



CITY OF
West Linn

PLANNING MANAGER DECISION

DATE: December 12, 2024

FILE NO.: ELD-24-04

REQUEST: Approval of an SB458 Expedited Land Division for a three-parcel middle housing land division resulting in a detached triplex at 4194 Cornwall Street.

PLANNER: Chris Myers, Associate Planner

Planning Manager

DSW

TABLE OF CONTENTS

STAFF ANALYSIS AND RECOMMENDATION

GENERAL INFORMATION 2

EXECUTIVE SUMMARY 3

PUBLIC COMMENTS 3

DECISION AND CONDITIONS OF APPROVAL 4

ADDENDUM

STAFF FINDINGS 6

EXHIBITS

PD-1 APPLICANT SUBMITTAL..... 18

PD-2 COMPLETENESS LETTER 80

PD-3 AFFIDAVIT AND NOTICE PACKET..... 82

GENERAL INFORMATION

**APPLICANT/
OWNER:**

JJ Portlock
TPC Property LLC/The Portlock Company
PO Box 521
West Linn OR. 97068

SITE LOCATION:

4194 Cornwall Street

SITE SIZE:

0.46 Acres (20,037 Square Feet)

**LEGAL
DESCRIPTION:**

Clackamas County Assessor Map 21E36BA Tax Lot 6500

**COMP PLAN
DESIGNATION:**

Low-Density Residential

ZONING:

R-10, Single-Family Residential Detached
(10,000 sq. ft. min. lot size)

**APPROVAL
CRITERIA:**

Oregon Revised Statute 92.031

120-DAY RULE:

The application became complete on September 30, 2024. The 63-day period for an expedited land division ends December 12, 2024.

PUBLIC NOTICE:

Notice was mailed to property owners within 100 feet of the subject property, public facility and services providers, and the Sunset Neighborhood Association on October 17, 2024, as required by Oregon Revised Statute 197.365. The notice was also posted on the City's website on October 17, 2024. Therefore, public notice requirements have been met.

EXECUTIVE SUMMARY

The 4194 Cornwall Street property is a 20,037 sq. ft., legal lot of record. The property is zoned R-10, Residential and the applicant will construct a detached triplex as permitted by West Linn Community Development Code Chapter 11.030.1(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 detached quadplex.

Proposed Parcel Sizes

Parcel 1 – 6749 sq. ft.

Parcel 2 – 6500 sq. ft.

Parcel 3 – 6742 sq. ft.

The property is not located within the Willamette River Greenway (WRG) nor any FEMA flood hazard area. Stormwater will be managed via private dry wells located on each individual parcel

The property has approximately 100 feet of frontage on Cornwall Street, which has a functional classification of Local. Each of the three parcels will take access from a 20-foot-wide shared access drive from Cornwall Street.

The Cornwall Street right-of-way is approximately 60 feet wide. The applicant will construct half-street improvements as detailed in Condition of Approval 8. No right-of-way dedication is required. Sanitary sewer and water mains are located in the Cornwall Street right-of-way to provide service to the proposed parcels.

Public comments:

No comments were received.

DECISION

The Planning Manager (designee) approves this application (ELD-23-06) 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. **Preliminary Plat.** With the exception of modifications required by these conditions, the final plat shall conform to the Preliminary Plat dated 9/26/24 (Exhibit PD-1).
2. **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.
3. **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. **Utility Easement.** The applicant shall show an eight-foot public utility easement along the Cornwall Street right-of-way frontage on the face of the plat prior to final plat approval by the City.
6. **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 SB458. Further division of the resulting parcels is prohibited".
7. **Final Plat Recording.** The approval of the tentative plat (ELD-24-04) shall be void if the applicant does not record the final partition plat within three years of approval.

8. **Required Street Improvements.** The applicant shall complete half street improvements, including curb, gutter, sidewalk, planter strip, street trees, pavement improvements, and street storm drainage for the portion of Cornwall Street abutting the subject property. The City may partner with the applicant to fund additional improvements as part of the project.
9. **Reciprocal Access, Maintenance, and Utility Easement.** Prior to final plat approval, the applicant shall record a reciprocal access easement, mutual maintenance agreement, and utility easement across the entirety of the shared access driveway. The easement recording number shall be provided on the face of the final plat.

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

Chris J. Myers
Chris Myers, Associate Planner

December 12, 2024
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 12th day of December, 2024.
Therefore, the 14-day appeal period ends at 5 p.m., on December 26, 2024.

**ADDENDUM
APPROVAL CRITERIA AND FINDINGS
ELD-23-06**

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 197.758 (2) or (3).

ORS 197.758(2) 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-10 and permits the construction of a single-family detached dwelling. ORS 197.758(2)(a) requires the City of West Linn to allow a triplex, 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 a detached triplex as permitted by West Linn Community Development Code (CDC) Chapter 11.030.1(a). CDC Chapter 2 defines a triplex as “Three attached or detached dwelling units on a lot or parcel in any configuration”. Therefore, the proposed division of the lot, 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 197.758 (5);

ORS 197.178(5) 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 detached triplex, which qualifies as a middle housing type (see Staff Finding 1). The applicant did not submit building plans for the detached triplex 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 detached triplex, 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-area-ratio (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 detached triplex 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 nor a Floodplain Management Area. The proposed development will not impact any Water Resource Areas. The criteria are met.

(b) Separate utilities for each dwelling unit;

Staff Finding 5: The applicant proposes the construction of a detached triplex 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 the construction of a detached triplex on the subject property, including the division of the lot as allowed by SB458. The City franchise agreements require an eight-foot public utility easement along Cornwall 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 5. Subject to the Conditions of Approval, 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 detached triplex on the subject property, including the division of the parcel as allowed by SB458. All dwellings will have pedestrian access to Cornwall Street via a shared access drive. 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; therefore, 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 detached triplex 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 via a shared access drive adjacent to Cornwall Street. 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 detached triplex as permitted by West Linn Community Development Code (CDC) Chapter 11.030.1(a). CDC Chapter 2 defines a triplex as “Three attached or detached dwelling units on a lot or parcel in any configuration.” The division of the lot under SB458 rules will result in one dwelling unit on each resulting parcel. 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 detached triplex, which qualifies as a middle housing type. The applicant did not submit building plans for the detached triplex 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 detached triplex 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 6. 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 detached triplex 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 6. 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 197.758.

Staff Finding 16: The subject property has approximately 100 feet of frontage along Cornwall Street, which has a functional classification of *Local*. The City may exact street frontage improvements that are roughly proportional to the impact from the development (*Dolan vs. City of Tigard, 1994*). The proposed development of three new dwelling units on the subject property will contribute approximately 30 vehicle trips a day.

Therefore, the applicant shall install half-street improvements along the Cornwall Street property frontage that conform to the TSP Local Street Cross Sections per Condition of Approval 8. 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 shared access drive for the three proposed parcels. 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 Cornwall Street, a public right-of-way (ROW). The existing Cornwall Street ROW measures approximately 60 feet in width adjacent to the subject property. The proposed project does not require a right-of-way dedication. The criteria are met.

(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 detached triplex on the subject property, including the division of the lot as allowed by SB458. The type of middle housing, detached triplex, will not be altered by the land division. The criteria are met.

(6) Notwithstanding ORS 197.312 (5), 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-24-04) shall be void if the applicant does not record the final partition plat within three years of approval per Condition of Approval 7. 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-10 and within the Portland Metropolitan Area Urban Growth Boundary. The applicant proposes development of a detached

triplex, 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 does not include any connectivity projects adjacent to the subject property. 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 20,037 sq. ft. and zoned Residential, R-10, which requires a minimum lot size of 10,000 sq. ft. Maximum density under a traditional CDC Chapter 85 land division would allow two dwelling units.

The applicant proposes a detached triplex 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 three dwelling units, which is 150 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 three parcels. 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 detached triplex, 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 parcels 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.

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 September 26, 2024 and deemed complete by the City on October 10, 2024. 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 September 26, 2024 and deemed complete by the City on October 10, 2024. Approval of the application is based on the standards and criteria found in ORS 92.031 that were applicable on September 26, 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 October 17, 2024. 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 October 17, 2024. The City provided written notice to the Sunset Neighborhood Association on October 17, 2024. The affidavit of public notice is found in Exhibit PD-5. 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-5. 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 October 17, 2024, with a deadline for submission of written comments on October 30, 2024. This provided a 14-day period. A copy of the notice is found in Exhibit PD-5. 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 September 26, 2024 and deemed complete by the City on October 10, 2024. The City approved the application with conditions on November 25, 2024, the 46th 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 November 25, 2024 the 46th 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-24-04	PRE-APPLICATION NO.	
NON-REFUNDABLE FEE(S) \$4,900	REFUNDABLE DEPOSIT(S)	TOTAL	\$4,900

Type of Review (Please check all that apply):

- | | | |
|--|---|---|
| <input type="checkbox"/> Annexation (ANX)
<input type="checkbox"/> Appeal (AP)
<input type="checkbox"/> CDC Amendment (CDC)
<input type="checkbox"/> Code Interpretation (MISC)
<input type="checkbox"/> Conditional Use (CUP)
<input type="checkbox"/> Design Review (DR)
<input type="checkbox"/> Tree Easement Vacation (MISC)
<input type="checkbox"/> Expediated Land Division (ELD)
<input type="checkbox"/> Extension of Approval (EXT) | <input type="checkbox"/> Final Plat (FP) Related File#
<input type="checkbox"/> Flood Management Area (FMA)
<input type="checkbox"/> Historic Review (HDR)
<input type="checkbox"/> Lot Line Adjustment (LLA)
<input checked="" type="checkbox"/> Minor Partition (MIP)
<input type="checkbox"/> Modification of Approval (MOD)
<input type="checkbox"/> Non-Conforming Lots, Uses & Structures
<input type="checkbox"/> Planned Unit Development (PUD)
<input type="checkbox"/> Street Vacation | <input type="checkbox"/> Subdivision (SUB)
<input type="checkbox"/> Temporary Uses (MISC)
<input type="checkbox"/> Time Extension (EXT)
<input type="checkbox"/> Right of Way Vacation (VAC)
<input type="checkbox"/> Variance (VAR)
<input type="checkbox"/> Water Resource Area Protection/Single Lot (WAP)
<input type="checkbox"/> Water Resource Area Protection/Wetland (WAP)
<input type="checkbox"/> Willamette & Tualatin River Greenway (WRG)
<input type="checkbox"/> Zone Change (ZC) |
|--|---|---|

Pre-Application, Home Occupation, Sidewalk Use, Addressing, and Sign applications require different forms, available on the website.

Site Location/Address: 4194 Cornwall Street, West Linn, OR 97068	Assessor's Map No.: 21E36BA
	Tax Lot(s): 6500
	Total Land Area: 0.46 AC (20,037 SF)

Brief Description of Proposal: The client proposes to partition the property into three lots for middle housing, in accordance with the City of West Linn's land development requirements.

Applicant Name*: TPC PROPERTY LLC contact: JJ Portlock	Phone: (425) 829-1566
Address: PO BOX 521	Email: JPORTLOCK@THEPORTLOCKCO.COM
City State Zip: WEST LINN, OR 97068	

Owner Name (required): The Portlock Company	Phone:
Address: PO Box 521, West Linn OR 97068	Email:
City State Zip:	

Consultant Name: FIRWOOD DESIGN GROUP LLC contact: Carmen Nemes	Phone: (503) 668-3737
Address: 359 E HISTORIC COLUMBIA RIVER HWY	Email: CN@FIRWOODDESIGN.COM
City State Zip: TROUTDALE, OR 97060	

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. The owner/applicant or their representative should attend all public hearings related to the propose land use.
3. A decision may be reversed on appeal. The decision will become effective once the appeal period has expired.
4. Submit this form, application narrative, and all supporting documents as a single PDF through the [Submit a Land Use Application](https://westlinnoregon.gov/planning/submit-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 signature
 ELD-24-04

9/24/24
 Date


 Owner's signature (required)
 Planning Manager
 9/24/24
 Date

Partition Application Narrative

Project Name: **Cornwall 3 Lot Middle Housing**

Site Address: 4194 Cornwall Street, West Linn, OR.

Applicant: TPC PROPERTY LLC
PO BOX 521
West Linn, OR 97068

Contact: JJ Portlock
(425) 829-1566
jportlock@theportlockco.com

Prepared By:



Table of Contents

I. General Project Description.....	3
II. Application Approval Requests.....	3
III. Applicable Code Criteria.....	3
IV. Conclusion.....	4
V. Items submitted with the Application	5

I. General Project Description

The project site is located at 4194 Cornwall Street, West Linn, OR (Parcel #21E36BA 065000), zoned R10. The current 0.459 acre lot features an existing residential structure and a detached garage. The existing house and garage will be removed, and the driveway will be improved. The site is relatively flat with slopes less than 5%, gently sloping towards the southeastern side. The remainder of the lot is landscaped with mature trees and a retaining landscape wall along the southern property line. A 20-foot access and utility easement is proposed to provide access to all three lots.

The property is currently connected to public utilities—including water, electricity, natural gas, and sewer services—available from Cornwall Street.

II. Application Approval Requests

The client, TPC Property LLC, proposes to partition the parcel (Parcel #1S3E 36C TL 1400) at 4194 Cornwall Street into three parcels for single-family use. A new 14-foot wide, 135-foot long driveway is proposed to serve the first two lots, and it will continue as a 12-foot wide private driveway serving the third lot.

III. Applicable Code Criteria

The subject property is zoned R-10, which permits triplex residential units as an outright use per CDC 11.030.1.b. This proposal includes three detached single units under the provisions of Section 2 of SB 458 for a middle housing land division. The applicable criteria are noted below in **bold** typeface with the applicant's responses in *italic* typeface.

SB 458 Section 2:

(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 197.758 (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 197.758 (5);

Response: The property is within the R-10 zoning designation and permits a triplex as outright use. The proposal includes a middle housing land division to create three lots, each with a detached single-family unit

(b) Separate utilities for each dwelling unit;

Response: A preliminary street and utility plan shows individual utilities for each lot.

(c) Proposed easements necessary for each dwelling unit on the plan for:

- (A) Locating, accessing, replacing and servicing all utilities;**
- (B) Pedestrian access from each dwelling unit to a private or public road;**
- (C) Any common use areas or shared building elements;**
- (D) Any dedicated driveways or parking; and**
- (E) Any dedicated common area;**

Response: A 20-foot shared access and utility easement is proposed, pedestrian access will be allowed via the private access easement. Each parcel has direct access to the shared driveway, with no common areas or shared building elements.

(d) Exactly one dwelling unit per resulting lot, except for common areas.

Response: The proposal includes one unit per lot, as shown in the submitted plans.

(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 site plan. Existing structures will be removed before constructing the triplex units. A building permit will ensure compliance with the Oregon Residential Specialty Code.

(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 understands that conditions may be applied, including noting the approval on the final plat.

(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 197.758.

(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.

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

(6) Notwithstanding ORS 197.312 (5), 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.

(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 the review process, including possible conditions and requirements and is aware that the application is void if the final plat is not approved within three years.

IV. Conclusion

This application narrative, along with the accompanying plans and supporting materials, demonstrates compliance with all applicable provisions of SB 458. The applicant respectfully requests approval of this application by the Planning Department.

V. Items Submitted With The Application

- Clackamas County Assessor Map
- West Linn Zoning Map
- Preliminary Plan Set

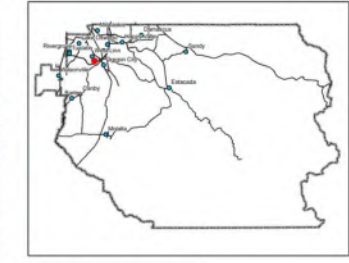


2 1E 36BA
WEST LINN
N.E. 1/4 N.W. 1/4 SEC. 36 T.2S. R.1E. W. M.
CLACKAMAS COUNTY

1" = 100'
D. L. C.
JULIA ANN LEWIS NO. 54

Cancelled
5700
7200
6200
5400
5800
3800
4600
4200
5990
300
5600
3000
6300

- Parcel Boundary
- Private Road ROW
- Historical Boundary
- Railroad Centerline
- Tax Code Lines
- Map Index
- Water Lines
- Land Use Zoning
- Plats
- Water
- Corner
- Section Corner
- 1/16th Line
- Govt Lot Line
- DLC Line
- Meander Line
- PLSS Section Line
- Historic Corridor 40'
- Historic Corridor 20'



THIS MAP IS FOR ASSESSMENT
PURPOSES ONLY

Print Date: 3/27/2024

2 1E 36BA
WEST LINN



Legend

Zoning

- Single and Multi Family R-2.1
- Single and Multi Family R-3
- Single-Family R-4.5
- Single-Family R-5
- Single-Family R-7
- Single-Family R-10
- Single-Family R-15
- Single-Family R-20
- Single-Family R-40
- Mixed Use
- Neighborhood Commercial
- General Commercial
- Office Business Center
- Campus Industrial
- General Industrial

dissolved 0-5K

- Street Lights
- Stormwater Main
- PIPE
- OPEN DITCH
- Stormwater Lateral
- Stormwater Facility
- Water Main

0 0.06 0.11 Miles

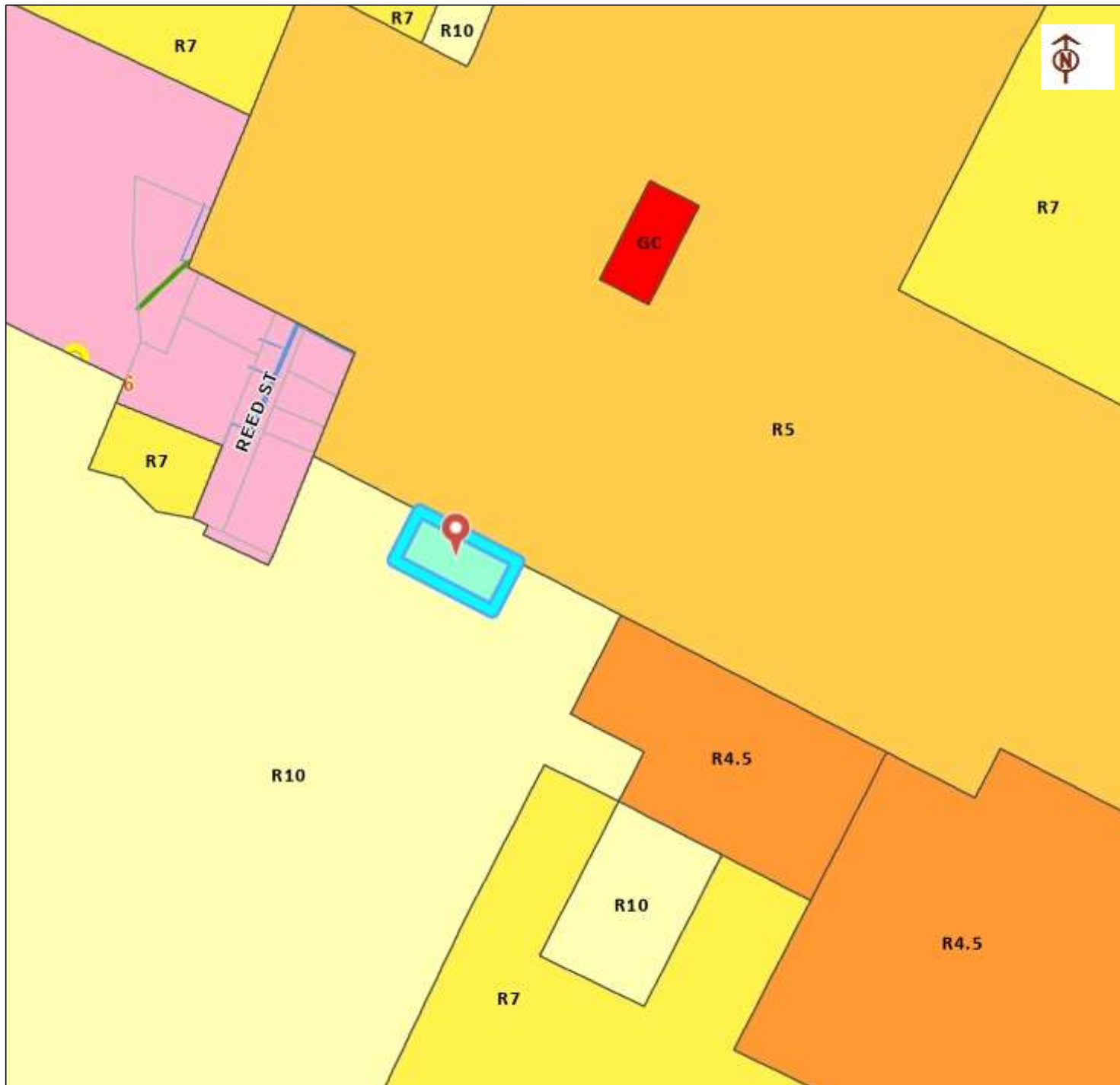


1: 4,514



Notes

This map was automatically generated using Geocortex Essentials
Planning Manager Decision



CORNWALL - 3 LOT PARTITION MIDDLE HOUSING - TAX LOT 21E36BA06500

DEVELOPMENT ENGINEERING PLANS

LOCATED AT 4194 CORNWALL ST, CITY OF WEST LINN, OREGON 97068

GENERAL NOTES:

- ALL REFERENCES TO THE CITY OF WEST LINN STANDARDS REFER TO THE CURRENT PUBLIC WORKS STANDARD CONSTRUCTION SPECIFICATIONS.
- THE DESIGN ENGINEER WILL BE RESPONSIBLE FOR INSPECTION OF THE PROPOSED IMPROVEMENTS WITH OVERSIGHT FROM THE CITY OF WEST LINN.
- THE CONTRACTOR SHALL PROVIDE A WORK SCHEDULE TO THE ENGINEER AND CITY AND PROVIDE 24-HOUR NOTICE OF ANY TESTING REQUIRING WITNESSING BY THE CITY OR ENGINEER.
- ANY CHANGES TO THE PLANS MUST RECEIVE APPROVAL BY THE ENGINEER AND CITY IN WRITING BEFORE PROCEEDING WITH THE WORK.
- A PUBLIC IMPROVEMENT GUARANTEE AGREEMENT, A PRE-CONSTRUCTION MEETING, AND INSTALLATION OF THE EROSION CONTROL MEASURES, ARE ALL REQUIRED PRIOR TO BEGINNING CONSTRUCTION.
- A CITY AND ENGINEER REPRESENTATIVE MUST BE PRESENT FOR ALL TESTING, AND THE CITY SHALL BE FURNISHED A COPY OF ALL TEST RESULTS.
- CONTRACTOR SHALL VERIFY DEPTH AND LOCATION OF EXISTING UTILITIES AND POINTS OF CONNECTION PRIOR TO ORDERING MATERIALS. OTHER EXISTING UTILITIES MAY EXIST AND IF DISCREPANCIES ARE FOUND THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
- THE CONTRACTOR SHALL ERECT AND MAINTAIN TRAFFIC CONTROL PER THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PART VI. CONSTRUCTION AND MAINTENANCE, AND SUBMIT A TRAFFIC PLAN TO THE CITY PRIOR TO BEGINNING WORK. FOR TEMPORARY TRAFFIC CONTROL, REFER TO ODOT TEMPORARY TRAFFIC CONTROL MANUAL.
- OREGON LAW REQUIRES THAT THE RULES ADOPTED BY OREGON UTILITY NOTIFICATION CENTER BE FOLLOWED. THOSE RULES ARE SET FORTH IN OAR 952-001-0090. COPIES OF THE RULES ARE AVAILABLE BY CALLING THE CENTER OR ACCESSING VIA INTERNET AT WWW.CALLBEFOREYOU.DIG.ORG, PORTLAND METRO AREA 503-248-6699.

STREET NOTES:

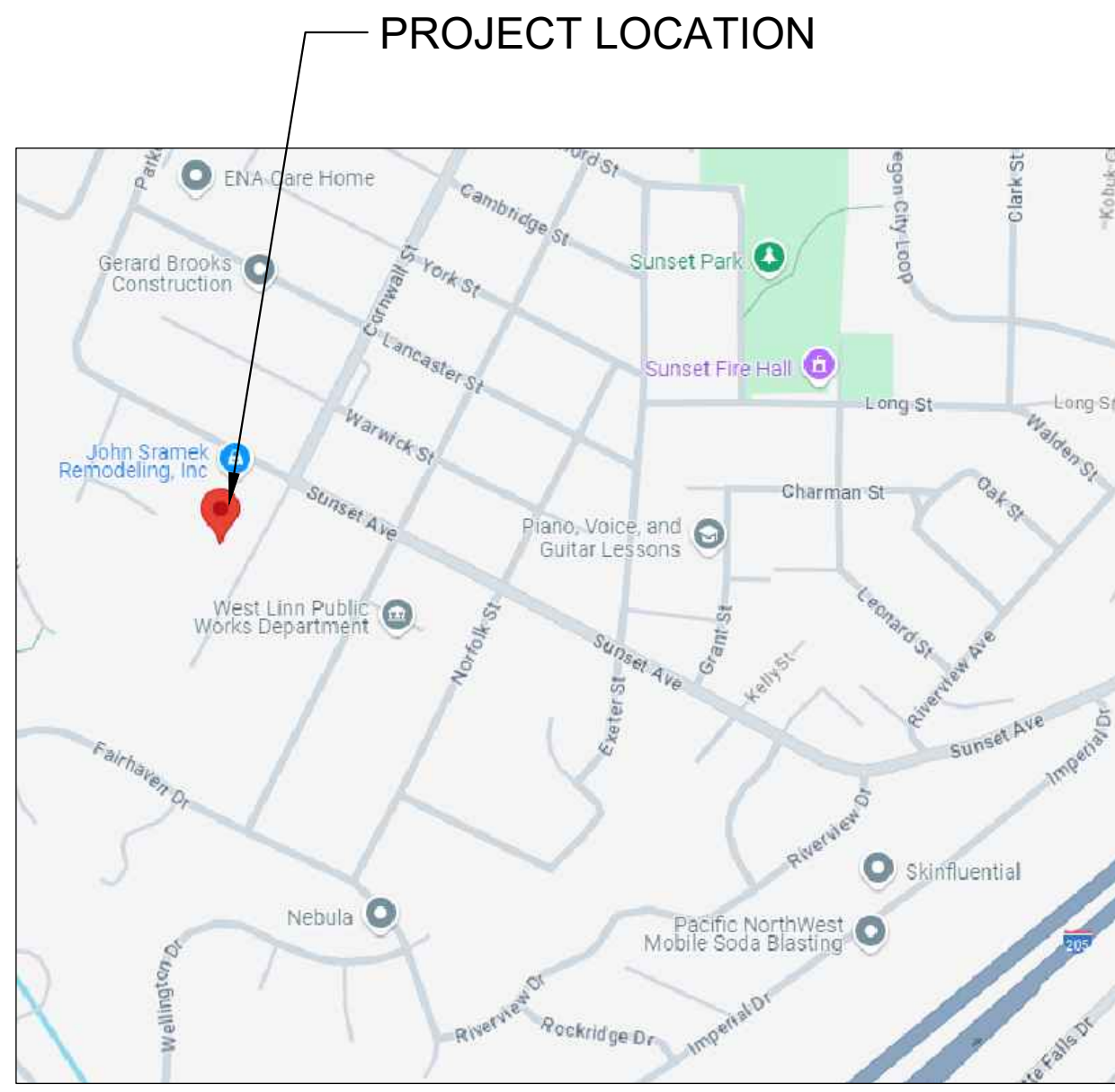
- ALL STREET SECTIONS TO BE CRUBBED AND GRADED TO A MINIMUM OF 8-INCHES BELOW THE SUBGRADE.
- THE STREET SUBGRADE SHALL CONFORM TO DIVISION 501 OF THE CITY OF WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS. AREAS TO RECEIVE FILL ARE TO BE INSPECTED BY THE CITY OF WEST LINN PERSONNEL AND PROJECT GEOTECHNICAL PRIOR TO PLACEMENT OF FILL. THE PROJECT GEOTECHNICAL SHALL TEST FOR COMPACTION PER DIVISION 501.03.08 OF THE WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS.
- AGGREGATE BASE ROCK SHALL CONFORM TO THE REQUIREMENTS OF DIVISION 205 OF THE WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS. BASE COURSE IS 1 1/2" - 0" CRUSHED ROCK AND LEVELING COURSE IS 3/4" - 0" CRUSHED ROCK. THE CITY OF WEST LINN REQUIRES A PROOF ROLL WITH A LOADED 10-CUBIC YARD OR LARGEST USED (IE SUPER SOLO) DUMP TRUCK OF THE SUBGRADE PRIOR TO PLACEMENT OF THE BASE ROCK AND AT TOP OF ROCK JUST PRIOR TO PAVING.
- ASPHALT CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS, DIVISION 205. THE BASE LIFT SHALL BE CLASS "B" AC AND THE TOP LIFT SHALL BE CLASS "C" AC MEETING THE WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS, DIVISION 505. THE TOP LIFT OF ASPHALT CONCRETE SHALL NOT BE PLACED PRIOR TO RECEIVING AUTHORIZATION FROM THE CITY OF WEST LINN.
- CURB AND GUTTER SHALL HAVE A COMPRESSIVE STRENGTH OF 3300 PSI, AND MAXIMUM AGGREGATE PER DIVISION 205 OF THE WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS. A PROOF ROLL OF THE CURB LINES IS REQUIRED PRIOR TO CURB PLACEMENT. CONTRACTION JOINTS ARE TO BE INSTALLED AT 15-FOOT MAXIMUM. THE CONTRACTOR IS TO STAMP LOCATION OF SEWER AND WATER LINES CROSSING THE CURB LINE WITH AN "S" OR "W".

STORM SEWER NOTES:

- RIBBED PVC ASTM 794 OR DUCTILE IRON CONFORMING TO ASTM C 151, CLASS 52, WITH RUBBER JOINTS REQUIRED.
- GUTTER INLETS SHALL BE POURED IN PLACE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3300 PSI. FRAMES SHALL BE FABRICATED OF STRUCTURAL STEEL, ASTM A-3733.
- MANHOLE BASES MAY BE POURED IN PLACE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3300 PSI OR PRECAST. MANHOLE RISERS AND TOPS SHALL BE PRECAST WITH MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI. TOPS SHALL BE ECCENTRIC CONES EXCEPT WHERE THERE IS INSUFFICIENT HEADROOM REQUIRES A FLAT TOP. THE INTERIOR DIMENSIONS NOTED ON THE PLANS ARE MINIMUMS, AND SOME OR ALL OF THE MANHOLES MAY BE REQUIRED TO BE OVERSIZED. THE CONTRACTOR SHALL VERIFY WITH THE MANHOLE MANUFACTURER FOR THE ACTUAL SIZE OF MANHOLE NEEDED FOR TYPE AND SIZE OF PIPE TO BE USED. INVERTS SHALL BE CONSTRUCTED SO AS TO PROVIDE A SMOOTH FLOW AND PIPES SHALL BE CONNECTED TO THE MANHOLE BY MEANS OF A FLEXIBLE CONNECTION AND SHALL HAVE A SHEAR JOINT LOCATED 18-INCHES OUTSIDE THE MANHOLE.
- MANHOLES LOCATED IN EASEMENTS REQUIRE A TAMPER PROOF FRAME AND COVER AND SET 12-INCHES ABOVE FINISHED GRADE IN UNPAVED AREAS.
- GRANULAR BACKFILL (3/4" - 0") IS TO BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY PER AASHTO T-180 TEST METHOD AND NATIVE MATERIAL SHALL BE COMPACTED TO 95% OF IN-PLACE DRY DENSITY OF SURROUNDING SOIL.
- A VIDEO INSPECTION IN ACCORDANCE WITH DIVISION 601.03.11 PER THE WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS IS REQUIRED. ALL TESTS SHALL BE WITNESSED BY THE ENGINEER AND A REPRESENTATIVE OF THE CITY.
- A PLUMBING PERMIT IS REQUIRED FOR ALL STORM DRAINS BEYOND THE FIRST CLEANOUT.

SANITARY SEWER NOTES:

- PIPE SHALL BE PVC SEWER PIPE CONFORMING TO ASTM D-3034 SDR 35, MINIMUM STIFFNESS SHALL BE 46 PSI AND JOINT TYPE SHALL BE ELASTOMERIC GASKET CONFORMING TO ASTM D-3212.
- MANHOLE BASE MAY BE POURED IN PLACE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 3300 PSI OR PRECAST. MANHOLE RISERS AND TOPS SHALL BE PRECAST WITH MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI. TOPS SHALL BE ECCENTRIC CONES EXCEPT WHERE THERE IS INSUFFICIENT HEADROOM REQUIRES A FLAT TOP. INVERTS SHALL BE CONSTRUCTED TO PROVIDE A SMOOTH FLOW WITH THE CHANNEL BEING ABLE TO PAS A 6" X 36" CYLINDER INTO THE PIPES. PVC PIPE SHALL BE CONNECTED TO THE MANHOLE BY MEANS OF A FLEXIBLE CONNECTION AND SHALL HAVE A SHEAR JOINT LOCATED 18-INCHES OUTSIDE THE MANHOLE. CEMENT GROUT FOR CONNECTING PVC SEWER PIPE WILL NOT BE PERMITTED.
- ALL MANHOLES LOCATED IN EASEMENT AREAS WILL HAVE TAMPER PROOF FRAMES AND COVERS WITH THE COVER SET 12-INCHES ABOVE FINISH GRADE IN UNPAVED AREAS.
- GRANULAR BACKFILL (3/4" - 0") IS TO BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY PER AASHTO T-180 TEST METHOD AND NATIVE MATERIAL SHALL BE COMPACTED TO 95% OF IN-PLACE DRY DENSITY OF SURROUNDING SOIL. EXCAVATION, BEDDING, AND BACKFILL SHALL BE IN CONFORMANCE WITH DIVISION 204 OF THE WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS. BACKFILL WITHIN NEW AND EXISTING STREETS SHALL BE CLASS B.
- PVC SERVICE LATERALS SHALL BE 4-INCH CONFORMING TO THE SAME MATERIALS AS THE MAINLINE SEWERS. SERVICE LATERALS SHALL BE INSTALLED TO A POINT BEYOND THE UTILITY EASEMENT AS SHOWN ON THE PLAN. THE SERVICE LATERALS SHALL BE PLUGGED WITH THE LOCATION MARKED WITH A 2X4 PAINTED GREEN.
- SANITARY SEWER PIPE, INCLUDING SERVICE LATERALS, SHALL BE TESTED IN ACCORDANCE WITH WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS DIVISION 301.03.09 AND MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE WITH DIVISION 302.03.07. TESTS SHALL BE WITNESSED BY THE ENGINEER AND THE CITY OF WEST LINN. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE TESTING AND PROVIDING PASSING TESTS PRIOR TO CONNECTION TO THE EXISTING SYSTEM.
- A PLUMBING PERMIT FROM THE CITY IS REQUIRED FOR SANITARY SEWER LATERALS BEYOND THE FIRST CLEANOUT.
- ALL MATERIALS, INSTALLATION, TESTING, AND INSPECTIONS TO BE IN STRICT ACCORDANCE WITH THE CITY OF WEST LINN PUBLIC WORKS STANDARDS AND THE DEQ.



PROPOSED LEGEND

PROPOSED MAJOR CONTOUR	—————
PROPOSED MINOR CONTOUR	-----
PROPOSED SIGHT LINE	- - - - -
PROPOSED ROAD CENTER LINE	- · - · -
PROPOSED SAWCUT LINE	- · - · -
PROPOSED GRAVEL	▨ ▨ ▨ ▨
PROPOSED FILTER STRIP	▨ ▨ ▨ ▨
PROPOSED EARTHEN SHOULDER	▨ ▨ ▨ ▨
PROPOSED AC	▨ ▨ ▨ ▨
PROPOSED CULVERT	— · — · — · — · —
PROPOSED UNDERGROUND POWER	— · — · — · — · —

SHEET INDEX	
SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	EXISTING CONDITIONS & DEMO PLAN
3	SITE PLAN
4	GRADING STORM & ESC PLAN
5	PRELIMINARY UTILITY PLAN
6	PRELIMINARY PLAT
7	DETAILS
8	DETAILS

PROJECT CIVIL ENGINEER

KELLI GROVER, PE
 FIRWOOD DESIGN GROUP, LLC
 359 E. HISTORIC COLUMBIA RIVER HWY
 TROUTDALE, OR 97060
 PHONE (503) 668-3737

PROJECT CONTRACTOR

THE PORTLOCK COMPANY LLC
 4194 CORNWALL ST
 WEST LINN, OR
 CCB#
 PROJECT CONTACT - JJ PORTLOCK
 JPORTLOCK@THEPORTLOCKCO.COM
 PHONE (425) 829-1566

PROJECT SURVEYOR

CMT SURVEYING AND CONSULTING
 20330 SE HIGHWAY 212
 DAMASCUS, OR 97089
 PHONE (503) 850-4672

PROJECT OWNER

CHRISTMAN, EARL & JENNIFER
 14495 S BLUE VISTA DR.
 OREGON CITY, 97045

NATIVE DESCRIPTION:

TAX LOT 21E36BA06500
 N.E. ¼ N.W. ¼ SEC. 36 T.2S. R.1E. W.M.
 CITY OF WEST LINN, CLACKAMAS COUNTY, OREGON

WATER NOTES:

- WATER MAINS SHALL BE DUCTILE IRON PIPE CONFORMING TO AWWA C151, CLASS 52. PIPE IS TO HAVE CEMENT MORTAR LINING AND BITUMINOUS SEAL COAT CONFORMING TO AWWA C104. JOINTS ARE TO BE PUSH-ON RUBBER GASKETED JOINTS UNLESS OTHERWISE NOTED ON THE PLANS. PIPE FITTINGS ARE TO BE THE SAME MATERIAL AND CLASS AS THE PIPE AND OF DOMESTIC ORIGIN.
- WATER MAINS TO HAVE A MINIMUM COVER OF 36-INCHES.
- ALL TEES, BENDS (HORIZONTAL AND VERTICAL), OR SIGNIFICANT CHANGES IN DIRECTION IN ALIGNMENT SHALL BE RESTRAINED WITH FIELD LOCK GASKETS AND MEGA LUG FITTINGS (SEE SPEC 4.0014).
- GRANULAR BACKFILL (3/4" - 0") IS TO BE COMPACTED TO 95% OF MAXIMUM DRY DENSITY PER AASHTO T-180 TEST METHOD AND NATIVE MATERIAL SHALL BE COMPACTED TO 95% OF IN-PLACE DRY DENSITY OF SURROUNDING SOIL. EXCAVATION, BEDDING, AND BACKFILL SHALL BE IN CONFORMANCE WITH DIVISION 204 OF THE WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS. BACKFILL WITHIN NEW AND EXISTING STREETS SHALL BE CLASS B.
- SERVICES SHALL BE 1-INCH TYPE K COPPER. CORPORATION STOPS SHALL BE MUELLER B-25008 OR APPROVED EQUAL. ANGLE STOPS SHALL BE MUELLER B-24258 OR APPROVED EQUAL. METER BOXES SHALL BE DFW PLASTICS MODEL DFW846WBC OR APPROVED EQUAL. METER BOXES ARE TO BE INSTALLED 2 1/2" FROM THE CURB IN PLANTER STRIPS OR BEHIND SIDEWALK. METER BOX LOCATION TO BE DETERMINED IN THE FIELD.
- ALL WATER LINES SHALL BE PRESSURE TESTED AND BIOLOGICALLY TESTED BEFORE CONNECTION TO THE CITY WATER SYSTEM. CHLORINATION SHALL BE PER DIVISION 403.13 OF THE CITY OF WEST LINN CONSTRUCTION SPECIFICATIONS. PRESSURE TESTING SHALL BE IN ACCORDANCE WITH THE CITY OF WEST LINN STANDARD CONSTRUCTION SPECIFICATIONS, DIVISION 403.14. TEST PRESSURE WILL BE 180 PSI OR 1.5 TIMES THE NORMAL WORKING PRESSURE, WHICHEVER IS HIGHER.
- CONNECTION OF THE NEW PIPE SYSTEMS WILL NOT BE MADE UNTIL ALL TESTS ARE MADE AND ACCEPTED BY THE CITY OF WEST LINN.
- A PLUMBING PERMIT IS REQUIRED FOR EXTENSIONS OF WATERLINES BEYOND THE METER.
- ALL MATERIALS, INSTALLATION, AND TESTS TO BE IN STRICT ACCORDANCE WITH THE CITY OF WEST LINN PUBLIC WORKS STANDARD CONSTRUCTION SPECIFICATIONS DIVISION 204, AND THE OREGON STATE HEALTH DIVISION ADMINISTRATION RULES, CHAPTER 333.
- ALL SURPLUS APPURTENANCES SHALL BE RETURNED TO THE CITY OF WEST LINN WATER DEPARTMENT.
- SERVICES TO BE INSTALLED BY WEST LINN STAFF. METERS TO BE PLACED IN PLANTER STRIP OR BACK OF SIDEWALK (NOT IN CONCRETE).

PROJECT DATUM

THE BASIS OF BEARINGS WAS PER SURVEY NO. 2014-039, CLACKAMAS COUNTY RECORDS.

NOTICE TO EXCAVATORS:

ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0001 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS (503)-232-1987).

POTENTIAL UNDERGROUND FACILITY OWNERS



CALL THE OREGON ONE-CALL CENTER
 1-800-332-2344 OR 811

EMERGENCY TELEPHONE NUMBERS

PGE	503-464-7777
NW NATURAL GAS	503-220-2415
CLACKAMAS COUNTY	503-742-4400
COMCAST CABLE	503-617-1212
VERIZON	800-837-4966



EXPIRES: 06/30/25
 SIGNATURE DATE:

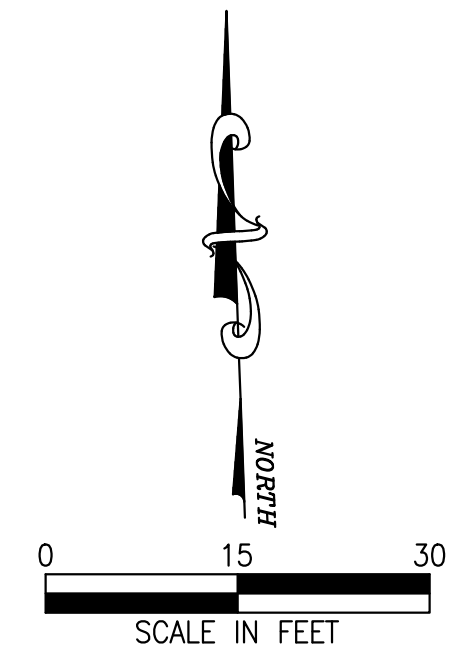
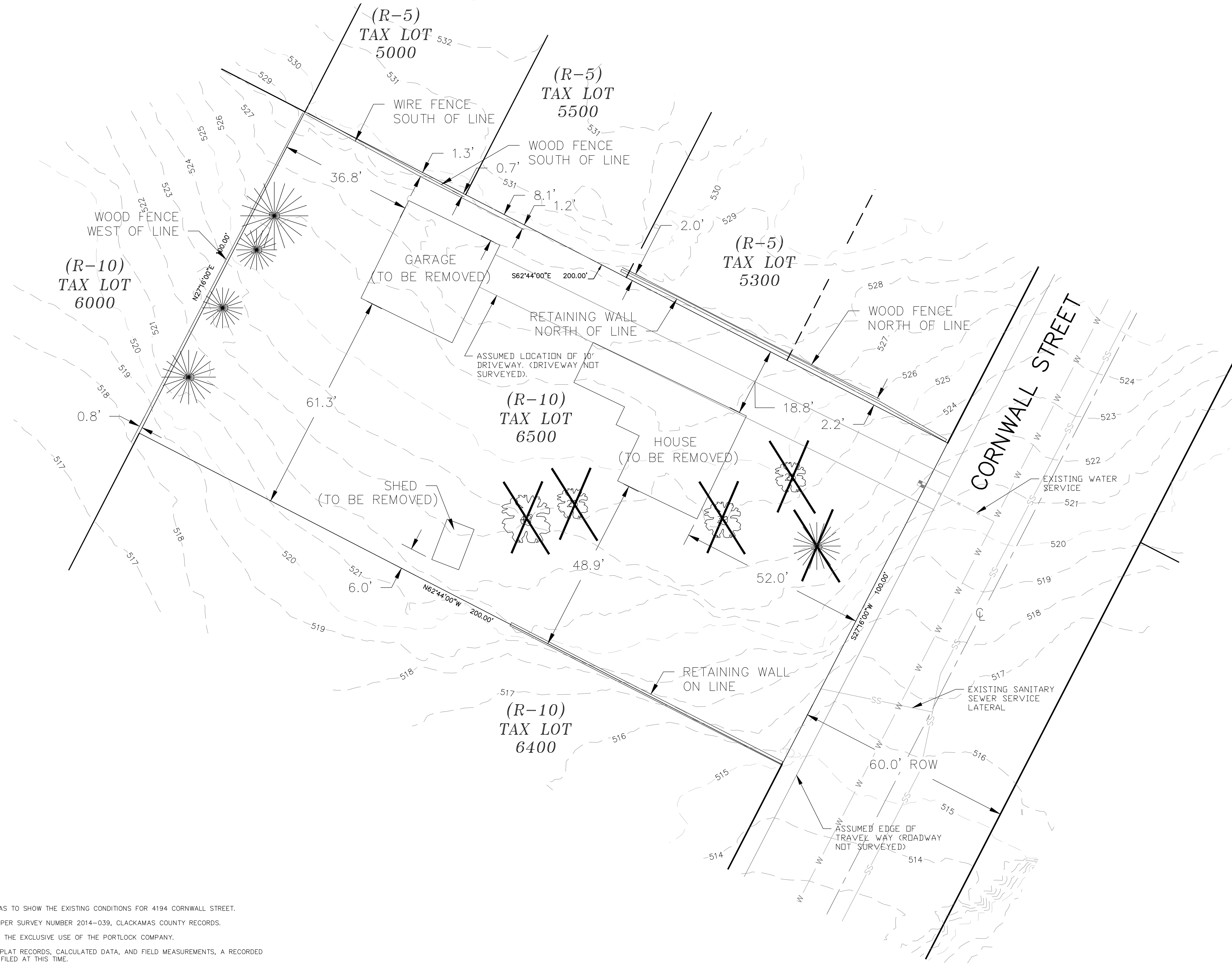
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SCALE: AS SHOWN	SEPTEMBER 2024		
PROJECT NO. E24-030			
DATE:	NO.	REVISION	

FIRWOOD DESIGN GROUP
 Reliable Engineering Solutions
 359 EAST HISTORIC COLUMBIA RIVER HIGHWAY
 TROUTDALE, OREGON 97060
 (503) 668-3737

TPC PROPERTY LLC
 PO BOX 521
 West Linn, OR 97068

COVER SHEET
 DEVELOPMENT ENGINEERING PLANS

1
8



NOTES

1. THE PURPOSE OF THIS MAP WAS TO SHOW THE EXISTING CONDITIONS FOR 4194 CORNWALL STREET.
2. THE BASIS OF BEARINGS WAS PER SURVEY NUMBER 2014-039, CLACKAMAS COUNTY RECORDS.
3. THIS MAP WAS PREPARED FOR THE EXCLUSIVE USE OF THE PORTLOCK COMPANY.
4. THIS MAP WAS PREPARED BY PLAT RECORDS, CALCULATED DATA, AND FIELD MEASUREMENTS, A RECORDED BOUNDARY SURVEY WILL NOT BE FILED AT THIS TIME.

LEGEND

- EXISTING DECIDUOUS TREE W/ TRUNK DIAMETER (INCHES)(CL=CLUSTER)
- EXISTING CONIFEROUS TREE W/ TRUNK DIAMETER (INCHES)(CL=CLUSTER)
- EXISTING POWER POLE
- EXISTING FENCE
- EXISTING DECIDUOUS TREE TO BE REMOVED
- EXISTING CONIFEROUS TREE TO BE REMOVED
- CENTER OF ROAD
- MAJOR CONTOUR (EX. 5')
- MINOR CONTOUR (EX. 1')

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
SEPTEMBER 11, 2018
DAVID ROEGER
86811

EXPIRES DECEMBER 31, 2024

DATE:	NO.	REVISION	DRAWN: JRF	DESIGNED: CMN	CHECKED: KAG
			SCALE: AS SHOWN	SEPTEMBER 2024	
			PROJECT NO. E24-030		

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(503) 668-3737

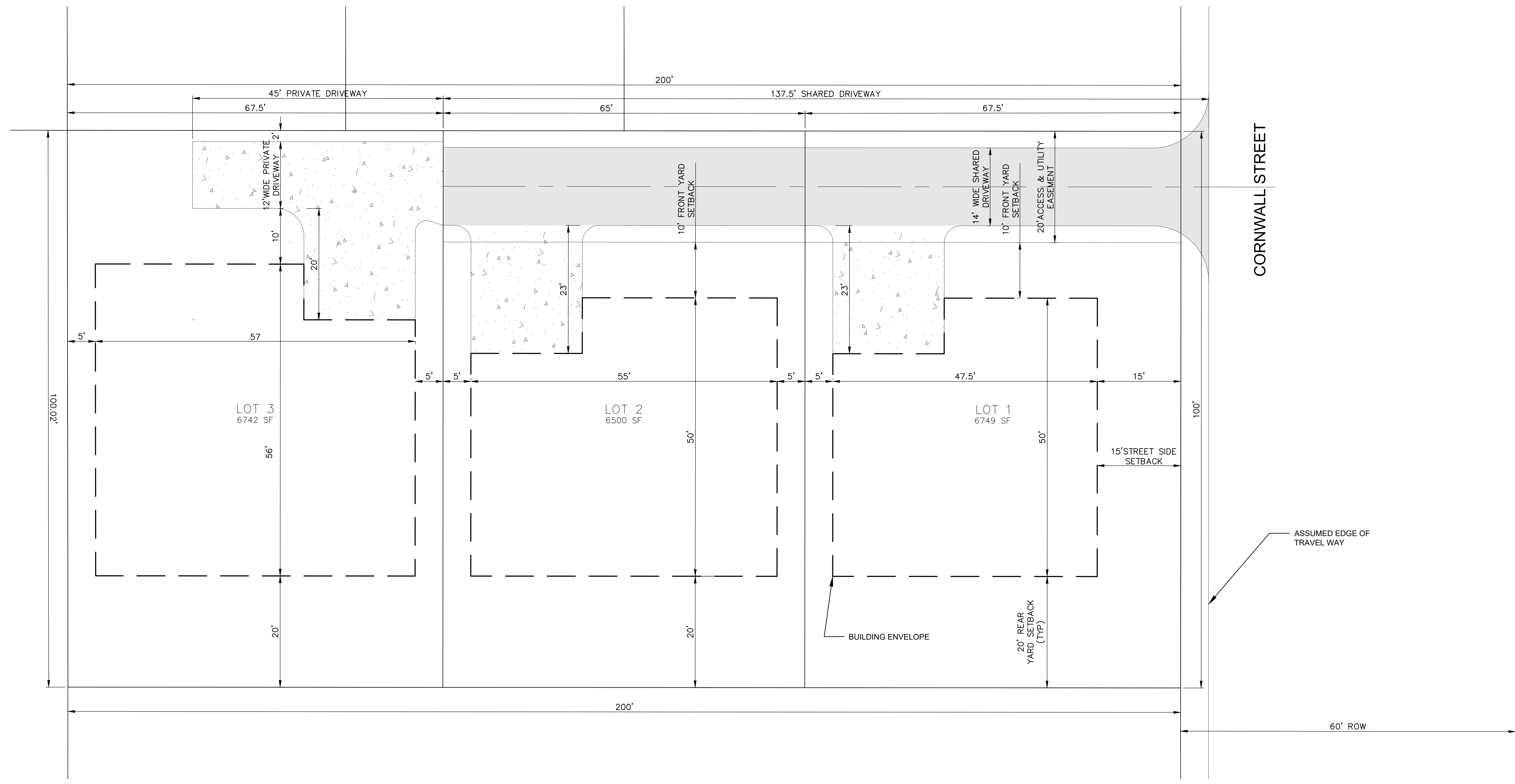
TPC PROPERTY LLC
PO BOX 521
West Linn, OR 97068

EXISTING CONDITIONS & DEMO PLAN
DEVELOPMENT ENGINEERING PLANS

2
8

CORNWALL - 3 LOT PARTITION MIDDLE HOUSING DEVELOPMENT ENGINEERING PLANS

LOCATED AT 4194 CORNWALL STREET, WEST LINN, OREGON 97068
TAX LOT: 21E36BA LOT NO.: 6500 ZONED R-10

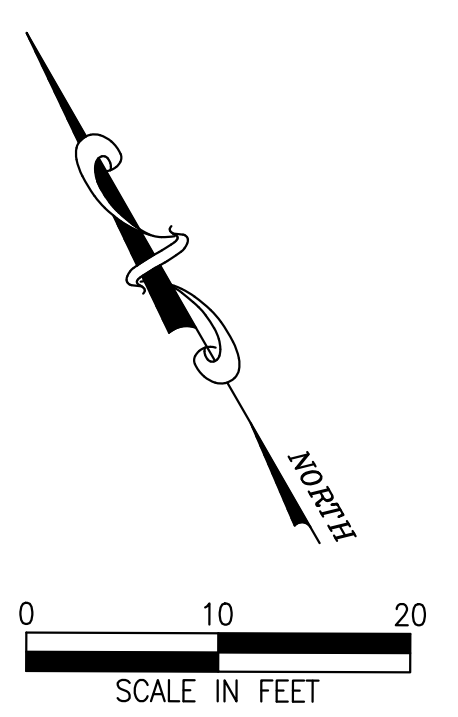


SITE DATA

SITE AREA : 0.46 AC
CURRENT ZONING : R-10
TAX LOT: 6500
PROPOSED NO OF LOTS: 3

SETBACKS:

FRONT SETBACK: 20'
STREET SETBACK: 15'
INTERIOR SIDE SETBACK: 5'
REAR SETBACK : 20'



DATE:	NO.	REVISION

DRAWN: JRF	DESIGNED: CMN	CHECKED: KAG
SCALE: AS SHOWN	SEPTEMBER 2024	
PROJECT NO. E24-030		

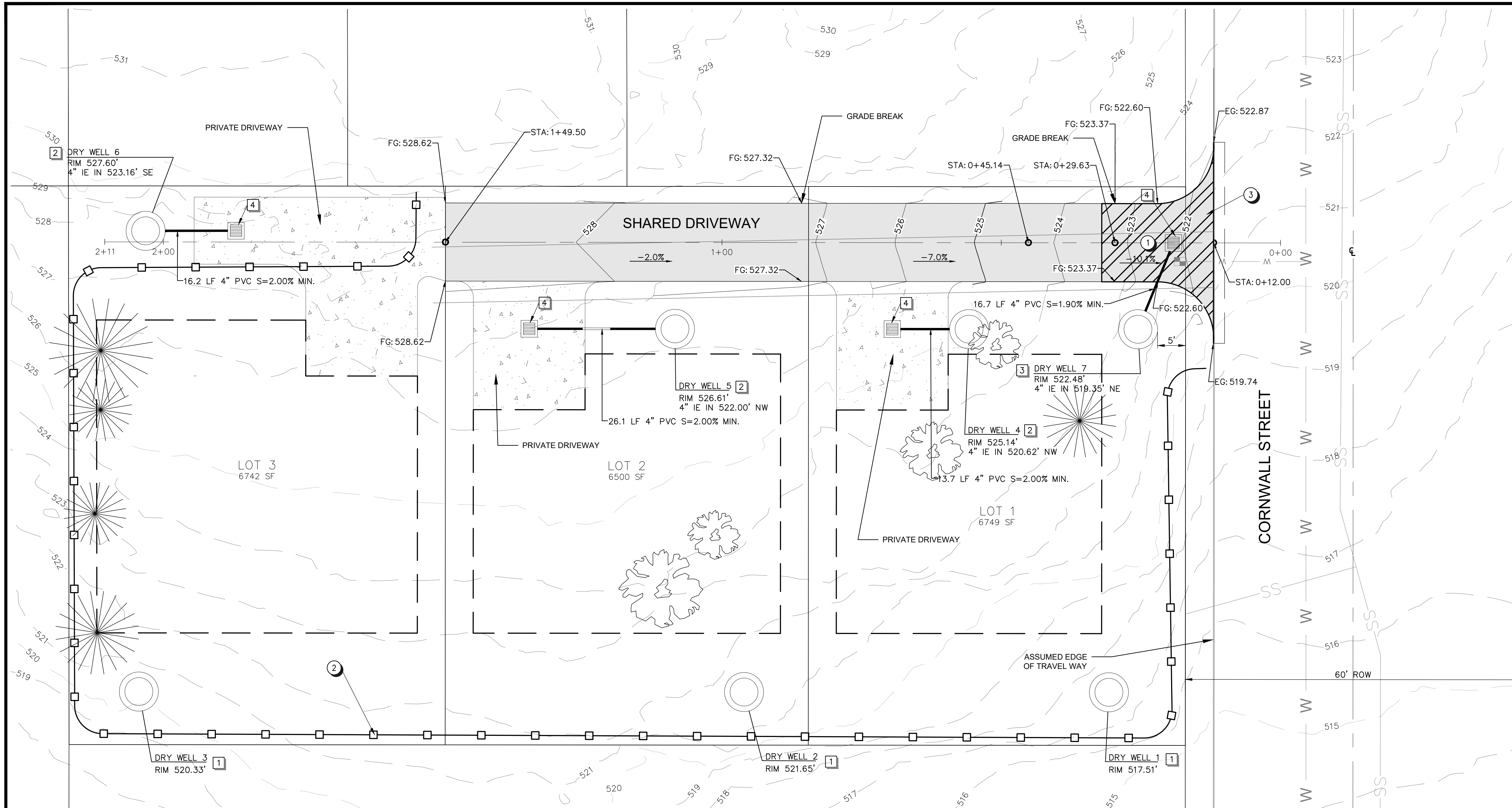

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SITE PLAN
DEVELOPMENT ENGINEERING PLANS

3/8



- GENERAL NOTES**
1. FILL PLACEMENT AND COMPACTION REQUIREMENTS SHALL BE PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
 2. STRIPPING DEPTH SHALL BE PER THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
 3. STRIPPINGS SHALL BE STOCKPILED ON SITE AND DISTRIBUTED OVER GRADED AREAS NOT RECEIVING A HARDSCAPE SURFACE (MAXIMUM 1' DEPTH)
 4. THE SCOPE OF THE GRADING PERMIT IS INTENDED TO COVER THE DRIVEWAY ONLY

- GRADING LEGEND**
- 2.0% SLOPE ARROW (PR)
 - EG EXISTING GRADE
 - FG FINISH GRADE
 - 100 MAJOR CONTOUR (PR, 5')
 - 101 MINOR CONTOUR (PR, 1')
 - 100 MAJOR CONTOUR (EX, 5')
 - 105 MINOR CONTOUR (EX, 1')

NOTE: TOPOGRAPHY DATA SOURCED FROM DOGAMI LIDAR WEB SERVICE. NO ONSITE SURVEY WAS CONDUCTED FOR THIS DESIGN. ACTUAL ELEVATIONS MAY DIFFER.

- STORMWATER NOTES**
- 1 PROPOSED DRYWELL TO SERVE ROOF DRAINS PER DETAIL ON SHEET 7.
 - 2 PROPOSED DRYWELL TO SERVE PRIVATE DRIVEWAY. SEE DETAIL ON SHEET 7.
 - 3 PROPOSED DRYWELL TO SERVE SHARED DRIVEWAY. SEE DETAIL ON SHEET 7.
 - 4 PROPOSED LYNCH CATCH BASIN PER DETAIL ON SHEET 8.

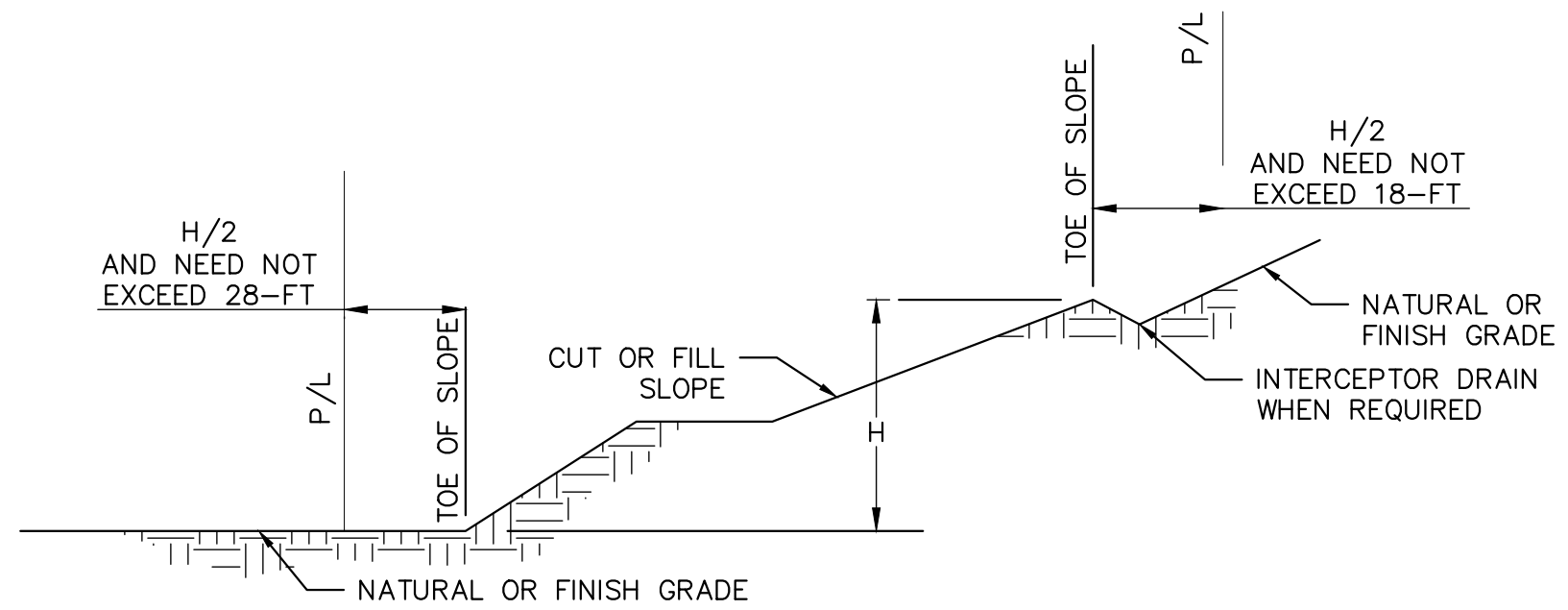
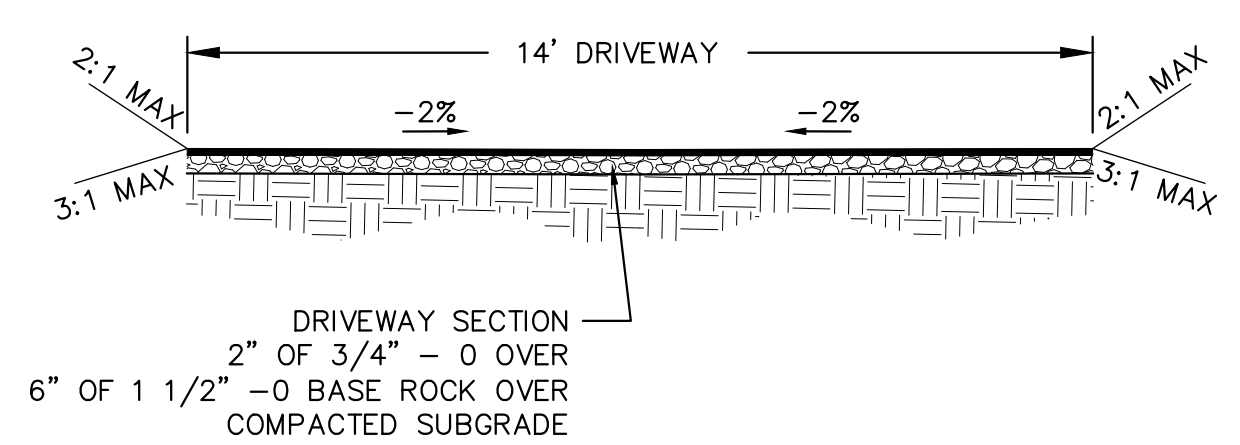
ESTIMATED GRADING QUANTITIES

NOTE: 2:1 MAX CUT SLOPE AND 3:1 MAX FILL SLOPE TO EXIST GROUND. CUT/FILL QUANTITIES REPRESENT GRADING NECESSARY FOR NEW SHARED DRIVEWAY.

CUT: 3.97 CY (DOES NOT ACCOUNT FOR ADDITIONAL TRENCH SPOILS)
 FILL: 28.29 CY
 NET: 24.32 (FILL)

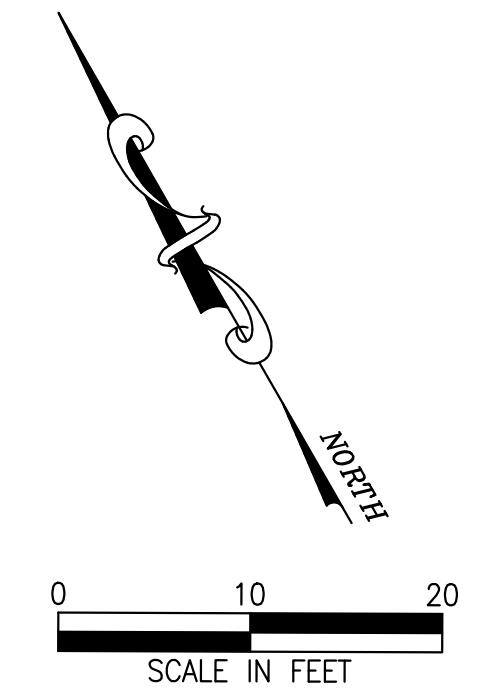
TOTAL AREA OF DISTURBANCE = 3,020 SF (0.06 ACRES)

NOTE: ALL ON-SITE STORMWATER LINES TO BE INSTALLED PER THE OREGON SPECIALTY PLUMBING CODE AND INSTALLED BY A LICENSED PLUMBING PROFESSIONAL.



GRADING AND EROSION CONTROL KEY NOTES

- 1 PROPOSED 14' WIDE A.C. DRIVEWAY APPROACH FROM CORNWALL STREET PER DETAIL ON SHEET 7.
- 2 PROPOSED SEDIMENT FENCE. INSTALL ON THE DOWNHILL SIDE OF PROPOSED GRADING ACTIVITIES. INSPECTION IS REQUIRED AFTER SEDIMENT FENCE IS INSTALLED. SEE ESC NOTES AND DETAIL ON SHEET 7.
- 3 INSTALL CONSTRUCTION ENTRANCE PER DETAIL ON SHEET 7.



DATE:	NO.	REVISION	DRAWN: JRF	DESIGNED: CMN	CHECKED: KAG
			SCALE: AS SHOWN	SEPTEMBER 2024	
			PROJECT NO. E24-030		

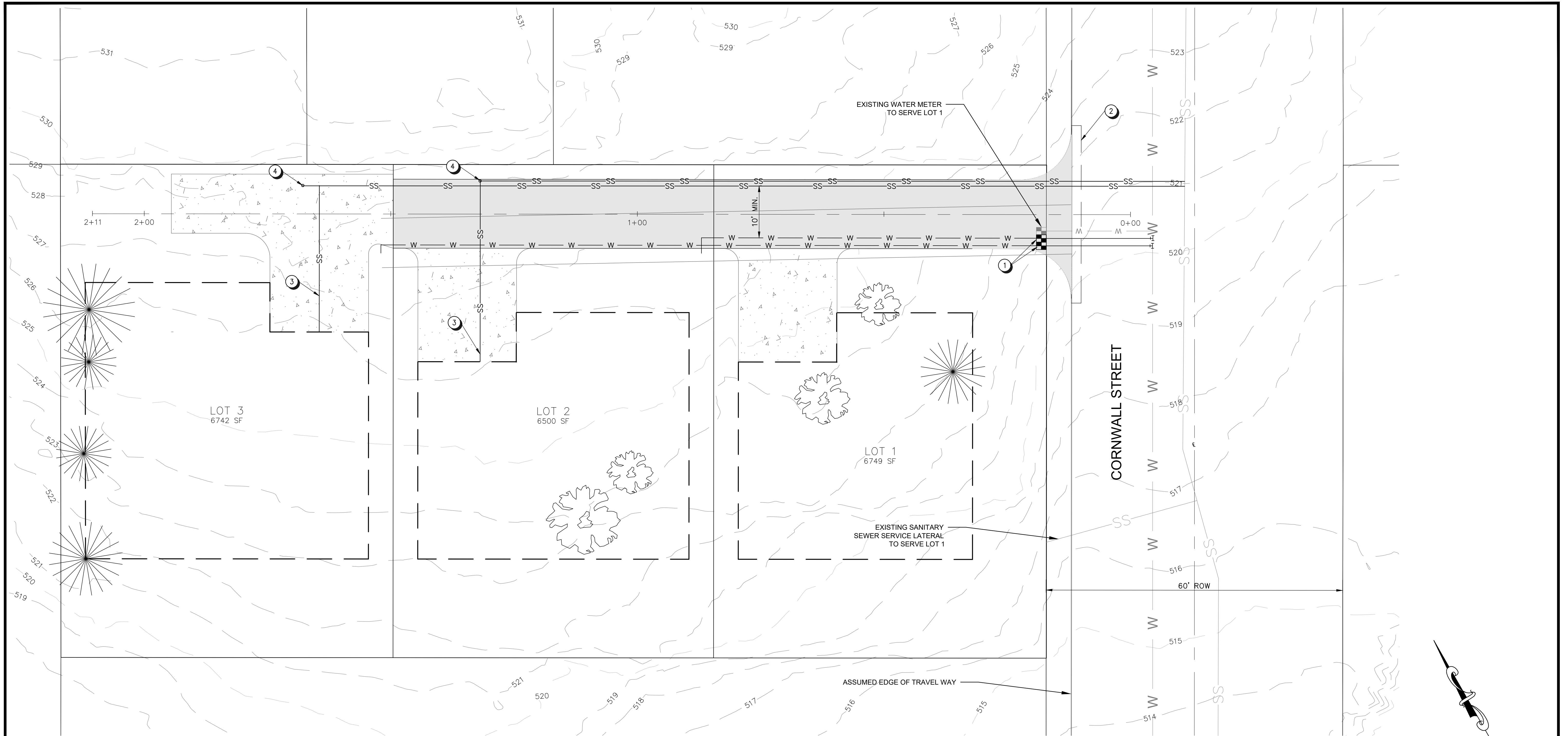
FIRWOOD DESIGN GROUP
Reliable Engineering Solutions

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TROUTDALE, OREGON 97060
(503) 668-3737

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GRADING STORM & ESC PLAN
DEVELOPMENT ENGINEERING PLANS

4
8



GENERAL NOTES

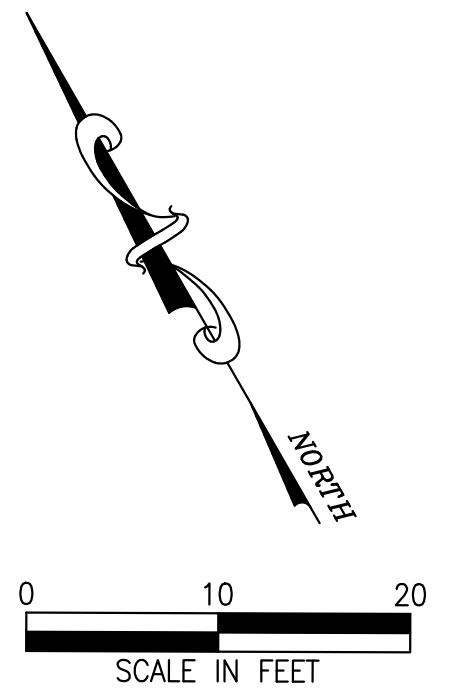
1. LOCATION OF WATER & SEWER MAINS WAS OBTAINED FROM CITY OF WEST LINN GIS. NO ONSITE SURVEY WAS CONDUCTED TO LOCATE UTILITIES. CONTRACTOR TO VERIFY LOCATION OF EXISTING UTILITIES.
2. SANITARY SEWER SERVICE LATERALS SHALL BE 4-INCH AND CONFORM TO THE SAME MATERIALS AS THE MAINLINE SEWERS.

KEY NOTES

- 1 PROPOSED 1-INCH WATER SERVICE PER DETAIL ON SHEET 8.
- 2 PROPOSED SAWCUT LINE MIN. 6" FROM EDGE OF EXISTING A.C. SAWCUT LINE TO BE APPROVED PRIOR TO BEGINNING WORK
- 3 PROPOSED 4-INCH SANITARY SEWER SERVICE LATERAL.
- 4 PROPOSED SANITARY SEWER CLEANOUT PER DETAIL ON SHEET 8.

LEGEND

- WATER METER
- CLEANOUT
- PROPOSED WATER LINE
- EXISTING WATER LINE
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER



DATE:	NO.	REVISION

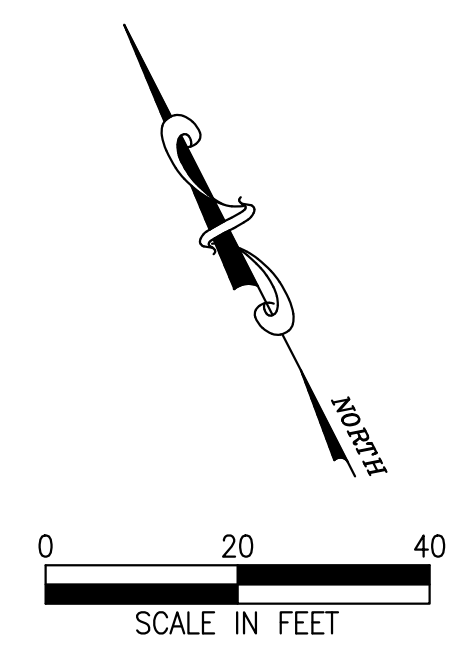
DRAWN: JRF	DESIGNED: CMN	CHECKED: KAG
SCALE: AS SHOWN	SEPTEMBER 2024	
PROJECT NO. E24-030		

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PRELIMINARY UTILITY PLAN
DEVELOPMENT ENGINEERING PLANS

5
8



EXPIRES: 06/30/25
SIGNATURE DATE:

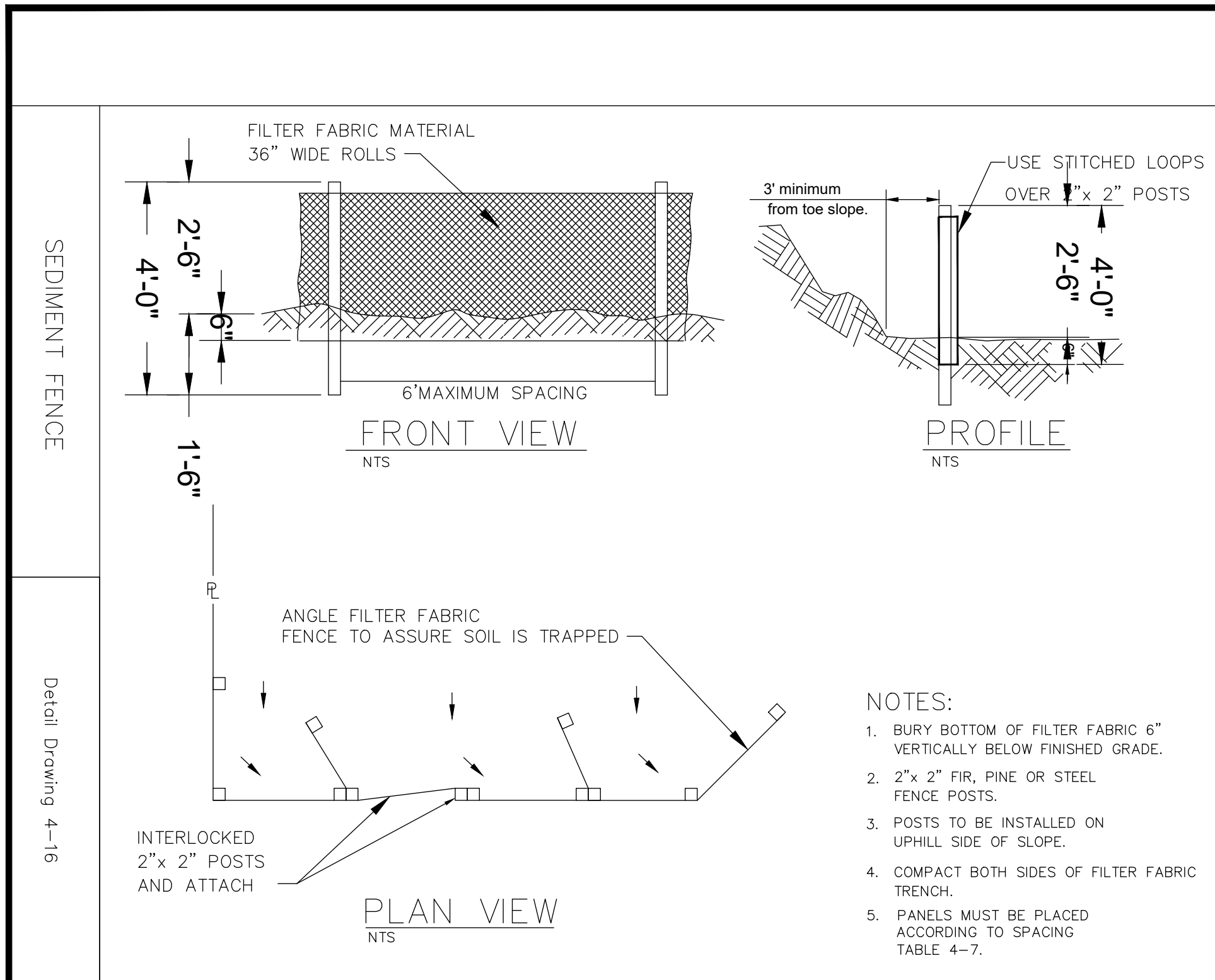
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			SCALE: AS SHOWN	SEPTEMBER 2024	
			PROJECT NO. E24-030		

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 (503) 668-3737

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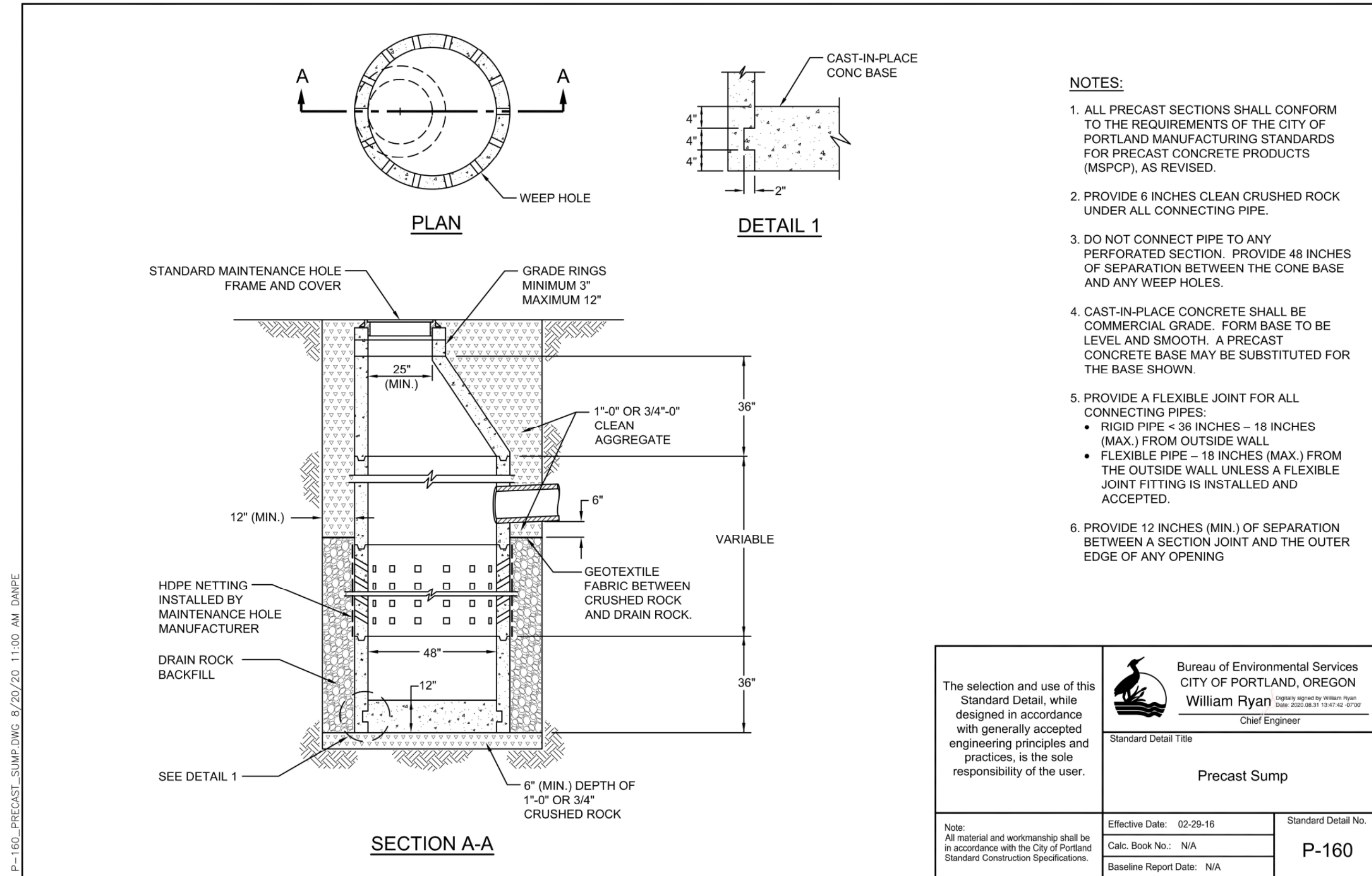
PRELIMINARY PLAT
DEVELOPMENT ENGINEERING PLANS

6
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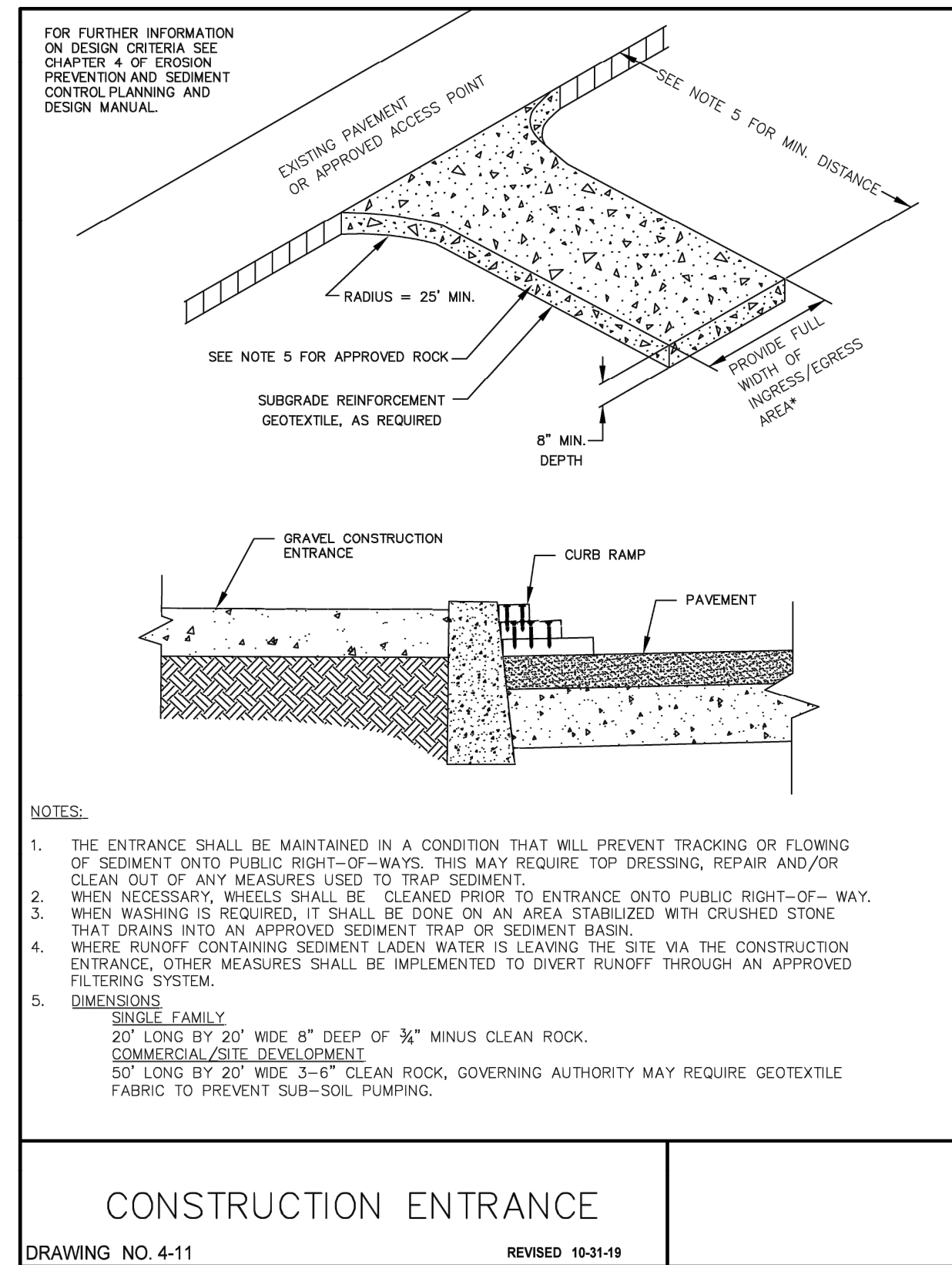
- NOTES:**
- BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
 - 2" x 2" FIR, PINE OR STEEL FENCE POSTS.
 - POSTS TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
 - COMPACT BOTH SIDES OF FILTER FABRIC TRENCH.
 - PANELS MUST BE PLACED ACCORDING TO SPACING TABLE 4-7.

SEDIMENT FENCE

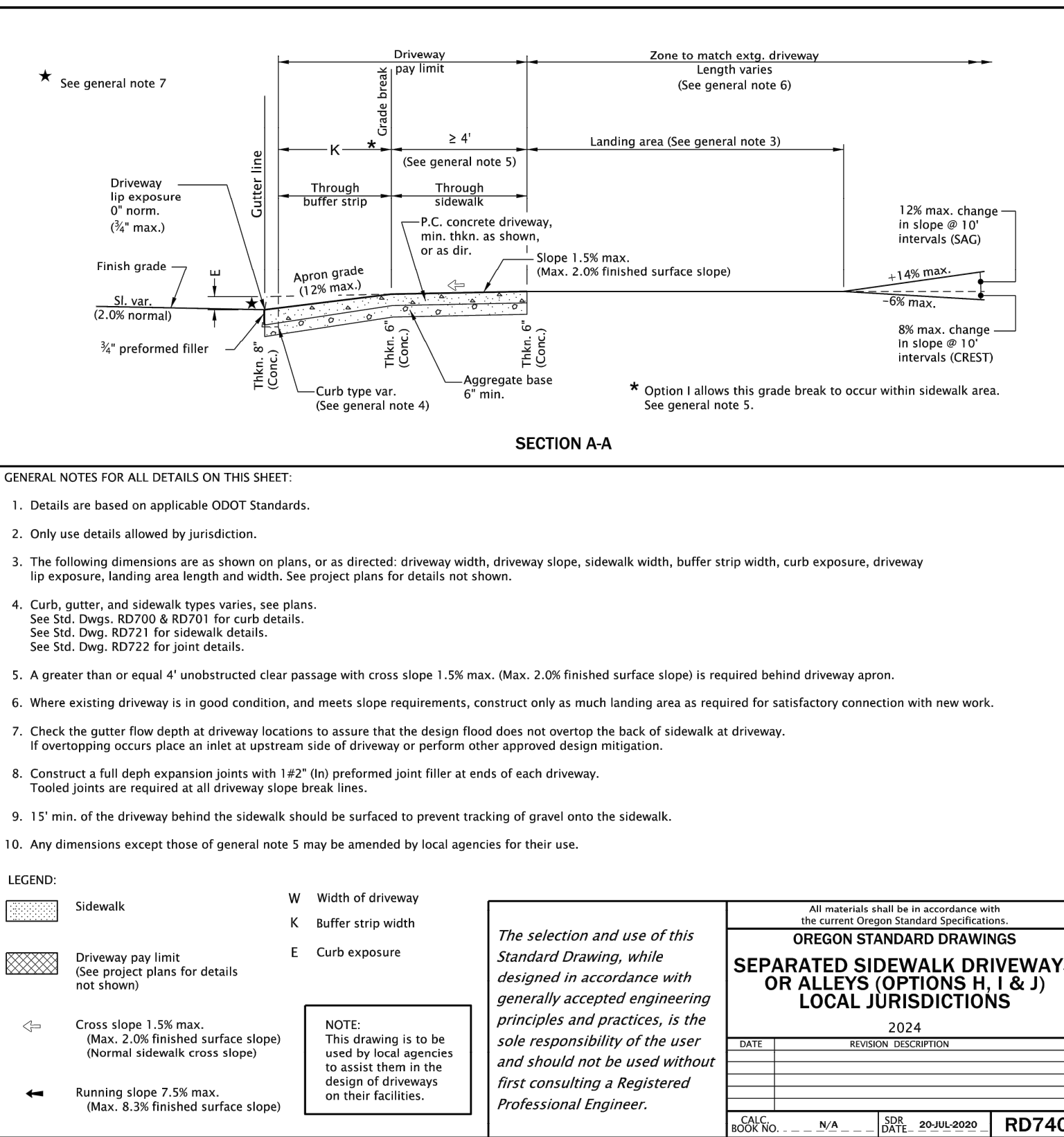
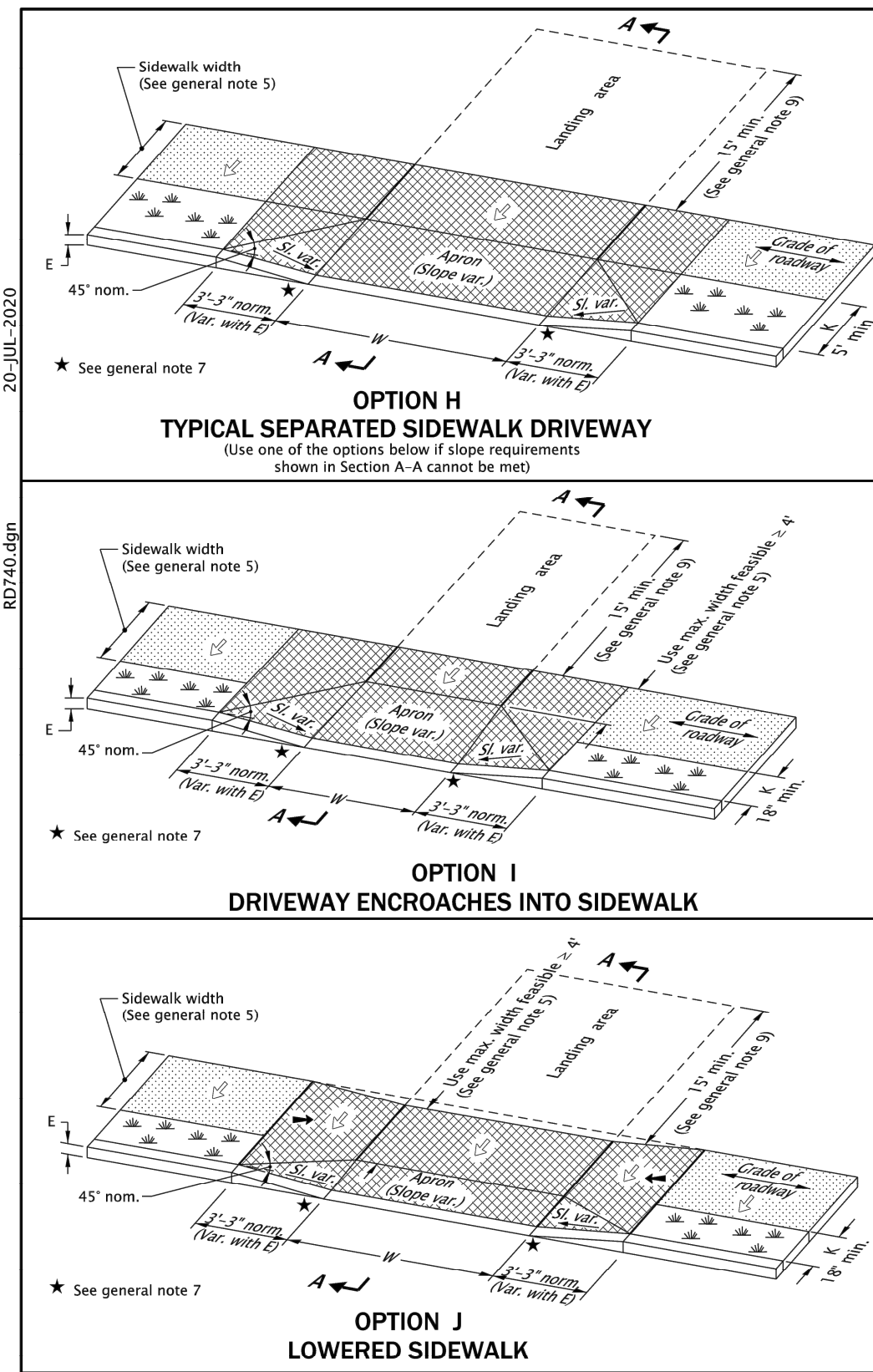


- NOTES:**
- ALL PRECAST SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF PORTLAND MANUFACTURING STANDARDS FOR PRECAST CONCRETE PRODUCTS (MSPCP), AS REVISED.
 - PROVIDE 6 INCHES CLEAN CRUSHED ROCK UNDER ALL CONNECTING PIPE.
 - DO NOT CONNECT PIPE TO ANY PERFORATED SECTION. PROVIDE 48 INCHES OF SEPARATION BETWEEN THE CONE BASE AND ANY WEEP HOLES.
 - CAST-IN-PLACE CONCRETE SHALL BE COMMERCIAL GRADE. FORM BASE TO BE LEVEL AND SMOOTH. A PRECAST CONCRETE BASE MAY BE SUBSTITUTED FOR THE BASE SHOWN.
 - PROVIDE A FLEXIBLE JOINT FOR ALL CONNECTING PIPES.
 - RIGID PIPE < 36 INCHES - 18 INCHES (MAX.) FROM OUTSIDE WALL
 - FLEXIBLE PIPE - 18 INCHES (MAX.) FROM THE OUTSIDE WALL UNLESS A FLEXIBLE JOINT FITTING IS INSTALLED AND ACCEPTED.
 - PROVIDE 12 INCHES (MIN.) OF SEPARATION BETWEEN A SECTION JOINT AND THE OUTER EDGE OF ANY OPENING

The selection and use of this Standard Detail, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user.	Bureau of Environmental Services CITY OF PORTLAND, OREGON William Ryan Chief Engineer	
	Standard Detail Title Precast Sump	
Note: All material and workmanship shall be in accordance with the City of Portland Standard Construction Specifications.	Effective Date: 02-29-16	Standard Detail No.
	Calc. Book No.: N/A	P-160
	Baseline Report Date: N/A	



- NOTES:**
- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
 - WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
 - WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
 - WHERE RUNOFF CONTAINING SEDIMENT LADEN WATER IS LEAVING THE SITE VIA THE CONSTRUCTION ENTRANCE, OTHER MEASURES SHALL BE IMPLEMENTED TO DIVERT RUNOFF THROUGH AN APPROVED FILTERING SYSTEM.
 - DIMENSIONS:**
 - SINGLE FAMILY: 20' LONG BY 20' WIDE 3/4" DEEP OF 3/4" MINUS CLEAN ROCK.
 - COMMERCIAL/SITE DEVELOPMENT: 50' LONG BY 20' WIDE 3-6" CLEAN ROCK. GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.



- GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:**
- Details are based on applicable ODOT Standards.
 - Only use details allowed by jurisdiction.
 - The following dimensions are as shown on plans, or as directed: driveway width, driveway slope, sidewalk width, buffer strip width, curb exposure, driveway lip exposure, landing area length and width. See project plans for details not shown.
 - Curb, gutter, and sidewalk types varies, see plans. See Std. Dwg. RD700 & RD701 for curb details. See Std. Dwg. RD721 for sidewalk details. See Std. Dwg. RD722 for joint details.
 - A greater than or equal 4' unobstructed clear passage with cross slope 1.5% max. (Max. 2.0% finished surface slope) is required behind driveway apron.
 - Where existing driveway is in good condition, and meets slope requirements, construct only as much landing area as required for satisfactory connection with new work.
 - Check the gutter flow depth at driveway locations to assure that the design flood does not overtop the back of sidewalk at driveway. If overtopping occurs place an inlet at upstream side of driveway or perform other approved design mitigation.
 - Construct a full depth expansion joints with 1/2" (in) preformed joint filler at ends of each driveway. Tooled joints are required at all driveway slope break lines.
 - 15' min. of the driveway behind the sidewalk should be surfaced to prevent tracking of gravel onto the sidewalk.
 - Any dimensions except those of general note 5 may be amended by local agencies for their use.

<p>LEGEND:</p> <ul style="list-style-type: none"> Sidewalk Driveway pay limit Cross slope 1.5% max. (Max. 2.0% finished surface slope) (Normal sidewalk cross slope) Running slope 7.5% max. (Max. 8.3% finished surface slope) 	<p>W Width of driveway</p> <p>K Buffer strip width</p> <p>E Curb exposure</p>	<p><i>The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.</i></p>	<p>OREGON STANDARD DRAWINGS</p> <p>SEPARATED SIDEWALK DRIVEWAYS OR ALLEYS (OPTIONS H, I & J) LOCAL JURISDICTIONS</p> <p>DATE: 2024</p> <p>REVISION DESCRIPTION:</p> <p>DATE: 06/14/2024</p> <p>BY: Kelli A. Grover</p> <p>RD740</p>
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Effective Date: June 1, 2024 - November 30, 2024



EXPIRES: 06/30/25
SIGNATURE DATE:

DRAWN: JRF	DESIGNED: CMN	CHECKED: KAG
SCALE: AS SHOWN	SEPTEMBER 2024	
PROJECT NO. E24-030		
DATE:	NO.	REVISION

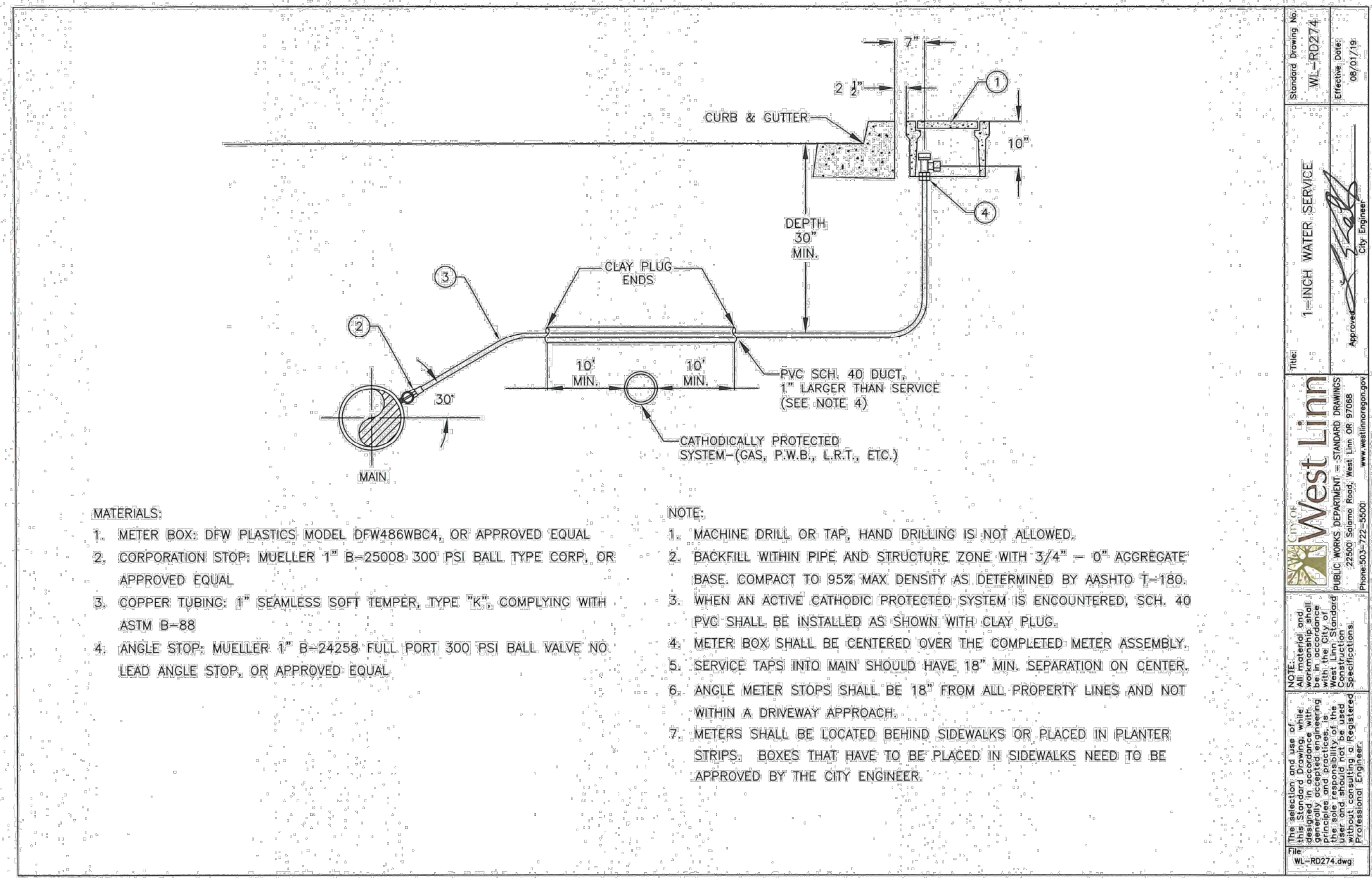
FIRWOOD DESIGN GROUP
Reliable Engineering Solutions

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TROUTDALE, OREGON 97060
(503) 668-3737

TPC PROPERTY LLC
PO BOX 521
West Linn, OR 97068

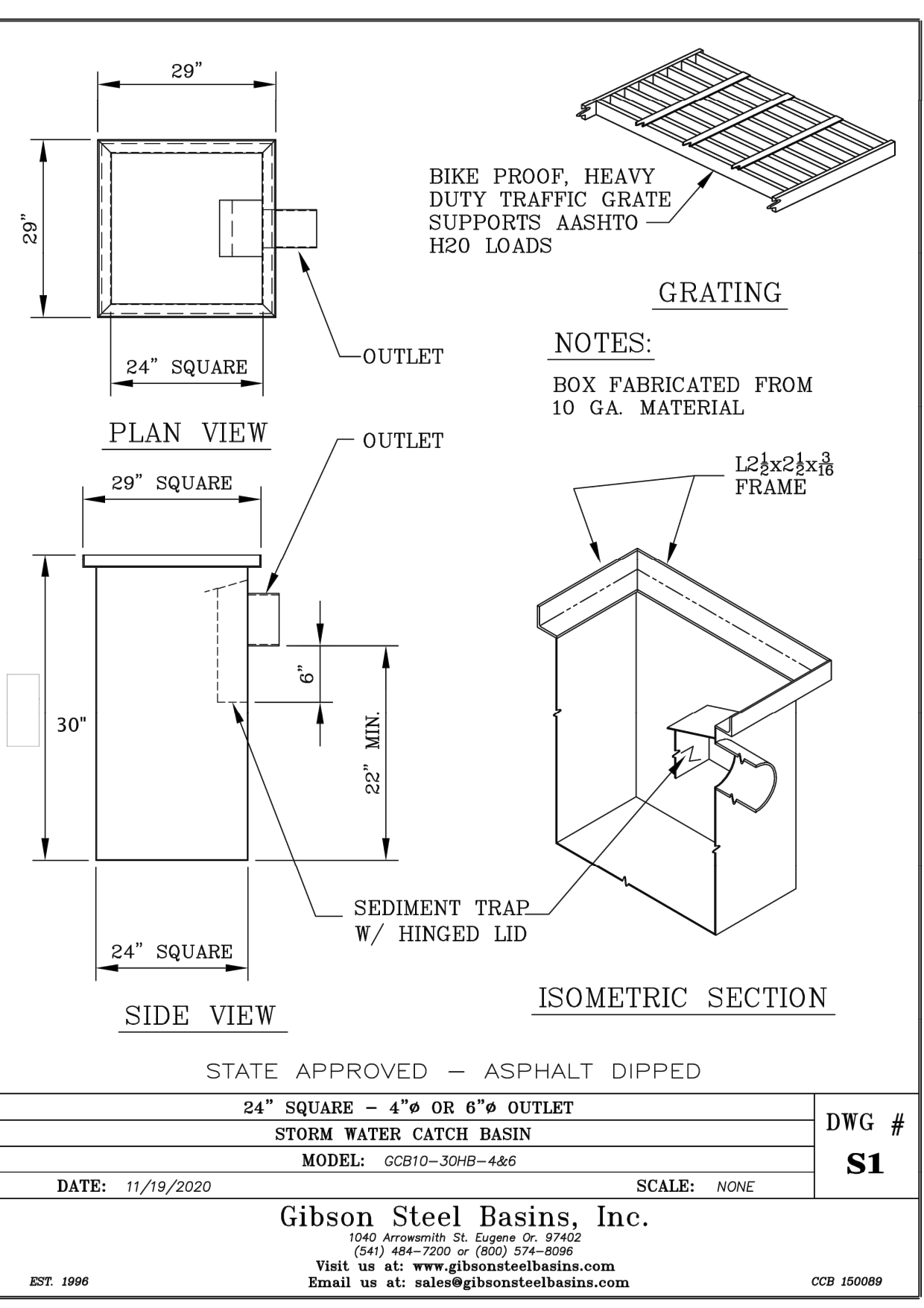
DETAILS
DEVELOPMENT ENGINEERING PLANS

7
8



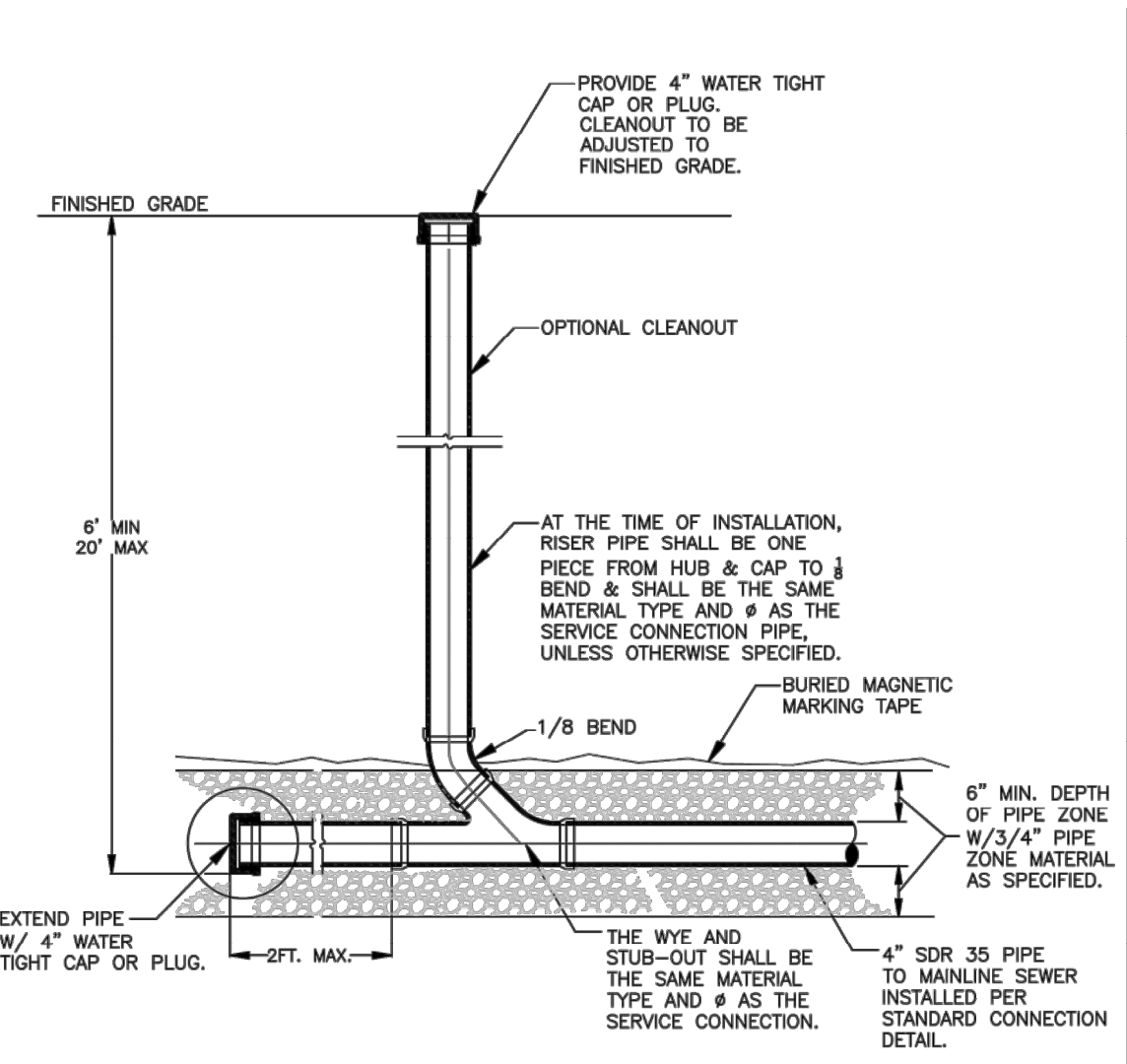
- MATERIALS:**
- METER BOX: DFW PLASTICS MODEL DFW486WBC4, OR APPROVED EQUAL
 - CORPORATION STOP: MUELLER 1" B-25008 300 PSI BALL TYPE CORP, OR APPROVED EQUAL
 - COPPER TUBING: 1" SEAMLESS SOFT TEMPER, TYPE "K", COMPLYING WITH ASTM B-88
 - ANGLE STOP: MUELLER 1" B-24258 FULL PORT 300 PSI BALL VALVE NO. LEAD ANGLE STOP, OR APPROVED EQUAL
- NOTE:**
- MACHINE DRILL OR TAP, HAND DRILLING IS NOT ALLOWED.
 - BACKFILL WITHIN PIPE AND STRUCTURE ZONE WITH 3/4" - 0" AGGREGATE BASE, COMPACT TO 95% MAX DENSITY AS DETERMINED BY AASHTO T-180.
 - WHEN AN ACTIVE CATHODIC PROTECTED SYSTEM IS ENCOUNTERED, SCH. 40 PVC SHALL BE INSTALLED AS SHOWN WITH CLAY PLUG.
 - METER BOX SHALL BE CENTERED OVER THE COMPLETED METER ASSEMBLY.
 - SERVICE TAPS INTO MAIN SHOULD HAVE 18" MIN. SEPARATION ON CENTER.
 - ANGLE METER STOPS SHALL BE 18" FROM ALL PROPERTY LINES AND NOT WITHIN A DRIVEWAY APPROACH.
 - METERS SHALL BE LOCATED BEHIND SIDEWALKS OR PLACED IN PLANTER STRIPS. BOXES THAT HAVE TO BE PLACED IN SIDEWALKS NEED TO BE APPROVED BY THE CITY ENGINEER.

Standard Drawing No. WL-R0274
 Effective Date: 08/07/19
 City Engineer: [Signature]
 Approved: [Signature]
 Title: 1-INCH WATER SERVICE
 City of West Linn
 Public Works Department - Standard Drawings
 1000 West Linn Road, West Linn, OR 97146
 Phone: 503-722-5500
 Fax: 503-722-5500
 Note: The selection and use of design and construction materials and methods is subject to change without notice and shall not be used for construction without the approval of the City Engineer.



STATE APPROVED - ASPHALT DIPPED

24" SQUARE - 4"Ø OR 6"Ø OUTLET	DWG #
STORM WATER CATCH BASIN	
MODEL: GCB10-30HB-4&6	S1
DATE: 11/19/2020	SCALE: NONE
Gibson Steel Basins, Inc. 1940 Arrowsmith St. Eugene, Or. 97402 (541) 484-7200 or (800) 574-8096 Visit us at: www.gibsonsteelbasins.com Email us at: sales@gibsonsteelbasins.com	
EST. 1996	CCB 150089



- ALL PIPE AND FITTINGS SHALL BE ASTM D-3034, SDR 35.
- ON LOTS WITH EXISTING HOMES, CONTRACTOR SHALL INSTALL APPROVED HUBS AND CAPS FLUSH WITH FINISHED GRADE.
- CLEANOUTS SHALL NOT BE CONSTRUCTED SO THE CLEANOUTS CAP WILL END UP IN SIDEWALKS, STEPS OR DRIVEWAYS.

STANDARD CLEANOUT



DATE:	NO.	REVISION	DRAWN: JRF	DESIGNED: CMN	CHECKED: KAG
			SCALE: AS SHOWN	SEPTEMBER 2024	
			PROJECT NO. E24-030		

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 Reliable Engineering Solutions
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 TROUTDALE, OREGON 97060
 (503) 668-3737

TPC PROPERTY LLC
 PO BOX 521
 West Linn, OR 97068

DETAILS
 DEVELOPMENT ENGINEERING PLANS

8/8

Preliminary Stormwater Report
Cornwall 3 Lot Middle Housing
City of West Linn, OR

September 2024

FDG Project No. E24-030



Prepared By:



FIRWOOD DESIGN GROUP

359 E. Historic Columbia River Highway Troutdale, OR 97060 503.668.3737 firwooddesign.com

Table of Contents

I EXISTING CONDITIONS 1
II PROPOSED IMPROVEMENTS AND DESIGN PARAMETERS 2
III FLOW CONTROL ANALYSIS..... 2
V WATER QUALITY..... 3
VII DOWN STREAM ANALYSIS..... 3
VIII CONCLUSION 4

APPENDICES:

- Appendix A: Stormwater and Grading Plan
- Appendix B: HydroCAD Output
- Appendix C: NRCS Soil Report
- Appendix D: Infiltration Test Report

I **EXISTING CONDITIONS**

The project site is located at 4194 Cornwall Street, West Linn, OR (Parcel #21E36BA 065000), and is zoned R10. The current 0.49 acres lot features an existing residential structure and a detached garage. The site is relatively flat, with slopes less than 5%, gently sloping towards the southern side. The remainder of the lot is landscaped with mature trees and a retaining landscape wall along the southern property line. The site's soils are classified as "Saum Silt Loam" and fall within hydrological soil group C, with slopes ranging from 3 to 8 percent. See Figure 1 for details.



Figure 1: 4194 Cornwall Street, West Linn, OR 97068

II PROPOSED IMPROVEMENTS AND DESIGN PARAMETERS

The client proposes to partition the parcel into three parcels for single-family use. A new 14-foot wide, 130-foot long driveway is proposed to serve the first two lots, continuing as a 12-foot wide private driveway serving the third lot. The project will include the construction of utility services (water, sewer) to connect to existing mains on Cornwall Street. Stormwater improvements will include Lynch Style Catch Basin to capture driveway surface runoff for treatment, and drywells to fully infiltrate the Stormwater runoff from the catch basins and roof runoff directly without treatment; individual drywells are proposed for each private driveway and each private roof area runoff. See Stormwater and Grading Plan.

The design parameters applied are consistent with the City of West Linn Public Works Standards Section 2 and the current edition of the City of Portland Stormwater Management Manual.

Rapid Soil Solutions conducted a geotechnical infiltration test meeting the City standard and determined that the site soils are conducive to on-site infiltration. Below is a summary of the findings. A copy of the full report is included in the appendices.

Location	Depth (ft)	Rate (in/hr.)
HA#1	3.5	6.375
HA#1	3.5	125

The design storms, as required by the City of West Linn and City of Portland design and construction standards, are as follows:

Recurrence Interval (years)	Total Precipitation Depth (In)
WQ	1.2
2	2.4
10	3.4
25	3.8

III FLOW CONTROL ANALYSIS

The Santa Barbara Urban Hydrography method (via HydroCAD) was used to create the basin hydrographs and estimate the peak flows for the 10-year design storms. For detailed data and calculations, please see the Hydrocad Output.

A curve number of 98 was assigned to all impervious surfaces, and a minimum time of concentration of 6 minutes was applied to all drainage basin areas.

The drywells were sized using the 10-year design storm per City standards.

The average infiltration rate derived from these tests is 3.812 inches per hour. For our stormwater design, we applied a safety factor of 2, resulting in an adjusted infiltration rate of 1.906 inches per hour. This rate was used in our stormwater calculations for the proposed drywells and planters. For the complete geotechnical report, please see Infiltration Test report attached.

The drywells were modeled assuming a 12-inch rock band surrounding the drywell with a 40% void ratio.

These basin areas and planter designs are discussed further in the next section. The following table summarizes the drywell design for the 10 year storm events.

Drywell	ID	Basin Area (sf)	Design Depth (ft)	Post Construction Storm Event	Peak Inflow (cfs)	Peak Elevation	Peak Storage (cf)
1	Shared Driveway	2,245	10'	10-year	0.04	12.17'	184
2	Lot 1 Private Driveway	930	5.5'	10-year	0.02	5.32'	64
3	Lot 1 Roof Area	2,175	9.5'	10-year	0.04	9.44'	178
4	Lot 2 Private Driveway	930	5.5'	10-year	0.02	5.32'	64
5	Lot 2 Roof Area	2,550	11.5'	10-year	0.05	11.26'	212
6	Lot 3 Private Driveway	960	6'	10-year	0.02	5.52'	67
7	Lot 3 Roof Area	3,016	14'	10-year	0.05	13.52'	255

The results of the analysis for full infiltration of the 10-year storm illustrate that a 36 inch and 48 -inch diameter with the specified design depth will be adequate, as the peak elevation does not exceed these depths during the maximum storm event.

V WATER QUALITY

Water quality treatment for all pollution generating surfaces is provided by Lynch style Catch basins as approved per Table 3-7 in the City of Portland Stormwater Management manual. Roof runoff is not required to be treated and will directly discharge into the proposed drywell systems.

VII DOWN STREAM ANALYSIS

No downstream analysis is required as the site is 100% infiltrated on site per city of Portland Stormwater standards.

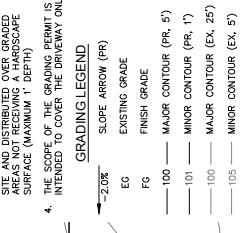
VIII CONCLUSION

The project site demonstrates favorable infiltration characteristics, enabling effective on-site stormwater management. The proposed stormwater management plan for the new improvements is summarized as follows: Stormwater from the proposed shared and private driveway areas will be treated by the proposed Lynch style catch basins.

Stormwater will be managed on-site through 100% infiltration for the 10-year design storm. The proposed stormwater management meets the City of West Linn Public Works standards.

APPENDIX A

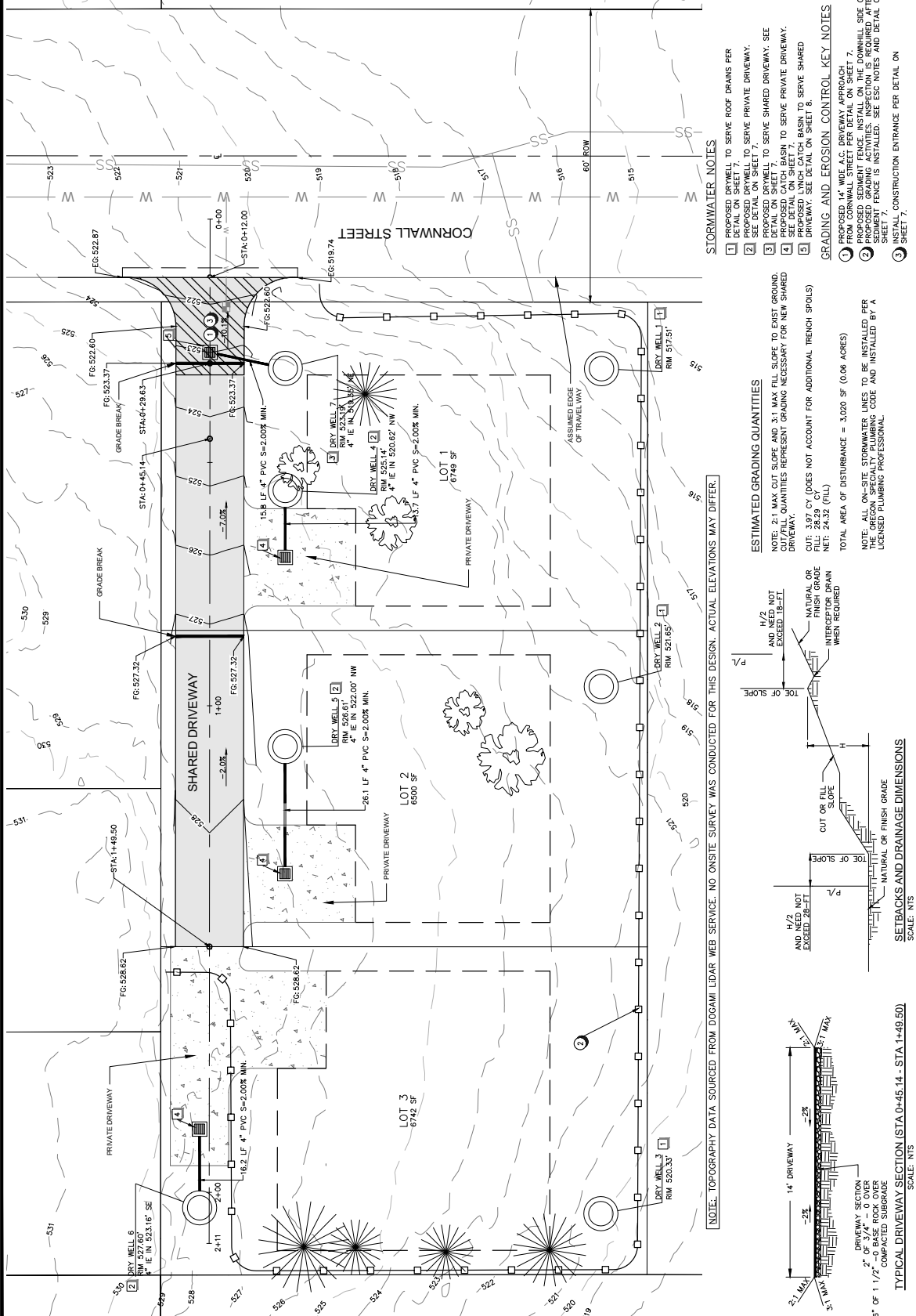
- GENERAL NOTES**
1. THE CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AND STATE AUTHORITIES. ALL REQUIREMENTS SHALL BE PER THE LOCAL AND STATE REGULATIONS. CONSULT WITH THE ENGINEER'S RECOMMENDATIONS.
 2. STRIPPING DEPTH SHALL BE PER THE LOCAL AND STATE REGULATIONS. CONSULT WITH THE ENGINEER'S RECOMMENDATIONS.
 3. EXPOSURES SHALL BE STICKELED ON SITE AND DISTRIBUTED OVER GRADED AREAS NOT RECEIVING A HARDSCAPE SURFACE (MINIMUM 1" DEPTH).
 4. THE SCOPE OF THE GRADING PERMIT IS INTENDED TO COVER THE DRIVEWAY ONLY.



EXPIRES: 06/30/25
SIGNATURE DATE:

4 8

GRADING STORM & ESC PLAN
DEVELOPMENT ENGINEERING PLANS



STORMWATER NOTES

1. PROPOSED DRYWELL TO SERVE ROOF DRAINS PER DETAIL ON SHEET 7.
 2. PROPOSED DRYWELL TO SERVE PRIVATE DRIVEWAY. SEE DETAIL ON SHEET 7.
 3. PROPOSED DRYWELL TO SERVE SHARED DRIVEWAY. SEE DETAIL ON SHEET 7.
 4. PROPOSED CATCH BASIN TO SERVE PRIVATE DRIVEWAY. SEE DETAIL ON SHEET 7.
 5. DRIVEWAY. SEE DETAIL ON SHEET 6.
- GRADING AND EROSION CONTROL KEY NOTES**
1. PROPOSED 14" WIDE A.C. DRIVEWAY APPROACH PER DETAIL ON SHEET 7.
 2. PROPOSED STORMWATER CONTROL. SEE DETAIL ON SHEET 7.
 3. PROPOSED SEMI-RIGID FENCE. INSTALL ON THE DOWNHILL SIDE OF THE DRIVEWAY. SEE DETAIL ON SHEET 7.
 4. PROPOSED GRADING ACTIVITIES IS REQUIRED AFTER SHEET 7 FENCE IS INSTALLED. SEE ESC NOTES AND DETAIL ON SHEET 7.
 5. INSTALL CONSTRUCTION ENTRANCE PER DETAIL ON SHEET 7.

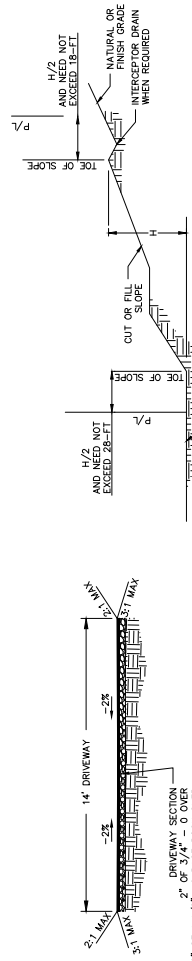
ESTIMATED GRADING QUANTITIES

NOTE: 2:1 MAX CUT SLOPE AND 3:1 MAX FILL SLOPE TO EXIST GROUND. CUT/FILL QUANTITIES REPRESENT GRADING NECESSARY FOR NEW SHARED DRIVEWAY.

CUT: 3.97 CY (DOES NOT ACCOUNT FOR ADDITIONAL TRENCH SPOILS)
FILL: 28.29 CY
NET: 24.32 (FILL)

TOTAL AREA OF DISTURBANCE = 3,020 SF (0.06 ACRES)

TYPICAL DRIVEWAY SECTION (STA 0+45.14 - STA 1+49.50)



NOTE: ALL ON-SITE STORMWATER LINES TO BE INSTALLED PER MECHANICAL SPECIALTY CONTRACTOR. SCHEDULE C INSTALLATION BY A LICENSED PLUMBING PROFESSIONAL.

NOTE: TOPOGRAPHY DATA SOURCED FROM DOGAMI LIDAR. WEB SERVICE. NO ONSITE SURVEY WAS CONDUCTED FOR THIS DESIGN. ACTUAL ELEVATIONS MAY DIFFER.

TPC PROPERTY LLC
PO BOX 521
West Linn, OR 97068

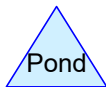
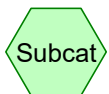
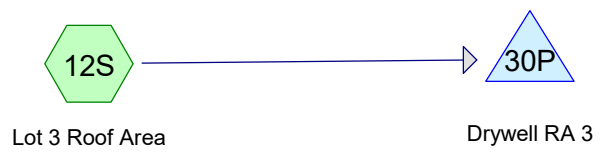
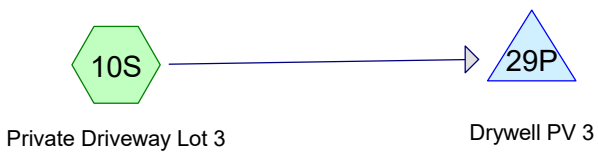
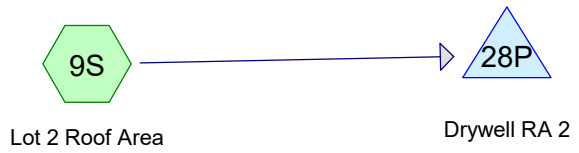
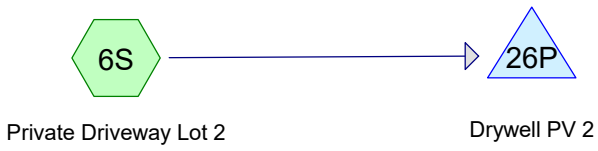
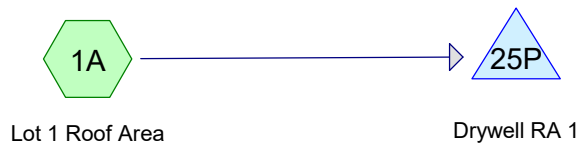
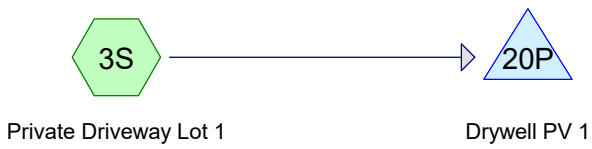
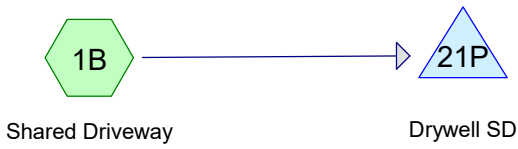
395 EAST 103RD COLUMBIAN RIVER HIGHWAY
TILLAMOOK, OR 97141
(503) 966-9377



DATE:	NO.	REVISION

DRAWN: JRF | DESIGNED: CMJ | CHECKED: MAG
SCALE: AS SHOWN | SEPTEMBER 2024
PROJECT NO. E24-030

APPENDIX B



Routing Diagram for Hydrocad Report
Prepared by Firwood Design Group, Printed 9/15/2024
HydroCAD® 10.10-7a s/n 04664 © 2021 HydroCAD Software Solutions LLC

Hydrocad Report

Prepared by Firwood Design Group

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Page 2

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	10 Year	Type IA 24-hr		Default	24.00	1	3.40	2

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Page 3

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
2,245	98	Asphalt (1B)
7,741	98	Building Roof Area (1A, 9S, 12S)
2,820	98	Concrete (3S, 6S, 10S)
12,806	98	TOTAL AREA

Hydrocad Report

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Page 4

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
0	HSG C	
0	HSG D	
12,806	Other	1A, 1B, 3S, 6S, 9S, 10S, 12S
12,806		TOTAL AREA

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Page 5

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Subcatch Numbers
0	0	0	0	2,245	2,245	Asphalt	
0	0	0	0	7,741	7,741	Building Roof Area	
0	0	0	0	2,820	2,820	Concrete	
0	0	0	0	12,806	12,806	TOTAL AREA	

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Type IA 24-hr 10 Year Rainfall=3.40"

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Page 6

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1A: Lot 1 Roof Area	Runoff Area=2,175 sf 100.00% Impervious Runoff Depth=3.17" Tc=6.0 min CN=0/98 Runoff=0.04 cfs 574 cf
Subcatchment 1B: Shared Driveway	Runoff Area=2,245 sf 100.00% Impervious Runoff Depth=3.17" Tc=6.0 min CN=0/98 Runoff=0.04 cfs 592 cf
Subcatchment 3S: Private Driveway Lot 1	Runoff Area=930 sf 100.00% Impervious Runoff Depth=3.17" Tc=6.0 min CN=0/98 Runoff=0.02 cfs 245 cf
Subcatchment 6S: Private Driveway Lot 2	Runoff Area=930 sf 100.00% Impervious Runoff Depth=3.17" Tc=6.0 min CN=0/98 Runoff=0.02 cfs 245 cf
Subcatchment 9S: Lot 2 Roof Area	Runoff Area=2,550 sf 100.00% Impervious Runoff Depth=3.17" Tc=6.0 min CN=0/98 Runoff=0.05 cfs 673 cf
Subcatchment 10S: Private Driveway Lot 3	Runoff Area=960 sf 100.00% Impervious Runoff Depth=3.17" Tc=6.0 min CN=0/98 Runoff=0.02 cfs 253 cf
Subcatchment 12S: Lot 3 Roof Area	Runoff Area=3,016 sf 100.00% Impervious Runoff Depth=3.17" Tc=6.0 min CN=0/98 Runoff=0.05 cfs 796 cf
Pond 20P: Drywell PV 1	Peak Elev=5.32' Storage=64 cf Inflow=0.02 cfs 245 cf Outflow=0.00 cfs 245 cf
Pond 21P: Drywell SD	Peak Elev=9.78' Storage=184 cf Inflow=0.04 cfs 592 cf Outflow=0.01 cfs 592 cf
Pond 25P: Drywell RA 1	Peak Elev=9.44' Storage=178 cf Inflow=0.04 cfs 574 cf Outflow=0.01 cfs 574 cf
Pond 26P: Drywell PV 2	Peak Elev=5.32' Storage=64 cf Inflow=0.02 cfs 245 cf Outflow=0.00 cfs 245 cf
Pond 28P: Drywell RA 2	Peak Elev=11.26' Storage=212 cf Inflow=0.05 cfs 673 cf Outflow=0.01 cfs 673 cf
Pond 29P: Drywell PV 3	Peak Elev=5.52' Storage=67 cf Inflow=0.02 cfs 253 cf Outflow=0.00 cfs 253 cf
Pond 30P: Drywell RA 3	Peak Elev=13.52' Storage=255 cf Inflow=0.05 cfs 796 cf Outflow=0.01 cfs 796 cf

Total Runoff Area = 12,806 sf Runoff Volume = 3,379 cf Average Runoff Depth = 3.17"
0.00% Pervious = 0 sf 100.00% Impervious = 12,806 sf

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Type IA 24-hr 10 Year Rainfall=3.40"

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Page 7

Summary for Subcatchment 1A: Lot 1 Roof Area

Runoff = 0.04 cfs @ 7.90 hrs, Volume= 574 cf, Depth= 3.17"

Routed to Pond 25P : Drywell RA 1

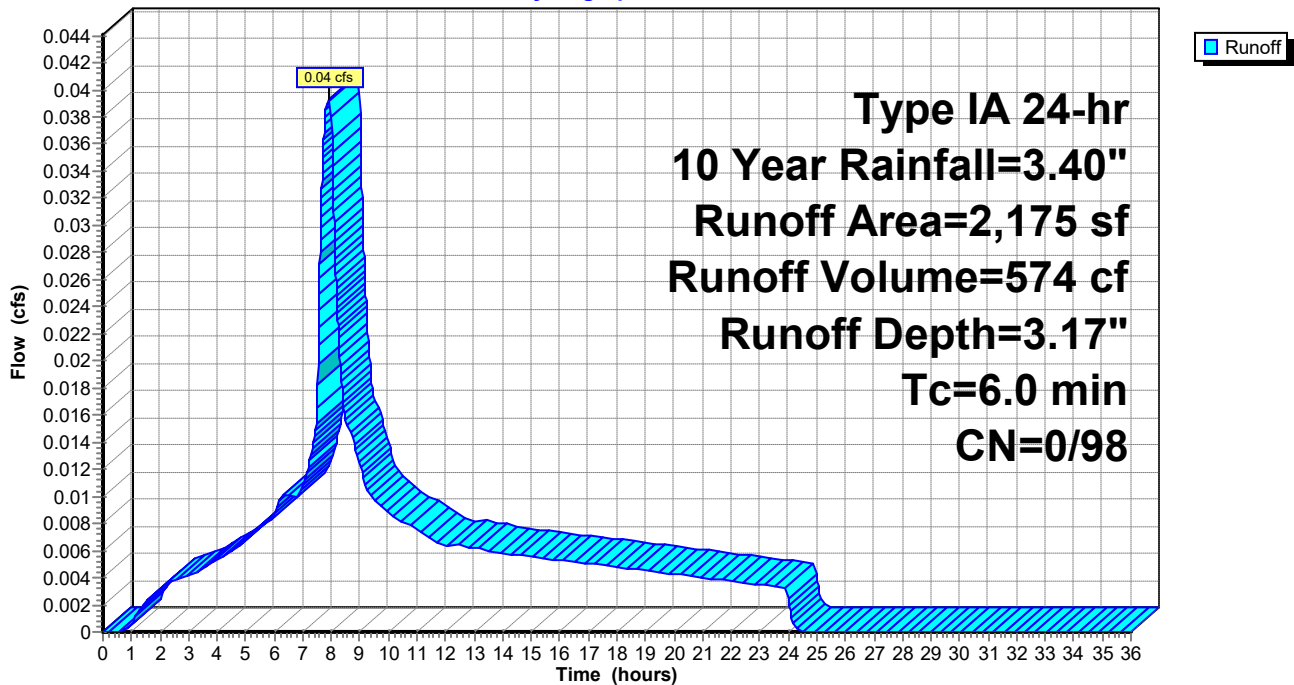
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 10 Year Rainfall=3.40"

Area (sf)	CN	Description
* 2,175	98	Building Roof Area
2,175		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Minimum

Subcatchment 1A: Lot 1 Roof Area

Hydrograph



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Type IA 24-hr 10 Year Rainfall=3.40"

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Page 8

Summary for Subcatchment 1B: Shared Driveway

Runoff = 0.04 cfs @ 7.90 hrs, Volume= 592 cf, Depth= 3.17"

Routed to Pond 21P : Drywell SD

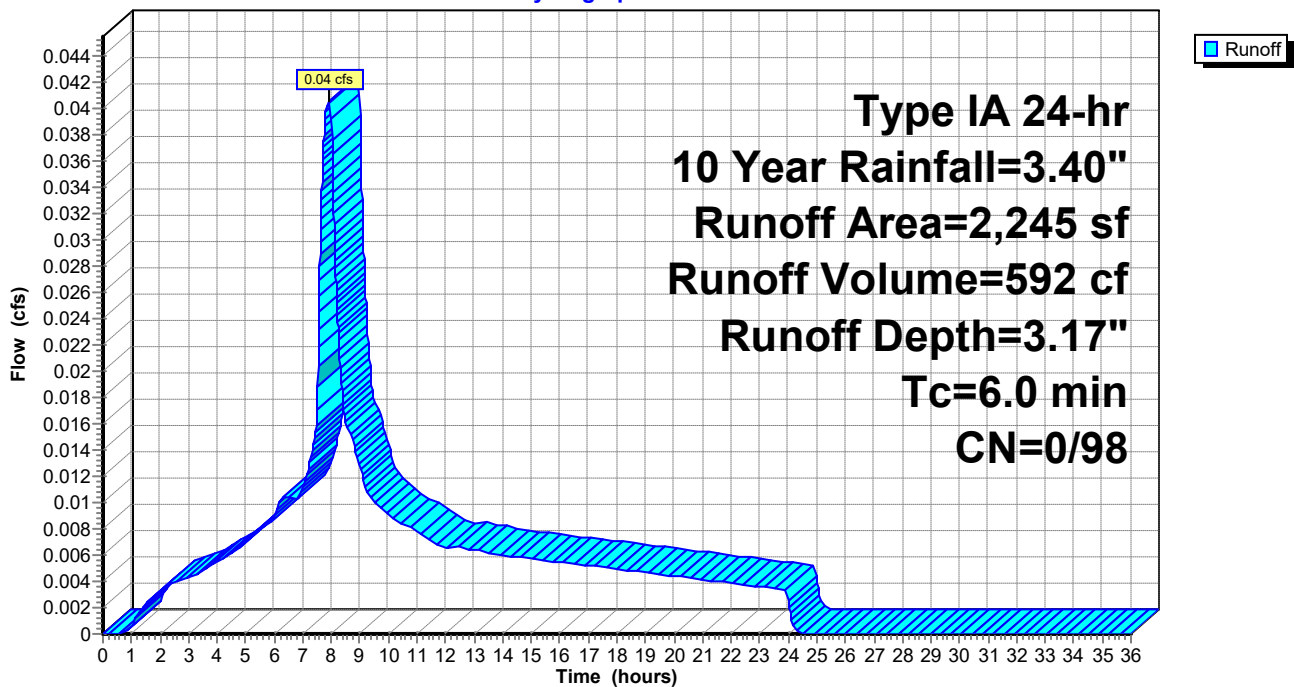
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10 Year Rainfall=3.40"

Area (sf)	CN	Description
* 2,245	98	Asphalt
2,245		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Minimum

Subcatchment 1B: Shared Driveway

Hydrograph



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Type IA 24-hr 10 Year Rainfall=3.40"

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Page 9

Summary for Subcatchment 3S: Private Driveway Lot 1

Runoff = 0.02 cfs @ 7.90 hrs, Volume= 245 cf, Depth= 3.17"
 Routed to Pond 20P : Drywell PV 1

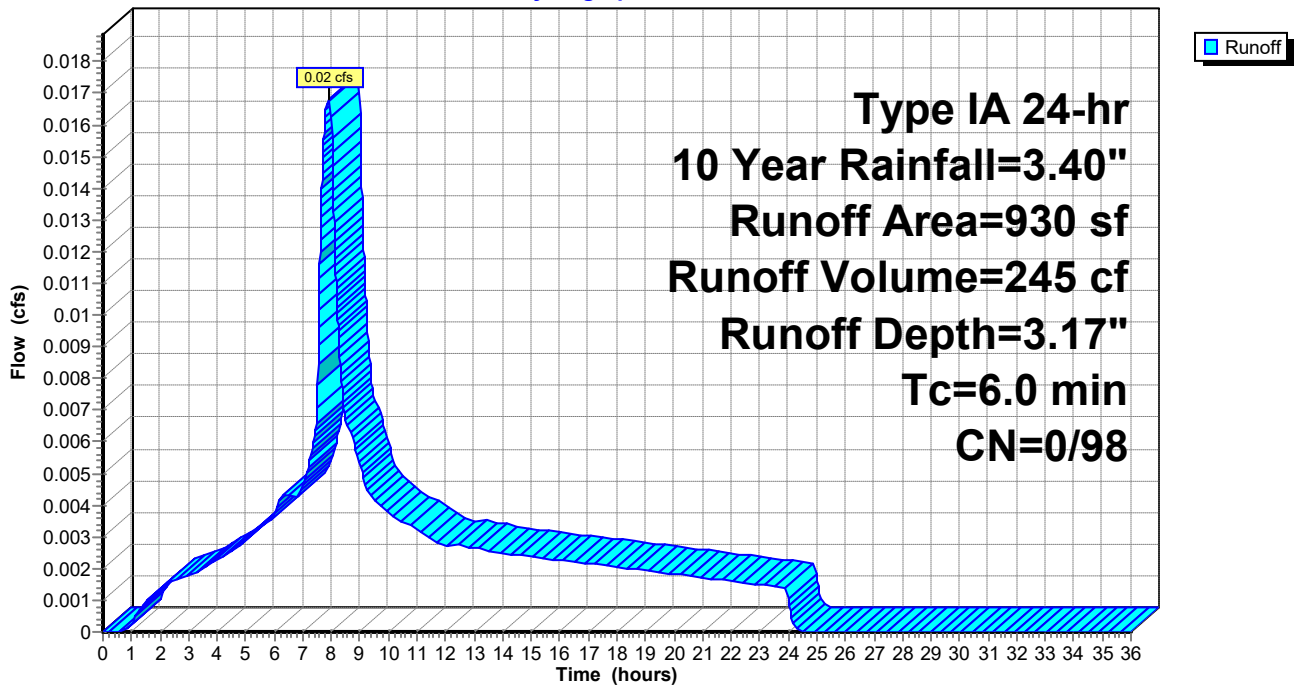
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type IA 24-hr 10 Year Rainfall=3.40"

Area (sf)	CN	Description
* 930	98	Concrete
930		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Minimum

Subcatchment 3S: Private Driveway Lot 1

Hydrograph



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Type IA 24-hr 10 Year Rainfall=3.40"

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Page 10

Summary for Subcatchment 6S: Private Driveway Lot 2

Runoff = 0.02 cfs @ 7.90 hrs, Volume= 245 cf, Depth= 3.17"

Routed to Pond 26P : Drywell PV 2

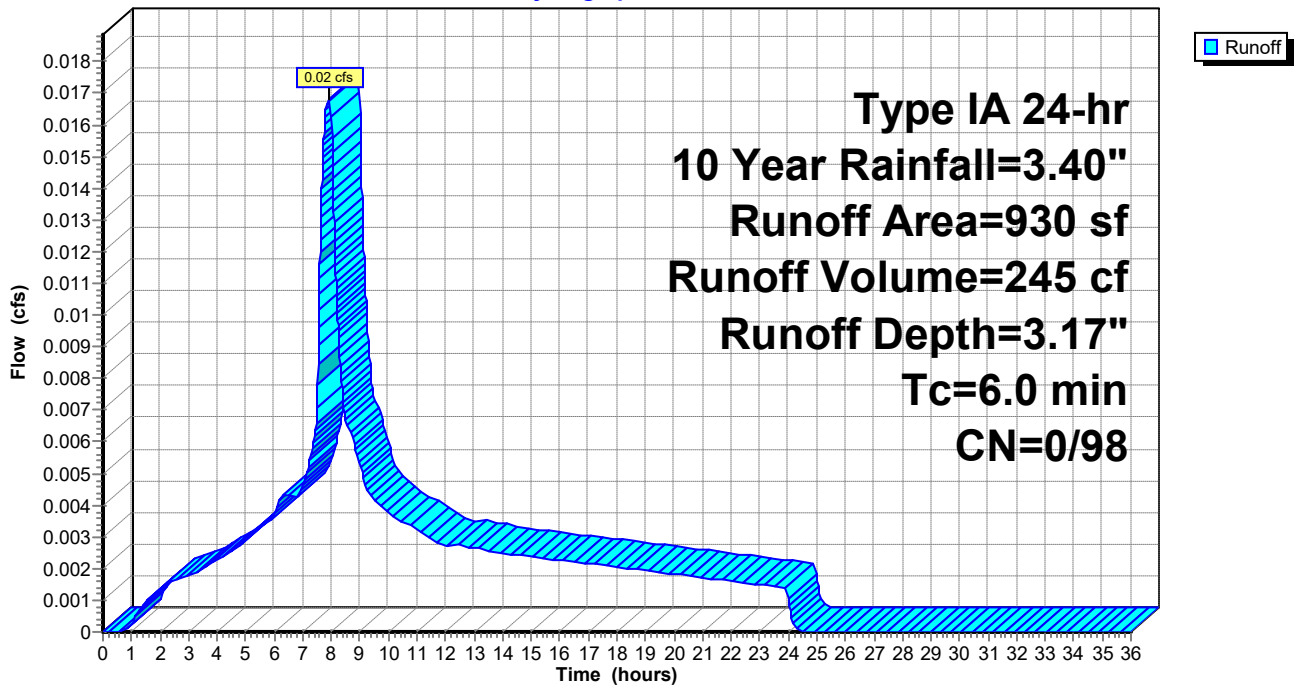
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10 Year Rainfall=3.40"

Area (sf)	CN	Description
* 930	98	Concrete
930		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Minimum

Subcatchment 6S: Private Driveway Lot 2

Hydrograph



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Type IA 24-hr 10 Year Rainfall=3.40"

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Page 11

Summary for Subcatchment 9S: Lot 2 Roof Area

Runoff = 0.05 cfs @ 7.90 hrs, Volume= 673 cf, Depth= 3.17"

Routed to Pond 28P : Drywell RA 2

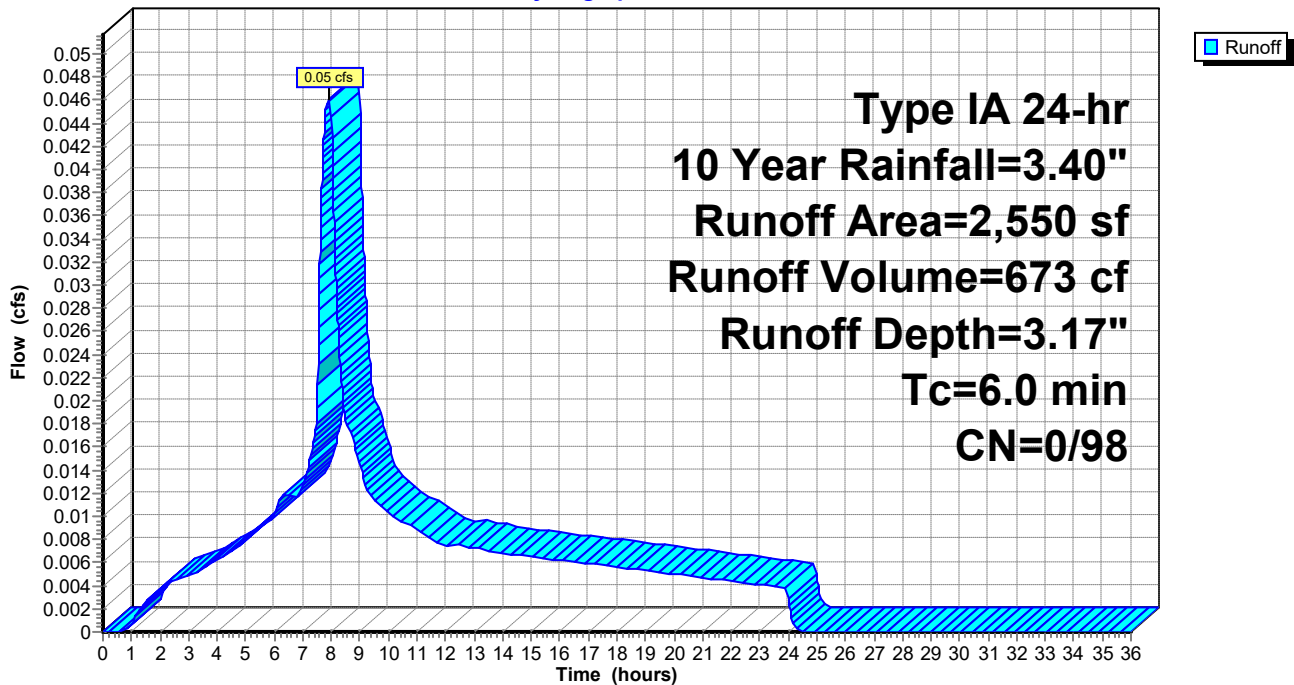
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10 Year Rainfall=3.40"

Area (sf)	CN	Description
* 2,550	98	Building Roof Area
2,550		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Minimum

Subcatchment 9S: Lot 2 Roof Area

Hydrograph



HydroCAD Report

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Type IA 24-hr 10 Year Rainfall=3.40"

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Page 12

Summary for Subcatchment 10S: Private Driveway Lot 3

Runoff = 0.02 cfs @ 7.90 hrs, Volume= 253 cf, Depth= 3.17"

Routed to Pond 29P : Drywell PV 3

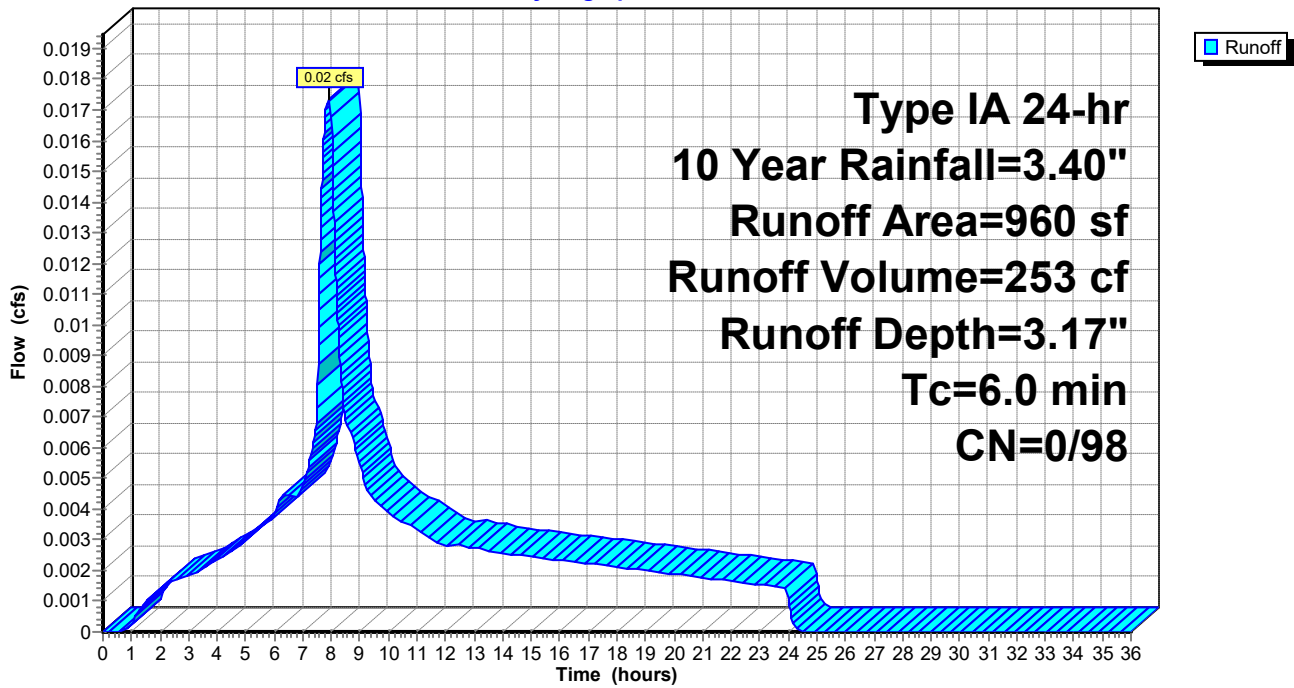
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10 Year Rainfall=3.40"

Area (sf)	CN	Description
* 960	98	Concrete
960		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Minimum

Subcatchment 10S: Private Driveway Lot 3

Hydrograph



HydroCAD Report

Prepared by Firwood Design Group

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Type IA 24-hr 10 Year Rainfall=3.40"

Printed 9/15/2024

Page 13

Summary for Subcatchment 12S: Lot 3 Roof Area

Runoff = 0.05 cfs @ 7.90 hrs, Volume= 796 cf, Depth= 3.17"

Routed to Pond 30P : Drywell RA 3

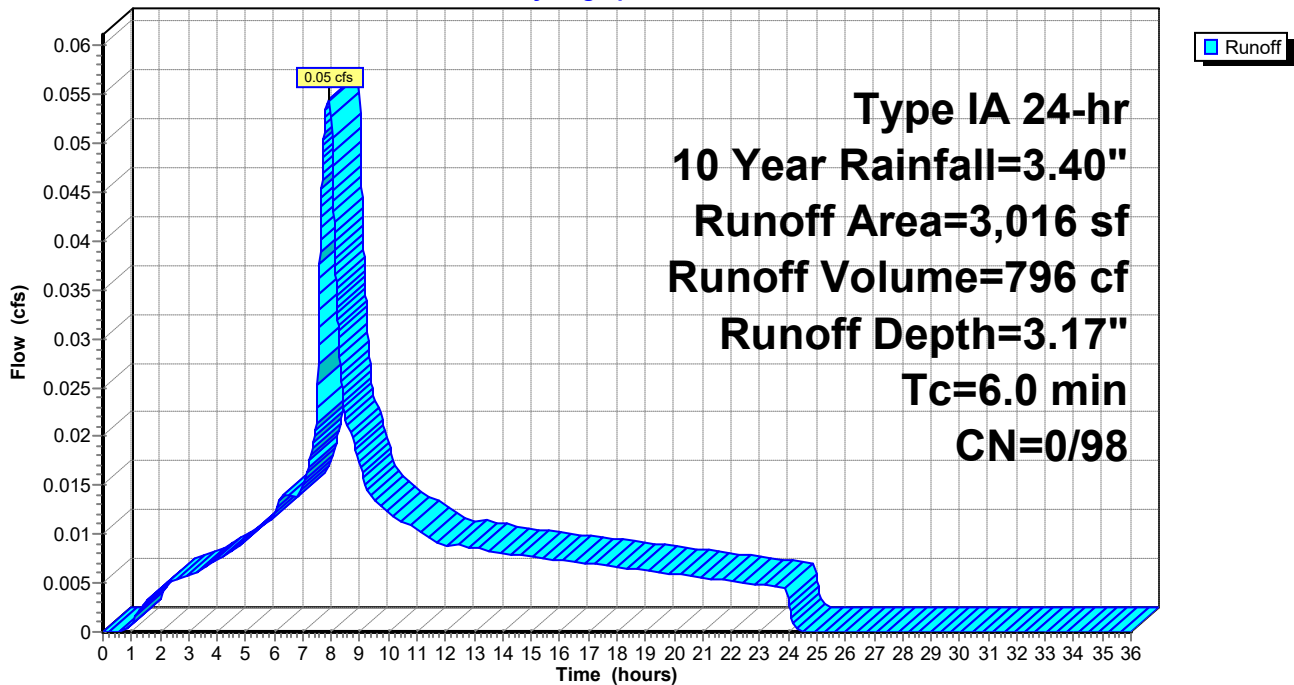
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10 Year Rainfall=3.40"

Area (sf)	CN	Description
* 3,016	98	Building Roof Area
3,016		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Minimum

Subcatchment 12S: Lot 3 Roof Area

Hydrograph



HydroCAD Report

Prepared by Firwood Design Group

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Type IA 24-hr 10 Year Rainfall=3.40"

Printed 9/15/2024

Page 14

Summary for Pond 20P: Drywell PV 1

Inflow Area = 930 sf, 100.00% Impervious, Inflow Depth = 3.17" for 10 Year event
 Inflow = 0.02 cfs @ 7.90 hrs, Volume= 245 cf
 Outflow = 0.00 cfs @ 9.25 hrs, Volume= 245 cf, Atten= 73%, Lag= 81.0 min
 Discarded = 0.00 cfs @ 9.25 hrs, Volume= 245 cf

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 5.32' @ 9.25 hrs Surf.Area= 20 sf Storage= 64 cf

Plug-Flow detention time= 191.7 min calculated for 245 cf (100% of inflow)
 Center-of-Mass det. time= 191.8 min (856.3 - 664.6)

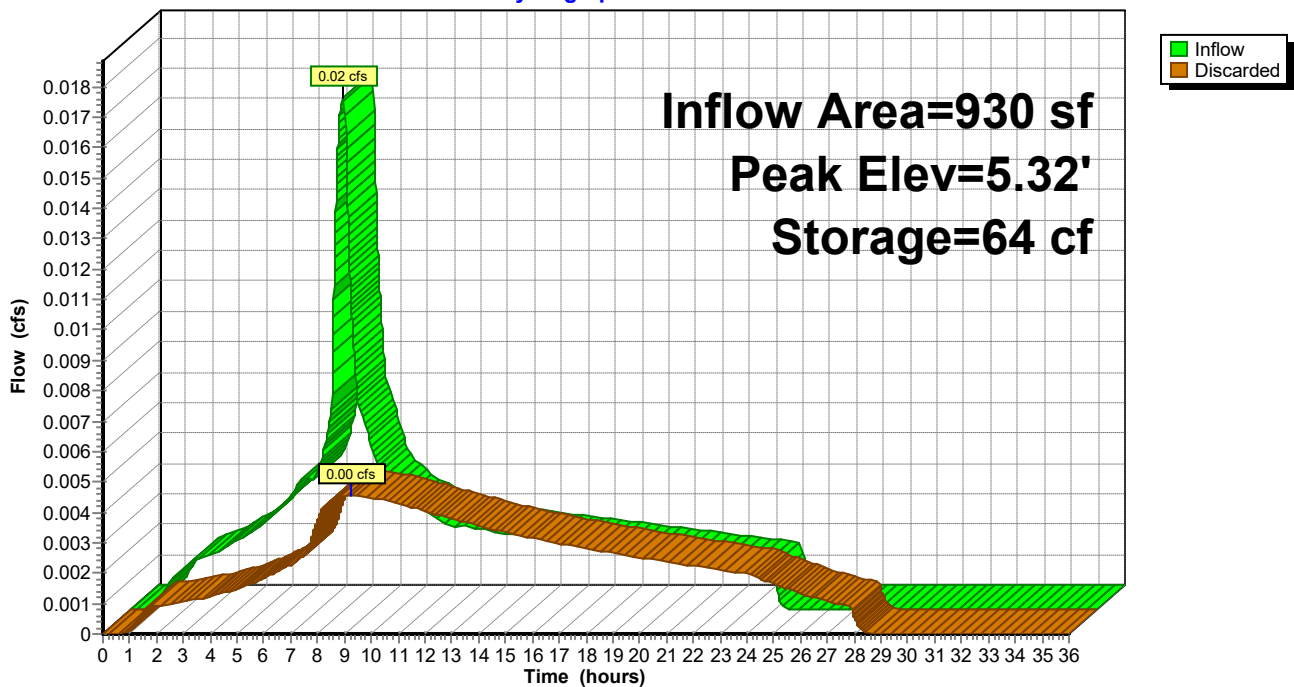
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	28 cf	5.00'D x 5.50'H Vertical Cone/Cylinder 108 cf Overall - 39 cf Embedded = 69 cf x 40.0% Voids
#2	0.00'	39 cf	3.00'D x 5.50'H Vertical Cone/Cylinder Inside #1
		67 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	1.906 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.00 cfs @ 9.25 hrs HW=5.32' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.00 cfs)

Pond 20P: Drywell PV 1

Hydrograph



HydroCAD Report

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Type IA 24-hr 10 Year Rainfall=3.40"

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Page 15

Summary for Pond 21P: Drywell SD

Inflow Area = 2,245 sf, 100.00% Impervious, Inflow Depth = 3.17" for 10 Year event
 Inflow = 0.04 cfs @ 7.90 hrs, Volume= 592 cf
 Outflow = 0.01 cfs @ 9.88 hrs, Volume= 592 cf, Atten= 77%, Lag= 119.3 min
 Discarded = 0.01 cfs @ 9.88 hrs, Volume= 592 cf

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 9.78' @ 9.88 hrs Surf.Area= 28 sf Storage= 184 cf

Plug-Flow detention time= 286.8 min calculated for 592 cf (100% of inflow)
 Center-of-Mass det. time= 286.9 min (951.5 - 664.6)

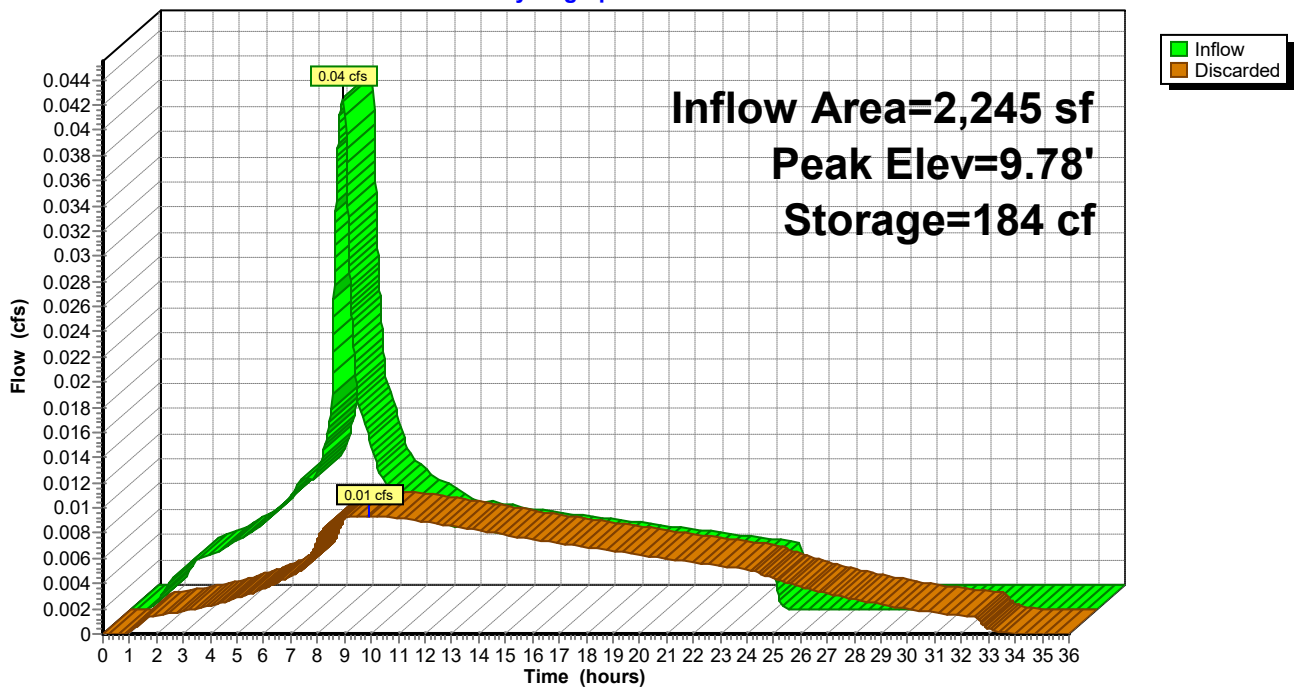
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	63 cf	6.00'D x 10.00'H Vertical Cone/Cylinder 283 cf Overall - 126 cf Embedded = 157 cf x 40.0% Voids
#2	0.00'	126 cf	4.00'D x 10.00'H Vertical Cone/Cylinder Inside #1
		188 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	1.906 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.01 cfs @ 9.88 hrs HW=9.78' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.01 cfs)

Pond 21P: Drywell SD

Hydrograph



HydroCAD Report

Prepared by Firwood Design Group

HydroCAD® 10.10-7a s/n 04664 © 2021 HydroCAD Software Solutions LLC

Type IA 24-hr 10 Year Rainfall=3.40"

Printed 9/15/2024

Page 16

Summary for Pond 25P: Drywell RA 1

Inflow Area = 2,175 sf, 100.00% Impervious, Inflow Depth = 3.17" for 10 Year event
 Inflow = 0.04 cfs @ 7.90 hrs, Volume= 574 cf
 Outflow = 0.01 cfs @ 9.88 hrs, Volume= 574 cf, Atten= 77%, Lag= 119.0 min
 Discarded = 0.01 cfs @ 9.88 hrs, Volume= 574 cf

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 9.44' @ 9.88 hrs Surf.Area= 28 sf Storage= 178 cf

Plug-Flow detention time= 284.6 min calculated for 574 cf (100% of inflow)
 Center-of-Mass det. time= 284.6 min (949.2 - 664.6)

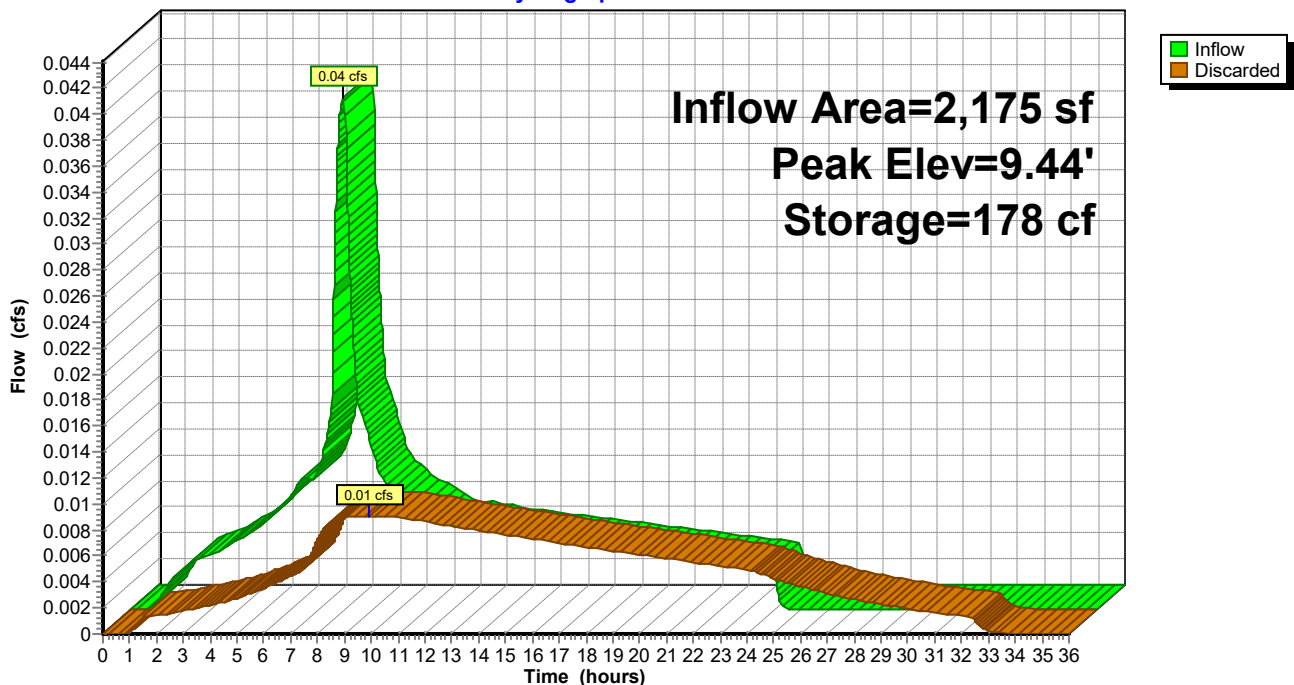
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	60 cf	6.00'D x 9.50'H Vertical Cone/Cylinder 269 cf Overall - 119 cf Embedded = 149 cf x 40.0% Voids
#2	0.00'	119 cf	4.00'D x 9.50'H Vertical Cone/Cylinder Inside #1
		179 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	1.906 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.01 cfs @ 9.88 hrs HW=9.44' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.01 cfs)

Pond 25P: Drywell RA 1

Hydrograph



HydroCAD Report

Prepared by Firwood Design Group

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Type IA 24-hr 10 Year Rainfall=3.40"

Printed 9/15/2024

Page 17

Summary for Pond 26P: Drywell PV 2

Inflow Area = 930 sf, 100.00% Impervious, Inflow Depth = 3.17" for 10 Year event
 Inflow = 0.02 cfs @ 7.90 hrs, Volume= 245 cf
 Outflow = 0.00 cfs @ 9.25 hrs, Volume= 245 cf, Atten= 73%, Lag= 81.0 min
 Discarded = 0.00 cfs @ 9.25 hrs, Volume= 245 cf

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 5.32' @ 9.25 hrs Surf.Area= 20 sf Storage= 64 cf

Plug-Flow detention time= 191.7 min calculated for 245 cf (100% of inflow)
 Center-of-Mass det. time= 191.8 min (856.3 - 664.6)

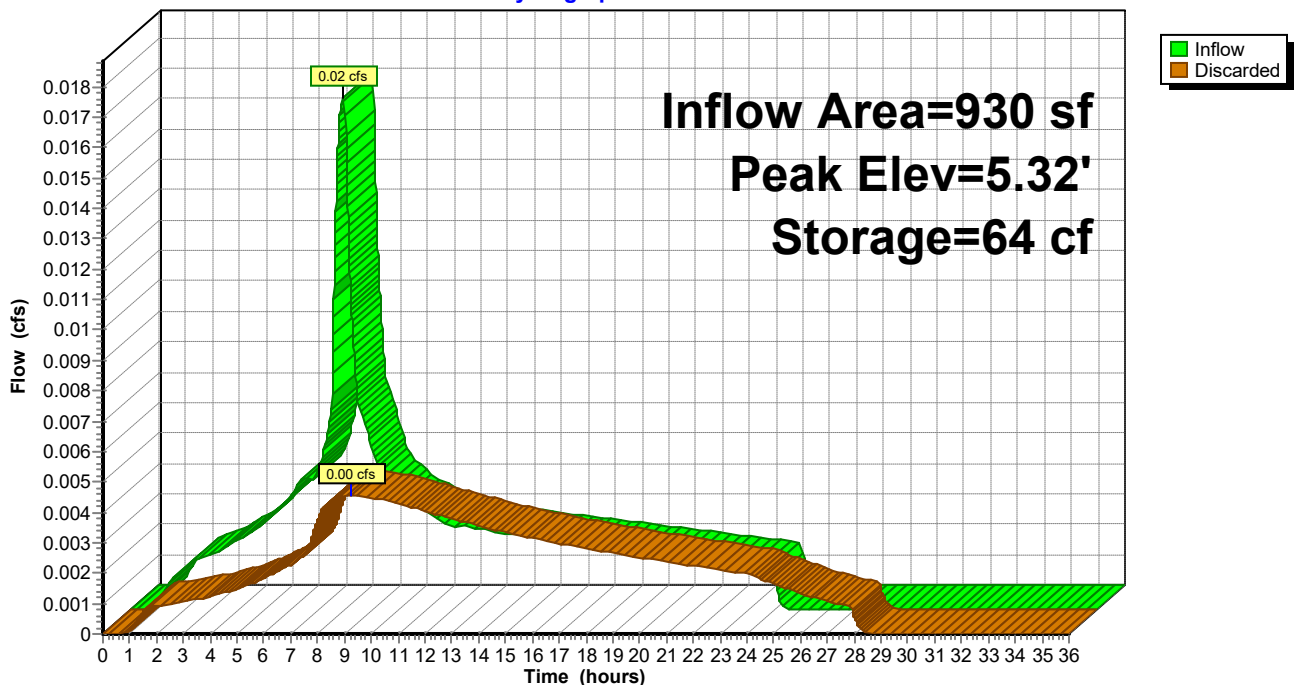
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	28 cf	5.00'D x 5.50'H Vertical Cone/Cylinder 108 cf Overall - 39 cf Embedded = 69 cf x 40.0% Voids
#2	0.00'	39 cf	3.00'D x 5.50'H Vertical Cone/Cylinder Inside #1
		67 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	1.906 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.00 cfs @ 9.25 hrs HW=5.32' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.00 cfs)

Pond 26P: Drywell PV 2

Hydrograph



HydroCAD Report

Prepared by Firwood Design Group

HydroCAD® 10.10-7a s/n 04664 © 2021 HydroCAD Software Solutions LLC

Type IA 24-hr 10 Year Rainfall=3.40"

Printed 9/15/2024

Page 18

Summary for Pond 28P: Drywell RA 2

Inflow Area = 2,550 sf, 100.00% Impervious, Inflow Depth = 3.17" for 10 Year event
 Inflow = 0.05 cfs @ 7.90 hrs, Volume= 673 cf
 Outflow = 0.01 cfs @ 9.90 hrs, Volume= 673 cf, Atten= 77%, Lag= 120.4 min
 Discarded = 0.01 cfs @ 9.90 hrs, Volume= 673 cf

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 11.26' @ 9.90 hrs Surf.Area= 28 sf Storage= 212 cf

Plug-Flow detention time= 295.7 min calculated for 673 cf (100% of inflow)
 Center-of-Mass det. time= 295.7 min (960.3 - 664.6)

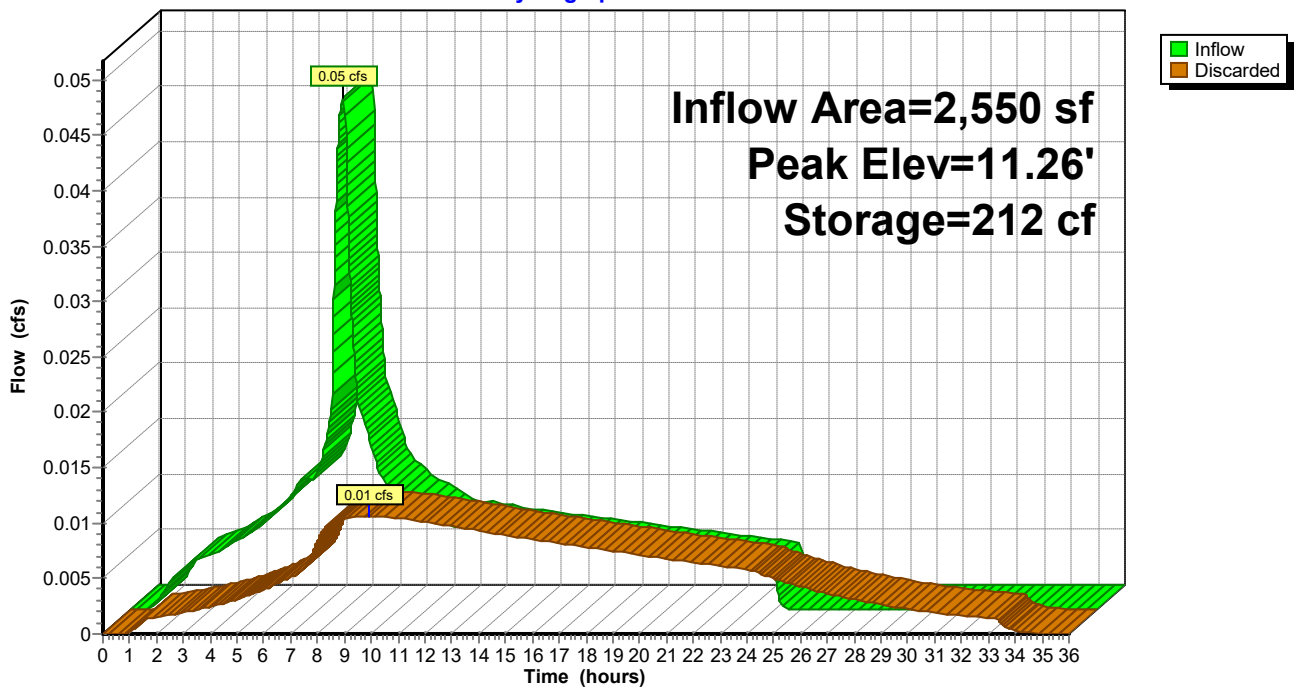
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	72 cf	6.00'D x 11.50'H Vertical Cone/Cylinder 325 cf Overall - 145 cf Embedded = 181 cf x 40.0% Voids
#2	0.00'	145 cf	4.00'D x 11.50'H Vertical Cone/Cylinder Inside #1
		217 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	1.906 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.01 cfs @ 9.90 hrs HW=11.26' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.01 cfs)

Pond 28P: Drywell RA 2

Hydrograph



HydroCAD Report

Prepared by Firwood Design Group

HydroCAD® 10.10-7a s/n 04664 © 2021 HydroCAD Software Solutions LLC

Type IA 24-hr 10 Year Rainfall=3.40"

Printed 9/15/2024

Page 19

Summary for Pond 29P: Drywell PV 3

Inflow Area = 960 sf, 100.00% Impervious, Inflow Depth = 3.17" for 10 Year event
 Inflow = 0.02 cfs @ 7.90 hrs, Volume= 253 cf
 Outflow = 0.00 cfs @ 9.25 hrs, Volume= 253 cf, Atten= 73%, Lag= 81.2 min
 Discarded = 0.00 cfs @ 9.25 hrs, Volume= 253 cf

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 5.52' @ 9.25 hrs Surf.Area= 20 sf Storage= 67 cf

Plug-Flow detention time= 194.3 min calculated for 253 cf (100% of inflow)
 Center-of-Mass det. time= 194.3 min (858.9 - 664.6)

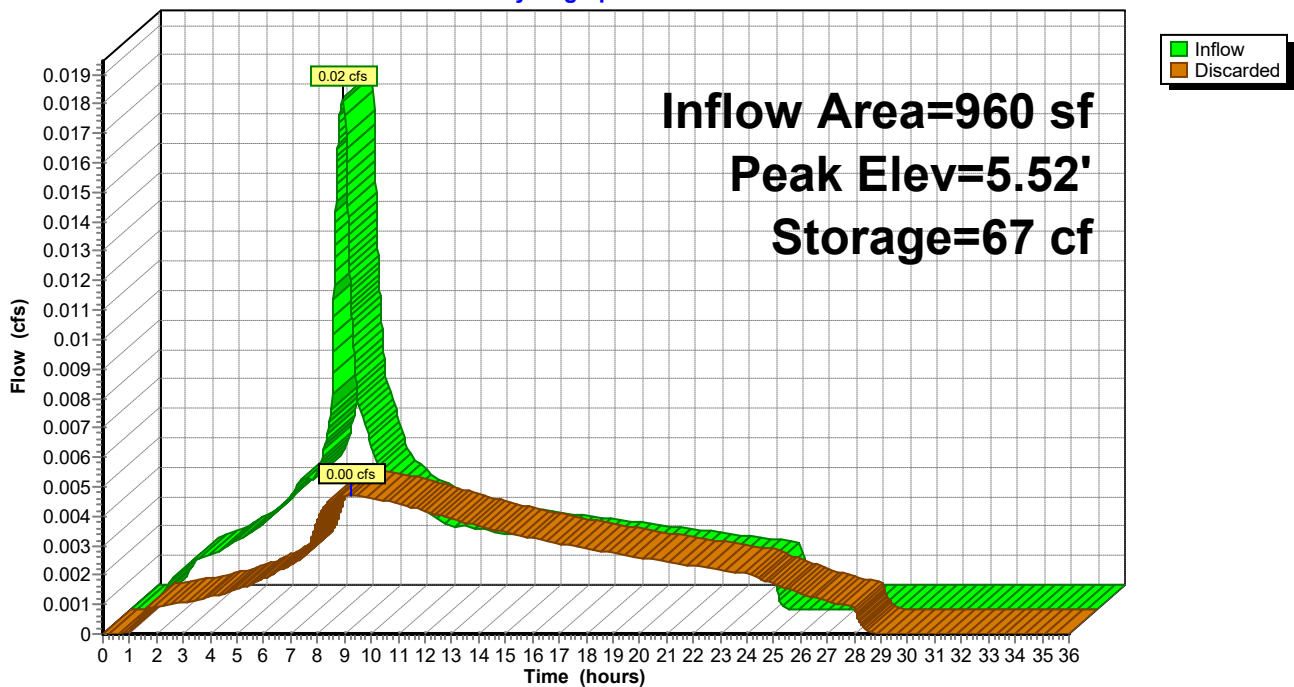
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	30 cf	5.00'D x 6.00'H Vertical Cone/Cylinder 118 cf Overall - 42 cf Embedded = 75 cf x 40.0% Voids
#2	0.00'	42 cf	3.00'D x 6.00'H Vertical Cone/Cylinder Inside #1
		73 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	1.906 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.00 cfs @ 9.25 hrs HW=5.52' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.00 cfs)

Pond 29P: Drywell PV 3

Hydrograph



HydroCAD Report

Prepared by Firwood Design Group

HydroCAD® 10.10-7a s/n 04664 © 2021 HydroCAD Software Solutions LLC

Type IA 24-hr 10 Year Rainfall=3.40"

Printed 9/15/2024

Page 20

Summary for Pond 30P: Drywell RA 3

Inflow Area = 3,016 sf, 100.00% Impervious, Inflow Depth = 3.17" for 10 Year event
 Inflow = 0.05 cfs @ 7.90 hrs, Volume= 796 cf
 Outflow = 0.01 cfs @ 9.92 hrs, Volume= 796 cf, Atten= 77%, Lag= 121.7 min
 Discarded = 0.01 cfs @ 9.92 hrs, Volume= 796 cf

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs / 2
 Peak Elev= 13.52' @ 9.92 hrs Surf.Area= 28 sf Storage= 255 cf

Plug-Flow detention time= 306.1 min calculated for 796 cf (100% of inflow)
 Center-of-Mass det. time= 306.0 min (970.6 - 664.6)

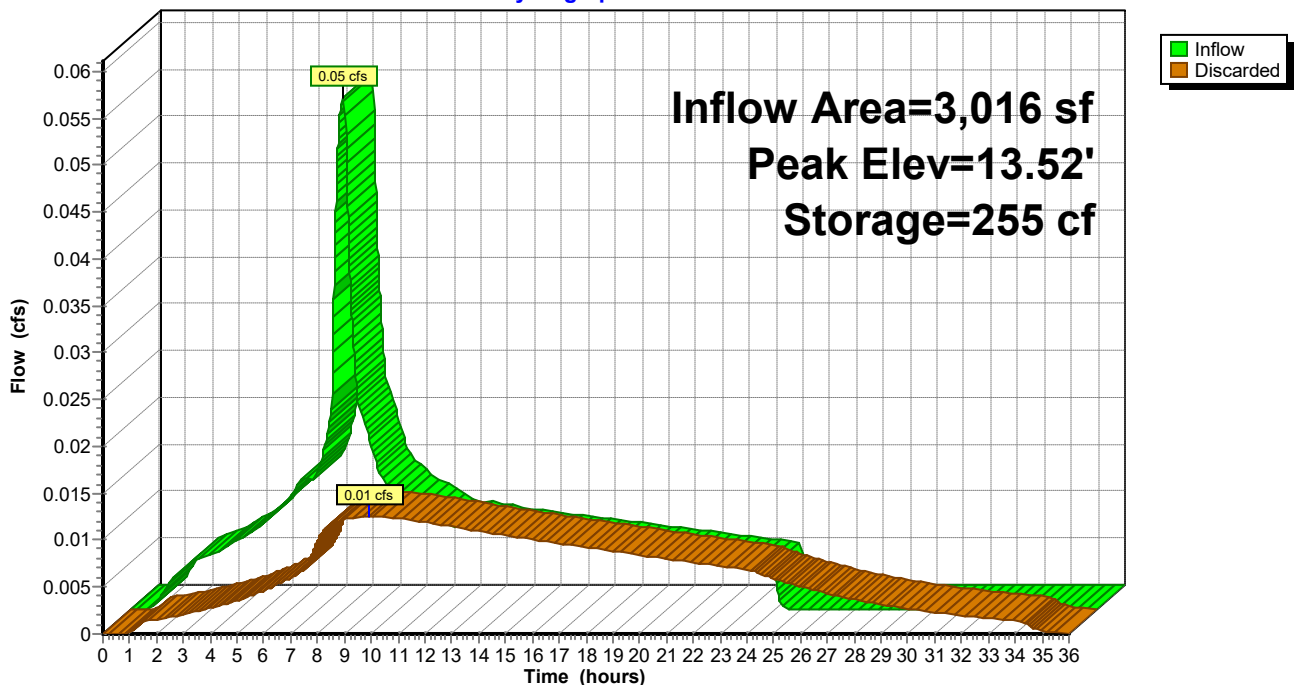
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	88 cf	6.00'D x 14.00'H Vertical Cone/Cylinder 396 cf Overall - 176 cf Embedded = 220 cf x 40.0% Voids
#2	0.00'	176 cf	4.00'D x 14.00'H Vertical Cone/Cylinder Inside #1
		264 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	1.906 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.01 cfs @ 9.92 hrs HW=13.52' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.01 cfs)

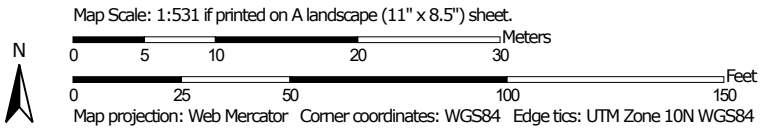
Pond 30P: Drywell RA 3

Hydrograph



APPENDIX C

Soil Map—Clackamas County Area, Oregon
(Cornwall Soil Map)



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Clackamas County Area, Oregon

Survey Area Data: Version 20, Sep 7, 2023

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

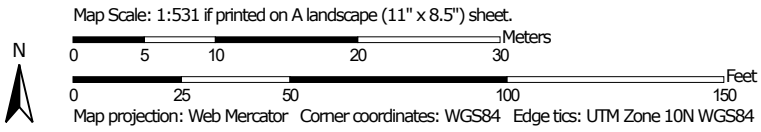
Date(s) aerial images were photographed: Sep 26, 2022—Oct 11, 2022

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

Hydrologic Soil Group—Clackamas County Area, Oregon
(Cornwall Soil Map)



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)









 Area of Interest (AOI)

Soils

Soil Rating Polygons





 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines


 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points






 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

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

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

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

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Clackamas County Area, Oregon
 Survey Area Data: Version 20, Sep 7, 2023

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

Date(s) aerial images were photographed: Sep 26, 2022—Oct 11, 2022

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
78B	Saum silt loam, 3 to 8 percent slopes	C	0.6	100.0%
Totals for Area of Interest			0.6	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

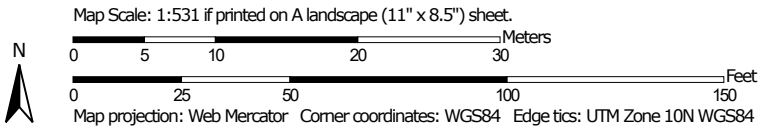
Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Saturated Hydraulic Conductivity (Ksat)—Clackamas County Area, Oregon
(Cornwall Soil Map)




Soil Map may not be valid at this scale.




MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)


Soils

Soil Rating Polygons

 = 9.0000


 Not rated or not available

Soil Rating Lines

 = 9.0000

 Not rated or not available

Soil Rating Points

 = 9.0000

 Not rated or not available

Water Features

 Streams and Canals


Transportation

 Rails


 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

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

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

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

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

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Clackamas County Area, Oregon
Survey Area Data: Version 20, Sep 7, 2023

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

Date(s) aerial images were photographed: Sep 26, 2022—Oct 11, 2022

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

Saturated Hydraulic Conductivity (Ksat)

Map unit symbol	Map unit name	Rating (micrometers per second)	Acres in AOI	Percent of AOI
78B	Saum silt loam, 3 to 8 percent slopes	9.0000	0.6	100.0%
Totals for Area of Interest			0.6	100.0%

Description

Saturated hydraulic conductivity (Ksat) refers to the ease with which pores in a saturated soil transmit water. The estimates are expressed in terms of micrometers per second. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Saturated hydraulic conductivity is considered in the design of soil drainage systems and septic tank absorption fields.

For each soil layer, this attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this soil property, only the representative value is used.

The numeric Ksat values have been grouped according to standard Ksat class limits.

Rating Options

Units of Measure: micrometers per second

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Fastest

Interpret Nulls as Zero: No

Layer Options (Horizon Aggregation Method): Depth Range (Weighted Average)

Top Depth: 36

Bottom Depth: 60

Units of Measure: Centimeters

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
78B	Saum silt loam, 3 to 8 percent slopes	0.6	100.0%
Totals for Area of Interest		0.6	100.0%

APPENDIX D

JJ Portlock
425-829-1566
jportlock@theportlockco.com

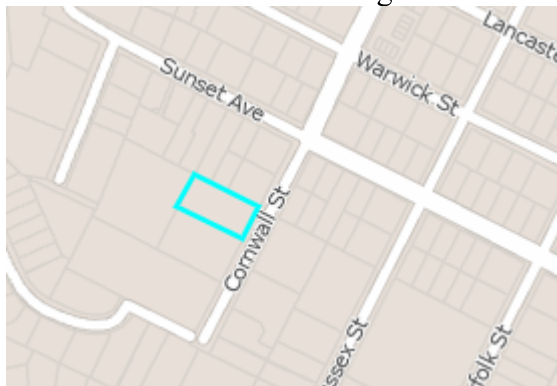
26 June 2024

Re: infiltration testing at 4194 Cornwall Street, West Linn OR

Dear Mr. Portlock,

Field Investigation:

Rapid Soil Solutions (RSS) has performed a two (2) infiltration tests. Figure 1 shows the project site location. The site has a gentle 5% slope to the rear where testing took place. Soils found on site match those in by DOGMI, RSS found fine- grained flood deposits. Testing was performed for future storm water drainage.



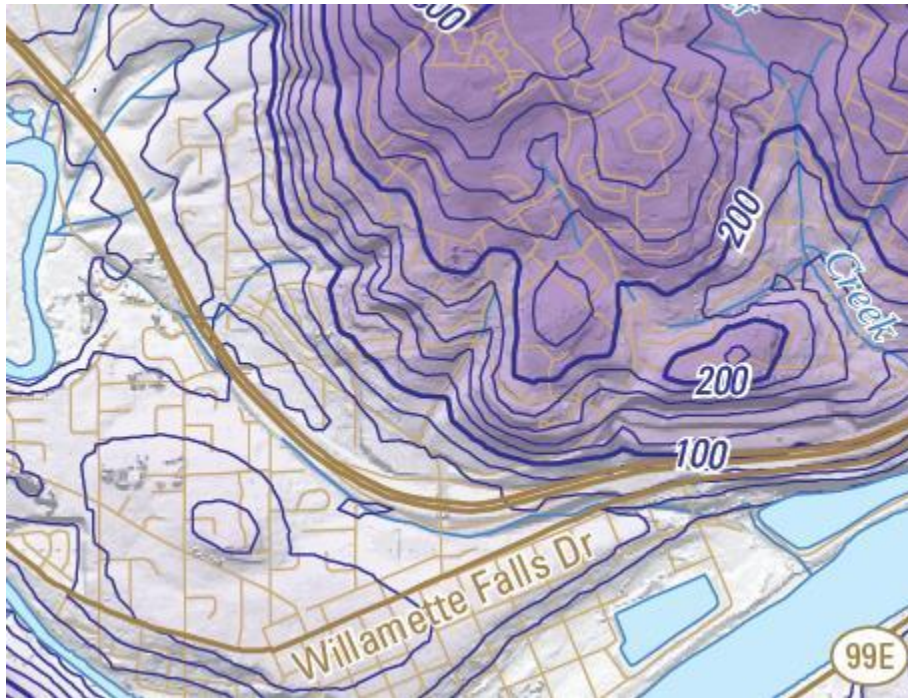
Infiltration Testing & Conclusion:

A summary of the test results is shown below. The attached sheets along with the soils and locations of the tests.

Location	Depth (ft)	Rate (in/hr.)
HA#1	3.5	6.375
HA#1	3.5	125

Depth to Ground Water

RSS was unable to excavate an addition hole to look for water at a depth of 10ft due to rock layer. No water loving vegetation was noted at the site. USGS has water mapped greater than 80ft below the surface.



USGS 5059 plate

The analysis, conclusions and recommendations contained in this report are based on site conditions as they existed at the time of explorations. Any questions regarding this report please contact me at the below number or email.

Sincerely,



EXPIRES:
12/31/2024

Mia Mahedy, PE GE.

Rapid Soil Solutions Infiltration Test Results



4194 CORNWALL ST
WEST LINN



Preliminary Information

Location:	4194 Cornwall St, West Linn, OR.	Performed By: (Supervised by Mia Mahedy, PE, GE)	Rick Sands
Date & Time:	6-24-24, 9:45 am	Instrument Used:	3 inch hand auger
Weather:	68, sunny	Depth:	3.5 ft

HA # 1

0-2	Dry, coarse, tan, silty clay, medium stiffness		
2-3.5	Dry to damp, tan, coarse, silty clay, medium stiff to stiff		
Time	Measurement (inches)	Level Refilled To (inches)	Rate (inches/hour)
10:25	13 5/8		
10:45	9.5		
11:05	7		
11:25	5.25	13 3/8	
11:45	10.25		
12:05	7.75		
12:25	6.25	13.5	
12:45	10.75		
1:05	9		
1:25	7 1/8		
Site Infiltration Rate (inches/hour)			6.375 in/hr.

Rapid Soil Solutions Infiltration Test Results



4194 CORNWALL ST
WEST LINN



Preliminary Information

Location:	4194 Cornwall St, West Linn, OR.	Performed By: (Supervised by Mia Mahedy, PE, GE)	Rick Sands
Date & Time:	6-24-24, 9:45 am	Instrument Used:	3-inch hand auger
Weather:	68, sunny	Depth:	3.5 ft

HA # 2

0-2	Dry, coarse, tan, silty clay, medium stiffness		
2-3.5	Dry to damp, tan, coarse, silty clay, medium stiff to stiff		
Time	Measurement (inches)	Level Refilled To (inches)	Rate (inches/hour)
10:25	12 7/8		
10:45	11.5		
11:05	10.75		
11:25	10 3/8	13.25	
11:45	12.75		
12:05	12 1/8		
12:25	11.75	13 1/8	
12:45	12.5		
1:05	12.25		
1:25	11 7/8		
Site Infiltration Rate (inches/hour)			1.25in/hr.

EXHIBIT PD-2 COMPLETENESS LETTER



CITY OF
West Linn

September 30, 2024

Brent Donnerberg
Tieton Construction, LLC
1751 Buse Street
West Linn OR. 97068

Subject: ELD-24-03 Application for an expedited land division to partition 1694 16th Street for a middle housing land division for a detached duplex (2 parcels).

Mr. Donnerberg,

You submitted an application on September 11, 2024. The Planning and Engineering Departments determined that the application is now **complete** as of September 30, 2024.

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 December 2, 2024.

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-24-04**

Applicant's Name: JJ Portlock

Development Name: 4094 Cornwall

Scheduled Decision Date: **Planning Manager Decision no earlier than 10/31/24**

MAILED NOTICE

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

JJ Portlock, applicant	10/17/24	<i>Lynn Schroder</i>
Property owners within 100ft of the site perimeter	10/17/24	<i>Lynn Schroder</i>
Sunset Neighborhood Association	10/17/24	<i>Lynn Schroder</i>
WLWL SD	10/17/24	<i>Lynn Schroder</i>
Clackamas County	10/17/24	<i>Lynn Schroder</i>
PGE	10/17/24	<i>Lynn Schroder</i>
TriMet	10/17/24	<i>Lynn Schroder</i>
Comcast	10/17/24	<i>Lynn Schroder</i>
NW Natural Gas	10/17/24	<i>Lynn Schroder</i>
TVF&R	10/17/24	<i>Lynn Schroder</i>

EMAILED NOTICE

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

JJ Portlock, applicant	10/17/24	<i>Lynn Schroder</i>
Sunset Neighborhood Association	10/17/24	<i>Lynn Schroder</i>
METRO	10/17/24	<i>Lynn Schroder</i>
Stafford-Tualatin CPO	10/17/24	<i>Lynn Schroder</i>

WEBSITE

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

10/17/24	<i>Lynn Schroder</i>
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SIGN

	<i>Aaron Gudelf</i>
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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.

	<i>Lynn Schroder</i>
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**CITY OF WEST LINN
NOTICE OF UPCOMING PLANNING MANAGER DECISION
FILE NO. ELD 24-04**

The City of West Linn has received a complete application (ELD 24-04) proposing a 3-lot partition at 4194 Cornwall Street (Clackamas County Tax Lot 21E36BA06500). The application is being processed under the expedited land division rules found in Oregon Revised Statute (ORS) 197.360-380.

The Planning Manager will make the decision after the required 14-day written comment period expires. The decision will be based on the criteria found in West Linn Community Development Code Chapters 12, 48, 85, 92, and 99., as well as ORS 197.360-380. 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, <https://westlinnoregon.gov/projects>. 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 October 31, 2024. Written comments can be submitted to cmyers@westlinnoregon.gov or to 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 cmyers@westlinnoregon.gov.

Mailed: 10/17/24



**NOTICE OF UPCOMING
PLANNING MANAGER DECISION**

**PROJECT # ELD-24-04
MAIL: 11/25/2024 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.