shall be comprised of native species approved by the local jurisdiction. No planting of invasive species is permitted.
- Pesticides or herbicides shall not be applied within 150 feet of an aquatic resource.
- Pesticides or herbicides shall not be applied if precipitation is predicted in upcoming 24 hours.
- Outside lighting should be directed downward to the ground and lighting must not illuminate aquatic resources occupied by ESA-listed species.
- Does not increase the amount of impervious surface.
- Removal/maintenance of hazard trees⁹ or similar vegetation is permitted, provided that the removal occurs outside of the breeding season (April 1 through August 31) and a qualified professional has documented that the tree does not provide habitat for ESA-listed species.¹⁰ In addition, an equivalent number of trees appropriate to the location are replaced.¹¹
- Does not result in wetland fill.

Interior rehabilitation:

- Applies only to existing structures.
- Access and staging, and source sites, have been assessed as part of the proposed action and occurs on previously developed land. The sites are located at least 150 feet away from any aquatic resources and include BMPs to prevent discharge of contaminants entering waterbodies or stormwater systems (e.g., filter fabrics in catch basins, sediment traps, etc.).
- New plantings shall be comprised of native species approved by the local jurisdiction. No planting of invasive species is permitted.
- Disposal sites are approved for materials to be received. Waste materials are recycled or otherwise disposed of in an EPA approved sanitary or hazardous waste disposal site.

⁸ An aquatic resource, for the purposes of this opinion, includes: streams, rivers, ponds, lakes, wetlands, estuaries, or bays. The marine environment is not considered an aquatic resource, for the purposes of this guidance.

⁹ A "hazard tree" is a tree that has a structural defect that creates a risk of failure and resulting damage to people or property.

¹⁰ A "qualified professional" is a biologist trained in the assessment of habitat requirements of the ESA-listed species that overlap with your project's action area.

¹¹ An "appropriate tree" is one that will be the correct size and species for the specific location and that the selected location is appropriate for the selected tree species at maturity. An arborist can recommend an appropriate species for replacement.

Exterior repairs or improvements of existing structures:

- Does not increase the amount of impervious surface.
- Does not install, repair, or replace exterior artificial lighting on properties adjacent to aquatic resources that support ESA-listed species.
- All exterior lighting is directed downward to the ground.
- Does not remove vegetation or trees within 150 feet of an aquatic resource.¹²
- Special projects directed to the removal of material or architectural barriers that restrict the mobility of and accessibility to elderly and persons with disabilities (e.g., curb cuts, wheelchair ramps, or similar) do not impact areas of natural habitat, including wetlands or riparian areas, and all activities comply with state and local building codes and stormwater regulations.
- Does not result in wetland fill.
- Does not result in discharges of new or additional sources of stormwater to wetlands or waterbodies.
- Access and staging, and source sites have been assessed as part of the proposed action. The sites are located at least 150 feet away from the aquatic resource and include BMPs to prevent discharge of contaminants from entering waterbodies or stormwater systems (e.g., filter fabrics in catch basins, sediment traps, etc.). Disposal sites are approved for materials to be received. Waste materials are recycled or otherwise disposed of in an approved sanitary or hazardous waste disposal site.

New construction or addition:

- Does not increase the amount of impervious surface.
- Does not remove vegetation or trees within 150 feet of an aquatic resource.
- Does not result in wetland fill.
- Will not impact an area of natural habitat, including wetlands or riparian areas.
- Complies with all state and local building codes and stormwater regulations.
- Does not result in discharges of new or additional sources of stormwater to wetlands or waterbodies.
- Access and staging, and source sites have been assessed as part of the proposed action. The sites are located at least 150 feet away from the aquatic resource and include BMPs to prevent discharge of contaminants from entering waterbodies or stormwater systems (e.g., filter fabrics in catch basins, sediment traps, etc.). Disposal sites are approved for materials to be received. Waste materials are recycled or otherwise disposed of in an EPA approved sanitary or hazardous waste disposal site.

¹² An aquatic resource, for the purposes of this opinion, includes: streams, rivers, ponds, lakes, wetlands, estuaries, or bays. The marine environment is not considered an aquatic resource, for the purposes of this guidance.

Part B: Consultation with the National Marine Fisheries Service (NMFS)

As stated in the introduction, few HUD actions occur within the designated critical habitat of NMFS-managed species, where direct injury or harm to an ESA-listed species or destruction of critical habitat/EFH is likely to occur. However, there are often effects from many HUD projects that occur outside the construction site or property boundaries of a given project, which can reach critical habitat/EFH and effect listed species. By far, the largest concern for NMFS is the generation of stormwater runoff from new or redeveloped impervious surfaces (e.g., concrete, asphalt, roofing materials, compacted gravel).

Impervious surfaces prevent precipitation from absorbing into the soil, resulting in runoff into storm drains and waterways. Stormwater runoff can transport pollutants (e.g., soil, fertilizer, metals, pesticides, tire particles) that degrade water quality in streams, lakes, reservoirs, and rivers where ESA-listed/MSA species occur. Many of these pollutants persist for years in the environment and can be transported downstream hundreds of miles from their point of origin. Pollutants can also make their way into the food chain where they can harm listed species and degrade habitat suitability. Of particular concern are dissolved metals and tire particulates. Dissolved metals can be generated from the wearing of a vehicle's brake pads and certain types of metal roofing and siding. Dissolved metals can be carried hundreds of miles downstream and interfere with listed salmon and steelhead's ability to navigate back to their spawning streams, among a range of other sub-lethal effects. Rubber particulate matter is generated from the wearing of a vehicle's tires and can leach compounds into the aquatic environment that have both lethal and sub-lethal effects on listed fish.

Additionally, impervious surfaces interrupt the natural cycle of rainwater infiltration into soil by diverting large volumes of runoff into streams, wetlands, rivers, and lakes. When this occurs, the volume and velocity of stormwater discharge to a receiving water can result in adverse hydromodification: the degradation of aquatic systems as a result of changes to the physical condition of a waterbody. Stormwater runoff can cause stream channel erosion, loss of habitat features required by listed species (e.g., large wood, spawning gravels), direct injury to aquatic species, and the incremental loss of overall habitat quality.

Many HUD projects result in the creation or redevelopment of impervious surfaces (e.g., roadways, sidewalks, parking lots, building roofs), assessment of stormwater runoff from a project is the most likely way that you will interact with NMFS and the ESA-listed/MSA species and habitats under their authority. Additional guidance of NMFS' stormwater treatment and management criteria can be found in the appendices of the programmatic biological opinion issued by NMFS for HUD projects in Oregon.¹³

The following steps will assist you in making a finding of effect for your project.

Step 1: Obtain Species List & Determine Critical Habitat / Essential Fish Habitat

NMFS' trust resources occur primarily in the marine environment; however, these resources include a number of ESA-listed fish species that spend a portion of their lives in inland, freshwater streams, rivers, reservoirs, and lakes. Additionally, through the MSA, NMFS manages a number of groundfish species that spend a portion of their lives in river estuaries and bays. Most watersheds in Oregon are within or upstream of a waterbody occupied by an ESA-listed species or designated as critical habitat/EFH.¹⁴ As stormwater pollutants can be transported downstream and can persist in the environment, all projects that discharge post-construction stormwater have the potential to effect ESA-listed and MSA species and critical habitat/EFH. NMFS considers discharge of post-construction stormwater an **Adverse Effect** on these species and habitats. With few

¹³ National Marine Fisheries Service (NMFS). 2016. Endangered Species Act Section 7 Formal Programmatic Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the U.S. Department of Housing and Urban Development Housing Programs in Oregon. West Coast Region. Portland, Oregon. July 25, 2016. [\[Insert link to appendices on HUD website or NMFS repository\]](#)

¹⁴ Exceptions include watersheds in: Harney, Klamath, Lake, and Malheur counties.

exceptions, discharge of post-construction stormwater extends from its point of origin to the nearest receiving water, then downstream, terminating at the Pacific Ocean.¹⁵ This means that most HUD projects that create new impervious surface area or replace existing impervious surface area are likely to have an adverse effect on NMFS listed species and critical habitat/EFH. Note that an **Adverse Effect** finding for a project does not necessarily preclude construction of the project, only that additional measure may be required in order to ensure the project's effects do not jeopardize listed species or adversely modify critical habitat/EFH.

Table 2 identifies the ESA-listed species under NMFS' jurisdiction that may be affected by your project; simply identify the area of the state in which your project occurs and see the ESA-listed species and critical habitat that may be affected. Figure 1, following page, depicts the geographic extent of NMFS' ESA-listed species and critical habitat occurrence in Oregon.

| Table 2: NMFS' ESA-Listed Species & Critical Habitat Designations in Oregon | | |
|--|---------------------------------|----------------------------|
| Oregon Coast (Middle/Northern)¹⁶ | Columbia River Basin | |
| Coho Salmon | Chinook Salmon | Sockeye Salmon |
| Oregon Coast Coho Salmon | Lower Columbia River | Snake River sockeye salmon |
| Southern Green Sturgeon | Upper Columbia River spring-run | Steelhead Trout |
| Southern Eulachon | Snake River spring/summer-run | Upper Columbia River |
| | Snake River fall-run | Lower Columbia River |
| Oregon Coast (Southern)¹⁷ | Upper Willamette River | Middle Columbia River |
| Coho Salmon | Chum Salmon | Snake River basin |
| Southern Oregon-Northern California Coast Coho | Columbia River chum | Upper Willamette River |
| Southern Green Sturgeon | Coho Salmon | Southern Green Sturgeon |
| Southern Eulachon | Lower Columbia River coho | Southern Eulachon |

Should you desire more specificity, NMFS maintains GIS data¹⁸ for the range and distribution of listed species and a web-based map application for identifying designated critical habitat and EFH.¹⁹ Familiarity with web-based GIS applications will be necessary to utilize these resources.

Essential fish habitat is the same throughout the state. If your project will discharge stormwater that reaches a receiving water, your project may adversely modify EFH for Pacific Salmon and Groundfish.

Oregon counties where ESA-listed species and critical habitat do not occur include: Harney, Klamath, Lake, and Malheur counties. Projects occurring in these counties are assumed to have "no effect" as the areas are inaccessible to species under NMFS' jurisdiction. There is currently uncertainty as to whether stormwater pollutants can be transported through major reservoirs in the Snake and Klamath rivers at concentrations sufficient to have an effect on downstream listed species and habitats. Please note that the counties listed above are only excluded from NMFS' managed species and habitats and that ESA-listed species and critical habitat under USFWS' jurisdiction may be present, so remember to complete Part A of this guidance.

If you need to assistance confirming whether your action is in proximity to ESA-listed salmon or steelhead, designated critical habitat, or EFH, please contact the appropriate NMFS office, identified in Part C

¹⁵ Exceptions to this finding are identified in Table 4.

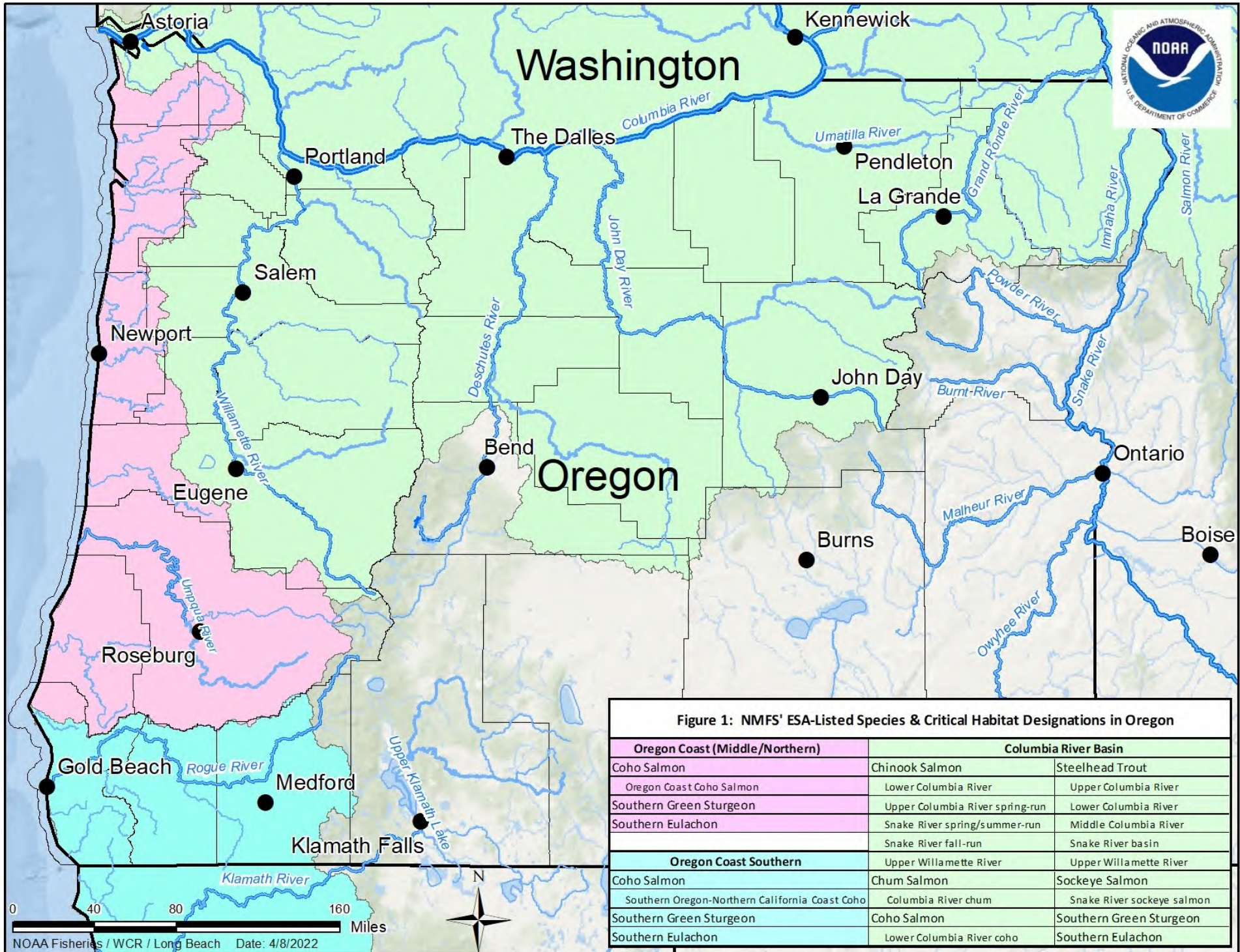
¹⁶ Extending from Cape Blanco north to the mouth of the Columbia River.

¹⁷ Extending from Cape Blanco south to the California border.

¹⁸ <https://www.fisheries.noaa.gov/resource/map/species-ranges-salmon-and-steelhead-west-coast-region>

¹⁹ Protected Resources App:

<https://www.webapps.nwfsc.noaa.gov/portal/apps/webappviewer/index.html?id=7514c715b8594944a6e468dd25aaacc9>



Step 2: Determine Effect

Question 1: Will the project's effects overlap with federally listed or proposed species, designated or proposed critical habitat, and/or essential fish habitat covered by NMFS?

Note that project effects include those that extend beyond the project site itself, such as noise, water quality, stormwater discharge, visual disturbance; habitat assessment must include consideration for feeding, spawning, rearing, overwintering sites, and migratory corridors.

- ☐ **NO, the project and all effects are outside the range of listed species and critical habitat covered by NMFS.** Therefore, the project will have **No Effect** on ESA-listed or proposed species or designated critical habitat/EFH.
 - Record your determination of **No Effect** on species or habitats covered by NMFS.
 - Maintain documentation in your Environmental Review Record. For example, a map showing that your project is not in or upstream of a watershed of a listed species.
- ☐ **YES, project effects may overlap with ESA-listed species or designated critical habitat covered by NMFS.**
 - Continue to Question 2.

Question 2: Is the project activity listed in Table 3 (following page) and does it meet all of the required parameters?

- ☐ **YES, the activity is listed in Table 3 and meets all the required parameters.** Therefore, the project will have **No Effect** on ESA-listed species and/or designated critical habitat/EFH.
 - Record your determination of **No Effect** and maintain this documentation, including a species list and map of your project location, in your Environmental Review Record.
 - Attach a statement to your determination explaining how your project meets the required parameters in Table 3.
- ☐ **NO, the activity does not match those described in Table 3 and all of the specified parameters.**
 - Continue to Question 3.

Question 3: Do you have some other basis for a **No Effect** determination, for example a biological assessment or other documentation from a qualified professional?²⁰

- ☐ **YES, the project has professional documentation for a **No Effect** determination.**
 - Record your determination of **No Effect** and maintain this documentation, including a species list and map of your project location, in your Environmental Review Record.
 - Attach the biological assessment or other professional documentation.
- ☐ **NO, the project does not have professional documentation supporting a **No Effect** determination.**
 - **YOU MUST INITIATE SECTION 7 CONSULTATION WITH NMFS.**
 - *Your project may qualify for inclusion under the Programmatic Biological Opinion for HUD Housing Projects in Oregon.* See Part C for additional details.
 - Contact information for NMFS offices provided in Part C.

²⁰ A "qualified professional" is a biologist trained in the assessment of habitat requirements of the ESA-listed species that overlap with your project's action area.

Table 3: Potential *No Effect* Categories and Required Criteria

Purchase building or property and:

- Does not change existing structures.
- Does not create new impervious surface area, either constructed or reconstructed.
- Does not modify existing stormwater collection or drainage patterns.
- Does not involve ground disturbing activities/construction.²¹

Landscaping maintenance/improvement:

- Does not remove riparian²² vegetation or trees within 150 feet of an aquatic resource.²³
- Does not increase hardscape area unless an equal area of impervious surface area is converted to pervious surface.

Specific landscaping maintenance/improvement criteria:

- New plantings shall be comprised of native species approved by the local jurisdiction. No planting of invasive species is permitted.
- Pesticides or herbicides shall not be applied within 150 feet of an aquatic resource.²⁰
- Pesticides or herbicides shall not be applied if precipitation is predicted in upcoming 24 hours.
- Outside lighting shall not illuminate aquatic resources occupied by ESA-listed species.
- Installation/maintenance of sprinkler irrigation systems shall be installed and maintained so that spray is directed away from pollution generating impervious surfaces.²⁴
- Removal/maintenance of hazard trees²⁵ or similar vegetation is permitted, so long as an equivalent number of trees appropriate to the location are replaced.^{26,27}

Interior rehabilitation:

- Applies only to existing structures.
- Access and staging, and source sites, have been assessed as part of the proposed action. The sites are located at least 150 feet away from any aquatic resources and include BMPs to prevent discharge of contaminants entering waterbodies or stormwater systems (e.g., filter fabrics in catch basins, sediment traps, etc.). No plantings of invasive species.
- Disposal sites are approved for materials to be received. Waste materials are recycled or otherwise disposed of in an EPA approved sanitary or hazardous waste disposal site.

²¹ Studies or surveys that do not require soil/ground disturbance are allowed. Wetland delineation, soil infiltration testing, and geotechnical drilling/boring are permitted.

²² Riparian zones are the areas bordering rivers and other bodies of surface water. They include the floodplain as well as the riparian buffers adjacent to the floodplain. Riparian zones are visually defined by a greenbelt with a characteristic suite of plants that are adapted to and depend on the shallow water table.

²³ An aquatic resource, for the purposes of this guidance, includes: streams, rivers, ponds, lakes, wetlands, estuaries, bays, or other tidally influenced marine areas.

²⁴ A pollution generating surface, as used in this guidance, is a surface upon which motorized vehicles travel. Examples include, but are not limited to: parking lots, driveways, and roads.

²⁵ A "hazard tree" is a tree that has a structural defect that creates a risk of failure and resulting damage to people or property.

²⁶ An "appropriate tree" is one that will be the correct size and species for the specific location and that the selected location is appropriate for the selected tree species at maturity. An arborist can recommend an appropriate species for replacement.

²⁷ When replacing trees adjacent to impervious surface area, give preference to evergreen species (e.g., firs, pines), as they intercept precipitation and re-evaporate it back to the atmosphere, reducing stormwater generation.

Any exterior repair or improvement that will not increase post-construction runoff and:

- Does not increase amount (area) of impervious surface area.
- Does not replace existing roof with new hot tar roofing methods, torch down roofing methods, treated wood, copper, or galvanized metal.²⁸
- Does not replace existing siding with galvanized sheeting.
- Does not install, repair, or replace exterior artificial lighting on properties adjacent to aquatic resources that support ESA-listed species.
- **Specific exterior repairs or improvements criteria:** New or replacement roof-mounted HVAC (or similar mechanical systems) for multi-family or commercial rooftop installation shall place such equipment under a roofed structure to prevent precipitation from leaching zinc into the runoff.
- Exterior repair or improvements to an existing structure located within a Special Flood Hazard Area (100-year floodplain) that does not increase structure footprint/does not reduce the amount of flood storage capacity, or remove native riparian vegetation.
- Special projects involving the removal of material or architectural barriers that restrict the mobility of and accessibility to the elderly and persons with disabilities (e.g., curb cuts, wheelchair ramps, or similar).
- Repair/maintenance of parking lots and access roads are limited to re-pavement, filling potholes/sealing, and re-painting. Repairs that require asphalt grinding or other methods of removal are excluded. Repairs that change the collection, conveyance, and discharge of surface runoff are excluded.
- Access and staging, and source sites have been assessed as part of the proposed action. The sites are located at least 150 feet away from the aquatic resource and include BMPs to prevent discharge of contaminants from entering waterbodies or stormwater systems (e.g., filter fabrics in catch basins, sediment traps, etc.).
- Disposal sites are approved for materials to be received. Waste materials are recycled or otherwise disposed of in an approved sanitary or hazardous waste disposal site.

New construction or addition to an existing developed site if:²⁹

- The construction does not increase the amount (area) of impervious surface area.
- The existing impervious areas are currently treated by stormwater facilities that meet NMFS' stormwater standards and the current stormwater facilities will be sufficient to treat and manage all the stormwater from the proposed development.³⁰
- The construction complies with all state and local building codes and stormwater regulations.
- All waste materials are recycled or otherwise disposed of in an EPA approved sanitary or hazardous waste disposal site.

²⁸ Galvanized flashing, gutters, or fasteners may be utilized as part of roofing systems, so long as they are coated or painted to prevent exposure to precipitation.

²⁹ Examples include building a new structure over an existing parking lot, adding a second story to an existing structure, or similar.

³⁰ An engineer licensed in the state of Oregon will need to assess the existing stormwater infrastructure and the new construction and document the facilities' compliance in writing. Refer to HUD Programmatic Opinion appendices or contact NMFS.

New construction on an undeveloped site that will create new impervious surface area / increase post-construction runoff if all of the following apply:

- The stormwater water quality design storm (50% of the 2-year, 24-hour storm) is treated for water quality; and
- All post-construction runoff through the 10-year storm event will be captured on-site and infiltrated or reused; and
- The proposed construction complies with all state and local building codes and stormwater regulations; and
- The proposed construction will not impact an area of natural habitat, a wetland, or riparian area; and
- Waste materials are recycled or otherwise disposed of in an EPA approved sanitary or hazardous waste disposal site.

Part C: Initiating Section 7 Consultation

If you completed the checklists in Part A and Part B of this document and determined there could be adverse effects to listed or proposed species, designated or proposed critical habitat, and/or essential fish habitat, then you may need to initiate section 7 consultation with NMFS and/or USFWS.

A project that does not meet the “no effect” determination criteria is considered a “may affect” action. There are two potential “may affect” determinations: “may affect, not likely to adversely affect” (NLAA) and “may affect, likely to adversely affect” (LAA). Contact USFWS and/or NMFS to determine whether the project can be modified to reach a “no effect” finding. If the project cannot be modified to avoid potential take of ESA-listed species or adversely effect on critical habitat/EFH, then additional consultation with USFWS and/or NMFS will be required to assist in making an appropriate determination.³¹

If the effects of the action, temporary or permanent, are insignificant, discountable, or entirely beneficial, the action is “not likely to adversely affect” ESA-listed or proposed species or designated critical habitats/EFH, and the section 7 consultation for the project will be informal. A “May Affect, Not Likely to Adversely Affect” determination is the most common outcome of consultation for HUD-funded projects with USFWS.

- Discountable effects are those extremely unlikely to occur. Based on the best available scientific and commercial data, and judgment, a person would not expect discountable effects to occur.
- Insignificant effects relate to the magnitude of the impact and should never reach the scale where “take” occurs. “Take” is defined to include “harass,” and “harm.” *Harm* can occur if habitat is altered in a manner that diminishes important species behavior, such as breeding, feeding, or sheltering, to the degree that it injures even a single individual of the species. *Harass* includes activities that alter an individual’s behavior in a manner that increases the likelihood of it being injured. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects.
- Wholly beneficial effects are very narrowly construed and cannot be interpreted to mean “better than before,” and cannot involve an analysis of net effects. All effects must be positive. If any adverse effect occurs, then the project is not wholly beneficial.

If the effects of the action on ESA-listed or proposed species and/or critical habitats/EFH are not discountable, insignificant, or entirely beneficial (i.e., *likely to adversely affect*), formal consultation must be initiated. In such cases, a formal consultation must be initiated prior to committing HUD resources to the project, by which the USFWS and/or NMFS assess the action’s potential to jeopardize the listed species, to result in the destruction or adverse modification of critical habitat/EFH, or to result in incidental take³² of a listed species. Formal consultation will result in the USFWS and/or NMFS issuing a Biological Opinion for the project, including an incidental take statement for project actions, if appropriate. The Biological Opinion will also include terms and conditions to minimize and/or avoid project impacts to ESA-listed species.

Because the constituents of stormwater runoff are particularly harmful to aquatic species, a “May Affect, Likely to Adversely Affect” determination is the most common outcome of consultation for HUD-funded projects with NMFS. To this end, NMFS has issued a Programmatic Biological Opinion for HUD Housing Projects in Oregon.³³ The programmatic Biological Opinion evaluates common HUD projects that result in

³¹ Please keep in mind that a beneficial effect is still an effect under the ESA, so a “no effect” finding is not appropriate for projects that may have wholly beneficial effects.

³² “Incidental take” refers to takings of an ESA-listed species that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant. [50 CFR 402.02]

³³ National Marine Fisheries Service (NMFS). 2016. Endangered Species Act Section 7 Formal Programmatic Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the

stormwater generation³⁴ and proscribes best management practices (BMPs) and project design criteria (PDCs) to minimize and avoid impacts to listed species, critical habitat, and EFH. The BMPs and PDCs take the form of stormwater collection, treatment, and flow control (management) criteria and include the Low Impact Development (LID) approaches NMFS prefers to see incorporated into project design and site development.³⁵ If the criteria stipulated in the programmatic Biological Opinion can be met through project design, then formal consultation with NMFS can be completed through an expedited review process.³⁶ Use of the programmatic Biological Opinion is voluntary, but is offered as a mechanism to assist HUD in carrying out its mission in a timely and efficient manner.

Figure 2, following page, depicts the process for determining which ESA consultation method is appropriate for NMFS.

At any stage in making your determination, you may wish to contact the appropriate USFWS and NOAA Fisheries field offices for technical assistance. Contact information is available at:

NMFS Portland Regional Office
1201 Northeast Lyon Blvd, Suite 1100
Portland, OR 97232
503-230-5400
<http://www.westcoast.fisheries.noaa.gov/index.html>

USFWS, Oregon Fish and Wildlife Office
2600 SE 98th Ave, Suite 100
Portland, OR 97266
503-231-6179
<http://www.fws.gov/oregonfwo/>

For projects located in the **Klamath River Basin**, you must contact the appropriate office at:

NMFS Arcata Office
1655 Heindon Road
Arcata, CA 95521
707-825-5171
<https://www.fisheries.noaa.gov/contact/arcata-ca>

USFWS, Klamath Falls Fish and Wildlife Office
1936 California Avenue
Klamath Falls, Oregon 97601
541-885-8481
<http://www.fws.gov/klamathfallsfwo/>

DISCLAIMER: This document is intended as a tool to help grantees and HUD staff complete ESA requirements. This document is subject to change. This is not a policy statement, and the Endangered Species Act, Magnuson-Stevens Act, and associated regulations take precedence over any information found in this document. Questions concerning environmental requirements related to HUD programs can be addressed to Brian Sturdivant, Regional Environmental Officer, Region 10. [Brian.Sturdivant@hud.gov]

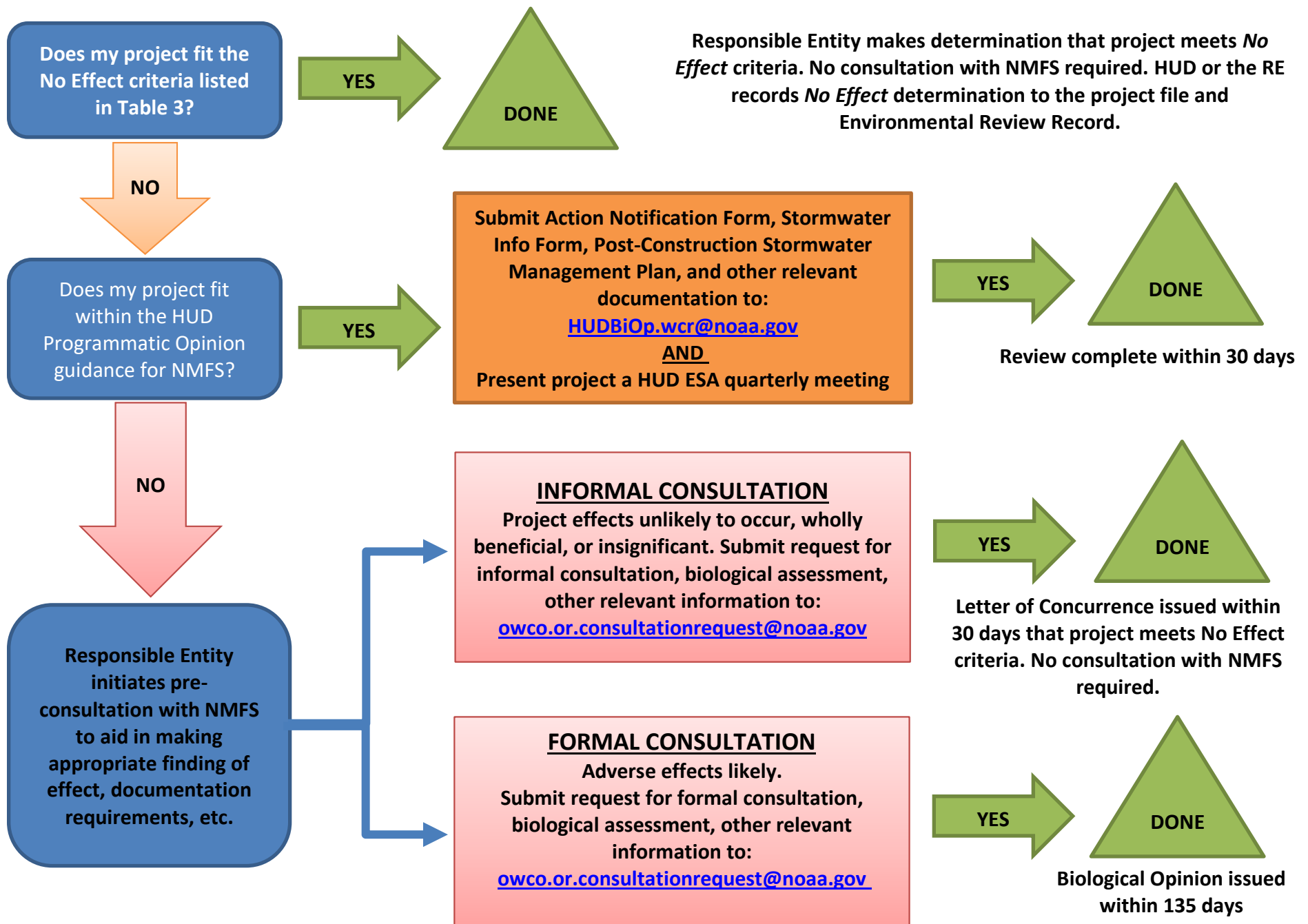
U.S. Department of Housing and Urban Development Housing Programs in Oregon. West Coast Region. Portland, Oregon. July 25, 2016. [<https://www.hud.gov/states/shared/working/r10/environment>]

³⁴ The range of projects evaluated in the BiOp is limited primarily to housing development, so check with NMFS to see if use of the programmatic BiOp is appropriate, if your project involves roadway construction/redevelopment, modification to a bridge or culvert stream crossing, stormwater facilities located in the riparian zone or floodplain, facilities not typically associated with housing (e.g., wastewater treatment plants, water treatment and supply facilities, any conveyance infrastructure entering or crossing an aquatic resource or its riparian zone.

³⁵ All stormwater criteria, BMPs, and PDCs are defined in the appendices of the Programmatic BiOp [<https://www.hud.gov/states/shared/working/r10/environment>].

³⁶ Typical review times for formal consultation are 145 days from receipt of a complete initiation package. Review times for the programmatic BiOp are typically less than 30 days from receipt of a complete initiation package.

FIGURE 2: NMFS ESA Consultation Process for HUD Projects in Oregon



Part D: Selected Resource / Glossary of Terms

Links to Section 7 Handbook and additional Section 7 resources:

- Consultation Fact Sheet: <https://www.fws.gov/endangered/esa-library/pdf/consultations.pdf>
- Section 7 Handbook: http://www.nmfs.noaa.gov/pr/pdfs/laws/esa_section7_handbook.pdf
- Overview of the Section 7 Process: <http://www.fws.gov/Midwest/endangered/section7/index.html>

Additional Resources for LID

- American Rivers, 2012, Banking on Green Report: Economic Benefits of Green Infrastructure Practices
- Clean Water Services, 2009, Low Impact Development Approaches (LIDA) Handbook
- ECO Northwest, 2009, LID at the Local Level - Developers' Experiences and City and County Support
- Herrera, 2013, Guidance Document: Western Washington LID Operation and Maintenance
- NCHRP, 2006, Evaluation of BMPs for Highway Runoff Control – LID Design Manual
- Oregon Department of Environmental Quality Template for LID Stormwater Manual for Western Oregon <https://www.oregon.gov/deq/wq/tmdls/Pages/TMDLs-LID.aspx>
- Prince George County, Maryland, 1999, Low-Impact Development Design Strategies
- Puget Sound Partnership, 2012, Low Impact Development: Technical Guidance Manual for Puget Sound
- US EPA, 2013, Stormwater to Street Trees: Engineering Urban Forests for Stormwater Management
- US EPA, 2005, Low Impact Development for Big Box Retailers
- Washington Department of Ecology Low Impact Development (LID) Guidance <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Low-Impact-Development-guidance#tab2>

Definitions & Terminology used in an ESA Review and Consultation

- **Action Area** includes all areas that will be affected directly or indirectly by the proposed action and not merely the immediate area involved in the action.
- **Built environment** includes all structures and paved areas like parking lots, patios, trails, retaining walls, sidewalks, streets, and amenities that prevent infiltration of rainwater into the water table.
- **Candidate Species** are plant and animal taxa considered for possible addition to the List of Endangered and Threatened Species. These are taxa for which the USFWS and NMFS have sufficient information on biological vulnerability and threat(s) to support issuance of a proposal to list, but issuance of a proposed rule is currently precluded by higher priority listing actions.
- **Critical Habitat** means those specific areas that have been designated by USFWS or NMFS (in a rule-making in the *Federal Register*) as essential to the conservation of a listed species.
- **Effects of the action** are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed

action (cumulative effects). A consequence is caused by the proposed action if it would not occur but for the proposed action occurring and if it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action.

- **No effect** is the appropriate conclusion when the action agency determines its proposed action will not affect listed species or critical habitat. A determination of '*no effect*' must be supported in the environmental review record but does not require consultation with NMFS or USFWS.
 - **May affect, not likely to adversely affect (NLAA)** is the appropriate conclusion when effects on listed species are expected to be *discountable*, or *insignificant*, or completely *beneficial*.
 - ✓ **Beneficial effects** are contemporaneous positive effects without any adverse effects to the species.
 - ✓ **Insignificant effects** relate to the size of the impact and should never reach the scale where take occurs. Based on best judgment, a person would not be able to meaningfully measure, detect, or evaluate insignificant effects.
 - ✓ **Discountable effects** are those extremely unlikely to occur. Based on best judgment, a person would not expect discountable effects to occur.
 - **May affect, likely to adversely affect (LAA)** is the appropriate conclusion if any adverse effect to listed species may occur because of the proposed action, and the effect is not discountable, insignificant, or beneficial. A determination of '*likely to adversely affect*' requires formal consultation under section 7 of the ESA; formal consultation results in a Biological Opinion from NMFS or USFWS. See Part C for additional information.
- **Impervious area** means artificial structures such as rooftops and pavements (e.g., driveways, parking lots, roads, sidewalks, trails) that are covered by impervious material like asphalt, brick, compacted soil, concrete, or stone.
 - **Listed Species** means any species of fish, wildlife or plant that has been determined to be endangered or threatened under section 4 of the Endangered Species Act.
 - **Nexus** means any action that is funded, authorized or carried out by a federal agency that may affect an ESA-listed species or habitats.
 - **Post-construction runoff** means runoff from the built environment that extends off-site after a project's construction is complete.
 - **Proposed Species** any species of fish, wildlife or plant that has been proposed by USFWS or NMFS in the *Federal Register* to be listed under section 4 of the Endangered Species Act.
 - **Proximity** means areas or effects that occur near ESA-listed species or habitats in space or time, including areas where species roost, feed, nest, rear, overwinter, or migrate. NMFS considers projects that discharge post-construction stormwater to be in proximity with ESA-listed species or habitats that occur downstream of the discharge site.
 - **Responsible entity** means the party authorized by HUD under 24 CFR Part 58 to complete any environmental review necessary for HUD to obligate funds.
 - **Riparian area** means vegetation, habitats, or ecosystems that are associated with bodies of water, typically within 150-feet of a stream bank or the shoreline of a standing body of water.
 - **Take** under the ESA is defined as actions that may harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The ESA also protects against interfering in vital breeding and behavioral activities or degrading critical habitat.

Attachments

Attachment 1: Troutdale Airports



SW 257th Ave, Troutdale, ✕ 🔍

🗲 Basemap 📍 Imagery 📏 Draw 🗑 Erase 💾 Save Session 🔧 Tools 📊 More Data ⌵

✕

Measure

Click one of the following buttons to start measuring:

Unit

Miles

Mode

Auto

Distance

1.23 mi

New Measurement

Select Map Contents ⌵

+

EPA Facilities

📄

+

Water Monitoring Stations

📄

+

Boundaries

📄

+

Non-attainment Areas

📄

+

EJScreen Indexes (2021)

📄

+

Water

📄

-

Transportation

📄

☑

Airport Points

📄

+

Airport Polygons

📄

+

Railroads

📄

+

Places

📄

+

Critical Habitat

📄

+

NWI Wetlands

📄

+

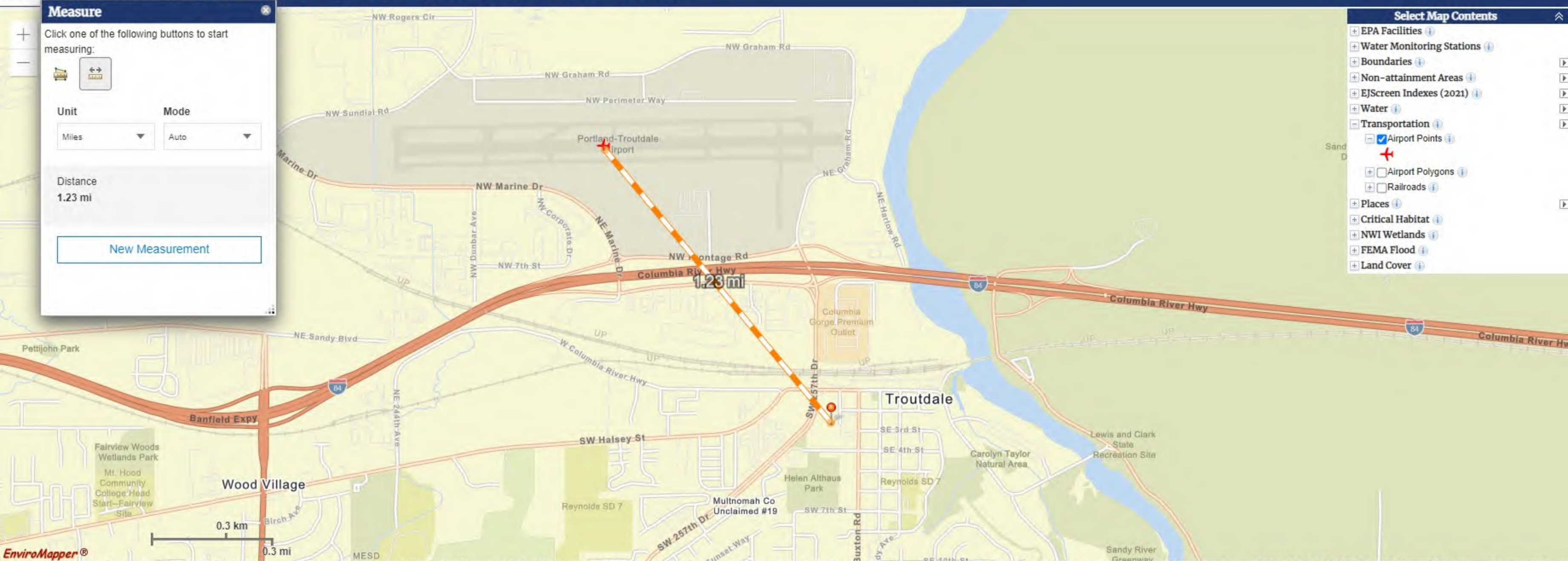
FEMA Flood

📄

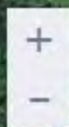
+

Land Cover

📄



Attachment 2: Coastal Barrier Resources- Troutdale

[BASEMAPS](#)[MAP LAYERS](#)☒ CBRS Units[Click here to learn more about CBRS Units.](#)[Measure](#)

LEGEND

CBRS Units

CBRS Buffer Zone

CBRS Prohibitions

Otherwise Protected Area

System Unit



1: 18,056

45.552 | -122.412

Attachment 3: FEMA Flood Map FIRMETTE - Troutdale

National Flood Hazard Layer FIRMMette



122°23'44"W 45°32'33"N



0 250 500 1,000 1,500 2,000 Feet 1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

| | | |
|-----------------------------|--|---|
| SPECIAL FLOOD HAZARD AREAS | | Without Base Flood Elevation (BFE) Zone A, V, A99 |
| | | With BFE or Depth Zone AE, AO, AH, VE, AR |
| | | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X |
| | | Future Conditions 1% Annual Chance Flood Hazard Zone X |
| | | Area with Reduced Flood Risk due to Levee. See Notes. Zone X |
| | | Area with Flood Risk due to Levee Zone D |
| OTHER AREAS | | NO SCREEN Area of Minimal Flood Hazard Zone X |
| | | Effective LOMRs |
| | | Area of Undetermined Flood Hazard Zone D |
| GENERAL STRUCTURES | | Channel, Culvert, or Storm Sewer |
| | | Levee, Dike, or Floodwall |
| OTHER FEATURES | | 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation |
| | | 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation |
| | | Coastal Transect |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| | | Jurisdiction Boundary |
| | | Coastal Transect Baseline |
| MAP PANELS | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **3/21/2022 at 4:10 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Attachment 4: Oregon Department of Environmental Quality Consult

From: WILLIAMS Karen * DEQ <karen.williams@deq.state.or.us>
Sent: Friday, December 3, 2021 3:06 PM
To: Soud, Faez <Faez.Soud@portlandoregon.gov>
Subject: Air Quality Consultation for Powellhurst Project: DEQ Response

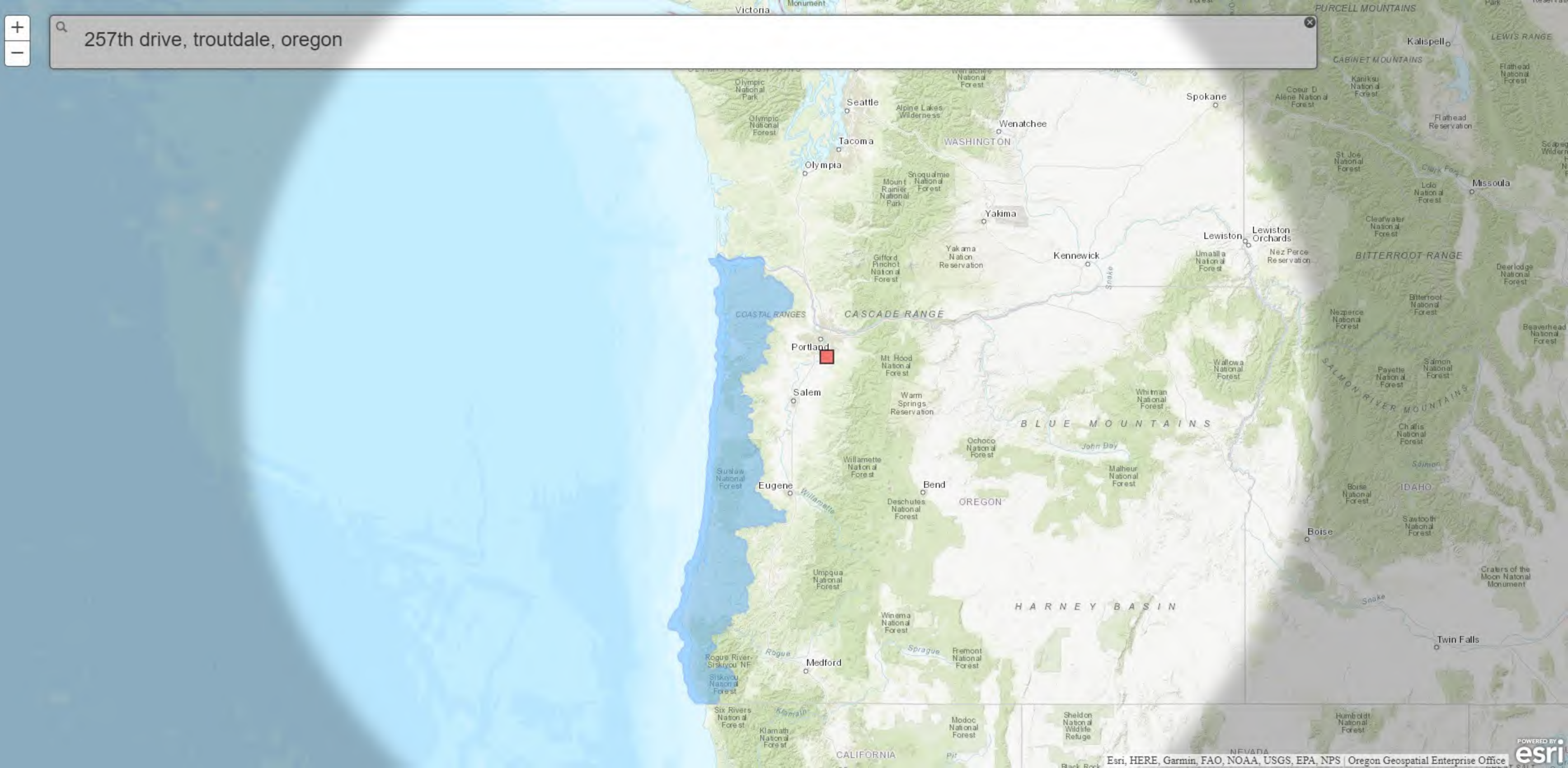
Dear Faez,

Thank you for contacting Oregon DEQ about the potential effects of the Powellhurst housing project, located at 5403 & 5413 SE 122nd Ave. in Portland, on carbon monoxide and ozone concentrations in the Portland Air Quality Maintenance Area. Although Portland is still a Maintenance Area for carbon monoxide and ozone, EPA designated Portland “attaining” for CO in 1997 and the maintenance period ended in 2017; Portland’s ozone designation is also “attaining” and the maintenance period ended in 2015. Because the maintenance periods for both CO and ozone are concluded, federal projects in Portland are no longer subject to General Conformity requirements, codified in Oregon Administrative Rules Chapter 340, Division 250. This means that the City of Portland does not have to demonstrate that direct and indirect emissions from the project, in this case CO emissions and ozone precursor emissions, will be de minimis.

Please feel free to give me a call or email if you need additional information from DEQ.

Karen Font Williams | Air Quality Planner
she/her/hers
DEQ Air Quality Division
700 NE Multnomah St., Ste. 600 | Portland, OR 97232
(503) 863 – 1664 Please note new phone number

Attachment 5: Oregon Coastal Zone- Troutdale



257th drive, troutdale, oregon

Attachment 6: USFWS IPaC- Troutdale

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Multnomah County, Oregon



Local office

Oregon Fish And Wildlife Office

☎ (503) 231-6179

📠 (503) 231-6195

2600 Southeast 98th Avenue, Suite 100

Portland, OR 97266-1398

<https://www.fws.gov/oregonfwo/articles.cfm?id=149489416>

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

-
1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
 2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

| NAME | STATUS |
|--|------------|
| Northern Spotted Owl <i>Strix occidentalis caurina</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/1123 | Threatened |
| Streaked Horned Lark <i>Eremophila alpestris strigata</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/7268 | Threatened |
| Yellow-billed Cuckoo <i>Coccyzus americanus</i> There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/3911 | Threatened |

Insects

| NAME | STATUS |
|--|-----------|
| Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743 | Candidate |

Flowering Plants

| NAME | STATUS |
|---|------------|
| Nelson's Checker-mallow <i>Sidalcea nelsoniana</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7340 | Threatened |

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES

THAT THE BIRD DOES NOT LIKELY
BREED IN YOUR PROJECT AREA.)

Bald Eagle *Haliaeetus leucocephalus*

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Breeds Jan 1 to Sep 30

Clark's Grebe *Aechmophorus clarkii*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Jun 1 to Aug 31

Evening Grosbeak *Coccothraustes vespertinus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 15 to Aug 10

Lesser Yellowlegs *Tringa flavipes*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9679>

Breeds elsewhere

Olive-sided Flycatcher *Contopus cooperi*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3914>

Breeds May 20 to Aug 31

Rufous Hummingbird *Selasphorus rufus*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/8002>

Breeds Apr 15 to Jul 15

Wrentit *Chamaea fasciata*

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds Mar 15 to Aug 10

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald Eagle
Non-BCC
Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Clark's Grebe
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Evening Grosbeak
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

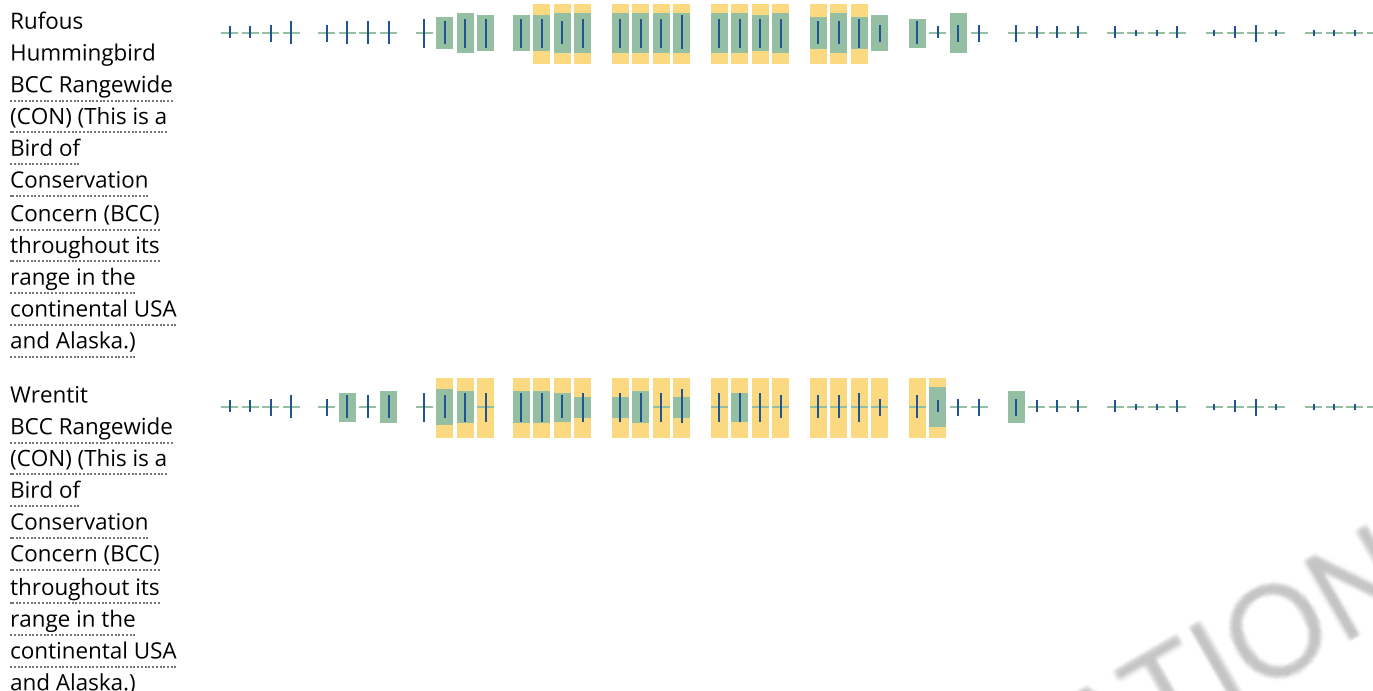


Lesser Yellowlegs
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Olive-sided Flycatcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring

in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the [NWI map](#) to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Attachment 7: Biology Summary Memo- Troutdale

MEMORANDUM

To: Nora Mattingly, Project Coordinator, Home Forward
From: Patricia Schuyler, Senior Biologist
Subject: Home Forward Troutdale HUD, Summary of Initial Biological Findings
Date: April 28, 2022
cc: Jonathan Rigg (Dudek)

Dudek biologists Patricia Schuyler and Emily Bradford conducted a general biological reconnaissance survey on April 6, 2022 for the proposed Troutdale HUD project site located in Troutdale, in Multnomah County, Oregon. The purpose of the biological review was to determine if the site has a potential to support habitat for special-status plant and wildlife species. A delineation of aquatic resources has already been conducted for the project site.

1 Summary of Initial Biological Findings

1.1 Literature Review

Prior to the field reconnaissance survey, a desktop-level literature review and database search were conducted based on the publicly available data obtained from federal, state, and local electronic repositories to identify on-site biological and aquatic resources. The desktop-level literature review and database search specifically included a review of special-status plant and wildlife species, as well as aquatic resources, with the potential to occur in the study area. Based on a review of the USFWS IPaC database search, there is potential for one mammal, three birds, one fish, two insects, and three plants of special-status to occur on site. However, based on the high level of disturbance of the site and development around the site, there is low potential for any of these species to occur on site.

1.2 Project Site

The Troutdale HUD project site is located on a vacant lot consisting of approximately 3.58 acres in Troutdale, Oregon. Almost the entire site consists of maintained native and non-native grasses except for some trees along the northern and southern boundaries of the site. The site provides both foraging and nesting habitat (note that an old nest was observed during the survey). However, given the largely disturbed nature of the site and development of adjacent sites, no federally-listed plant or wildlife species have a potential to occur within the project site. In addition, the project is designed to retain all storm water onsite for up to a 10-year storm event. Therefore, the project would have no offsite impacts from storm water runoff into streams and rivers that provide critical habitat for aquatic species.

At the northern end of the site, there is an unnamed perennial stream. As described in the wetland determination report prepared by PBS, the water flows within this earth channel west to east near the northern border of the site. The water seems to move offsite, however downstream review was restricted by private lands. This area has been mapped as a perennial stream due to the presence of hydrology. The limits of the channel have been delineated.

1.3 Recommendations

Rare plant surveys are not recommended due to the disturbed nature of the site. Avoidance of the mapped waters is recommended to avoid obtaining permits from the regulatory agencies and providing mitigation. Should impacts to this feature be required, those impacts can be analyzed in the NEPA document.

Attachment 8: AST Evaluation- Troutdale

MEMORANDUM

To: Nora Mattingly, Home Forward
From: Audrey Herschberger, PE
Subject: Comcast AST Assessment, Troutdale Apartments, Troutdale, Oregon
Date: May 10, 2023
cc: Jonathan Rigg, Dudek; Glenna McMahon, Dudek
Attachment(s): 1, Project Site Location; 2, Acceptable Separation Distance Calculation; 3, Line of Sight Photographs

This assessment has been conducted for the proposed Troutdale Apartments project, located on the east side of SW 257th Drive, between SW 4th Street and E Columbia River Highway in Troutdale, Oregon (project site). The proposed project layout is shown on Attachment 1, Project Site Location, overlaid onto an aerial photograph showing the location of the AST in question. As outlined in ERR 8, Explosives and Flammable Hazards, two diesel aboveground storage tanks (ASTs) are located at the Comcast Facility, 540 SW Halsey Street, west-northwest of the project site. The ASTs are 3,600 gallons each, are undiked, and are each attached to an emergency generator.

Using the Acceptable Separation Distance (ASD) Assessment Tool, the ASD is 471.58 feet for thermal radiation for people, and 90.90 feet for thermal radiation for buildings (Attachment 2, Acceptable Separation Distance Calculation). The US Department of Housing and Urban Development (HUD) Acceptable Separation Distance Guidebook (ASD Guidebook) states ASD calculations must be made between the AST and outdoor areas where people congregate, including parking lots for residential facilities. The distance between the AST and the western edge of the nearest proposed parking lot is 411 feet, less than the required ASD.

The location of the AST, surrounding barriers, and proposed project layout have been evaluated to determine if natural or manmade barriers are in place which would be adequate to mitigate impacts following U.S. Code of Federal Regulations (CFR) Title 24 Section 51.205.

24 CFR 51.205 states the ASD is predicted based on level topography with no intervening objects between the hazard and the project. 24 CFR 51.205(c) states application of the ASD can be eliminated or modified if a barrier is constructed surrounding the hazard, at the site of the project, or in between the potential hazard and the proposed project.

The Comcast facility has an 8-foot-high concrete block wall surrounding the property, located between the project site and the ASTs. This wall was evaluated as a barrier as described in 24 CFR 51.205. A 3-foot gap is located in the wall, creating a potential unobstructed pathway between the AST and the project site. As stated in the ASD Guidebook, if the ASD is not achievable, but there is no clear line of sight between the proposed project and the AST, mitigation may not be required. Under 24 CFR 51, Subpart C, if there is a natural or man-made abatement between the proposed project and the AST that impedes a clear view, the abatement can serve as mitigation. An

example is provided in the ASD Guidebook, identifying a building as a man-made barrier obstructing the line of sight from an AST, following the regulation 24 CFR Part 51 Subpart C.

Line of sight photographs were collected from the western edge of the project site, in view of the wall gap and the AST area. Photographs and the photo locations are shown on Attachment 3. As seen in the photographs, there is no clear line of sight to the AST from the project site. In all photographs, the 8-foot concrete block wall blocks the view, and the AST cannot be observed. As such, the 8-foot concrete block wall provides adequate separation as defined in 24 CFR 51.205(c) and as outlined in the ASD Guidebook. No additional mitigation is required.



Attachment 1

Project Site Location

Attachment 1

Project Site Location

Legend

-  Comcast AST
-  Project Boundary



Attachment 2

Acceptable Separation Distance Calculation

Acceptable Separation Distance Assessment Tool

| | |
|---|---|
| Is the container above ground? | Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/> |
| Is the container under pressure? | Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/> |
| Does the container hold a cryogenic liquified gas? | Yes: <input type="checkbox"/> No: <input type="checkbox"/> |
| Is the container diked? | Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/> |
| What is the volume (gal) of the container? | <input type="text" value="3600"/> |
| What is the Diked Area Length (ft)? | <input type="text"/> |
| What is the Diked Area Width (ft)? | <input type="text"/> |
| <input type="button" value="Calculate Acceptable Separation Distance"/> | |
| Diked Area (sqft) | <input type="text"/> |
| ASD for Blast Over Pressure (ASDBOP) | <input type="text"/> |
| ASD for Thermal Radiation for People (ASDPPU) | <input type="text" value="471.58"/> |
| ASD for Thermal Radiation for Buildings (ASDBPU) | <input type="text" value="90.90"/> |
| ASD for Thermal Radiation for People (ASDPNPD) | <input type="text"/> |
| ASD for Thermal Radiation for Buildings (ASDBNPD) | <input type="text"/> |

Calculated May 10, 2023 using the ASD calculator:

<https://www.hudexchange.info/programs/environmental-review/asd-calculator/>

Attachment 3

Line of Site Photographs





Photo 1. View from top of culvert south of the proposed project site



Photo 2. View near southern corner of proposed project site



Photo 3. View from west of nearby manhole



Photo 4. View from manhole adjacent to proposed project site. Gap in wall observed; AST not observed



Photo 5. View from top of ridge west of manhole. Gap in wall observed, AST not observed.

Attachment 9: NRCS Soil Survey- Troutdale

Soil Map—Multnomah County Area, Oregon




MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Multnomah County Area, Oregon

Survey Area Data: Version 20, Oct 27, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 15, 2018—Oct 18, 2018

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|------------------------------------|--|--------------|----------------|
| 36B | Quafeno loam, 3 to 8 percent slopes | 2.9 | 93.8% |
| 54C | Urban land-Quatama complex, 8 to 15 percent slopes | 0.2 | 6.2% |
| Totals for Area of Interest | | 3.1 | 100.0% |

Attachment 10: Troutdale Archaeological and Cultural Assessment

Troutdale Archaeological and Cultural Assessment

Removed from Troutdale HUD EA as it contains confidential archaeological information.

Attachment 11: SHPO Response Letter- Troutdale



Oregon
Kate Brown, Governor

Parks and Recreation Department
State Historic Preservation Office
725 Summer St NE Ste C
Salem, OR 97301-1266
Phone (503) 986-0690
Fax (503) 986-0793
www.oregonheritage.org



January 6, 2023

Fanny Adams
Multnomah County
209 SW 4th Ave, Ste 200
Portland, OR 97204

RE: SHPO Case No. 22-1463

MULTCO, Home Forward, Troutdale Affordable Housing Project
Develop vacant land 94 units apartment building
NE 257th and SW Kendall (1N 3E 25), Troutdale, Multnomah County

Dear Adams:

Thank you for submitting information for the undertaking referenced above. We concur with the determination that the cultural resource(s) identified is(are) not eligible for listing in the National Register of Historic Places. We concur that there will be no historic properties affected for this undertaking.

This concludes consultation with our office under Section 106 of the National Historic Preservation Act (per 36 CFR Part 800) and/or Oregon Revised State (ORS) 358.905-961, ORS 358.653, and ORS 97.740-760 for archaeological resources. If you have not already done so, be sure to consult with all appropriate Native American tribes and interested parties regarding the proposed undertaking.

If the undertaking design or effect changes or if additional historic properties are identified, further consultation with our office will be necessary before proceeding with the proposed undertaking. Additional consultation regarding this case must be sent through Go Digital. In order to help us track the undertaking accurately, reference the SHPO case number above in all correspondence.

Our office has assigned the report SHPO biblio number 33216. Details will be available in the bibliographic database.

Please contact our office if you have any questions, comments or need additional assistance.

Sincerely,

Jamie French, M.A.
Assistant State Archaeologist
(503) 979-7580
Jamie.French@oprds.oregon.gov

cc: Jonathon Rigg, Dudek



Oregon

Tina Kotek, Governor

Parks and Recreation Department

Oregon Heritage/
State Historic Preservation Office
725 Summer St. NE, Suite C
Salem, OR 97301-1266
(503) 986-0690
Fax (503) 986-0793
oregonheritage.org



July 12, 2023

Fanny Adams
Multnomah County
209 SW 4th Ave, Ste 200
Portland, OR 97204

RE: SHPO Case No. 22-1463

MULTCO, Home Forward, Troutdale Affordable Housing Project
Develop vacant land 94 units apartment building
NE 257th and SW Kendall (1N 3E 25), Troutdale, Multnomah County

Dear Fanny Adams:

Thank you for submitting information for the undertaking referenced above. We concur that there will be no historic properties affected for this undertaking.

This concludes consultation with our office under Section 106 of the National Historic Preservation Act (per 36 CFR Part 800) and/or Oregon Revised State (ORS) 358.905-961, ORS 358.653, and ORS 97.740-760 for archaeological resources. If you have not already done so, be sure to consult with all appropriate Native American tribes and interested parties regarding the proposed undertaking.

If the undertaking design or effect changes or if additional historic properties are identified, further consultation with our office will be necessary before proceeding with the proposed undertaking. Additional consultation regarding this case must be sent through Go Digital. In order to help us track the undertaking accurately, reference the SHPO case number above in all correspondence.

Our office has assigned the report SHPO biblio number 33762. Details will be available in the bibliographic database.

Please contact our office if you have any questions, comments or need additional assistance.

Sincerely,

Jamie French, M.A.
Assistant State Archaeologist
(503) 979-7580
Jamie.French@oprds.oregon.gov

cc: Zach Windler, Dudek

Attachment 12: Noise Technical Report- Troutdale

Troutdale Housing Development

Noise Technical Report

July 2022

Produced by

Michael Minor & Associates
Portland Oregon

for

Home Forward
Portland

and

Dudek
Portland Oregon

TABLE OF CONTENTS

| | | |
|----------|---|-------------|
| 1 | INTRODUCTION | 1-1 |
| 1.1 | SUMMARY | 1-1 |
| 2 | PROJECT DESCRIPTION | 2-3 |
| 3 | INTRODUCTION TO NOISE AND VIBRATION | 3-5 |
| 3.1 | BUILDING ACOUSTICS | 3-5 |
| 3.2 | VIBRATION PRIMER | 3-6 |
| 4 | RELEVANT LAWS AND REGULATIONS | 4-8 |
| 4.1 | HUD | 4-8 |
| 4.2 | OREGON DEQ | 4-8 |
| 4.3 | CITY OF TROUTDALE | 4-9 |
| 4.4 | CONSTRUCTION | 4-9 |
| 4.5 | VIBRATION | 4-9 |
| 5 | METHODOLOGY | 5-10 |
| 5.1 | EXISTING NOISE LEVELS | 5-10 |
| 6 | DEVELOPMENT OF THE TROUTDALE HOUSING | 6-15 |
| 6.1 | SHORT TERM NOISE SOURCES AND LEVELS | 6-15 |
| 6.2 | SHORT TERM CONSTRUCTION VIBRATION SOURCES AND LEVEL | 6-15 |
| 6.3 | LONG TERM NOISE | 6-16 |
| 6.3.1 | Interior Noise and Ventilation | 6-16 |
| 6.3.2 | Exterior Shared Use Areas | 6-19 |
| 7 | POSSIBLE MITIGATION MEASURES | 7-20 |
| 7.1 | SHORT TERM CONSTRUCTION NOISE MITIGATION | 7-20 |
| 7.2 | SHORT TERM CONSTRUCTION VIBRATION MITIGATION: | 7-20 |
| 7.3 | LONG TERM NOISE | 7-20 |
| 8 | ANTICIPATED PERMITS AND APPROVALS | 8-22 |

TABLES

| | |
|--|------|
| Table 3-1. Effects of Construction Vibration | 3-7 |
| Table 4-1. HUD General Acceptability Standards | 4-8 |
| Table 4-2. Maximum Allowable Noise Levels from New Industrial and Commercial Source..... | 4-9 |
| Table 6-1. Typical Construction Vibration Levels | 6-16 |

FIGURES

| | |
|---|------|
| Figure 2-1. Troutdale Housing Development Area Overview | 2-3 |
| Figure 2-2. Building Concept – Aerial View | 2-4 |
| Figure 5-1. Noise Monitoring Sites..... | 5-11 |
| Figure 5-2. Site M-1 Details | 5-12 |
| Figure 5-3. Site M-2 Details..... | 5-13 |
| Figure 5-4. Hourly Leq Noise Levels at M-1 and M-2..... | 5-14 |
| Figure 6-1. Exterior Wall Assembly Troutdale Residential Development..... | 6-17 |
| Figure 6-1. Window Assembly Troutdale Residential Development..... | 6-18 |

APPENDICES

APPENDIX A: REFERENCES

A

1 INTRODUCTION

This Noise Technical Report was prepared as part of the Environmental Assessment (EA) for the Troutdale Housing Project on NE 257th Drive in Troutdale. This analysis evaluates the Build Alternative for potential adverse impacts related to noise as identified in the National Environmental Policy Act (NEPA) guidelines and U.S. Department of Housing and Urban Development's regulations and guidance for implementing NEPA. The evaluation also provides an analysis of the existing environment where the development will be constructed to determine if it is suitable for residential land uses per HUD standards. HUD has established noise standards (24 CFR Part 51, Subpart B) that require noise attenuation for new construction in high noise areas. Proposed sound attenuation must meet HUD environmental criteria and standards.

1.1 SUMMARY

The construction of the proposed residential development is predicted to have a short-term impact on sound and vibration levels at the project location. During project construction, there would be a short-term increase in sound levels from construction activities. This increase would be temporary in nature and is not expected to result in any noticeable impacts. Similarly, the increase, if any, in noise and vibration levels from construction activities would be temporary and is not expected to result in any noticeable impacts as long as the contractor follows the recommended mitigation measures.

Existing and future noise levels at this location are dominated by traffic on SW 257th Drive. Noise from other major roadways, like the E Columbia River Highway are acoustically shielded by existing structures and only contribute minimal noise to the site. Noise levels at those residential units nearest to SW 257th Drive will have exterior noise levels that are above the HUD exterior standard of 65 dBA DNL, with levels ranging from 66 dBA DNL to 70 dBA DNL.

However, the design of the proposed development, which includes exterior wall assembly with 5/8-inch gypsum on 2 x 6 structural framing, certified R-23 insulation, 1/2-inch plywood sheath with vapor barriers and fiber cement siding, along with high quality windows with sound transmission class levels of 28 to 33. As a result of the structural noise reduction, the interior noise levels at the units with the highest exterior noise levels, are predicted to range from 38 to 42 dBA DNL, which is below the HUD interior requirement of 45 dBA DNL. Furthermore, the residences will be equipped with *Heat Recovery Ventilator* systems in each unit that provides additional ventilation to keep the indoor air quality high even with the windows closed. Therefore, the units will have noise levels below the interior HUD standard with fresh air exchange without opening the windows.

The overall design of the complex includes two exterior shared uses areas that are also well shielded from SW 257th Drive traffic noise. The shared outdoor uses include one with a play area near Building A, and a second open courtyard mostly surrounded by Buildings B and C. Worst case peak hour noise levels at the play area near Building A were predicted at 48 dBA Leq. The open area by Building B and C has a worst case peak hourly noise level of 54 dBA Leq. These levels are fully compatible with exterior uses like parks and school grounds.

Noise from business operations and other support noise sources are negligible and are not predicted to result in any exceedance of the DEQ standards.

The vibration analysis did not identify any long-term increase in vibration levels from the project.

Therefore, the proposed project, as designed, will meet the requirements in the HUD standards for an acceptable residential development in an area with existing noise levels above 65 dBA DNL.

2 PROJECT DESCRIPTION

The Troutdale Residential Development site is currently a vacant lot, which is approximately 3.58 acres located in Troutdale, Oregon. The site is bounded by 257th on the west, SW Kendall to the east, SW 2nd to the south, and adjacent buildings to the north. The property is located near historic downtown Troutdale, Oregon in Multnomah County.

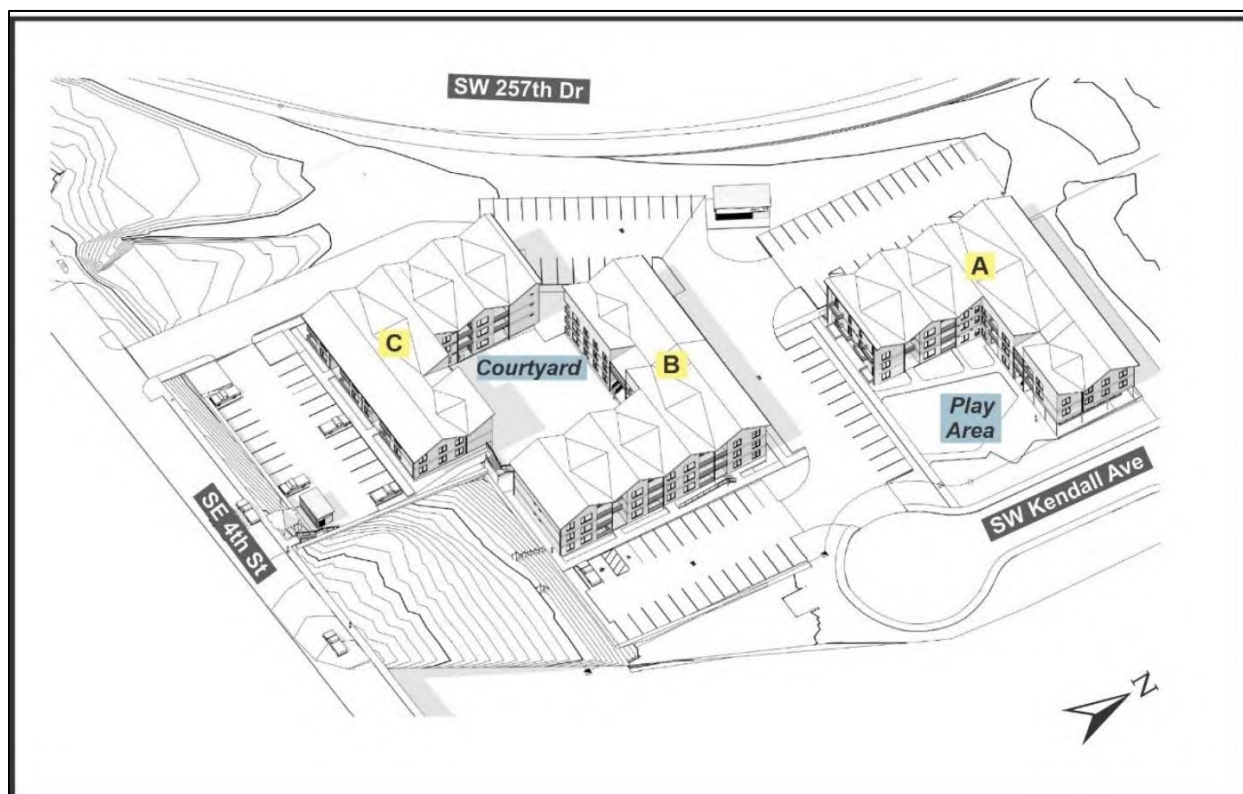
The property is currently owned by Multnomah County and an IGA was executed on Feb 10th, 2021, which stipulates that at financial closing the title will be transferred from Multnomah County to Home Forward for the purpose of building affordable housing.

Home Forward intends on developing this empty parcel into a new construction ninety-four (94) unit complex. Figure 2-1 shows the project site and surrounding area. Figure 2-2 is a conceptual plan view of the project when completed and identifies the three buildings, exterior play areas and parking.

Figure 2-1. Troutdale Housing Development Area Overview



Figure 2-2. Building Concept – Aerial View



The layout of the complex includes two courtyards/play areas. Each of these are protected from traffic noise from SW 257th Drive by the building structures. The Play Area near building A will have nature inspired area with artificial turf and an activity area for children.

It is important to note that the topographical conditions at this site vary substantially and will require construction of several retaining walls. Buildings B and C are cut into the slope north of SE 4th Street, and a retaining wall would be constructed along the south part of the property. The driveway access from 4th Street will also be sloped down to meet the grade of the parking areas. Finally, because the property is also elevated above SW 257th Drive, stairs will be required for access to SW 257th Drive.

3 INTRODUCTION TO NOISE AND VIBRATION

Noise is generally defined as unwanted sound. Human response to noise is subjective and can vary greatly from person to person. Factors that can influence individual response to noise include the loudness, frequency, amount of background noise present before an intruding noise, and the nature of the work or activity (e.g., sleeping) that the noise affects.

The unit used to measure the loudness of noise is the decibel (dB). To better approximate the sensitivity of the human ear to sounds of different frequencies, the A-weighted decibel scale was developed. Because the human ear is less sensitive to higher and lower frequencies, the A-weighted scale reduces the sound level contributions of these frequencies. When the A-weighted scale is used, the decibel levels are denoted as dBA. The A-scale is used in most ordinances and standards that regulate noise levels.

A 10-dBA change in noise levels is judged by most people as a doubling of the sound level. The smallest change in noise level that a human ear can perceive is about 3 dB and increases of 5 dBA or more are clearly noticeable. Normal conversation ranges between 44 and 65 dBA when speakers are 3 to 6 feet apart.

Noise levels in a quiet rural area at night are typically between 32 and 35 dBA. Quiet urban nighttime noise levels range from 40 to 50 dBA. Noise levels during the day in a noisy urban area are frequently as high as 70 to 80 dBA. Noise levels above 110 dBA become intolerable and then painful, while levels higher than 80 dBA over continuous periods can result in hearing loss.

To account for the time-varying nature of noise, several noise metrics are useful. The equivalent sound pressure level (Leq) is defined as the average noise level, on an energy basis, for a stated time-period (for example, hourly). The Leq is the preferred noise descriptor for traffic noise analysis and transit analysis for daytime use facilities.

Another useful descriptor is the Day-Night Equivalent Sound Level, Ldn, also abbreviated DNL, which is defined as the 24-hour Leq, but with a 10 dB penalty assessed to noise events occurring at night (defined as 10:00 p.m. to 7:00 a.m.). The effect of this penalty is that any event during nighttime hours is equivalent to ten events during the daytime hours. This strongly weights DNL toward nighttime noise to reflect that most people are more easily annoyed by noise during nighttime hours when background noise is lower, and most people are sleeping.

The DNL is the preferred noise level descriptor for transit-related noise analysis at residential structures and other locations, such as hotels and hospitals, where high nighttime noise levels can have the most severe effect. For instance, the DNL is the main noise descriptor used under HUD noise criteria for residential land uses. Under the HUD guidelines, the interior noise reference value for living and sleeping quarters with fresh air exchange is 45 dBA DNL.

3.1 BUILDING ACOUSTICS

There are several different types of acoustical considerations under the general title of Building Acoustics. The primary terms used for interior acoustics include the sound transmission class (STC), sound transmission loss (TL), and noise reduction (NR). The primary concern is sound transmission from nearby traffic and transit entering the living and sleeping areas of the project apartment homes. A general introduction to the different terms and general building practices are provided below:

- Sound Transmission Loss (TL) is the ratio of the sound intensity transmitted through a partition to the airborne sound incident to the partition. Therefore, the TL is a measurement of the partition's performance that is entirely a function of the partition weight, material, and construction. The TL is not influenced by the acoustical environment on either side of the partition. Typically, the actual noise reduction is 4 to 5 dBA less than the TL value, which is measured in a laboratory setting.
- Noise Reduction (NR) is the actual sound transmitted from the exterior of a building into the inside living and sleeping areas. Factors that influence the NR include the TL of the partitions through which the sound is transmitted (windows, walls, doors), square footage of the receiving area, and frequency of the sound being transmitted.
- Sound Transmission Class (STC) is single number describing of how well a building partition attenuates airborne sound. The STC is roughly equal to the decibel reduction a partition can provide. For example, an STC of 35 means that the partition would provide a 35 dB noise reduction. The STC is used to rate interior walls, ceilings, floors, doors, windows, and exterior walls. The number is derived from sound attenuation values evaluated at sixteen standard frequencies from 125 Hz to 4000 Hz. These transmission-loss values are then plotted on a sound pressure level graph and the resulting curve is compared to a standard reference contour to determine the STC rating. Standard STC ratings are accurate for speech and most general sound, but not for amplified music, mechanical equipment, heavy trucks, or any other sound with substantial low-frequency energy. There is limited information on sound transmission loss at very low frequencies.

3.2 VIBRATION PRIMER

Vibration consists of oscillatory waves that propagate from the source through the ground to adjacent buildings. Vibration from construction projects is caused by general equipment operations, and is usually highest during pile driving, soil compacting, jackhammering and construction related demolition activities. Although the vibration is sometimes noticeable outdoors, it is almost exclusively an indoor problem. Although it is conceivable for ground-borne vibration from construction projects to cause building damage, the vibration from construction activities is almost never of sufficient amplitude to cause even minor cosmetic damage to buildings. The primary concern is that the vibration can be intrusive and annoying to building occupants.

The frequency of a vibrating object describes how rapidly it is oscillating. The unit for frequency is Hertz, abbreviated Hz, and represents the number of cycles per second of oscillation. Construction vibration consists of a composite or "spectrum" of many frequencies and is generally classified as broadband or random vibration. The normal frequency range of most ground-borne vibration that can be felt generally starts from a low frequency of less than 1 Hz to a high of about 200 Hz. Vibration levels are usually expressed as single-number measure of vibration magnitude, in terms of velocity or acceleration, which describes the severity of the vibration without the frequency variable.

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High frequency vibrations reduce much more rapidly than low frequencies, so that low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances. When vibration encounters a building, a ground-to-foundation coupling loss will usually reduce the overall vibration level. However, under certain circumstances, the ground-to-foundation coupling may also amplify the vibration level due to structural resonances of the floors and walls.

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings caused by construction activities may be perceived as motion of building surfaces or rattling of windows, items on shelves, and pictures hanging on walls. Vibration of building components can also take the form of an audible low-frequency rumbling noise, which is referred to as ground-borne noise. Ground-borne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hz) or when the structure and the construction activity are connected by foundations or utilities, such as sewer and water pipes.

Table 3-1 summarizes the levels of vibration and the usual effect on people and buildings. While there are no vibration-specific regulations that are applicable to construction of the project, the U.S. Department of Transportation (U.S. DOT) has guidelines for vibration levels from construction related to their activities, and the U.S. DOT recommends that the maximum peak-particle-velocity levels remain below 0.5 inches per second at the nearest vibration sensitive structures. Vibration levels above 0.5 inches per second have the potential to cause minor architectural damage to sensitive dwellings. Most modern buildings can sustain vibration levels up to one inch per second without any notable damage. The U.S. DOT also states that the level at which vibration becomes annoying to people inside a building is approximately 0.64 inches per second.

Table 3-1. Effects of Construction Vibration

| Peak Particle Velocity (in/sec) | Effects on Humans | Effects on Buildings |
|--|--|---|
| <0.005 | Imperceptible | No effect on buildings |
| 0.005 to 0.015 | Barely perceptible | No effect on buildings |
| 0.02 to 0.05 | Level at which continuous vibrations begin to annoy in buildings | No effect on buildings |
| 0.1 to 0.5 | Vibrations considered unacceptable for people exposed to continuous or long-term vibration | Minimal potential for damage to weak or sensitive structures |
| 0.5 to 1.0 | Vibrations considered bothersome by most people, however tolerable if short term in length | Threshold at which there is a risk of architectural damage to buildings with plastered ceilings and walls. Some risk to ancient monuments and ruins. |
| 1.0 to 2.0 | Vibrations considered unpleasant by most people | U.S. Bureau of Mines data indicates that blasting vibration in this range will not harm most buildings. Most construction vibration limits are in this range. |
| >3.0 | Vibration is unpleasant | Potential for architectural damage and possible minor structural damage |

4 RELEVANT LAWS AND REGULATIONS

Noise regulations applicable to the project include the HUD noise abatement and control regulations and the Oregon Department of Environmental Quality (ODEQ) regulations. A review of the City of Troutdale municipal code was performed, and the noise control ordinance is found in Chapter 8.24 of the code. There are no specific traffic-related noise regulations that apply to the development. Because the proposed project will not add capacity to any roadways, a traffic analysis is not needed and will not be required as part of this redevelopment.

4.1 HUD

This project is subject to 24 CFR 51, Subpart B, Department of Housing and Urban Development (HUD) *Environmental Criteria and Standards – Noise Abatement and Control*. These regulations are designed so that HUD-funded developments achieve the goal of a suitable living environment. HUD uses the day–night average sound level (DNL) measurement metric for compliance verification. The DNL is the 24-hour average sound level with 10 dBA added to the nighttime noise levels to reflect human sensitivity to sleep interference.

The “Acceptable” exterior noise criteria for new housing construction assisted or supported by HUD is 65 dBA DNL. Exterior noise levels exceeding 65 dBA DNL but not exceeding 75 dBA DNL are “Normally Unacceptable” and, therefore, require sound attenuation measures to achieve an Acceptable status. Any exterior noise level greater than 75 DNL dBA is “Unacceptable” and must be mitigated using measures submitted in advance to HUD’s Assistant Secretary for Community Planning and Development for approval on a case-by-case basis. HUD’s site acceptability noise standards are presented in Table 4-1.

Table 4-1. HUD General Acceptability Standards

| HUD Acceptability Determination | Exterior DNL Sound Level (dBA) |
|---------------------------------|--|
| Acceptable | Not exceeding 65 dBA |
| Normally Acceptable | Above 65 dBA, but not to exceed 75 dBA |
| Unacceptable | Above 75 dBA |

Source: 24 CFR Part 51

The HUD guidelines contain an interior noise reference goal of 45 dBA DNL for living and sleeping quarters with fresh air exchange. Attenuation measures to meet this interior goal must be employed where feasible, with emphasis given to noise sensitive interior spaces such as bedrooms.

4.2 OREGON DEQ

The ODEQ regulations are found in OAR 340 Division 35 Noise Control Regulations. Under OAR 340-035-0035 (Noise Control Regulations for Industry and Commerce), industrial or commercial noise sources are subject to the limits specified in Table 4-2 below. The statistical noise levels L_{01} , L_{10} , and L_{50} refer to the sound pressure levels that occur for one percent (0.6 minutes), 10 percent (6 minutes), and 50 percent (30 minutes) in any 1-hour period. The DEQ regulations would only be applicable to commercial uses at the property, such as the business offices, and are not applicable to construction noise.

Table 4-2. Maximum Allowable Noise Levels from New Industrial and Commercial Source

| Measurement Metric | Daytime Limits (7:00am to 10:00pm) | Nighttime Limits (10:00pm to 7:00am) |
|--------------------|------------------------------------|--------------------------------------|
| L ₅₀ | 55 dBA | 50 dBA |
| L ₁₀ | 60 dBA | 55 dBA |
| L ₀₁ | 75 dBA | 60 dBA |

Source: OAR 340 Division 35

4.3 CITY OF TROUTDALE

Because the project is located in Troutdale, Oregon, the local noise control ordinance is applicable to the operation of the facility. The code does not contain any specific noise level restrictions like those presented from the Oregon DEQ. The code generally restricts most noise producing activities to the hours of 7:00 am and 10:00 pm.

4.4 CONSTRUCTION

Construction activities are allowed Monday through Friday between 7:00 am and 9:00 pm, Saturdays between 8:00 am and 7:00 pm. On Sunday construction is allowed between 10:00 am and 7:00 pm. Construction outside these hours would require a noise variance from the City of Troutdale. The variance application process is provided in the City of Troutdale Municipal Code, Chapter 8.24.070.

4.5 VIBRATION

There are no local, state, or federal regulations governing vibration resulting from short term construction activity. Vibration will be produced by several different types of construction equipment throughout the project area. Because of construction staging and procedures, most activities would not occur for more than 3 to 5 consecutive days. However, different construction phases may require different activities to occur over the life of the project construction.

5 METHODOLOGY

This section discusses methods and assumptions used to model sound levels at the proposed site.

5.1 EXISTING NOISE LEVELS

The DNL Calculator found on the HUD Exchange web site is typically used to predict exterior noise levels at the project site from the nearby roadways, rail activity, and aircraft. However, due to the complexity of the topographical conditions at this site, and the proximity to two major roadways, on-site noise monitoring was used for this noise analysis.

The on-site monitoring was used to calculate the actual measured DNL and compare the measurements to the HUD standards. The measurements would include any noise attenuation from topographical conditions and provide a more accurate understanding of the existing noise environment on this complex site.

Two measurement locations were selected, one in the southern area, and a second in the northern part of the property. The on-site noise monitoring was performed over 65 continuous hours from Wednesday March 23 at 3:00 pm to Saturday March 26 at 8:00 am. Noise measurements were taken in accordance with the American National Standards Institute (ANSI) procedures for community noise measurements and the Oregon DEQ. The equipment used for noise monitoring were Bruel & Kjaer Type 2238 Sound Level Meters. All meters were calibrated prior to and after the measurement period using a Larson Davis CAL200 Sound Level Calibrator. Calibration varied by less than 0.1 dB during the measurement period. Complete system calibration is performed on an annual basis and the system meets or exceeds the requirements for an ANSI Type 1 noise measurement system.

All measurements taken included one-second Leq, Lmax and Lmin. Bruel & Kjaer Type 7820 Evaluation Software was used for data post-processing and calculations of the hour Leq and DNL noise levels presented in this report. All data transfer and analysis is computer controlled using a USB computer interface, preventing any data editing or corruption.

Figure 5-1 shows the measurement locations and identifies nearby roadways. Figures 5-2 and 5-3 provide photos of the two monitoring locations from different directions.

Site M-1, in the northern part of the property, was located approximately 120 feet from SW 257th Drive. The site was on top of a steep slope, which blocked much of the noise from the northbound lanes on SW 257th Drive. In addition, structures between the E Columbia Highway and site M-1 are effective at shielding the site from traffic noise from the highway. The shielding from 257th Drive can be best seen in Photos 1 and 3 in Figure 5-2

Site M-2 is in the southern part of the property, closer to SW 4th Street and the Troutdale Public Works Building. This site was approximately 60 feet from SW 257th Drive has a much clearer line-of-sight view to SW 257th Drive and no additional shielding from any structures. The site also has minimal topographical shielding and all four lanes of SW 257th Drive were visible from the site.

Figure 5-1. Noise Monitoring Sites



Figure 5-2. Site M-1 Details



Noise levels at site M-1 ranged from 54.0 dBA Leq at night to 63.4 dBA Leq during daytime hours. The overall Lmax (loudest 1-second) over the 65 hours was 88.7 dBA Lmax. In general, the hourly Leq noise levels during daytime hour ranged from 60 to 63 dBA Leq with nighttime levels of 54 to 59 dBA Leq. The worst case DNL of 66.4 was calculated for Thursday at 8:00 am to Friday at 8:00 am. This exceeds the HUD recommended level for residences of 65 dBA DNL provided in Table 4-1.

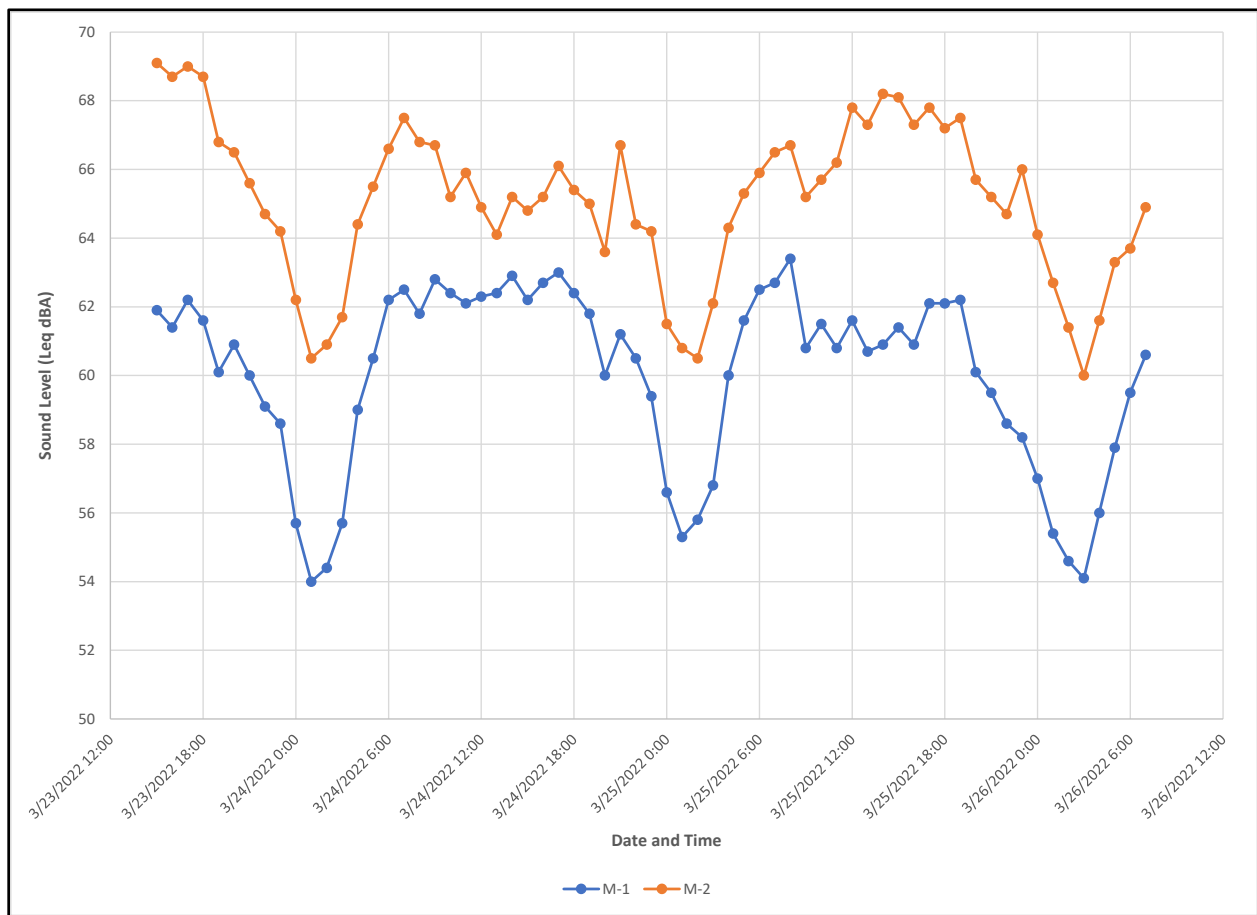
Figure 5-3. Site M-2 Details



Noise levels at site M-2 ranged from 60.0 dBA Leq at night to 69.1 dBA Leq during daytime hours. The overall Lmax (loudest 1-second) over the 65 hours was 91.7 dBA Lmax. In general, the hourly Leq noise levels during daytime hour ranged from 64 to 68 dBA Leq with nighttime levels of 60 to 65 dBA Leq. The worst case DNL of 71.2 was calculated for Friday at 2:00 am to Saturday at 2:00 am. This exceeds the HUD recommended level for residences of 65 dBA DNL provided in Table 4-1.

The higher noise levels at M-2 versus M-1 are due to two main factors, first, M-2 is only 60 feet from SW 257th Drive, while M-1 was 120 feet from SW 257th Drive. Secondly, the steeper hillside near site M-1 provides acoustical shielding from northbound traffic on SW 257th Drive. Figure 5-4 is a graph of the hourly Leq noise levels at sites M1 and M-2.

Figure 5-4. Hourly Leq Noise Levels at M-1 and M-2



5.2 NOISE LEVELS AT BUILDING FACADE

Because noise attenuates with distance, it is necessary to adjust the measured data to the location of the proposed buildings. M-1 is approximately 20 feet from the northwest corner of Building A. This added distance makes little difference and the DNL at the face of Building A is 66 dBA after rounding. Because this level remains above the acceptable HUD level of 65 dBA DNL, a detailed noise analysis is required for Building A. This analysis will determine if the interior noise levels inside living areas (living room, dining room, and bedrooms) are below 45 dBA DNL.

The DNL at the west parts of Buildings B and C are 69 dBA DNL and 70 dBA DNL, respectively. Therefore, the same level of detailed analysis for the interior uses is required to assure the units meet the 45 dBA DNL interior standards.

6 DEVELOPMENT OF THE TROUTDALE HOUSING

The development of this parcel would include project construction and operations. Project construction has short term noise impact potential, while operations have long-term impact potential.

6.1 SHORT TERM CONSTRUCTION NOISE SOURCES AND LEVELS

Construction activities associated with the proposed project improvements would result in an increase in short term noise levels. Short term major construction activities are expected to include the following:

- Site grading and base preparation
- Construction of building foundations
- Constructing the building superstructure
- Access intersection improvements and light poles and signs
- Installation of sidewalks, final finishes, and preparation for occupation

Noise levels for these activities can be expected to range from 70 to 95 dBA at sites 50 feet from the activities. Typical equipment for project construction would include haul trucks, loaders, loaders, dump trucks, concrete trucks, pump trucks, flatbed trucks, pump trucks and other supporting equipment. The loudest phases are typically during grading and base preparation and building foundations. The actual noise at any nearby receivers would be dependent on the activity, distance between the construction site, and any shielding between the construction noise source and the receiver.

Project construction would be required to meet the City of Troutdale noise ordinance, limiting construction to Monday through Friday between 7:00 am and 9:00 pm, Saturdays between 8:00 am and 7:00 pm, and Sundays between 10:00 am and 7:00 pm. Construction outside these hours would require a noise variance from the City of Troutdale, as described in the City of Troutdale Municipal Code, Chapter 8.24.070.

6.2 SHORT TERM CONSTRUCTION VIBRATION SOURCES AND LEVEL

Project related vibration sources include excavators, compactors, backhoes, and jackhammers. The vibration sources associated with the project, even though are likely to be noticeable to the occupants of buildings when construction is nearby, are not expected to cause any structural damage.

The reason that normal construction vibration does not result in structural damage has to do with several issues, including the frequency of vibration and magnitude of construction related vibration. Unlike earthquakes, which produce vibration at very low frequencies and have a high potential for structural damage, most construction vibration is in the mid- to upper- frequency range, and therefore has a lower potential for structural damage.

Vibration levels for construction activities are the highest during site grading activities and soil compacting. Site grading includes clearing and grading the site to prepare for constructing the building foundations, while soil compacting is required for parking areas and access roads. These construction activities typically require the use of dozers, excavators, loaders, compactors, and haul trucks. Vibration levels are expected to remain below 0.5 in/sec at buildings near the project area during grading and soil compacting activities, and there is only a minimal potential for any structural damage. Table 6-1 provides vibration levels for several different common pieces of construction equipment in inches per second.

| | |
|--------------------------------------|--------------------|
| <i>Troutdale Housing Development</i> | <i>Page 6-15</i> |
| <i>Technical Noise Study</i> | |

Table 6-1. Typical Construction Vibration Levels

| Equipment | Conditions | Peak Particle Velocity at 25 feet (in/sec) |
|--------------------|-------------------|--|
| | Typical | 0.170 |
| Large Bulldozer | Normal operations | 0.089 |
| Loaded haul trucks | Normal operations | 0.076 |
| Jackhammer | Normal operations | 0.035 |
| Small Bulldozer | Normal operations | 0.003 |
| Vibratory Roller | Normal operations | 0.210 |

Source: Federal Transit Administration 2018.

in/sec = inches per second

6.3 LONG TERM OPERATIONAL NOISE

Future sound levels at the project site are not expected to have any notable change from the existing conditions noise levels with completion of the project. The large volumes of traffic on NW 257th Drive will continue to dictate the noise environment. Traffic noise sources associated with the new residential development, such as cars and delivery trucks accessing the site, are not expected to result in a measurable difference in the area noise levels.

Because future sound levels are expected to be similar to existing levels, which themselves are above the HUD's *Normally Acceptable Standard* of 65 dBA DNL, an analysis of interior noise levels was performed along with a review of the shared exterior uses at the facility. The interior noise levels must be below 45 dBA DNL while still providing some fresh air ventilation. The analysis for each of the three proposed buildings are provided in the following sections. A discussion of the noise levels on the two exterior shared uses and on-site office space at the complex is also included.

6.3.1 Interior Residential Area Noise Levels

The west side of Building A would face toward SW 257th Drive, the main noise source at the new complex. Therefore, all units located along the west side of the building would need to meet the HUD 45 dBA DNL interior standards. Other units in Building A would be provided acoustical shielding from the front-row units, and therefore have exterior noise levels below the 65 dBA HUD standard, and interior noise levels below the 45 dBA interior HUD standard, and no further analysis is needed.

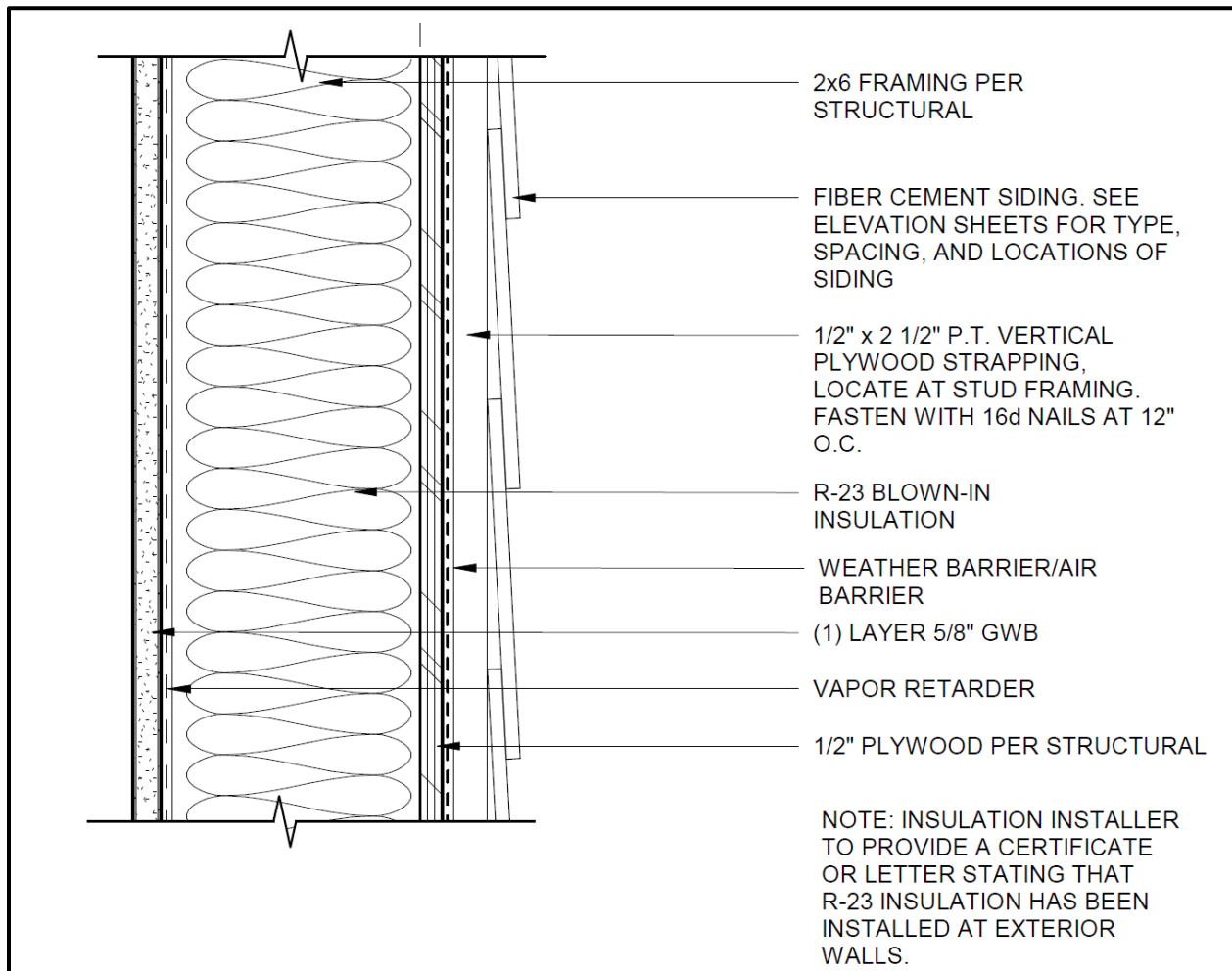
Building A is located in the northeast part of the complex. Units facing toward SW 257th Drive includes four units per floor and three floors or 12 total units. Each of the three floors has one studio unit, two one bedroom units, and one two bedroom unit.

Building B will have two three bedroom units, per floor, that face towards SW 257th Drive. The parts of the units facing toward SW 257 are the kitchen and living areas, all bedrooms are shielded by the kitchen and living areas. The configuration in Building C is the same as described for Building A, with one exception, the ground floor only has two units, a studio and a 1 bedroom unit, both located in the northern part of the building due to the steep topographical conditions.

When noise enters most structures the majority of that noise comes in through the windows and doors. Typical exterior wall structures are sufficient to reduce noise by well over 40 to 50 dB. However, depending on the quality of the windows, the overall reduction can be greatly reduced by the level of noise transmitted through the windows. Doors can also allow excess noise into the residences, however the doors in the units of concern are not facing toward SW 257th Drive, and therefore the windows will be the primary contributor to interior noise for these units.

Design drawings for the proposed development were obtained from MWA Architects. In addition to the drawings, specific information on the manufacturers of doors and windows was also provided by MWA Architects. MWA also provided information on the ventilation systems proposed for the Troutdale Residential Complex. Figure 6-1 shows the typical exterior wall assembly facing toward SW 257th Drive.

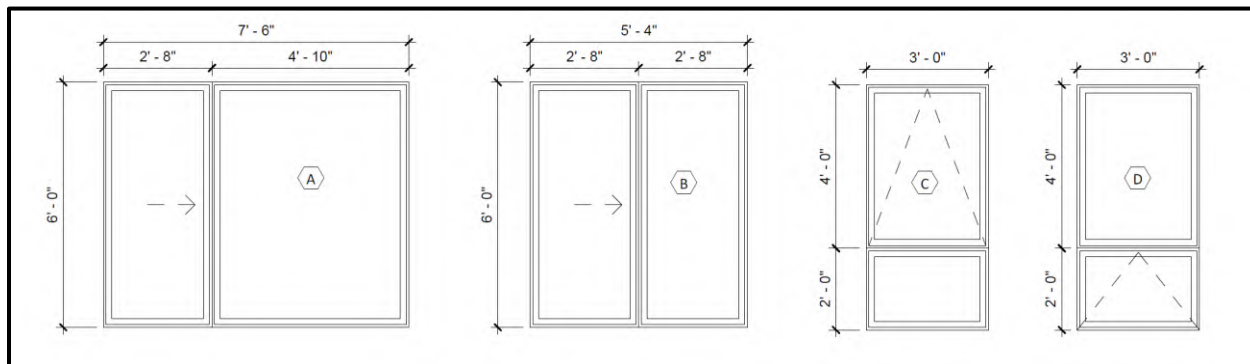
Figure 6-1. Exterior Wall Assembly Troutdale Residential Development



The exterior wall assembly has interior 5/8 inch gypsum board mounted on 2 x 6 structural framing. The walls will be certified with R-23 insulation, 1/2 inch plywood, air, vapor, and weather barriers, along with fiber cement exterior siding. The exterior wall was reviewed and would exceed 50 STC, and therefore using information from Section 3.1, the wall assembly would be more than sufficient to maintain interior noise levels below the HUD 45 dBA DNL interior standard.

The second review was on the proposed windows. The window size options for the Troutdale development that would be facing toward SW 257th Drive are provided in Figure 6-2. The larger the window, given the same general construction, the more noise that can be transmitted into the interior.

Figure 6-1. Window Assembly Troutdale Residential Development



The windows are normally the major contributor to exterior noise entering into a residence and will have lower STC factors than most wall assemblies. The STC factor for windows when closed can range from 26 to 35 or more depending on the type of window. Typical high quality residential windows used in most new construction, including the Troutdale development, have STC factors of 28 to 32 when closed. The STC factors presented are provided by the proposed window manufacture, VPI Quality Windows Endurance Series. The lowest STC factor of 28 was used to determine if a higher quality window would be required for the project.

Based on the proposed window system, residences in Building A with the largest windows would have a noise level of 38 dBA DNL. Building B would have a worst case interior level of 41 dBA DNL and Building C would have a worst case level of 42 dBA DNL. Therefore, the structure, as proposed with window with a minimum STC of 28 will meet the required interior noise levels of 45 dBA DNL with a 2 to 3 dB (or more) safety factor.

6.3.2 Residential Ventilation Systems

The HUD requirement also states fresh air or some other form of air conditioning and/or treatment must also be included, or the windows must be opened 2 inches for ventilation. Opening the windows above would reduce the STC to approximately 20 and the interior noise levels would exceed the HUD required 45 dBA DNL interior level. To remedy this issue, all residential units in the development will be equipped with a ventilation system. The proposed system will include a *Heat Recovery Ventilator* (HRV) system in each unit that provides additional ventilation to keep the indoor air quality high, even with the windows closed.

A HRV system mixes fresh air from the exterior with the interior air, creating a balanced ventilation system. The HRV also uses the heat in the outgoing stale air to warm up the fresh air, providing warm fresh air during cold periods without drastically increasing heating cost. The HRV systems typically feature two fans, one to exhaust out stale air, and a second to bring in fresh air. Therefore, the unit design provides for fresh air exchange without using the windows.

The interior noise level of the units in the proposed complex nearest to SW 257th Drive would range from 38 to 42 dBA DNL. This range of interior noise levels are below the HUD interior standard of 45 dBA DNL or less for living and sleeping areas. Therefore, the residential units in this project, as designed, will meet the requirements in the HUD standards for an acceptable residential development in an area with existing noise levels above 65 dBA DNL.

6.3.3 Exterior Shared Use Areas

The proposed Troutdale Residential Development includes two large outdoor shared use areas. To maintain lower noise levels in these areas, the project was designed with a distance buffer and structural shielding to reduce traffic noise from SW 257th Drive in both areas. First, the design located the shared exterior use areas in courtyards, using the building structures as acoustical shielding. Second, by locating these areas far away from the noisy roadways, atmospheric attenuation assists in noise reduction. The result is two large shared outdoor uses with acceptable noise levels.

There is an outdoor play area near Building A, and a second courtyard mostly surrounded by Buildings B and C. Using the measured maximum hourly Leq noise level from sites M-1 and M-2, worst case noise levels in the courtyards were predicted. To do this, the measured levels are distance corrected and it was also assumed that the building structures would provide a conservative 10 dB of additional noise reduction. With these assumptions, the result is a worst case peak hour noise level at the play area near Building A of 48 dBA Leq. The open courtyard area by Buildings B and C has a worst case peak hourly noise level of 54 dBA Leq. Noise levels in this range during peak traffic noise hour are fully compatible with exterior uses like parks and school playgrounds.

Therefore, the exterior uses in this project, as designed, will provide shared exterior uses with acceptable noise levels.

6.3.4 Business Office Operations and Shared Noise Sources

A community center and business offices are planned for the northeast corner of Building A. Noise from the use of these offices is not expected to have any affect on the local noise environment. The offices will be general site support and are not noise producing operations.

Noise from any exterior fans, ventilation systems, or other shared sources of potential noise would include the use of modern, low noise systems, and would meet all DEQ property line noise requirements.

7 POSSIBLE MITIGATION MEASURES

There are some recommended noise and vibration mitigation measures for short term construction impacts. For operation of the redevelopment, no noise mitigation is required as the predicted noise levels are within HUD's Normally Acceptable Standard.

7.1 SHORT TERM CONSTRUCTION NOISE MITIGATION

Construction activities associated with the proposed project improvements are expected to result in noise levels that range from 70 to 95 dBA at sites 50 feet from the activities. These noise levels, although temporary in nature, could be annoying. Therefore, the following construction noise abatement measures would be included in the project specifications:

- Construction activities are allowed Monday through Friday between 7:00 am and 9:00 pm, Saturdays between 8:00 am and 7:00 pm, Sunday between 10:00 am and 7:00 pm. Construction outside these hours would require a noise variance as described in the City of Troutdale Municipal Code, Chapter 8.24.070.
- All equipment used shall have sound-control devices no less effective than those provided on the original equipment. No equipment shall have un-muffled exhaust.
- All equipment shall comply with pertinent equipment noise standards of the U.S. Environmental Protection Agency.

If a specific noise impact complaint is received during construction of the project, the contractor may be required to implement one or more of the following noise abatement measures at the contractor's expense, as directed by the project manager:

- Locate stationary construction equipment as far from nearby noise-sensitive properties as feasible.
- Shut off idling equipment.
- Reschedule construction operations to avoid periods of noise annoyance identified in the complaint.
- Notify nearby residents whenever extremely noisy work will be occurring.
- Install temporary or portable acoustic barriers around stationary construction noise sources.

7.2 SHORT TERM CONSTRUCTION VIBRATION MITIGATION:

During high vibration-producing activities such as soil compacting and demolition, there is a potential for vibration being noticeable in nearby structures. Vibration mitigation could include limiting the hours when the vibration-producing equipment can be used near sensitive receivers. By restricting and monitoring vibration-producing activities, vibration impacts from construction can be kept to a minimum.

7.3 LONG TERM NOISE

No operation noise mitigation is required as the predicted interior noise levels are within HUD's Normally Acceptable Standard of 45 dBA DNL or lower and the units are all equipped with HRV systems for fresh air.

Any fans, heating ventilation, or air condition systems (HVAC) servicing the buildings will be designed to meet City of Troutdale and Oregon DEQ noise standards at the property lines of the development's nearest neighbors.

No other operational noise mitigation is required.

8 ANTICIPATED PERMITS AND APPROVALS

There are no permits required as related to project noise. If project construction is to occur outside the allowable hours outlined in Section 4.4, then a noise variance would be required from the City of Troutdale.

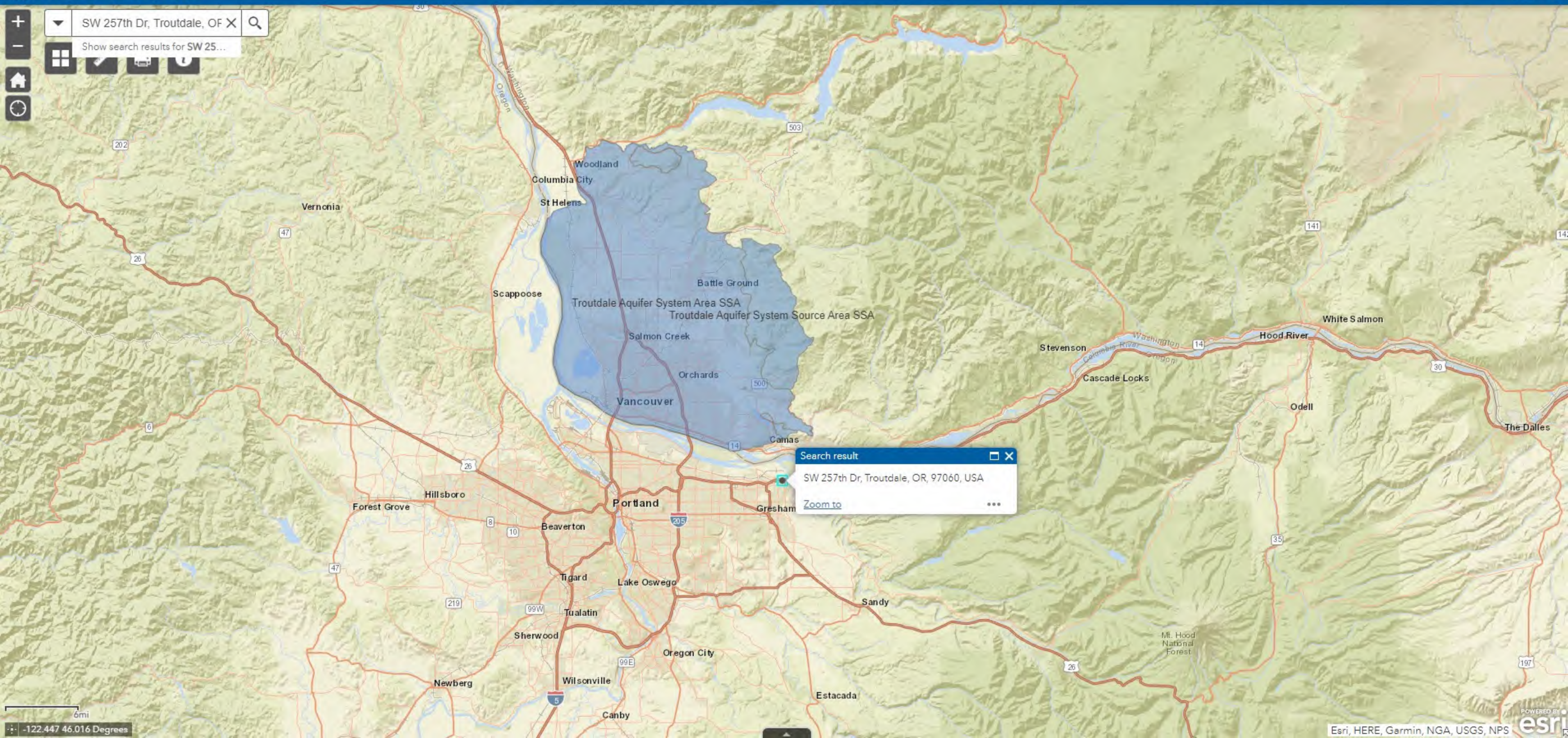
APPENDIX A: REFERENCES

City of Troutdale. (2022). Municipal Code, Title 8.24 Noise Control.

HUD Exchange web site: <https://www.hudexchange.info/resource/2830/day-night-noise-level-assessment-tool/>.

Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment (FTA Manual). FTA Report No. 0123. September 2018.

Attachment 13: Sole Source Aquifers- Troutdale



Search result

SW 257th Dr, Troutdale, OR, 97060, USA

[Zoom to](#)

Attachment 14: NWI Map- Troutdale



BASEMAPS >

MAP LAYERS >

- ☒ Wetlands
- ☒ Riparian
- ☐ Riparian Mapping Areas
- ☒ Data Source
 - Source Type
 - Image Scale
 - Image Year
- ☐ Areas of Interest
- ☐ FWS Managed Lands
- ☐ Historic Wetland Data



LEGEND

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Riparian

- Forested/Shrub
- Herbaceous

Attachment 15. Wetland Delineation Determination Report

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

Fully completed and signed report cover forms and applicable fees are required before report review timelines are initiated by the Department of State Lands. Make checks payable to the Oregon Department of State Lands. To pay fees by credit card, go online at <https://apps.oregon.gov/DSL/EPS/program?key=4>.

Attach this completed and signed form to the front of an unbound report or include a hard copy with a digital version (single PDF file of the report cover form and report, minimum 300 dpi resolution) and submit to: **Oregon Department of State Lands, 775 Summer Street NE, Salem, OR 97301-1279**. A single PDF of the completed cover form and report may be e-mailed to **Wetland_Delineation@dsl.state.or.us**. For submittal of PDF files larger than 10 MB, e-mail DSL instructions on how to access the file from your ftp or other file sharing website.

| Contact and Authorization Information | | | |
|---|--|---|--|
| <input checked="" type="checkbox"/> Applicant <input type="checkbox"/> Owner Name, Firm and Address: Home Forward Attn: Leslie Crehan 135 SW Ash Street, 5 th Floor Portland, Oregon 97204 | | Business phone # (503) 802-8554 Mobile phone # (optional) E-mail: Leslie.Crehan@homeforward.org | |
| <input type="checkbox"/> Authorized Legal Agent, Name and Address (if different): N/A | | Business phone # Mobile phone # (optional) E-mail: | |
| I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact. | | | |
| Typed/Printed Name: Leslie Crehan | | Signature: | |
| Date: 11/8/21 | | Special instructions regarding site access: Please call ahead before accessing site. | |
| Project and Site Information | | | |
| Project Name: Wetland Delineation Report for the SW 257 th Drive Property | | Latitude: 45.539387 Longitude: -122.390107 decimal degree - centroid of site or start & end points of linear project | |
| Proposed Use: Affordable housing | | Tax Map # 1N 3E 25CB Tax Lot(s) 2501 | |
| Project Street Address (or other descriptive location): SW 257 th Drive and SW 4 th Street | | Tax Map # 1N 3E 25CB Tax Lot(s) 2601 | |
| City: Troutdale County: Multnomah | | Township 1N Range 3E Section 25 QQ NW, SW Use separate sheet for additional tax and location information | |
| Waterway: Unnamed Perennial Stream River Mile: N/A | | | |
| Wetland Delineation Information | | | |
| Wetland Consultant Name, Firm and Address: PBS Engineering and Environmental, Attn: Greg Swenson 4412 S. Corbett Avenue Portland, Oregon 97239 | | Phone # (503) 935-5492 Mobile phone # (if applicable) E-mail: greg.swenson@pbsusa.com | |
| The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge. | | | |
| Consultant Signature: | | Date: | |
| Digitally signed by Greg Swenson Date: 2021.11.08 13:21:10 -08'00' | | | |
| Primary Contact for report review and site access is <input type="checkbox"/> Consultant <input checked="" type="checkbox"/> Applicant/Owner <input type="checkbox"/> Authorized Agent | | | |
| Wetland/Waters Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Study Area size: 3.58 ac. Total Acreage: 0.00-ac. wetland, 0.01-ac waters | | | |
| Check Applicable Boxes Below | | | |
| <input type="checkbox"/> R-F permit application submitted <input type="checkbox"/> Mitigation bank site <input type="checkbox"/> EFSC/ODOE Proj. Mgr: <input type="checkbox"/> Wetland restoration/enhancement project (not mitigation) <input type="checkbox"/> Previous delineation/application on parcel If known, previous DSL # | | <input type="checkbox"/> Fee payment submitted \$ 475 <input type="checkbox"/> Fee (\$100) for resubmittal of rejected report <input type="checkbox"/> Request for Reissuance. See eligibility criteria. (no fee) DSL# _____ Expiration date _____ <input type="checkbox"/> LWI shows wetlands or waters on parcel Wetland ID code | |
| For Office Use Only | | | |
| DSL Reviewer: _____ | | Fee Paid Date: ____ / ____ / ____ | |
| Date Delineation Received: ____ / ____ / ____ | | Scanned: <input type="checkbox"/> Electronic: <input type="checkbox"/> | |
| DSL WD # _____ | | DSL App. # _____ | |

Wetland Determination Report for the SW 257th Drive Property

SW 257th Drive and SW 4th Street
Troutdale, Oregon 97060

Home Forward
135 SW Ash Street, 5th Floor
Portland, Oregon 97204

November 3, 2021
PBS Project No. 75433.000



4412 S. CORBETT AVENUE
PORTLAND, OR 97239
503.248.1939 MAIN
866.727.0140 FAX
PBSUSA.COM

TABLE OF CONTENTS

| | |
|--|----------|
| INTRODUCTION..... | 1 |
| A. LANDSCAPE SETTING AND LAND USE | 1 |
| B. SITE ALTERATIONS | 1 |
| C. PRECIPITATION AND ANALYSIS..... | 1 |
| D. METHODS | 2 |
| E. DESCRIPTION OF ALL WETLANDS AND OTHER NON-WETLAND WATERS | 2 |
| F. DEVIATION FROM LWI OR NWI..... | 4 |
| G. MAPPING METHOD..... | 4 |
| H. ADDITIONAL INFORMATION | 4 |
| I. RESULTS AND CONCLUSIONS..... | 4 |
| J. DISCLAIMER | 4 |

SUPPORTING DATA

TABLES

| | |
|-----------|--|
| Table 1A. | Precipitation To-Date Data |
| Table 1B. | Precipitation Data for the Preceding 3 Months |
| Table 2A. | Oregon Department of State Lands OHWL Indicators |
| Table 2B. | USACE OHWM Indicators |
| Table 3. | NWI Mapping |
| Table 4. | Field Summary |

APPENDICES

APPENDIX A - MAPS

| | |
|----------|---------------------------------|
| Figure 1 | Location Map |
| Figure 2 | Tax Lot Map 1N 3E 25CB |
| Figure 3 | National Wetlands Inventory Map |
| Figure 4 | County Soil Survey Map |
| Figure 5 | July 20, 2018 Aerial Photograph |
| Figure 6 | Wetland Determination Map |

APPENDIX B - DATA FORMS

APPENDIX C - GROUND LEVEL COLOR PHOTOGRAPHS

APPENDIX D - ADDITIONAL TABLES AND INFORMATION

APPENDIX E - LITERATURE CITATIONS

INTRODUCTION

PBS Engineering and Environmental (PBS) was contracted by Home Forward to conduct a wetland determination to assist in the planning of an affordable housing complex. The 3.58-acre study area is located in Troutdale, Oregon (Appendix A, Figure 1) and is identified as tax lots 2501 and 2601 on Multnomah County Assessor's map no. 1N 3E 25CB (ORMAP 2021) (Figure 2), Township 1 North, Range 3 East, Section 25 W.M. PBS' fieldwork and reporting was conducted by Greg Swenson, Professional Wetland Scientist and Hailey Gilliland, Field Technician.

A. LANDSCAPE SETTING AND LAND USE

The study area is located within the Portland/ Vancouver Basin level IV ecoregion (USGS 2021). This ecoregion is characterized by terraces and floodplains with low gradient streams and rivers. (USGS 2021). Site specific topography is a combination of hillside with moderate slopes in the north, south and west parts of the study area. The north-central part of the study area is a relatively flat field. According to the topographic survey conducted for the project, study area elevations range from approximately 85 to 146 feet (NAVD88) above sea level. Land use is a vacant grass field with areas of remnant forest.

B. SITE ALTERATIONS

The study area is vacant and lacks site alterations such as grading and filling. Regular mowing is conducted to maintain the grass field.

C. PRECIPITATION AND ANALYSIS

Precipitation data were obtained from the Natural Resource Conservation Service (NRCS 2021) WETS website for Portland Troutdale AP, Oregon (Appendix D). As indicated in Table 1A, no rainfall occurred during the field study and 1.87 inches fell in the preceding two weeks. Cumulative precipitation for the water year starting October 1, 2020 and the three-month period prior to the field study was normal (Tables 1A and 1B). Due to the early fall timing of the field investigation, the lack of primary hydrology indicators was not considered reliable for making the wetland hydrology determination.

Table 1A. Precipitation To-Date Data

| Field Study Date | Observed Precipitation on the Date of the Field Study (in.) | Observed Precipitation Two Weeks Prior to the Field Study Date (in.) |
|-------------------------|--|---|
| October 12, 2021 | 0.00 | 1.87 |

Table 1B. Precipitation Data for the Preceding 3 Months

| Prior Month | WETS Rainfall Percentile (in.) | | Measured Rainfall (in.) | Condition: Dry, Wet, Normal | Condition Value: (1=dry, 2=normal, or 3=wet) | Month weight | Multiply previous two columns |
|--|--------------------------------|-----------------|-------------------------|-----------------------------|--|--------------|-------------------------------|
| | 30th | 70th | | | | | |
| July 11-August 10 | 0.20 (prorated) | 0.55 (prorated) | 0.07 | Dry | 1 | 1 | 1 |
| August 11-September 10 | 0.40 (prorated) | 1.16 (prorated) | 0.04 | Dry | 1 | 2 | 2 |
| September 11-October 11 | 1.58 (prorated) | 3.13 (prorated) | 3.86 | Wet | 3 | 3 | 9 |
| | | | | | | Sum | 12 |
| Rainfall of prior period was: drier than normal (sum is 6-9), normal (sum is 10-14), wetter than normal (sum is 15-18). | | | | | | | Normal |

WETS Station: Portland Troutdale AP, OR**Measured Rainfall: Portland Troutdale AP, Oregon, July 2021 - October 2021****Data From: <http://agacis.rcc-acis.org/?fips=41051>****D. METHODS**

The field study occurred on October 12, 2021. The method used for determining the presence/absence of wetlands followed the routine approach of the U.S. Army Corps of Engineers (USACE) *Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Version 2.0) (U.S. Army Corps of Engineers 2010). Soils, vegetation, and indicators of hydrology were recorded at three sample plot locations on standard wetland determination data forms (Appendix B). Wetland plant ratings were assigned based on the *2018 National Wetland Plant List* (U.S. Army Corps of Engineers 2018). Plot locations were chosen to represent contrasts in landscape positions and plant communities. No modification of the standard wetland boundary determination methodology (i.e., presence of hydric soil indicators, hydrophytic plant dominance, and wetland hydrology indicators) was necessary during the field study.

E. DESCRIPTION OF ALL WETLANDS AND OTHER NON-WETLAND WATERS

The non-wetland Unnamed Perennial Stream was documented during the field study. The Cowardin classification (Cowardin et. al. 1979) of the Unnamed Perennial Stream is riverine, lower perennial, unconsolidated bottom, permanently flooded, and the hydrogeomorphic classification (Adamus, P.R. and D. Field 2001) is riverine flow-through. Hydrology sources to the Unnamed Perennial Stream appear to be direct precipitation, groundwater discharge, and possibly upgradient runoff. Soils within the Unnamed Perennial Stream were not described in the field but clearly met the definition of hydric soils due to permanent flooding.

The boundaries of the Unnamed Perennial Stream were based on the ordinary high water line/mark (OHWL/M) pursuant to field indicators described under OAR 141-085-0515(3)(a-e) (State of Oregon 2021) and Regulatory Guidance Letter No. 05-05 (Riley, D. 2005). Tables 2A and 2B summarize the field results.

Table 2A. Oregon Department of State Lands OHWL Indicators

| OHWL Field Indicators | Occurs Within Study Area? |
|--|---|
| (a) Clear, natural line impressed on the shore | Yes. An impressed line was clearly visible along the streambanks and edges of the Unnamed Perennial Stream. |
| (b) Change in vegetation from riparian (e.g., willows) to upland (e.g., oak, fir) dominated | Yes. The Unnamed Perennial Stream was unvegetated whereas elevations above the OHWL had upland and riparian vegetation. |
| (c) Textural change of depositional sediment or changes in the character of the soil (e.g., from sand, sand and cobble, cobble and gravel to upland soils) | Yes. The Unnamed Perennial Stream bed has a gravel/cobble substrate. Adjacent uplands consist of finer soils. |
| (d) Elevation below which no fine debris (needles, leaves, cones, and seeds) occurs | Yes. |
| (e) Presence of litter and debris, water stained leaves, water lines on tree trunks | Yes. Wrack lines were clearly visible within the Unnamed Perennial Stream. |
| (f) Other appropriate means that consider the characteristics of the surrounding areas | N/A |

Table 2B. USACE OHWM Indicators

| OHWM Field Indicators | Occurs Within Study Area? |
|---|---|
| Natural line impressed on the bank | Yes. An impressed line was clearly visible along the streambanks and edges of the Unnamed Perennial Stream. |
| Shelving | None observed. |
| Changes in the character of soil | Yes. The Unnamed Perennial Stream bed has abundant gravels and cobbles. Adjacent uplands and wetlands consist of finer soils. |
| Destruction of terrestrial vegetation | Yes. The Unnamed Perennial Stream was unvegetated whereas elevations above the OHWM had upland and riparian vegetation. |
| Presence of litter and debris | None observed. |
| Wracking | Yes. Wrack lines were clearly visible within the Unnamed Perennial Stream. |
| Vegetation matted down, bent, or absent | None observed. |
| Sediment sorting | None observed. |
| Leaf litter disturbed or washed away | None observed. |
| Scour | None observed. |
| Deposition | None observed. |
| Multiple observed flow events | No. |
| Bed and banks | Yes. |
| Water staining | None observed. |
| Change in plant community | Yes. The Unnamed Perennial Stream was unvegetated whereas elevations above the OHWM had upland and riparian vegetation. |

No wetlands were documented during the field study.

F. DEVIATION FROM LWI OR NWI

The National Wetlands Inventory (NWI) (USFWS 2021) mapping is depicted on Figure 3. No NWI polygons are mapped within the study area.

A Local Wetlands Inventory has not been completed for the study area.

G. MAPPING METHOD

A recent color aerial photograph (Google Earth 2021) with the study area boundary was used as the base map for the field study. The study area boundary, sample plot locations, OHWL/M, and topographic contours were surveyed by professional surveyors. Digitized mapping and cartography were completed in ArcGIS Pro. Soil mapping units are depicted on Figure 4 and an aerial photograph is included as Figure 5. Ground-level site photographs are included in Appendix C. Reference materials are included in Appendix E.

H. ADDITIONAL INFORMATION

The Unnamed Perennial Stream is a naturally occurring stream with year-round flow, which meets the definition of jurisdictional waters of the state (State of Oregon 2021). In terms of federal jurisdiction, the Unnamed Perennial Stream is likely jurisdictional because it appears to have a significant nexus to downstream waters.

I. RESULTS AND CONCLUSIONS

The Unnamed Perennial Stream was delineated within the study area (Figure 6) as summarized in the table below.

Table 4. Field Summary

| Field ID | Area (acre) | Cowardin Class (Cowardin et. al. 1979) | HGM Class (Adamus, P.R. and D. Field 2001) |
|--------------------------|--------------------|---|---|
| Unnamed Perennial Stream | 0.01 | Riverine, lower perennial, unconsolidated bottom, permanently flooded | Riverine flow through |

J. DISCLAIMER

This report documents the investigation, best professional judgment, and conclusions of the investigator. It is correct and complete to the best of my knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Oregon Department of State Lands in accordance with OAR 141-090-0005 through 141-090-0055.

Appendix A

Maps

Figure 1. Location Map

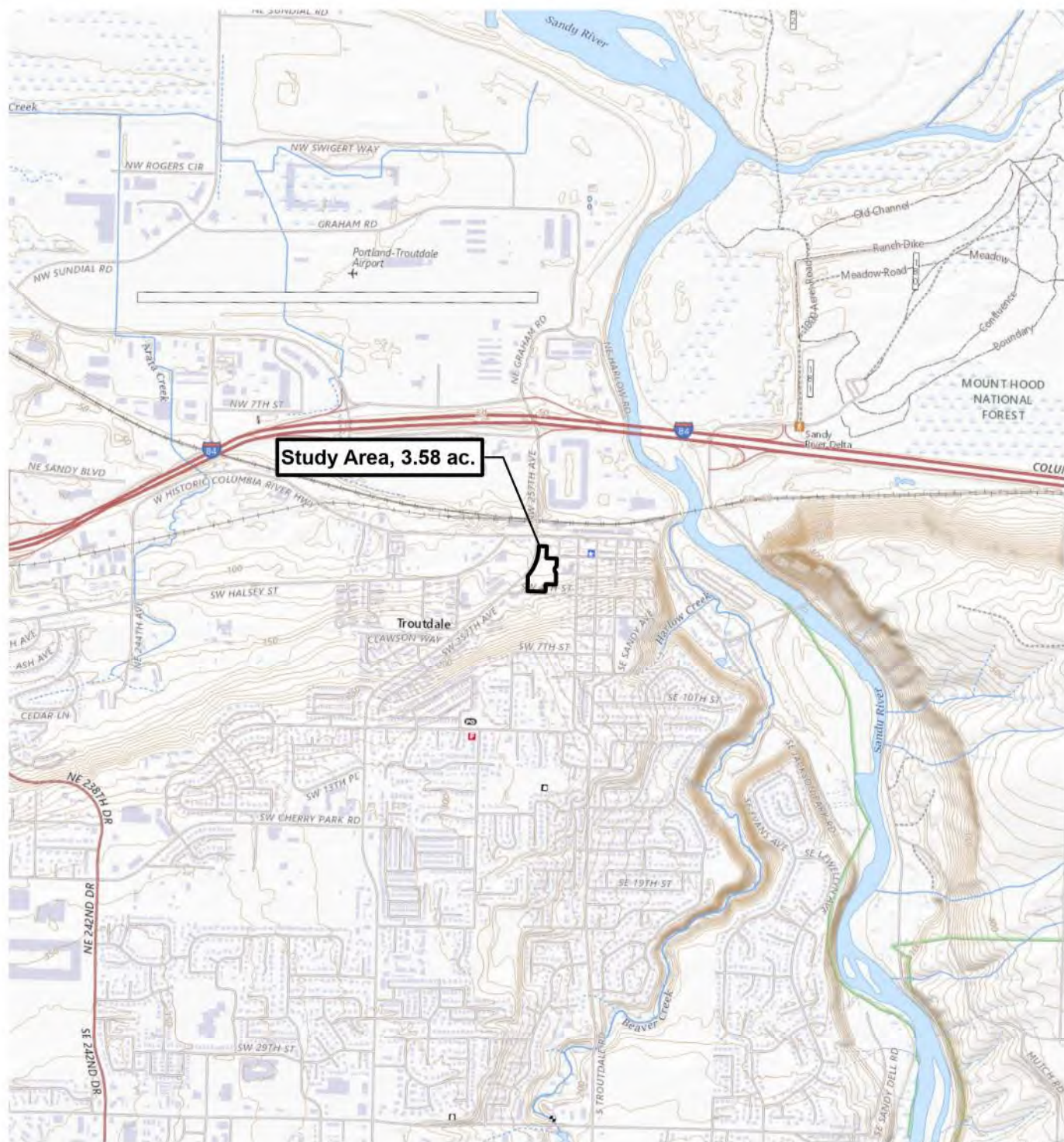
Figure 2. Tax Lot Map 1N 3E 25CB

Figure 3. National Wetlands Inventory Map

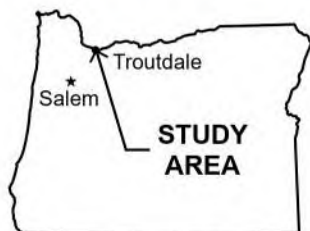
Figure 4. County Soil Survey Map

Figure 5. July 20, 2018 Aerial Photograph

Figure 6. Wetland Determination Map



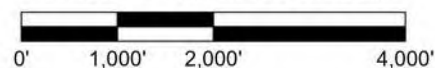
SOURCE: USGS (2021).



OREGON



SCALE: 1" = 2,000' (8.5X11 SHEET)



PREPARED FOR: HOME FORWARD.



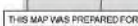
LOCATION MAP

WETLAND DETERM. FOR THE HOME FORWARD SW 257TH DR. PROPERTY
TROUTDALE, MULTNOMAH COUNTY, OREGON

NOV 2021
75433.000

FIGURE

1



1N 3E 25CB
TROUTDALE

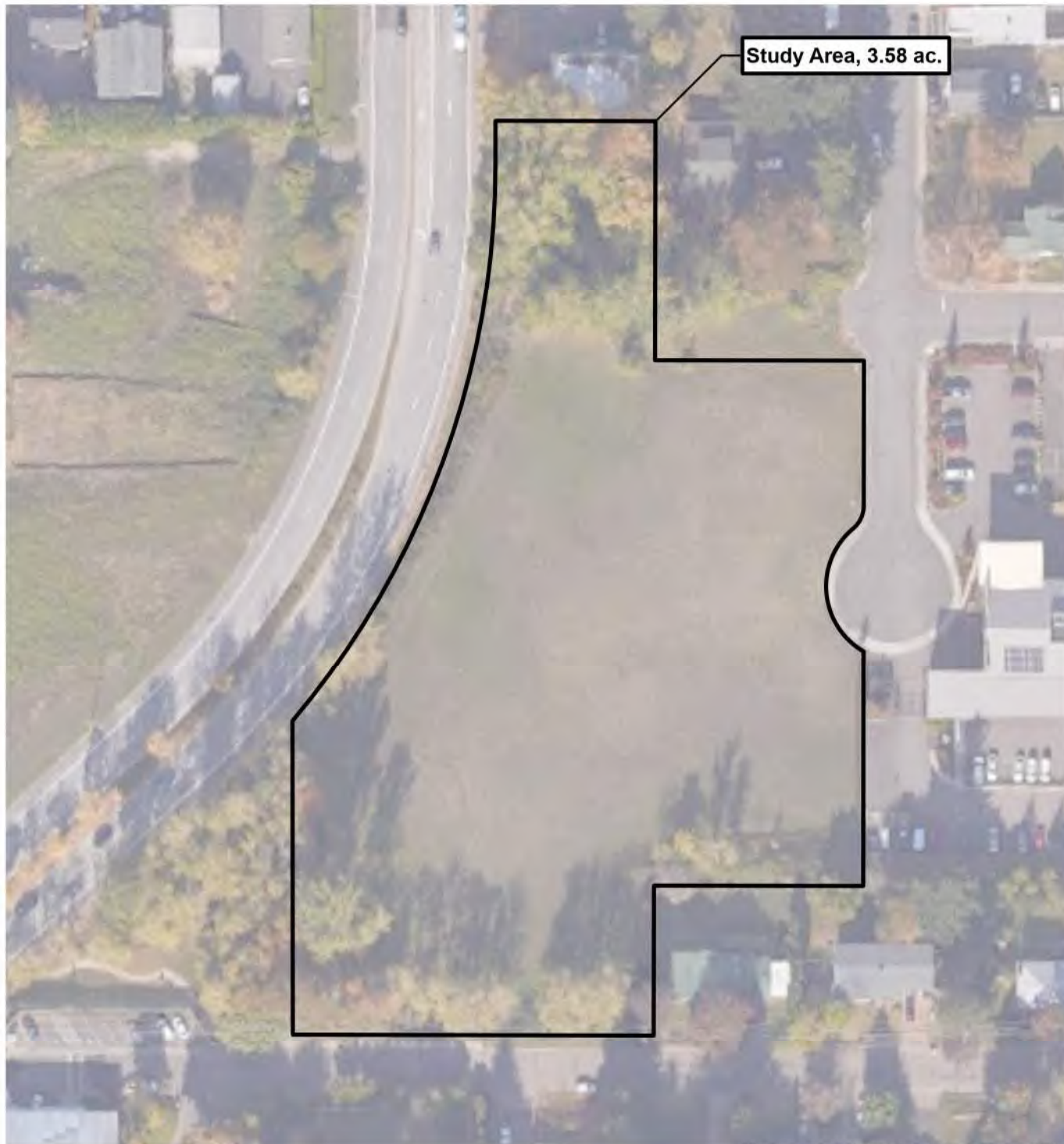
1N 3E 25CB
TROUTDALE



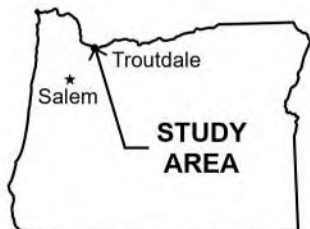
WETLAND DETERM. FOR THE HOME FORWARD SW 257TH DR. PROPERTY
TROUTDALE, MULTNOMAH COUNTY, OREGON

FIGURE

2



SOURCE: U.S. FISH AND WILDLIFE SERVICE (2021).

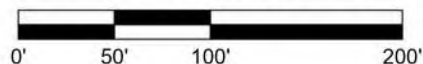


OREGON

****No NWI Polygons Mapped In Study Area****



SCALE: 1" = 100' (8.5X11 SHEET)



PREPARED FOR: HOME FORWARD.

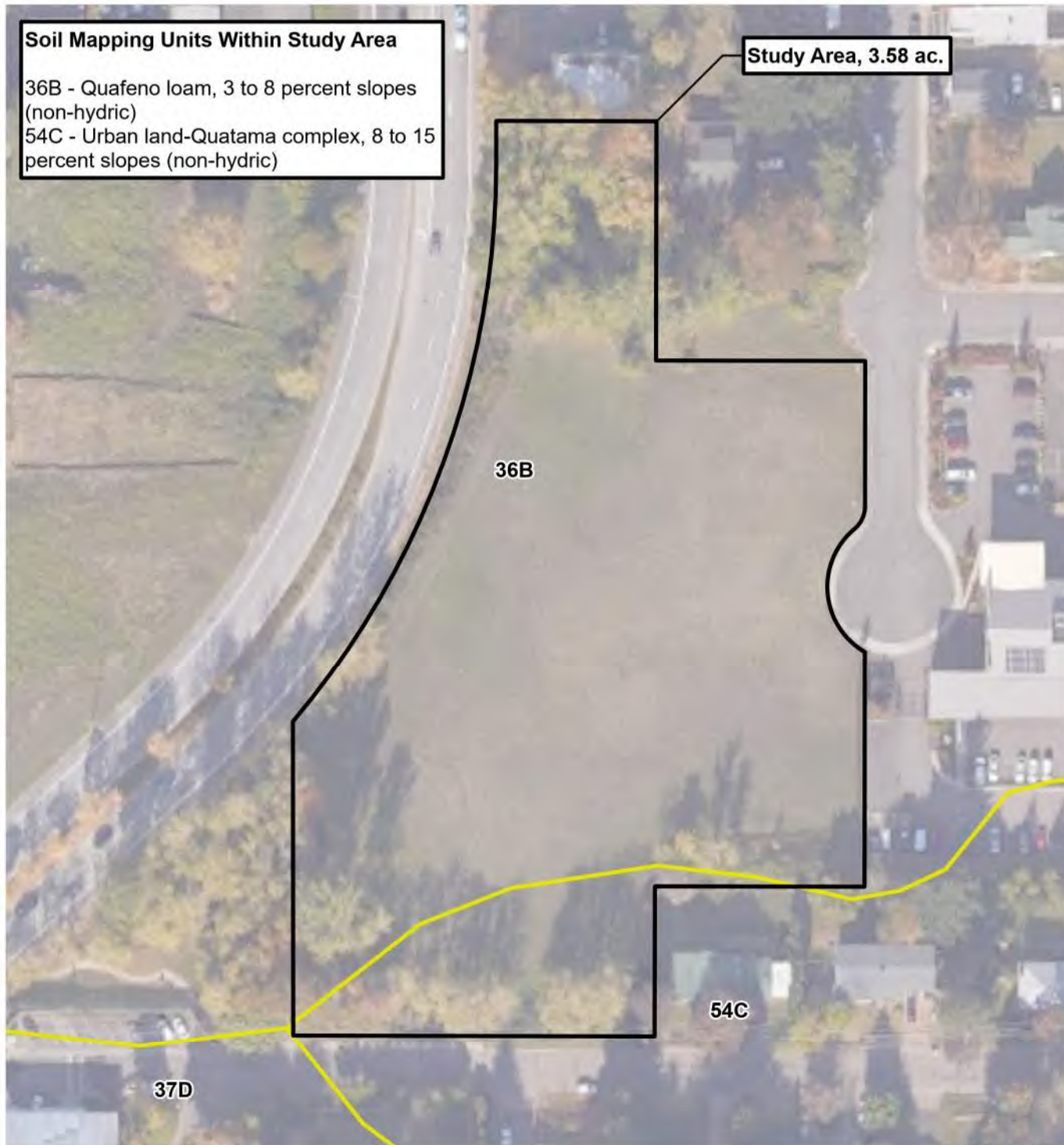


NATIONAL WETLANDS INVENTORY MAP
WETLAND DETERM. FOR THE HOME FORWARD SW 257TH DR. PROPERTY
TROUTDALE, MULTNOMAH COUNTY, OREGON

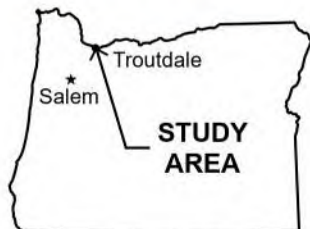
NOV 2021
75433.000

FIGURE

3



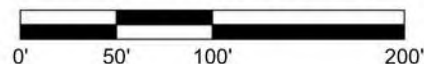
SOURCE: NRCS (2021).



OREGON



SCALE: 1" = 100' (8.5X11 SHEET)



PREPARED FOR: HOME FORWARD.



COUNTY SOIL SURVEY MAP
WETLAND DETERM. FOR THE HOME FORWARD SW 257TH DR. PROPERTY
TROUTDALE, MULTNOMAH COUNTY, OREGON

NOV 2021
75433.000

FIGURE

4



Study Area, 3.58 ac.

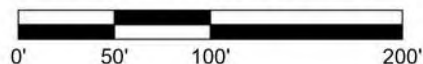
SOURCE: GOOGLE EARTH (2021).



OREGON



SCALE: 1" = 100' (8.5X11 SHEET)



PREPARED FOR: HOME FORWARD.

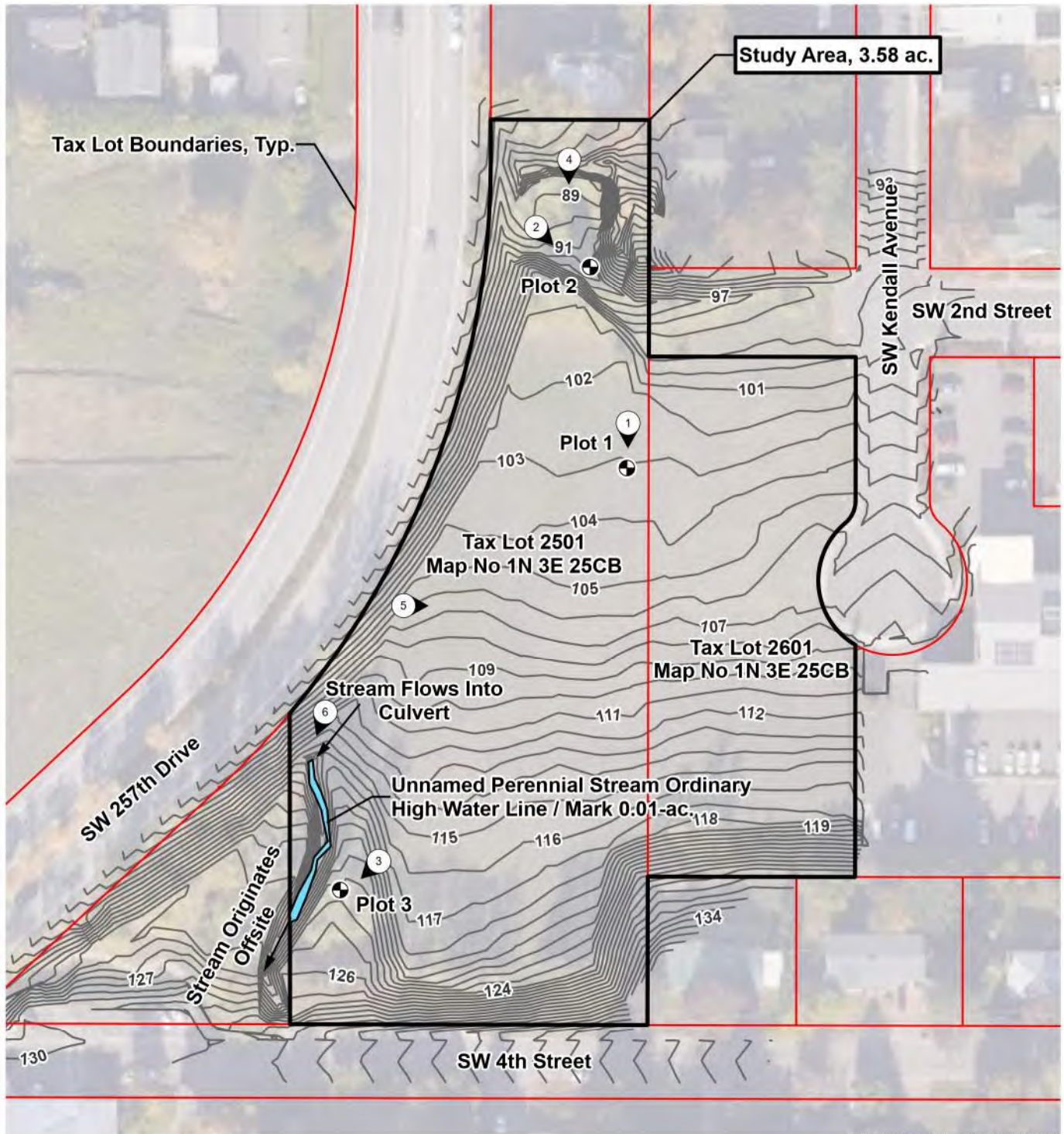


JULY 20, 2018 AERIAL PHOTOGRAPH
WETLAND DETERM. FOR THE HOME FORWARD SW 257TH DR. PROPERTY
TROUTDALE, MULTNOMAH COUNTY, OREGON

NOV 2021
75433.000

FIGURE

5

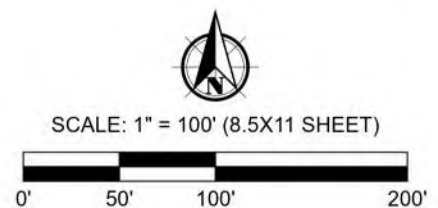


SOURCE: GOOGLE EARTH (2021).

Legend

- Plot 1 Data Plot Locations
- Ground Level Photograph Locations
- Unnamed Perennial Stream Ordinary High Water Line / Mark, 0.01-ac.

Photo points were mapped using a Trimble Geo7X handheld GPS unit. All features collected achieved submeter accuracy after post-processing. Study area boundary, sample plots, and stream boundary were professionally surveyed.



PREPARED FOR: HOME FORWARD.



WETLAND DETERMINATION MAP WETLAND DETERM. FOR THE HOME FORWARD SW 257TH DR. PROPERTY TROUTDALE, MULTNOMAH COUNTY, OREGON

NOV 2021
75433.000

FIGURE

6

Appendix B

Data Forms

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys and Coast Region

Project/Site: SW 257th Drive Property City/County: Troutdale / Multnomah Sampling Date: 10/12/2021
 Applicant/Owner: Home Forward State: Oregon Sampling Point: Plot 1
 Investigator(s): G. Swenson, H. Gilliland Section, Township, Range: Sec. 25, T. 1N, R. 3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 4
 Subregion (LRR): LRR A - Northwest Forests and Coast Lat: 45.539753 Long: -122.390047 Datum: WGS84
 Soil Map Unit Name: Quafeno loam, 3 to 8 percent slopes NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Yes X No (If no, explain in remarks)
 Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? (If needed, explain any answers in remarks) Yes X No
 Are vegetation , Soil , or Hydrology naturally problematic? Yes X No

SUMMARY OF FINDINGS - Attach site map showing sampling point location, transects, important features, etc.

| | | | |
|--|-----------------|----------------|--|
| Hydrophytic vegetation present? | Yes <u>X</u> | No <u> </u> | Is the sampled area within a wetland? Yes <u> </u> No <u>X</u> |
| Hydric soil present? | Yes <u> </u> | No <u>X</u> | |
| Indicators of wetland hydrology present? | Yes <u> </u> | No <u>X</u> | |

Remarks: North-central part of study area, 130 feet east of west study area boundary and 220 feet south of north study area boundary.

VEGETATION -- Use scientific names of plants.

| Tree Stratum | (Plot size: <u>30' r</u>) | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across all Strata: <u>3</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>67%</u> (A/B) |
|------------------------------------|----------------------------|------------------|------------------|------------------|--|
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| | | <u>0</u> | = Total Cover | | Prevalence Index Worksheet Total % Cover of: Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>60</u> x 3 = <u>180</u> FACU species <u>40</u> x 4 = <u>160</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>100</u> (A) <u>340</u> (B) Prevalence Index = B/A = <u>3.40</u> |
| Sapling/Shrub Stratum | (Plot size: <u>30' r</u>) | | | | |
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |
| | | <u>0</u> | = Total Cover | | |
| Herb Stratum | (Plot size: <u>5' r</u>) | | | | Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u> </u> <u>3</u> - Prevalence Index is ≤3.0 <u> </u> <u>4</u> - Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) <u> </u> <u>5</u> - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic |
| 1. <i>Agrostis stolonifera</i> | | <u>30</u> | <u>Y</u> | <u>FAC</u> | |
| 2. <i>Schedonorus arundinaceus</i> | | <u>25</u> | <u>Y</u> | <u>FAC</u> | |
| 3. <i>Taraxacum officinale</i> | | <u>20</u> | <u>Y</u> | <u>FACU</u> | |
| 4. <i>Hypochaeris radicata</i> | | <u>15</u> | <u>N</u> | <u>FACU</u> | |
| 5. <i>Plantago major</i> | | <u>5</u> | <u>N</u> | <u>FAC</u> | |
| 6. <i>Daucus carota</i> | | <u>5</u> | <u>N</u> | <u>FACU</u> | |
| 7. | | | | | |
| 8. | | | | | |
| 9. | | | | | |
| 10. | | | | | |
| 11. | | | | | |
| | | <u>100</u> | = Total Cover | | |
| Woody Vine Stratum | (Plot size: <u>30' r</u>) | | | | |
| 1. | | | | | |
| 2. | | | | | |
| | | <u>0</u> | = Total Cover | | |
| % Bare Ground in Herb Stratum | | <u>0</u> | | | |

Remarks:

Field was recently mowed.

SOIL

Sampling Point: Plot 1

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|----------------|---|-------------------|------------------|---------|---------|
| Depth (Inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-10 | 7.5YR 3/3 | 100 | | | | | sl | moist |
| 10-19 | 7.5YR 3/3 | 100 | | | | | ls | moist |
| 19-20+ | 10YR 4/3 | 100 | | | | | ls | moist |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | Indicators for Problematic Hydric Soils ³ : |
|---|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (Except MRLA 1) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) | ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) | |

| | |
|--|--|
| Restrictive Layer (if present): Type: _____ Depth (inches): _____ | Hydric Soil Present? Yes _____ No <u> X </u> |
| Remarks: | |

HYDROLOGY

| Wetland Hydrology Indicators | | |
|---|---|--|
| Primary Indicators (minimum of one is required; check all that apply) | Secondary Indicators (2 or more required) | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) | |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> FAC-Neutral Test (D5) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) | |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Frost Heave Hummocks (D7) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | |

| | |
|--|---|
| Field Observations: Surface Water Present? Yes _____ No <u> X </u> Depth (inches): _____ Water Table Present? Yes _____ No <u> X </u> Depth (inches): <u> >20 </u> Saturation Present? Yes _____ No <u> X </u> Depth (inches): <u> >20 </u> (includes capillary fringe) | Wetland Hydrology Present? Yes _____ No <u> X </u> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: | |
| Aerial photograph | |
| Remarks: | |

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys and Coast Region

Project/Site: SW 257th Drive Property City/County: Troutdale / Multnomah Sampling Date: 10/12/2021
 Applicant/Owner: Home Forward State: Oregon Sampling Point: Plot 2
 Investigator(s): G. Swenson, H. Gilliland Section, Township, Range: Sec. 25, T. 1N, R. 3E
 Landform (hillslope, terrace, etc.): Swale within hillslope Local relief (concave, convex, none): Concave Slope (%): 5
 Subregion (LRR): LRR A - Northwest Forests and Coast Lat: 45.540125 Long: -122.390142 Datum: WGS84
 Soil Map Unit Name: Quafeno loam, 3 to 8 percent slopes NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Yes X No (If no, explain in remarks)
 Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? (If needed, explain any answers in remarks) Yes X No
 Are vegetation , Soil , or Hydrology naturally problematic? Yes X No

SUMMARY OF FINDINGS - Attach site map showing sampling point location, transects, important features, etc.

| | | | |
|--|-----------------|-------------|---|
| Hydrophytic vegetation present? | Yes <u> </u> | No <u>X</u> | Is the sampled area within a wetland? Yes <u> </u> No <u>X</u> |
| Hydric soil present? | Yes <u> </u> | No <u>X</u> | |
| Indicators of wetland hydrology present? | Yes <u> </u> | No <u>X</u> | |

Remarks: North part of study area, 35 feet west of east study area boundary and 95 feet south of north study area boundary.

VEGETATION -- Use scientific names of plants.

| Tree Stratum (Plot size: <u>30' r</u>) | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across all Strata: <u>4</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>0%</u> (A/B) |
|--|------------------|------------------|--------------------------|--|
| 1. <u>Pseudotsuga menziesii</u> | <u>50</u> | <u>Y</u> | <u>FACU</u> | |
| 2. <u>Corylus cornuta</u> | <u>15</u> | <u>Y</u> | <u>FACU</u> | |
| 3. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 4. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| | | | <u>65</u> = Total Cover | |
| Sapling/Shrub Stratum (Plot size: <u>30' r</u>) | Absolute % Cover | Dominant Species | Indicator Status | Prevalence Index Worksheet Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>170</u> x 4 = <u>680</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>170</u> (A) <u>680</u> (B) Prevalence Index = B/A = <u>4.00</u> |
| 1. <u>Quercus rubra</u> | <u>5</u> | <u>Y</u> | <u>FACU</u> | |
| 2. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 3. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 4. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 5. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| | | | <u>5</u> = Total Cover | |
| Herb Stratum (Plot size: <u>5' r</u>) | Absolute % Cover | Dominant Species | Indicator Status | Hydrophytic Vegetation Indicators: 1 - Rapid Test for Hydrophytic Vegetation <u> </u> 2 - Dominance Test is >50% <u> </u> 3 - Prevalence Index is ≤3.0 <u> </u> 4 - Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) <u> </u> 5 - Wetland Non-Vascular Plants ¹ <u> </u> Problematic Hydrophytic Vegetation ¹ (Explain) <u> </u> <small>¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic</small> |
| 1. <u>Hedera helix</u> | <u>100</u> | <u>Y</u> | <u>FACU</u> | |
| 2. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 3. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 4. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 5. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 6. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 7. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 8. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 9. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 10. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 11. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| | | | <u>100</u> = Total Cover | |
| Woody Vine Stratum (Plot size: <u>30' r</u>) | Absolute % Cover | Dominant Species | Indicator Status | Hydrophytic vegetation present? Yes <u> </u> No <u>X</u> |
| 1. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 2. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| | | | <u>0</u> = Total Cover | |
| % Bare Ground in Herb Stratum <u>0</u> | | | | |

Remarks:

SOIL

Sampling Point: Plot 2

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|----------------|---|-------------------|------------------|---------|---------|
| Depth (Inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-20+ | 10YR 3/2 | 100 | | | | | ls | moist |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| | |
|--|---|
| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4) | Indicators for Problematic Hydric Soils³: <input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) (Except MRLA 1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> 2 cm Muck (A10) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Very Shallow Dark Surface (TF12) <input type="checkbox"/> Other (Explain in Remarks) |
|--|---|

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

| | |
|--|--|
| Restrictive Layer (if present): Type: _____ Depth (inches): _____ | Hydric Soil Present? Yes _____ No <u> X </u> |
|--|--|

Remarks:
Profile contains salt and pepper sand grains throughout.

HYDROLOGY

| | | | |
|--|---|---|--|
| Wetland Hydrology Indicators | | | |
| <u>Primary Indicators (minimum of one is required; check all that apply)</u> | | <u>Secondary Indicators (2 or more required)</u> | |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) | |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Drainage Patterns (B10) | |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Dry-Season Water Table (C2) | |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) | |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> Geomorphic Position (D2) | |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Shallow Aquitard (D3) | |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> FAC-Neutral Test (D5) | |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) | |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Frost Heave Hummocks (D7) | |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | | |

| | |
|--|---|
| Field Observations: Surface Water Present? Yes _____ No <u> X </u> Depth (inches): _____ Water Table Present? Yes _____ No <u> X </u> Depth (inches): <u> >20 </u> Saturation Present? Yes _____ No <u> X </u> Depth (inches): <u> >20 </u> (includes capillary fringe) | Wetland Hydrology Present? Yes _____ No <u> X </u> |
|--|---|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
Aerial photograph

Remarks:

WETLAND DETERMINATION DATA FORM - Western Mountains, Valleys and Coast Region

Project/Site: SW 257th Drive Property City/County: Troutdale / Multnomah Sampling Date: 10/12/2021
 Applicant/Owner: Home Forward State: Oregon Sampling Point: Plot 3
 Investigator(s): G. Swenson, H. Gilliland Section, Township, Range: Sec. 25, T. 1N, R. 3E
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 5
 Subregion (LRR): LRR A - Northwest Forests and Coast Lat: 45.538976 Long: -122.390806 Datum: WGS84
 Soil Map Unit Name: Quafeno loam, 3 to 8 percent slopes NWI Classification: None

Are climatic/hydrologic conditions of the site typical for this time of the year? Yes X No (If no, explain in remarks)
 Are vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? (If needed, explain any answers in remarks) Yes X No
 Are vegetation , Soil , or Hydrology naturally problematic? Yes X No

SUMMARY OF FINDINGS - Attach site map showing sampling point location, transects, important features, etc.

| | | | |
|--|-----------------|----------------|--|
| Hydrophytic vegetation present? | Yes <u>X</u> | No <u> </u> | Is the sampled area within a wetland? |
| Hydric soil present? | Yes <u> </u> | No <u>X</u> | |
| Indicators of wetland hydrology present? | Yes <u> </u> | No <u>X</u> | |

Remarks: Southwest part of study area, 30 feet east of west study area boundary and 100 feet north of south study area boundary.

VEGETATION -- Use scientific names of plants.

| Tree Stratum (Plot size: <u>30' r</u>) | Absolute % Cover | Dominant Species | Indicator Status | Dominance Test Worksheet Number of Dominant Species that are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across all Strata: <u>5</u> (B) Percent of Dominant Species that are OBL, FACW, or FAC: <u>60%</u> (A/B) |
|--|------------------|------------------|------------------|--|
| 1. <u>Populus balsamifera</u> | <u>30</u> | <u>Y</u> | <u>FAC</u> | |
| 2. <u>Prunus virginiana</u> | <u>5</u> | <u>N</u> | <u>FACU</u> | |
| 3. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 4. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| <u>35</u> = Total Cover | | | | |
| Sapling/Shrub Stratum (Plot size: <u>30' r</u>) | | | | Prevalence Index Worksheet Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>85</u> x 3 = <u>255</u> FACU species <u>50</u> x 4 = <u>200</u> UPL species <u>0</u> x 5 = <u>0</u> Column totals <u>135</u> (A) <u>455</u> (B) Prevalence Index = B/A = <u>3.37</u> |
| 1. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 2. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 3. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 4. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 5. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| <u>0</u> = Total Cover | | | | |
| Herb Stratum (Plot size: <u>5' r</u>) | | | | Hydrophytic Vegetation Indicators: <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>3</u> - Prevalence Index is ≤3.0 <u>4</u> - Morphological Adaptations* (Provide supporting data in Remarks or on a separate sheet) <u>5</u> - Wetland Non-Vascular Plants ¹ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic |
| 1. <u>Agrostis stolonifera</u> | <u>30</u> | <u>Y</u> | <u>FAC</u> | |
| 2. <u>Dactylis glomerata</u> | <u>25</u> | <u>Y</u> | <u>FACU</u> | |
| 3. <u>Schedonorus arundinaceus</u> | <u>25</u> | <u>Y</u> | <u>FAC</u> | |
| 4. <u>Taraxacum officinale</u> | <u>20</u> | <u>Y</u> | <u>FACU</u> | |
| 5. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 6. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 7. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 8. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 9. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 10. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 11. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| <u>100</u> = Total Cover | | | | |
| Woody Vine Stratum (Plot size: <u>30' r</u>) | | | | Hydrophytic vegetation present? Yes <u>X</u> No <u> </u> |
| 1. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| 2. <u> </u> | <u> </u> | <u> </u> | <u> </u> | |
| <u>0</u> = Total Cover | | | | |
| % Bare Ground in Herb Stratum <u>0</u> | | | | |

Remarks:

SOIL

Sampling Point: Plot 3

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) | | | | | | | | |
|---|---------------|-----|----------------|---|-------------------|------------------|---------|---------|
| Depth (Inches) | Matrix | | Redox Features | | | | Texture | Remarks |
| | Color (moist) | % | Color (moist) | % | Type ¹ | Loc ² | | |
| 0-8 | 7.5YR 3/3 | 100 | | | | | ls | moist |
| 8-11 | 7.5YR 2.5/3 | 95 | 5YR 3/4 | 5 | C | M | sl | moist |
| 11-23+ | 10YR 3/4 | 100 | | | | | ls | moist |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | | Indicators for Problematic Hydric Soils ³ : |
|---|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> 2 cm Muck (A10) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) (Except MRLA 1) | <input type="checkbox"/> Very Shallow Dark Surface (TF12) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Matrix (F3) | ³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Redox Depressions (F8) | |

| | |
|--|--|
| Restrictive Layer (if present): Type: _____ Depth (inches): _____ | Hydric Soil Present? Yes _____ No <u> X </u> |
| Remarks: | |

HYDROLOGY

| Wetland Hydrology Indicators | | |
|--|---|---|
| <u>Primary Indicators (minimum of one is required; check all that apply)</u> | | <u>Secondary Indicators (2 or more required)</u> |
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Water-Stained Leaves (B9) | <input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B) |
| <input type="checkbox"/> High Water Table (A2) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Water Marks (B1) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Sediment Deposits (B2) | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <input type="checkbox"/> Geomorphic Position (D2) |
| <input type="checkbox"/> Drift Deposits (B3) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Shallow Aquitard (D3) |
| <input type="checkbox"/> Algal Mat or Crust (B4) | <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) | <input type="checkbox"/> FAC-Neutral Test (D5) |
| <input type="checkbox"/> Iron Deposits (B5) | <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A) | <input type="checkbox"/> Raised Ant Mounds (D6) (LRR A) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Frost Heave Hummocks (D7) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | | |
| <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) | | |

| | | | |
|---|---------------------------|-----------------------------------|-----------------------------------|
| Field Observations: | | | Wetland Hydrology Present? |
| Surface Water Present? | Yes _____ No <u> X </u> | Depth (inches): _____ | Yes _____ No <u> X </u> |
| Water Table Present? | Yes _____ No <u> X </u> | Depth (inches): <u> >23 </u> | |
| Saturation Present? | Yes _____ No <u> X </u> | Depth (inches): <u> >23 </u> | |
| (includes capillary fringe) | | | |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: Aerial photograph | | | |
| Remarks: | | | |

Appendix C

Ground Level Color Photographs



Photo 1. North-central part of study area looking south. Hand auger (center) shows location of Plot 1 (upland). Photo taken October 12, 2021.



Photo 2. North part of study area looking southeast. Hand auger (center) shows location of Plot 2 (upland). Photo taken October 12, 2021.



Photo 3. Southwest part of study area looking southwest. Hand auger (center) shows location of Plot 3 (upland). Photo taken October 12, 2021.

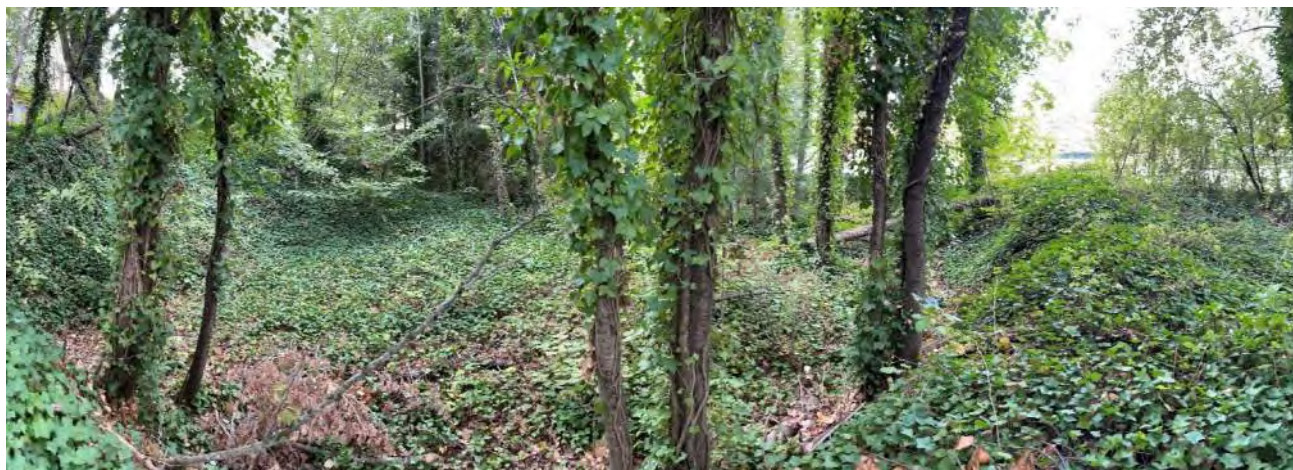


Photo 4. North part of study area looking south. Photo taken October 12, 2021.



Photo 5. Center of study area looking east. SW 257th Drive shown on the left. Photo taken October 12, 2021.



Photo 6. Southwest part of study area looking southwest at inlet to culvert. Photo taken October 12, 2021.

Appendix D

Additional Tables and Information

[illegible]

| | | | | | | | | | | | | | | |
|------|-------|-------|-------|------|-------|------|-------|-------|-------|------|-------|-------|-------|-------|
| | | | | | | | | | | | | | | |
| 1958 | | | | | | | | | | | | | | |
| 1959 | | | | | | | | | MT | 3.51 | 4.58 | 3.64 | 4.07 | 15.80 |
| 1960 | 4.65 | 5.32 | 5.40 | 4.92 | 4.29 | 0.86 | T | 1.48 | 1.19 | 3.76 | 11.80 | 3.80 | 47.47 | |
| 1961 | 5.31 | 11.07 | 7.74 | 4.23 | 4.18 | 0.46 | 0.19 | 0.54 | 1.81 | 4.07 | 5.80 | 6.87 | 52.27 | |
| 1962 | 2.48 | 3.75 | 5.75 | 4.01 | 4.24 | 1.08 | T | 1.47 | 2.21 | 4.96 | 10.87 | 4.05 | 44.87 | |
| 1963 | 1.79 | 5.75 | 6.13 | 5.54 | 4.91 | 2.07 | M1.42 | 0.82 | 1.03 | 3.69 | 7.63 | 4.12 | 44.90 | |
| 1964 | 12.20 | 1.87 | 3.51 | 3.05 | 1.93 | 3.62 | 0.88 | M1.74 | 2.71 | 1.66 | 7.36 | 10.56 | 51.09 | |
| 1965 | 10.88 | 3.98 | 1.53 | 3.89 | 1.72 | 1.04 | M0.00 | | | | | | | 23.04 |
| 1966 | | | | | | | | | | | | | | |
| 1967 | | | | | | | | | | | | | | |
| 1968 | | | | | | | | | | | | | | |
| 1969 | | | | | | | | | | | | | | |
| 1970 | | | | | | | | | | | | | | |
| 1971 | | | | | | | | | | | | | | |
| 1972 | | | | | | | | | | | | | | |
| 1973 | | | | | | | | | | | | | | |
| 1974 | | | | | | | | | | | | | | |
| 1975 | | | | | | | | | | | | | | |
| 1976 | | | | | | | | | | | | | | |
| 1977 | | | | | | | | | | | | | | |
| 1978 | | | | | | | | | | | | | | |
| 1979 | | | | | | | | | | | | | | |
| 1980 | | | | | | | | | | | | | | |
| 1981 | | | | | | | | | | | | | | |
| 1982 | | | | | | | | | | | | | | |
| 1983 | | | | | | | | | | | | | | |
| 1984 | | | | | | | | | | | | | | |
| 1985 | | | | | | | | | | | | | | |
| 1986 | | | | | | | | | | | | | | |
| 1987 | | | | | | | | | | | | | | |
| 1988 | | | | | | | | | | | | | | |
| 1989 | | | | | | | | | | | | | | |
| 1990 | | | | | | | | | | | | | | |
| 1991 | | | | | | | | | | | | | | |
| 1992 | | | | | | | | | | | | | | |
| 1993 | | | | | | | | | | | | | | |
| 1994 | | | | | | | | | | | | | | |
| 1995 | | | | | | | | | | | | | | |
| 1996 | | | | | | | | | | | | | | |
| 1997 | | | | | | | | | | | | | | |
| 1998 | | | | | | | 0.38 | T | 1.08 | 2.47 | 10.34 | 7.67 | 21.94 | |
| 1999 | 7.20 | 8.72 | 4.90 | 2.19 | 1.92 | 3.57 | 0.80 | 1.29 | 0.13 | 2.81 | M7.21 | 5.02 | 45.76 | |
| 2000 | 6.58 | M5.32 | M3.06 | 2.89 | M3.50 | 1.15 | 0.22 | 0.14 | 2.87 | 3.77 | 3.45 | 3.61 | 36.56 | |
| 2001 | 2.28 | 2.05 | 4.89 | 3.44 | 1.49 | 2.52 | 0.69 | 0.83 | 0.91 | 3.79 | 7.53 | 7.77 | 38.19 | |
| 2002 | 7.31 | 3.97 | 4.83 | 3.38 | 1.57 | 2.46 | 0.35 | 0.04 | M2.07 | 1.00 | 2.60 | 8.70 | 38.28 | |
| 2003 | 8.65 | 2.88 | 7.42 | 4.75 | 2.33 | 0.38 | 0.02 | 0.02 | 2.04 | 2.95 | 5.75 | 8.74 | 45.93 | |
| 2004 | M5.75 | 4.99 | 2.04 | 1.34 | 2.41 | 1.65 | 0.30 | 3.30 | 2.30 | 5.11 | 2.84 | 4.98 | 37.01 | |
| 2005 | 2.12 | 1.44 | 4.18 | 4.53 | 5.54 | 3.28 | 0.83 | 1.62 | 2. | 4. | 5.18 | 8.46 | 43. | |

| | | | | | | | | | 10 | 56 | | | | 84 |
|------|-------|-------|-------|------|------|------|------|-------|------|-------|-------|-------|-------|----|
| 2006 | 10.59 | 2.67 | 3.07 | 3.52 | 2.67 | 1.21 | 0.27 | 0.05 | 1.24 | 2.17 | 13.00 | M5.62 | 46.08 | |
| 2007 | 3.50 | 4.43 | 5.62 | 2.87 | 1.49 | 1.51 | 0.49 | 0.62 | 1.80 | 3.84 | 5.34 | 9.65 | 41.16 | |
| 2008 | 5.97 | 2.77 | 4.35 | 2.82 | 1.80 | 1.37 | 0.22 | 1.20 | 0.66 | 1.75 | 6.09 | M1.28 | 30.28 | |
| 2009 | 4.99 | 1.21 | M4.23 | 3.45 | 3.61 | 1.52 | 0.39 | 0.46 | 1.01 | 3.64 | 5.18 | 3.44 | 33.13 | |
| 2010 | 5.20 | 2.62 | 4.41 | 2.88 | 4.21 | 5.32 | 0.21 | 0.59 | 2.68 | 5.21 | 7.55 | 7.38 | 48.26 | |
| 2011 | M3.43 | 4.16 | 7.56 | 4.64 | 3.45 | 1.02 | 0.96 | 0.06 | 1.03 | 2.33 | 5.44 | 2.61 | 36.69 | |
| 2012 | 5.97 | M2.93 | 7.98 | 3.62 | 3.24 | 4.58 | 0.34 | 0.01 | 0.06 | 7.03 | 7.33 | M5.67 | 48.76 | |
| 2013 | 3.55 | 1.20 | 1.75 | 3.42 | 4.91 | 1.69 | T | 0.30 | 4.13 | 1.61 | 3.61 | 2.37 | 28.54 | |
| 2014 | 2.86 | 3.44 | 5.56 | 3.28 | 3.38 | 2.21 | 1.07 | 0.12 | 1.02 | 6.94 | 3.72 | 4.30 | 37.90 | |
| 2015 | 2.74 | 3.14 | 4.48 | 2.20 | 0.82 | 0.63 | 0.56 | 1.36 | 1.18 | 4.19 | 4.60 | 11.03 | 36.93 | |
| 2016 | 4.50 | 3.64 | 4.57 | 2.49 | 1.87 | 2.40 | 0.76 | 0.11 | 2.17 | 11.30 | 6.66 | 3.16 | 43.63 | |
| 2017 | 2.37 | 8.01 | 7.38 | 5.41 | 2.22 | 1.72 | T | 0.21 | 3.06 | 5.19 | 6.12 | 3.03 | 44.72 | |
| 2018 | 5.02 | 2.12 | 2.77 | 4.05 | 0.45 | 1.90 | T | 0.25 | 0.88 | 4.19 | 2.70 | 5.16 | 29.49 | |
| 2019 | 3.11 | 3.84 | 1.68 | 4.01 | 1.87 | 1.13 | 0.62 | 0.94 | 3.38 | 2.26 | 1.62 | 3.57 | 28.03 | |
| 2020 | 6.94 | 2.26 | 2.80 | 1.28 | 3.95 | 3.60 | 0.08 | M0.44 | 3.42 | 2.19 | 5.07 | 4.95 | 36.98 | |
| 2021 | 5.47 | 3.11 | 1.82 | 0.48 | 1.76 | 1.51 | T | 0.11 | 3.52 | M0.44 | | | 18.22 | |

Notes: Data missing in any month have an "M" flag. A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2021-10-13

Climatological Data for PORTLAND TROUTDALE AP, OR - July 2021

| Date | Max Temperature | Min Temperature | Avg Temperature | GDD Base 40 | GDD Base 50 | Precipitation | Snowfall | Snow Depth |
|-------------|-----------------|-----------------|-----------------|-------------|-------------|---------------|----------|------------|
| 2021-07-01 | 74 | 63 | 68.5 | 29 | 19 | 0.00 | M | M |
| 2021-07-02 | 86 | 64 | 75.0 | 35 | 25 | 0.00 | M | M |
| 2021-07-03 | 88 | 60 | 74.0 | 34 | 24 | 0.00 | M | M |
| 2021-07-04 | 87 | 60 | 73.5 | 34 | 24 | 0.00 | M | M |
| 2021-07-05 | 87 | 59 | 73.0 | 33 | 23 | 0.00 | M | M |
| 2021-07-06 | 90 | 59 | 74.5 | 35 | 25 | 0.00 | M | M |
| 2021-07-07 | 75 | 60 | 67.5 | 28 | 18 | T | M | M |
| 2021-07-08 | 80 | 57 | 68.5 | 29 | 19 | 0.00 | M | M |
| 2021-07-09 | 90 | 53 | 71.5 | 32 | 22 | 0.00 | M | M |
| 2021-07-10 | 89 | 61 | 75.0 | 35 | 25 | 0.00 | M | M |
| 2021-07-11 | 87 | 58 | 72.5 | 33 | 23 | 0.00 | M | M |
| 2021-07-12 | 87 | 58 | 72.5 | 33 | 23 | 0.00 | M | M |
| 2021-07-13 | 86 | 58 | 72.0 | 32 | 22 | 0.00 | M | M |
| 2021-07-14 | 84 | 58 | 71.0 | 31 | 21 | 0.00 | M | M |
| 2021-07-15 | 81 | 59 | 70.0 | 30 | 20 | 0.00 | M | M |
| 2021-07-16 | 79 | 59 | 69.0 | 29 | 19 | 0.00 | M | M |
| 2021-07-17 | 84 | 61 | 72.5 | 33 | 23 | 0.00 | M | M |
| 2021-07-18 | 89 | 55 | 72.0 | 32 | 22 | 0.00 | M | M |
| 2021-07-19 | 89 | 58 | 73.5 | 34 | 24 | 0.00 | M | M |
| 2021-07-20 | 80 | 61 | 70.5 | 31 | 21 | 0.00 | M | M |
| 2021-07-21 | 76 | 53 | 64.5 | 25 | 15 | 0.00 | M | M |
| 2021-07-22 | 83 | 51 | 67.0 | 27 | 17 | 0.00 | M | M |
| 2021-07-23 | 87 | 53 | 70.0 | 30 | 20 | 0.00 | M | M |
| 2021-07-24 | 92 | 57 | 74.5 | 35 | 25 | 0.00 | M | M |
| 2021-07-25 | 91 | 60 | 75.5 | 36 | 26 | 0.00 | M | M |
| 2021-07-26 | 90 | 59 | 74.5 | 35 | 25 | 0.00 | M | M |
| 2021-07-27 | 89 | 61 | 75.0 | 35 | 25 | 0.00 | M | M |
| 2021-07-28 | 95 | 58 | 76.5 | 37 | 27 | 0.00 | M | M |
| 2021-07-29 | 100 | 60 | 80.0 | 40 | 30 | 0.00 | M | M |
| 2021-07-30 | 90 | 65 | 77.5 | 38 | 28 | 0.00 | M | M |
| 2021-07-31 | 83 | 70 | 76.5 | 37 | 27 | T | M | M |
| Average Sum | 86.1 | 59.0 | 72.5 | 1017 | 707 | T | M | M |

Climatological Data for PORTLAND TROUTDALE AP, OR - August 2021

| Date | Max Temperature | Min Temperature | Avg Temperature | GDD Base 40 | GDD Base 50 | Precipitation | Snowfall | Snow Depth |
|-------------|-----------------|-----------------|-----------------|-------------|-------------|---------------|----------|------------|
| 2021-08-01 | 91 | 63 | 77.0 | 37 | 27 | 0.00 | M | M |
| 2021-08-02 | 92 | 60 | 76.0 | 36 | 26 | 0.00 | M | M |
| 2021-08-03 | 91 | 63 | 77.0 | 37 | 27 | 0.00 | M | M |
| 2021-08-04 | 96 | 58 | 77.0 | 37 | 27 | 0.00 | M | M |
| 2021-08-05 | 85 | 65 | 75.0 | 35 | 25 | 0.00 | M | M |
| 2021-08-06 | 82 | 65 | 73.5 | 34 | 24 | 0.07 | M | M |
| 2021-08-07 | 83 | 59 | 71.0 | 31 | 21 | T | M | M |
| 2021-08-08 | 78 | 58 | 68.0 | 28 | 18 | T | M | M |
| 2021-08-09 | 87 | 55 | 71.0 | 31 | 21 | 0.00 | M | M |
| 2021-08-10 | 94 | 59 | 76.5 | 37 | 27 | 0.00 | M | M |
| 2021-08-11 | 104 | 63 | 83.5 | 44 | 34 | 0.00 | M | M |
| 2021-08-12 | 103 | 67 | 85.0 | 45 | 35 | 0.00 | M | M |
| 2021-08-13 | 97 | 68 | 82.5 | 43 | 33 | 0.00 | M | M |
| 2021-08-14 | 92 | 67 | 79.5 | 40 | 30 | 0.00 | M | M |
| 2021-08-15 | 96 | 65 | 80.5 | 41 | 31 | 0.00 | M | M |
| 2021-08-16 | 87 | 62 | 74.5 | 35 | 25 | 0.00 | M | M |
| 2021-08-17 | 71 | 60 | 65.5 | 26 | 16 | T | M | M |
| 2021-08-18 | 81 | 56 | 68.5 | 29 | 19 | 0.00 | M | M |
| 2021-08-19 | 82 | 61 | 71.5 | 32 | 22 | 0.00 | M | M |
| 2021-08-20 | 73 | 60 | 66.5 | 27 | 17 | 0.01 | M | M |
| 2021-08-21 | 72 | 60 | 66.0 | 26 | 16 | T | M | M |
| 2021-08-22 | 69 | 55 | 62.0 | 22 | 12 | 0.03 | M | M |
| 2021-08-23 | 75 | 46 | 60.5 | 21 | 11 | 0.00 | M | M |
| 2021-08-24 | 88 | 47 | 67.5 | 28 | 18 | 0.00 | M | M |
| 2021-08-25 | 81 | 52 | 66.5 | 27 | 17 | 0.00 | M | M |
| 2021-08-26 | 78 | 60 | 69.0 | 29 | 19 | T | M | M |
| 2021-08-27 | 74 | 55 | 64.5 | 25 | 15 | 0.00 | M | M |
| 2021-08-28 | 89 | 48 | 68.5 | 29 | 19 | 0.00 | M | M |
| 2021-08-29 | 89 | 52 | 70.5 | 31 | 21 | 0.00 | M | M |
| 2021-08-30 | 71 | 52 | 61.5 | 22 | 12 | 0.00 | M | M |
| 2021-08-31 | 71 | 52 | 61.5 | 22 | 12 | 0.00 | M | M |
| Average Sum | 84.6 | 58.5 | 71.5 | 987 | 677 | 0.11 | M | M |

Climatological Data for PORTLAND TROUTDALE AP, OR - September 2021

| Date | Max Temperature | Min Temperature | Avg Temperature | GDD Base 40 | GDD Base 50 | Precipitation | Snowfall | Snow Depth |
|-------------|-----------------|-----------------|-----------------|-------------|-------------|---------------|----------|------------|
| 2021-09-01 | 80 | 45 | 62.5 | 23 | 13 | 0.00 | M | M |
| 2021-09-02 | 87 | 46 | 66.5 | 27 | 17 | 0.00 | M | M |
| 2021-09-03 | 83 | 49 | 66.0 | 26 | 16 | 0.00 | M | M |
| 2021-09-04 | 88 | 50 | 69.0 | 29 | 19 | 0.00 | M | M |
| 2021-09-05 | 87 | 55 | 71.0 | 31 | 21 | 0.00 | M | M |
| 2021-09-06 | 85 | 60 | 72.5 | 33 | 23 | 0.00 | M | M |
| 2021-09-07 | 87 | 53 | 70.0 | 30 | 20 | 0.00 | M | M |
| 2021-09-08 | 89 | 60 | 74.5 | 35 | 25 | T | M | M |
| 2021-09-09 | 87 | 55 | 71.0 | 31 | 21 | 0.00 | M | M |
| 2021-09-10 | 68 | 60 | 64.0 | 24 | 14 | 0.00 | M | M |
| 2021-09-11 | 81 | 54 | 67.5 | 28 | 18 | 0.00 | M | M |
| 2021-09-12 | 76 | 56 | 66.0 | 26 | 16 | 0.00 | M | M |
| 2021-09-13 | 75 | 50 | 62.5 | 23 | 13 | 0.00 | M | M |
| 2021-09-14 | 83 | 47 | 65.0 | 25 | 15 | 0.00 | M | M |
| 2021-09-15 | 71 | 54 | 62.5 | 23 | 13 | 0.00 | M | M |
| 2021-09-16 | 78 | 41 | 59.5 | 20 | 10 | 0.00 | M | M |
| 2021-09-17 | 81 | 51 | 66.0 | 26 | 16 | 0.15 | M | M |
| 2021-09-18 | 68 | 57 | 62.5 | 23 | 13 | 1.24 | M | M |
| 2021-09-19 | 70 | 53 | 61.5 | 22 | 12 | 0.55 | M | M |
| 2021-09-20 | 73 | 50 | 61.5 | 22 | 12 | 0.00 | M | M |
| 2021-09-21 | 83 | 55 | 69.0 | 29 | 19 | 0.00 | M | M |
| 2021-09-22 | 70 | 54 | 62.0 | 22 | 12 | T | M | M |
| 2021-09-23 | 76 | 56 | 66.0 | 26 | 16 | 0.00 | M | M |
| 2021-09-24 | 86 | 52 | 69.0 | 29 | 19 | 0.00 | M | M |
| 2021-09-25 | 85 | 53 | 69.0 | 29 | 19 | 0.00 | M | M |
| 2021-09-26 | 77 | 58 | 67.5 | 28 | 18 | 0.05 | M | M |
| 2021-09-27 | 66 | 52 | 59.0 | 19 | 9 | 1.11 | M | M |
| 2021-09-28 | 62 | 51 | 56.5 | 17 | 7 | 0.15 | M | M |
| 2021-09-29 | 68 | 47 | 57.5 | 18 | 8 | 0.00 | M | M |
| 2021-09-30 | 64 | 56 | 60.0 | 20 | 10 | 0.27 | M | M |
| Average Sum | 77.8 | 52.7 | 65.2 | 764 | 464 | 3.52 | M | M |

Climatological Data for PORTLAND TROUTDALE AP, OR - October 2021

| Date | Max Temperature | Min Temperature | Avg Temperature | GDD Base 40 | GDD Base 50 | Precipitation | Snowfall | Snow Depth |
|-------------|-----------------|-----------------|-----------------|-------------|-------------|---------------|----------|------------|
| 2021-10-01 | 69 | 50 | 59.5 | 20 | 10 | 0.00 | M | M |
| 2021-10-02 | 72 | 43 | 57.5 | 18 | 8 | 0.00 | M | M |
| 2021-10-03 | 71 | 44 | 57.5 | 18 | 8 | 0.00 | M | M |
| 2021-10-04 | 68 | 52 | 60.0 | 20 | 10 | 0.00 | M | M |
| 2021-10-05 | 60 | 47 | 53.5 | 14 | 4 | 0.15 | M | M |
| 2021-10-06 | 64 | 44 | 54.0 | 14 | 4 | 0.01 | M | M |
| 2021-10-07 | 62 | 43 | 52.5 | 13 | 3 | 0.00 | M | M |
| 2021-10-08 | 62 | 41 | 51.5 | 12 | 2 | 0.00 | M | M |
| 2021-10-09 | 64 | 40 | 52.0 | 12 | 2 | 0.02 | M | M |
| 2021-10-10 | 61 | 45 | 53.0 | 13 | 3 | 0.16 | M | M |
| 2021-10-11 | 59 | 39 | 49.0 | 9 | 0 | 0.00 | M | M |
| 2021-10-12 | 55 | 36 | 45.5 | 6 | 0 | 0.10 | M | M |
| 2021-10-13 | M | M | M | M | M | M | M | M |
| 2021-10-14 | M | M | M | M | M | M | M | M |
| 2021-10-15 | M | M | M | M | M | M | M | M |
| 2021-10-16 | M | M | M | M | M | M | M | M |
| 2021-10-17 | M | M | M | M | M | M | M | M |
| 2021-10-18 | M | M | M | M | M | M | M | M |
| 2021-10-19 | M | M | M | M | M | M | M | M |
| 2021-10-20 | M | M | M | M | M | M | M | M |
| 2021-10-21 | M | M | M | M | M | M | M | M |
| 2021-10-22 | M | M | M | M | M | M | M | M |
| 2021-10-23 | M | M | M | M | M | M | M | M |
| 2021-10-24 | M | M | M | M | M | M | M | M |
| 2021-10-25 | M | M | M | M | M | M | M | M |
| 2021-10-26 | M | M | M | M | M | M | M | M |
| 2021-10-27 | M | M | M | M | M | M | M | M |
| 2021-10-28 | M | M | M | M | M | M | M | M |
| 2021-10-29 | M | M | M | M | M | M | M | M |
| 2021-10-30 | M | M | M | M | M | M | M | M |
| 2021-10-31 | M | M | M | M | M | M | M | M |
| Average Sum | 63.9 | 43.7 | 53.8 | 169 | 54 | 0.44 | M | M |

Appendix E

Literature Citations

LITERATURE CITATIONS

- Adamus, P.R. and D. Field. 2001. Guidebook for Hydrogeomorphic (HGM)-based Assess. of Oregon Wetland and Riparian Sites. I. Willamette Valley Ecoregion, Riverine Impounding and Slope/Flats Subclasses. Vol. IA: Assess. Methods. Oregon Div. of State Lands, Salem, OR.
- Cowardin, L. M., C. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of wetlands and deepwater habitats of the United States. FWS/OBS-78/31. U.S. Department of the Interior, Fish and Wildlife Service, Office of Biological Services, Washington, D.C.
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. U.S. Department of the Army, Corps of Engineers, Waterways Experiment Station, Vicksburg, Mississippi.
- Google Earth. 2021. Aerial photograph dated September 3, 2018 from the Google Earth application.
- NRCS. 2021. Natural Resources Conservation Service, U.S. Department of Agriculture. WETS and daily precipitation data. Available online at <http://agacis.rcc-acis.org/>. Accessed November 3, 2021.
- ORMAP. 2021. The Oregon Map tax map database and viewer. Available online at <http://www.ormap.net>. Accessed November 3, 2021.
- Riley, D. 2005. U.S. Army Corps of Engineers Regulatory Guidance Letter No. 05-05. December 7, 2005. Available at: <https://usace.contentdm.oclc.org/utis/getfile/collection/p16021coll9/id/1253>. Accessed November 3, 2021.
- State of Oregon. 2021. Oregon Administrative Rules. Salem, Oregon. Available at: http://sos.oregon.gov/archives/Pages/oregon_administrative_rules.aspx. Accessed November 3, 2021.
- U.S. Army Corps of Engineers. 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*. ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-10-3. Vicksburg, MS. U.S. Army Corps of Engineer Research and Development Center.
- U.S. Army Corps of Engineers. 2018. National Wetland Plant List, version 3.4. U.S. Army Corps of Engineers. Engineer Research and Development Center. Cold Regions Research and Engineering Laboratory, Hanover, NH. Available online at https://cwbi-app.sec.usace.army.mil/nwpl_static/v34/home/home.html. Accessed November 3, 2021.
- USFWS. 2021. U.S. Fish and Wildlife Service. Publication date 1977 to present. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Available at <https://www.fws.gov/wetlands/data/Mapper.html>. Accessed November 3, 2021.
- USGS. 2021. Ecoregions of Western Washington and Oregon. Map. 1:1,350,000. Washington, D.C.: Department of the Interior. Available online at: <https://www.epa.gov/eco-research/ecoregion-download-files-state-region-10#pane-35>. Accessed November 3, 2021.

Attachment 16: Wild & Scenic Rivers- Troutdale

Find address or place



Basemap Imagery Draw Erase Save Session Tools More Data

Measure

Click one of the following buttons to start measuring:



Unit

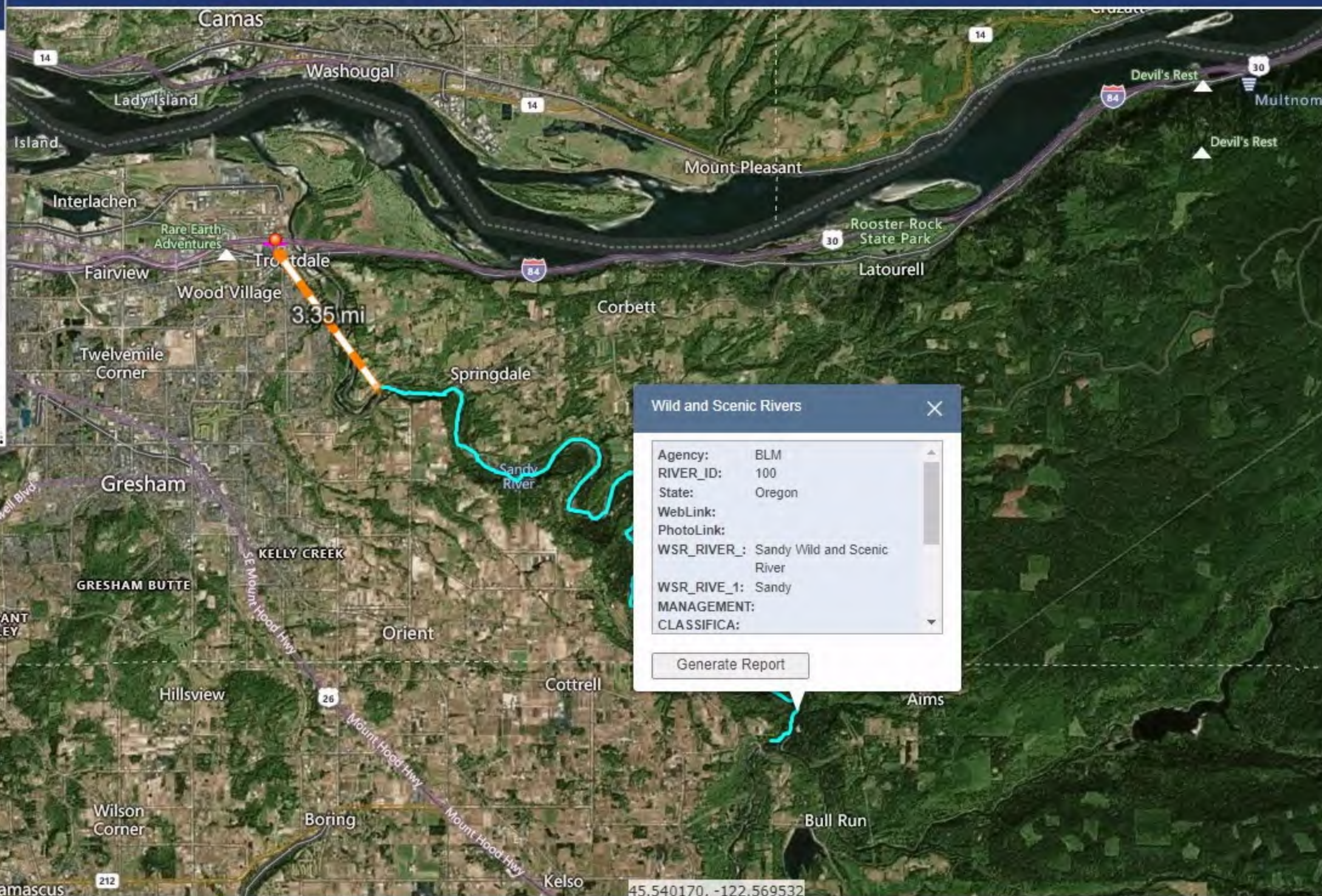
Miles

Mode

Auto

Distance
3.35 mi

New Measurement



Wild and Scenic Rivers

Agency: BLM
RIVER_ID: 100
State: Oregon
WebLink:
PhotoLink:
WSR_RIVER_: Sandy Wild and Scenic River
WSR_RIVE_1: Sandy
MANAGEMENT:
CLASSIFICA:

Generate Report

Select Map Contents

- ☐ EPA Facilities
 - ☐ Hazardous Waste (RCRAInfo)
 - ☐ Air Pollution (ICIS-AIR)
 - ☐ Water Dischargers (NPDES)
 - ☐ Toxic Releases (TRI)
 - ☐ Superfund (NPL)
 - ☐ Brownfields (ACRES)
 - ☐ Toxic Substances Control Act (TSCA)
- ☐ Water Monitoring Stations
 - ☐ USGS Water Monitors (NWIS)
 - ☐ EPA Water Monitors (STORET)
- ☐ Boundaries
- ☐ Non-attainment Areas
- ☐ EJScreen Indexes (2021)
- ☐ Water
 - ☐ Impaired Water Points
 - ☐ Impaired Streams
 - ☐ Impaired Waterbodies
 - ☐ Catchments (ATTAINS)
 - ☐ Streams
 - ☐ Water Bodies
 - ☐ Sole Source Aquifers
 - ☐ Watersheds (HUC12)
 - ☐ Watersheds (HUC8)
 - ☒ Wild and Scenic Rivers
- ☐ Transportation
- ☐ Places
- ☐ Critical Habitat
- ☐ NWI Wetlands
- ☐ FEMA Flood
- ☐ Land Cover
 - ☐ NLCD 2019 CONUS Land Cover
 - ☐ NLCD 2016 CONUS Land Cover
 - ☐ NLCD 2013 CONUS Land Cover
 - ☐ NLCD 2011 CONUS Land Cover
 - ☐ NLCD 2008 CONUS Land Cover
 - ☐ NLCD 2006 CONUS Land Cover

Attachment 17: EJScreen Report- Troutdale

EJScreen Report (Version 2.0)

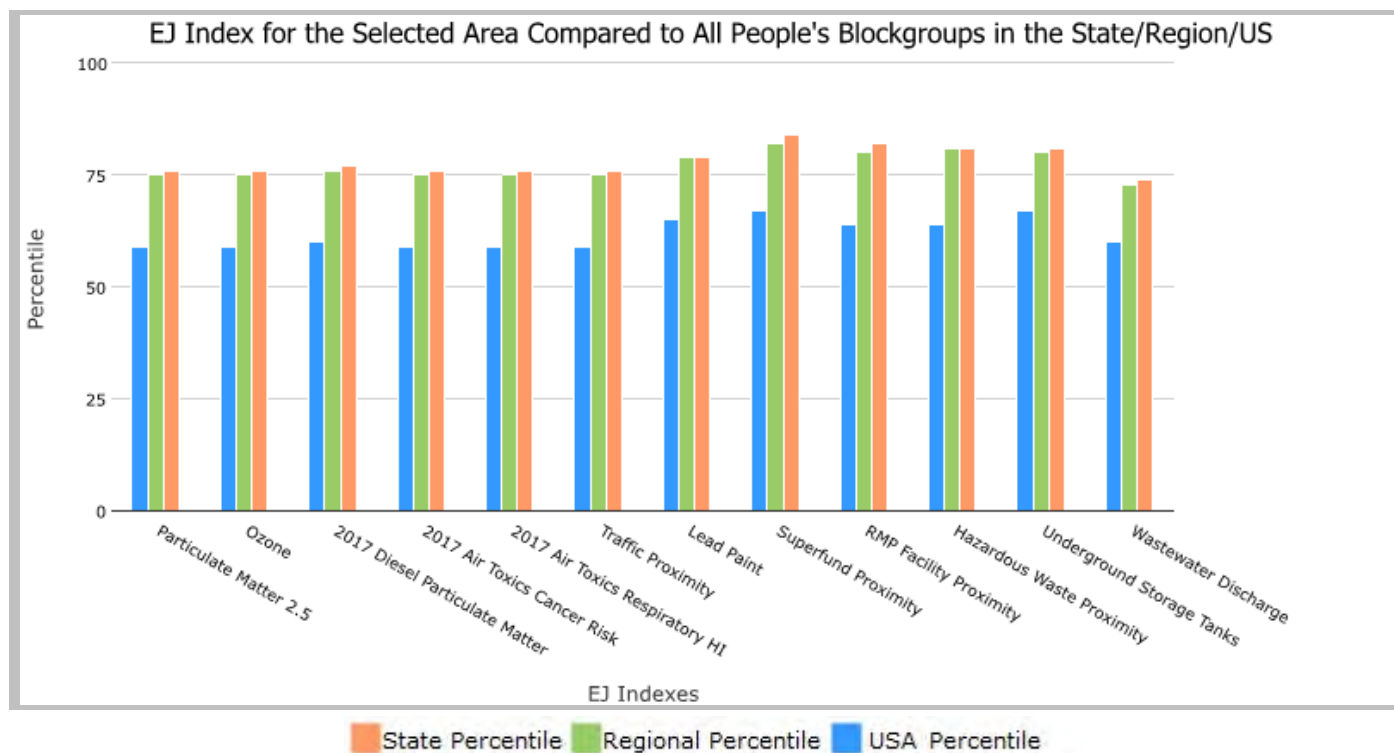
0.125 miles Ring around the Area, OREGON, EPA Region 10

Approximate Population: 82

Input Area (sq. miles): 0.10

Troutdale HUD EA

| Selected Variables | State Percentile | EPA Region Percentile | USA Percentile |
|--|------------------|-----------------------|----------------|
| Environmental Justice Indexes | | | |
| EJ Index for Particulate Matter 2.5 | 76 | 75 | 59 |
| EJ Index for Ozone | 76 | 75 | 59 |
| EJ Index for 2017 Diesel Particulate Matter* | 77 | 76 | 60 |
| EJ Index for 2017 Air Toxics Cancer Risk* | 76 | 75 | 59 |
| EJ Index for 2017 Air Toxics Respiratory HI* | 76 | 75 | 59 |
| EJ Index for Traffic Proximity | 76 | 75 | 59 |
| EJ Index for Lead Paint | 79 | 79 | 65 |
| EJ Index for Superfund Proximity | 84 | 82 | 67 |
| EJ Index for RMP Facility Proximity | 82 | 80 | 64 |
| EJ Index for Hazardous Waste Proximity | 81 | 81 | 64 |
| EJ Index for Underground Storage Tanks | 81 | 80 | 67 |
| EJ Index for Wastewater Discharge | 74 | 73 | 60 |



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJScreen Report (Version 2.0)



0.125 miles Ring around the Area, OREGON, EPA Region 10

Approximate Population: 82

Input Area (sq. miles): 0.10

Troutdale HUD EA

Map image session is timeout.

| Sites reporting to EPA | |
|--|---|
| Superfund NPL | 0 |
| Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF) | 0 |

EJScreen Report (Version 2.0)



0.125 miles Ring around the Area, OREGON, EPA Region 10

Approximate Population: 82

Input Area (sq. miles): 0.10

Troutdale HUD EA

| Selected Variables | Value | State Avg. | %ile in State | EPA Region Avg. | %ile in EPA Region | USA Avg. | %ile in USA |
|---|---------|------------|---------------|-----------------|--------------------|----------|-------------|
| Pollution and Sources | | | | | | | |
| Particulate Matter 2.5 ($\mu\text{g}/\text{m}^3$) | 7.77 | 8.75 | 14 | 8.17 | 43 | 8.74 | 27 |
| Ozone (ppb) | 38.1 | 37 | 72 | 37.2 | 66 | 42.6 | 22 |
| 2017 Diesel Particulate Matter* ($\mu\text{g}/\text{m}^3$) | 0.312 | 0.345 | 49 | 0.312 | 50-60th | 0.295 | 60-70th |
| 2017 Air Toxics Cancer Risk* (lifetime risk per million) | 40 | 33 | 97 | 33 | 90-95th | 29 | 95-100th |
| 2017 Air Toxics Respiratory HI* | 0.5 | 0.47 | 74 | 0.47 | 70-80th | 0.36 | 95-100th |
| Traffic Proximity (daily traffic count/distance to road) | 110 | 590 | 34 | 600 | 35 | 710 | 35 |
| Lead Paint (% Pre-1960 Housing) | 0.31 | 0.25 | 70 | 0.22 | 74 | 0.28 | 64 |
| Superfund Proximity (site count/km distance) | 0.42 | 0.083 | 98 | 0.13 | 93 | 0.13 | 94 |
| RMP Facility Proximity (facility count/km distance) | 1.6 | 0.79 | 84 | 0.66 | 88 | 0.75 | 86 |
| Hazardous Waste Proximity (facility count/km distance) | 2.5 | 1.6 | 78 | 1.7 | 79 | 2.2 | 75 |
| Underground Storage Tanks (count/km ²) | 4 | 3.4 | 71 | 4.5 | 71 | 3.9 | 73 |
| Wastewater Discharge (toxicity-weighted concentration/m distance) | 6.8E-08 | 0.004 | 0 | 0.53 | 0 | 12 | 0 |
| Socioeconomic Indicators | | | | | | | |
| Demographic Index | 37% | 28% | 76 | 28% | 75 | 36% | 59 |
| People of Color | 32% | 24% | 73 | 28% | 67 | 40% | 50 |
| Low Income | 41% | 31% | 73 | 28% | 77 | 31% | 70 |
| Unemployment Rate | 2% | 5% | 25 | 5% | 28 | 5% | 29 |
| Linguistically Isolated | 6% | 2% | 83 | 3% | 81 | 5% | 74 |
| Less Than High School Education | 10% | 9% | 65 | 9% | 69 | 12% | 56 |
| Under Age 5 | 5% | 6% | 42 | 6% | 36 | 6% | 37 |
| Over Age 64 | 16% | 17% | 50 | 16% | 58 | 16% | 57 |

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's 2017 Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

For additional information, see: www.epa.gov/environmentaljustice




EJScreen is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJScreen documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJScreen outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

Attachment 18: Project Site Slope- Troutdale



SOURCE: © 2016 GOOGLE EARTH PRO.

LEGEND

-  CATCH BASIN
-  STEEP INCLINE AND DIRECTION
-  MODERATE INCLINE AND DIRECTION



SCALE: 1" = 120'

PREPARED FOR: MULTNOMAH COUNTY



PROJECT #
15194.882

DATE
JUNE 2016

SITE PLAN
NE 257TH DRIVE
TROUTDALE, OREGON

FIGURE

2