

# **PLANNING MANAGER DECISION**

DATE:	March 19, 2025			
FILE NO.:	ELD-24-06			
REQUEST:	• •	8 Expedited Land Division for a Townhouse Project to divide new lots for the construction of 7 townhouse units at 5769		
PLANNER:	Chris Myers, Associa	te Planner		
	Planning Manager	DSW		
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## **GENERAL INFORMATION**

**APPLICANT/** Dan Williams

2000 SW 1<sup>st</sup> Ave, Suite 420

Portland, OR. 97201

**OWNER:** Dreambuilder Custom Homes Inc.

1125 SW Borland Rd. West Linn, OR. 97068

**SITE LOCATION:** 5743-5773 SW Broadway Street

SITE SIZE: .48 acres ( 20,909 square feet)

**LEGAL** 

**DESCRIPTION:** Clackamas County Assessor Map 22E30CB Tax Lots 2700, 2800, 2900

**COMP PLAN** 

**DESIGNATION:** Medium-Density Residential

**ZONING:** R-5, Residential

(5000 sq. ft. min. lot size)

**APPROVAL** 

**CRITERIA:** Oregon Revised Statute 92.031

**63-DAY RULE:** The application became complete on January 21, 2025. The 63-day

period for an expedited land division ends March 25, 2025.

**PUBLIC NOTICE:** Notice was mailed to property owners within 100 feet of the subject

property, public facility and services providers, and the Bolton Neighborhood Association on January 30, 2025. The notice was also posted on the City's website on January 30, 2025. Therefore, public

notice requirements have been met.

## **EXECUTIVE SUMMARY**

The subject properties are three legal lots of record on West A Street. Each lot measures 5400 square feet in size and is a legal lot of record. The property is zoned R-5 Residential, and the applicant will construct a Townhouse Project consisting of 7 townhouse units as permitted by West Linn Community Development Code Chapter 13.030.1(a), which was adopted as part of the City's HB2001 code amendment package (Ordinance 1736). The applicant has proposed to divide the property under SB458 rules adopted by the Oregon Legislature in 2021 and codified in Oregon Revised Statute 92.031. Each resulting lot will contain one dwelling unit of the Townhouse Project.

### Approximate proposed Lot Sizes

Lot 1 - 2700 sq. ft.

Lot 2 – 2160 sq. ft.

Lot 3 - 2160 sq. ft.

Lot 4 – 2160 sq. ft.

Lot 5 – 2160 sq. ft.

Lot 6 – 2160 sq. ft.

Lot 7 - 2700 sq. ft.

The property is not located within the Willamette River Greenway (WRG), a Water Resource Area (WRA), nor any FEMA flood hazard area. There is an existing water line adjacent to the property in Broadway Street. An existing sewer line also located in Broadway Street. The nearest existing stormwater lines in Broadway Street and in Highway 43 to the east of the subject property.

The property has approximately 150 feet of frontage on Broadway Street, which has a functional classification of a Local Street. Each of the seven lots will take access from private driveways adjacent to Broadway Street. The Broadway Street right-of-way (ROW) is approximately 60 feet wide adjacent to the subject property and requires no additional ROW dedication. The subject properties have existing street improvements, no further street improvements are required.

### **Public comments:**

No public comments received.

### **DECISION**

The Planning Manager (designee) approves this application (ELD-24-06) for an expedited land division under the rules of SB458 based on: 1) the applicant proposes to construct middle housing on the property; 2) the findings submitted by the applicant, which are incorporated by this reference; 3) supplementary staff findings included in the Addendum; and 4) the addition of conditions of approval below. With these findings, the applicable approval criteria of ORS 92.031 are met. The conditions are as follows:

- 1. <u>Preliminary Plat</u>. With the exception of modifications required by these conditions, the final plat shall substantially conform to the Preliminary Plat dated 12/31/24 (Exhibit PD-1).
- Compliance with Oregon Residential Specialty Code. The applicant shall submit building plans and obtain approval of compliance with the Oregon Residential Specialty Code from West Linn Building staff prior to final plat approval from the City.
- Compliance with Siting and Design Standards. The applicant shall submit building plans and obtain approval of compliance with siting and design standards from West Linn Planning staff prior to final plat approval from the City.
- 4. Engineering Standards. All public improvements and facilities associated with the approved site design, including but not limited to street improvements, driveway approaches, curb cuts, utilities, grading, onsite and offsite stormwater, street lighting, easements, easement locations, and connections for future extension of utilities are subject to conformance with the City Municipal Code and Community Development Code. These must be designed, constructed, and completed prior to final plat approval. Public Works may coordinate with the applicant to complete additional, voluntary, off-site improvements.
- 5. <u>Public Stormwater Easements.</u> The applicant shall show a 15-foot-wide public utility easement leading from the rear of the subject properties across the property at 21745 Willamette Drive extending to Willamette Drive (Highway 43). The applicant shall show a 10-foot wide Private Stormwater Easement at the rear of the subject properties.
- 6. <u>Broadway Street Public Utility Easement</u>. The City franchise agreements require an eight-foot-wide public utility easement along the Broadway Street right-of-way frontage on the face of the plat prior to final plat approval by the City.

- 7. Final Plat Notation. The applicant shall include on the face of the plat the notation "This middle housing land division approval was given under the provisions of ORS 92.031. Further division of the resulting parcels is prohibited".
- 8. Final Plat Recording. The approval of the tentative plat (ELD-24-06) shall be void if the applicant does not record the final partition plat within three years of approval.

The provisions of the Oregon Revised Statute 92.031 have been met.

Chris J. Myers
Chris Myers, Associate Planner

March 19, 2025

Date

Appeals to this decision must be filed with the West Linn Planning Department within 14 days of mailing date and include a \$300 deposit for costs. An appeal of an expedited land division is decided by a referee that is not an employee or official of the City of West Linn. The appeal must be filed by the applicant or an individual who has established standing by submitting comments prior to the public comment deadline date. Approval will lapse 3 years from effective approval date if the final plat is not recorded.

Mailed this 19<sup>th</sup> day of March 2025.

Therefore, the 14-day appeal period ends at 5 p.m., on April 2, 2025.

# ADDENDUM APPROVAL CRITERIA AND FINDINGS ELD-24-06

This decision adopts the findings for approval contained within the applicant's submittal, with the following exceptions and additions:

### ORS 92.031 Middle housing land division; conditions of approval.

(1) As used in this section, "middle housing land division" means a partition or subdivision of a lot or parcel on which the development of middle housing is allowed under ORS 197A.420.

ORS 197A.420) Except as provided in subsection (4) of this section, each city with a population of 25,000 or more and each county or city within a metropolitan service district shall allow the development of:

(a) All middle housing types in areas zoned for residential use that allow for the development of detached single-family dwellings; and

Staff Finding 1: The subject property is zoned Residential, R-5 and permits the construction of 7 townhomes. ORS 197A.420 requires the City of West Linn to allow townhomes, one type of middle housing, in areas zoned for residential use that allows for the development of detached single-family dwellings. The applicant proposes the construction of Townhouse Project with each townhome on its own lot. Each lot is larger than the 1500 square foot average as required by West Linn Community Development Code (CDC) Chapter 13.030.1(a). CDC Chapter 2 defines a townhouse as "A dwelling unit that is part of a row of two or more attached dwelling units, where each unit is located on an individual lot or parcel and shares at least one common wall with an adjacent dwelling unit.". The CDC defines Townhouse Project as, "One or more townhouse structures constructed, or proposed to be constructed, together with the development site where the land has been divided, or is proposed to be divided, to reflect the townhouse property lines and any commonly owned property." The proposed division of the subject lots, which allows the development of middle housing, is permitted. The criteria are met.

- (2) A city or county shall approve a tentative plan for a middle housing land division if the application includes:
- (a) A proposal for development of middle housing in compliance with the Oregon residential specialty code and land use regulations applicable to the original lot or parcel allowed under ORS 197A.420.

ORS 197A.420 Local governments may regulate siting and design of middle housing required to be permitted under this section, provided that the regulations do not, individually or cumulatively, discourage the development of all middle housing types permitted in the area through unreasonable costs or delay. Local governments may regulate middle housing to comply with protective measures adopted pursuant to statewide land use planning goals.

Staff Finding 2: The applicant proposes the construction of a Townhouse Project, which qualifies as a middle housing type (see Staff Finding 1). The applicant did not submit building plans for the

Townhouse Project with this application. The applicant shall submit building plans and obtain approval of compliance with the Oregon Residential Specialty Code from West Linn Building staff prior to final plat approval by the City per Condition of Approval 2. Subject to the Conditions of Approval, the criteria are met.

Staff Finding 3: The applicant proposes the construction of a Townhouse Project, which qualifies as a middle housing type (see Staff Finding 1). The City regulates siting and design of middle housing, including minimum property line setbacks, sidewall transitions, maximum floor-arearatio (FAR), maximum lot coverage, and maximum building height. The siting and design regulations are reviewed by West Linn Planning staff during building permit review. Minimum property line setbacks and maximum lot coverage will be applied and calculated based on the subject property boundary and total area. Sidewall transitions and maximum building height will be reviewed based on building plans. The applicant did not submit building plans for the Townhouse Project with this application. The applicant shall submit building plans and obtain approval of compliance with siting and design standards from West Linn Planning staff prior to final plat approval by the City per Condition of Approval 3. Subject to the Conditions of Approval, the criteria are met.

Staff Finding 4: The City has adopted protective measures pursuant to statewide land use planning goals for the Willamette River Greenway (Goals 5 and 15), Water Resource Areas (Goals 5, 6, and 7), and Floodplain Management Areas (Goal 7). The City regulates the protective measures through CDC Chapters 27, 28, and 32. The subject property is not located within the Willamette River Greenway, a Water Resource Area, nor a Floodplain Management Area. The criteria are met.

(b) Separate utilities for each dwelling unit;

Staff Finding 5: The applicant proposes the construction of a Townhouse Project with separate utility connections for each dwelling unit. Utilities shall be installed in compliance with West Linn Municipal Code requirements per Condition of Approval 4. Subject to the Conditions of Approval, the criteria are met.

- (c) Proposed easements necessary for each dwelling unit on the plan for:
- (A) Locating, accessing, replacing and servicing all utilities;

Staff Finding 6: The applicant proposes a 15-foot public utility easement leading from the rear of the subject properties across the property at 21745 Willamette Drive extending to Willamette Drive (Highway 43) per Condition of Approval 5.

The City franchise agreements require an eight-foot public utility easement along the frontage of the subject properties on Broadway Street. The applicant shall show the utility easement on the face of the final plat prior to final plat approval by the City per Condition of Approval 6. Subject to the Conditions of Approval. The criteria are met.

The applicant proposes a 10-foot wide Private Stormwater Easement at the rear of the subject properties as shown in Exhibit PD-1.

#### The criteria are met.

(B) Pedestrian access from each dwelling unit to a private or public road;

Staff Finding 7: The applicant proposes the construction of a Townhouse Project on the subject property, including the division of the parcel as allowed by SB458. All dwellings will have pedestrian access to Broadway Street, a public street, via dedicated driveways for each lot. The criteria are met.

(C) Any common use areas or shared building elements;

Staff Finding 8: The applicant does not propose any common use areas or shared building elements; no easements are required. The criteria are met.

(D) Any dedicated driveways or parking; and

Staff Finding 9: The applicant proposes the construction of a Townhouse Project on the subject property, including the division of the parcel as allowed by SB458. The proposal does not include any parking areas needing an easement. Access to all parcels will come directly from Broadway Street via dedicated driveways for each parcel. The criteria are met.

(E) Any dedicated common area;

Staff Finding 10: The applicant does not propose any dedicated common use area; therefore no easements are required. The criteria are met.

(d) Exactly one dwelling unit on each resulting lot or parcel, except for lots, parcels or tracts used as common areas; and

Staff Finding 11: The applicant proposes the construction of a Townhouse Project as permitted by West Linn Community Development Code (CDC) Chapter 13.030.1(a). CDC Chapter 2 defines a townhouse as "A dwelling unit that is part of a row of two or more attached dwelling units, where each unit is located on an individual lot or parcel and shares at least one common wall with an adjacent dwelling unit.". The CDC defines Townhouse Project as, "One or more townhouse structures constructed, or proposed to be constructed, together with the development site where the land has been divided, or is proposed to be divided, to reflect the townhouse property lines and any commonly owned property." The middle housing land division will result in one dwelling unit (townhouse) on each resulting lot. No common areas are proposed. The criteria are met.

(e) Evidence demonstrating how buildings or structures on a resulting lot or parcel will comply with applicable building codes provisions relating to new property lines and, notwithstanding the creation of new lots or parcels, how structures or buildings located on the newly created lots or parcels will comply with the Oregon residential specialty code.

Staff Finding 12: The applicant proposes the construction of a Townhouse Project, which qualifies as a middle housing type. The applicant did not submit building plans for the Townhouse Project

with this application. The applicant shall submit building plans and obtain approval of compliance with the Oregon Residential Specialty Code, including provisions related to new property lines, from West Linn Building staff prior to final plat approval by the City per Condition of Approval 2. Subject to the Conditions of Approval, the criteria are met.

- (3) A city or county may add conditions to the approval of a tentative plan for a middle housing land division to:
- (a) Prohibit the further division of the resulting lots or parcels.

Staff Finding 13: The applicant proposes the construction of a Townhouse Project on the subject property, including the division of the lot as allowed by SB458. The applicant shall include on the face of the plat a notation prohibiting the further division of the resulting parcels under the provisions of SB458 per Condition of Approval 7. Subject to the Conditions of Approval, the criteria are met.

(b) Require that a notation appear on the final plat indicating that the approval was given under this section.

Staff Finding 14: The applicant proposes the construction of a Townhouse Project on the subject property, including the division of the lot as allowed by SB458. The applicant shall include on the face of the plat a notation indicating the approval was given under the provisions of SB458 per Condition of Approval 7. Subject to the Conditions of Approval, the criteria are met.

- (4) In reviewing an application for a middle housing land division, a city or county:
- (a) Shall apply the procedures under ORS 197.360 to 197.380.

Staff Finding 15: Please see Staff Findings 24 to 51. The criteria are met.

(b) May require street frontage improvements where a resulting lot or parcel abuts the street consistent with land use regulations implementing ORS 197A.420

Staff Finding 16: The subject property has approximately 150 feet of frontage along Broadway Street, which is classified as a Local Street. Frontage improvements have been completed per the TVF&R approved plan found in Exhibit PD-1. The City may partner with the applicant to fund additional improvements as part of the project. Subject to the Conditions of Approval, the criteria are met.

(c) May not subject an application to approval criteria except as provided in this section, including that a lot or parcel require driveways, vehicle access, parking or minimum or maximum street frontage.

Staff Finding 17: The City has not applied any approval criteria except as provided in this section. The applicant has proposed utilizing a driveway for each of the proposed townhomes. The criteria are met.

(d) May not subject the application to procedures, ordinances or regulations adopted under ORS 92.044 or 92.046 that are inconsistent with this section or ORS 197.360 to 197.380.

Staff Finding 18: The City has not applied any approval criteria that are inconsistent with this section or ORS 197.360 to 197.380. The criteria are met.

(e) May allow the submission of an application for a middle housing land division at the same time as the submission of an application for building permits for the middle housing.

Staff Finding 19: The applicant shall submit building plans and obtain approval of compliance with the Oregon Residential Specialty Code, including provisions related to new property lines, from West Linn Building staff prior to final plat approval by the City per Conditions of Approval 2 and 3. Subject to the Conditions of Approval, the criteria are met.

(f) May require the dedication of right of way if the original parcel did not previously provide a dedication.

Staff Finding 20: The subject property is adjacent to Broadway Street, a public right-of-way (ROW). The existing Broadway Street ROW measures approximately 60 feet in width. The proposed project does not require a right-of-way dedication. The criteria do not apply.

(5) The type of middle housing developed on the original parcel is not altered by a middle housing land division.

Staff Finding 21: The applicant proposes the construction of a Townhouse Project on the subject property, including the division of the lot as allowed by SB458. The type of middle housing, Townhouse Project, will not be altered by the land division. The criteria are met.

(6) Notwithstanding ORS 197A.425., a city or county is not required to allow an accessory dwelling unit on a lot or parcel resulting from a middle housing land division.

Staff Finding 22: The applicant does not propose an accessory dwelling unit on any parcel resulting from the land division. The criteria are met.

(7) The tentative approval of a middle housing land division is void if and only if a final subdivision or partition plat is not approved within three years of the tentative approval. Nothing in this section or ORS 197.360 to 197.380 prohibits a city or county from requiring a final plat before issuing building permits.

Staff Finding 23: The approval of the tentative plat (ELD-24-06) shall be void if the applicant does not record the final partition plat within three years of approval per Condition of Approval 8. Subject to the Conditions of Approval, the criteria are met.

197.360 "Expedited land division" defined; applicability.

(1) As used in this section:

(a) "Expedited land division" means a division of land under ORS 92.010 to 92.192, 92.205 to 92.245 or 92.830 to 92.845 by a local government that:

Staff Finding 24: The applicant proposes a middle housing development (see Staff Finding 1), which is eligible for an expedited land division under ORS 92.031, Middle Housing Land Division. The criteria are met.

(A) Includes only land that is zoned for residential uses and is within an urban growth boundary.
(B) Is solely for the purposes of residential use, including recreational or open space uses accessory to residential use.

Staff Finding 25: The subject property is zoned Residential, R-5 and within the Portland Metropolitan Area Urban Growth Boundary. The applicant proposes development of a Townhouse Project, which is a residential use. No open space or recreational uses are proposed. The criteria are met.

- (C) Does not provide for dwellings or accessory buildings to be located on land that is specifically mapped and designated in the comprehensive plan and land use regulations for full or partial protection of natural features under the statewide planning goals that protect:
- (i) Open spaces, scenic and historic areas and natural resources;
- (ii) The Willamette River Greenway;

Staff Finding 26: The subject property is not located within the Willamette River Greenway. No development is proposed in a Water Resource Area. The criteria are met.

- (iii) Estuarine resources;
- (iv) Coastal shorelands; and
- (v) Beaches and dunes.

Staff Finding 27: The subject property does not contain any estuarine resources, coastal shorelands, or beaches and dunes. The criteria are met.

(D) Satisfies minimum street or other right-of-way connectivity standards established by acknowledged land use regulations or, if such standards are not contained in the applicable regulations, as required by statewide planning goals or rules.

Staff Finding 28: Existing development patterns meet street connectivity standards in the vicinity of the subject property. The 2016 West Linn Transportation System Plan (TSP) does not include any street connectivity projects adjacent to the subject property. The pedestrian plan within the TSP does not show any pedestrian projects adjacent to the subject property. The applicant has completed frontage improvements. The criteria are met.

- (E) Will result in development that either:
- (i) Creates enough lots or parcels to allow building residential units at 80 percent or more of the maximum net density permitted by the zoning designation of the site; or

(ii) Will be sold or rented to households with incomes below 120 percent of the median family income for the county in which the project is built.

Staff Finding 29: The subject property is approximately 16,200 sq. ft. and zoned Residential, R-5, which requires a minimum lot size of 5000 sq. ft. Maximum density under a traditional CDC Chapter 85 land division would allow three dwelling units. The applicant proposes a Townhouse Project middle housing development (see Staff Finding 1), which is eligible for an expedited land division under ORS 92.031, Middle Housing Land Division. The middle housing development will result in seven dwelling units, which is 230 percent of the maximum density currently permitted on the subject property. The criteria are met.

(b) "Expedited land division" includes land divisions that create three or fewer parcels under ORS 92.010 to 92.192 and meet the criteria set forth in paragraph (a) of this subsection.

Staff Finding 30: The applicant proposes an expedited land division that creates seven lots as permitted under ORS 92.031. The proposal meets the criteria set forth in paragraph (a), see Staff Findings 24 to 29. The criteria are met.

(2) An expedited land division as described in this section is not a land use decision or a limited land use decision under ORS 197.015 or a permit under ORS 215.402 or 227.160.

Staff Finding 31: The City and applicant acknowledge an expedited land division is not a land use decision or limited land use decision under ORS 197.015 or a permit under ORS 215.402 or ORS 227.160. The criteria are met.

- (3) The provisions of ORS 197.360 to 197.380 apply to all elements of a local government comprehensive plan and land use regulations applicable to a land division, including any planned unit development standards and any procedures designed to regulate:
- (a) The physical characteristics of permitted uses;
- (b) The dimensions of the lots or parcels to be created; or
- (c) Transportation, sewer, water, drainage and other facilities or services necessary for the proposed development, including but not limited to right-of-way standards, facility dimensions and on-site and off-site improvements.

Staff Finding 32: The applicant proposes middle housing on the subject property through the construction of a Townhouse Project, including the division of the lot as allowed by SB458. The City has applied the approval criteria of ORS 92.031, including the physical characteristics of the development (see Staff Finding 3), the dimensions of the lots to be created (see Staff Findings 6, 7, 9, and 29), and required facilities and services necessary for the proposed development (see Staff Findings 5, 6, 7, 9, 16, and 20). The criteria are met.

(4) An application for an expedited land division submitted to a local government shall describe the manner in which the proposed division complies with each of the provisions of subsection (1) of this section.

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Staff Finding 33: See Staff Findings 24 to 32. The criteria are met.

### 197.365 Application; notice to neighbors; comment period.

Unless the applicant requests to use the procedure set forth in a comprehensive plan and land use regulations, a local government shall use the following procedure for an expedited land division, as described in ORS 197.360, or a middle housing land division under ORS 92.031:

(1)(a) If the application for a land division is incomplete, the local government shall notify the applicant of exactly what information is missing within 21 days of receipt of the application and allow the applicant to submit the missing information. For purposes of computation of time under this section, the application shall be deemed complete on the date the applicant submits the requested information or refuses in writing to submit it.

Staff Finding 34: The applicant did not request to use the procedures outlined in the West Linn Community Development Code, therefore the City processed the application as an expedited land division. The application was submitted on December 31, 2024 and deemed complete by the City on January 21, 2025. The criteria are met.

(b) If the application was complete when first submitted or the applicant submits the requested additional information within 180 days of the date the application was first submitted, approval or denial of the application shall be based upon the standards and criteria that were applicable at the time the application was first submitted.

Staff Finding 35: The application was submitted on December 31. 2024 and deemed complete by the City on January 21, 2025. Approval of the application is based on the standards and criteria found in ORS 92.031 that were applicable on December 31, 2024. The criteria are met.

(2) The local government shall provide written notice of the receipt of the completed application for a land division to any state agency, local government or special district responsible for providing public facilities or services to the development and to owners of property within 100 feet of the entire contiguous site for which the application is made. The notification list shall be compiled from the most recent property tax assessment roll. For purposes of appeal to the referee under ORS 197.375, this requirement shall be deemed met when the local government can provide an affidavit or other certification that such notice was given. Notice shall also be provided to any neighborhood or community planning organization recognized by the governing body and whose boundaries include the site.

Staff Finding 36: The City provided written notice of the receipt of a completed application to all state agencies, local governments, and special districts responsible for providing public facilities or services on January 30, 2025. The City provided written notice to property owners within 100 feet of the entire contiguous site, compiled from the most recent property owner information available, on January 30, 2025. The City provided written notice to the Bolton Neighborhood Association on January 30, 2025. The affidavit of public notice is found in Exhibit PD-4 The criteria are met.

- (3) The notice required under subsection (2) of this section shall:
- (a) State:

- (A) The deadline for submitting written comments;
- (B) That issues that may provide the basis for an appeal to the referee must be raised in writing prior to the expiration of the comment period; and
- (C) That issues must be raised with sufficient specificity to enable the local government to respond to the issue.
- (b) Set forth, by commonly used citation, the applicable criteria for the decision.
- (c) Set forth the street address or other easily understood geographical reference to the subject property.
- (d) State the place, date and time that comments are due.
- (e) State a time and place where copies of all evidence submitted by the applicant will be available for review.
- (f) Include the name and telephone number of a local government contact person.
- (g) Briefly summarize the local decision-making process for the land division decision being made.

Staff Finding 37: The City provided written notice in compliance with subsection (3). A copy of the notice is found in Exhibit PD-4. The criteria are met.

- (4) After notice under subsections (2) and (3) of this section, the local government shall:
- (a) Provide a 14-day period for submission of written comments prior to the decision.

Staff Finding 38: The City provided written notice under subsections (2) and (3) on January 30, 2025, with a deadline for submission of written comments on February 13, 2025. This provided a 14-day comment period. A copy of the notice is found in Exhibit PD-4. The criteria are met.

(b) Make a decision to approve or deny the application within 63 days of receiving a completed application, based on whether it satisfies the substantive requirements of the applicable land use regulations. An approval may include conditions to ensure that the application meets the applicable land use regulations. For applications subject to this section, the local government:

Staff Finding 39: The application was submitted on December 31, 2024 and deemed complete by the City on January 21, 2025. The City approved the application with conditions on March 19, 2025, the 56th day after deeming the application complete. The criteria are met.

- (A) Shall not hold a hearing on the application; and
- (B) Shall issue a written determination of compliance or noncompliance with applicable land use regulations that includes a summary statement explaining the determination. The summary statement may be in any form reasonably intended to communicate the local government's basis for the determination.

Staff Finding 40: The City did not hold a hearing on the application. The City issued the Planning Manager decision with a summary statement explaining the determination. The criteria are met.

- (c) Provide notice of the decision to the applicant and to those who received notice under subsection (2) of this section within 63 days of the date of a completed application. The notice of decision shall include:
- (A) The summary statement described in paragraph (b)(B) of this subsection; and

(B) An explanation of appeal rights under ORS 197.375.

Staff Finding 41: The City provided notice of the decision to the applicant and those who received notice under subsection (2) on March 19, 2025, the 56th day after deeming the application complete. The notice of decision included the summary statement and an explanation of appeal rights. The criteria are met.

## 197.370 Failure of local government to timely act on application.

- (1) Except as provided in subsection (2) of this section, if the local government does not make a decision on an expedited land division or a middle housing land division, as defined in ORS 92.031, within 63 days after the application is deemed complete, the applicant may apply in the circuit court for the county in which the application was filed for a writ of mandamus to compel the local government to issue the approval. The writ shall be issued unless the local government shows that the approval would violate a substantive provision of the applicable land use regulations or the requirements of ORS 92.031 or 197.360. A decision of the circuit court under this section may be appealed only to the Court of Appeals.
- (2) After seven days' notice to the applicant, the governing body of the local government may, at a regularly scheduled public meeting, take action to extend the 63-day time period to a date certain for one or more applications for an expedited land division or a middle housing land division prior to the expiration of the 63-day period, based on a determination that an unexpected or extraordinary increase in applications makes action within 63 days impracticable. In no case shall an extension be to a date more than 120 days after the application was deemed complete. Upon approval of an extension, the provisions of ORS 92.031 and 197.360 to 197.380, including the mandamus remedy provided by subsection (1) of this section, shall remain applicable to the land division, except that the extended period shall be substituted for the 63-day period wherever applicable.
- (3) The decision to approve or not approve an extension under subsection (2) of this section is not a land use decision or limited land use decision.

# Staff Finding 42: The City acted in a timely manner and made the decision within the 63 day time period. The criteria are met.

## 197.375 Appeal of local government to referee; Court of Appeals.

- (1) An appeal of a decision made under ORS 197.360 and 197.365 or under ORS 92.031 and 197.365 shall be made as follows:
- (a) An appeal must be filed with the local government within 14 days of mailing of the notice of the decision under ORS 197.365 (4) and shall be accompanied by a \$300 deposit for costs.
- (b) A decision may be appealed by:
- (A) The applicant; or
- (B) Any person or organization who files written comments in the time period established under ORS 197.365.
- (c) An appeal shall be based solely on allegations:
- (A) Of violation of the substantive provisions of the applicable land use regulations;
- (B) Of unconstitutionality of the decision;
- (C) That the application is not eligible for review under ORS 92.031 or 197.360 to 197.380 and should be reviewed as a land use decision or limited land use decision; or

(D) That the parties' substantive rights have been substantially prejudiced by an error in procedure by the local government.

Staff Finding 43: The applicant acknowledges and understands the appeal rights and process. If appealed, the City will follow the expedited land division appeal process and criteria. The criteria are applicable upon appeal.

(2) The local government shall appoint a referee to decide the appeal of a decision made under this section. The referee may not be an employee or official of the local government. However, a local government that has designated a hearings officer under ORS 215.406 or 227.165 may designate the hearings officer as the referee for appeals of a decision made under ORS 197.360 and 197.365.

Staff Finding 44: The applicant acknowledges and understands the appeal procedures. If appealed, the City will follow the expedited land division appeal process and criteria, including the appointment of a referee to decide the appeal.

(3) Within seven days of being appointed to decide the appeal, the referee shall notify the applicant, the local government, the appellant if other than the applicant, any person or organization entitled to notice under ORS 197.365 (2) that provided written comments to the local government and all providers of public facilities and services entitled to notice under ORS 197.365 (2) and advise them of the manner in which they may participate in the appeal. A person or organization that provided written comments to the local government but did not file an appeal under subsection (1) of this section may participate only with respect to the issues raised in the written comments submitted by that person or organization. The referee may use any procedure for decision-making consistent with the interests of the parties to ensure a fair opportunity to present information and argument. The referee shall provide the local government an opportunity to explain its decision, but is not limited to reviewing the local government decision and may consider information not presented to the local government.

Staff Finding 45: If appealed, the referee appointed by the City will follow the expedited land division appeal process and criteria.

- (4)(a) The referee shall apply the substantive requirements of the applicable land use regulations and ORS 92.031 or 197.360. If the referee determines that the application does not qualify as an expedited land division or a middle housing land division, as defined in ORS 92.031, the referee shall remand the application for consideration as a land use decision or limited land use decision. In all other cases, the referee shall seek to identify means by which the application can satisfy the applicable requirements.
- (b) For an expedited land use division, the referee may not reduce the density of the land division application.
- (c) The referee shall make a written decision approving or denying the application or approving it with conditions designed to ensure that the application satisfies the land use regulations, within 42 days of the filing of an appeal. The referee may not remand the application to the local government for any reason other than as set forth in this subsection.

# Staff Finding 46: If appealed, the referee appointed by the City will follow the expedited land division appeal process and criteria.

(5) Unless the governing body of the local government finds exigent circumstances, a referee who fails to issue a written decision within 42 days of the filing of an appeal shall receive no compensation for service as referee in the appeal.

# Staff Finding 47: If appealed, the referee appointed by the City will follow the expedited land division appeal process and criteria.

(6) Notwithstanding any other provision of law, the referee shall order the local government to refund the deposit for costs to an appellant who materially improves his or her position from the decision of the local government. The referee shall assess the cost of the appeal in excess of the deposit for costs, up to a maximum of \$500, including the deposit paid under subsection (1) of this section, against an appellant who does not materially improve his or her position from the decision of the local government. The local government shall pay the portion of the costs of the appeal not assessed against the appellant. The costs of the appeal include the compensation paid the referee and costs incurred by the local government, but not the costs of other parties.

# Staff Finding 48: If appealed, the referee appointed by the City will follow the expedited land division appeal process and criteria.

(7) The Land Use Board of Appeals does not have jurisdiction to consider any decisions, aspects of decisions or actions made under ORS 92.031 or 197.360 to 197.380.

# Staff Finding 49: The applicant acknowledges and understands the Land Use Board of Appeals does not have jurisdiction over this decision.

- (8) Any party to a proceeding before a referee under this section may seek judicial review of the referee's decision in the manner provided for review of final orders of the Land Use Board of Appeals under ORS 197.850 and 197.855. The Court of Appeals shall review decisions of the referee in the same manner as provided for review of final orders of the Land Use Board of Appeals in those statutes. However, notwithstanding ORS 197.850 (9) or any other provision of law, the court shall reverse or remand the decision only if the court finds:
- (a) That the decision does not concern an expedited land division as described in ORS 197.360 or middle housing land division as defined in ORS 92.031 and the appellant raised this issue in proceedings before the referee;
- (b) That there is a basis to vacate the decision as described in ORS 36.705 (1)(a) to (d), or a basis for modification or correction of an award as described in ORS 36.710; or
- (c) That the decision is unconstitutional.

# Staff Finding 50: The applicant acknowledges and understands the right to seek judicial review of the referee's decision.

197.380 Application fees.

Each city and county shall establish application fees for an expedited land division and a middle housing land division, as defined in ORS 92.031. The fees must be set at a level calculated to recover the estimated full cost of processing an application, including the cost of appeals to the referee under ORS 197.375, based on the estimated average cost of such applications. Within one year of establishing a fee under this section, the city or county shall review and revise the fee, if necessary, to reflect actual experience in processing applications under ORS 92.031 and 197.360 to 197.380.

Staff Finding 51: The City has an adopted fee schedule, including for expedited land divisions. The applicant paid the fee at the time of submittal. The criteria are met.

# **EXHIBIT PD-1 APPLICANT SUBMITTAL**



# **DEVELOPMENT REVIEW APPLICATION**

	For Office Use Only		
STAFF CONTACT	PROJECT NO(S). ELD-24-06		Pre-application No. <b>n/a</b>
NON-REFUNDABLE FEE(s) \$4,900	REFUNDABLE DEPOSIT(S)	TOTAL \$4,9	900
Type of Review (Please check all that a	apply): X MIDDLE HOUSING	LAND DVISION	
Annexation (ANX) Appeal (AP) CDC Amendment (CDC) Code Interpretation (MISC) Conditional Use (CUP) Design Review (DR Tree Easement Vacation (MISC) Expediated Land Division (ELD) Extension of Approval (EXT)  Pre-Application, Home Occupation, Side	Final Plat (FP) Related File # Flood Management Area (FMA) Historic Review (HDR) Lot Line Adjustment (LLA) Minor Partition (MIP) Modification of Approval (MOD) Non-Conforming Lots, Uses & Structures Planned Unit Development (PUD) Street Vacation walk Use, Addressing, and Sign applications re-	Water Resource Al Willamette & Tua Zone Change (ZC)	(MISC) EXT) ation (VAC) rea Protection/Single Lot (WAI rea Protection/Wetland (WAI llatin River Greenway (WRG)
Site Location/Address: 5743-5773 SV		Assessor's Map No.: 22	
Oregon 97068		Tax Lot(s): 1800, 1900, & 1901	
		Total Land Area: .48 A	cres
Brief Description of Proposal: Application for Middle Housing L townhomes.	and Division to create seven (7) pa	arcels intended for th	ne construction of
Applicant Name*: Dan Williams  Address: 2000 SW 1st Ave,  City State Zip: Portland, OR 9720		Phone: 503-819 Email: dan@fas	-7754 sterpermits.com
Owner Name (required): DREAMBUILDER CUSTOM HOMES INC Address: City State Zip: WEST LINN, OR 97068		Phone: 503-880- Email: tim@dre me.com	-7132 ambuildercustomho
Consultant Name: Address: City State Zip:		Phone: Email:	

- 1. Application fees are non-refundable (excluding deposit). Applications with deposits will be billed monthly for time and materials above the initial deposit. \*The applicant is financially responsible for all permit costs.
- 2.T he owner/applicant or their representative should attend all public hearings.
- 3. A decision may be reversed on appeal. The decision will become effective once the appeal period has expired.
- 4.S ubmit this form, application narrative, and all supporting documents as a single PDF through the Submit a Land Use Application web page: https://westlinnoregon.gov/planning/submit-land-use-application

The undersigned property owner authorizes the application and grants city staff the **right of entry** onto the property to review the application. Applications with deposits will be billed monthly for time and materials incurred above the initial deposit. The applicant agrees to pay additional billable charges.

Applicant's FLD=24-06

Date 12/20/24

<sup>2</sup>Owner's signature (required) lanning Manager Decision 12/20/24

# SUBMITTAL PACKAGE CONTENTS MIDDLE HOUSING LAND DIVISION

# 5743-5773 SW Broadway Street

- 0\_Development Review Application
- 1\_Application Narrative\_MHLD
- 2\_FD Permit Application 2024-0180 Middle Housing 5743-5773 Broadway St
- 3\_FS-1 2024-0180 Middle Housing 5743-5773 Broadway St
- 4\_Geotechnical Report
- 5\_Stormwater Report
- 6\_SITE PLAN-R2
- 7\_Broadway Street Civil3 Utility (1) (19) (3)
- 8\_Broadway Street Civil3 Grad (1) (4) (2)
- 9 EROSION PLAN

# **0\_Development Review Application**



# **DEVELOPMENT REVIEW APPLICATION**

	For Office Use Only	
STAFF CONTACT	PROJECT NO(s).	PRE-APPLICATION NO.
Non-Refundable Fee(s)	REFUNDABLE DEPOSIT(S)	TOTAL
Type of Review (Please check all that apply	MIDDLE HOUSING	LAND DVISION
Annexation (ANX) Appeal (AP) CDC Amendment (CDC) Code Interpretation (MISC) Conditional Use (CUP) Design Review (DR Tree Easement Vacation (MISC) Expediated Land Division (ELD) Extension of Approval (EXT)  Pre-Application, Home Occupation, Sidewalk	Final Plat (FP) Related File # Flood Management Area (FMA) Historic Review (HDR) Lot Line Adjustment (LLA) Minor Partition (MIP) Modification of Approval (MOD) Non-Conforming Lots, Uses & Structures Planned Unit Development (PUD) Street Vacation	Subdivision (SUB) Temporary Uses (MISC) Time Extension (EXT) Right of Way Vacation (VAC) Variance (VAR) Water Resource Area Protection/Single Lot (WAF) Water Resource Area Protection/Wetland (WAF) Willamette & Tualatin River Greenway (WRG) Zone Change (ZC) equire different forms, available on the website.
Site Location/Address: 5743-5773 SW B		Assessor's Map No.: 22E30CB
Oregon 97068		Tax Lot(s): 1800, 1900, & 1901
		Total Land Area: .48 Acres
Brief Description of Proposal: Application for Middle Housing Land townhomes.	d Division to create seven (7) pa	arcels intended for the construction of
Applicant Name*: Dan Williams  Address: 2000 SW 1st Ave, Su City State Zip: Portland, OR 97201	iite 420	Phone: 503-819-7754 Email: dan@fasterpermits.com
Owner Name (required): DREAMBUILDER CUSTOM HOMES INC Address: City State Zip: WEST LINN, OR 97068		Phone: 503-880-7132 Email: tim@dreambuildercustomho me.com
Consultant Name: Address: City State Zip:		Phone: Email:

- 1. Application fees are non-refundable (excluding deposit). Applications with deposits will be billed monthly for time and materials above the initial deposit. \*The applicant is financially responsible for all permit costs.
- 2.T he owner/applicant or their representative should attend all public hearings.
- 3. A decision may be reversed on appeal. The decision will become effective once the appeal period has expired.
- 4.S ubmit this form, application narrative, and all supporting documents as a single PDF through the Submit a Land Use Application web page: https://westlinnoregon.gov/planning/submit-land-use-application

The undersigned property owner authorizes the application and grants city staff the **right of entry** onto the property to review the application. Applications with deposits will be billed monthly for time and materials incurred above the initial deposit. The applicant agrees to pay additional billable charges.

Applicant's ELD324706

Date 12/20/24

<sup>2</sup>Owner's signature (*required*) lanning Manager Decisione 12/20/24

# **DEVELOPMENT REVIEW CHECKLIST**

The application form and supporting materials should be submitted electronically through https://westlinnoregon.gov/planning/submit-land-use-application as one (1) .pdf file. To create a single PDF file, go to Adobe Acrobat Free Merge PDF online tool. Other free Acrobat PDF tools like converting a file to PDF or reducing the file size are available on the Adobe website.

Supporting reports may be uploaded separately through this web form if the file size is too large. The separate submissions should be numbered (i.e., Submittal 1 of 2) and noted under transmittal contents. All plan set files MUST be flattened and reduced.

Submission requirement to upload through the web form:

- .pdf format.
- Individual file size no larger than 128 MB.
- Do not attach 'zip' files. Our server will reject all 'zip' files.
- Reduce and flatten all plan sets BEFORE uploading plan sets. The raster/vector settings should be optimized for printing.

A co

omp	plete application must include the following:			
~	Development Review Application. Original signatures from all owners must be on the application form.			
	NOT use DocuSign.			
V	A project narrative outlining the project's scope in detail, including the changes to the site, structure,			
	landscaping, parking, land use, and lot consolidations.			
V	Complete written responses to identified approval criteria in the Community Development Code (CDC).			
V	A Service Provider Letter from Tualatin Valley Fire and Rescue - <a href="https://www.tvfr.com/399/Service-">https://www.tvfr.com/399/Service-</a>			
	Provider-Permit Please contact Jason Arn at jason.arn@tvfr.com with any questions about TVF&R			
	requirements.			
~	Vicinity Map showing the site within the City.			
~	Site Plan drawn to scale showing the:			
	<ul><li>Taxlot and address of the project,</li></ul>			
	<ul><li>Area of the site (acres or square feet),</li></ul>			
	<ul><li>Zoning and Neighborhood Association,</li></ul>			

- Location of existing and proposed on-site driveways and off-street parking,
- Configuration and dimensions of all existing and proposed lots and tracts, including a proposed park, open space, and or drainage tracts or easements,
- Location and width of existing and proposed easement for access, drainage, etc., and
- Location of existing and proposed trees and other proposed landscaping.

Location and dimensions of existing and proposed buildings, structures,

- Location of existing public and private utilities, easements, and 100-year floodplain,
- Sensitive areas, including the location of on-site wetlands and riparian areas,
- Location of existing off-site driveways across the street,
- If applicable, internal circulation system, name, and location of existing and proposed roadways and roadway easements (private and public), and
- Location and width of existing and proposed on-site pedestrian and bicycle facilities on-site.

V	If applicable, a Utility Plan and Landscape plan, drawn to scale.
<b>V</b>	If applicable, Building elevation drawings with exterior elevations for every side of each structure, height
	including building materials and floor levels, drawn to scale.
	If required, documentation of any required meeting with the respective City-recognized neighborhood
	association per CDC <u>99.038</u> .
	Any other materials identified by city staff at the pre-application meeting.

For applications that the Planning Commission decides, the applicant or applicant's representative should present their proposal to the PC at the public hearing.

# 1\_Application Narrative\_MHLD

# **Broadway Townhomes**

# **Prepared for:**

Tim Walker
DreamBuilder Custom Homes Inc.

# Prepared by:



1500 Valley River Drive, Suite 100 Eugene, OR 97401 503.746.8812 emeriodesign.com

# **Project Summary**

Request:	Application for Middle Housing Land Division to create seven (7) parcels
	intended for the construction of townhomes.
Location and Map	5743-5773 SW Broadway Street, West Linn, Oregon 97068
Number:	Clackamas County Assessor's Map No. 2-2e-30CB, Tax Lots 1800, 1900, &
	1901
Applicant/Owner:	Tim Walker
	Dreambuilder Custom Homes Inc.
	16805 Gassner Lane
	Lake Oswego, Oregon 97035
	Phone: 503-880-7132
	Email: tim@dreambuildercustomhome.com
Engineer/Planner:	Emerio Design, LLC
	1500 Valley River Drive Suite 100
	Eugene, OR 97401
	503-746-8812
	Engineer: Dan Boultinghouse, PE Planner: Jennifer Arnold
	dboultinghouse@emeriodesign.com <u>jarnold@emeriodesign.com</u>

# Exhibits:

A – County Assessor's Map

B – Aerial Photograph

C – Zoning Map

## I. Project Description

Dreambuilder Custom Homes Inc, the applicant, is proposing a Middle Housing Land Division to create seven (7) lots for the construction of townhomes on three existing parcels identified as Clackamas County Assessor's Map No.\_2-2e-30CB, Tax Lots 1800, 1900, & 1901 (Exhibit A); they can also be located by their addresses, 5743-5773 SW Broadway Street. The base zone applied to these properties is Residential, R5.

The proposed development conforms to all applicable sections of the Oregon Revised Statutes (ORS) and the City of West Linn Community Development Code (CDC). This application provides findings of fact that demonstrate conformance with all applicable standards of the previously mentioned governing regulations. Applicable criteria of the ORS and CDC will appear in *italics* followed by the applicant's responses in **bold** font.

## II. Existing Conditions

The development site consists of three parcels each with an area of approximately 5,400 square feet, resulting in a total project area of about 16,200 square feet. All three parcels have frontage on Broadway Street, a local street. Sidewalk, curb, gutter, and driveway cuts have already been constructed to serve future development of these properties.

Elevations on the subject properties increase from 170 feet near the north property boundary to 202 feet above mean sea level near the southeast corner. West Linn Maps indicates slopes are in the 10 to 25 percent range and can exceed 25 percent in certain locations. The subject properties are undeveloped and contain no significant trees or vegetation. There are no significant natural features located within the boundaries of the subject properties.

For adjacent zones and land uses refer to Exhibit B for an aerial photograph and Exhibit C for a zoning map. All surrounding uses are detached, single-dwelling units zoned either R5 or R10.

## III. Middle Housing Land Division; Conditions of Approval (ORS 92.031)

- (1) As used in this section, "middle housing land division" means a partition or subdivision of a lot or parcel on which the development of middle housing is allowed under ORS 197A.420 (2) or (3).
- (2) A city or county shall approve a tentative plan for a middle housing land division if the application includes:
  - (a) A proposal for development of middle housing in compliance with the Oregon residential specialty code and land use regulations applicable to the original lot or parcel allowed under ORS 197A.420 (5);

Response: The applicant is proposing a middle housing land division to create seven (7) lots from three existing parent parcels to construct townhomes. The subject properties are zoned R5 and per CDC 13.030(3) townhomes are outright permitted use.

Compliance with the applicable Oregon Residential Specialty Code regulations will be demonstrated during the Building Permit review process. This element of the criterion will be addressed at a future date and time. As for the local land use regulations applicable to this project, ORS 197.758(5) states:

"Local governments may regulate siting and design of middle housing required to be permitted under this section, provided that the regulations do not, individually or cumulatively, discourage

the development of all middle housing types permitted in the area through unreasonable costs or delay. Local governments may regulate middle housing to comply with protective measures adopted pursuant to statewide land use planning goals."

The City of West Linn has the authority to regulate siting and design of middle housing units such as townhomes. These standards include minimum property line setbacks, sidewall transitions, maximum floor-area-ratio, lot coverage, and building height. These standards, however, are traditionally reviewed under the Building Permit review process. Consequently, this element of the criterion will also be addressed at a future date and time.

(b) Separate utilities for each dwelling unit;

Response: As illustrated by the attached utility plan, separate utilities will be provided for each of the proposed dwelling units. Therefore, this criterion is satisfied.

- (c) Proposed easements necessary for each dwelling unit on the plan for:
  - (A) Locating, accessing, replacing and servicing all utilities;

Response: The proposed land division includes the creation of a 10-foot-wide public utility easement along the frontage of Broadway Street. Additionally, a 10-foot-wide private storm easement will be created for the locating, accessing, and replacing of a private stormwater system serving the proposed townhomes. These easements will appear on the final plat. Therefore, this criterion is satisfied.

(B) Pedestrian access from each dwelling unit to a private or public road;

Response: The proposed land division will create seven parcels for the construction of townhomes. All proposed dwellings will have pedestrian access to SW Broadway Street, a public street, via dedicated driveways. Therefore, this criterion is satisfied.

(C) Any common use areas or shared building elements;

Response: The proposed land division will create lots for townhomes, which will have shared common walls. Maintenance easements will be shown on the final plat centered on the shared property lines with common walls. Therefore, this criterion will be satisfied in the future.

(D) Any dedicated driveways or parking; and

Response: Six of the seven townhomes will be accessed via shared driveways. Shared access easements will be shown over these driveways on the final plat. Therefore, this criterion will be satisfied in the future.

(E) Any dedicated common area;

Response: The proposed land division will not create dedicated common use areas. Therefore, no easements are required, and this criterion is met.

(d) Exactly one dwelling unit on each resulting lot or parcel, except for lots, parcels or tracts used as common areas; and

Response: The proposed land division will create seven lots for seven townhomes. No single parcel will contain more than one dwelling unit. This land division does not create common lots, parcels, or tracts. Therefore, this criterion is satisfied.

(e) Evidence demonstrating how buildings or structures on a resulting lot or parcel will comply with applicable building codes provisions relating to new property lines and, notwithstanding the creation of new lots or parcels, how structures or buildings located on the newly created lots or parcels will comply with the Oregon residential specialty code.

Response: Building setbacks are shown on the submitted site plan, which demonstrates compliance with the appropriate standards outlined the West Linn CDC. Compliance with the applicable Oregon Residential Specialty Code regulations will be demonstrated during the Building Permit review process. Therefore, this element of the criterion will be addressed at a future date and time.

- (3) A city or county may add conditions to the approval of a tentative plan for a middle housing land division to:
  - (a) Prohibit the further division of the resulting lots or parcels.
  - (b) Require that a notation appear on the final plat indicating that the approval was given under this section.

Response: The applicant acknowledges and understands that the above conditions of approval may be required with the approval of this application.

- (4) In reviewing an application for a middle housing land division, a city or county:
  - (a) Shall apply the procedures under ORS 197.360 to 197.380.
  - (b) May require street frontage improvements where a resulting lot or parcel abuts the street consistent with land use regulations implementing ORS 197A.420.
  - (c) May not subject an application to approval criteria except as provided in this section, including that a lot or parcel require driveways, vehicle access, parking or minimum or maximum street frontage.
  - (d) May not subject the application to procedures, ordinances or regulations adopted under ORS 92.044 or 92.046 that are inconsistent with this section or ORS 197.360 to 197.380.
  - (e) May allow the submission of an application for a middle housing land division at the same time as the submission of an application for building permits for the middle housing.
  - (f) May require the dedication of right of way if the original parcel did not previously provide a dedication.

Response: The applicant acknowledges and understands this application will be processed according to the procedures under ORS 197.360 to 197.380. Compliance with this portion of the criterion will occur through completion of the land use process.

The subject properties have approximately 150 feet of frontage on Broadway Street, a local street. No half-street improvements or right-of-way dedications will be required because the project's frontage has already been improved to local street standards. Therefore, the portions of this criterion related to street improvements have been satisfied.

(5) The type of middle housing developed on the original parcel is not altered by a middle housing land division.

Response: The subject properties are currently undeveloped. No housing will be altered by this application. Therefore, this criterion is met.

(6) Notwithstanding ORS 197A.425 (1), a city or county is not required to allow an accessory dwelling unit on a lot or parcel resulting from a middle housing land division.

Response: The applicant acknowledges and understands that the city is not required to allow accessory dwelling units now or in the future.

(7) The tentative approval of a middle housing land division is void if and only if a final subdivision or partition plat is not approved within three years of the tentative approval. Nothing in this section or ORS 197.360 to 197.380 prohibits a city or county from requiring a final plat before issuing building permits.

Response: The applicant acknowledges and understands that this application is void if the final plat is not approved within three years of the tentative approval.

## IV. Conclusion

This application narrative and accompanying plan set demonstrate that all applicable provisions of the Oregon Revised Statutes Chapter 92, Subdivisions and Partitions, and the City of West Linn Community Development Code are satisfied.

Exhibit A – Clackamas County Assessor Map

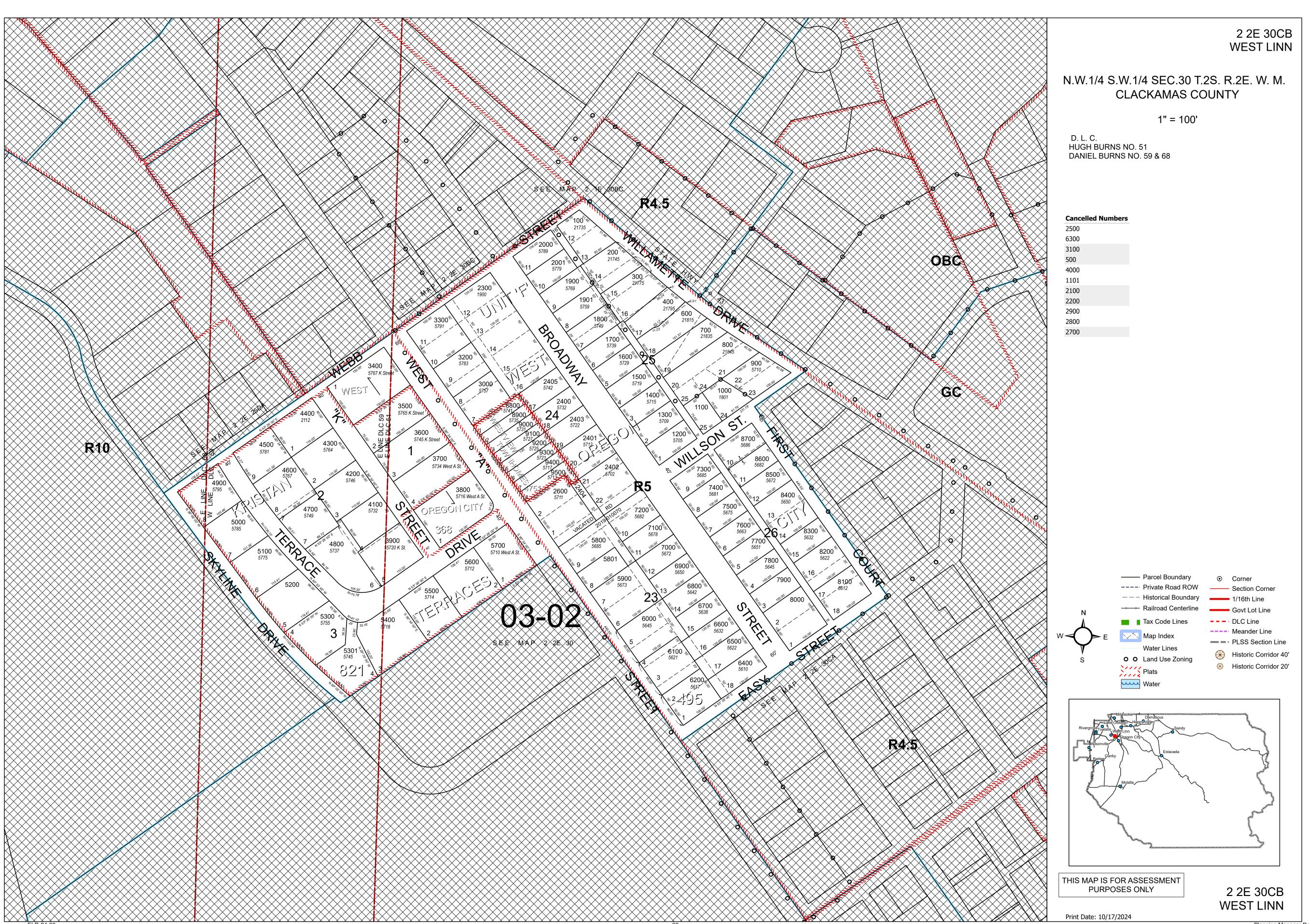


Exhibit B – Aerial Photograph





# Legend

Points of Interest



Fire Station

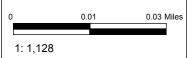


City Hall
Police Station



Public School

Named Parks and OS

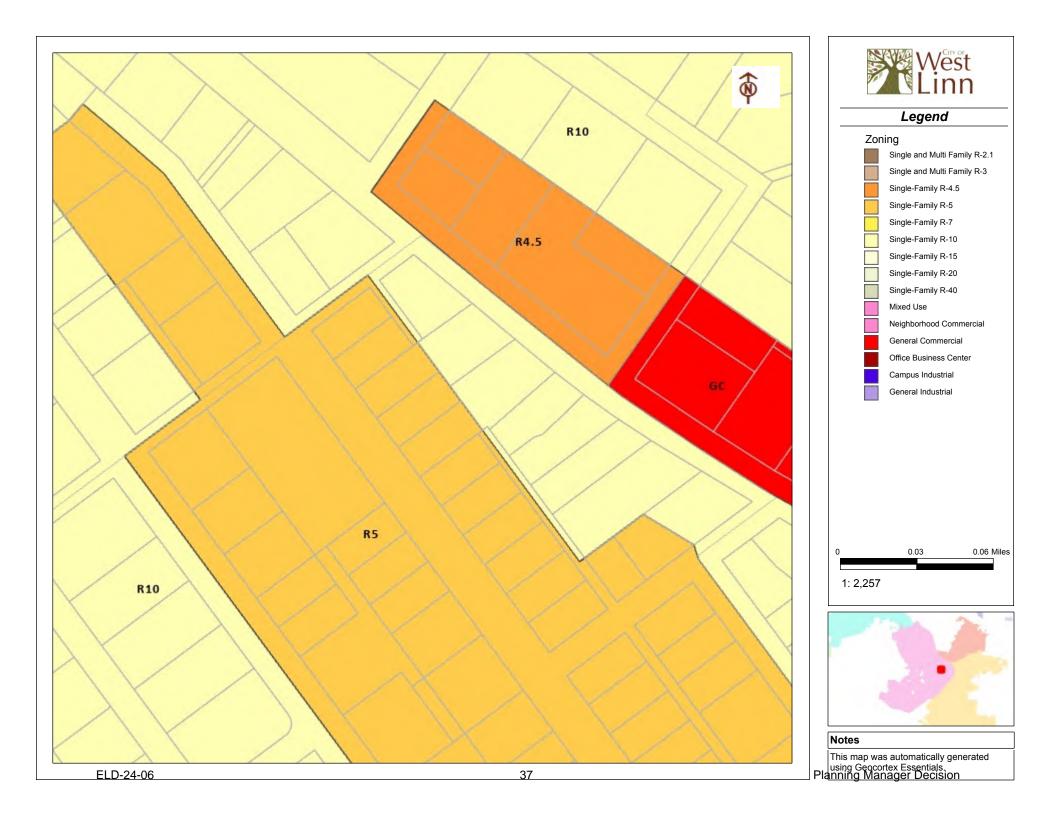




## Notes

This map was automatically generated using Geocortex Essentials.
Planning Manager Decision

Exhibit C – West Linn Zoning Map



# 2\_FD Permit Application 2024-0180 Middle Housing 5743-5773 Broadway St

# TVF R Tualatin Valley Fire & Rescue

## FIRE CODE / LAND USE / BUILDING REVIEW APPLICATION

North Operating Center

11945 SW 70<sup>th</sup> Avenue Tigard, OR 97223 Phone: 503-649-8577 South Operating Center 8445 SW Elligsen Rd Wilsonville, OR 97070 Phone: 503-649-8577

**REV 6-30-20** 

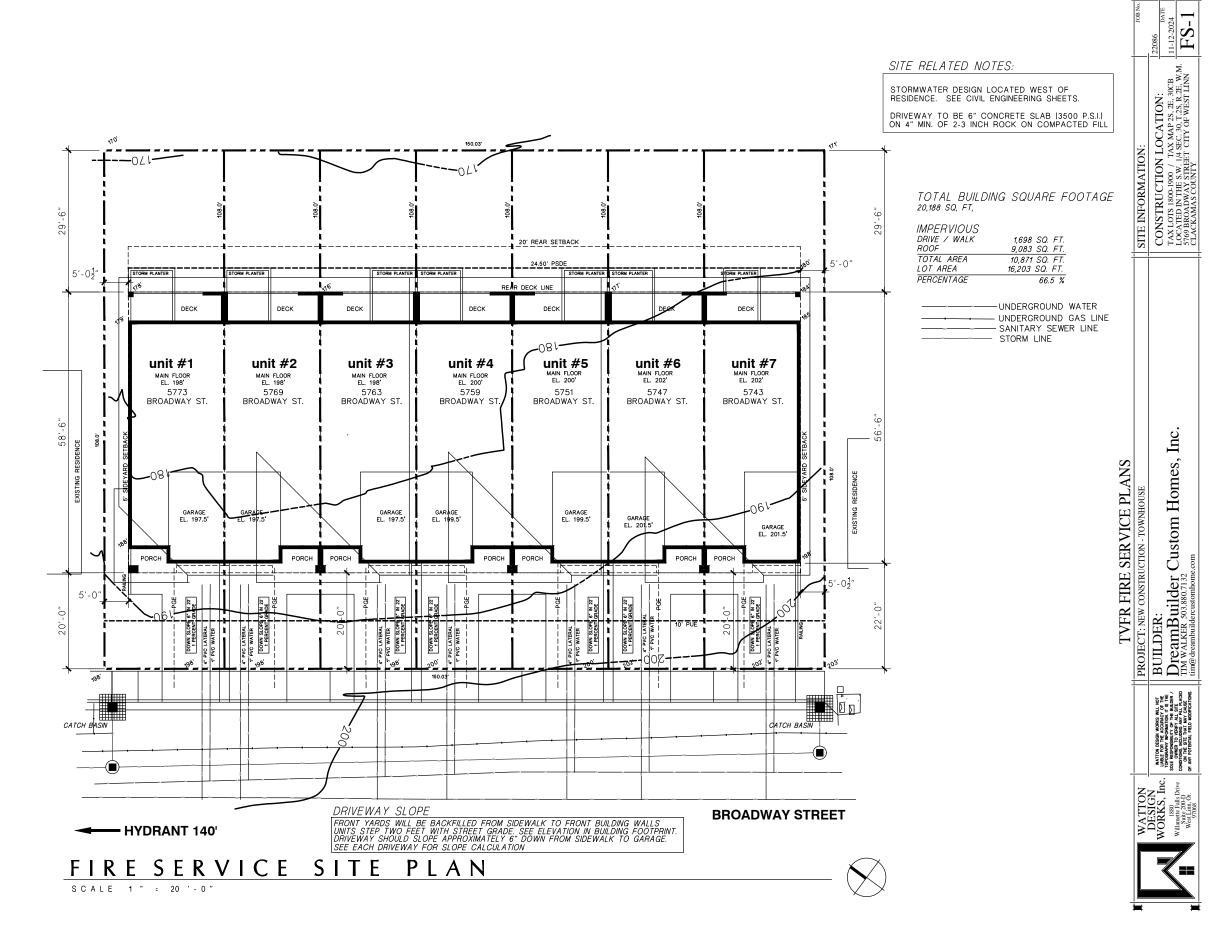
#### Permit/Review Type (check one): **Project Information** Mand Use / Building Review - Service Provider Permit Applicant Name: Tim Walker □Emergency Radio Responder Coverage Install/Test Address: 16805 Gassner Lane, Lake Oswego, OR 97035 □LPG Tank (Greater than 2,000 gallons) Phone: 503-880-7132 ☐Flammable or Combustible Liquid Tank Installation Email: tim@dreambuildercustomhome.com (Greater than 1,000 gallons) Site Address: 5743-5773 SW Broadway Street Exception: Underground Storage Tanks (UST) are deferred to DEQ for regulation. City: West Linn, Oregon 97068 □Explosives Blasting (Blasting plan is required) Map & Tax Lot #: 2-2e-30CB, 1800, 1900, & 1901 □Exterior Toxic, Pyrophoric or Corrosive Gas Installation Business Name: Dreambuilder Custom Homes, Inc. (in excess of 810 cu.ft.) Land Use/Building Jurisdiction: West Linn ☐ Tents or Temporary Membrane Structures (in excess Land Use/ Building Permit# N/Aof 10,000 square feet) Choose from: Beaverton, Tigard, Newberg, Tualatin, North ☐Temporary Haunted House or similar Plains, West Linn Wilsonville, Sherwood, Rivergrove, □OLCC Cannabis Extraction License Review Durham, King City, Washington County, Clackamas County, Multnomah County, Yamhill County □Ceremonial Fire or Bonfire (For gathering, ceremony or other assembly) **Project Description** For Fire Marshal's Office Use Only The applicant is proposing a Middle Housing Land Division to create seven (7) lots for the TVFR Permit # 2024-0180 construction of townhomes on three existing Permit Type: SPP-West Linn parcels identified as Clackamas County Assessor's Map No. 2-2e-30CB, Tax Lots 1800, Submittal Date: \_\_\_11-26-2024 1900, & 1901. The development site consists of Assigned To: DFM Arn three parcels each with an area of approximately 5,400 square feet, resulting in a Due Date: NA total project area of about 16,200 square feet. Fees Due: \$0. All three parcels have frontage on Broadway Street. Fees Paid: \$0.

**Approval/Inspection Conditions** 

# This section is for application approval only This section is for application approval only 11-26-2024 Fire Marshal or Designee Conditions: See approved fire service plan. See Attached Conditions: Yes No Site Inspection Required: Yes No Final TVFR Application approval only This section Inspection Cor Fire Marshal's Office Use Only) This section Inspection Cor Final TVFR Application approval only This section Inspection Cor Final TVFR Application approval only This section Inspection Cor Final TVFR Application approval only This section Inspection Cor Final TVFR Application approval only This section Inspection Cor Final TVFR Application approval only This section Inspection Cor This section Cor This sectio

This section used when site inspection is	required
Inspection Comments:	
Final TVFR Approval Signature & Emp ID	Date
Planning Manager Decision	n .

# **3\_FS-1 2024-0180 Middle Housing 5743-5773 Broadway St**





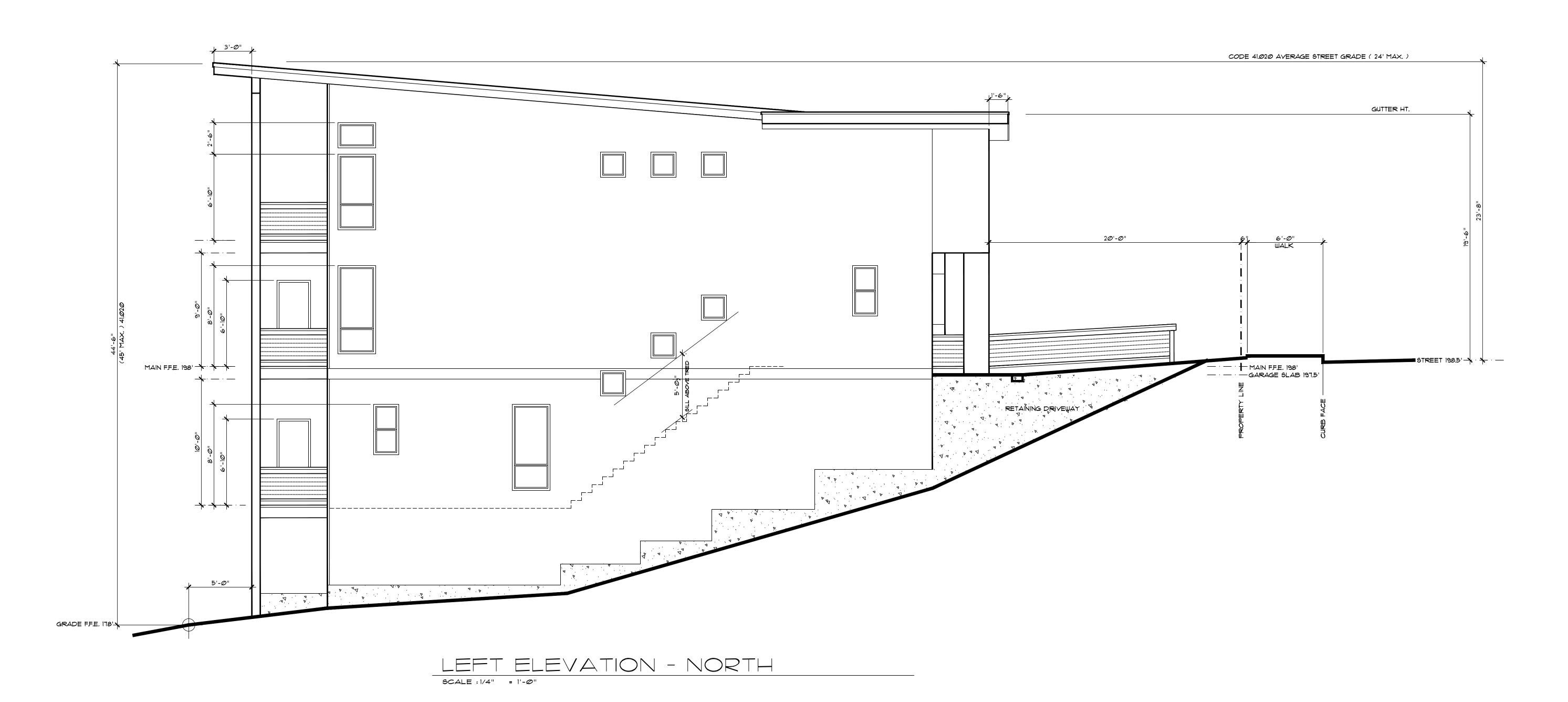


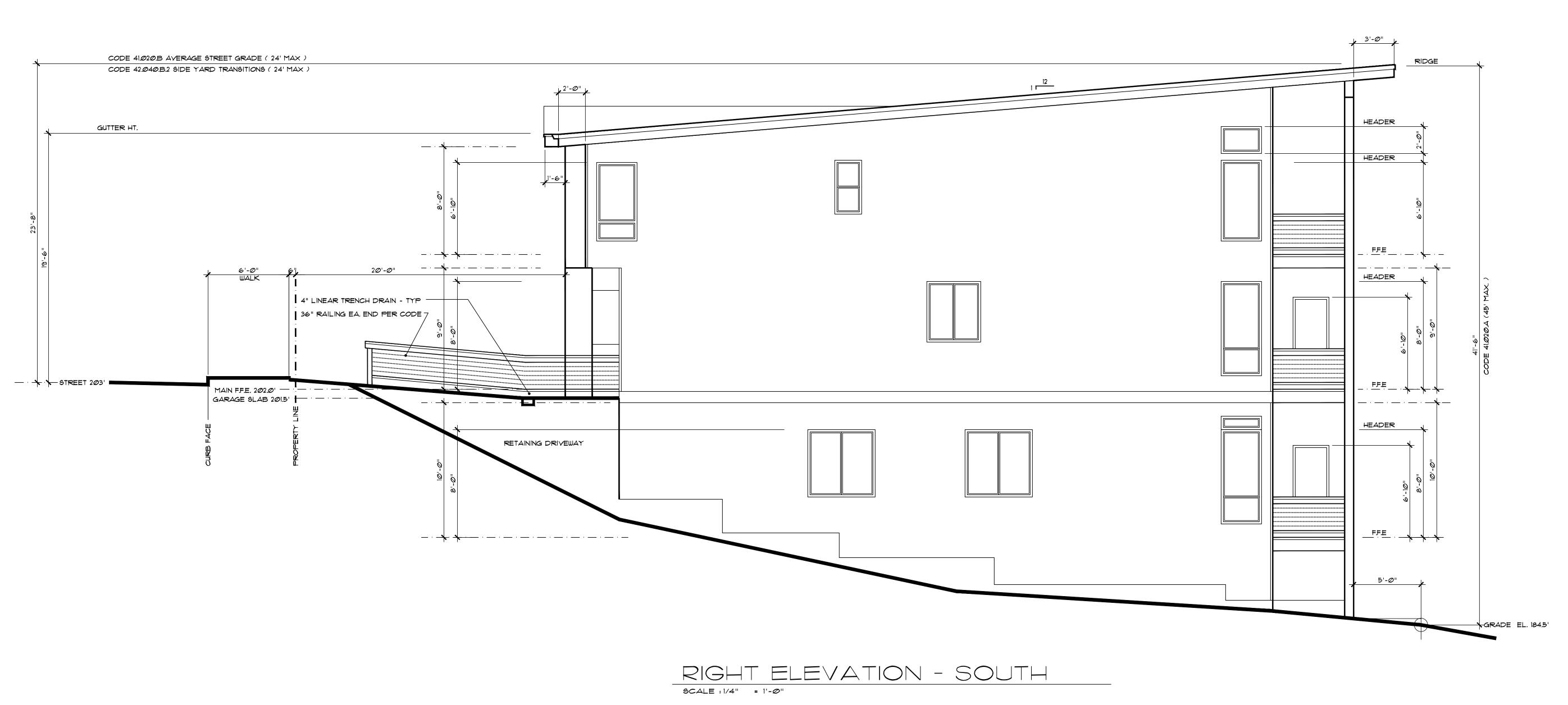


REAR ELEVATION - EAST

DATE: 12-14-2024 7. 7. JOB No. 22086 SHEET

FS-2





Although flor one by dote into the membration for the themselves to the first insulation for control of the first insulat

TVFR FIRE SERVICE - EXTERIOR ELEVATIONS

SQUARE FOOTAGE

MAIN AREA

164 S.F.

UPPER AREA

164 S.F.

UPPER AREA

164 S.F.

UPPER AREA

164 S.F.

DreamBuilder Custom Homes, Inc.

TOTAL AREA

2636 S.F.

TIM WALKER 503.880.7132

Est. 12-14-20

Rev. Rev. JOB N

FS-3

## **4\_Geotechnical Report**



#### **Geotechnical Investigation**

and

Geologic Landslide Hazards Study Services

Proposed Single-Family Residential Home Development Project

Tax Lot No's. 1800 and 1900

21765 Willamette Drive

Lake Oswego (Clackamas County), Oregon

for

**DreamBuilder Custom Homes** 

Project No. 1098.023.G August 3, 2018

August 3, 2018

Mr. Tim Walker DreamBuilder Custom Homes 16805 Gassner Lane Lake Oswego, Oregon 97035

Dear Mr. Walker:

Re: Geotechnical Investigation and Geologic Landslide Hazards Study Services, Proposed Single-Family Residential Home Development Project, Tax Lot No's. 1800 and 1900, 21765 Willamette Drive, Lake Oswego (Clackamas County), Oregon

Submitted herewith is our report entitled "Geotechnical Investigation and Geologic Landslide Hazards Study Services, Proposed Single-Family Residential Home Development Project, Tax Lot No's. 1800 and 1900, 21765 Willamette Drive, Lake Oswego (Clackamas County), Oregon". The scope of our services was outlined in our formal proposal to Mr. Tim Walker of DreamBuilder Custom Homes dated June 13, 2018. Written authorization of our services was provided by Mr. Tim Walker of DreamBuilder Custom Homes on June 14, 2018.

During the course of our investigation, we have kept you and/or others advised of our schedule and preliminary findings. We appreciate the opportunity to assist you with this phase of the project. Should you have any questions regarding this report, please do not hesitate to call.

Sincerely.

Daniel M. Redmond, P.E., G.E.

President/Principal Geotechnical Engineer

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### GEOTECHNICAL INVESTIGATION &

GEOLOGIC LANDSLIDE HAZARDS STUDY SERVICES
PROPOSED SINGLE-FAMILY RESIDENTIAL HOME DEVELOPMENT PROJECT
TAX LOT NO'S. 1800 AND 1900, 21765 WILLAMETTE DRIVE
LAKE OSWEGO (CLACKAMAS COUNTY), OREGON

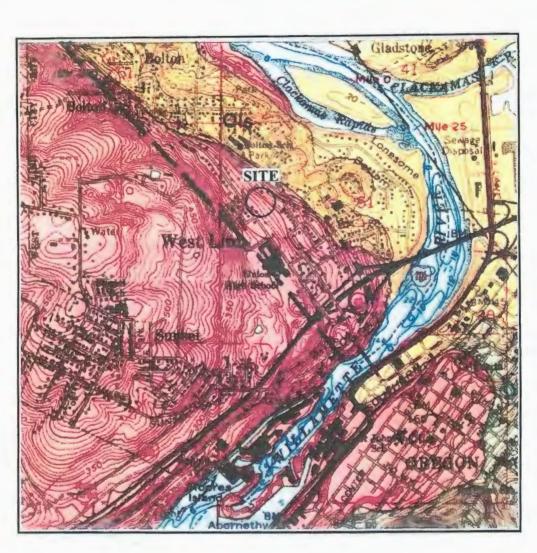
#### INTRODUCTION

Redmond Geotechnical Services, LLC is please to submit to you the results of our Geotechnical Investigation and Geologic Landslide Hazards Study report at the site of the proposed residential development property located generally to the east of Broadway Street and south of Webb Street in Lake Oswego (Clackamas County), Oregon. The general location of the subject site is shown on the Site Vicinity and Geologic Map, Figure No. 1. The purpose of our geotechnical investigation and geologic landslide hazards study services at this time was to explore the existing subsurface soils and/or groundwater conditions across the subject site and assess the presence and/or degree of any existing and/or ancient (historic) landslide(s) at the site with regard to potential stability problems and/or development. Additionally, we have provided supplemental geotechnical design and/or construction recommendations with regard to construction of the new residential homes and their associated site improvements.

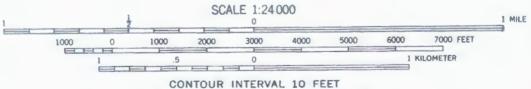
#### PROJECT DESCRIPTION

We understand that present plans are to construct one (1) or more new single-family residential structures at the subject property. Reportedly, we understand that the proposed development of the subject property will consist of the construction of up to three (3) new single-family residential structures. The new single-family residential structures are generally anticipated to be two- and/or three-story structures constructed with wood framing. Additionally, due to the existing sloping site conditions, we understand that the residential structures may be constructed with a partial and/or below grade basement level. As such, the proposed new residential structures will likely include one (1) or more partial and/or below grade retaining walls.

Support of the new residential structures is anticipated to include conventional shallow individual (spread) column footings and continuous (strip) footings as well as concrete slab-on-grade floor systems. Structural loading information, although unavailable at this time, is anticipated to be fairly typical and light for this type of wood-frame single-family structure and is expected to result in maximum dead plus live continuous (strip) and individual (spread) column footing loads on the order of about 2.0 to 3.5 kips per lineal foot (klf) and 15 to 35 kips, respectively.



# CANBY QUADRANGLE OREGON 7.5 MINUTE SERIES (TOPOGRAPHIC) SW/4 OREGON CITY 15' QUADRANGLE



NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES AND SOUNDINGS IN FEET—WILLAMETTE RIVER DATUM

#### SITE VICINITY AND GEOLOGIC MAP

TAX LOT NO'S. 1800 AND 1900 21765 WILLAMETTE DRIVE

Figure No. 1

ELD-24-06

#### **SCOPE OF WORK**

The subject site has reportedly been flagged by the City of Lake Oswego and/or Clackamas County as a potential slope and/or geologic hazards area, apparently because a portion of the subject property is shown as having existing slope gradients greater than 15 percent. Additionally, the "Relative Earthquake Hazard Map (HEHRP) of Lake Oswego and/or Clackamas County, Oregon" indicates that the subject property is located within Zone B. In this regard, the purpose of our geotechnical investigation studies was to evaluate the overall site subsurface soil and/or groundwater conditions underlying the site with regard to the proposed new single-family residential development at the site and any associated impacts or concerns with respect to the new residential construction as well as provide appropriate geotechnical design and construction recommendations for the project. Additionally, the purpose of the geologic landslide hazards study was to assess the presence and/or degree of any existing and/or ancient (historic) landslide(s) at the site with regard to potential stability problems associated with development of the site. Specifically, the geotechnical investigation and geologic landslide hazards study included the following scope of work items:

- 1. Review of available and relevant (pertinent) geologic information including available landslide mapping, historic topographic maps and historic aerial photographs.
- 2. A site vicinity geologic and detailed site reconnaissance to observe the area geology and geologic features that could be related to past landslide activity in the area and a visual reconnaissance of existing road cuts and fills as well as pavement areas for indications of slope movement.
- 3. A subsurface exploration program of the soil and groundwater conditions underlying the site by means of two (2) exploratory test pit excavations. The exploratory test pits were excavated with tracked excavation equipment to depths of between two (2) and seven (7) feet beneath existing site grades at the approximate locations as shown on the Site Exploration Plan, Figure No. 2.
- 4. Laboratory testing to help evaluate and identify pertinent physical and engineering properties of the subsurface soils encountered relative to the stability of the existing moderately steep slope and/or the planned residential development of the site. The laboratory testing consisted of tests to help evaluate the natural (field) moisture content, maximum dry density and optimum moisture content, Atterberg Limits and gradational characteristics as well as direct shear strength tests.
- 5. A literature review and engineering evaluation and assessment of the regional seismicity to evaluate the potential ground motion hazard(s) at the subject site. The evaluation and assessment included a review of the regional earthquake history and sources such as potential seismic sources, maximum credible earthquakes, and reoccurrence intervals as well as a discussion of the possible ground response to the selected design earthquake(s), fault rupture, landsliding, liquefaction, and tsunami and seiche flooding.

6. Engineering analyses utilizing the field and laboratory data as a basis for furnishing recommendations for foundation support of the proposed new single-family residential structures. Recommendations include maximum design allowable contact bearing pressure(s), depth of footing embedment, estimates of foundation settlement, lateral soil resistance and/or lateral earth pressures, and foundation subgrade preparation as well as recommended foundation setbacks from slopes. Additionally, construction and/or permanent subsurface water drainage considerations have also been prepared. Further, our report includes recommendations regarding site preparation, placement and compaction of structural fill materials, suitability of the on-site soils for use as structural fill, criteria for import fill materials, and preparation of foundation and floor slab subgrades.

#### SITE CONDITIONS

#### Site Geology

Based on the Geologic Map of the Lake Oswego Quadrangle, Clackamas, Multnomah, and Washington Counties, Oregon (GMS-59), the subject site is underlain at depth by the Sentinel Bluffs unit of the Grande Ronde Basalt deposits (Tgsb) of middle Miocene age. Within the map area, two flows that were formerly designated as "-1 and -2 flows" of Beeson and Moran (1979) are present. Flows typically display blocky to columnar jointing and rarely display an entablature/colonnade jointing pattern. Fresh exposures are light to dark gray; weathered surfaces are greenish gray to dark gray. The lower flow is typically fine- to medium-grained basalt and sparsely plagioclase phyric, with small tabular plagioclase phenocrysts. The upper flow is fine- to medium-grained, commonly diktytaxitic, and aphyric. Unit thickness ranges from 25 to 150 feet within the map area. Sentinel Bluffs flows are distinguished from both younger Frenchman Sprinmgs units and older Grande Ronde units on the basis of stratigraphic position, composition, lithology, and normal paleomagnetic polarity (see Reidel) and others, 1989; Beeson and others, 1989).

#### **Surface Conditions**

The subject proposed new residential development property is comprised of two (2) separate tax lots (TL's 1800 and 1900) and is generally rectangular in shape and encompasses a total plan area of approximately 0.35 acres. The proposed residential property is located along the easterly flank of an existing north/south trending ridge and is roughly bounded to the west by Broadway Street, to the north and south by existing single-family residential home sites, and to the east by a public alley, existing single-family residential properties and Willamette Drive. At the time of our study, the subject property was improved and contained an existing single-family residential home.

Surface vegetation across the site generally consists of a moderate growth of ground cover consisting of grass, weeds and brush as well as trees. Topographically, the subject property is best characterized as gently to moderately sloping terrain descending downwards towards the east at slope gradients of about 20 to 25 percent. Overall topographic relief across the entire site is estimated at about thirty (30) feet and ranges from a low about Elevation 170 feet near the easterly property boundary to a high of about Elevation 200 feet near the southwesterly property corner.

#### **Subsurface Soil Conditions**

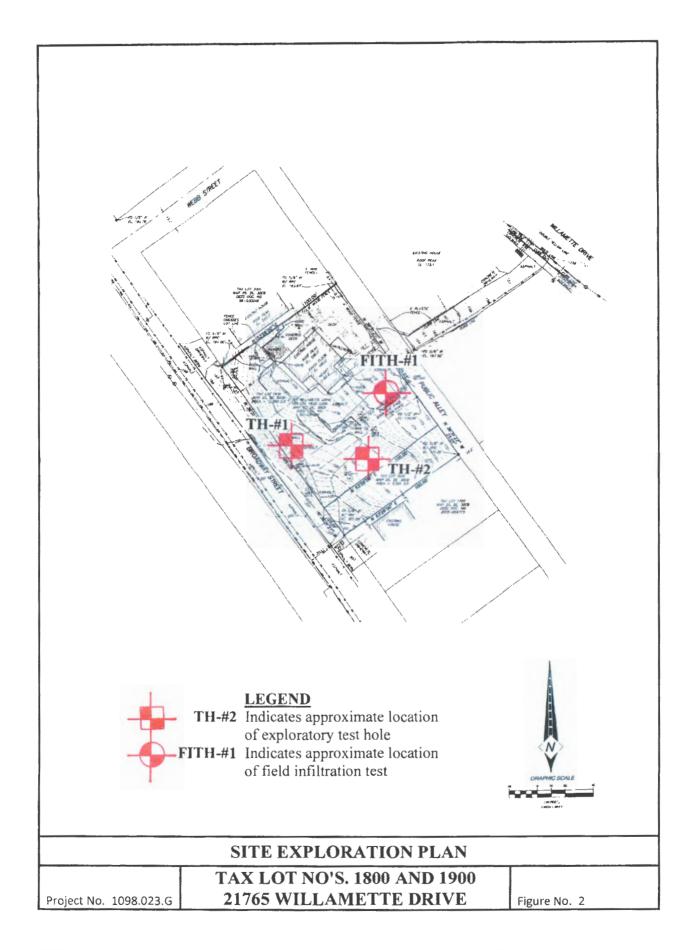
Our understanding of the subsurface soil conditions underlying the subject site was developed by means of two (2) exploratory test pits excavated to depths of between two (2) and seven (7) feet beneath existing site grades on June 29, 2018 with tracked excavating equipment. The location of the exploratory test pits were located in the field by marking off distances from existing and/or known site (land) features and is shown in relation to the existing site improvements on the Site Exploration Plan, Figure No. 2. Detailed logs of the test pit explorations, presenting conditions encountered at each location explored, are presented in the Appendix, Figure No. A-4.

The exploratory test pit excavations were observed by staff from Redmond Geotechnical Services, LLC who logged the test pit explorations and obtained representative samples of the subsurface soils encountered at the site. Additionally, the elevation of the exploratory test pit excavations were referenced from an Existing Conditions Map prepared by Centerline Concepts and should be considered as approximate. All subsurface soils encountered at the site and/or within the exploratory test pit excavation were logged and classified in general conformance with the Unified Soil Classification System (USCS) which is outlined on Figure No. A-3.

The test pit explorations performed at the subject property revealed that the subject site is generally underlain by native soils comprised of residual and/or highly to slightly weathered Columbia River Basalt bedrock deposits of middle Miocene age. Specifically, the subsurface soils underlying the project area consist of native soil deposits generally comprised of an upper and/or surficial layer of topsoil materials composed of approximately 8 to 12 inches of moist to very moist, soft, organic, sandy, clayey silt. These surficial topsoil materials were inturn underlain by residual and/or over-burden soils composed of medium brown, very moist, medium stiff becoming medium to reddish-brown and stiff at depth, sandy, clayey silt to a depth of about five (5.0) feet beneath the existing site and/or surface grades. These residual and/or over-burden soils are best characterized by relatively low to moderate strength and moderate compressibility. The residual and/or over-burden soils were found to be underlain by gray-brown to gray, dense to very dense, highly to slightly weathered and fractured Basalt bedrock deposits to the maximum depth explored of about seven (7.0) feet beneath existing site grades. These highly to slightly weathered and fractured Basalt bedrock deposits are best characterized by relatively moderate to high strength and low to compressibility. In addition, localized fill soils were also encountered in the area of test hole TH-#2 which consisted of approximately two (2) feet of poorly to moderately compacted, clayey, sandy silt.

#### Groundwater

Groundwater was not encountered within the exploratory test pit explorations at the time of our field work to depths of up to seven (7) feet beneath the existing site and/or surface grades. However, groundwater elevations in the area and/or across the site are expected to fluctuate seasonally in accordance with rainfall conditions and/or site utilization and may approach to near surface elevations during periods of heavy and/or prolonged rainfall.



#### **INFILTRATION TESTING**

We performed one (1) field infiltration test at the site on June 29, 2018. The infiltration test was performed in field infiltration test hole FITH-#1 at a depth of between three (3) and four (4) feet beneath the existing site and/or surface grades. The subgrade soils encountered in the infiltration test hole consisted of sandy, clayey silt. The infiltration testing was performed in general conformance with current EPA and/or Clackamas County Encased Falling Head test method which consisted of advancing a 6-inch diameter PVC pipe approximately 6 inches into the exposed soil horizon at each test location. Using a steady water flow, water was discharged into the pipe and allowed to penetrate and saturate the subgrade soils. The water level was adjusted over a two (2) hour period and allowed to achieve a saturated subgrade soil condition consistent with the bottom elevation of the surrounding test pit excavation. Following the required saturating period, water was again added into the PVC pipe and the time and/or rate at which the water level dropped was monitored and recorded. Each measurable drop in the water level was recorded until a consistent infiltration rate was observed and/or repeated.

Based on the results of the field infiltration testing at the site, we have found that the native sandy, clayey silt subgrade soil deposits posses an ultimate infiltration rate on the order of about 0.6 inches per hour (in/hr).

#### **LABORATORY TESTING**

Representative samples of the on-site subsurface soils were collected at selected depths and intervals from the test pit excavations and returned to our laboratory for further examination and testing and/or to aid in the classification of the subsurface soils as well as to help evaluate and identify their engineering strength and compressibility characteristics. The laboratory testing consisted of visual and textural sample inspection, moisture content determinations, maximum dry density and optimum moisture content, Atterberg Limits and gradation analyses as well as direct shear strength tests. Results of the various laboratory tests are presented in the Appendix, Figure No's. A-5 through A-8.

#### SEISMICITY AND EARTHQUAKE SOURCES

The seismicity of the southwest Washington and northwest Oregon area, and hence the potential for ground shaking, is controlled by three (3) separate fault mechanisms. These include the Cascadia Subduction Zone (CSZ), the mid-depth intraplate zone, and the relatively shallow crustal zone. Descriptions of these potential earthquake sources are presented below.

The CSZ is located offshore and extends from northern California to British Columbia. Within this zone, the oceanic Juan de Fuca Plate is being subducted beneath the continental North American Plate to the east. The interface between these two (2) plates is located at a depth of approximately 15 to 20 kilometers (km). The seismicity of the CSZ is subject to several uncertainties, including the maximum earthquake magnitude and the recurrence intervals associated with various magnitude earthquakes.

Anecdotal evidence of previous CSZ earthquakes have been observed within coastal marshes along the Washington and Oregon coastlines. Sequences of interlayered peat and sands have been interpreted to be the result of large Subduction Zone earthquakes occurring at intervals on the order of 300 to 500 years, with the most recent event taking place approximately 300 years ago. A recent study by Geomatrix (1995) suggests that the maximum earthquake associated with the CSZ is moment magnitude (Mw) 8 to 9. This is based on an empirical expression relating moment magnitude to the area of fault rupture derived from earthquakes that have occurred within subduction zones in other parts of the world. An Mw 9 earthquake would involve a rupture of the entire CSZ. As discussed by Geomatrix (1995) this has not occurred in other subduction zones that have exhibited much higher levels of historical seismicity than the CSZ, and is considered unlikely. For the purpose of this study an earthquake of Mw 8.5 was assumed to occur within the CSZ.

The intraplate zone encompasses the portion of the subducting Juan de Fuca Plate located at a depth of approximately 30 to 50 km below western Washington and western Oregon. Very low levels of seismicity have been observed within the intraplate zone in western Oregon and western Washington. However, much higher levels of seismicity within this zone have been recorded in Washington and California. Several reasons for this seismic quiescence were suggested in the Geomatrix (1995) study and include changes in the direction of subduction between Oregon, Washington, and British Columbia as well as the effects of volcanic activity along the Cascade Range. Historical activity associated with the intraplate zone includes the 1949 Olympia magnitude 7.1 and the 1965 Puget Sound magnitude 6.5 earthquakes. Based on the data presented within the Geomatrix (1995) report, an earthquake of magnitude 7.25 has been chosen to represent the seismic potential of the intraplate zone.

The third source of seismicity that can result in ground shaking within the Oregon and southwest Washington area is near-surface crustal earthquakes occurring within the North American Plate. The historical seismicity of crustal earthquakes in this area is higher than the seismicity associated with the CSZ and the intraplate zone. The 1993 Scotts Mills (magnitude 5.6) and Klamath Falls (magnitude 6.0), Oregon earthquakes were crustal earthquakes.

#### Liquefaction

Seismic induced soil liquefaction is a phenomenon in which loose, granular soils and some silty soils, located below the water table, develop high pore water pressures and lose strength due to ground vibrations induced by earthquakes. Soil liquefaction can result in lateral flow of material into river channels, ground settlements and increased lateral and uplift pressures on underground structures. Buildings supported on soils that have liquefied often settle and tilt and may displace laterally. Soils located above the ground water table cannot liquefy, but granular soils located above the water table may settle during the earthquake shaking.

Our review of the subsurface soil test pit logs from our exploratory field exploration (TH-#1 and TH-#2) indicates that the site is generally underlain by dense to very dense, highly to slightly weathered and fractured Basalt bedrock deposits. Additionally, groundwater was not encountered at the site during our field exploration work.

As such, due to the dense to very dense nature of the bedrock deposits beneath the site as well as the apparently low groundwater elevation at the site, it is our opinion that the site has a very low potential for liquefaction during the design earthquake motions previously described.

#### Landslides

No ancient and/or active landslides were observed at and/or are known to be present on the subject site. Additionally, the subject site is characterized as moderately sloping terrain and the native sandy, clayey silt subgrade soil deposits beneath the site and/or in the immediate area possesses relatively moderate strength. However, Dogami mapping indicates that the area to the northwest has been associated with past landsliding. Specifically, the area to the northwest of the subject property and/or to the west of Broadway Street has been associated with previous relatively small landslides. However, this area of mapped instability is located along the easterly flank of a downward trending slope. Additionally, this area of instability is located above about Elevation 200 feet. As such, based on a review of the City of Lake Oswego and/or Clackamas County Landslide Hazards Map(s), the risk of slope instability at the subject site resulting in landslides and/or lateral earth movements do not appear to present a significant potential geologic hazard for this project.

#### **Surface Rupture**

Although the site is generally located within a region of the country known for seismic activity, no known faults exist on and/or immediately adjacent to the subject site. The closest known fault is located approximately 500 to 1,000 feet to the northeast of the subject property. As such, the risk of surface rupture due to faulting is considered negligible.

#### Tsunami and Seiche

A tsunami, or seismic sea wave, is produced when a major fault under the ocean floor moves vertically and shifts the water column above it. A seiche is a periodic oscillation of a body of water resulting in changing water levels, sometimes caused by an earthquake. Tsunami and seiche are not considered a potential hazard at this site because the proposed apartment development is not near to the coast and/or there are no immediately adjacent significant bodies of water.

#### Flooding and Erosion

Stream flooding is a potential hazard that should be considered in lowland areas of Clackamas County and Lake Oswego. The FEMA (Federal Emergency Management Agency) flood maps should be reviewed as part of the design for the proposed new residential structure and site improvements. Elevations of structures on the site should be designed based upon consultants reports, FEMA (Federal Emergency Management Agency), and Clackamas County requirements for the 100-year flood levels of any nearby creeks and/or streams.

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#### Slope Hazards

We evaluated potential slope hazards by examining historic aerial photographs of the subject site, reviewing available topographic and geologic maps, LIDAR imagery, and conducting a geologic reconnaissance of the subject property. During the reconnaissance, we observed existing roadways and/or structures immediately adjacent to and/or in the area for indications of slope movement.

There are no steep slopes (i.e., greater than 50 percent) at and/or adjacent to the subject property. The steepest existing slope gradient at the subject property is approximately 20 to 25 percent which is located across the lower southeasterly portion of the subject property. Our site reconnaissance of the subject property found it to be as shown on available maps, LIDAR and aerial photos - moderately steep terrain and showing no evidence of anomalous topography, nor any evidence of present and/or past slope instability. Given that the adjacent properties to the north, south, east and west have been developed for several years, one would expect to find fairly obvious evidence of existing slope movement and/or slope failures if the slopes at and/or near to the subject property are marginally stable. Specifically, our review of LIDAR imagery and aerial photographs found no evidence of slope instability at and/or on other developed and/or undeveloped residential properties located immediately adjacent to the subject property.

#### **CONCLUSIONS AND RECOMMENDATIONS**

#### General

Our review of available geologic maps, examination of historic aerial photographs and LIDAR imagery as well as our site reconnaissance found no evidence of landslides at and/or immediately adjacent to the subject property. The closets know mapped and/or suspected landslide area is located approximately 1/8-mile to the northwest of the subject property and/or to the northwest of Broadway Street. As such, it appears that the inclusion of the subject property in the potential slope hazard mapping of Lake Oswego and/or Clackamas County is based solely on the existing site topography exceeding a slope gradient of 15 percent.

In this regard, based on the results of our field explorations, laboratory testing and engineering analyses, it is our opinion that the site is presently stable and generally suitable for the proposed new single-family residential development and its associated site improvements described herein provided that the recommendations contained within this report are properly incorporated into the design and construction of the project.

The primary features of concern at the site and/or for the project are 1) the presence of the existing site improvements, 2) the planned excavation and construction of below grade retaining wall(s) of the proposed residential structures and, 3) the moisture sensitivity and erosion potential of the upper and/or near surface sandy, clayey silt subgrade soils across the site.

In regard to the presence of the existing site improvements, we understand that the existing residential home will be razed from the site. In this regard, close monitoring by the Geotechnical Engineer during the site grading and earthwork operations will be required.

With regard to the planned excavation and construction of below grade retaining walls for the proposed new residential structures, we are of the opinion that a retaining wall height of approximately eight (8) feet or less should not result in the development of any significant additional loads beneath the retaining wall that would likely result in destabilization of the existing moderately steep slope. However, we point out that any retaining walls constructed along and/or directly adjacent to the top of the existing moderately steep slope should be sufficiently embedded such that at least eight (8) feet of separation is developed between the face of the existing slope and the outer (downslope) bearing edge of the retaining wall footing. Where significantly higher retaining walls are planned and/or desired, this office should be consulted.

In regard to the moisture sensitivity and erosion potential of the native (on-site) sandy, clayey silt subgrade soil deposits across the site, we are of the opinion that all site grading and earthwork operations would best be performed during the drier summer months which is typically June through September. Additionally, we are generally of the opinion that the greatest potential for soil erosion will occur during and/or immediately following construction. As such, in areas that have been stripped and cleared of surface vegetation, erosion at the site can be minimized by implementing a project erosion control plan which should include the judicious use of straw bales and silt fences. Additionally, all erosion control devices should be in place and remain in place throughout all of the site grading and earthwork operations. Erosion and sedimentation of exposed sandy subgrade soils can also be minimized by quickly re-vegetating exposed areas of soil and by staging construction (if possible) such that large areas of the site are not denuded and exposed at the same time. Areas of exposed sandy soils requiring immediate and/or temporary protection against erosion should be covered either with mulch or erosion control netting/blankets. Areas of exposed soil requiring permanent stabilization should be seeded with an approved grass seed mixture or hydroseeded with an approved seed-mulch-fertilizer mixture.

The following sections of this report provide specific recommendations regarding subgrade preparation and grading as well as foundation, retaining wall and floor slab design and construction for the new residential home project.

#### Site Preparation

As an initial step in site preparation, we recommend that the proposed new residential home site area(s) and its/their associated structural and/or site improvement area(s) be stripped and cleared of all existing improvements, any existing undocumented fill materials, surface debris, existing vegetation, topsoil materials, and/or any other deleterious materials present at the time of construction. In general, we envision that the site stripping to remove existing vegetation and topsoil materials will generally be about 8 to 12 inches. However, localized areas requiring deeper removals, such as any existing undocumented fill materials and/or old foundation remnants, will be encountered and should be evaluated at the time of construction by the Geotechnical Engineer.

The stripped and cleared materials should be properly disposed of as they are generally considered unsuitable for use/reuse as fill materials.

Following the completion of the site stripping and clearing work and prior to the placement of any required structural fill materials and/or structural improvements, the exposed subgrade soils within the planned structural improvement area(s) should be inspected and approved by the Geotechnical Engineer and possibly proof-rolled with a half and/or fully loaded dump truck. Areas found to be soft or otherwise unsuitable should be over-excavated and removed or scarified and recompacted as structural fill. During wet and/or inclement weather conditions, proof rolling and/or scarification and recompaction as noted above may not be appropriate.

The on-site native sandy, clayey silt subgrade soil materials are generally considered suitable for use/reuse as structural fill materials provided that they are free of organic materials, debris, and rock fragments in excess of about 6 inches in dimension. However, if site grading is performed during wet or inclement weather conditions, the use of some of the on-site native subgrade soil materials which contain significant silt and clay sized particles will be difficult at best. In this regard, during wet or inclement weather conditions, we recommend that an import structural fill material be utilized which should consist of a free-draining (clean) granular fill (sand & gravel) containing no more than about 5 percent fines. Representative samples of the materials which are to be used as structural fill materials should be submitted to the Geotechnical Engineer and/or laboratory for approval and determination of the maximum dry density and optimum moisture content for compaction.

In general, all site earthwork and grading activities should be scheduled for the drier summer months (June through September) if possible. However, if wet weather site preparation and grading is required, it is generally recommended that the stripping of topsoil materials be accomplished with a tracked excavator utilizing a large smooth-toothed bucket working from areas yet to be excavated. Additionally, the loading of strippings into trucks and/or protection of moisture sensitive subgrade soils will also be required during wet weather grading and construction. In this regard, we recommend that areas in which construction equipment will be traveling be protected by covering the exposed subgrade soils with a geotextile fabric such as Mirafi 140N followed by at least 12 inches or more of crushed aggregate base rock. Further, the geotextile fabric should have a minimum Mullen burst strength of at least 250 pounds per square inch for puncture resistance and an apparent opening size (AOS) between the U.S. Standard No. 70 and No. 100 sieves.

All structural fill materials placed within the new single-family residential home sites should be moistened or dried as necessary to near (within 3 percent) optimum moisture conditions and compacted by mechanical means to a minimum of 92 percent of the maximum dry density as determined by the ASTM D-1557 (AASHTO T-180) test procedures. Structural fill materials should be placed in lifts (layers) such that when compacted do not exceed about 8 inches. Additionally, all fill materials placed within five (5) lineal feet of the perimeter (limits) of the proposed residential structure should be considered structural fill. Further, all structural fill materials placed on sloping ground which exceeds an existing slope gradient of about 20 percent (5H to 1V) should be properly benched and keyed into the native slope.

All aspects of the site grading should be monitored and approved by a representative of Redmond Geotechnical Services, LLC.

#### **Foundation Support**

Based on the results of our investigation, it is our opinion that the subject site is suitable for support of the proposed new two- and/or three-story wood-frame residential structure(s) provided that the following foundation design recommendations are followed. The following sections of this report present specific foundation design and construction recommendations for the planned new residential structure(s).

#### **Shallow Foundations**

In general, conventional shallow continuous (strip) footings and individual (spread) column footings may be supported by approved native (untreated) medium stiff to stiff, sandy, clayey silt subgrade soil materials and/or by properly placed and compacted silty sand structural fill soils based on an allowable contact bearing pressure of up to 2,000 pounds per square foot (psf). This recommended allowable contact bearing pressure is intended for dead loads and sustained live loads and may be increased by one-third for the total of all loads including short-term wind or seismic loads. In general, continuous strip footings should have a minimum width of at least 16 inches and be embedded at least 18 inches below the lowest adjacent finish grade (includes frost protection). Individual column footings (where required) should be embedded at least 18 inches below grade and have a minimum width of at least 24 inches. Additionally, foundations should be constructed no closer than about eight (8) feet from the face of existing moderately steep slope.

Total and differential settlements of foundations constructed as recommended above and supported by approved native subgrade soils or by properly compacted structural fill materials are expected to be well within the tolerable limits for this type of lightly loaded wood-frame structure and should generally be less than about 1-inch and 1/2-inch, respectively.

Allowable lateral frictional resistance between the base of the footing element and the supporting subgrade bearing soil can be expressed as the applied vertical load multiplied by a coefficient of friction of 0.35 and 0.45 for native silty subgrade soils and/or import gravel fill materials, respectively. In addition, lateral loads may be resisted by passive earth pressures on footings poured "neat" against in-situ (native) subgrade soils or properly backfilled with structural fill materials based on an equivalent fluid density of 250 pounds per cubic foot (pcf). This recommended value includes a factor of safety of approximately 1.5 which is appropriate due to the amount of movement required to develop full passive resistance.

#### Floor Slab Support

In order to provide uniform subgrade reaction beneath concrete slab-on-grade floors, we recommend that the floor slab area be underlain by a minimum of 6 inches of free-draining (less than 5 percent passing the No. 200 sieve), well-graded, crushed rock. The crushed rock should help provide a capillary break to prevent migration of moisture through the slab. Additional moisture protection, where needed, can be provided by using a 10-mil polyolefin geo-membrane sheet such as StegoWrap.

The base course materials should be compacted to at least 95 percent of the maximum dry density as determined by the ASTM D-1557 (AASHTO T-180) test procedures. Where floor slab subgrade materials are undisturbed, firm and stable and where the underslab aggregate base rock section has been prepared and compacted as recommended above, we recommend that a modulus of subgrade reaction of 200 pci be used for design.

#### Retaining/Below Grade Walls

Retaining and/or below grade walls should be designed to resist lateral earth pressures imposed by native soils or granular backfill materials as well as any adjacent surcharge loads. For walls which are unrestrained at the top and free to rotate about their base, we recommend that active earth pressures be computed on the basis of the following equivalent fluid densities:

Non-Restrained Retaining Wall Pressure Design Recommendations

Slope Backfill (Horizontal/Vertical)	Equivalent Fluid Density/Silt (pcf)	Equivalent Fluid Density/Gravel (pcf)
Level	35	30
3H:1V	60	50
2H:1V	90	80

For walls which are fully restrained at the top and prevented from rotation about their base, we recommend that at-rest earth pressures be computed on the basis of the following equivalent fluid densities:

Restrained Retaining Wall Pressure Design Recommendations

Slope Backfill (Horizontal/Vertical)	Equivalent Fluid Density/Silt (pcf)	Equivalent Fluid Density/Gravel (pcf)
Level	45	35
3H:1V	65	60
2H:1V	95	90

The above recommended values assume that the walls will be adequately drained to prevent the buildup of hydrostatic pressures. Where wall drainage will not be present and/or if adjacent surcharge loading is present, the above recommended values will be significantly higher.

Project No. 1098.023.G Page No. 13

Backfill materials behind walls should be compacted to 90 percent of the maximum dry density as determined by the ASTM D-1557 (AASHTO T-180) test procedures. Special care should be taken to avoid over-compaction near the walls which could result in higher lateral earth pressures than those indicated herein. In areas within three (3) to five (5) feet behind walls, we recommend the use of hand-operated compaction equipment.

#### Excavation/Slopes

Temporary excavations of up to about four (4) feet in depth may be constructed with near vertical inclinations. Temporary excavations greater than about four (4) feet but less than eight (8) feet should be excavated with inclinations of at least 1 to 1 (horizontal to vertical) or properly braced/shored. Where excavations are planned to exceed about eight (8) feet, this office should be consulted. All shoring systems and/or temporary excavation bracing for the project should be the responsibility of the excavation and/or grading contractor.

Permanent cut and/or fill slopes should be constructed no steeper than about 2H to 1V.

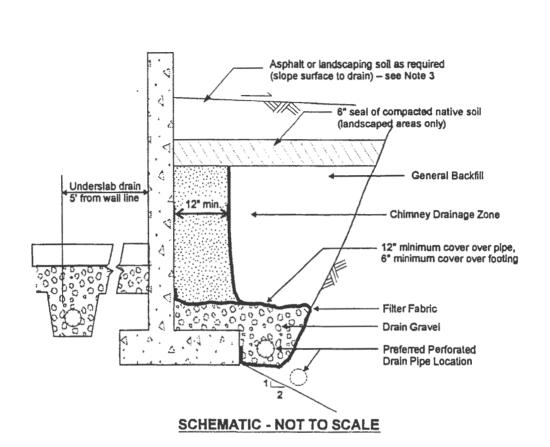
#### Surface Drainage/Groundwater

We recommend that positive measures be taken to properly finish grade the site so that drainage waters from the building and landscaping areas as well as adjacent properties or buildings are directed away from the new residential structures foundations and/or floor slabs as well as the existing moderately steep slope. All roof drainage should be directed into conduits that carry runoff water away from the residential structure(s) to a suitable outfall. Roof downspouts should not be connected to foundation drains. A minimum ground slope of about 2 percent is generally recommended in unpaved areas around the residential structure(s).

Groundwater was not encountered at the site in any of the exploratory test pits at the time of excavation. Additionally, although groundwater elevations in the area may fluctuate seasonally and may temporarily pond/perch near the ground surface during periods of prolonged rainfall, based on our current understand of the site grading required to bring the subject site to finish design grades, we are of the opinion that an underslab drainage system is not required for the proposed single-family structure(s). However, due to our understanding that the proposed residential structure(s) may be constructed with a below grade retaining wall and basement area, we are generally of the opinion that a perimeter footing/foundation drainage system should be utilized around the perimeter of the proposed residential structure(s). Additionally, a foundation drain is recommended for any other below grade footings and/or retaining walls. A typical recommended perimeter footing and/or retaining wall footing drain detail is shown on Figure No. 3.

#### **Design Infiltration Rates**

Based on the results of our field infiltration testing, we recommend using the following infiltration rate to design any on-site near surface storm water infiltration and/or disposal systems for the project:



#### NOTES:

- 1. Filter Fabric to be non-woven geotextile (Amoco 4545, Mirafi 140N, or equivalent)
- Lay perforated drain pipe on minimum 0.5% gradient, widening excavation as required.
   Maintain pipe above 2:1 slope, as shown.
- All-granular backfill is recommended for support of slabs, pavements, etc. (see text for structural fill).
- 4. Drain gravel to be clean, washed 3/4" to 11/2" gravel.
- General backfill to be on-site gravels, or %\*\*-0 or 1½\*-0 crushed rock compacted to 92% Modified Proctor (AASHTO T-180).
- Chimney drainage zone to be 12" wide (minimum) zone of clean washed, medium to coarse sand or drain gravel if protected with filter fabric. Alternatively, prefabricated drainage structures (Miradrain 6000 or similar) may be used.

#### PERIMETER FOOTING/RETAINING WALL DRAIN DETAIL

TAX LOT NO'S. 1800 AND 1900 21765 WILLAMETTE DRIVE

Figure No. 3

Project No. 1098.023.G

#### **Subgrade Soil Type**

#### **Recommended Infiltration Rate**

sandy, clayey SILT (ML)

0.3 inches per hour (in/hr)

Note: A safety factor of two (2) was used to calculate the above recommended design infiltration rate. Additionally, given the gradational variability of the on-site sandy, clayey sit subgrade soils beneath the site as well as the anticipation of some site grading for the project, it is generally recommended that field testing be performed during and/or following construction of any on-site storm water infiltration system(s) in order to confirm that the above recommended design infiltration rates are appropriate.

#### Seismic Design Considerations

Structures at the site should be designed to resist earthquake loading in accordance with the methodology described in the 2014 and/or latest edition of the State of Oregon Structural Specialty Code (OSSC) and/or Amendments to the 2015 International Building Code (IBC). The maximum considered earthquake ground motion for short period and 1.0 period spectral response may be determined from the Oregon Structural Specialty Code and/or Figures 1613 (1) and 1613 (2) of the 2009 National Earthquake Hazard Reduction Program (NEHRP) "Recommended Provisions for Seismic Regulations for New Buildings and Other Structures" published by the Building Seismic Safety Council. We recommend Site Class "C" be used for design per Table 1613.5.2. Using this information, the structural engineer can select the appropriate site coefficient values (Fa and Fv) from Tables 1613.5.3 (1) and 1613.5.3 (2) of the IBC to determine the maximum considered earthquake spectral response acceleration for the project.

However, we have assumed the following response spectrum for the project:

Table 1. IBC Seismic Design Parameters

Site Class	Ss	Sı	Fa	Fv	SMS	Smi	SDS	Spi
С	0.944	0.407	1.022	1.393	0.965	0.566	0.644	0.378

Notes: 1. Ss and S1 were established based on the USGS 2015 mapped maximum considered earthquake spectral acceleration maps for 2% probability of exceedence in 50 years.

2. Fa and Fv were established based on 2015 IBC tables 1613.5.3 (1) and 1613.5.3 (2) using the selected Ss and S1 values.

#### **Erosion Control**

During our field exploration program, we observed soil types that would generally be considered highly susceptible to erosion. In our opinion, the primary concern regarding soil erosion potential will likely occur during and/or immediately following construction in areas that have recently been stripped and cleared of surface vegetation. Erosion at the site during construction can be minimized by implementing a project erosion control plan which should include the judicious use of straw bales and silt fences. If used, these erosion control devices should be in place and remain in place throughout all of the site grading and earthwork operations. Erosion and sedimentation of exposed sandy subgrade soils can also be minimized by quickly re-vegetating exposed areas of soil and by staging (if possible) construction such that large areas of the site are not denuded and exposed at the same time. Areas of exposed soil requiring immediate and/or temporary protection against exposure should be covered with either mulch or erosion control netting/blankets. Areas of exposed soil requiring permanent stabilization should be seeded with an approved grass seed mixture or hydroseeded with an approved seed-mulch-fertilizer mixture.

#### **CONSTRUCTION MONITORING AND TESTING**

We recommend that **Redmond Geotechnical Services**, **LLC** be retained to provide construction monitoring and testing services during all earthwork operations for the proposed new residential development. The purpose of our monitoring services would be to confirm that the site conditions reported herein are as anticipated, provide field recommendations as required based on the actual conditions encountered, document the activities of the grading contractor and assess his/her compliance with the project specifications and recommendations. It is important that our representative meet with the contractor prior to grading to help establish a plan that will minimize costly over-excavation and site preparation work. Of primary importance will be observations made during site preparation, structural fill placement, footing excavations and construction as well as retaining wall backfill and construction of subsurface drains.

#### **CLOSURE AND LIMITATIONS**

This report is intended for the exclusive use of the addressee and/or their representative(s) to use to design and construct the proposed new single-family residential structure(s) and its/their associated site improvements described herein as well as to prepare any related construction documents. The conclusions and recommendations contained in this report are based on site conditions as they presently exist and assume that the explorations are representative of the subsurface conditions between the explorations and/or across the study area. The data, analyses, and recommendations herein may not be appropriate for other structures and/or purposes. We recommend that parties contemplating other structures and/or purposes contact our office. In the absence of our written approval, we make no representation and assume no responsibility to other parties regarding this report. Additionally, the above recommendations are contingent on Redmond geotechnical Services, LLC being retained to provide all site inspections and construction monitoring services associated with all aspects of the site grading, earthwork operations, and foundation preparation work for this project.

Redmond Geotechnical Consultants, LLC will not assume any responsibility and/or liability for any engineering judgment, inspection, and/or testing performed by others.

It is the owners/developers responsibility for insuring that the project designers and/or contractors involved with this project implement our recommendations into the final design plans, specifications and/or construction activities for the project. Further, in order to avoid delays during construction, we recommend that the final design plans and specifications for the project be reviewed by our office to evaluate as to whether our recommendations have been properly interpreted and incorporated into the project.

If during any future site grading and construction, subsurface conditions different from those encountered in the explorations are observed or appear to be present beneath excavations, we should be advised immediately so that we may review these conditions and evaluate whether modifications of the design criteria are required. We also should be advised if significant modifications of the proposed site development are anticipated so that we may review our conclusions and recommendations.

#### LEVEL OF CARE

The services performed by the Geotechnical Engineer for this project have been conducted with that level of care and skill ordinarily exercised by members of the profession currently practicing in the area under similar budget and time restraints. No warranty or other conditions, either expressed or implied, is made.

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## **APPENDIX A**

TEST PIT LOGS & LABORATORY TEST RESULTS

#### **APPENDIX**

#### FIELD EXPLORATIONS AND LABORATORY TESTING

#### FIELD EXPLORATION

Subsurface conditions at the site were explored by excavating two (2) exploratory test pits on June 29, 2018. The approximate location of the test pit exploration is shown in relation to the existing site improvements on the Site Exploration Plan, Figure No. 2.

The test pits were excavated using tracked excavating equipment in general conformance with ASTM Methods in Vol. 4.08, D-1586-94 and D-1587-83. The test pits were excavated to depths of between 2.0 and 7.0 feet beneath existing site grades. Detailed logs of the test pits are presented on the Log of Test Pits, Figure No. A-4. The soils were classified in accordance with the Unified Soil Classification System (USCS), which is outlined on Figure No. A-3.

The exploration program was coordinated by a field engineer who monitored the excavating and exploration activity, obtained representative samples of the subsurface soils encountered, classified the soils by visual and textural examination, and maintained continuous logs of the subsurface conditions. Disturbed and/or undisturbed samples of the subsurface soils were obtained at appropriate depths and/or intervals and placed in plastic bags and/or with a thin walled ring sample.

Groundwater was not encountered within either exploratory test pits at the time of excavating.

#### LABORATORY TESTING

Pertinent physical and engineering characteristics of the soils encountered during our subsurface investigation were evaluated by a laboratory testing program to be used as a basis for selection of soil design parameters and for correlation purposes. Selected tests were conducted on representative soil samples. The program consisted of tests to evaluate the existing field moisture content, maximum dry density and optimum moisture content, Atterberg Limits and gradational characteristics as well as direct shear strength properties of the native sandy, clayey silt subgrade soils.

#### **Dry Density and Moisture Content Determinations**

Density and moisture content determinations were performed on both disturbed and relatively undisturbed samples from the test pit explorations in general conformance with ASTM Vol. 4.08 Part D-216. The results of these tests were used to calculate existing overburden pressures and to correlate strength and compressibility characteristics of the soils. Test results are shown on the test pit log at the appropriate sample depths.

#### **Maximum Dry Density**

One (1) Maximum Dry Density and Optimum Moisture Content test was performed on a representative sample of the on-site near surface sandy, clayey silt subgrade soils in accordance with ASTM Vol. 4.08 Part D-1557-91. The test was conducted to help establish various engineering properties and/or for use as structural fill. The test results are presented on Figure No. A-5.

#### **Atterberg Limits**

Liquid Limit (LL) and Plastic Limit (PL) tests were performed on representative samples of the subsurface sandy, clayey silt subgrade soils in accordance with ASTM Vol. 4.08 Part D-4318-95. These tests were conducted to facilitate classification of the soils and for correlation purposes. The test results appear graphically on Figure No. A-6.

#### **Gradation Analysis**

Gradation analyses were performed on representative samples of the native sandy, clayey silt subgrade soils in accordance with ASTM Vol. 4.08 Part D-422. The test results were used to classify the soil in accordance with the Unified Soil Classification System (USCS). The test results are shown graphically on Figure No. A-7.

#### **Direct Shear Strength Test**

One (1) Direct Shear Strength test was performed on a relatively undisturbed and/or remolded sample at a continuous rate of shearing deflection (0.02 inches per minute) in accordance with ASTM Vol. 4.08 Part D-3080-79. The test results were used to determine engineering strength properties and are shown graphically on Figure No. A-8.

The following figures are attached and complete the Appendix:

Figure No. A-3	Key To Exploratory Boring Logs
Figure No. A-4	Log of Test Pits
Figure No. A-5	Maximum Dry Density Test Results
Figure No. A-6	Atterberg Limits Test Results
Figure No. A-7	Gradation Test Results
Figure No. A-8	Direct Shear Strength Test Results

PF	RIMARY DIVISION	IS	GROUP SYMBOL	SECONDARY DIVISIONS
	GRAVELS	ELS CLEAN GRAVELS		Well graded gravels, gravel-sand mixtures, little or no fines.
SOILS MATERIAL 3. 200	MORE THAN HALF OF COARSE	(LESS THAN 5% FINES)	GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
1 =	FRACTION IS	GRAVEL	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines.
A O Z Z	LARGER THAN NO. 4 SIEVE	WITH FINES	GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines.
	SANDS	CLEAN SANDS	sw	Well graded sands, gravelly sands, little or no fines.
COARSE G RE THAN E S LARGER SIE	MORE THAN HALF OF COARSE	(LESS THAN 5% FINES)	SP	Poorly graded sands or gravelly sands, little or no fines.
COA MORE IS L	FRACTION IS SMALLER THAN	SANDS	SM	Silty sands, sand-silt mixtures, non-plastic fines.
M	NO. 4 SIEVE	FINES	sc	Clayey sands, sand-clay mixtures, plastic fines.
LS DF ER SIZE	SILTS AND	CLAYS	ML	Inorganic silts and very fine sands, rock flour, silty, or clayey fine sands or clayey silts with slight plasticity.
	LIQUID LIM	IIT IS	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
INED SC AN HALF IS SMAL	LESS THAI	N 50%	OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS		МН	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
: # m -			СН	Inorganic clays of high plasticity, fat clays.
FINE MOR MAT THAN	GREATER TH	AN 50%	он	Organic clays of medium to high plasticity, organic silts.
H	IGHLY ORGANIC SOIL	S	Pt	Peat and other highly organic soils.

### DEFINITION OF TERMS

20		TANDARD SERIES	SIEVE			SIEVE OPE	NINGS 2"
SILTS AND CLAYS		SAND		GRA	VEL	CORRIEC	BOULDERS
SILIS AND CLATS	FINE	MEDIUM	COARSE	FINE	COARSE	COBBLES	BOULDERS

### GRAIN SIZES

SANDS, GRAVELS AND NON-PLASTIC SILTS	BLOWS/FOOT †
VERY LOOSE LOOSE	0 - 4 4 - 10
MEDIUM DENSE	10 - 30
DENSE	30 - 50
VERY DENSE	OVER 50

CLAYS AND PLASTIC SILTS	STRENGTH *	BLOWS/FOOT <sup>†</sup>
VERY SOFT SOFT FIRM STIFF VERY STIFF HARD	0 - 1/4 1/4 - 1/2 1/2 - 1 1 - 2 2 - 4 OVER 4	0 - 2 2 - 4 4 - 8 8 - 16 16 - 32 OVER 32
	1	1

#### RELATIVE DENSITY

#### CONSISTENCY

Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O.D. (1-3/8 inch I.D.) split spoon (ASTM D~1586).

<sup>‡</sup>Unconfined compressive strength in tons/sq. ft. as determined by laboratory testing or approximated by the standard penetration test (ASTM D=1586), pocket penetrometer, torvane, or visual observation.

# REDMOND GEOTECHNICAL SERVICES

PO Box 20547 . PORTLAND, OREGON 97294

# KEY TO EXPLORATORY TEST PIT LOGS Unified Soil Classification System (ASTM D-2487)

21765 WILLAMETTE DRIVE West Linn, Oregon

PROJECT NO.	DATE	Figure 2	
10 <u>9</u> 8.023.G	8/03/18	Figure	A-3
/3	Planning	Manager E	ecision

ELD-24-06

S	DENSITY	DRY DENSITY (pcf)	MOISTURE CONTENT (%)	SOIL CLASS. (U.S.C.S.)	SOIL DESCRIPTION  TEST PIT NO. TH-#1 ELEVATION 188'±
				ML	Dark brown, moist, soft, organic, clayey, sandy SILT (Topsoil)
				RK	Gray-brown to gray, dense to very dense, slightly to moderately weathered and fractured BASALT bedrock
					Total Depth = 2.0 feet (Refusal) No groundwater encountered at time of exploration
Х				ML	TEST PIT NO. TH-#2 ELEVATION 186'±  FILL: Medium brown, moist to very moist, poorly to moderately compacted, clayey, sandy SILT with trace of organics
х			22.2	ML	NATIVE GROUND: Medium to dark brown, very moist, soft to medium stiff, sandy, clayey SILT with traces of organics and rock fragments
				RK	Gray-brown, moist, medium dense to dense, highly to moderately weathered and fracture BASALT bedrock
					Total Depth = 7.0 feet No groundwater encountered at time of exploration
				X 22.2	X ML 22.2 ML

#### MAXIMUM DENSITY TEST RESULTS

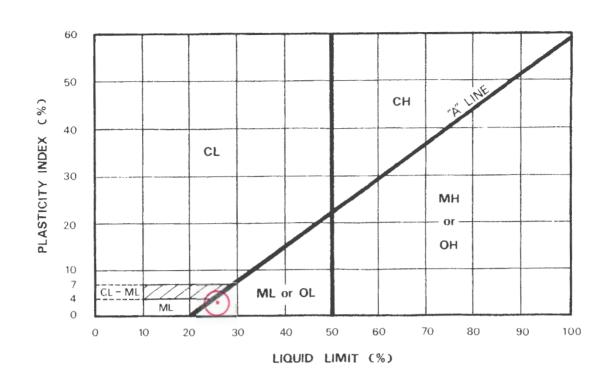
SAMPLE SOIL DESCRIPTION		MAXIMUM DRY DENSITY (pcf)	OPTIMUM MOISTURE CONTENT (%)
TH-#2 @ SILT (ML) 3.0'	clayey	(pcf) 110.0	16.0

#### **EXPANSION INDEX TEST RESULTS**

SAMPLE LOCATION	INITIAL MOISTURE (%)	COMPACTED DRY DENSITY (pcf)	FINAL MOISTURE (%)	VOLUMETRIC SWELL (%)	EXPANSION INDEX	EXPANSIVE CLASS.
						:

# MAXIMUM DENSITY & EXPANSION INDEX TEST RESULTS

FIGURE NO .: A-5 PROJECT NO.: 1098.023.G 21765 WILLAMETTE DRIVE



KEY SYMBOL	BORING NO.	SAMPLE DEPTH (feet)	NATURAL WATER CONTENT %	LIQUID LIMIT %	PLASTICITY INDEX %	PASSING NO. 200 SIEVE %	LIQUIDITY INDEX	UNIFIED SOIL CLASSIFICATION SYMBOL
·	TH-#2	3.0	22.2	25.6	3.7	81.1		ML



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# PLASTICITY CHART AND DATA

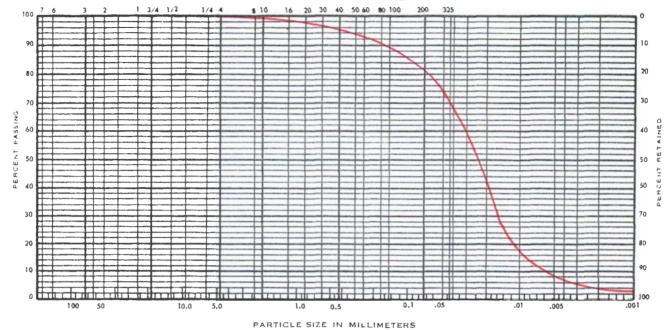
21765 WILLAMETTE DRIVE West Linn, Oregon

PROJECT NO. DATE Figure A-6
1098.023.G 8/03/18

#### UNIFIED SOIL CLASSIFICATION SYSTEM

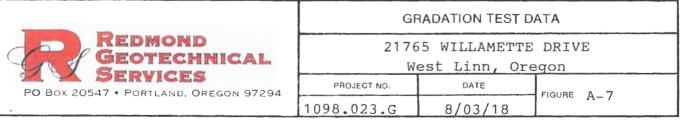
(ASTM D 422-72)

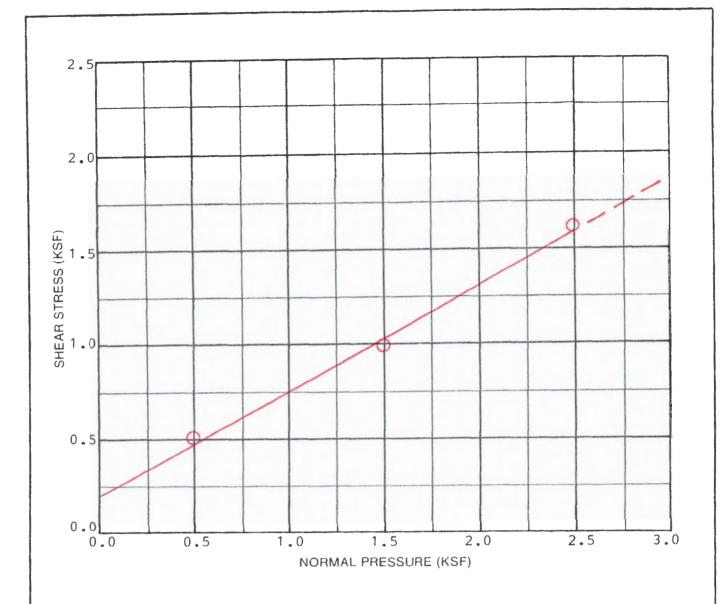
U. S STANDARD SIEVE SIZES



COBBLES	GRAVEL		SAND			SILT AND CLAY
COBBCES	COARSE FINE		COARSE	MEDIUM	FINE	SICI AND CLAY

KEY SYMBOL	BORING NO.	SAMPLE DEPTH (feet)	ELEV. (feet)	UNIFIED SOIL CLASSIFICATION SYMBOL	SAMPLE DESCRIPTION
	TH-#2	3.0		ML	Medium to dark brown, sandy clayey SILT





SAMPLE DATA					
DESCRIPTION: Medium to dark brown, sandy, clayey SILT (ML) (Remolded)					
BORING NO.: TH-#2					
DEPTH (ft.): 3.0	ELEVATION (II):				
TEST RESULTS					
APPARENT COHESION (C): 200 psf					
APPARENT ANGLE OF INTERNAL	FRICTION (Φ): 28°				

TEST DATA				
TEST NUMBER I 2 3				
NORMAL PRESSURE (KSF)	0.5	1.5	2.5	
SHEAR STRENGTH (KSF)	0.5	1.0	1.6	
INITIAL H:O CONTENT (%)	16.0	16.0	16.0	
FINAL H20 CONTENT (%)	16.4	12.1	7.8	
INITIAL DRY DENSITY (PCF)	98.0	98_0	98.0	
FINAL DRY DENSITY (PCF)	98 7	101 6	106.3	
STRAIN RATE: 0.02 inches per minute				



PO BOX 20547 . PORTLAND, OREGON 97294

DIRECT SHEAR TEST DATA				
21765 WILLAMETTE DRIVE				
₩€	est Linn, Ore	gon		
PROJECT NO. DATE				
Figure A-8 1098.023.G 8/03/18 Planning Manager Decision				
'8 Planning Manager Decision				

ELD-24-06

# **5\_Stormwater Report**

# Broadway Townhomes 21765 Willamette Drive

West Linn, Oregon



# DRAINAGE ANALYSIS May 2023

Prepared By:

Bruce D. Goldson, PE

Theta, Ilc

PO Box 1345, Lake Oswego, Oregon 97035

# 2018-276



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Summary	pg 2-3
Hydrographic Calculations	pg 3-8
Conclusion	pg 8
Appendix	pg 9-11

#### **PURPOSE:**

This is a proposed 7-lot townhome development on a very steep parcel sloping south to north, with street improvements on Broadway and the storm system for the new impervious storm flow directed towards Highway 43. Since the infiltration was found to be only 0.6 inches per hour total infiltration is not practical. Individual flow through planters are proposed for each unit

#### NARRATIVE ASSUMPTIONS

# Regulatory

2.0013 Minimum Design Criteria

### A. Storm Detention Facilities

2. Storms to be evaluated shell include to 2, 5, 10, 25, and 100-year event. Allowable post-development discharge rates for the 2, 5, 10, and 25-year events hall be that of the predevelopment rate. An outfall structure such as a "V-North" weir of single of multiple orifice structure shall be designed to control the release rate for the above events. No flow control orifice smaller than 1 in. shall be allowed. If the maximum release cannot be met with all the site drainage controlled by a single 1 in. orifice, the allowable release rate provided by the 1 in. orifice will be considered adequate as approved by the City Engineer.

# References Regulatory

- King County Department of Public Works, Surface Water Management Division, Hydrographic Programs, Version 4.21B
- 2. City of Portland Sewer & Drainage Facilities Design Manual, Chart 1
- 3. City of West Linn Public Works Design Standards (2010) Section two-storm Facilities Design Manual

# Summary

Event	Pre flow	Post flow	With Orifices
2-year	0.01 cfs	0.0.02 cfs	0.01 cfs

5-year	0.02 cfs	0.03 cfs	0.02 cfs
10-year	0.02 cfs	0.03 cfs	0.02 cfs
25-year	0.02 cfs	0.03 cfs	0.02 cfs

### Time of concentration

Assumed 5 minutes.

#### Areas:

Each unit has 1422 SF of impervious area

# HYDROGRAPH RESULTS (DETENTION, WATER QUALITY, INFILTRATION)

KING COUNTY DEPARTMENT OF PUBLIC WORKS

Surface Water Management Division HYDROGRAPH PROGRAMS

Version 4.21B

- 1 INFO ON THIS PROGRAM
- 2 SBUHYD
- 3 MODIFIED SBUHYD
- 4 ROUTE
- 5 ROUTE2
- 6 ADDHYD
- 7 BASEFLOW
- 8 PLOTHYD
- 9 DTATA
- 10 REFAC
- 11 RETURN TO DOS

### **ENTER OPTION:**

2

SBUH/SCS METHOD FOR COMPUTING RUNOFF HYDROGRAPH STORM OPTIONS:

- 1 S.C.S. TYPE-1A
- 2 7-DAY DESIGN STORM
- 3 STORM DATA FILE

SPECIFY STORM OPTION:

1

S.C.S. TYPE - 1A RAINFALL DISTRIBUTION

ENTER; FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES)

25,24,3.9

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1

0.033,86,0.0,98,5.0 DATA PRINT OUT:

AREA(ACRES)	PERV	IOUS	IMPER	RVIOUS	TC(MINUTES)
	Α	CN	Α	CN	
.0	.0	86.0	.0	98.0	5.0
PEAK-Q(CFS)	T-PEA	K(HRS)	VOL(C	U-FT)	
.02		67	29	20	
ENTER [dk:][path]filena	me[.ext]	FOR STORAGE OF	СОМРИТ	ED HYDROGR	APH:
C:25bex					
SPECIFY: C - CONTINUE	, N - NEV	/STORM, P -PRINT,	S - STOP		
С		edeminates es es es estados es estados			
ENTER: A(PERV), CN(PE	RV) A(IM	PERV) CN(IMPERV)	TC FOR	BASIN NO. 1	
0.0,86,0.033,98,13.7		// ( /	,,		
DATA PRINT OUT:					
AREA(ACRES)	PERV	IOUS	IMPER	VIOUS	TC(MINUTES)
, interioritary	A	CN	Α	CN	10(111110125)
.0	.0	86.0	.0	98.0	5.0
					3.0
PEAK-Q(CFS)		kK(HRS)	VOL(C	151 171.00	
.03		67 FOR STORAGE OF	439		ADIL
ENTER [dk:][path]filena	ameį.extj	FOR STORAGE OF	COMPUT	ED HYDROGK	APH:
C:25bpx					
1 - S.C.S. TYPE-1A					
1 - S.C.S. TYPE-1A 2 - 7-DAY DESIGN STOR	NA.				
3 - STORM DATA FILE					
SPECIFY STORM OPTIO	N:				
1					
S.C.S. TYPE - 1A RAINFA					
ENTER; FREQ(YEAR), DI 2,24,2.5	URATION	(HOUR), PRECIP(IN	CHES)		
	xx S.C.S.T	YPE-1A DISTRIBUTI	ON xxxxx	xxxxxxxxx	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
XXXXXXXXXXX 2-YEA	AR 24-HC	OUR STORM XXXX	2.50 "T	OTAL PRECIP	Xxxxxxxxxxxxxxxxxxxxxxxx
ENTER: A(PERV),CN(PE	RV),A(IMI	PERV),CN(IMPERV),	TC FOR E	BASIN NO. 1	
0.033,86,0.0,98,5	,czu 10	0000 SA 5555			
DATA PRINT OUT:					
AREA(ACRES)	PERV	ous	IMPER	VIOUS	TC(MINUTES)
	Α	CN	Α	CN	2
.0	.0	86.0	.0	98.0	5.0
PEAK-Q(CFS)		K(HRS)	VOL(CI		2.2
.01	7.0		148		
.01 ENTER [dk:][path]filena					APH:
C:2bex	o[,ext]		× (		THE CONTROL
SPECIFY: C - CONTINUE	. N - NFM	STORM P -PRINT	S - STOP		
	, IV IVEV	OTOMAN, E TERMAN,	3 3101		
C					

pg. 4

ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1 0.0,86,0.033,98,5 DATA PRINT OUT: AREA(ACRES) **PERVIOUS IMPERVIOUS** TC(MINUTES) CN CN A 5.0 .0 .0 86.0 .0 98.0 PEAK-Q(CFS) T-PEAK(HRS) VOL(CU-FT) 7.67 .02 272 ENTER [dk:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH: C:2bpx SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP N 1 - S.C.S. TYPE-1A 2 - 7-DAY DESIGN STORM 3 - STORM DATA FILE SPECIFY STORM OPTION: 1 S.C.S. TYPE - 1A RAINFALL DISTRIBUTION ENTER; FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES) 5,24,3.1 ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1 0.033,86,0.0,98,5 DATA PRINT OUT: TC(MINUTES) **IMPERVIOUS** AREA(ACRES) **PERVIOUS** CN CN 5.0 86.0 .0 98.0 .0 .0 T-PEAK(HRS) VOL(CU-FT) PEAK-Q(CFS) 7.67 ENTER [dk:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH: C:5bex SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1 0.0,86,0.033,98,5 DATA PRINT OUT: TC(MINUTES) PERVIOUS **IMPERVIOUS** AREA(ACRES) CN CN 5.0 86.0 .0 98.0 .0 VOL(CU-FT) PEAK-Q(CFS) T-PEAK(HRS)

pg. 5

C:wr5

7.67

ENTER [dk:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:

343

T-PEAK(HRS)

ENTER [dk:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH:

7.67

1 - S.C.S. TYPE-1A 2 - 7-DAY DESIGN STORM 3 - STORM DATA FILE SPECIFY STORM OPTION: 1 S.C.S. TYPE - 1A RAINFALL DISTRIBUTION ENTER; FREQ(YEAR), DURATION(HOUR), PRECIP(INCHES) 10,24,3.40 ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1 0.033,86,0.0,98,5 DATA PRINT OUT: **PERVIOUS IMPERVIOUS** TC(MINUTES) AREA(ACRES) CN CN .0 .0 86.0 .0 98.0 5.0 T-PEAK(HRS) PEAK-Q(CFS) VOL(CU-FT) 240 7.67 ENTER [dk:][path]filename[.ext] FOR STORAGE OF COMPUTED HYDROGRAPH: SPECIFY: C - CONTINUE, N - NEWSTORM, P - PRINT, S - STOP ENTER: A(PERV), CN(PERV), A(IMPERV), CN(IMPERV), TC FOR BASIN NO. 1 0.0.86, 0.033, 98, 5 DATA PRINT OUT: TC(MINUTES) AREA(ACRES) **PERVIOUS IMPERVIOUS** CN CN Α 86.0 98.0 5.0 .0

# **DETENTION**

PEAK-Q(CFS)

.03

C:10bpx

# KING COUNTY DEPARTMENT OF PUBLIC WORKS Surface Water Management Division HYDROGRAPH PROGRAMS

VOL(CU-FT) 379

pg. 6

#### Version 4.21B

- 1 INFO ON THIS PROGRAM
- 2 SBUHYD
- 8 PLOTHYD
- 9 DTATA
- 10 REFAC
- 11 RETURN TO DOS

```
10
```

R/D FACILITY DESIGN ROUTINE SPECIFY TYPE OF R/D FACULTY

- 1 POND
- 4 INFILTRATION POND
- 2 TANK
- 5 INFILTRATION TANK
- 3 -VAULT
- 6 GRAVEL TRENCH/BED

3

ENTER: EFFECTIVE STORAGE DEPTH (ft) BRFORE OVERFLOW

35

ENTER [d:][path]filename[.ext] OF PRIMARY DESIGN INFLOW HYDROGRAPH:

C:25BPX

PRELIMINARY DESIGN INFLOW PEAK = 0.03 CFS

ENTER PRIMARY DESIGN RELEASE RATE(cfs)

0.02

ENTER NUMBER OF INFLOW HYDROGRAPHS TO BE TESTED FOR PERFORMANCE (5 MAXIMUM)

3

ENTER [d:][path] filename[.ext] OF HYDROGRAPH 1:

C:10BPX

**ENTER TARGET RELEASE RATE (cfs)** 

0.02

ENTER [d:][path] filename[.ext] OF HYDROGRAPH 2:

C-SRPY

ENTER TARGET RELEASE RATE (cfs)

0.02

ENTER [d:][path] filename[.ext] OF HYDROGRAPH 3:

C:2BPX

**ENTER TARGET RELEASE RATE (cfs)** 

0.01

ENTER; NUMBER OF ORIFICES, RISER-HEAD (ft), RISER-DIAMETER(in)

1,3.5,6

RISER OVERFLOW DEPTH FOR PRIMARY PEAK INFLOW = .03 FT

SPECIFY ITERATION DISPLAY: Y - YES, N - NO

N

SPECIFY: R - REVIEW/REVISE INPUT, C - CONTINUE

C

INITIAL STORAGE VALUE FOR ITERATION PURPOSES: 165 CU-FT

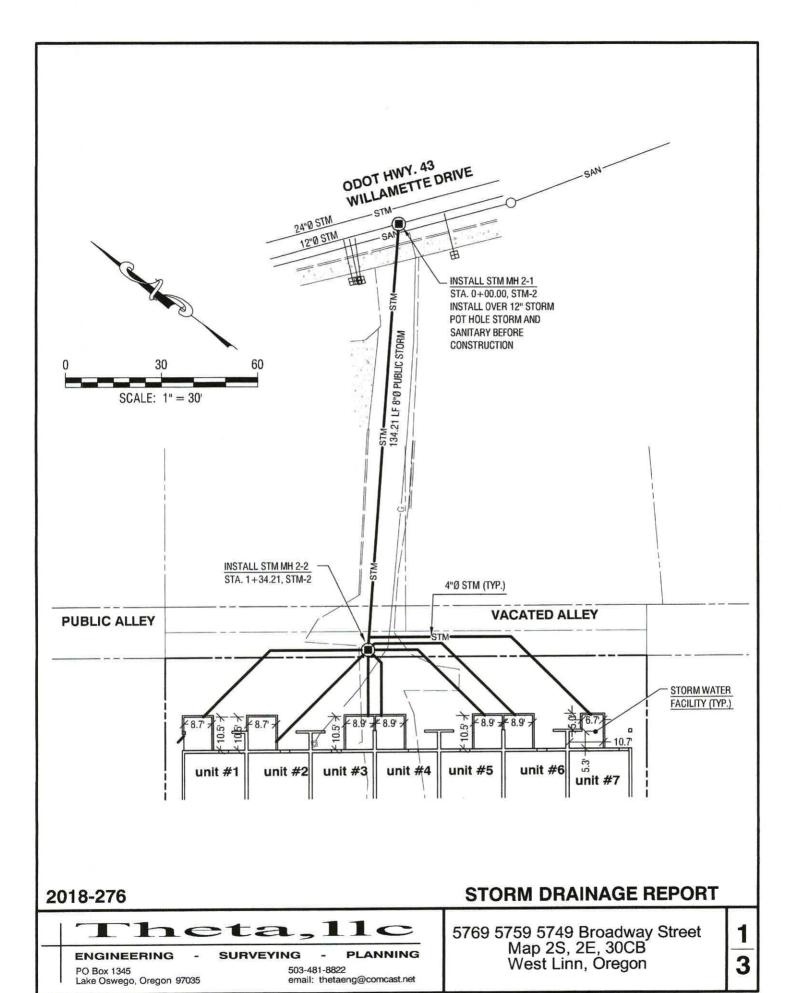
SINGLE ORIFICE RESTRICTOR: DIA = ..63

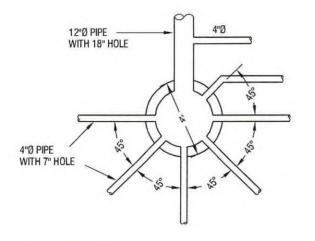
1

PERFORMANCE:	INFLOW	TARGET-OUTFLOW	<b>ACTUAL-OUTFLOW</b>	PK-STAGE	STORAGE
<b>DESIGN HYD:</b>	.03	.02	.02	3.50	27
TEST HYD: 1	.03	.02	.02	3.50	20
TEST HYD: 2	.03	.02	.02	2.72	20
TEST HYD: 3	.02	.01	.01	1.78	10

### CONCLUSION

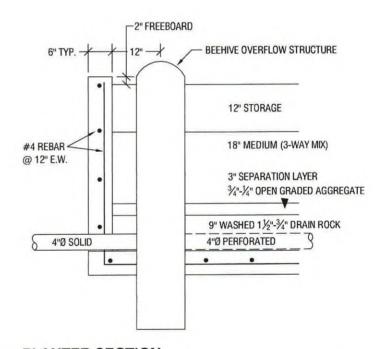
All the units are the same size. Placing a restrictor orifice to control the outward flow releases the storm water at the predeveloped rate for the 25,10,5 and 2 events. Even though the City recommends the minimum orifice size at 1" a 0.63 diameter (5/8") orifice is recommended and  $\frac{1}{2}$ " is the minimum size accepted in many other jurisdictions. Water quality is sized per the City of Portland simplified approach.





# **STM MH 2-2 MANHOLE DETAIL**

SCALE: 1" = 5'



# **PLANTER SECTION**

SCALE: 1" = 2'

# 2018-276

# STORM DRAINAGE REPORT



ENGINEERING

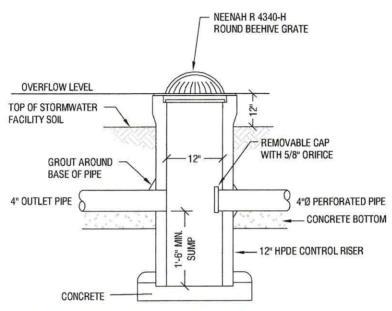
PO Box 1345 Lake Oswego, Oregon 97035 SURVEYING

503-481-8822

email: thetaeng@comcast.net

5769 5759 5749 Broadway Street Map 2S, 2E, 30CB West Linn, Oregon

**PLANNING** 



# **BEEHIVE OVERFLOW STRUCTURE**

SCALE: NTS

# **PLANTER**

SPECIES	SPACING & SIZE
JUNCUS TENUIS (SLENDER RUSH)	12", 10" DEEP CONTAINER
CAREX DENSAI (DENSE SEDGE)	12", 10" DEEP CONTAINER
DESCHAMPSIA CESPITOSA (TUFFED HAIRGRASS)	12", 10" DEEP CONTAINER
SCRIPTUS AMERICANUS (AMERICAN BULLRUSH)	12", 10" DEEP CONTAINER
POLYPODIUM MUITUM (SWORD FERN)	24", 1 GAL.

# 2018-276

# STORM DRAINAGE REPORT



ENGINEERING

SURVEYING

PLANNING

Lake Oswego, Oregon 97035

503-481-8822 email: thetaeng@comcast.net 5769 5759 5749 Broadway Street Map 2S, 2E, 30CB West Linn, Oregon

3 3

# **Geotechnical Investigation**

and

Geologic Landslide Hazards Study Services

Proposed Single-Family Residential Home Development Project

Tax Lot No's. 1800 and 1900

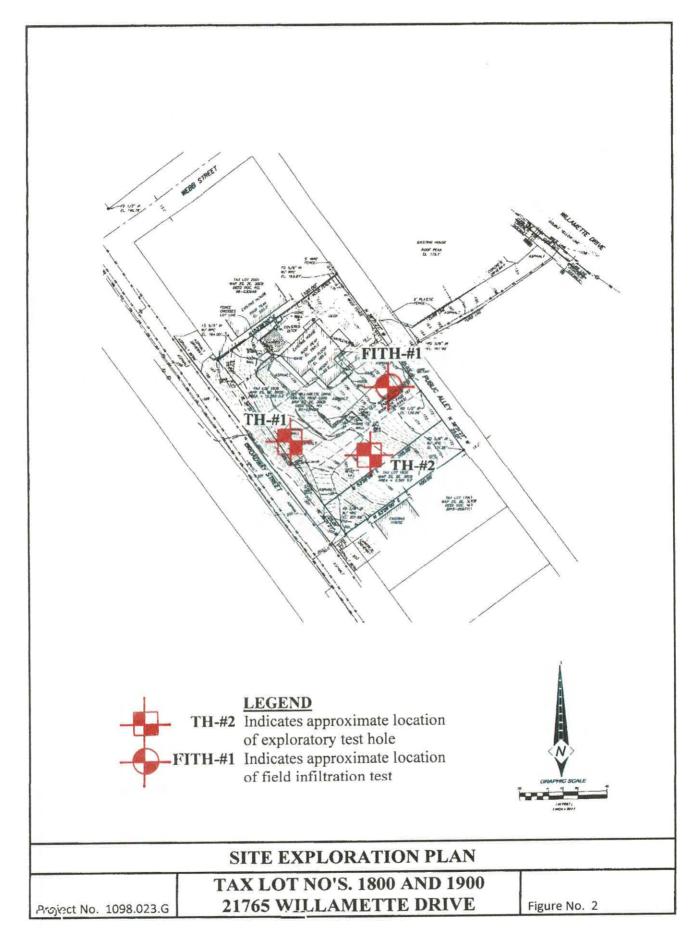
21765 Willamette Drive

Lake Oswego (Clackamas County), Oregon

for

**DreamBuilder Custom Homes** 

Project No. 1098.023.G August 3, 2018



# **INFILTRATION TESTING**

We performed one (1) field infiltration test at the site on June 29, 2018. The infiltration test was performed in field infiltration test hole FITH-#1 at a depth of between three (3) and four (4) feet beneath the existing site and/or surface grades. The subgrade soils encountered in the infiltration test hole consisted of sandy, clayey silt. The infiltration testing was performed in general conformance with current EPA and/or Clackamas County Encased Falling Head test method which consisted of advancing a 6-inch diameter PVC pipe approximately 6 inches into the exposed soil horizon at each test location. Using a steady water flow, water was discharged into the pipe and allowed to penetrate and saturate the subgrade soils. The water level was adjusted over a two (2) hour period and allowed to achieve a saturated subgrade soil condition consistent with the bottom elevation of the surrounding test pit excavation. Following the required saturating period, water was again added into the PVC pipe and the time and/or rate at which the water level dropped was monitored and recorded. Each measurable drop in the water level was recorded until a consistent infiltration rate was observed and/or repeated.

Based on the results of the field infiltration testing at the site, we have found that the native sandy, clayey silt subgrade soil deposits posses an ultimate infiltration rate on the order of about 0.6 inches per hour (in/hr).

### LABORATORY TESTING

Representative samples of the on-site subsurface soils were collected at selected depths and intervals from the test pit excavations and returned to our laboratory for further examination and testing and/or to aid in the classification of the subsurface soils as well as to help evaluate and identify their engineering strength and compressibility characteristics. The laboratory testing consisted of visual and textural sample inspection, moisture content determinations, maximum dry density and optimum moisture content, Atterberg Limits and gradation analyses as well as direct shear strength tests. Results of the various laboratory tests are presented in the Appendix, Figure No's. A-5 through A-8.

# SEISMICITY AND EARTHQUAKE SOURCES

The seismicity of the southwest Washington and northwest Oregon area, and hence the potential for ground shaking, is controlled by three (3) separate fault mechanisms. These include the Cascadia Subduction Zone (CSZ), the mid-depth intraplate zone, and the relatively shallow crustal zone. Descriptions of these potential earthquake sources are presented below.

The CSZ is located offshore and extends from northern California to British Columbia. Within this zone, the oceanic Juan de Fuca Plate is being subducted beneath the continental North American Plate to the east. The interface between these two (2) plates is located at a depth of approximately 15 to 20 kilometers (km). The seismicity of the CSZ is subject to several uncertainties, including the maximum earthquake magnitude and the recurrence intervals associated with various magnitude earthquakes.

# CITY OF PORTLAND Stormwater Management Manual

A. Time (of day)

E. Infiltration Rate\* (inches/hour)

# SIMPLIFIED APPROACH FOR

	PROJECT INFORMATION WORKSHEET				
1851	Project/Permit Number:	SITE CHARACTERISTICS			
AND	Land Use Case Number:	S.1 Do slopes exceed 20%			
CITY OF PORTLAND	Contact Name:	anywhere within the project area? ☐ Yes ☐ No			
Stormwater Management Manual	Phone:	groundwater table within the			
	Site Address/R Number(s) for all parcels:	S.3 Geotech Report? Yes No			
	West Lin	S.4 Infiltration Test? Yes No			
	Project Description: 7-Town He	Saa hack of form for required			
	Existing impervious area:	<u>f</u> 2			
	Total NEW impervious area: 1922 ED	E4			
SIMPLE PIT IN	FILTRATION TEST PROCEDURE				
The person performing	ng this test does not need a professional credentia	al.			
Test instruction	s:				
1. Conduct the test	in and/or near the location of the proposed infiltr	ration facility.			
<ol><li>Excavate a 2' by 2 Check for standir proceed with the</li></ol>	ng water or hardpan soil preventing excavation. If e	han 2' deep or 3' below grade for facilities greater than 2' deep. ither is present, document conditions on this form and <u>do not</u>			
depth at regular	t least 12 inches of water and record the initial war intervals until all of the water has been absorbed ne end of the test.	ter depth and the time when the test starts. Check the water or for 1 hour, whichever occurs first. Record the time and final			
4. Repeat the proce infiltration rates a	ess two more times for a total of three rounds. Cond at different levels of saturation. The third test provid	uct the tests in succession to accurately characterize the soil's les the best measure of the infiltration rate when saturated.			
<ol><li>Record infiltratio</li></ol>	n test data in the table below and certify the resul	ts. Uncertified test results will not be accepted.			
Required Infiltra	ation Testing				
Date of Test:	144 2018	Test Pit Location (site plan sketch)			
Depth of Excavation	(ft): 3-477-	Key information to include: 1) Site or parcel; 2) Adjacent road(s) or cross street(s); 3) Test pit location with dimensions			
Depth of Proposed Fa	acility:				
	TEST 1 TEST 2 TEST 3				
A Time (of day)					

B. Duration (minutes; 1 hour maximum) C. Initial Water Depth (inches) D. Final Water Depth (inches)

\*Infiltration Rate = Initial Depth (in) - Final Depth (in) / Duration of Test (hours). hours = minutes/60



# SIMPLIFIED APPROACH FORM

# PROPOSED STORMWATER FACILITIES

# **Proposed Stormwater Facilities**

Please note: Each individual tax lot is required to manage the stormwater runoff it generates on the same lot to the maximum extent feasible (for new construction or redevelopment). The following table includes accepted Simplified Approach facilities as described in Chapters 2 & 3 of the 2020 Stormwater Management Manual. Copies of the manual are available online at www.portlandoregon.gov/bes/SWMM.

STORMWATER FACILITY TYPE	AREA DRAINING TO FACILITY (SF)	FACILITY SIZING FORMULA	FACILITY SIZE (surface area of facility)
Ecoroof		Area x 1 (1:1 ratio)	
Pervious Pavement		Area x 1 (1:1 ratio)	
Rain garden		Area x 0.10	
Basin		Area x 0.09	
Planter	1422	Area x 0.06	85
Filter Strip		See sizing table in SWMM Section 3.3.2.1	
Driveway Center Strip		Min. width is 3 ft; max. length is 50 ft if slope is 10-15% (max. slope is 15%).	
Drywell		See Maximum Catchment Area Managed by a Single Drywell Table below	(Drywell diameter, depth number)
Soakage Trench		25 ft² of soakage trench for every 500 ft² of impervious area. (Depth = 1.5 ft; width & length vary)	
Surface Sand Filter		Area x 0.06	
TOTAL IMPERVIOUS AREA (Managed, new, and redeveloped)		Total impervious area must equal the total <b>NEW</b> impervious area being proposed.	AND REDEVELOPED

<b>Maximum Catchment Area Managed</b>
by a Single Drywell (ft²)

MATERIAL	PLASTIC	CONCRETE	CONCRETE
<b>Ring Diameter</b>	24 inches	28 inches	48 inches
2 ft deep	500 ft <sup>2</sup>	NA	NA
5 ft deep	NA	1,000 ft <sup>2</sup>	2,500 ft <sup>2</sup>
10 ft deep	NA	2,500 ft <sup>2</sup>	4,500 ft <sup>2</sup>
15 ft deep	NA	3,500 ft <sup>2</sup>	5,000 ft <sup>2</sup>

No more than 2 plastic drywells allowed per catchment area.

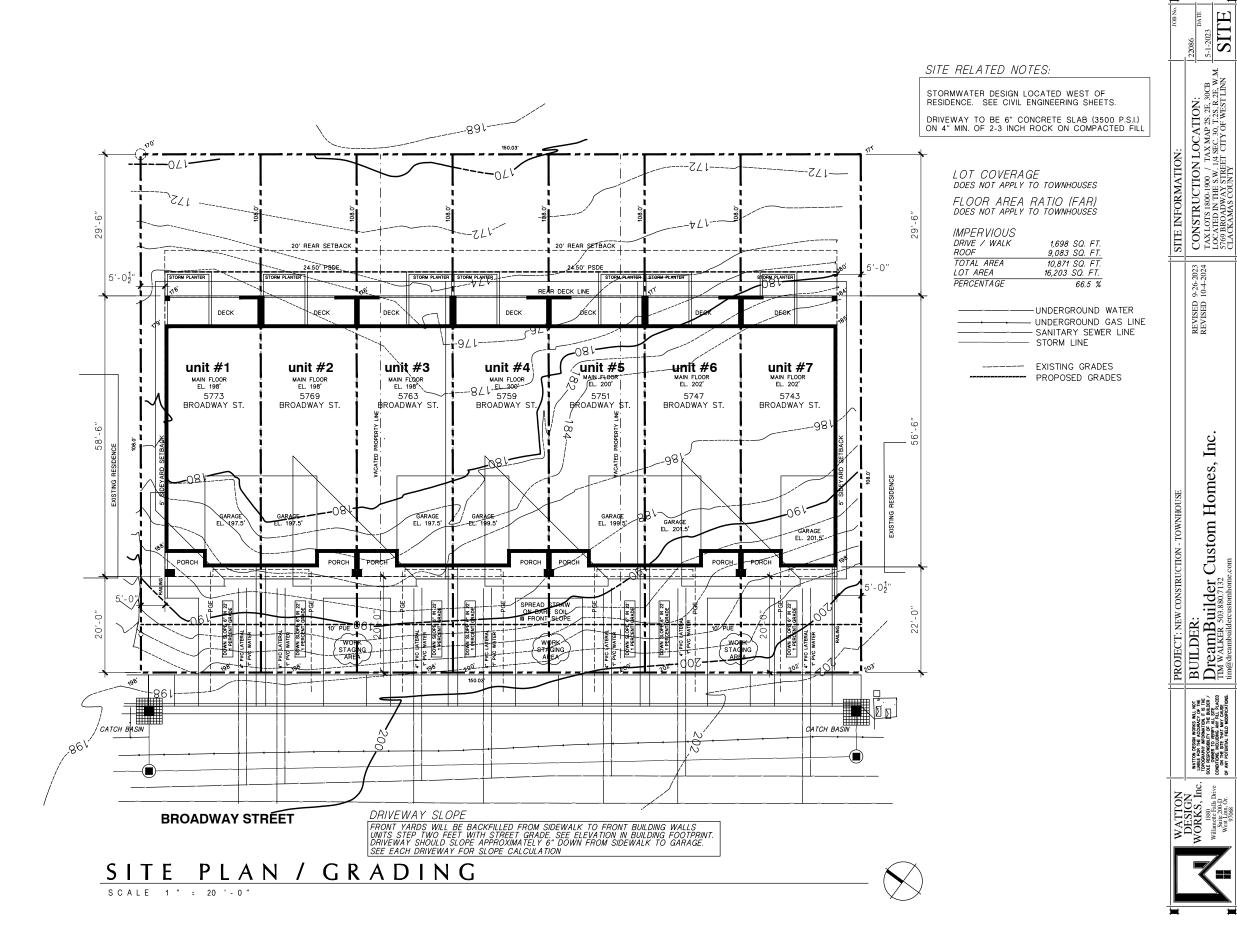
SIMPLE PIT TEST	Geotechica
Name of Tester	OF EU CONTIN
Signature of Tester	
Date	
PERSON RESPONSIBLE FOR	APPLICATION ACCURACY

**Required Certifications** 

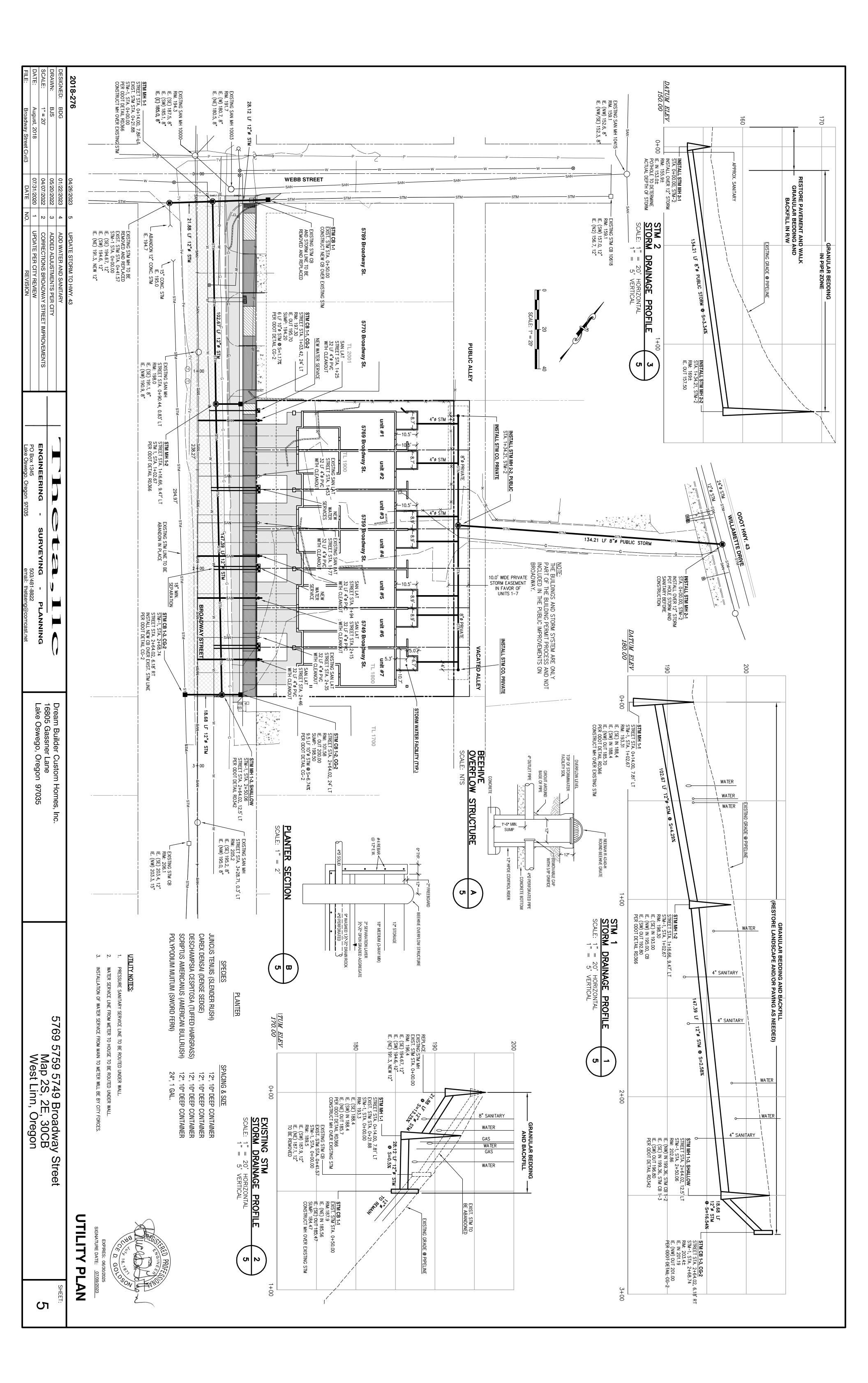
Signature

12,2023 Date

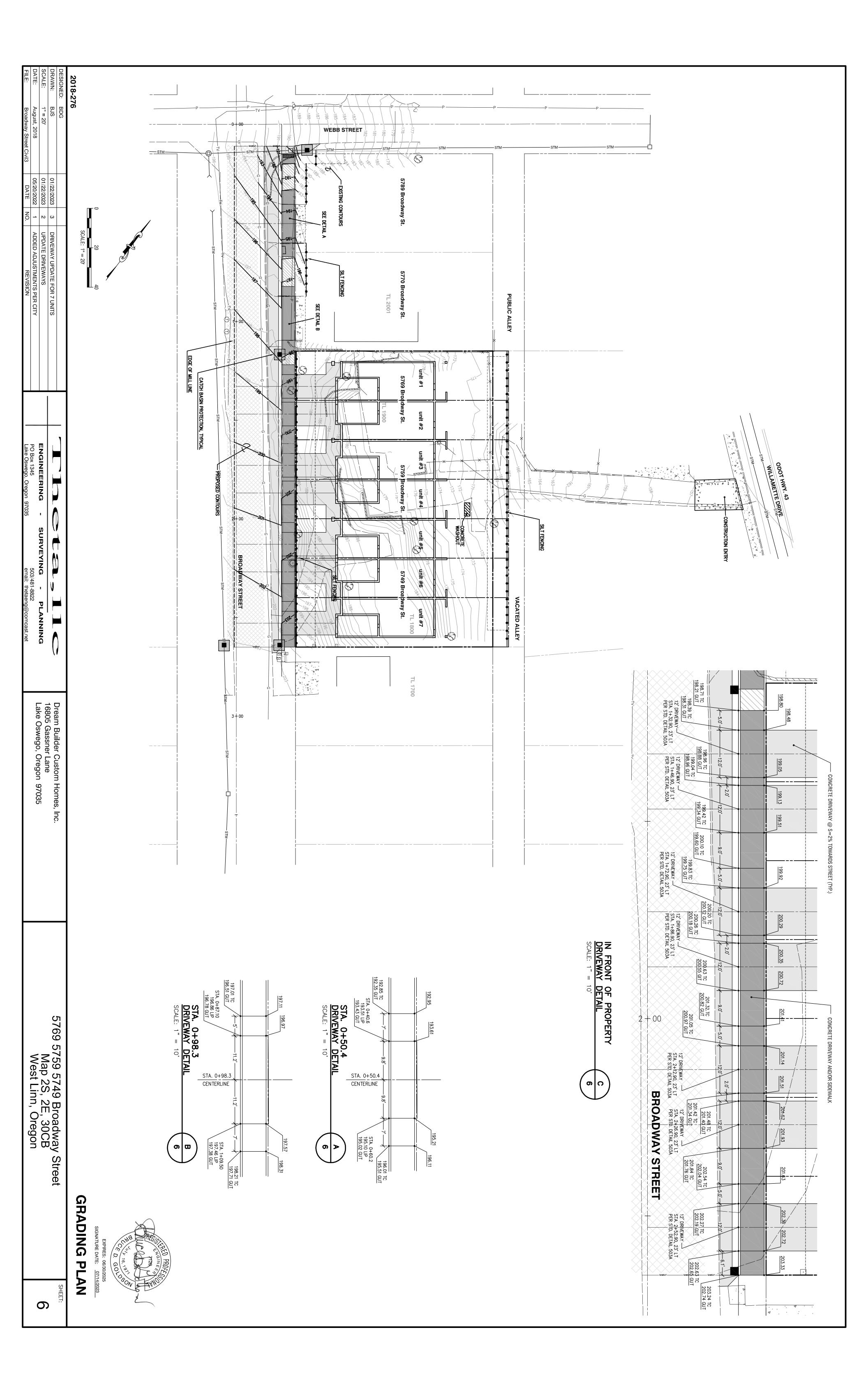
# **6\_SITE PLAN-R2**



# 7\_Broadway Street Civil3 Utility (1) (19) (3)

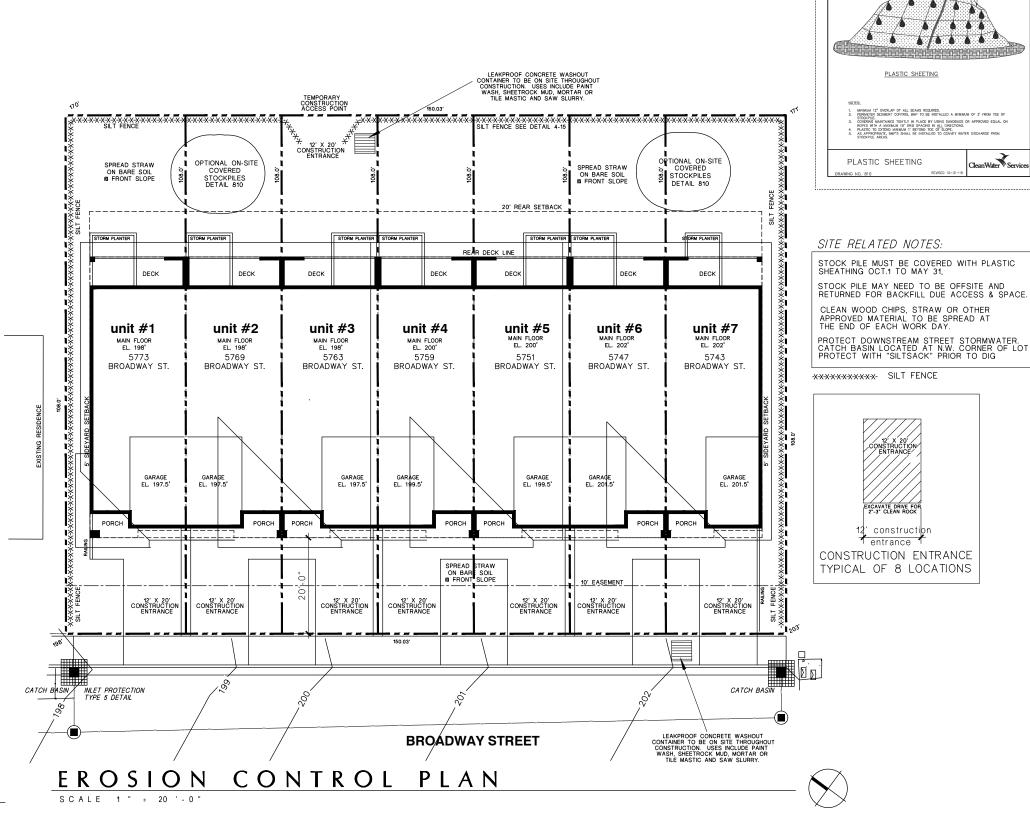


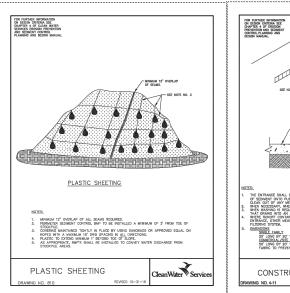
# 8\_Broadway Street Civil3 Grad (1) (4) (2)

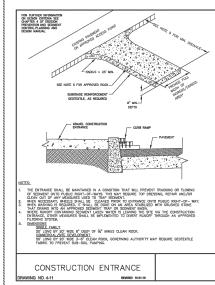


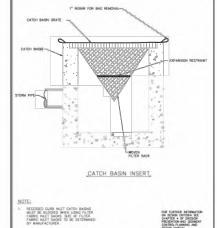
101

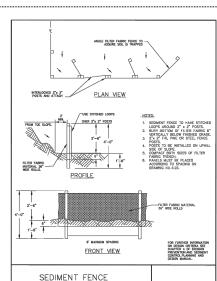
# **9\_EROSION PLAN**

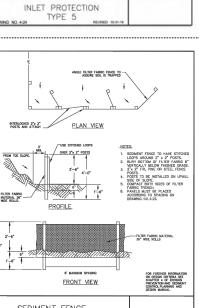














PROJECT: NEW CONSTRUCTION - TOWNHOUSE
BUILDER:
DreamBuilder Custom Homes, Inc.

CONSTRUCTION LOCATION: TAX LOTS 1800-1900 / TAX MAP 28, 2E, 30CB CITCATED IN THE S.W. 1/4 SEC. 30, T.2S, R.2E, W.M. CLACKAMAS COUNTY

# **EXHIBIT PD-2 COMPLETENESS LETTER**



January 21, 2025

Dreambuilder Custom Homes Inc. 1125 SW Borland Rd. West Linn, OR 97068

Subject: ELD-24-06 - Application for an expedited land division to divide existing lots into 7 new lots for the construction of a townhouse project.

Mr. Walker,

You submitted revised application materials on December 31, 2024. The Planning and Engineering Departments determined that the application is now **complete** as of January 21, 2025.

The application proposes a SB458 expedited land division for HB2001 middle housing development. Per SB458, the City is required to process the application under the procedures outlined in Oregon Revised Statute 197.360 to 197.380. The City has 63 days to make a decision to approve or deny the application; that period ends March 25, 2025.

Please be aware that a determination of a complete application does not guarantee an approval for your proposal as submitted – it signals that staff believes you have provided the necessary information for the Planning Director to render a decision on your proposal.

A 14-day public notice will be prepared and mailed. This notice will identify the earliest potential decision date by the Planning Director.

Please contact me at 503-742-6062, or by email at cmyers@westlinnoregon.gov if you have any questions or comments.

Respectfully,

Chris Myers

Chris Myers Associate Planner

# **EXHIBIT PD-3 AFFIDAVIT AND NOTICE PACKET**



# AFFIDAVIT OF NOTICE PLANNING MANAGER DECISION

We, the undersigned, certify that, in the interest of the party (parties) initiating a proposed land use, the following took place on the dates indicated below:

**PROJECT** 

File No.: **ELD-24-06** Applicant's Name: Dan Williams

Development Name: Broadway Townhomes Scheduled Decision Date: after 02/13/25

# **MAILED NOTICE**

Notice of Upcoming Planning Manager Decision was mailed at least 14 days before the decision.

Dan Williams, applicant	1/30/25	Lynn Schroder
Dreambuilder Custom Homes, owner	1/30/25	Lynn Schroder
Property owners within 100ft of the site perimeter	1/30/25	Lynn Schroder
Bolton Neighborhood Association	1/30/25	Lynn Schroder
Metro emailed per request	1/30/25	Lynn Schroder
WLWL SD	1/30/25	Lynn Schroder
Clackamas County	1/30/25	Lynn Schroder
PGE	1/30/25	Lynn Schroder
TriMet	1/30/25	Lynn Schroder
Comcast	1/30/25	Lynn Schroder
NW Natural Gas	1/30/25	Lynn Schroder
TVF&R	1/30/25	Lynn Schroder
Stafford-Tualatin CPO emailed per request	1/30/25	Lynn Schroder

#### **EMAILED NOTICE**

Notice of Upcoming Planning Manager Decision was emailed at least 14 days before the decision date to:

Bolton Neighborhood Association	1/30/25	Lynn Schroder
Dan Williams, applicant	1/30/25	Lynn Schroder
METRO	1/30/25	Lynn Schroder
Stafford-Tualatin CPO	1/30/25	Lynn Schroder

### **WEBSITE**

Notice was posted on the City's website at least 14 days before the decision.

1/30/25	Lynn Schroder
-,,	1 - 9

### **FINAL DECISION**

Notice of Final Decision was mailed to the **applicant and all parties mailed the original notice above** (ORS 197.365), all parties with standing, and posted on the City's website.

3/19/25	Lynn Schroder

# CITY OF WEST LINN NOTICE OF UPCOMING PLANNING MANAGER DECISION FILE NO. ELD-24-06

The City of West Linn has received a complete application for an expedited land division for middle housing at 5473 Broadway Street (Tax Lot 22E30CB 1800, 1900, & 1901). The applicant is requesting approval of a middle housing land division to construct 7 townhouse units. The application is being processed under the expedited land division rules found in Oregon Revised Statute (ORS) 197.360-380.

The Planning Manager will decide after the required 14-day written comment period expires. The decision will be based on the criteria found in <u>Oregon Revised Statute 92.031</u>. An appointed referee will review any appeal of the decision.

The complete application and all evidence submitted by the applicant are posted on the City's website <a href="https://westlinnoregon.gov/projects">https://westlinnoregon.gov/projects</a> Alternatively, the application and all evidence submitted by the applicant are available for review between 8:00 am and 5:00 pm, Monday through Thursday, at City Hall at no cost. Copies may be obtained at a reasonable cost.

A public hearing will not be held for this decision. Anyone wishing to submit written comments for consideration must submit all material before the 14-day comment period expires. The deadline to submit written comments is 4:00 pm on February 13, 2025. Written comments can be submitted to <a href="mailto:cmyers@westlinnoregon.gov">cmyers@westlinnoregon.gov</a> or City Hall, 22500 Salamo Road, West Linn, OR 97068. All comments must be received by the deadline.

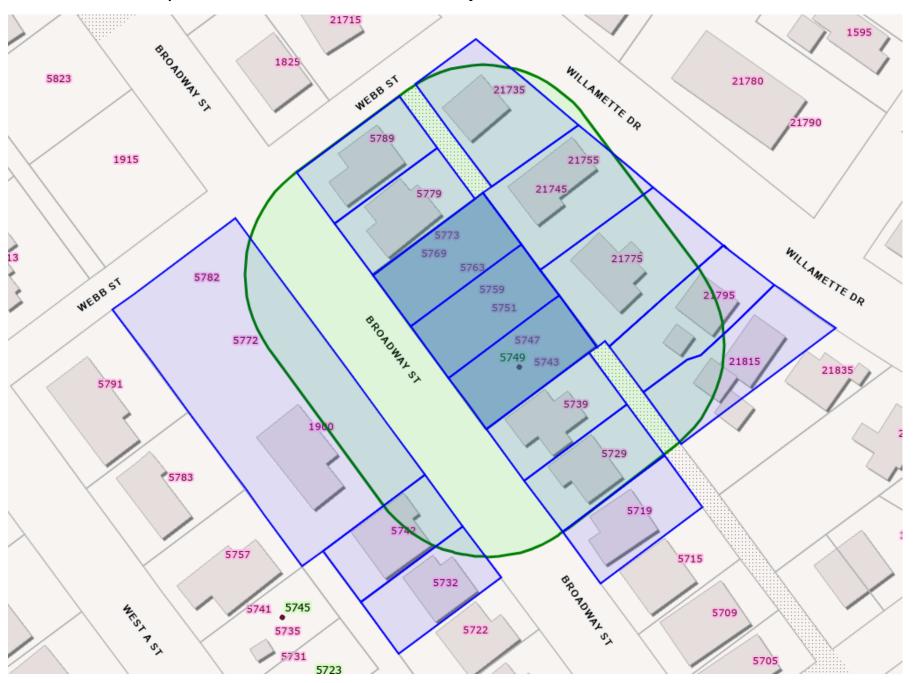
All issues that may provide the basis for an appeal to the referee must be raised in writing prior to the expiration of the comment period outlined above and all issues must be raised with sufficient specificity to enable the Planning Manager to respond to the issue.

For additional information, please contact Chris Myers, Associate Planner, at City Hall, 22500 Salamo Road, West Linn, OR 97068, or 503-742-6062 or <a href="mailto:cmyers@westlinnoregon.gov">cmyers@westlinnoregon.gov</a>.

Scan this QR Code to go to Project Web Page:



ELD-24-06 - Notified Properties within 100 feet for 5743-5773 Broadway St





# NOTICE OF UPCOMING PLANNING MANAGER DECISION

PROJECT # ELD-24-06
MAIL: 1/30/2025 TIDINGS: N/A

# **CITIZEN CONTACT INFORMATION**

To lessen the bulk of agenda packets and land use application notice, and to address the concerns of some City residents about testimony contact information and online application packets containing their names and addresses as a reflection of the mailing notice area, this sheet substitutes for the photocopy of the testimony forms and/or mailing labels. A copy is available upon request.