



Planning Commission Agenda
February 20, 2024
7:00 PM

Chairperson: Todd Culver
Commissioners: Rhonda Giles, Jeremy Moritz, Kurt Kayner, Kent Wullenwaber, Susan Jackson and Joe Neely
Meeting Location: Harrisburg Municipal Center Located at 354 Smith St

PUBLIC NOTICES:

1. *This meeting is open to the public and will be tape-recorded.*
2. *Copies of the Staff Reports or other written documents relating to each item on the agenda are on file in the office of the City Recorder and are available for public inspection.*
3. *The City Hall Council Chambers are handicapped accessible. Persons with disabilities wishing accommodations, including assisted listening devices and sign language assistance are requested to contact City Hall at 541-995-6655, at least 48 hours prior to the meeting date. If a meeting is held with less than 48 hours' notice, reasonable effort shall be made to have an interpreter present. The requirement for an interpreter does not apply to an emergency meeting. ORS 192.630(5)*
4. *Persons contacting the City for information requiring accessibility for deaf, hard of hearing, or speech-impaired persons, can use TTY 711; call 1-800-735-1232, or for Spanish voice TTY, call 1-800-735-3896.*
5. *The City of Harrisburg does not discriminate against individuals with disabilities, and is an equal opportunity provider.*
6. *For information regarding items of discussion on this agenda, please contact City Administrator Michele Eldridge, at 541-995-2200.*
7. *The Municipal Center is disinfected prior to meetings. Seating is 6' apart, and only 50 people can be in the room, dependent upon adequate spacing.*
8. *Masks are not required currently. The City does ask that anyone running a fever, having an active cough or other respiratory issues, not to attend this meeting.*
9. *If you would like to provide testimony, and are unable to attend, please contact the City Recorder. We can accept written testimony up until 5:00 on the day of the meeting and can also call someone during the meeting if verbal testimony is needed.*

CALL TO ORDER AND ROLL CALL

CONCERNED CITIZEN(S) IN THE AUDIENCE. (Please limit presentation to two minutes per issue.)

PUBLIC HEARING

- 1. THE MATTER OF THE PROPOSED PRELIMINARY SUBDIVISION CASTLEBERRY CROSSING AND ADJUSTMENT TO DIMENSIONAL STANDARDS LOCATED AT 930 SOMMERVILLE LOOP.**

STAFF REPORT EXHIBITS:

Exhibit A: Application Form, Writing Materials, Attachments

Exhibit B: Proposed Preliminary Subdivision Plan Set

Exhibit C: Tentative Plan Engineering Comments Technical Memorandum

ACTION: MOTION TO APPROVE (AMEND OR DENY) THE CASTLEBERRY CROSSING PRELIMINARY SUBDIVISION AND ASSOCIATED ADJUSTMENT, LU NO.455-2024 and LU 456-2024), SUBJECT TO THE CONDITIONS OF APPROVAL CONTAINED IN THE FEBRUARY 15, 2024 STAFF REPORT. THIS MOTION IS BASED ON FINDINGS CONTAINED IN THE FEBRUARY 15 2024, STAFF REPORT AND ON FINDINGS MADE DURING DELIBERATIONS ON THE REQUEST.

APPLICANT: Hayden Homes, 2464 SW Glacier Place, Suite 110, Redmond, Oregon, 9756]

OTHERS

ADJOURN

Staff Report Harrisburg Planning Commission Harrisburg, Oregon

THE MATTER OF THE PROPOSED PRELIMINARY SUBDIVISION CASTLEBERRY CROSSING AND ADJUSTMENT TO DIMENSIONAL STANDARDS LOCATED AT 930 SOMMERVILLE LOOP.

STAFF REPORT EXHIBITS:

- Exhibit A: Application Form, Writing Materials, Attachments
- Exhibit B: Proposed Preliminary Subdivision plan set
- Exhibit C: Tentative Plan Engineering Comments Technical Memorandum

ACTION: MOTION TO APPROVE (AMEND OR DENY)THE CASTLEBERRY CROSSING PRELIMINARY SUBDIVISION AND ASSOCIATED ADJUSTMENT, LU NO.455-2024 and LU 456-2024), SUBJECT TO THE CONDITIONS OF APPROVAL CONTAINED IN THE FEBRUARY 15, 2024 STAFF REPORT. THIS MOTION IS BASED ON FINDINGS CONTAINED IN THE FEBRUARY 15 2024, STAFF REPORT AND ON FINDINGS MADE DURING DELIBERATIONS ON THE REQUEST.

APPLICANT: Hayden Homes, 2464 SW Glacier Place, Suite 110, Redmond, Oregon, 9756]

LOCATION: 930 Sommerville Loop (15S04W15-03700)

HEARING DATE: February 20, 2024

ZONING: Residential Low Density (R-1) and Residential Medium Density (R-2) zoning districts

OWNER: Izetta Labar M Trust; Certified Representative David Labar

BACKGROUND

The property owner is Izetta Labar M Trust; the Certified Representative David Labar has authorized Hayden Homes, LLC, (“Applicant”) to develop the parcel located at 930 Sommerville Loop, which is approximately 600 feet east of South 6th Street. The existing lot, identified as Tax Lot 3700 on Linn County Assessor’s Map 15S04W15 (“site”), totals 7.44-acres or 324,086.4 square feet.

The site is split zoned. The western 4.2-acre portion of the site is in the Residential Medium Density (R-2) zone and the eastern 3.2-acre portion is in the Residential Low Density (R-1) zone. The adjacent properties are zoned similarly, and they are developed with different housing types, including single-family detached, single-family attached, and manufactured homes. The site has access to two existing public rights-of-way, with frontage on Sommerville Loop and South 9th Street, which terminates at the Applicant’s southern property line. Sommerville Loop is classified as a Collector street in the Harrisburg Transportation System Plan. South 9th Street is a Local street.

A previously approved subdivision of the site has since expired.

The Planning Commission and City Council have amended the development code, in both Titles 18 and 19; these amendments are effective as of the date of the public hearing, February 20, 2024. Therefore, the criteria used within this staff report shall be based upon the proposed and amended development code.

INTRODUCTION

Castleberry Crossing is a proposed Preliminary Subdivision Plat that includes 53 residential lots for single-family attached (townhomes) and detached homes. The Harrisburg Comprehensive Plan designates the site as Residential. As noted above, the site is in both the R-1 and R-2 zones. The different housing types – single-family detached and attached (townhome) – are enabled by and consistent with the permitted uses of the R-1 and R-2 zones, respectively.

Per Title 19 of the Harrisburg Municipal Code (HMC), a Subdivision is a two-step process, including both a Preliminary Plat and a Final Plat. The Preliminary Plat is a Type III application process that is subject to Planning Commission review and decision. The subsequent Final Plat application is a Type I application. The Preliminary Plat is subject to the procedural requirements of HMC 19.20.030 and the approval criteria at HMC 19.20.070. Also, the proposed preliminary subdivision must comply with other applicable development standards of the R-1 and R-2 zones.

The R-1 portion of the site has a density of 5.7 dwellings per acre and the R-2 portion of the site has a density of 11.5 dwellings per acre. Densities are explained in more detail under the applicable criterion.

The proposed Preliminary Subdivision Plat includes two new public streets and improvements to the existing Sommerville Loop right-of-way. Santiam Street runs generally east west through the site. A north-south extension of South 9th Street is proposed in the eastern portion of the site. A 20-foot-wide dedication is proposed along the northern property boundary. The dedication increases the existing Sommerville Loop right-of-way to account for the required public improvements: street paving (parking lane), curb and gutter, sidewalk, and stormwater drainage facilities.

CRITERIA AND FINDINGS OF FACT

This section is organized by the applicable criteria per HMC outlined in ***bold italics*** below and then followed by discussion, findings, and proposed conditions in normal text.

1. CRITERION: HMC 19.20.050 Preliminary plat submission requirements.

Discussion: Per HMC 19.20.050, the Applicant is required to provide application materials, including a written narrative, preliminary plan sets, and supporting analysis, according to the descriptions therein. These descriptions include specific information that must be shown on the preliminary plan that demonstrates compliance with the development standards.

Finding: The Applicant has met the submission requirements. City staff deemed the application complete on Friday, January 26, 2024.

2. CRITERION: HMC 19.20.070 Preliminary plat approval criteria – Subdivision.

- 1. ***Approval Criteria. The Planning Commission may approve, approve with conditions, or deny a preliminary subdivision plat. The Planning Commission’s decision shall be based on findings of compliance with all of the following approval criteria:***
 - a. ***The land division application shall conform to the requirements of this chapter;***
 - b. ***All proposed lots, blocks, and proposed land uses shall conform to the applicable provisions of Chapter 18.45 HMC;***
 - c. ***Access to individual lots, and public improvements necessary to serve the development, including but not limited to water, sewer, and streets, shall conform to Chapters 18.70 and 18.85 HMC;***
 - d. ***The proposed plat name is not already recorded for another subdivision, and satisfies the provisions of ORS Chapter 92;***
 - e. ***The proposed streets, utilities, park land or open space dedication, and surface water drainage facilities, as applicable, conform to City of Harrisburg adopted public facilities master plans and applicable engineering standards, and allow for transitions to existing and potential future development on adjacent lands. The preliminary plat shall identify all proposed public improvements and dedications;***
 - f. ***All proposed private common areas and improvements, if any, are identified on the preliminary plat and maintenance of such areas is assured through appropriate legal instrument;***
 - g. ***Evidence that any required State and Federal permits, as applicable, have been obtained or can reasonably be obtained prior to development; and***

h. Evidence that improvements or conditions required by the City, road authority, Linn County, special districts, utilities, and/or other service providers, as applicable to the project, have been or can be met.

DISCUSSION: The Applicant has met the burden of proof to provide findings for the applicable approval criteria. The findings for HMC 18.45, 18.50, 18.70, 18.80, and 18.85 are provided below and can be found in numerical order.

The proposed subdivision name Castleberry Crossing is not known locally and can be recorded without concern for duplication.

RECOMMENDED CONDITION NO.1: The Applicant shall provide to the Linn County surveyor the proposed subdivision plat name to verify the plat name is not already recorded for another subdivision and that it satisfies the provisions of ORS Chapter 92.

In accordance with subsection (e), as demonstrated in the Applicant’s application materials and as provided in the findings and recommended conditions of approval below, the proposed public improvements comply with the applicable criteria in the City’s public facility plans, including stormwater quality and detention facilities, street improvements and extensions, and other necessary public utilities. Based on this information and the required future review of the privately engineered public improvement construction plans and specifications for public improvements, including but not limited to, traffic control devices, detailed storm detention and conveyance system, sanitary sewer conveyance system, water distribution system, and roadway design details, the City is willing to accept dedications of the new proposed street rights-of-way. The proposed utilities are shown on sheet 7 of 8 in the Preliminary Subdivision Plat drawings.

There are no proposed private common areas or private improvements. The proposed stormwater facilities – Tract A and Tract B, which are not part of residential lots or street rights-of-way are proposed as public facilities. These facilities will be dedicated to and maintained by the City. Maintenance Fees equal to the first five years of operations of the storm detention area shall be provided with other engineering fees when the development agreement is completed.

RECOMMENDED CONDITION NO. 2: The applicant and the City of Harrisburg shall enter into a mutual agreement for the placement and completion of all required infrastructure and utilities, including permanent access and maintenance of storm drain detention areas by the City with funding assistance provided by the applicant.

The Applicant is working to resolve environmental issues associated with on-site wetlands. The written narrative asserts that all necessary state and/or Federal permits will be obtained prior to construction beginning on site. Both the City and Applicant have submitted information to the Department of State Lands (DSL). DSL has started the

process, per Application No. APP0064884, providing the public an opportunity to comment on the removal or fill activity in a wetland.

RECOMMENDED CONDITION NO. 3: The Applicant shall provide to the City any required wetland-related permit approvals from State and/or Federal agencies prior to beginning site preparation activities on the subject site.

Per section 2, above, the Planning Commission is enabled to apply conditions of approval as needed to ensure code compliance. A complete list of proposed conditions of approval is provided at the conclusion of the staff report.

FINDING: As described in the discussion above and the additional findings in the following sections, the Applicant has demonstrated that the Preliminary Subdivision, as conditioned, meets the applicable criteria.

3. CRITERION: HMC 19.40.030 Adjustments.

Adjustments are subject to the following standards and procedures. (Permitted uses, as provided in Division 2 of HMC Title 18, shall not be adjusted.)

1. Applicability. *The City Administrator or Planning Commission, through a Type II procedure, may adjust the following standards where the criteria in subsection (2) of this section are met:*

f. Other dimensional standards: *Up to a 10 percent increase or decrease in a quantitative (numerical) standard not listed above. This option is limited to standards in Division 2 of HMC Title 18 (Table 18.45.030 and Chapter 18.50 HMC, Special Use Standards) and Division 3 of HMC Title 18; it does not include building code requirements, engineering design standards, public safety standards, or standards implementing State or Federal requirements, as determined by the City Administrator.*

2. Approval Criteria. *The City may grant an adjustment only upon finding that all of the following criteria are met. The burden is on the applicant to demonstrate compliance with the criteria.*

- a.** *The adjustment allows for a building plan that is compatible with adjacent land uses, and it does not create a conflict with adjacent uses;*
- b.** *Approval of an adjustment is necessary in order for the applicant to develop his property consistent with the “highest and best” uses of the zone or to allow less intensive development consistent with the zoning that could not otherwise occur;*
- c.** *Approval of the adjustment does not create (a) violation(s) of any State or Federal regulation or other adopted ordinance or code standard, and does not create the need for a variance;*

- d. **Requests for more than one adjustment on the same lot shall be consolidated on one application and reviewed concurrently by the City;**
- e. **All applicable building code requirements and City Engineering and Public Works design standards shall be met. [Ord. 987 § 1 (Exh. A), 2022.]**

DISCUSSION: Per HMC 19.40.030(1)(f), the Applicant may seek an adjustment to the dimensional standards, as described in the applicability text. The R-1 portion of the site totals 2.4 acres and includes 15 proposed lots. This results in a density of 6.25 dwelling units per acre. The HMC definitions and code standards do not stipulate whether a density calculation should round up or down. Further, when the Applicant initiated this project and started design, HMC Table 18.45.040.4 included an ambiguous density standard that used both “net” and “gross”. With the amended development code in Title 18, the density standard is based on net density consistent with the comprehensive plan. To account for this ambiguity prior to this clarification, the Applicant has proposed to adjust the buildable area by 10 percent, which would bring the density calculation into compliance with current code standards. However, buildable area is not a dimensional standard. The proposed adjustment should apply to the residential density standard. The maximum allowable 10 percent increase in the standard adjusts the allowed maximum density from 6 dwellings per net acre to 6.6 dwellings per net acre. This adjustment brings the 15 proposed lots on the R-1 portion of the site into compliance with a net density of 6.25 dwellings per acre.

The buildable area on the R-2 portion of the site totals 3.3 acres. The 38 proposed lots in the R-2 zoned portion have a net density of 11.5 dwellings per acre. The maximum density standard in the R-2 zone is 12 dwellings per acre. No adjustment is necessary in the R-2 portion of the site. The Applicant has provided responses to the approval criteria, as well as the proposed adjustment to the density standard.

FINDING: The proposed adjustment complies with the approval criteria in effect as of the date of this public hearing. The proposed Preliminary Subdivision Plat, as adjusted, is consistent with the applicable development standards.

4. CRITERION: 19.20.040 Lot size averaging, flag lots, and infill development.

- 1. **Lot Size Averaging Subdivisions. To allow flexibility in subdivision design that meets the intent of the applicable code standards or to address physical constraints, such as topography, existing development, significant trees, and other natural and built features, the approval body may grant a 20 percent modification to the lot area and/or lot dimension (width/depth) standards in Chapter 18.45 HMC; provided, that the overall density of the subdivision does not exceed the allowable density of the district. The City Planning Commission may require screening, buffering, or other transitions as provided in HMC Chapter 18.75 in site design**

where substandard lots are proposed to abut standard- or larger-sized lots.

DISCUSSION: The R-2 zone has a minimum 35-foot interior lot width standard. The proposed Preliminary Subdivision includes two lots – Lot 48 and 49 – that do not meet the minimum lot width along the street frontage. Lots 48 and 49 are sited in the southwest portion of the site with narrower frontage along the knuckle of the proposed bulb of Santiam Street. Per HMC 19.20.040(1), the Applicant requests that the approval body modify the minimum lot width standard by 20-percent.

This request is based on the necessary alignment of Santiam Street, which cannot be extended southward because of existing development to the south. The Applicant also provided findings explaining the functionality of stormwater facilities, a built feature that forces the reduced width of the adjacent lots.

City staff supports the request to modify the minimum lot width, reducing the lots widths for Lots 48 and 49 from 35-feet to 28-feet, which is consistent with the overall density of the subdivision in the R-2 district as discussed above.

FINDING: With the proposed modification, the proposed Preliminary Subdivision meets the minimum lot width standard for all proposed lots in the R-2 zone.

5. CRITERION: 18.45.030 Allowed uses.

- ...
- 2. Permitted Uses and Uses Permitted Subject to Special Use Standards. Uses listed as “Permitted Use (P)” are allowed provided they conform to relevant lot and development standards. Uses listed as “Permitted With Special Use Standards (S)” are allowed, provided they conform to Chapter 18.50 HMC, Special Use Standards. Uses listed as “Not Allowed (N)” are prohibited. Uses not listed but similar to those allowed may be permitted following the code interpretations of this title.**

Table 18.45.030 – Uses Allowed by Zoning District			
Uses	Residential Zones		
	R-1	R-2	R-3
A. Residential Uses¹			
Single-family dwelling, nonattached	P	P	P
Single-family dwelling, attached (townhome)	S	P	P

DISCUSSION: As described above, the eastern portion of the site is in the R-1 zone and the western portion is in the R-2 zone. The Applicant proposes different housing types in the different zones. Single-family nonattached dwellings are proposed in the R-1 zone on 15 total proposed lots. Single-family attached dwellings (townhomes) are

proposed in the R-2 zone on the other 38 proposed lots. Both housing types are permitted in the respective zones.

FINDING: The proposed housing types are permitted in the R-1 and R-2 zones. The proposed residential uses comply with the allowed use standards.

6. CRITERION: 18.45.040 Lot and development standards.

...
4. Table 18.45.040.4 – Lot and Development Standards for Residential Zones.

Table 18.45.040.4 – Lot and Development Standards for Residential Zones Except as provided by HMC 18.45.040 through 18.45.080, as modified under Chapter 19.40 HMC, Adjustments and Variances, or as approved under Chapter 19.45 HMC, Master Planned Developments.				
Standard	R-1	R-2	R-3	(Reserve)
Residential Density, per HMC 18.45.060 (dwelling units per (gross/net) acre) – minimum and maximum	Min. 1 per acre Max. 6 per acre (Per Comp Plan)	Min. 2 per acre Max. 12 per acre (Per Comp Plan)	Min. 6 per acre Max. 18 per acre (Per Comp Plan)	
Minimum Lot Area* (square feet)				
Single-family, not attached:				
Corner lot	7,000 sf	6,000 sf	4,000 sf	
Interior lot	6,000 sf	5,000 sf	4,000 sf	
Single-family, attached (townhome) dwellings:				
Corner lot	7,000 sf	4,000 sf	4,000 sf	
Interior lot	6,000 sf	3,000 sf	2,500 sf	
Lot size may be reduced in new subdivisions through lot size averaging per HMC 19.20.040 or through approval of a master planned development under Chapter 19.45 HMC, provided the density standards of this section are met. Minimum lot sizes do not apply to open space tracts and similar properties where development is restricted.				
Minimum Lot Width				
Single-family, not attached:				
Corner lot	60 ft	50 ft	40 ft	
Interior lot	50 ft	45 ft	40 ft	
Single-family, attached (townhome):				
Corner lot	40 ft (See also HMC 18.50)	40 ft	37.5 ft	
Interior lot	35 ft (See also HMC 18.50)	35 ft	35 ft	
Minimum Lot Depth				
Street frontage width may be less than minimum lot width where flag lots are allowed, per HMC 19.20.040.	1.5 times min. width or 80 feet, whichever is less	1.5 times min. width or 75 feet, whichever is less	1.5 times min. width or 70 feet, whichever is less	

NOTE: The above table represents the amended development code approved by the Planning Commission and City Council effective as of the date of the public hearing, February 20, 2024.

DISCUSSION: The proposed Preliminary Subdivision includes lots within both the R-1 and R-2 zones. As described above and enabled per HMC 19.40.030, the Applicant has requested an adjustment to the density standards. With the adjustment, the proposal complies with the R-1 zone density standards.

The proposed R-1 lots range in size from 6,403 square feet (SF) to 8,557 SF, all of which comply with and exceed the minimum lot area standards. Each corner lot in the R-1 zone exceeds the minimum 7,000 square foot lot area, and all the interior lots exceed the minimum 6,000 square foot lot area. The proposed R-2 zone lots range in size from 3,070 SF to 6,271 SF. Each R-2 lot exceeds the minimum lot area standard for single-family attached dwellings. All the proposed lots are interior lots, and each exceeds the minimum 3,000 square foot lot area.

As described above and enabled per HMC 19.20.040, the proposed lots comply with the minimum lot width standards in the R-1 and R-2 zones, with the exception for Lots 48 and 49 discussed above. The proposed 20-percent modification to Lots 48 and 49 results in a reduced minimum 28-foot lot width. All other R-2 zoned lots meet the minimum 35-foot lot width for interior lots. The proposed R-1 zoned interior lots have a 50-foot minimum lot width and 80-foot minimum lot depth. Corner lots in the R-1 zone must comply with a 60-foot minimum lot width standard. All R-1 zoned lots comply with the minimum lot width standards. All proposed lots exceed and comply with the minimum lot depth per zone.

The Tentative Site Plan (sheet 4 of the plan set) notes the applicable setbacks for each zone consistent with the minimal revisions included in the amended development code approved by the Planning Commission and City Council effective as of the date of the public hearing. A general footprint of the allowed buildable area is based on the previous code standards. The applicable setbacks will be reviewed at the time of building permit submittal for the individual dwellings. The tentative plan demonstrates that there is sufficient lot area to meet the side setback standards.

Lastly, certain standards (e.g., building heights, fences and walls, lot coverage) in HMC Table 18.45.030 are not applicable to the Preliminary Subdivision and will be addressed at the time of building permitting.

FINDING: City staff concurs with the Applicant’s findings. The proposed lots are consistent with the lot and development standards, including as adjusted per the allowance at HMC 19.40.030 and modified per HMC 19.20.040. This criterion is met.

7. CRITERION: HMC 18.50.060 Townhomes, attached single-family dwellings, special review criteria.

...

2. Applicability. The following standards apply to new attached single-family dwellings in all residential zones. The standards are applied through the special review process. Those not meeting these requirements must meet

the review standards and criteria of a site plan review pursuant to Chapter 19.15 HMC, prior to issuance of building permits.

- 3. **Standards.** *Where attached single-family dwellings are proposed, the structure(s) shall meet all of the following standards:*
 - a. *Each building shall contain not more than four consecutively attached dwelling units and not exceed an overall length or width of 125 feet.*
 - b. *The primary entrance of each dwelling unit shall orient to a street or an interior courtyard that is not less than 24 feet in width. This standard is met when the primary entrance faces or is within 45 degrees of parallel to an abutting street or courtyard.*
 - c. *Where the subject site is served by an existing or planned alley, vehicle access shall be from the alley and all garage entrances shall orient to the alley. Planned alleys shall be at least 24 feet in width.*
 - d. *The development standards of Chapter 18.45 HMC and the building and site design standards of Chapters 18.60 through 18.75 HMC shall be met.*
 - e. *Every dwelling unit in a townhouse/attached single-family dwelling shall, on the primary entrance side, be composed of not less than 20 percent windows and door surface area, exclusive of the garage door(s).*
 - f. *The standards of this subsection (3) shall be met.*
 - g. *Townhouse buildings containing three or more dwelling units shall provide a total of five or more off-street parking locations, consistent with HMC 18.80.020(3)(a) and (b). [Ord. 987 § 1 (Exh. A), 2022.]*

DISCUSSION: The proposed Preliminary Subdivision includes 38 lots that are intended to be developed with 2-unit, single-family attached dwellings. Per HMC 18.50.060(2), the special use standards are applicable to all new single-family attached dwellings. The standards of subsection (3)(a)-(g) are largely specific to the building design. The forthcoming building designs will be reviewed for compliance with these development standards at the time of building permitting.

According to the Applicant’s written narrative, the intent is to create 2-unit townhouse units. This is demonstrated on the Tentative Site Plan (sheet 4 of the plan set) by the general footprint of the buildable area that extends to a shared property line and the co-location of driveways. Based on the available information provided in the Preliminary Subdivision application package, the Applicant is able to meet the applicable standards for townhouse dwellings, including not more than 4 attached dwellings, orienting entrances to the street, and providing not less than 20 percent of the street facing, primary entrance side as windows and door openings. As noted above, the applicant is aware of recent changes to the side setbacks in residential zones.

FINDING: The proposed Preliminary Subdivision is consistent with the applicable standards, and it is able to address standards related to building design at the time of building permitting.

8. CRITERION: 18.70.030 Vehicular access and circulation.

...
3. Traffic Study Requirements. The City, in reviewing a development proposal or other action requiring an approach permit, may require a traffic impact analysis or other traffic engineering analysis, pursuant to HMC 18.85.020, to determine compliance with this code.

DISCUSSION: During the initial stages of scoping this project, the Applicant worked with the City to determine whether a Traffic Impact Analysis (TIA) was required. The City Engineer determined that a TIA was not required but a transportation technical assessment would be required to demonstrate compliance with the applicable code criteria for the proposed subdivision. The Applicant has provided a Transportation Assessment technical memorandum (Exhibit G to the written narrative) to address the trip generation, trip distribution, and traffic safety of the proposed Preliminary Subdivision. The analysis concluded that area streets have adequate capacity, and no off-site mitigation or improvement projects are needed.

See review comments from the City Engineer for additional details.

FINDING: The City Engineer concurs with the Applicant’s conclusions that the transportation system can accommodate the proposed subdivision with “minimal impact on traffic operations and safety.” Therefore, the Transportation Assessment technical memorandum provided by the Applicant is satisfactory to demonstrate compliance with the applicable code criteria for the proposed subdivision. See section 11. CRITERION: HMC 18.85.020 Transportation standards below for additional findings.

4. Approach and Driveway Development and Circulation Standards. Approaches and driveways shall conform to all of the following development standards: [For expanded criteria, see HMC 18.70.030(4)(a) through (v).]

DISCUSSION: The proposed Preliminary Subdivision includes 53-lots. Each lot is accessed by an individual driveway. The driveways accessing the single-family attached dwellings are co-located. Twelve of the total 53 driveways are oriented to the lower classification local streets, South 9th Street and Santiam Street, thereby minimizing the number of approaches on higher classification streets.

At the time of development, all driveways shall be paved and oriented as generally shown on the Tentative Site Plan (sheet 4 of the plan set).

The garage of any proposed dwelling has a minimum 20-foot setback. This is sufficient to accommodate one vehicle in the driveway and avoid obstructing the public right-of-way, including sidewalks. The Tentative Site Plan demonstrates that future homes are able to meet this minimum setback.

Again, as shown on the Tentative Site Plan, the proposed driveway aprons connecting the proposed lots to the new local streets are located within the linear path of the planting strip. The sidewalk is setback, thereby avoiding the driveway apron and maintaining a level walkway that is able to meet ADA standards.

FINDING: Based on the Applicant’s findings and plan set, the criteria are met.

5. Internal, on-site circulation of cars and persons on development in excess of 40,000 square feet or one and one-half acres shall conform to the following standards: [For expanded criteria, see HMC 18.70.030(5)(a) through (d).]

DISCUSSION: The development site is approximately 7.44-acres; therefore, these standards are applicable. The location of the proposed driveways minimizes disruptions to pedestrian access to the future dwellings. The driveways are co-located to maximize area that is free of vehicular crossings of the sidewalk. Also, there is a minimum 20-foot setback for garages that is shown on the Tentative Site Plan. This standard is intended to avoid parked vehicles from blocking the adjacent sidewalk. The proposed lot layouts can meet this standard at the time of building permitting.

FINDING: This criterion is met.

6. Approach Separation from Street Intersections. Except as provided by subsection (8) of this section, the following minimum distances shall be maintained between approaches and street intersections, where distance is measured from the edge of an approach surface to the edge of the roadway at its ultimate designated width:
b. On a collector street: 50 feet.
c. On a local street: 20 feet.

DISCUSSION: Sommerville Loop is classified as a collector street, and the proposed Santiam Street and South 9th Street are classified as local streets. The driveway approaches to Lot 8 and 19 are approximately 75-feet and 120-feet, respectively, from the adjacent street intersections. Driveway approaches for Lots 1 and 7 are located on a local street and are more than 30-feet from the intersection. The driveway approaches for Lots 32 and 33 are located on a local street and are both about 50-feet from the intersection. All proposed driveway approaches that are nearest to intersections exceed the minimum separation standards of subsection (b) and (c) above, as applicable.

FINDING: This criterion is met.

7. Approach Spacing. Except as provided by subsection (8) of this section or as required to maintain street operations and safety, the following minimum distances shall be maintained between approaches, where distance is measured from the edge of one approach to the edge of another:

- b. On a collector street: 50 to 100 feet.**
- c. On a local street: 20 feet, or the City Engineer or authorized representative may approve closer spacing where necessary to provide for on-street parking (e.g., between paired approaches).**

DISCUSSION: As described above, the proposed driveway approaches are co-located to minimize disruptions to the pedestrian sidewalks. Per HMC 19.55, the City defines driveway approaches as a “connection to a public street or highway where it meets a public right-of-way.” The Applicant does not address these criteria in the written narrative; instead, focusing on the spacing between public streets. However, the site drawings provide sufficient information to assess compliance with the criterion.

The co-located approaches on the local streets, Santiam Street and South 9th Street, comply with the minimum 20-foot spacing standard. The distance between co-located driveway approaches ranges from approximately 28- to 50-feet in the R-2 zoned portion of the site. Similarly, the co-located driveways in the R-1 zoned portion have greater separation, and they also comply with the 20-foot minimum spacing standard for local streets.

The driveway approaches on Sommerville Loop are also co-located. The co-located driveway approaches on the western R-2 zoned portion of the site do not meet the 50-foot minimum spacing standard for collector streets. The Tentative Site Plan (sheet 4 of the plan set) shows about 48-feet of spacing between co-located driveway approaches. This deficiency is also acknowledged in the Transportation Assessment memo (Exhibit G to the written narrative).

RECOMMENDED CONDITION NO. 4: At the time of Final Plat application submittal, a final site plan shall be provided that demonstrates compliance with the 50-foot minimum driveway approach spacing standard for the co-located driveway approaches on the R-2 zoned portion of the site on Sommerville Loop (HMC 18.70.030(7)).

FINDING: As conditioned, the driveway approach spacing standards are met.

- 8. Vision Clearance. No visual obstruction (e.g., sign, structure, solid fence, or shrub vegetation) between three feet and eight feet in height shall be placed in “vision clearance areas” at street intersections, as illustrated. The minimum vision clearance area may be modified by the City Engineer through a Type I procedure, upon finding that more or less sight distance is required (i.e., due to traffic speeds, roadway alignment, etc.). Placement of light poles, utility poles, and tree trunks should be avoided within vision clearance areas.**

DISCUSSION: The Applicant’s vision clearance area drawing when cross referenced with the Tentative Site Plan and landscape plan, demonstrate that there are likely no proposed visual obstructions within the 20-feet by 20-feet vision clearance areas at the

three intersections of the proposed public rights-of-way. To confirm compliance with this criterion, the Applicant is required to provide a final site plan that shows vision clearance triangles on the three intersections (Sommerville Loop & South 9th Street, Somerville Loop & Santiam Street, and Santiam Street & South 9th Street) as well as both sides of the 'curve' on Santiam Street within the project area to demonstrate compliance with this criterion. If the applicant is relying on vision clearance area on private property, show an associated easement area to be recorded as part of the Final Plat application process.

RECOMMENDED CONDITION NO. 5: Provide a final site plan signed and sealed by the engineer of record that shows vision clearance triangles on the three intersections (Sommerville Loop & South 9th Street, Somerville Loop & Santiam Street, and Santiam Street & South 9th Street) as well as both sides of the 'curve' on Santiam Street within the project area to demonstrate compliance with this criterion. If the applicant is relying on vision clearance area on private property, show an associated easement area to be recorded as part of the Final Plat application process.

See referral comments from the City Engineer for additional details.

FINDING: As conditioned, the criterion is met.

9. CRITERION: HMC 18.75 Landscaping, Fences and Walls, Outdoor Lighting

18.75.030 Landscaping and screening.

DISCUSSION: The Applicant has provided a Landscape Plan (Exhibit E to the written narrative) to demonstrate compliance with the applicable landscape, street tree, and stormwater facility planting requirements.

The water quality facility details (sheet 8 of the plan set) and the landscape plan (Exhibit E to the written narrative) address the stormwater management requirements with the exception of any associated 25-year storm event requirements, as noted below. The Applicant is able to meet the City landscape and screening standards at the time of development.

While the cited drawings in this application demonstrate that the proposed development is able to meet applicable landscape standards at the time of development, the drawings are not signed and sealed by the design professional of record. The planting details will also be reviewed to verify compliance at the time of building permitting.

RECOMMENDED CONDITION NO. 6: Provide a final landscape plan signed and sealed by the design professional of record.

FINDING: Although HMC 18.60.020 states that the provisions of HMC Chapter 18.75 are not applicable to Subdivision applications, the City planner requested the applicant

address these standards due to the stormwater facilities in Tracts A and B contained in this subdivision – see section 14. **CRITERION:** HMC 18.85.050 Storm drainage and surface water management facilities below for additional findings and recommended condition. As described in the discussion above, the Preliminary Subdivision, as conditioned, meets the applicable criteria.

18.75.040 Fences and Walls.

DISCUSSION: The Applicant has provided a Landscape Plan (Exhibit E to the written narrative) that shows fencing around each proposed lot and the stormwater facilities. The Applicant correctly notes that fencing type, height, and location will be reviewed at the time of building permitting. The fencing and retaining walls as proposed on the Landscape Plan are consistent with the applicable code standards, except as noted below.

OTHER DEVELOPMENT CONSIDERATION NO. 1: The proposed fencing along the northern property line of Lot 1 does not comply with City standards. Per HMC 18.75.040(3)(a)(i), the maximum fence height in street-side yard setbacks is 4-feet, or the proposed 6-foot fence must be setback not less than 3-feet from the property line.

FINDING: Per HMC 18.60.020, the provisions of HMC Chapter 18.75 are not applicable to Subdivision applications. Any proposed fencing or freestanding walls will be reviewed for compliance with applicable standards at the time of building permitting.

18.75.050 Outdoor Lighting.

DISCUSSION: The Applicant has provided a Lighting Plan (Exhibit F to the written narrative). The outdoor lighting standards are applicable to proposed lighting on private property. The provided Lighting Plan shows the location and associated details for required street lighting within the public right-of-way.

Per HMC 18.60.020, the provisions of HMC Chapter 18.75 are not applicable to Subdivision applications. Therefore, the outdoor lighting plan details will be reviewed for compliance with applicable standards at the time of building permitting. While the cited drawings included in this application demonstrate that the proposed development is able to meet applicable outdoor lighting standards at the time of development, the Exhibit F: Lighting Plan is not signed and sealed by the engineer of record.

RECOMMENDED CONDITION NO. 7: Provide the outdoor lighting plan signed and sealed by the engineer of record.

FINDING: As described in the discussion above, the Preliminary Subdivision, as conditioned, meets the applicable criteria.

10. CRITERION: HMC 18.80 Parking and Loading

18.80.030 Automobile Parking.

- 1. Minimum Number of Off-Street Automobile Parking Spaces. Except as provided by this subsection, or as required for Americans with Disabilities Act compliance under subsection (6) of this section, off-street parking shall be provided pursuant to one of the following three standards:**
 - a. Standards in Table 18.80.030.1;**
 - b. A standard from Table 18.80.030.1 for a use that the City Administrator determines is similar to the proposed use; or**
 - c. Subsection (2) of this section, Exceptions and Reductions to Off-Street Parking, which includes a parking demand analysis option.**

Table 18.80.030.1 – Automobile Parking Spaces by Use	
Use Categories (Chapter 19.55 HMC contains examples of uses and definitions.)	Minimum Parking per Land Use (Fractions are rounded down to the closest whole number.)
Residential Categories	
Single-family dwelling, including manufactured homes on lots	Two spaces per dwelling

DISCUSSION: The Applicant has provided written findings to address the automobile parking requirements. As shown in the code excerpt above, the City requires 2 parking spaces for each single-family dwelling. This standard applies to both detached and attached (townhouse) dwellings. The Applicant’s written narrative explains that each proposed lot and dwelling layout provides space for 2 parking spaces within the garage and on the driveway. These areas are shown on the Tentative Site Plan and the landscape plan. Additionally, the garage setback standard is 20-feet. This is adequate length to accommodate one parking space in each driveway without blocking the public sidewalk.

This is important to the City per concerns raised during prior subdivision requests, to adequately provide parking adjacent to Sommerville Loop. Per HMC 18.60.020, the provisions of Chapter 18.80 are not applicable to Subdivision applications. However, the Applicant has demonstrated that the future residential development is able to comply with the parking requirements at the time of building permitting.

Additionally, the Applicant proposes to widen Sommerville Loop to provide a parking lane that will accommodate on-street parallel parking. The proposed local streets – Santiam and South 9th Streets – are 32 feet in width to allow for on-street parallel parking.

FINDING: Based on the provided documents, the Applicant has demonstrated that the project is able to meet the above applicable City standards at the time of development.

11. CRITERION: HMC 18.85.020 Transportation standards

18.85.020 Transportation standards.

1. General Requirements.

- a. *Except as provided by subsection (1)(e) of this section, existing substandard streets and planned streets within or abutting a proposed development shall be improved in accordance with the standards of this chapter as a condition of development approval.*
- b. *All street improvements, including the extension or widening of existing streets and public access ways, shall conform to this section, and shall be constructed consistent with the City of Harrisburg Engineering Design Standards Manual.*
- c. *All new publicly owned streets shall be contained within a public right-of-way. Public pedestrian access ways may be contained within a right-of-way or a public access easement, as required by the City Engineer.*
- d. *The purpose of this subsection is to coordinate the review of land use applications with roadway authorities and to implement Section 660-012-0045(2)(e) of the State Transportation Planning Rule, which requires the City to adopt a process to apply conditions to development proposals in order to minimize impacts and protect transportation facilities.*
 - (1) *When a Traffic Impact Analysis Is Required. The City or other road authority with jurisdiction may require a traffic impact analysis (TIA) as part of an application for development, a change in use, or a change in access. A TIA may be required by the City Administrator where a change of use or a development would involve one or more of the following:*
 - (a) *A change in zoning or a plan amendment designation, as may be required to determine compliance with OAR 660-012-0060, Transportation Planning Rule;*
 - (b) *Operational or safety concerns documented in writing by a road authority;*
 - (c) *An increase in site traffic volume generation by 300 average daily trips (ADT) or more;*
 - (d) *An increase in peak hour volume of a particular movement to and from a street or highway by 20 percent or more;*
 - (e) *An increase in the use of adjacent streets by vehicles exceeding the 20,000-pound gross vehicle weights by 10 vehicles or more per day;*

- (f) ***Existing or proposed approaches or access connections that do not meet minimum spacing or sight distance requirements or are located where vehicles entering or leaving the property are restricted, or such vehicles are likely to queue or hesitate at an approach or access connection, creating a safety hazard;***
 - (g) ***A change in internal traffic patterns that may cause safety concerns; or***
 - (h) ***A TIA required by ODOT pursuant to OAR 734-051.***
- ***
- e. ***The City Engineer or authorized representative may waive or allow deferral of standard street improvements, including sidewalk, roadway, bicycle lane, undergrounding of utilities, and landscaping, as applicable, where one or more of the following conditions in subsections (1)(e)(1) through (4) of this section is met. Where the City Engineer or authorized representative agrees to defer a street improvement, it shall do so only where the property owner agrees not to remonstrate against the formation of a local improvement district in the future.***

DISCUSSION: The proposed Preliminary Subdivision includes the construction of two new public local streets – Santiam Street and South 9th Street – and public improvements to the existing substandard Sommerville Loop along the northern site frontage. The existing streets and proposed public improvements are entirely within existing right-of-way. The two proposed public streets are proposed to be dedicated to the City through the Final Plat application process.

The proposed public improvements along the substandard Sommerville Loop frontage are shown ending at the intersections of Santiam Street and South 9th Street. The Applicant is required to extend the required public improvements along Sommerville Loop to the eastern and western extent of the site’s property line. These improvements include underground stormwater piping, sidewalks, and planting strips with street trees.

RECOMMENDED CONDITION NO. 8: Extend Sommerville Loop public improvements to the eastern and western extent of the site’s property line based on the City of Harrisburg Engineering Design Standards Manual, Collector Street Standards outlined in the Tentative Plan Engineering Comments technical memorandum by the City Engineer.

During the initial stages of scoping this project, the Applicant worked with the City to determine whether a TIA was required. The City Engineer determined that a TIA was not required. The Applicant has provided a technical memorandum assessing the trip generation, trip distribution, and traffic safety. The assessment found that the transportation system can accommodate the proposed subdivision with “minimal impact on traffic operations and safety.”

The proposed 53-lot residential subdivision is expected to be a significant pedestrian generator on a Collector street without an existing connected pedestrian system and a safe pedestrian route to schools. Therefore, the City Engineer and Public Works Director have determined that as part of the proposed subdivision, the Applicant is required to provide a safe pedestrian connection across the Sommerville Loop Collector street to the public sidewalk system north of the development, such as a Rectangular Rapid Flashing Beacon. See additional findings and associated recommended condition below. See also referral comments from the City Engineer for additional details.

The Applicant did not request the City waive or defer any standards.

FINDING: The Applicant’s Exhibit G: Transportation Assessment addresses the applicable code criteria, and as conditioned, the City Engineer concurs with the Applicant’s conclusions.

- 2. Street Location, Alignment, Extension, and Grades.**
 - a. All new streets, to the extent practicable, shall connect to the existing street network and allow for the continuation of an interconnected street network, consistent with adopted public facility plans and pursuant to subsection (4) of this section, Transportation Connectivity and Future Street Plans.**
 - b. Specific street locations and alignments shall be determined in relation to existing and planned streets, topographic conditions, public convenience and safety, and in appropriate relation to the proposed use of the land to be served by such streets.**
 - c. Grades of streets shall conform as closely as practicable to the original (predevelopment) topography to minimize grading.**
 - d. New streets and street extensions exceeding a grade of 15 percent over a distance more than 200 feet, to the extent practicable, shall be avoided. Where such grades are unavoidable, the Planning Commission may approve an exception to the 200-foot standard and require mitigation, such as a secondary access for the subdivision, installation of fire protection sprinkler systems in dwellings, or other mitigation to protect public health and safety.**
 - e. Where the locations of planned streets are shown on a local street network plan, the development shall implement the street(s) as shown on the plan.**
 - f. Where required local street connections are not shown on an adopted City street plan, or the adopted street plan does not designate future streets with sufficient specificity, the development shall provide for the reasonable continuation and connection of existing streets to adjacent developable properties, conforming to the standards of this code and approval of the Public Works Director and/or City Engineer.**

- g. Existing street-ends that abut a proposed development site shall be extended within the development, unless prevented by environmental or topographical constraints, existing development patterns, or compliance with other standards in this code. In such situations, the applicant must provide evidence that the environmental or topographic constraint precludes reasonable street connection.**
- h. Proposed streets and any street extensions required pursuant to this section shall be located, designed, and constructed to allow continuity in street alignments and to facilitate future development of vacant or redevelopable lands.**

DISCUSSION: The Applicant proposes to connect to and extend the existing South 9th Street public right-of-way that currently terminates at the southern property line. The extension runs north to Sommerville Loop and creates a 90-degree intersection. The proposed new streets provide efficient, direct routes due to the relatively flat site. The flat topography allows construction of the proposed streets to minimize grading.

There are no proposed streets that exceed 15-percent grades, and there is not an adopted local street network plan for the area.

Santiam Street connects to Sommerville Loop and curves southeastward to intersect with South 9th Street. This is the appropriate connection because of existing residential development to the south and east that precludes future street connections.

FINDING: The criterion is met.

- 3. Rights-of-Way and Street Section Widths. The standards contained in Table 18.85.020.3 are intended to provide for streets of suitable location, width, and design to accommodate expected vehicle, pedestrian, and bicycle traffic; to afford satisfactory access to law enforcement, fire protection, sanitation, and road maintenance equipment; and to provide a convenient and accessible network of streets, avoiding undue hardships to adjoining properties. Where a range of street width or improvement options is indicated, the City Administrator or Planning Commission shall determine requirements based on the advice of a qualified professional and all of the following factors:**
 - a. Street classification and requirements of the roadway authority, if different than the City’s street classifications and requirements;**
 - b. Existing and projected street operations relative to applicable standards;**
 - c. Safety of motorists, pedestrians, bicyclists, and transit users, including consideration of accident history;**
 - d. Convenience and comfort for pedestrians, bicyclists, and transit users;**
 - e. Provision of on-street parking;**

- f. **Placement of utilities;**
- g. **Street lighting;**
- h. **Slope stability, erosion control, and minimizing cuts and fills;**
- i. **Surface water management and storm drainage requirements;**
- j. **Emergency vehicles or apparatus and emergency access, including evacuation needs;**
- k. **Transitions between varying street widths (i.e., existing streets and new streets); and**
- l. **Other factors related to public health, safety, and welfare.**

Table 18.85.020.3

Width of each of the following (in feet)	Neighborhood/Local		Collector	
	R/W	Street	R/W	Street
Extra R/W	1	–	1	–
Planter or utility	5	–	6	–
Sidewalk	5	–	6	–
Bike lane	–	–	6	6
Parking lane	8	8	8	8
Travel or turn lane	10	10	11	11
Railroad corridor	–	–	–	–
Minimum street width	29		36	
Right-of-way	45-50		60	

* **All streets shall be improved in accordance with the construction standards and specifications of the applicable roadway authority, including requirements for pavement, curbs, drainage, striping, and traffic control devices. Where a parking strip is provided it shall consist of a planter/utility strip between the sidewalk and the curb or roadway. Where a swale is provided, it shall either be placed between the roadway and sidewalk or behind the sidewalk on private property, subject to City approval and recording of required public drainage way and drainage way maintenance easements. Streets with parking on one side only should be avoided. When used, they must be posted NO PARKING.**

DISCUSSION: The proposed improvements to Sommerville Loop do not comply with the adopted City standards. As shown on the Tentative Site Plan, the Sommerville Loop improvements result in 18-feet from the centerline to the proposed curb line. Per HMC 18.85.020.3, collector street lane widths are 11-feet, and a parking lane is 8-feet wide.

See referral comments from the City Engineer for additional details.

RECOMMENDED CONDITION NO. 9: Provide public improvements in the Sommerville Loop right-of-way that comply with HMC Table 18.85.020.3.

Also related to Sommerville Loop, the proposed street improvements within the right-of-way place the sidewalk at the back of curb, and the tree planter strip is behind the sidewalk adjacent to the proposed private lots. This orientation is not consistent with the City standards. The adopted City standards include a setback sidewalk and a planter strip placed between the sidewalk and curb.

RECOMMENDED CONDITION NO. 10: Provide public improvements in the Sommerville Loop right-of-way that comply with City standards to place a planter strip between the curb and public sidewalk.

The proposed new local streets – Santiam Street and South 9th Street – include right-of-way, sidewalks, planter strips, and travel lanes that meet or exceed the minimum widths. The parking lanes do not comply with the City standards. The Applicant can increase the width of the paved area from 32-feet to 36-feet to provide a parking lane on both sides of the street or reduce the paved width to 29-feet to provide only one parking lane. If the street width is reduced to one parking lane, the applicant must provide no parking signs on one side of Santiam Street.

RECOMMENDED CONDITION NO. 11: Provide public improvements in the Santiam Street and South 9th Street rights-of-way that comply with HMC Table 18.85.020.3.

The provision of street trees within planting strips along all public street frontages is consistent with City standards. Per HMC 12.20.010(3), the City or its agent shall be responsible for street tree plantings, and the Applicant shall be responsible for the expense. The provided Landscape Plan (Exhibit E to the written narrative) proposes paperbark maples, western dogwoods, and ginkgo fairmounts as street trees within the public rights-of-way. Each of the proposed tree species are on the City’s approved tree planting list.

RECOMMENDED CONDITION NO. 12: Provide the required street tree planting funds to the City of Harrisburg, consistent with the provisions of HMC Chapter 12.20, and Council Fee Resolutions to implement the landscape plan within the public street right-of-way consistent with the City’s approved street tree planting list.

FINDING: As conditioned above, the criterion is met.

- 4. *Transportation Connectivity and Future Street Plans. The following standards apply to the creation of new streets:***
 - a. *Intersections. Streets shall be located and designed to intersect as nearly as possible to a right angle. Street intersections shall have a minimum intersection angle of 75 degrees. All legs of an***

intersection shall meet the above standard for at least 100 feet back from the point of intersection. No more than two streets shall intersect, i.e., creating a four-legged intersection, at any one point. Street jogs and intersection offsets of less than 125 feet are not permitted. Intersections shall be designed to facilitate storm water runoff into City-approved storm water facilities.

- c. Connectivity to Abutting Lands. The street system of a proposed subdivision shall be designed to connect to existing, proposed, and planned streets adjacent to the subdivision. Wherever a proposed development abuts unplatted land or a future development phase of an existing development, street stubs shall be provided to allow access to future abutting subdivisions and to logically extend the street system into the surrounding area. Street ends shall contain turnarounds constructed to Uniform Fire Code standards, as the City deems applicable, and shall be designed to facilitate future extension in terms of grading, width, and temporary barricades.*
- d. Street Connectivity and Formation of Blocks. In order to promote efficient vehicular and pedestrian circulation throughout the City, subdivisions and site developments shall be served by an interconnected street network, pursuant to the standards in subsections (4)(d)(1) through (4) of this section. Distances are measured from the edge of street rights-of-way. Where a street connection cannot be made due to physical site constraints, approach spacing requirements, access management requirements, or similar restrictions, where practicable, a pedestrian access way connection shall be provided pursuant to Chapter 18.70 HMC.*
 - (1) Residential zones: minimum of 200-foot block length and maximum of 750-foot length; maximum 2,000-foot block perimeter;*

DISCUSSION: The proposed Preliminary Subdivision includes three new intersections. Each is a 3-legged intersection with intersecting streets aligned at generally 90-degree angles. There are no proposed cul-de-sacs or other dead-end streets. The proposed South 9th Street included in the subdivision is an extension of a current dead end that terminates along the southern property boundary of the site. There is no vacant or undeveloped land on the west, southwest, or east sides of the site. The existing residential development precludes extensions in those directions.

The proposed new local streets comply with the minimum block length and perimeter standards. Measured from the centerline of intersecting streets, the longest block length (Sommerville Loop between Santiam and South 9th Streets) is about 740-feet, which complies with the 750-foot maximum block length. The other block lengths are shorter and comply with both the 200-foot minimum block length standard. The block bounded

by the two new local streets and Sommerville Loop has a block perimeter of about 1,775-feet.

FINDING: The criterion is met.

- 5. **Engineering Design Standards.** *Street design shall conform to the standards of the applicable roadway authority; for City streets that is the Engineering/Public Works Design Standards Manual. Where a conflict occurs between this code and the manual, the provisions of the Engineering/Public Works Design Manual shall govern.*
- 6. **Fire Code Standards.** *Where fire code standards conflict with City standards, the City shall consult with the Fire Marshal in determining appropriate requirements. The City shall have the final determination regarding applicable standards.*
- 7. **Substandard Existing Right-of-Way.** *Where an existing right-of-way adjacent to a proposed development is less than the standard width, the Planning Commission may require the dedication of additional rights-of-way at the time of subdivision, partition, or site plan review, to mitigate the impacts of development pursuant to the standards in Table 18.85.020.3.*
- 8. **Traffic Calming.** *The City may require the installation of traffic calming features to mitigate the impacts of development and slow traffic in neighborhoods or commercial areas with high pedestrian traffic.*
- 9. **Sidewalks, Planter Strips, and Bicycle Lanes.** *Except where the City Administrator grants a deferral of public improvements, pursuant to Chapter 19.15 or 19.20 HMC, sidewalks, planter strips, and bicycle lanes shall be installed concurrent with development or widening of new streets, pursuant to the requirements of this chapter. Maintenance of sidewalks and planter strips in the right-of-way is the continuing obligation of the adjacent property owner.*
- 10. **Streets Adjacent to Railroad Right-of-Way.** *When a transportation improvement is proposed within 300 feet of a railroad crossing, or a modification is proposed to an existing railroad crossing, the Oregon Department of Transportation and the rail service provider shall be notified and City design standards required.*
- 11. **Street Names.** *No new street name shall be used which will duplicate or be confused with the names of existing streets in the City of Harrisburg or vicinity.*
- 12. **Survey Monuments.** *Upon completion of a street improvement and prior to acceptance by the City, it shall be the responsibility of the developer’s registered professional land surveyor to provide certification to the City that all boundary and interior monuments have been reestablished and protected.*
- 13. **Street Signs.** *The City shall install all signs for traffic control and street names, which shall conform to existing City design standards and the MUTCD. The cost of signs required for new development shall be the*

responsibility of the developer. Street name signs shall be installed at all street intersections. Stop signs and other signs may be required. All required signs must be installed and paid for prior to the issuance of a CO.

- 14. Streetlight Standards.** *Streetlights shall be relocated or new lights installed, as applicable, with street improvement projects. Streetlights shall conform to City standards, or the requirements of the roadway authority, if different than the City.*
- 15. Mailboxes.** *Mailboxes shall conform to the requirements of the United States Postal Service and the State of Oregon Structural Specialty Code.*
- 16. Street Cross-Sections.** *The final lift of pavement shall be placed on all new constructed public roadways prior to final City acceptance of the roadway unless otherwise approved by the Planning Commission. [Ord. 987 § 1 (Exh. A), 2022.]*

DISCUSSION: The proposed Preliminary Subdivision includes public improvements to the currently substandard Sommerville Loop. The proposed improvements will occur within the existing right-of-way, which is of sufficient width to meet City standards. The current Sommerville Loop right-of-way is 60-feet, consistent with HMC Table 18.85.020.3. The dedication of additional right-of-way is not required.

As described above and subject to the previously recommended conditions, the required sidewalk and planting strip on Sommerville Loop must be reoriented to place the planting strip and street trees nearest the curb.

Santiam Street is a new street name that has not been used in Harrisburg. South 9th Street is a logical continuation of the existing numerical street network.

As noted above, the proposed 53-lot residential subdivision is expected to be a significant pedestrian generator on a Collector street without an existing connected pedestrian system and a safe pedestrian route to schools. Therefore, per subsection (8) above, the City Engineer and Public Works Director have determined that as part of the proposed subdivision, the Applicant is required to provide a safe pedestrian connection across the Sommerville Loop Collector street to the public sidewalk system north of the development, such as a Rectangular Rapid Flashing Beacon. See the referral comments from the City Engineer for additional information.

RECOMMENDED CONDITION NO. 13: At the time of submitting the required privately engineered public improvement construction plans and specifications, the Applicant shall include a safe pedestrian connection across the Sommerville Loop street to the public sidewalk system north of the development, such as a Rectangular Rapid Flashing Beacon and the associated public improvements and traffic control devices for review and approval by the City Engineer. The privately engineered public improvement construction plans and specifications need to be complete and approved before any construction starts on the project.

The additional standards are related to operational items (e.g., survey monuments, street signs, etc.) that will be installed at the time of development. These items are not directly relevant to the Preliminary Subdivision application.

FINDING: As conditioned above, the criteria are met.

12. CRITERION: HMC 18.85.030 Public use areas.

- 1. ***Dedication of Public Use Areas.***
 - a. ***Where a proposed park, playground, or other public use shown in a plan adopted by the City is located in whole or in part in a subdivision or the PUZ zone, the City may require the dedication or reservation of this area on the final plat for the subdivision or major plat to mitigate development impacts, provided the open space dedication or reservation is roughly proportionate to the impacts of development on the City park system.***

DISCUSSION: The City did not identify the need for a park, playground, or other public use on the project site in the adopted Harrisburg Parks System Plan (October 2022).

FINDING: This criterion is not applicable.

13. CRITERION: HMC 18.85.040 Sanitary sewer and water service improvements.

- 1. ***Sewers and Water Mains Required. All new development requiring land use approval is required to connect to City water and sanitary sewer systems. Sanitary sewer and water system improvements shall be installed to serve each new development and to connect developments to existing mains in accordance with the adopted facility master plans and applicable engineering/public works design standards. Where streets are required to be stubbed to the edge of the subdivision, sewer and water system improvements and other utilities shall also be stubbed with the streets, except as approved by the City Engineer where alternate alignment(s) are provided consistent with the adopted public facility master plan.***

DISCUSSION: As shown on the Tentative Composite Utility Plan (Sheet 7 of the plan set), the proposed Preliminary Subdivision connects to the available sanitary sewer and water service lines in the abutting rights-of-way. The proposal includes an 8-inch sanitary sewer line and laterals to each lot through the proposed Santiam Street and South 9th Street rights-of-way. Both lines connect to the existing sanitary sewer main in Sommerville Loop.

The proposal includes water lines that connect to the existing water lines in the adjoining Sommerville Loop right-of-way. The water lines also extend northward from

the current terminus of South 9th Street, thereby creating a connected, looped water line system.

FINDING: The proposed Preliminary Subdivision connects to City water and sewer systems. The criterion is met.

14. CRITERION: HMC 18.85.050 Storm drainage and surface water management facilities.

- 1. General Provisions. The City shall issue a development permit only where adequate provisions for storm water runoff have been made in conformance with a 25-year storm plan. All applications for developments that increase impervious surface must submit a specific storm water plan with their application unless waived by the City Engineer.**

DISCUSSION: The Applicant has proposed a stormwater management plan that includes on-site drainage for the anticipated site development and public streets, water quality and detention facilities on Tract A and B (see Tentative Composite Utility Plan, sheet 7 of plan set), and outfalls to the public drainage system in the Sommerville Loop right-of-way. The application materials also include a Preliminary Drainage Report (Exhibit H to the written narrative) prepared by a licensed professional engineer.

In reviewing the Applicant’s Preliminary Drainage Report, the City Engineer determined that the Applicant did not size the stormwater system to detain the required 25-year storm event. Therefore, the City Engineer is requiring that the Applicant submit an updated stormwater management plan and drainage report that demonstrates that a 25-year storm event can be accommodated by the proposed stormwater system.

RECOMMENDED CONDITION NO. 14: Provide an updated stormwater management plan and drainage report signed and sealed by the engineer of record that demonstrates that a 25-year storm event can be accommodated by the proposed stormwater system to be reviewed and approved by the City Engineer.

FINDING: The proposed storm drainage and surface water management facilities as conditioned comply with the City standards.

15. CRITERION: HMC 18.85.060 Utilities.

The following standards apply to new development where extension of electric power, natural gas or communication lines is required:

- 1. General Provision. The developer of a property is responsible for coordinating the development plan with the applicable utility providers and paying for the extension and installation of utilities not otherwise available to the subject property.**

- 2. **Underground Utilities.**
 - a. **General Requirement.** The requirements of the utility service provider shall be met. All utility lines in new subdivisions, including, but not limited to, those required for electric, communication, lighting, and related facilities, shall be placed underground, except where the City Administrator or Planning Commission determines that placing utilities underground would adversely impact adjacent land uses. The City Administrator or Planning Commission may require screening and buffering of aboveground facilities to protect the public health, safety, or welfare.
 - b. **Subdivisions and Partitions.** In order to facilitate underground placement of utilities, the following additional standards apply to all new subdivisions:
 - (1) The developer shall make all necessary arrangements with the serving utility to provide the underground services. Care shall be taken to ensure that no aboveground equipment obstructs vision clearance areas for vehicular traffic, per Chapter 18.70 HMC, Access and Circulation.
 - (2) The City Engineer reserves the right to approve the location of all surface-mounted facilities.
 - (3) All underground utilities installed in streets must be constructed and approved by the applicable utility provider prior to the surfacing of the streets.
 - (4) Stubs for service connections shall be long enough to avoid disturbing the street improvements when service connections are made.
- 3. **Exception to Undergrounding Requirement.** The City or Planning Commission may grant exceptions to the undergrounding standard where existing physical constraints, such as geologic conditions, streams, or existing development conditions make underground placement impractical. [Ord. 987 § 1 (Exh. A), 2022.]

DISCUSSION: The Applicant proposes to place all utilities underground in compliance with the criterion. The Tentative Composite Utility Plan (sheet 7 of plan set) does not provide information on utilities, beyond those utilities previously listed (water, sewer, stormwater) or the location of surface-mounted facilities.

The Applicant has not requested an exception to the undergrounding requirement.

RECOMMENDED CONDITION NO. 15: In accordance with the requirements of HMC 18.85.060(2)(b), all utilities shall be placed underground prior to the issuance of the first building permit.

FINDING: As conditioned, the criterion can be met.

16. CRITERION: HMC 18.85.070 Easements.

- 1. Provision.** *The developer shall coordinate with the City and applicable utility providers in meeting the needs of each utility franchise for the provision and dedication of utility easements necessary to provide full services to the development.*
- 2. Standards.** *Utility easements shall conform to the requirements of the utility service provider. All other easements shall conform to the City of Harrisburg engineering design standards/public works design standards.*
- 3. Recordation.** *All easements for sewers, storm drainage and water quality facilities, water mains, electric lines, natural gas lines, or other utilities shall be recorded and referenced on a survey or final plat, as applicable.*

DISCUSSION: The Applicant has provided a Tentative Plat (sheet 3 of the plan set) that show the dimensions and locations of proposed public utility easements along the street frontage of each proposed lot. There is also a proposed 8-foot wide storm drainage easement internal to the block formed by the 3 public streets.

RECOMMENDED CONDITION NO. 16: All proposed easements shall be provided at the time of Final Plat application submittal. The proposed easements shall be referenced on the final plat and recorded accordingly.

FINDING: As conditioned, the criterion is met.

17. CRITERION: HMC 18.85.080 Construction Plan Approval.

No development, including sanitary sewers, water, streets, utilities, parking areas, buildings, or other development, shall be undertaken without plans having been approved by the City of Harrisburg, permit fees paid, and permits issued. Permit fees are required to defray the cost and expenses incurred by the City for construction and other services in connection with the improvement. Permit fees are as set by City Council resolution.

DISCUSSION: The Applicant has acknowledged and is aware of these criteria that will be applied through the development process following the current application for Preliminary Subdivision approval and subsequent application for Final Plat approval.

RECOMMENDED CONDITION NO. 17: The Applicant shall acquire all required permits, including but not limited to those related to demolition and site preparation, building, electrical, mechanical, and plumbing, before beginning construction of different project components, as required by HMC Title 15.

FINDING: As conditioned, this criterion is met.

18. CRITERION: HMC 18.85.090 Facility Installation.

- 1. Conformance Required. Improvements installed by the developer, either as a requirement of these regulations or at the developer’s option, shall conform to the requirements of this chapter, approved construction plans, and to improvement standards and specifications adopted by the City.**

DISCUSSION: The Applicant has acknowledged and is aware of these criteria that will be applied through the development process following the current application for Preliminary Subdivision approval and subsequent application for Final Plat approval.

CONDITION OF APPROVAL NO. 18: The Applicant shall provide an acceptable plan for the installation of items provided in design specifications, including but not limited to the number, type and location of fire hydrants, manholes, sidewalks, street signs and mail receptacles. These items shall be provided to the City Engineer prior to starting construction of the infrastructure of this subdivision.

FINDING: As conditioned, this criterion is met.

19. CRITERION: HMC 18.85.100 Performance guarantee and warranty.

- 1. Performance Guarantee Required. The City at its discretion may approve a final plat or building permit when it determines that at least 50 percent of the public improvements required for the site development or land division, or phase thereof, are complete and the applicant has posted an acceptable assurance of performance bond for the balance of said improvements.**

DISCUSSION: The Applicant has acknowledged and is aware of these criteria that will be applied through the development process following the current application for Preliminary Subdivision approval and subsequent application for Final Plat approval.

DEVELOPMENT CONSIDERATION NO. 2: A separate Development Agreement (DVA) between Applicant and the City of Harrisburg will be required before any construction begins. The Development Agreement will include bond and deposit requirements, as well as other engineering requirements.

FINDING: As conditioned, this criterion is met.

CONCLUSIONS

The applicant requests approval of a concurrent Castleberry Crossing PRELIMINARY SUBDIVISION and associated ADJUSTMENT, Type III land use application. As demonstrated by the above discussion, analysis and findings, the application, as conditioned, complies with the applicable criteria from the Harrisburg Municipal Code.

PLANNING COMMISSION ACTION

The Planning Commission has three options with respect to the subject applications. They can:

- 1. Approve the request;
- 2. Approve the request with conditions; or
- 3. Deny the request.

Based upon the criteria, discussion, and findings of facts above, staff recommends the Planning Commission **Approve with Conditions** the Preliminary Subdivision Plat and Adjustment applications.

RECOMMENDED MOTION(S)

Consistent with staff’s recommendation to the Planning Commission above, the motion at the top of this staff report should apply to this land use request.

RECOMMENDED CONDITIONS OF APPROVAL

- 1. The Applicant shall provide to the Linn County surveyor the proposed subdivision plat name to verify the plat name is not already recorded for another subdivision and that it satisfies the provisions of ORS Chapter 92.
- 2. The Applicant and the City of Harrisburg shall enter into a mutual agreement for the placement and completion of all required infrastructure and utilities, including permanent access and maintenance of storm drain detention areas by the City with funding assistance provided by the applicant.
- 3. The Applicant shall provide to the City any required wetland-related permit approvals from State and/or Federal agencies prior to beginning site preparation activities on the subject site.
- 4. At the time of Final Plat application submittal, a final site plan shall be provided that demonstrates compliance with the 50-foot minimum driveway approach spacing standard for the co-located driveway approaches on the R-2 zoned portion of the site on Sommerville Loop (HMC 18.70.030(7)).

5. Provide a final site plan signed and sealed by the engineer of record that shows vision clearance triangles on the three intersections (Sommerville Loop & South 9th Street, Sommerville Loop & Santiam Street, and Santiam Street & South 9th Street) as well as both sides of the 'curve' on Santiam Street within the project area to demonstrate compliance with this criterion. If the applicant is relying on vision clearance area on private property, show an associated easement area to be recorded as part of the Final Plat application process.
6. Provide a final landscape plan signed and sealed by the design professional of record.
7. Provide the outdoor lighting plan signed and sealed by the engineer of record.
8. Extend Sommerville Loop public improvements to the eastern and western extent of the site's property line based on the City of Harrisburg Engineering Design Standards Manual, Collector Street Standards outlined in the tentative Plan Engineering Comments technical memorandum by the City Engineer.
9. Provide public improvements in the Sommerville Loop right-of-way that comply with HMC Table 18.85.020.3.
10. Provide public improvements in the Sommerville Loop right-of-way that comply with City standards to place a planter strip between the curb and public sidewalk.
11. Provide public improvements in the Santiam Street and South 9th Street rights-of-way that comply with HMC Table 18.85.020.3.
12. Provide the required street tree planting funds to the City of Harrisburg, consistent with the provisions of HMC Chapter 12.20, and Council Fee Resolutions to implement the landscape plan within the public street right-of-way consistent with the City's approved street tree planting list.
13. At the time of submitting the required privately engineered public improvement construction plans and specifications, the Applicant shall include a safe pedestrian connection across the Sommerville Loop collector street to the public sidewalk system north of the development, such as a Rectangular Rapid Flashing Beacon and the associated public improvements and traffic control devices for review and approval by the City Engineer. The privately engineered public improvement construction plans and specifications need to be complete and approved before any construction starts on the project.
14. Provide an updated stormwater management plan and drainage report signed and sealed by the engineer of record that demonstrates that a 25-year storm event can be accommodated by the proposed stormwater system to be reviewed and approved by the City Engineer.

- 15. In accordance with the requirements of HMC 18.85.060(2)(b), all utilities shall be placed underground prior to the issuance of the first building permit.
- 16. All proposed easements shall be provided at the time of Final Plat application submittal. The proposed easements shall be referenced on the final plat and recorded accordingly.
- 17. The Applicant shall acquire all required permits, including but not limited to those related to demolition and site preparation, building, electrical, mechanical, and plumbing, before beginning construction of different project components, public improvements as required by HMC Title 15.
- 18. The Applicant shall provide an acceptable plan for the installation of items provided in design specifications, including but not limited to the number, type and location of fire hydrants, manholes, sidewalks, street signs, and mail receptacles. These items shall be provided to the City Engineer prior to starting construction of the infrastructure of this subdivision.

OTHER DEVELOPMENT CONSIDERATIONS (*Informational Only*)

- 1. The proposed fencing along the northern property line of Lot 1 does not comply with City standards. Per HMC 18.75.040(3)(a)(i), the maximum fence height in street-side yard setbacks is 4-feet, or the proposed 6-foot fence must be setback not less than 3-feet from the property line.
- 2. A separate Development Agreement (DVA) between the Applicant and the City of Harrisburg will be required before any construction begins. The Development Agreement will include bond and deposit requirements, as well as other engineering requirements.
- 3. Submission of Final Plat – Applicant shall submit a Final Plat application consistent with HMC 19.20.090 within two years of the final approval of the preliminary plat.
- 4. Development shall comply with the plans and narrative in the applicant’s proposal, except where modified by the recommended conditions of approval.
- 5. If there are any wells on the property that will not be used, they shall be properly abandoned by a licensed well driller.
- 6. Requirements herein imposed upon the Applicant may be imposed upon a developer or builder if the developer or builder has accepted the responsibility in a written document, and the City of Harrisburg is satisfied that it will not have any adverse impact on bonding requirements or other guarantees of compliance.

7. All public improvements, including but not limited to, traffic control devices, detailed storm detention and conveyance system, sanitary sewer conveyance system, water distribution system, and roadway design details, are subject to review and approval under a future review of the privately engineered public improvement construction plans and specifications. The privately engineered public improvement construction plans and specifications need to be complete and approved before any construction starts on the project.

8. At the time of Final Plat and development permit application submittals, all documents need to be stamped and signed by applicable licensed professionals, including but not limited to architectural, engineering, and landscape plans and technical reports and memorandums like the Storm Drainage Report and Sight Distance Memorandum.

Exhibit A



City of Harrisburg
120 Smith Street
Harrisburg, OR 97446
Phone (541) 995-6655
www.ci.harrisburg.or.us/planning

LAND USE APPLICATION

STAFF USE ONLY	
File Number:	455-2024 456-2024 Date Received: 12-22-23
Fee Amount:	4,105- 1-26-23

455-2024 SUBDIVISION ~ 456-2024 ADJUSTMENT

APPLICATION TYPE	
<input type="checkbox"/> Annexation*	<input type="checkbox"/> Property Line Adjustment
<input type="checkbox"/> Comprehensive Plan Amendment*	<input type="checkbox"/> Partition/Replat* Minor Major
<input type="checkbox"/> Conditional Use Permit*	<input type="checkbox"/> Site Plan Review*
<input type="checkbox"/> Historic Permit*	<input type="checkbox"/> Site Plan Review – Parking Only
<input type="checkbox"/> Resource Alteration	<input checked="" type="checkbox"/> Subdivision/Replat*
<input type="checkbox"/> Resource Demolition	<input type="checkbox"/> Vacation of street, alley or easement
<input type="checkbox"/> Historic Review – District	<input type="checkbox"/> Variance*
<input type="checkbox"/> Legal Lot Determination	<input type="checkbox"/> Zone Map Change*
<input type="checkbox"/> *A Pre-Application Conference with City Staff is Required	<input type="checkbox"/> Zoning Ordinance Text Amendment*

PLEASE PROVIDE A BRIEF SUMMARY OF THE PROPOSAL

Project Description	53-lot subdivision with wetland mitigation. Homes will be a mix of single-family detached and single-family attached depending on the zoning designation.
---------------------	---

Project Name	Woodhill Crossing Subdivision
--------------	-------------------------------

PRIMARY CONTACT AND OWNER INFORMATION

Applicant's Name **Heather Dewolf - Hayden Homes Craig Smith**

Phone **541-699-2191** Email **hdewolf@hayden-homes.com**

Mailing Address **2464 SW Glacier Place, Ste 110 Redmond, OR 97756**

Applicant's Signature **Craig K. Smith** Date **12/21/2023**

Property Owner Name **IZETTA LABAR M TRUST**

Phone Email

Mailing Address **930 SOMMERVILLE LOOP, HARRISBURG, OR 97446**

Owner Signature **See Attached Letter** Date

*If more than one property owner is involved, provide a separate attachment listing each owner or legal representative and their signature.

PROPERTY DESCRIPTION
(general vicinity, side of street, distance to intersection, etc.)

Street Address **930 Sommerville Loop**

General Location Description **South side of Sommerville Loop**

Assessor's Map Number(s) **1s-04W-15 15S04W15** Related Tax Lot(s) **3700**

Map # **1s-04W-15 15S04W15** Tax Lot(s) # **3700**

The Assessor's Map Number (Township, Section and Range) and the Tax Lot Number (parcel) can be found on your tax statement, at the Linn County Assessor's Office, or online at <http://linn-web.co.linn.or.us/propertywebquerypublic/>

Lot Area **7.91 acres 7.44 ACRES**

LAND USE AND OVERLAY ZONES

Existing Zone(s)

Existing Comprehensive Plan Designation(s)

Please select any of the following zone overlays or natural areas that apply to the subject site:

- Historic Overlay
- Willamette River Greenway
- Floodplain
- Riparian Corridors
- Wetlands

*Please include a discussion in the project narrative indicating how these overlays affect your proposal. For more information about any of these overlays, please contact the City Planner at (541) 995-6655.

CHECK THE BOX NEXT TO INCLUDED EXHIBITS

- | | |
|---|--|
| <input checked="" type="checkbox"/> Narrative* (address all applicable HMC review criteria) | <input type="checkbox"/> Architectural Elevations |
| <input checked="" type="checkbox"/> Assessor's Map with Applicable Tax Lots Highlighted | <input type="checkbox"/> Architectural Floor Plans |
| <input checked="" type="checkbox"/> Site Plan | <input checked="" type="checkbox"/> Utilities Plan |
| <input type="checkbox"/> Survey / ALTA | <input type="checkbox"/> Geotechnical Report/Site |
| <input checked="" type="checkbox"/> Aerial Photograph / Existing Land Use(s) Map | <input type="checkbox"/> Assessment |
| <input checked="" type="checkbox"/> Zoning Map (if applicable, show proposed change(s)) | <input type="checkbox"/> Electronic Versions of Exhibits |
| <input type="checkbox"/> Comprehensive Plan Map(s) (if applicable, show proposed changes)) | <input type="checkbox"/> Application Fee |
| <input checked="" type="checkbox"/> Subdivision or Partition Plat | <input type="checkbox"/> Other |

*A written narrative is required for all application types. Typical drawings sizes are 24"X36", 11"X17", or 8.5"X11". Sizes of required drawings will depend on the type and scope of applications involved. Contact the City Planner to verify requirements. On your plans, include the following: property lines, points of access for vehicles, pedestrians, and bicycles, water courses, any natural features (wetlands, floodplain, etc.), existing and proposed streets and driveways, parking areas, utilities, pedestrian and bike paths, and existing easements. Please note there are additional specific graphic and narrative requirements for each application type. Refer to the Harrisburg Municipal Code for more information.

A Pre-application Conference is Required with City Staff prior to turning in your land use application. Please contact the City Administrator, or City Recorder/Assistant City Administrator to make an appointment. Date of Appointment:

PLEASE TELL US MORE ABOUT THE PROPOSAL AND ITS SITE

1. Are there existing structures on the site? Yes No If yes, please explain

An existing home and accessory structures are located on the subject site but proposed to be removed.

2. Indicate the uses proposed and describe the intended activities:

The applicant proposes a residential subdivision which is consistent with the underlying zoning designations

3. How will open space, common areas and recreational facilities be maintained?

This application does not propose any common areas or recreational facilities. This application proposes water quality facilities to be deeded to the City.

4. Are there previous land use approvals on the development site? Yes No If yes, please include a discussion in the project narrative describing how the prior approvals impact your proposal.

Previous subdivision approval under different applicant and currently expired.

5. Have you reviewed the Oregon Fire Code Applications Guide in relation to your land use request? Yes No Do you have questions about any element of these requirements? If yes, please explain:

AUTHORIZATION FOR STAFF & DECISION MAKERS TO ENTER LAND

City staff, Planning Commissioners, and City Councilors are encouraged to visit the sites of proposed developments as part of their review of specific land use applications. Decision maker site visits are disclosed through the public hearing process. Please indicate below whether you authorize City staff and decision makers to enter onto the property(-ies) associated with this application as part of their site visits.

I authorize City staff and decision makers to enter onto the property(-ies) associated with this application.

I do not authorize City decision makers to enter onto the property(-ies) associated with this application.

OWNER RELEASE LETTER

Date: December 20th, 2023

SUBJECT: LETTER OF AUTHORIZATION

RE Subject Property:

930 Sommerville Loop, Harrisburg, OR-97446

To Whom It May Concern:

I, Izzetta M. Labar, hereby authorize Hayden Homes, LLC to apply for and submit any necessary land use documents at their sole expense as it relates to the development of Subject property.

We certify that we are the owner of the property.

Authentic
David Labar 12/22/23

Izzetta Labar

Date

Castleberry Crossings

Project Narrative

Prepared for:
Hayden Homes

Prepared by:



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

Project Summary

Request:	Application for 53-lot Subdivision	
Location and Map Number:	930 SW Summerville Loop, Harrisburg, OR 97446 Linn County Assessor's Map No. 1s-04W-15, Tax Lot 3700	
Applicant:	Hayden Homes, LLC 2464 SW Glacier Place Redmond, Oregon 97756 Phone: 541-923-6607 Email: hdewolf@hayden-homes.com	
Engineer/Planner:	Emerio Design, LLC 1500 Valley River Drive Suite 100 Eugene, OR 97401 503-746-8812 Engineer: Roy Hankins, PE roy@emeriodesign.com	Planner: Jennifer Arnold jarnold@emeriodesign.com

Exhibits:

- A – County Assessor's Map
- B – Aerial Photograph
- C – Zoning Map
- D – Vision Clearance Exhibit
- E – Landscape Plan
- F – Lighting Plan (Streetlights)
- G – Traffic Memorandum
- H – Stormwater & Drainage Report
- I – Sight Distance Memorandum

I. Project Description

Hayden Homes, the applicant, is proposing a 53-lot subdivision on a 7.44 acre parcel identified as Linn County Assessor's Map No. 1s-04W-15, Tax Lot 3700 (Exhibit A); it can also be located by its address, 930 Summerville Loop. The base zones applied to the property are both residential with the east side under the R-1 zoning designation and the west side under the R-2 zoning designation.

Prior approval of a subdivision under a different applicant on the subject property has expired. This prior subdivision approval does not impact this application as the proposals are different. The applicant respectfully requests this application is reviewed on its own merits.

The proposed development conforms to all applicable sections of the Harrisburg Municipal Code (HMC). This application provides findings of fact that demonstrate conformance with all applicable standards of the previously mentioned governing regulations. Applicable criteria of the HMC will appear in *italics* followed by the applicant's responses in **bold** font.

II. Existing Conditions

The subject site is located on the south side of Summerville Loop approximately 260 feet east of the South Sixth Street right-of-way. The proposal will divide the 7.44 acre parcel into 53 lots. As shown on the applicant's tentative plat, lots range in size but all exceed the minimum required lot area for each zone.

The subject site is relatively flat and currently used as an agricultural field. The site has an existing single-family home and accessory structures all proposed to be removed. The site is sparsely vegetated around the existing structures. The site has wetlands proposed to be mitigated and south 9th Street is stubbed to the southern property line in the southeastern portion of the property. SW 9th Street is shown to be extended through the project site on preliminary engineering plans.

For land uses and adjacent zones refer to Exhibit B for an aerial photograph and Exhibit C for a zoning map:

North: Single-family dwelling zoned R-2 (to the west), Multi-Family Residential and Single-family dwelling zoned R-1 (to the east), Single-Family Residential by City of Harrisburg (Map 15S04W15CB).

South: Single-family dwelling zoned R-2 (to the west), Multi-Family Residential and Single-family dwelling zoned R-1 (to the east), Single-Family Residential by City of Harrisburg (Map 15S04W15CB).

East: Single-family dwelling zoned R-1, Single-Family Residential by City of Harrisburg (Map 15S04W15CB, Tax Lot 13200).

West: Single-family dwelling zoned R-2, Multi-Family Residential by City of Harrisburg (Map 15S04W15CB, Tax Lot 4900).

III. Development Standards

18.45 Zone District Regulations

18.45.030 Allowed Uses

1. *Uses Allowed in Base Zones. Allowed uses include those that are permitted (P) outright, those that are permitted subject to meeting special use standards or requirements (S), and those that*

are allowed subject to approval of a conditional use permit (CU) (as identified by Table 18.45.030). Allowed uses fall into four general categories: residential, public and institutional, commercial, and industrial. Where Table 18.45.030 does not list a specific use, and Chapter 19.55 HMC, Definitions, does not identify the use or include it as an example of an allowed use, the City may find that use is allowed, or is not allowed, following the code interpretations of this title. Uses not listed in Table 18.45.030 and not found to be similar to an allowed use are prohibited.

2. *Permitted Uses and Uses Permitted Subject to Special Use Standards.* Uses listed as “Permitted Use (P)” are allowed provided they conform to relevant lot and development standards. Uses listed as “Permitted With Special Use Standards (S)” are allowed, provided they conform to Chapter 18.50 HMC, Special Use Standards. Uses listed as “Not Allowed (N)” are prohibited. Uses not listed but similar to those allowed may be permitted following the code interpretations of this title.
3. *Conditional Uses.* Uses listed as “Conditional Use Permit Required (CU)” are allowed subject to the requirements of Chapter 19.25 HMC, Conditional Use Permits.
4. *Uses Regulated by Overlay Zones.* Notwithstanding the provisions of this chapter, additional standards may apply to uses within overlay zones. In addition, an overlay zone may allow exceptions to some standards of the underlying zone. See Chapter 18.55 HMC.
5. *Master Planned Developments/Planned Unit Developments.* Uses that are not otherwise allowed by the underlying zone may be permitted through the master planned development procedure under Chapter 19.45 HMC.
6. *Accessory Uses.* Uses identified as “Permitted (P)” are permitted as primary uses and as accessory uses. For information on other uses that are customarily allowed as accessory, please refer to the description of the use categories in Chapter 19.55 HMC, Definitions.
7. *Mixed-Use.* Uses allowed individually are also allowed in combination with one another, in the same structure, or on the same site, provided all applicable development standards are met.
8. *Outdoor Uses.* Any use of real property that occurs primarily outside (i.e., not within a permitted building) requires a conditional use permit under this chapter. Examples of outdoor uses and unenclosed activities include, but are not limited to, automotive services, vehicle and equipment repair, fueling, drive-in restaurants, drive-up windows and similar drive-through facilities, automatic teller machines, kiosks, outdoor assembly and theaters, outdoor markets, and similar uses. Outdoor uses of the public right-of-way, for example, cafe seating, may be permitted without a conditional use permit when an encroachment permit is approved by the applicable roadway authority.
9. *Temporary Uses.* Temporary uses may occur no more than four times in a calendar year and are seasonal in nature. Approval of a special event or use permit in accordance with Chapter 9.52 HMC is required. Uses may be permitted on a temporary basis, subject to review and approval under Chapter 19.15 HMC, Site Design Review.

10. *Disclaimer. Property owners are responsible for verifying whether a specific use is allowed on a particular site. The City Administrator may require a special permit to allow an outdoor or temporary use(s) that is otherwise permitted in the zone.*

Applicant Response: The applicant proposes a single-family subdivision with attached and detached house types. The subject site is split zoned between the R1 and R2 zones. The detached homes are proposed within the R1 zone designation with the attached housing proposed within the R2 designation. Both housing types are permitted outright in their respective zoning designation. This application does not include a proposal for multi-family housing, or any uses considered permitted conditionally. The subject site is not within an overlay zone identified by staff in the pre-application conference. The applicant proposes a standard subdivision and does not include any planned unit developments or master planned communities. All uses proposed with this application are associated with residential development. No outdoor uses, temporary uses, or mixed uses are proposed with this application. To the extent they apply, the above criteria are met.

18.45.040 Lot and development standards

1. *Development Standards. This section provides the general lot and development standards for each of the City's base zoning districts. The standards of this section are organized into two tables: Table 18.45.040.4 applies to residential and residential-commercial zones, and Table 18.45.040.5 applies to nonresidential zones.*
2. *Design Standards. City standards for access, circulation, site and building design, parking, landscaping, fences and screening, and public improvements, among others, are located in HMC Title 18. Notwithstanding the provisions of Tables 18.45.040.4 and 18.45.040.5 and HMC Title 18, different standards may apply in specific locations, such as at street intersections, within overlay zones, adjacent to natural features, and other areas as may be regulated by this code or subject to State or Federal requirements. For requirements applicable to the City's overlay zones, please refer to Chapter 18.55 HMC.*
3. *Lot and Development Standards for Residential Districts. The development standards in Tables 18.45.040.4 and 18.45.040.5 apply to all new development as of the effective date of HMC Title 19.*
4. *Table 18.45.040.4 – Lot and Development Standards for Residential Zones.*
5. *Lot and Development Standards for Nonresidential Districts. The development standards in Table 18.45.040.5 apply to all new development as of the date of adoption of this chapter in the City's nonresidential zones, as follows:*

Applicant Response: The subject property is split zoned with the east side within the R-1 zoning designation and the west side is within the R-2 zoning designation. Within the R-1 zoned area of the site, the applicant proposes single-family detached homes. Per the submitted site plan, the setback standards are shown for each lot and proposed to be met. The lot areas proposed within the R-1 zoning designation are shown to exceed the interior lot size of 6,000 sf and for corner lots the proposed size exceeds the required 7,000 sf. On the western portion of the site within the R-2 zoning designation, the applicant proposes single-family attached homes. The R-2 zoned lots are proposed to exceed the 3,000 square foot minimum lot area for townhouse lots. The attached homes are shown to be two units with a zero foot setback between units on the shared wall. Front and rear yard setbacks are also shown on the submitted site plan and the applicant does not propose

deviation from those standards. Both residential type uses are permitted outright within each zone. No non-residential uses are proposed with this application.

Lots within the R-1 zone are required to have a minimum lot width of 50 feet for interior lots and 60 feet for corner lots. That standard is from the proposed code amendment documents provided to the applicant and the current published Zoning and Development chapter of the HMC. The applicant proposes to meet the minimum of 50 foot wide interior and 60 foot corner lot widths as shown on the proposed tentative plat. All lot depths exceed the minimum standard outlined in the proposed code amendment documents provided to the applicant and the current published Zoning and Development chapter of the HMC. No maximum lot depth standard is listed in the HMC and therefore lot dimension standards are met in the R-1 zone.

Lots within the R-2 zone are required to have a minimum lot width of 35 feet for interior lots (townhouse lots) and 40 feet for corner lots (townhouse lots). That standard is from the proposed code amendment documents provided to the applicant by City Staff. The applicant proposes to meet the minimum lot widths as shown on the proposed tentative plat apart from proposed lots 48 and 49. The applicant proposes to utilize the provisions of HMC chapter 19.20.40 for lot size averaging to allow a 20% reduction in lot width. See findings addressing this chapter below in this narrative. The proposed lot width for lots 48 and 49 is 28 feet, which is within the 20% reduction from the minimum standard of 35 feet. All lot depths exceed the minimum standard outlined in the proposed code amendment documents provided to the applicant and the current published Zoning and Development chapter of the HMC. No maximum lot depth standard is listed in the HMC and therefore lot dimension standards are met in the R-2 zone.

The above criteria are met.

18.45.050 Setback yards exceptions

1. Encroachments.

- a. *Except as otherwise restricted by applicable building codes, building elements such as eaves, chimneys, bay windows, overhangs, heating, cooling and ventilation systems, and similar incidental structures may extend into the required setback yards by no more than 24 inches; provided, that a setback of not less than 36 inches is maintained, all applicable building codes are met, and the clear vision standards in HMC 18.70.030 are met.*
- b. *Porches, decks, patios, and similar features not exceeding 30 inches in height may encroach into setbacks, provided a minimum setback of not less than 36 inches is maintained and all applicable building codes are met.*
- c. *Fences may be placed within setback yards, subject to the standards of Tables 18.45.040.4 and 18.45.040.5.*

Applicant Response: The applicant has shown the required setbacks on the submitted site plan and does not propose any setback encroachments. The above criteria do not apply.

2. *Flag Lots. The City Administrator or the Planning Commission may designate the front yard of a flag lot (to ensure compatibility with adjacent land uses, based on existing development patterns and location of adjacent driveways, utilities, and natural features), as either the:*
 - a. *Front yard parallel to the street providing automobile access; or*
 - b. *Front yard parallel to the flagpole from which driveway access is received; or*
 - c. *Other, as surrounding land uses or building construction needs may indicate.*

The City shall review proposals for flag lots pursuant to the standards in HMC 19.20.040.

Applicant Response: This application proposes public street access for each lot and does not include any flag lots with this application.

18.45.060 Residential density standards.

To ensure efficient use of buildable lands and to provide for a range of needed housing in conformance with the comprehensive plan, all new developments in the residential districts shall conform to the minimum and maximum densities prescribed in Table 18.45.040.4, except as provided in subsections (1) through (3) of this section:

1. Residential care homes and facilities, senior housing, including assisted living, accessory dwellings, and subdivisions, are exempt from the minimum density standard.
2. The density standards may be averaged over more than one development phase (i.e., as in a master planned development). Duplex lots used to comply with the density standard shall be so designated on the final subdivision plat.
3. Minimum and maximum housing densities are calculated by multiplying the total parcel or lot area by the applicable density standard.
4. Areas reserved for flag lot access (flag poles) are not counted as part of the total parcel or lot area for the purpose of calculating density.

Applicant Response: The applicant proposes to take advantage of this provision and adjust the site area in each zoning designation up to 10% for the purpose of density calculations. The adjustment in site area brings the proposed density within the allowed parameters. Site area is considered a quantitative standard and therefore this code provision can be applied to this application. No proposed adjustments in lot dimensions, lot area, landscape/irrigation, lot coverage or setbacks are being requested of this provision.

The R-1 zoning designation has a total area of 139,166 square feet (3.19 ac), right-of-way total area is 33,388 square feet (0.76ac) and a total buildable area of 105,778 square feet (2.43 ac) [139,166 – 33,388= 105,778]. The applicant is applying the provisions of HMC 19.40.30 to increase the buildable area by 10%. The new buildable area is 116,356 square feet (2.67 ac) [105,778 X 1.1 = 116,356]. After the adjustment, the applicant proposes a density of 5.61 units per acre in the R-1 area [15 units/ 2.67 acres = 5.61 units/ac]. The applicant’s proposed density is below the maximum standard of 6 units per acre.

The R-2 zoning designation has a total area of 184,428 square feet (4.23 ac), right-of-way total area is 39,971 square feet (0.92 ac) and a total buildable area of 144,457 square feet (3.32 ac) [184,428 – 39,971= 144,457]. The applicant is applying the provisions of HMC 19.40.30 to increase the buildable area by 10%. The new buildable area is 158,903 square feet (3.65 ac) [144,457 X 1.1 = 158,903]. After the adjustment, the applicant proposes a density of 10.41 units per acre in the R-2 area [38 units/ 3.65 acres = 10.41 units/ac]. The applicant's proposed density is below the maximum standard of 12 units per acre.

No flag lots proposed with this project. The applicant has proposed this project in one phase and does not propose more than one unit per lot. No residential care homes, senior housing or assisted living facilities are proposed with this application.

To the extent they apply, the above criteria are met.

18.45.070 Lot coverage

1. *Lot Coverage Calculation. The maximum allowable lot coverage, as provided in Table 18.45.040.4, is calculated as the percentage of a lot or parcel covered by buildings and structures (as defined by the foundation plan area) at 30 inches or greater above the finished grade. It does not include paved surface-level developments such as driveways, parking pads, and patios that do not meet the minimum elevation of 36 inches above grade.*
2. *Lot Coverage Bonus. The City Administrator or the Planning Commission, subject to review through a Type II procedure, may approve increases to the lot coverage standards in Table 18.45.040.4, as follows:*
 - a. *Lot coverage may increase by up to one-half square foot for every one square foot of proposed automobile parking area to be contained in a parking structure (either above or below leasable ground floor space, e.g., residential, commercial, or civic use), not to exceed a 20 percent increase in allowable coverage.*
 - b. *Lot coverage may increase by up to three-quarters (75 percent) of a square foot for every one square foot of proposed parking area paving that uses a City-approved porous or permeable paving material (i.e., allowing storm water infiltration).*
 - c. *Lot coverage may increase by up to three-quarters (75 percent) of a square foot for every one square foot of City-approved water quality treatment area (e.g., vegetative swale or biofiltration) to be provided on the subject site.*
 - d. *In approving increases in lot coverage under subsections (2)(a) through (c) of this section, the City may require additional landscape buffering or screening, above that which is required by other provisions of this code, and may impose reasonable conditions of approval to ensure the ongoing maintenance of parking areas and surface water management facilities.*

- e. *Notwithstanding the lot coverage increases authorized by this section, all other development standards of this chapter, and other applicable provisions of this code, must be met.*

Applicant Response: Lot coverage is to be evaluated prior to issuance of a building permit. buildable areas are shown on the submitted site plan based on setback standards. The applicant does not propose to exceed maximum lot coverage or anticipate the need for a lot coverage bonus. The above criteria can be met.

18.45.080 Height measurement, exceptions, and transition.

1. *Building Height Measurement. Building height is measured pursuant to the building code.*
2. *Exception From Maximum Building Height Standards. Except as required pursuant to FAA regulations, chimneys, bell towers, steeples, roof equipment, flag poles, and similar features not for human occupancy are exempt from the maximum building heights; provided, that all applicable fire and building codes are met.*
3. *Fence Height Increase. Where Tables 18.45.040.4 and 18.45.040.5 provide for a height increase, the proposal shall be subject to City review and approval pursuant to Chapter 19.25 HMC.*

Applicant Response: Building height is to be evaluated prior to issuance of a building permit. The applicant does not propose to exceed the maximum height. The above criteria can be met.

18.50 Special Use Standards

18.50.060 Townhomes, attached single-family dwellings, special review criteria.

1. *Purpose. The following provisions are intended to promote a compatible building scale where attached single-family dwellings are proposed, while minimizing the impact of garages along street fronts and creating a streetscape that is conducive to walking.*
2. *Applicability. The following standards apply to new attached single-family dwellings in all residential zones. The standards are applied through the special review process. Those not meeting these requirements must meet the review standards and criteria of a site plan review pursuant to Chapter 19.15 HMC, prior to issuance of building permits.*
3. *Standards. Where attached single-family dwellings are proposed, the structure(s) shall meet all of the following standards:*
 - a. *Each building shall contain not more than four consecutively attached dwelling units and not exceed an overall length or width of 125 feet.*
 - b. *The primary entrance of each dwelling unit shall orient to a street or an interior courtyard that is not less than 24 feet in width. This standard is met when the primary entrance faces or is within 45 degrees of parallel to an abutting street or courtyard.*

- c. *Where the subject site is served by an existing or planned alley, vehicle access shall be from the alley and all garage entrances shall orient to the alley. Planned alleys shall be at least 24 feet in width.*
- d. *The development standards of Chapter 18.45 HMC and the building and site design standards of Chapters 18.60 through 18.75 HMC shall be met.*
- e. *Every dwelling unit in a townhouse/attached single-family dwelling shall, on the primary entrance side, be composed of not less than 20 percent windows and door surface area, exclusive of the garage door(s).*
- f. *The standards of this subsection (3) shall be met.*
- g. *Townhouse buildings containing three or more dwelling units shall provide a total of five or more off-street parking locations, consistent with HMC 18.80.020(3)(a) and (b).*

Applicant Response: The subject site is located within two zoning designations. The east side of the site is located within the R-1 zoning designation and the applicant proposes single-family detached homes. The western portion of the site is zoned R-2 and allows for attached housing. The applicant proposes duplex style townhouses within the R-2 zone. The duplex style townhouse means only two units share a wall, but each unit is on its own legal lot of record. All entrances are proposed to face the front property line/public street. No courtyards are proposed with this application. No alleys are proposed with this application and all lots have direct access onto a public street. Site design standards are to be evaluated prior to issuance of a building permit. To the extent they apply, the above criteria are met.

18.50.190 Special use standards in the residential zones.

- 1. *Purpose. The following provisions are intended to encourage a variety of residential related and compatible uses in the residential zones with particular emphasis on the R-3 zone. The R-3 zone is a higher density zone with numerous compatible uses within walking distances. These include uses such as small professional offices, personal services providers, transitory rentals, religious and community organizations and facilities and many others typically found in Harrisburg and similar small communities.*
- 2. *Applicability. The standards in this section are applicable to "S" rated uses, as per Table 18.45.030.*
- 3. *Standards.*
 - a. *Traffic. The traffic generated by the proposed use shall not exceed the greater of an estimated two times that of a single-family dwelling or two times the use generated per MFD.*
 - b. *All other City development and building standards as per Table 18.45.040.4 must be met.*
 - c. *Parking. "S" rated uses in the residential zones must provide adequate off-street parking to demonstrate compatibility with existing uses. Parking needs in excess of two times that of an SFD must be provided on site.*

- d. *RV parks in the R-3 zone may not exceed three acres.*
- e. *Commercial uses in the R-3 zone may not exceed a gross area of one acre nor structure(s) exceeding 3,000 square feet.*

Applicant Response: The subject site is split zoned and includes the R-1 and R-2 zoning designations. A memorandum stating trip generation and transportation safety was submitted to demonstrate compliance with the traffic generation standards above. Standards for uses within the R-3 zone do not apply to this application. To the extent they apply, the above criteria are met.

18.70 Access and Circulation

18.70.030 Vehicular access and circulation.

1. *Purpose and Intent. This section implements the street access policies of the City of Harrisburg transportation system plan and serves as the street access management policy of the City of Harrisburg until such time as the City adopts a revised transportation system plan. It is intended to promote safe vehicle access, circulation, and egress to properties, while maintaining traffic operations in conformance with adopted standards. "Safety," for the purposes of this chapter, extends to all modes of transportation.*
2. *Permit Required. Vehicular access to a public street (e.g., a new or modified driveway connection to a street or highway) requires an approach permit approved by the applicable roadway authority. The City Administrator reviews permit requests for connections to City streets through a Type I procedure.*
3. *Traffic Study Requirements. The City, in reviewing a development proposal or other action requiring an approach permit, may require a traffic impact analysis or other traffic engineering analysis, pursuant to HMC 18.85.020, to determine compliance with this code.*
4. *Approach and Driveway Development and Circulation Standards. Approaches and driveways shall conform to all of the following development standards:*
 - a. *The number of approaches on higher classification streets (e.g., collector and arterial streets) shall be minimized; where practicable, access shall be taken first from a lower classification street.*
 - b. *Approaches shall conform to the spacing standards of subsections (4)(e) and (f) of this section, and shall conform to minimum sight distance and channelization standards of the roadway authority.*
 - c. *Driveways shall be paved and meet applicable construction standards.*
 - d. *(1) Private or public driveways exceeding 150 feet and/or as the sole access for three or more homes shall have a paved driving surface of at least 25 feet (26 feet if abutting a fire hydrant, with an unobstructed width of 20 feet) and an unobstructed vertical clearance of not less than 14 feet.*

(2) Public or private driveways serving as the sole vehicle access to one or two homes and/or less than 150 feet shall have a paved driving surface of at least 25 feet, with an

unobstructed width of 20 feet, and a turning radius of not less than 28 feet and a turnaround radius of at least 48 feet, as measured from the same center point.

(3) These requirements are subject to amendments by the Oregon Fire Code Application Guide and upon mutual agreement of the City Engineer and local Fire Marshal or their authorized representatives.

- e. The City Engineer may limit the number or location of connections to a street, or limit directional travel at an approach to one-way, right-turn only, or other restrictions, where the roadway authority requires mitigation to alleviate safety or traffic operations concerns.*
- f. Where the spacing standards of the roadway authority limit the number or location of connections to a street or highway, the City Engineer or authorized City representative may require that a driveway extend to one or more edges of a parcel and be designed to allow for future extension and inter-parcel circulation as adjacent properties develop. The City Engineer or authorized City representative may also require the owner(s) of the subject site to record an access easement for future joint use of the approach and driveway as the adjacent property(ies) develop(s).*
- g. Where applicable codes require emergency vehicle access, approaches and driveways shall be designed and constructed to accommodate emergency vehicle apparatus and shall conform to applicable fire protection requirements. The City Engineer or authorized City representative may restrict parking, require signage, or require other public safety improvements pursuant to the recommendations of an emergency service provider.*
- h. As applicable, approaches and driveways shall be designed and constructed to accommodate truck/trailer turning movements.*
- i. Driveways shall accommodate all projected vehicular traffic on site without vehicles stacking or backing up onto a street.*
- j. Driveways shall be designed so that vehicle areas, including, but not limited to, drive-up and drive-through facilities and vehicle storage and service areas, do not obstruct any public right-of-way.*
- k. Approaches and driveways shall not be wider than necessary to safely accommodate projected peak hour trips and turning movements and shall be designed to minimize crossing distances for pedestrians.*
- l. As it deems necessary for pedestrian safety, the City Engineer or authorized representative, in consultation with the roadway authority, as applicable, may require that traffic-calming features, such as speed tables, textured driveway surfaces (e.g., pavers or similar devices), curb extensions, signage or traffic control devices, or other features, be installed on or in the vicinity of a site as a condition of development approval.*

- m. Construction of approaches along acceleration or deceleration lanes, and along tapered (reduced width) portions of a roadway, shall be avoided; except where no reasonable alternative exists, and the approach does not create safety or traffic operations concern.*
- n. Approaches and driveways shall be located and designed to allow for safe maneuvering in and around loading areas, while avoiding conflicts with pedestrians, parking, landscaping, and buildings.*
- o. Where sidewalks or walkways occur adjacent to a roadway, driveway aprons constructed of concrete shall be installed between the driveway and roadway edge. The roadway authority may require the driveway apron be installed outside the required sidewalk or walkway surface, consistent with Americans with Disabilities Act (ADA) requirements, and to manage surface water runoff and protect the roadway surface.*
- p. Where an accessible route is required pursuant to ADA, approaches and driveways shall meet accessibility requirements where they coincide with an accessible route.*
- q. The City Engineer or authorized representative may require changes to the proposed configuration and design of an approach, including the number of drive aisles or lanes, surfacing, traffic-calming features, allowable turning movements, and other changes or mitigation, to ensure traffic safety and operations.*
- r. Where a new approach onto a State highway or a change of use adjacent to a State highway requires ODOT approval, the applicant is responsible for obtaining ODOT approval. The City Engineer may approve a development conditionally, requiring the applicant first obtain required ODOT permit(s) before commencing development, in which case the City will work cooperatively with the applicant and ODOT to avoid unnecessary delays.*
- s. Where an approach or driveway crosses a drainage ditch, canal, railroad, or other feature that is under the jurisdiction of another agency, the applicant is responsible for obtaining all required approvals and permits from that agency prior to commencing development.*
- t. Where a proposed driveway crosses a culvert or drainage ditch, the City Engineer or authorized representative may require the developer to install a culvert extending under and beyond the edges of the driveway on both sides of it, pursuant to applicable public works design standards.*
- u. Except as otherwise required by the applicable roadway authority or waived by the City Engineer, temporary driveways providing access to a construction site or staging area shall be paved or graveled to prevent tracking of mud onto adjacent paved streets.*
- v. Development that increases impervious surface area shall conform to the storm drainage and surface water management requirements of HMC 18.85.050.*

Applicant Response: The subject site has been designed to avoid dead ends and cul-de-sacs. The applicant proposes circulation throughout the site with the extension of S. 9th Street from the south and the new local street (Santiam Street) as shown on the submitted site plan.

All proposed lots are shown to have direct access to public right-of-way. Driveway approaches have been designed to minimize access onto higher classified streets and show access from local streets to the greatest extent possible. All driveway widths are shown to be appropriate for the use and not larger than necessary. The applicant does not propose any driveways serving more than two homes. No new approaches onto state highways are proposed with this application. The applicant proposes to reroute stormwater from existing ditches into an appropriate facility shown as Tracts A and B on the submitted preliminary engineering plans. The applicant understands additional permitting and process may be required with outside agencies for work within the drainage ditch. No driveways are proposed to cross drainage ditches, railways, or other features. See tentative composite utility plan (sheet 7) for proposed stormwater infrastructure in the current drainage ditch locations. A gravel construction entrance is shown on sheet 6 (grading plan) to demonstrate compliance with the above criteria. A stormwater report is included with this application to demonstrate compliance with storm drainage and surface water management requirements. The above criteria are met.

5. *Internal, on-site circulation of cars and persons on development in excess of 40,000 square feet or one and one-half acres shall conform to the following standards:*
- a. *Driveway egress and/or ingress shall not impede the unrestricted access of pedestrians to the primary building.*
 - b. *At least one curbed pedestrian walkway shall connect the parking lot to the primary structure.*
 - c. *The development site parking plan will allow sufficient vehicle turning radius and parking lot spaces to accommodate large, four-wheel drive personal pickups and SUVs as determined by the City Engineer.*
 - d. *The development site parking plan will allow sufficient, dedicated area(s) to allow large truck loading and unloading zone(s) that do(es) not interfere with passenger vehicle or pedestrian circulation.*

Applicant Response: Each proposed lot exceeds the minimum lot size required for the underlying zone, but no lot is more than 40,000 square feet (or 1/2 acre). On-site circulation per lot is limited to a driveway with garage access. Sidewalks for pedestrian circulation throughout the community are shown on the submitted site plan along all right-of-way frontages. No surface parking areas are proposed with this application aside from off-street parking in each residential driveway. The above criteria do not apply to this application.

6. *Approach Separation from Street Intersections. Except as provided by subsection (8) of this section, the following minimum distances shall be maintained between approaches and street intersections, where distance is measured from the edge of an approach surface to the edge of the roadway at its ultimate designated width:*
- a. *On an arterial street: 100 feet, except as required by ODOT, pursuant to Oregon Administrative Rule (OAR) 734-051, for State highways.*

- b. *On a collector street: 50 feet.*
- c. *On a local street: 20 feet.*
- d. *Where existing conditions and easements limit separation distances, the City Engineer may grant reductions of up to 25 percent.*

Applicant Response: The nearest intersection outside of the proposed subdivision is over 100 feet away and the two intersections created by this proposal are separated more than 650 feet apart. The applicant does not propose to reduce the intersection spacing requirements. The above criteria are met.

7. *Approach Spacing. Except as provided by subsection (8) of this section or as required to maintain street operations and safety, the following minimum distances shall be maintained between approaches, where distance is measured from the edge of one approach to the edge of another:*
 - a. *On an arterial street: 150 to 250 feet based on speed limit or posted speed, as applicable, except as otherwise required by ODOT for a State highway, pursuant to Oregon Administrative Rules (OAR) 734-051.*
 - b. *On a collector street: 50 to 100 feet.*
 - c. *On a local street: 20 feet, or the City Engineer or authorized representative may approve closer spacing where necessary to provide for on-street parking (e.g., between paired approaches).*
8. *Vision Clearance. No visual obstruction (e.g., sign, structure, solid fence, or shrub vegetation) between three feet and eight feet in height shall be placed in "vision clearance areas" at street intersections, as illustrated. The minimum vision clearance area may be modified by the City Engineer through a Type I procedure, upon finding that more or less sight distance is required (i.e., due to traffic speeds, roadway alignment, etc.). Placement of light poles, utility poles, and tree trunks should be avoided within vision clearance areas.*
9. *Exceptions and Adjustments to Spacing Standards. The City Engineer may approve adjustments to the spacing standards of subsections (5) and (6) of this section, where an existing connection to a City street does not meet the standards of the roadway authority and the proposed development moves in the direction of better code compliance. The City Engineer through a Type I procedure may also approve a deviation to the spacing standards on City streets where it finds that mitigation measures, such as consolidated access (removal of one access), joint use driveways (more than one property uses same access), directional limitations (e.g., one-way), turning restrictions (e.g., right-in/right-out only), or other mitigation, alleviate all traffic operations and safety concerns.*
10. *Joint Use Access Easement and Maintenance Agreement. Where the City requires and approves a joint use driveway, the property owners shall record an easement with the deed allowing joint use of and cross access between adjacent properties. The owners of the properties agreeing to joint use of the driveway shall record a joint maintenance agreement with the deed, defining maintenance responsibilities of property owners. The applicant shall provide a fully executed*

copy of the agreement to the City for its records, but the City is not responsible for maintaining the driveway or resolving any dispute between property owners.

Applicant Response: A clear vision exhibit has been included with this application (see exhibit D) to demonstrate compliance with the above standards. The S. 9th Street extension runs north through the subject property and intersects Sommerville Loop. A new local street is proposed with this subdivision to complete the circulation through the site which intersects Sommerville Loop and Short Street. The intersections of Santiam Street/S. 9th Street and S. 9th Street/Sommerville Loop are approximately 195 feet apart, meeting the local street intersection spacing requirements. No obstructions exceeding 3 feet in height at intersections are proposed with this application, therefore meeting the clear vision standards listed above. No adjustments to spacing standards are proposed with this application. No joint use accessways are proposed with this application, and therefore no joint access and maintenance easements are required. The above criteria are met to the extent they apply.

18.75 *Landscaping, Fences and Walls, Outdoor Lighting*

18.75.030 *Landscaping and screening.*

1. *General Landscape Standard. All portions of a lot not otherwise developed with buildings, accessory structures, vehicle maneuvering areas, or parking shall be landscaped as required by Table 18.45.040.5. All developments requiring site plan review, subdivisions, or partitions shall include a formal landscape plan as part of their application.*
2. *Minimum Landscape Area. All lots shall conform to the minimum landscape area standards of the applicable zoning district, as contained in Tables 18.45.040.4 and 18.45.040.5. The City Administrator, consistent with the purposes in HMC 18.75.010, may allow credit toward the minimum landscape area for existing vegetation that is retained in the development. The City Administrator may apply landscaping credits for features such as patios, large rocks, barked or mulched areas, decorative concrete, etc.*
3. *Plant Selection. A combination of deciduous and evergreen trees, shrubs, and ground covers shall be used for all planted areas, the selection of which shall be based on local climate, exposure, water availability, and drainage conditions, among other factors. When new vegetation is planted, soils shall be amended, and necessary irrigation shall be provided to allow for healthy plant growth. The selection of plants shall be based on all of the following standards and guidelines:*
 - a. *Use plants that are appropriate to the local climate, exposure, and water availability. The presence of utilities and drainage conditions shall also be considered. The City may rely on Oregon State University Extension Service bulletins or other expert sources in evaluating landscape plans. Plant species, size, and location shall be included on the landscape plan.*
 - b. *Plant species that do not require irrigation once established (naturalized) are preferred over species that require regular irrigation.*

- c. *Trees shall be healthy and disease free and not less than two-inch caliper for street trees and one and one-half-inch caliper for other trees at the time of planting (measured six inches above ground level). Trees to be planted under or near power lines shall be selected so as to not conflict with power lines at maturity. Street trees must be selected from the City's approved list.*
- d. *Shrubs shall be planted from five-gallon containers, minimum, where they are for required screens or buffers, and two-gallon containers minimum elsewhere.*
- e. *Shrubs shall be spaced in order to provide the intended screen or canopy cover within two years of planting.*
- f. *All landscape areas, whether required or not, that are not planted with trees and shrubs or covered with allowable nonplant material, shall have ground cover plants that are sized and spaced to achieve plant coverage of not less than 75 percent at maturity. The City Administrator may reduce this standard by one-half where a project proposal includes preserving a heritage tree.*
- g. *Bark dust, chips, aggregate, rocks, or other nonplant ground covers may be used, but shall cover not more than 40 percent of any landscape area.*
- h. *Where storm water retention or detention, or water quality treatment facilities are proposed, they shall be planted with water-tolerant species and may be counted toward meeting the landscaping requirement.*
- i. *Existing mature trees that can thrive in a developed area and that do not conflict with other provisions of this code shall be retained where specimens are in good health, have desirable aesthetic characteristics, and do not present a hazard.*
- j. *Evergreen plants shall be used where a sight-obscuring landscape screen is required.*
- k. *Deciduous trees should be used where summer shade and winter sunlight are desirable.*
- l. *Landscape plans shall provide for both temporary and permanent erosion control measures, which shall include plantings where cuts or fills, including berms, swales, storm water detention facilities, and similar grading, is proposed.*
- m. *When new vegetation is planted, soils shall be amended, and irrigation provided until the plants are naturalized and able to grow on their own.*

Applicant Response: A landscape plan addressing the above criteria has been included with this application. Please refer to the submitted plan to demonstrate compliance with the above criteria as this application proposes a subdivision.

- 4. *Historical Overlay District Streetscape Standard. Developers of projects within the City's historical district zone can meet the landscape area requirement of subsection (2) of this section, in part, by installing street trees in front of their projects. The City Administrator shall grant credit toward the landscape area requirement using a ratio of one-to-one, where one square foot of planted area (e.g., tree well or planter surface area) receives one square foot of credit.*

The City Administrator may grant additional landscape area credit by the same ratio where the developer widens the sidewalk, creates a plaza, adds street trees or lighting, or other civic space.

5. *Parking Lot Landscaping. All of the following standards shall be met for parking lots in excess of 5,000 square feet. If a development contains multiple parking lots, then the standards shall be evaluated separately for each parking lot.*
 - a. *A minimum of 10 percent of the total surface area of all parking areas, as measured around the perimeter of all parking spaces and maneuvering areas, shall be landscaped. At a minimum, one tree per 15 parking spaces on average shall be planted over and around the parking area.*
 - b. *All parking areas with more than 30 spaces shall provide irrigated landscape islands of at least one 48-square-foot island or larger for every 5,000 square feet of total parking surface area.*
 - c. *Wheel stops, curbs, bollards, or other physical barriers are required along the edges of all vehicle maneuvering areas to protect landscaping from being damaged by vehicles. Trees shall be planted at least two feet from any such barrier.*
 - d. *Trees planted in tree wells within sidewalks or other paved areas shall be installed with root barriers, consistent with applicable nursery standards.*
6. *Screening Requirements. Screening is required for outdoor storage areas, unenclosed uses, and parking lots in the C-1 and PUZ zones and may be required in other situations as determined by the City Administrator. Landscaping shall be provided pursuant to the standards of subsections (6)(a) through (c) of this section:*
 - a. *Outdoor Storage and Unenclosed Uses. All areas of a site containing or proposed to contain outdoor storage of goods, materials, equipment, and vehicles (other than required parking lots and service and delivery areas, per site design review), and areas containing junk, salvage materials, or similar contents, shall be screened from view from adjacent rights-of-way and residential uses by a sight-obscuring fence, wall, landscape screen, or combination of screening methods. See also HMC 18.75.040 for related fence and wall standards.*
 - b. *Parking Lots. The edges of parking lots shall be screened to minimize vehicle headlights shining into adjacent rights-of-way and residential yards. Parking lots abutting a sidewalk or walkway shall be screened using a low-growing hedge or low garden wall to a height of between three feet and four feet.*
 - c. *Other Uses Requiring Screening. The City Administrator may require screening in other situations as authorized by this code, including, but not limited to, outdoor storage areas, blank walls, accessory dwelling units, special uses pursuant to Chapter 18.55 HMC, and as mitigation where an applicant has requested an adjustment pursuant to Chapter 19.40 HMC.*
7. *Maintenance. All landscaping shall be maintained in good condition, or otherwise replaced by the property owner.*

Applicant Response: This application proposes residential development within the R-1 and R-2 zones. The subject property is not within a historic overlay district and therefore the streetscape standard does not apply to this application. As this application proposes single-family residential development. A parking lot exceeding 5,000 square feet is not included with this application and therefore the parking lot landscape standards do not apply to this application. The subject property is surrounded by residential zoning districts and this application does not include a proposal including unenclosed uses, large parking areas, or outdoor storage areas. A landscape plan including street trees has been submitted with this application. The above criteria do not apply.

18.75.040 *Fences and walls.*

1. *Purpose.* This section provides general development standards for fences, and walls that are not part of a building, such as screening walls and retaining walls.
2. *Applicability.* This section applies to all fences, and walls that are not part of a building, including modifications to existing fences and walls. This section supplements the development standards of Tables 18.45.040.4 and 18.45.040.5.
3. *Height.*
 - a. *Residential Zones.* Fences and freestanding walls (i.e., exclusive of building walls) for residential uses shall not exceed the following heights above grade, where grade is measured from the base of the subject fence or wall:
 - i. *Within front or street-side yard setback:* four feet if fence does not obstruct more than 50 percent visual clearance; three feet if sight is obscured more than 50 percent; except the following additional height is allowed:
 1. A fence may be constructed to a maximum height of seven feet where it is located on a street-side yard and is set back not less than three feet from the street-side property line behind a landscaped area.
 2. A fence may be constructed to a maximum height of six feet where the fence is of open chain link or other “see-through” composition that allows 90 percent light transmission.
 - ii. *Within an interior side or rear yard setback:* seven feet; except the fence or wall height, as applicable, shall not exceed the distance from the fence or wall line to the nearest primary structure on an adjacent property.
 - iii. A fence, landscaping, or both shall be required for all new, nondetached accessory dwelling units. Required fencing and/or landscaping shall be sufficient to maintain prior existing privacy with adjacent and developed residential uses.

Applicant Response: The applicant does not propose any walls on the residential lots, however there will be retaining walls within Tracts A and B for the required water quality facility. No freestanding walls are proposed with this application. Both Tracts are proposed to be fenced meeting the Public Works standards for water quality facility safety. No other fencing is proposed with this application; however, a good neighbor fence is conceptually

shown on the landscape plan. All future fencing on residential lots is proposed to be evaluated for compliance with the above standards prior to issuance of a building permit. No fences or walls are proposed in clear vision areas which would conflict with those standards.

- b. *Nonresidential Zones. Fences and freestanding walls (i.e., exclusive of building walls) for nonresidential uses shall not exceed the following height above grade, where grade is measured from the base of the subject fence or wall:*
 - i. *Within front or street-side yard setback: four feet if fence does not obstruct more than 50 percent visual clearance; three feet if sight is obscured more than 50 percent, except the following additional height is allowed for properties located within an industrial, public, or institutional zone:*
 - 1. *A fence or wall may be constructed to a maximum height of seven feet where the fence is set back behind the front or street-side property line behind a five-foot landscape buffer.*
 - 2. *A fence or wall may be constructed to a maximum height of eight feet where the fence or wall is set back behind the front or street-side property line behind an eight-foot landscape buffer.*
 - 3. *Where approved by the City Administrator, a fence constructed of open chain link or other "see-through" composition that allows 90 percent light transmission may reach a height of up to eight feet.*
 - ii. *Within an interior side or rear yard setback: eight feet; except the fence or wall height, as applicable, shall not exceed the distance from the fence or wall line to the nearest primary structure on an adjacent property.*
- c. *All Zones. Fences and walls shall comply with the vision clearance standards of HMC 18.70.030. Other provisions of this code, or the requirements of the roadway authority, may limit allowable height of a fence or wall below the height limits of this section.*

Applicant Response: The subject property is split zoned between the R-1 and R-2 zoning designation. With Both the R-1 and R-2 zones considered residential zones, the nonresidential zoning standards do not apply to this application. As addressed in the previous applicant finding, no fences or retaining walls are proposed in locations which would conflict with the clear vision standards. The above criteria are met to the extent they apply.

4. *Materials.*

- a. *Permitted fence and wall materials include weather-treated wood; untreated cedar and redwood; metal (e.g., chain link, wrought iron, and similar fences); bricks, stone, masonry block, formed-in-place concrete, or similar masonry; vinyl and composite (e.g., recycled) materials designed for use as fencing; and similar materials as determined by*

the City Administrator. In addition, evergreen hedges are considered screening walls for the purpose of this chapter, subject to site design review approval.

- b. Prohibited fence and wall materials include straw bales, tarps, barbed or razor wire (except in an industrial zone); scrap lumber, untreated wood (except cedar or redwood), corrugated metal, sheet metal, scrap materials; dead, diseased, or dying plants; and materials similar to those listed herein.*
- 5. Permitting. A permit is required to install a fence of seven feet or more in height, or a wall that is four feet or more in height. All other walls and fences require review and approval by the Public Works Director through a free fence permit. The City Administrator may require installation of walls or fences as a condition of approval for development, as provided by other code sections. A building permit may be required for some fences and walls, pursuant to applicable building codes.*
- 6. Maintenance. Fences and walls shall be maintained in good condition, or otherwise replaced by the property owner.*

Applicant Response: The fencing around the water quality facility is detailed on the landscape plan. No freestanding walls are proposed with this application. All fences on residential lots are proposed to be evaluated for compliance with above standards prior to issuance of a building permit. Residential fence details are shown on the submitted landscape plan. The applicant understands the maintenance requirements for walls and fences. The above criteria are met.

18.75.050 Outdoor lighting.

- 1. Purpose. This section contains regulations requiring adequate levels of outdoor lighting while minimizing negative impacts of light pollution.*
- 2. Applicability. All outdoor lighting shall comply with the standards of this section.*
- 3. Standards.*
 - a. Light poles, except as required by a roadway authority or public safety agency, shall not exceed a height of 20 feet. Pedestal or bollard-style lighting is the preferred method illuminating walkways. This limitation does not apply to flag poles, utility poles, and streetlights.*
 - b. Where a light standard is placed over a sidewalk or walkway, a minimum vertical clearance of eight feet shall be maintained.*
 - c. Outdoor lighting levels shall be subject to review and approval as part of the site design review, subdivisions, or a Type II commercial or industrial application. Lighting levels shall be sufficient to provide for pedestrian safety, property or business identification, and crime prevention. (See also the City of Harrisburg Sign Code, Chapter 18.90 HMC.)*
 - d. Except as provided for up-lighting of flags and permitted building-mounted signs, all outdoor light fixtures shall be directed downward, and have full cutoff and full shielding*

to preserve views of the night sky and to minimize excessive light spillover onto adjacent properties.

- e. Lighting shall be installed where it will not obstruct public ways, driveways, or walkways.*
 - f. Where a light standard is placed within a walkway, an unobstructed pedestrian through zone not less than 36 inches wide shall be maintained.*
 - g. Lighting subject to this section shall consist of materials approved for outdoor use and shall be installed according to the manufacturer's specifications.*
- 4. Permitting. A land use permit is not required to install or replace outdoor lighting. The City Administrator may require lighting as a condition of approval for some projects, pursuant to other code requirements.*
 - 5. Maintenance. For public health and safety, outdoor lighting shall be maintained in good condition, or otherwise replaced by the property owner.*

Applicant Response: All lighting associated with this project is for either street lighting or the residential lighting on each private home. The applicant proposes to be conditioned to provide a lighting plan for private residential lot lighting prior to issuance of a building permit if required. The applicant has submitted a lighting plan for all proposed streetlights to demonstrate compliance with applicable standards. The applicant does not propose to deviate from the standards listed above. The applicant understands the maintenance requirements associated with lighting and the potential for lighting to be a condition of approval.

18.80 Parking and Loading

18.80.030 Automobile parking.

- 1. Minimum Number of Off-Street Automobile Parking Spaces. Except as provided by this subsection, or as required for Americans with Disabilities Act compliance under subsection (6) of this section, off-street parking shall be provided pursuant to one of the following three standards:*
 - a. Standards in Table 18.80.030.1;*
 - b. A standard from Table 18.80.030.1 for a use that the City Administrator determines is similar to the proposed use; or*
 - c. Subsection (2) of this section, Exceptions and Reductions to Off-Street Parking, which includes a parking demand analysis option.*
- 2. Exceptions and Reductions to Off-Street Parking.*
 - a. There is no minimum number of required automobile parking spaces for uses within the downtown historic district zone.*

- b. *The applicant may propose a parking standard that is different than the standard under subsections (1)(a) and (b) of this section for review and action by the City Administrator through a Type II procedure. The applicant's proposal shall consist of a written request and a parking analysis, prepared by a qualified professional. The parking analysis, at a minimum, shall assess the average current or anticipated parking demand and available supply for existing and proposed uses on the subject site; opportunities for shared parking with other uses in the vicinity; existing public parking in the vicinity; transportation options existing or planned near the site, such as frequent bus service, carpools, or private shuttles; and other relevant factors.*

Applicant Response: The applicant proposes a mix of single-family detached and attached housing units, dependent on the zoning designation. In the R-2 zone on the west side of the site, the applicant proposes attached single-family homes which each home has a garage and driveway for off-street parking. In the R-1 zone on the east side of the site, the applicant proposes single-family detached homes with a garage and driveway for off-street parking. With driveway and garage parking, the applicant exceeds the minimum parking standards per unit in both zones. The applicant does not propose any exceptions or deviations to the required parking standards. The subject property is not located in the downtown historic district zone. The above criteria are met as they apply to this application.

- c. *The City Planning Commission through a Type III procedure may reduce the off-street parking standards of Table 18.80.030.1 for sites with one or more of the following features:*
- i. *Site has a bus stop with frequent transit service located adjacent to it, and the site's frontage is improved with a bus stop waiting shelter, consistent with the standards of the applicable transit service provider: allow up to a 20 percent reduction to the standard number of automobile parking spaces;*
 - ii. *Site has dedicated parking spaces for carpool or vanpool vehicles: allow up to a 10 percent reduction to the standard number of automobile parking spaces;*
 - iii. *Site has dedicated parking spaces for bicycles, motorcycles, scooters, or electric carts: allow reductions to the standard dimensions for parking spaces;*
 - iv. *Site is located in the C-1 zone bounded by 3rd Street, Monroe, Kesling and 1st Street.*
 - v. *Site has more than the minimum number of required bicycle parking spaces: Allow up to a five to 10 percent reduction to the number of automobile parking spaces.*
- d. *Met through the provision of shared parking, pursuant to subsection (3) of this section.*
- e. *The City Administrator through a Type II procedure may reduce the off-street parking standards of Table 18.80.030.1 by one parking space for every two on-street parking*

spaces located adjacent to the subject site, provided the parking spaces meet the dimensional standards of subsection (4) of this section.

- f. The City Administrator or Planning Commission may authorize the payment of a fee to the City for future development or management of public parking areas to offset up to 50 percent of the requirements of Table 18.80.030.1.*

Applicant Response: The applicant does not propose a reduction in off-street parking. The subject property is not located adjacent to a bus stop with frequent transit service, nor is the site within the C-1 zone boundary. This application does not include dedicated parking spaces for carpool/vanpool vehicles, bicycles, motorcycles, scooters, or electric carts. All off-street parking is proposed to be located on private property, including bike and scooter parking. The applicant does not propose any shared parking areas. The above criteria do not apply.

- 3. Shared Parking. Required parking facilities for two or more uses, structures, or parcels of land may be satisfied by the same parking facilities used jointly, to the extent that the owners or operators show that the need for parking facilities does not materially overlap. Shared parking requests shall be subject to review and approval through a Type II process.*
- 4. Parking Stall Design and Minimum Dimensions. Where a new off-street parking area is proposed, or an existing off-street parking area is proposed for expansion, the entire parking area shall be improved in conformance with this code. At a minimum the parking spaces and drive aisles shall be paved with asphalt, concrete, or other City-approved materials, provided the Americans with Disabilities Act requirements are met, and shall conform to the minimum dimensions in Table 18.80.030.5 and the figures below. All off-street parking areas shall contain wheel stops, perimeter curbing, bollards, or other edging as required to prevent vehicles from damaging buildings or encroaching into walkways, landscapes, or the public right-of-way. Parking areas shall also provide for surface water management, pursuant to HMC 18.85.050.*

Applicant Response: All off-street parking proposed with this project is to be on private property in a driveway or garage. The newly proposed public right-of-way (streets) are detailed on sheet 5 for a typical section. As shown on sheet 5 the right-of-way is large enough to accommodate on-street parking. No surface parking or parking lots are proposed with this application, but all driveways are shown to be paved meeting the standard above. The impervious surface associated with the driveway development on each lot has been accommodated in the stormwater management design and addressed in the submitted stormwater and drainage report. To the extent they apply, the above criteria are met.

**See also Chapter 18.65 HMC, Building Orientation and Design, for parking location requirements for some types of development; Chapter 18.70 HMC, Access and Circulation, for driveway standards; and Chapter 18.75 HMC for requirements related to landscaping, screening, fences, walls, and outdoor lighting.*

- 5. Adjustments to Parking Area Dimensions. The dimensions in Table 18.80.030.5 are minimum standards. The City Administrator, through a Type II procedure, may adjust the dimensions based*

on evidence that a particular use will require more or less maneuvering area, where the criteria in Section 19.40.030(2) are met. For example, the City Administrator may approve an adjustment where an attendant will be present to move vehicles, as with valet parking. In such cases, a form of guarantee must be filed with the City ensuring that an attendant will always be present when the lot is in operation.

6. *Americans with Disabilities Act (ADA). Parking shall be provided consistent with ADA requirements, including, but not limited to, the minimum number of spaces for automobiles, van-accessible spaces, location of spaces relative to building entrances, accessible routes between parking areas and building entrances, identification signs, lighting, and other design and construction requirements.*
7. *Electric Charging Stations. Charging stations for electric vehicles are allowed as an accessory use to parking areas developed in conformance with this code, provided the charging station complies with applicable building codes and any applicable State or Federal requirements. Charging stations are considered accessory to a permitted use and are not considered a quick vehicle service use where such parking comprises less than 10 percent of all on-site parking. Electric charging stations shall count toward meeting parking requirements.*

Applicant Response: The applicant does not propose or anticipate the need for any adjustments to parking area dimensions. All off-street parking is shown to be within driveway areas and/or garages. Driveways are all large enough to meet the standards shown in HMC Table 18.80.030.5. Driveway parking areas are close enough to proposed dwellings that ADA requirements are met. No electric vehicle parking areas are proposed with this application. Individual property owners will assess their EV parking needs on a case by case basis. As this is a residential project within residential zoning designations, no large parking areas or charging stations are proposed with this application. To the extent they apply, the above criteria are met.

18.80.040 Loading areas.

1. *Purpose. The purpose of this section is to provide adequate loading areas for commercial and industrial uses that do not interfere with the operation of adjacent streets.*
2. *Applicability. This section applies to uses that are expected to have service or delivery truck visits as part of their normal operations. It applies only to uses visited by trucks with a 40-foot or longer wheelbase, at a frequency of one or more vehicles per week. The City Planning Commission shall determine through site design review the number, size, location, and design, access and circulation and other requirements of required loading areas, if any.*

Applicant Response: This application proposes residential development, and it is not expected or necessary to provide loading areas for delivery or service trucks. It is anticipated that delivery or service trucks could utilize the provided on- or off-street parking areas.

18.85 Public Facilities

18.85.020 Transportation standards.

1. *General Requirements.*

- a. *Except as provided by subsection (1)(e) of this section, existing substandard streets and planned streets within or abutting a proposed development shall be improved in accordance with the standards of this chapter as a condition of development approval.*
- b. *All street improvements, including the extension or widening of existing streets and public access ways, shall conform to this section, and shall be constructed consistent with the City of Harrisburg Engineering Design Standards Manual.*
- c. *All new publicly owned streets shall be contained within a public right-of-way. Public pedestrian access ways may be contained within a right-of-way or a public access easement, as required by the City Engineer.*
- d. *The purpose of this subsection is to coordinate the review of land use applications with roadway authorities and to implement Section 660-012-0045(2)(e) of the State Transportation Planning Rule, which requires the City to adopt a process to apply conditions to development proposals in order to minimize impacts and protect transportation facilities.*
 - i. *When a Traffic Impact Analysis Is Required. The City or other road authority with jurisdiction may require a traffic impact analysis (TIA) as part of an application for development, a change in use, or a change in access. A TIA may be required by the City Administrator where a change of use or a development would involve one or more of the following:*
 1. *A change in zoning or a plan amendment designation, as may be required to determine compliance with OAR 660-012-0060, Transportation Planning Rule;*
 2. *Operational or safety concerns documented in writing by a road authority;*
 3. *An increase in site traffic volume generation by 300 average daily trips (ADT) or more;*
 4. *An increase in peak hour volume of a particular movement to and from a street or highway by 20 percent or more;*
 5. *An increase in the use of adjacent streets by vehicles exceeding the 20,000-pound gross vehicle weights by 10 vehicles or more per day;*
 6. *Existing or proposed approaches or access connections that do not meet minimum spacing or sight distance requirements or are located where vehicles entering or leaving the property are restricted, or such vehicles are likely to queue or hesitate at an approach or access connection, creating a safety hazard;*
 7. *A change in internal traffic patterns that may cause safety concerns; or*

8. *A TIA required by ODOT pursuant to OAR 734-051.*
- ii. *Traffic Impact Analysis Preparation. A professional engineer registered by the State of Oregon, in accordance with the requirements of the road authority, shall prepare the traffic impact analysis.*
- e. *The City Engineer or authorized representative may waive or allow deferral of standard street improvements, including sidewalk, roadway, bicycle lane, undergrounding of utilities, and landscaping, as applicable, where one or more of the following conditions in subsections (1)(e)(1) through (4) of this section is met. Where the City Engineer or authorized representative agrees to defer a street improvement, it shall do so only where the property owner agrees not to remonstrate against the formation of a local improvement district in the future.*
- i. *The standard improvement conflicts with an adopted capital improvement plan.*
 - ii. *The standard improvement would create a safety hazard.*
 - iii. *It is unlikely due to the developed condition of adjacent property that the subject improvement would be extended in the foreseeable future, and the improvement under consideration does not by itself significantly improve transportation operations or safety.*
 - iv. *The improvement under consideration is part of an approved minor partition in the R-1 or R-2 zone and the proposed partition does not create any new street.*
 - v. *The City Administrator may accept development of a privately owned street in lieu of a standard public street improvement where the private street is designed to serve pedestrian, bicycle, and local automobile traffic and is not contrary to the City's transportation systems plan or other development code standard.*

Applicant Response: A memo from the project Traffic Engineer has been submitted to address the above criteria. This submittal includes a trip generation count as well as an intersection safety analysis. A full traffic impact analysis can be provided as conditioned upon approval. Street/frontage improvements are proposed along Sommerville Loop which include a sidewalk, pavement extension, and planter strip. These same improvements are shown for all new right-of-way associated with this project. Sidewalks are all within the public right-of-way as shown on the submitted plans and no additional pedestrian accessways are proposed with this application. No public improvements are proposed to be differed. The above criteria are met.

2. *Street Location, Alignment, Extension, and Grades.*

- a. *All new streets, to the extent practicable, shall connect to the existing street network and allow for the continuation of an interconnected street network, consistent with adopted public facility plans and pursuant to subsection (4) of this section, Transportation Connectivity and Future Street Plans.*

- b. *Specific street locations and alignments shall be determined in relation to existing and planned streets, topographic conditions, public convenience and safety, and in appropriate relation to the proposed use of the land to be served by such streets.*
- c. *Grades of streets shall conform as closely as practicable to the original (predevelopment) topography to minimize grading.*
- d. *New streets and street extensions exceeding a grade of 15 percent over a distance more than 200 feet, to the extent practicable, shall be avoided. Where such grades are unavoidable, the Planning Commission may approve an exception to the 200-foot standard and require mitigation, such as a secondary access for the subdivision, installation of fire protection sprinkler systems in dwellings, or other mitigation to protect public health and safety.*
- e. *Where the locations of planned streets are shown on a local street network plan, the development shall implement the street(s) as shown on the plan.*
- f. *Where required local street connections are not shown on an adopted City street plan, or the adopted street plan does not designate future streets with sufficient specificity, the development shall provide for the reasonable continuation and connection of existing streets to adjacent developable properties, conforming to the standards of this code and approval of the Public Works Director and/or City Engineer.*
- g. *Existing street-ends that abut a proposed development site shall be extended within the development, unless prevented by environmental or topographical constraints, existing development patterns, or compliance with other standards in this code. In such situations, the applicant must provide evidence that the environmental or topographic constraint precludes reasonable street connection.*
- h. *Proposed streets and any street extensions required pursuant to this section shall be located, designed, and constructed to allow continuity in street alignments and to facilitate future development of vacant or redevelopable lands.*

Applicant Response: The applicant proposes to extend S. 9th Street through the subject property to intersect with Sommerville Loop. The applicant also proposes a new local street (Santiam Street) which intersects Sommerville Loop and continues to an intersection with S. 9th Street. This circulation avoids dead ends and cul-de-sacs. Intersection alignment is at 90 degrees to the greatest extent possible. The subject site has existing wetlands proposed to be filled. The wetlands are shown to be filled which will raise the subject site. Santiam Street and S. 9th Street, as well as the widened section of Sommerville Loop will follow existing topography to the greatest extent possible. Street grades are shown to be approximately 0.5% slope. To meet the existing grade of the Sommerville Loop right-of-way the intersections of S. 9th Street/Sommerville Loop and Santiam Street/Sommerville Loop are shown to be approximately 2.5% due to lifting the property slightly. No street in or adjacent to this project exceeds 15% grade for any distance. S. 9th Street is the only existing right-of-way that abuts the subject property which is shown to be extended through the site. The above criteria are met.

3. *Rights-of-Way and Street Section Widths. The standards contained in Table 18.85.020.3 are intended to provide for streets of suitable location, width, and design to accommodate expected vehicle, pedestrian, and bicycle traffic; to afford satisfactory access to law enforcement, fire protection, sanitation, and road maintenance equipment; and to provide a convenient and accessible network of streets, avoiding undue hardships to adjoining properties. Where a range of street width or improvement options is indicated, the City Administrator or Planning Commission shall determine requirements based on the advice of a qualified professional and all of the following factors:*
- a. *Street classification and requirements of the roadway authority, if different than the City's street classifications and requirements;*
 - b. *Existing and projected street operations relative to applicable standards;*
 - c. *Safety of motorists, pedestrians, bicyclists, and transit users, including consideration of accident history;*
 - d. *Convenience and comfort for pedestrians, bicyclists, and transit users;*
 - e. *Provision of on-street parking;*
 - f. *Placement of utilities;*
 - g. *Street lighting;*
 - h. *Slope stability, erosion control, and minimizing cuts and fills;*
 - i. *Surface water management and storm drainage requirements;*
 - j. *Emergency vehicles or apparatus and emergency access, including evacuation needs;*
 - k. *Transitions between varying street widths (i.e., existing streets and new streets); and*
 - l. *Other factors related to public health, safety, and welfare.*

** All streets shall be improved in accordance with the construction standards and specifications of the applicable roadway authority, including requirements for pavement, curbs, drainage, striping, and traffic control devices. Where a parking strip is provided it shall consist of a planter/utility strip between the sidewalk and the curb or roadway. Where a swale is provided, it shall either be placed between the roadway and sidewalk or behind the sidewalk on private property, subject to City approval and recording of required public drainage way and drainage way maintenance easements. Streets with parking on one side only should be avoided. When used, they must be posted NO PARKING.*

The schematic below is representative of a typical street section in relation to a transit conflict.

Applicant Response: Typical street sections for all right-of-way associated with his project are found within the submitted preliminary engineering plans. See sheets 5 for applicable details and demonstrated compliance with the above standards. The applicant has included a memo from the project traffic engineer speaking to intersection safety and a trip

generation count. The above criteria are met.

4. *Transportation Connectivity and Future Street Plans. The following standards apply to the creation of new streets:*
- a. *Intersections. Streets shall be located and designed to intersect as nearly as possible to a right angle. Street intersections shall have a minimum intersection angle of 75 degrees. All legs of an intersection shall meet the above standard for at least 100 feet back from the point of intersection. No more than two streets shall intersect, i.e., creating a four-legged intersection, at any one point. Street jogs and intersection offsets of less than 125 feet are not permitted. Intersections shall be designed to facilitate storm water runoff into City-approved storm water facilities.*
 - b. *Access Ways. The Planning Commission, in approving a land use application with conditions, may require a developer to provide an access way where the creation of a cul-de-sac or dead-end street is unavoidable, and the access way connects the end of the street to another street, a park, or a public access way. Access ways shall be contained within a public right-of-way or public access easement, as required by the City.*
 - c. *Connectivity to Abutting Lands. The street system of a proposed subdivision shall be designed to connect to existing, proposed, and planned streets adjacent to the subdivision. Wherever a proposed development abuts unplatted land or a future development phase of an existing development, street stubs shall be provided to allow access to future abutting subdivisions and to logically extend the street system into the surrounding area. Street ends shall contain turnarounds constructed to Uniform Fire Code standards, as the City deems applicable, and shall be designed to facilitate future extension in terms of grading, width, and temporary barricades.*
 - d. *Street Connectivity and Formation of Blocks. In order to promote efficient vehicular and pedestrian circulation throughout the City, subdivisions and site developments shall be served by an interconnected street network, pursuant to the standards in subsections (4)(d)(1) through (4) of this section. Distances are measured from the edge of street rights-of-way. Where a street connection cannot be made due to physical site constraints, approach spacing requirements, access management requirements, or similar restrictions, where practicable, a pedestrian access way connection shall be provided pursuant to Chapter 18.70 HMC.*
 - i. *Residential zones: minimum of 200-foot block length and maximum of 750-foot length; maximum 2,000-foot block perimeter;*
 - ii. *Downtown/Main Street zone: minimum of 200-foot length and maximum of 400-foot length; maximum 1,200-foot perimeter;*
 - iii. *General commercial zone and light industrial zone: minimum of 100-foot length*
 - iv. *Not applicable to general industrial zone.*

Applicant Response: This application includes the proposal of three new intersections.

Both streets within this community intersect with Sommerville Loop in two locations at either end of the project area. Santiam Street and S. 9th Street both intersect Sommerville Loop at right angles to the greatest extent possible. Santiam Street intersects with S. 9th Street in the southeast portion of the site and that intersection is at a right angle to the greatest extent possible. Only two streets intersect per intersection to comply with the above criteria. The applicant does not propose any dead-ends or cul-de-sacs and therefore does not anticipate the need for any accessways. S. 9th Street is stubbed to the southern boundary of the subject site and the applicant proposes to extend it north to intersect with Sommerville Loop. Due to the proposed circulation pattern, no fire turnarounds are proposed with this application. The longest block length proposed with this application is approximately 741 feet between Santiam Street and S. 9th Street along Sommerville Loop. On S. 9th Street, the block length is shown to be roughly 225 feet and the subject property is in residential zones. The above criteria are met.

- e. *A Cul-De-Sac Street. Where the City determines that a cul-de-sac is allowed, all of the following standards shall be met:*
- i. *The cul-de-sac shall not exceed a length of 400 feet, except where the Planning Commission through a Type III procedure determines that topographic or other physical constraints of the site require a longer cul-de-sac. The length of the cul-de-sac shall be measured along the centerline of the roadway from the near side of the intersecting street to the farthest point of the cul-de-sac.*
 - ii. *The cul-de-sac shall terminate with a circular or hammerhead turnaround meeting the Uniform Fire Code and the standards of Table 18.85.020.3.*
 - iii. *The cul-de-sac shall provide, or not preclude the opportunity to later install, a pedestrian and bicycle access way between it and adjacent developable lands. Such access ways shall conform as specified in this chapter.*

Applicant Response: No cul-de-sacs are proposed with this project and therefore the above criteria do not apply.

5. *Engineering Design Standards. Street design shall conform to the standards of the applicable roadway authority; for City streets that is the Engineering/Public Works Design Standards Manual. Where a conflict occurs between this code and the manual, the provisions of the Engineering/Public Works Design Manual shall govern.*
6. *Fire Code Standards. Where fire code standards conflict with City standards, the City shall consult with the Fire Marshal in determining appropriate requirements. The City shall have the final determination regarding applicable standards.*
7. *Substandard Existing Right-of-Way. Where an existing right-of-way adjacent to a proposed development is less than the standard width, the Planning Commission may require the dedication of additional rights-of-way at the time of subdivision, partition, or site plan review, to mitigate the impacts of development pursuant to the standards in Table 18.85.020.3.*

8. *Traffic Calming. The City may require the installation of traffic calming features to mitigate the impacts of development and slow traffic in neighborhoods or commercial areas with high pedestrian traffic.*
9. *Sidewalks, Planter Strips, and Bicycle Lanes. Except where the City Administrator grants a deferral of public improvements, pursuant to Chapter 19.15 or 19.20 HMC, sidewalks, planter strips, and bicycle lanes shall be installed concurrent with development or widening of new streets, pursuant to the requirements of this chapter. Maintenance of sidewalks and planter strips in the right-of-way is the continuing obligation of the adjacent property owner.*
10. *Streets Adjacent to Railroad Right-of-Way. When a transportation improvement is proposed within 300 feet of a railroad crossing, or a modification is proposed to an existing railroad crossing, the Oregon Department of Transportation and the rail service provider shall be notified and City design standards required.*
11. *Street Names. No new street name shall be used which will duplicate or be confused with the names of existing streets in the City of Harrisburg or vicinity.*
12. *Survey Monuments. Upon completion of a street improvement and prior to acceptance by the City, it shall be the responsibility of the developer's registered professional land surveyor to provide certification to the City that all boundary and interior monuments have been reestablished and protected.*
13. *Street Signs. The City shall install all signs for traffic control and street names, which shall conform to existing City design standards and the MUTCD. The cost of signs required for new development shall be the responsibility of the developer. Street name signs shall be installed at all street intersections. Stop signs and other signs may be required. All required signs must be installed and paid for prior to the issuance of a CO.*
14. *Streetlight Standards. Streetlights shall be relocated or new lights installed, as applicable, with street improvement projects. Streetlights shall conform to City standards, or the requirements of the roadway authority, if different than the City.*
15. *Mailboxes. Mailboxes shall conform to the requirements of the United States Postal Service and the State of Oregon Structural Specialty Code.*
16. *Street Cross-Sections. The final lift of pavement shall be placed on all new constructed public roadways prior to final City acceptance of the roadway unless otherwise approved by the Planning Commission.*

Applicant Response: As shown on the submitted preliminary engineering plans, the street design conforms with applicable standards. Hydrants are shown on the site plan to demonstrate compliance with fire code standards. Sommerville Loop is shown to be improved narrower than City standards and the applicant has proposed widening the southern portion of the right-of-way to include additional paving and frontage improvements. The applicant can install traffic calming measures if conditioned by the Planning Commission upon approval. Sidewalks and planter strips are shown throughout the project site and the Sommerville Loop improvements increase the width of the right-of-

way to accommodate a bike lane if the City determines it is needed. The striping plan for a bike lane is proposed to be evaluated prior to issuance of the final engineering civil plan approval. Right-of-way typical sections are included with the preliminary engineering plans. The project site does not abut a railroad right-of-way. Street names shown on preliminary plans are conceptual and subject to change to meet the street naming standards as conditioned upon approval. The applicant and project surveyor understand the requirements for monumentation. The applicant understands their responsibilities relating street signs, mailbox placement and final pavement. A lighting plan has been included with this application to demonstrate compliance with streetlighting standards. The above standards are met or can be met with a reasonable condition of approval.

18.85.030 Public use areas.

1. Dedication of Public Use Areas.

- a. Where a proposed park, playground, or other public use shown in a plan adopted by the City is located in whole or in part in a subdivision or the PUZ zone, the City may require the dedication or reservation of this area on the final plat for the subdivision or major plat to mitigate development impacts, provided the open space dedication or reservation is roughly proportionate to the impacts of development on the City park system.*
- b. The City may purchase or accept voluntary dedication or reservation of areas, either within or near the proposed subdivision, that are suitable for the development of parks and other public uses; however, the City is under no obligation to accept such areas offered for dedication or sale.*

Applicant Response: No playgrounds or parks are proposed with this application. Two tracts are shown on the submitted plans (Tract A and Tract B) both are set aside for the water quality facility which manages the surface water and the new impervious area. The above criteria are met.

18.85.040 Sanitary sewer and water service improvements.

- 1. Sewers and Water Mains Required. All new development requiring land use approval is required to connect to City water and sanitary sewer systems. Sanitary sewer and water system improvements shall be installed to serve each new development and to connect developments to existing mains in accordance with the adopted facility master plans and applicable engineering/public works design standards. Where streets are required to be stubbed to the edge of the subdivision, sewer and water system improvements and other utilities shall also be stubbed with the streets, except as approved by the City Engineer where alternate alignment(s) are provided consistent with the adopted public facility master plan.*
- 2. Sewer and Water Plan Approval. Development permits for sewer and water improvements shall not be issued until the Public Works Director and/or City Engineer has approved all sanitary sewer and water plans in conformance with City standards and State regulatory authority, if needed.*

3. *Over-Sizing. The City may require as a condition of development approval that sewer and water lines serving new development be sized to accommodate future development within the area as projected by the applicable facility master plans. In these instances, the City may authorize cost-recovery or cost-sharing methods as provided under State law.*
4. *Inadequate Facilities. Development permits may be restricted or rationed by the Planning Commission where a deficiency exists in the existing water or sewer system that cannot be rectified by the development and which, if not rectified, will result in a threat to public health or safety, surcharging of existing mains, or violations of State or Federal standards pertaining to operation of domestic water and sewerage treatment systems. The City Administrator may require water booster pumps, sanitary sewer lift stations, and other critical facilities be installed with backup power.*

Applicant Response: A composite utility plan was included with this application submittal. See sheet 7 to demonstrate compliance with the above criteria.

18.85.050 Storm drainage and surface water management facilities.

1. *General Provisions. The City shall issue a development permit only where adequate provisions for storm water runoff have been made in conformance with a 25-year storm plan. All applications for developments that increase impervious surface must submit a specific storm water plan with their application unless waived by the City Engineer.*
2. *Accommodation of Upstream Drainage. Culverts and other drainage facilities shall be large enough to accommodate existing and potential future runoff from the entire upstream drainage area, whether inside or outside the development. Such facilities shall be subject to review and approval by the City Engineer.*
3. *Effect on Downstream Drainage. Where it is anticipated by the City Engineer that the additional runoff resulting from the development will overload an existing drainage facility, the City shall withhold approval of the development until provisions have been made for improvement of the potential condition or until provisions have been made for retention of additional runoff caused by the development in accordance with City standards.*
4. *Over-Sizing. The City may require as a condition of development approval that sewer, water, or storm drainage systems serving new development be sized to accommodate future development within the area as projected by the applicable facility master plan. In these instances, the City may authorize cost-recovery or cost-sharing methods as provided under State law.*
5. *Existing Watercourse. Where a proposed development is traversed by a watercourse, drainage way, swale, channel, or stream, there shall be provided a storm water easement or drainage right-of-way conforming substantially with the lines of such watercourse and such further width as will be adequate for conveyance and maintenance to protect the public health and safety. All applications for site plan review, subdivision, and partitions must submit a specific storm water plan with their application unless waived by the City Engineer.*

Applicant Response: A stormwater and drainage management plan has been included with this application to demonstrate compliance with the above standards. See sheet 8 for water

quality facility details.*18.85.060 Utilities.*

The following standards apply to new development where extension of electric power, natural gas or communication lines is required:

- 1. General Provision. The developer of a property is responsible for coordinating the development plan with the applicable utility providers and paying for the extension and installation of utilities not otherwise available to the subject property.*
- 2. Underground Utilities.*
 - a. General Requirement. The requirements of the utility service provider shall be met. All utility lines in new subdivisions, including, but not limited to, those required for electric, communication, lighting, and related facilities, shall be placed underground, except where the City Administrator or Planning Commission determines that placing utilities underground would adversely impact adjacent land uses. The City Administrator or Planning Commission may require screening and buffering of aboveground facilities to protect the public health, safety, or welfare.*
 - b. Subdivisions and Partitions. In order to facilitate underground placement of utilities, the following additional standards apply to all new subdivisions:*
 - i. The developer shall make all necessary arrangements with the serving utility to provide the underground services. Care shall be taken to ensure that no aboveground equipment obstructs vision clearance areas for vehicular traffic, per Chapter 18.70 HMC, Access and Circulation.*
 - ii. The City Engineer reserves the right to approve the location of all surface-mounted facilities.*
 - iii. All underground utilities installed in streets must be constructed and approved by the applicable utility provider prior to the surfacing of the streets.*
 - iv. Stubs for service connections shall be long enough to avoid disturbing the street improvements when service connections are made.*
- 3. Exception to Undergrounding Requirement. The City or Planning Commission may grant exceptions to the undergrounding standard where existing physical constraints, such as geologic conditions, streams, or existing development conditions make underground placement impractical.*

Applicant Response: A composite utility plan was included with this application submittal. See sheet 7 to demonstrate compliance with the above criteria. All new utilities are proposed to be installed underground. The applicant understands that this application could be conditioned to place existing utilities adjacent to the site underground. The above criteria is met or can be met with a reasonable condition of approval.

18.85.070 Easements.

1. *Provision. The developer shall coordinate with the City and applicable utility providers in meeting the needs of each utility franchise for the provision and dedication of utility easements necessary to provide full services to the development.*
2. *Standards. Utility easements shall conform to the requirements of the utility service provider. All other easements shall conform to the City of Harrisburg engineering design standards/public works design standards.*
3. *Recordation. All easements for sewers, storm drainage and water quality facilities, water mains, electric lines, natural gas lines, or other utilities shall be recorded and referenced on a survey or final plat, as applicable. See Chapter 19.15 HMC, Site Design Review, and Chapter 19.20 HMC, Land Divisions and Property Line Adjustments.*

Applicant Response: Easements are shown on the tentative plat and site plan (see sheets 3 & 4) to demonstrate compliance with the above criteria.

18.85.080 Construction plan approval.

No development, including sanitary sewers, water, streets, utilities, parking areas, buildings, or other development, shall be undertaken without plans having been approved by the City of Harrisburg, permit fees paid, and permits issued. Permit fees are required to defray the cost and expenses incurred by the City for construction and other services in connection with the improvement. Permit fees are as set by City Council resolution.

Applicant Response: The applicant understands and acknowledges the requirements listed above.

18.85.090 Facility installation.

1. *Conformance Required. Improvements installed by the developer, either as a requirement of these regulations or at the developer's option, shall conform to the requirements of this chapter, approved construction plans, and to improvement standards and specifications adopted by the City.*
2. *Adopted Installation Standards. The City of Harrisburg has adopted various engineering/public works design standards for public improvements and private utility installation within the public right-of-way. All adapted engineering/public works design standards shall be met unless one or more partial waivers are granted by the City Engineer and City Administrator.*
3. *Commencement. Work in a public right-of-way shall not begin until all applicable agency permits have been approved and issued.*
4. *Resumption. If work is discontinued for more than six months, it shall not be resumed until the Public Works Director and/or City Engineer grants written approval for the recommencement of work or a hiatus of more than six months.*

5. *City Inspection. Improvements shall be constructed under the inspection of the City Engineer or Public Works Director. The City Engineer or Public Works Director may approve minor changes in typical sections and details if unusual conditions arising during construction warrant such changes in the public interest, except those substantive changes to the approved design shall be subject to review under Chapter 19.30 HMC, Modifications to Approved Plans and Conditions of Approval. (Any survey monuments that are disturbed before all improvements are completed by the developer or subdivider shall be replaced prior to final acceptance of the improvements.) Any new or disturbed monuments must be replaced by a certified land surveyor.*
6. *Engineer's Certification and As-Built Plans. A registered civil engineer shall provide written certification in a form required by the City that all improvements, workmanship, and materials are in accordance with current and standard engineering and construction practices, conform to approved plans and conditions of approval, and are of high grade, prior to City's acceptance of the public improvements, or any portion thereof, for operation and maintenance. The developer's engineer shall also provide two sets of "as-built" plans for permanent filing with the City. If required by the City, the developer or subdivider shall provide a warranty bond pursuant to HMC 18.85.100.*

Applicant Response: At this stage in the application process, the applicant is seeking land use approval for a new subdivision. Compliance with the above criteria is proposed to be demonstrated with the submittal of the final civil engineering plans. The above criteria can be met.

18.85.100 Performance guarantee and warranty.

1. *Performance Guarantee Required. The City at its discretion may approve a final plat or building permit when it determines that at least 50 percent of the public improvements required for the site development or land division, or phase thereof, are complete and the applicant has posted an acceptable assurance of performance bond for the balance of said improvements.*
2. *Determination of Sum. The assurance of performance bond shall be for a sum determined by the City Engineer as required to cover the cost of the improvements and repairs, including related engineering and incidental expenses, plus reasonable inflationary costs. The assurance bond shall not be less than 110 percent of the estimated improvement costs.*
3. *Itemized Improvement Estimate. The applicant shall furnish to the City an itemized improvement estimate, certified by a registered civil engineer, to assist the City in calculating the amount of the performance assurance.*
4. *Development Agreement. A written agreement between the City and applicant shall be signed and recorded. The agreement may include a provision for the construction of the improvements in stages and for the extension of time under specific conditions. The agreement shall contain all of the following:*
 - a. *The period within which all required improvements and repairs shall be completed;*

- b. *A provision that if work is not completed within the period specified, the City may complete the work and recover the full cost and expenses from the applicant directly or an applicant-provided bond.*
 - c. *The required improvement fees and deposits.*
5. *When Applicant Fails to Perform. In the event the applicant fails to carry out all provisions of the agreement and the City has unreimbursed costs or expenses resulting from such failure, the City shall call on the bond, cash deposit, or letter of credit for reimbursement or take other appropriate action to recover all unreimbursed costs.*
 6. *Termination of Performance Guarantee. The applicant shall not cause termination, nor allow expiration, of the guarantee/bond without first securing written authorization from the City.*
 7. *Warranty Bond. A warranty bond good for two years is required on all public improvements and landscaping when installed in the public right-of-way. The warranty bond shall equal 15 percent of the total cost of improvements and begin upon acceptance of said improvements by the City.*

Applicant Response: The applicant understands the requirements for bonding and financial guarantees.

19.20.040 Lot size averaging, flag lots, and infill development.

1. *Lot Size Averaging Subdivisions. To allow flexibility in subdivision design and to address physical constraints, such as topography, existing development, significant trees, and other natural and built features, the approval body may grant a 20 percent modification to the lot area and/or lot dimension (width/depth) standards in Chapter 18.45 HMC; provided, that the overall density of the subdivision does not exceed the allowable density of the district. The City Planning Commission may require screening, buffering, or other transitions in site design where substandard lots are proposed to abut standard- or larger-sized lots.*

Applicant Response: The applicant is utilizing this code provision to address lot width on proposed lots 48 and 49. As shown on the submitted site plan, the lot widths at the front property line (abutting public right-of-way) are proposed to be 28 feet. However, at the building setback line, both lots exceed the minimum standard of 35 foot wide lots. The minimum lot width in the R-2 zone based on the proposed code revisions provided to the applicant, is 35 feet. A 20% modification to the minimum standard is 28 feet and therefore the applicant complies with the applicable standards.

The subject property has existing wetlands and stormwater issues in large rain events. The applicant proposes to fill the existing wetlands, following all local, state, and federal agency requirements. Additionally, the applicant proposes to mitigate the current stormwater issues by diverting existing stormwater into Tracts A and B as shown on the submitted plans. Currently there is a drainage ditch along Sommerville Loop and the back side which collects stormwater from upstream, funnels it through the subject site, collects in a ditch along the western property line, and then downstream to the west. The quantity of the current stormwater requires a larger water quality facility and is considered a built feature. Additionally, locations of Tracts A and B were chosen due to the existing topography and lot geometry requirements of the HMC. This proposed adjustment does

not impact the overall density of the site in either zone.

2. *Flag Lots.* Flag lots may be created only when a through street cannot be extended to serve abutting uses or future development due to a physical or legal barrier. A flag lot driveway (“flagpole”) shall serve not more than four dwelling units, not including accessory dwellings and dwellings on individual lots. The layout of flag lots, the placement of buildings on such lots, and the alignment of shared drives shall be designed so that future street connections can be made as adjacent properties develop, to the extent practicable, and in accordance with the transportation connectivity and block length standards of HMC [18.70.030](#) and [18.85.020](#). All flag lot driveways shall be paved from the serving public or private street to the property line of each lot.
3. *Infill Development and Mid-Block Lanes.* Where consecutive flag lot developments or other infill development could have the effect of precluding local street extensions through a long block, the City Planning Commission may require the improvement of a mid-block lanes through the block. Mid-block lanes are private drives serving four or more dwelling units with reciprocal access easements; such lanes are an alternative to requiring public right-of-way street improvements. Mid-block lanes, at a minimum, shall be paved, have adequate storm drainage, meet the construction specifications to uphold a 75,000-pound vehicle and conform to the standards of subsections (4) and (5) of this section.
4. *Emergency Vehicle Access.* A drive serving more than one lot shall have a reciprocal access and maintenance easement recorded for all lots it serves. Said easement shall be at least 25 feet wide at its most narrow point, paved, and able to carry 75,000/square foot of load and meet the requirements of HMC [18.70.030](#). A five-foot-wide pedestrian walkway is required to be marked in paint. No fence, structure, or other obstacle shall be placed within the drive area. Emergency vehicle apparatus lanes, including any required turnaround, shall conform to applicable building and fire code requirements. Fire sprinklers may also be required for buildings that cannot be fully served by fire hydrants due to distance from hydrant, insufficient fire flow, or adjacency to wildfire areas.
5. *Maximum Drive Lane Length.* The maximum length of a drive serving more than one dwelling is subject to requirements of the Uniform Fire Code, but in no case shall it exceed 150 feet without providing secondary access/egress or a vehicle turnaround approved by the Fire Marshal and City Engineer.

Applicant Response: No flag lots are proposed with this application, the development proposal is not considered infill development and no mid-block lanes are proposed. No additional emergency vehicle access or drive lanes are proposed with this application since the proposal includes a circulation plan avoiding dead-ends and cul-de-sacs. The above criteria do not apply to this application.

19.20.070 Preliminary plat approval criteria – Subdivision.

1. *Approval Criteria.* The Planning Commission may approve, approve with conditions, or deny a preliminary subdivision plat. The Planning Commission’s decision shall be based on findings of compliance with all of the following approval criteria:

- a. *The land division application shall conform to the requirements of this chapter;*
- b. *All proposed lots, blocks, and proposed land uses shall conform to the applicable provisions of Chapter 18.45 HMC;*

Applicant Response: The requirements of Chapter 18.45 have been addressed previously in this narrative to demonstrate compliance. The applicant does not seek any variances or adjustments to the requirements of this chapter.

- c. *Access to individual lots, and public improvements necessary to serve the development, including but not limited to water, sewer, and streets, shall conform to Chapters 18.70 and 18.85 HMC;*

Applicant Response: The requirements of chapter 18.70 and 18.85 are previously addressed in this narrative to demonstrate compliance with applicable standards. The applicant does not seek any variances or adjustments to the requirements of those chapters.

- d. *The proposed plat name is not already recorded for another subdivision, and satisfies the provisions of ORS Chapter 92;*

Applicant Response: The applicant has proposed the subdivision name Castleberry Crossings. Prior to final plat approval, the applicant will file a subdivision name request with the County Surveyor's Office. The applicant does not intend to duplicate any other subdivision name per ORS Chapter 92. The applicant can submit an approved subdivision plat name as conditioned upon approval.

- e. *The proposed streets, utilities, park land or open space dedication, and surface water drainage facilities, as applicable, conform to City of Harrisburg adopted public facilities master plans and applicable engineering standards, and allow for transitions to existing and potential future development on adjacent lands. The preliminary plat shall identify all proposed public improvements and dedications;*

Applicant Response: All proposed improvements and dedications are shown on the submitted plans. All right-of-way areas shown on sheet 4 are to be dedicated to the City. A tentative composite utility plan is also included on sheet 7 of the submitted plans. The submitted tentative plat also shows all lands to be dedicated. The information contained within the preliminary engineering plans and drainage/stormwater report all demonstrate compliance with the Harrisburg Public Facilities Master Plan.

- f. *All proposed private common areas and improvements, if any, are identified on the preliminary plat and maintenance of such areas is assured through appropriate legal instrument;*

Applicant Response: The applicant does not propose any private common areas. The above criterion does not apply.

- g. *Evidence that any required State and Federal permits, as applicable, have been obtained or can reasonably be obtained prior to development; and*

Applicant Response: The applicant has an environmental consultant completing all required local, state and/or federal environmental permits necessary to mitigate the existing wetlands identified on the subject property. The applicant proposes to obtain all required permits prior to work starting on the subject property. Upon approval, the above criterion can be met.

h. Evidence that improvements or conditions required by the City, road authority, Linn County, special districts, utilities, and/or other service providers, as applicable to the project, have been or can be met.

Applicant Response: The extension of S. 9th Street is shown through the site and shows all required frontage improvements. Frontage improvements are also shown along Sommerville Loop, but no additional dedication is required. Santiam Street also includes the same required improvements. No other improvements or conditions were identified to be met with a development application.

2. *Conditions of Approval. The Planning Commission may attach such conditions as are necessary to carry out provisions of this code, and other applicable ordinances and regulations.*

Applicant Response: The applicant supports reasonable conditions necessary for approval of this application and understands the Planning Commissions responsibility in the approval process.

19.40.030 Adjustments.

Adjustments are subject to the following standards and procedures. (Permitted uses, as provided in Division 2 of HMC Title 18, shall not be adjusted.)

1. *Applicability. The City Administrator or Planning Commission, through a Type II procedure, may adjust the following standards where the criteria in subsection (2) of this section are met:*
 - a. *Setbacks: Up to a 15 percent reduction to a minimum setback.*
 - b. *Lot coverage: Up to a 20 percent increase to the maximum lot coverage.*
 - c. *Landscaping/irrigation: Up to a 30 percent reduction in required landscaping and irrigation.*
 - d. *Lot dimensions: Up to a 10 percent decrease to a minimum lot dimension.*
 - e. *Lot area: Up to a 10 percent decrease in minimum lot area.*
 - f. *Other dimensional standards: Up to a 10 percent increase or decrease in a quantitative (numerical) standard not listed above. This option is limited to standards in Division 2 of HMC Title 18 (Table 18.45.030 and Chapter 18.50 HMC, Special Use Standards) and Division 3 of HMC Title 18; it does not include building code requirements, engineering design standards, public safety standards, or standards implementing State or Federal requirements, as determined by the City Administrator.*

Applicant Response: The applicant proposes to take advantage of this provision and adjust the buildable area in each zoning designation up to 10% for the purpose of density calculations. The adjustment in site area brings the proposed density within the allowed parameters. buildable area is considered a quantitative standard and therefore this code provision can be applied to this application. No proposed changes in lot dimensions, lot area, landscape/irrigation, lot coverage or setbacks.

The R-1 zoning designation has a total area of 139,166 square feet (3.19 ac), right-of-way total area is 33,388 square feet (0.76ac) and a total buildable area of 105,778 square feet (2.43 ac) [139,166 – 33,388= 105,778]. The applicant is applying the provisions of HMC 19.40.30 to increase the buildable area by 10%. The new buildable area is 116,356 square feet (2.67 ac) [105,778 X 1.1 = 116,356]. After the adjustment, the applicant proposes a density of 5.61 units per acre in the R-1 area [15 units/ 2.67 acres = 5.61 units/ac]. The applicant's proposed density is below the maximum standard of 6 units per acre.

The R-2 zoning designation has a total area of 184,428 square feet (4.23 ac), right-of-way total area is 39,971 square feet (0.92 ac) and a total buildable area of 144,457 square feet (3.32 ac) [184,428 – 39,971= 144,457]. The applicant is applying the provisions of HMC 19.40.30 to increase the buildable area by 10%. The new buildable area is 158,903 square feet (3.65 ac) [144,457 X 1.1 = 158,903]. After the adjustment, the applicant proposes a density of 10.41 units per acre in the R-2 area [38 units/ 3.65 acres = 10.41 units/ac]. The applicant's proposed density is below the maximum standard of 12 units per acre.

2. *Approval Criteria. The City may grant an adjustment only upon finding that all of the following criteria are met. The burden is on the applicant to demonstrate compliance with the criteria.*
 - a. *The adjustment allows for a building plan that is compatible with adjacent land uses, and it does not create a conflict with adjacent uses;*
 - b. *Approval of an adjustment is necessary in order for the applicant to develop his property consistent with the "highest and best" uses of the zone or to allow less intensive development consistent with the zoning that could not otherwise occur;*
 - c. *Approval of the adjustment does not create (a) violation(s) of any State or Federal regulation or other adopted ordinance or code standard, and does not create the need for a variance;*
 - d. *An application for an adjustment is limited to not more than six lots per application;*
 - e. *Requests for more than one adjustment on the same lot shall be consolidated on one application and reviewed concurrently by the City;*
 - f. *Not more than three adjustments may be approved for one lot or parcel in a continuous 12-month period; and*

- g. *All applicable building code requirements and City Engineering and Public Works design standards shall be met.*

Applicant Response: The proposed adjustment of up to 10% of the buildable area per zoning designation for the purposes of density calculations. This adjustment does not impact the building plan in terms of compatibility with adjacent land uses. The proposed adjustment will allow the applicant a slight increase in site area to bring the proposed density into compliance with the new standards of the HMC. Aside from proposed lots 48 and 49 which are utilizing the provisions of HMC 19.20.40 for a lot width reduction, all lots in both zones meet the dimensional standards of the underlying zone. The applicant proposes both attached and detached single-family homes at a range of sizes. As a land use planner with a decade of Oregon experience, it is my professional opinion that the applicant's proposal is the highest and best/most practical use of the site. The proposed adjustment does not create any violations with local, State, or Federal regulations or code standards. No variances are necessary because of this request. The subject property is one lot of record and therefore, this adjustment request does not exceed the limit of a 6 lot impact maximum. The applicant is requesting one adjustment per this code section to the overall land area divided by the zoning designation. Since only one adjustment is requested in this section, the applicant complies with the criteria above which limits the number of adjustment requests. All applicable building code requirements, City Engineering and Public Works Standards were not impacted by this adjustment request. Building code requirements are to be evaluated prior to issuance of a building permit and all applicable Engineering and Public Works standards are to be evaluated for compliance prior to issuance of and site development permits (example: early grading permit). The above criteria are met.

IV. Conclusion

This application narrative and accompanying plan set demonstrate that all applicable provisions of the Harrisburg Municipal Code are satisfied.

Castleberry Crossings

Supplemental Narrative

Prepared for:
Hayden Homes

Prepared by:



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

Project Summary

Request:	Application for 53-lot Subdivision	
Location and Map Number:	930 SW Summerville Loop, Harrisburg, OR 97446 Linn County Assessor's Map No. 1s-04W-15, Tax Lot 3700	
Applicant:	Hayden Homes, LLC 2464 SW Glacier Place Redmond, Oregon 97756 Phone: 541-923-6607 Email: hdewolf@hayden-homes.com	
Engineer/Planner:	Emerio Design, LLC 1500 Valley River Drive Suite 100 Eugene, OR 97401 503-746-8812 Engineer: Roy Hankins, PE roy@emeriodesign.com	Planner: Jennifer Arnold jarnold@emeriodesign.com

I. Purpose

Due to changes in the Harrisburg Municipal Code (HMC), additional findings are being made to demonstrate compliance with both the old and new development standards. This is the supplemental narrative addressing applicable code of the upcoming changes as they are proposed.

The proposed development conforms to all applicable sections of the HMC. This application provides findings of fact that demonstrate conformance with all applicable standards of the previously mentioned governing regulations. Applicable criteria of the HMC will appear in *italics* followed by the applicant's responses in **bold** font.

II. Additional Development Standards

18.45 Zone District Regulations

18.45.030 Allowed Uses

1. *Uses Allowed in Base Zones. Allowed uses include those that are permitted (P) outright, those that are permitted subject to meeting special use standards or requirements (S), and those that are allowed subject to approval of a conditional use permit (CU) as identified by Table 18.45.030. Allowed uses fall into four general categories: residential, public and institutional, commercial, and industrial. The examples listed in Table 18.45.030 are for informational purposes and are not exclusive. Where Table 18.45.030 does not list a specific use, and Chapter 19.55 HMC, Definitions, does not identify the use or include it as an example of an allowed use, the City will provide an interpretation if the proposed use is allowed, or is not allowed, pursuant to HMC 18.30.10. Uses not listed in Table 18.45.030 and not found to be similar to an allowed use are prohibited.*
2. *Permitted Uses and Uses Permitted Subject to Special Use Standards. Uses listed as "Permitted Use (P)" are allowed provided they conform to relevant lot and development standards. Uses listed as "Permitted With Special Use Standards (S)" are allowed, provided they conform to Chapter 18.50 HMC, Special Use Standards. Uses listed as "Not Allowed (N)" are prohibited. Uses not listed but similar to those allowed may be permitted following the code interpretations of this title.*
3. *Conditional Uses. Uses listed as "Conditional Use Permit Required (CU)" are allowed subject to the requirements of Chapter 19.25 HMC, Conditional Use Permits.*
4. *Uses Regulated by Overlay Zones. Notwithstanding the provisions of this chapter, additional standards may apply to uses within overlay zones. In addition, an overlay zone may allow exceptions to some standards of the underlying zone. See Chapter 18.55 HMC.*
5. *Master Planned Developments/Planned Unit Developments. Uses that are not otherwise allowed by the underlying zone may be permitted through the master planned development procedure under Chapter 19.45 HMC.*
6. *Accessory Uses. Uses identified as "Permitted (P)" are permitted as primary uses and as accessory uses. For information on other uses that are customarily allowed as accessory, please refer to the description of the use categories in Chapter 19.55 HMC, Definitions.*

7. *Mixed-Use. Uses allowed individually are also allowed in combination with one another, in the same structure, or on the same site, provided all applicable development standards are met.*
8. *Outdoor Uses. Any use of real property that occurs primarily outside (i.e., not within a permitted building) requires a conditional use permit under this chapter. Examples of outdoor uses and unenclosed activities include, but are not limited to, automotive services, vehicle and equipment repair, fueling, drive-in restaurants, drive-up windows and similar drive-through facilities, automatic teller machines, kiosks, outdoor assembly and theaters, outdoor markets, and similar uses. Outdoor uses of the public right-of-way, for example, cafe seating, may be permitted without a conditional use permit when an encroachment permit is approved by the applicable roadway authority.*
9. *Temporary Uses. Temporary uses may occur no more than four times in a calendar year and are seasonal in nature. Approval of a special event or use permit in accordance with Chapter 9.52 HMC is required. Uses may be permitted on a temporary basis, subject to review and approval under Chapter 19.15 HMC, Site Design Review.*
10. *Disclaimer. Property owners are responsible for verifying whether a specific use is allowed on a particular site. The City Administrator may require a special permit to allow an outdoor or temporary use(s) that is otherwise permitted in the zone.*

Applicant Response: The applicant proposes a single-family subdivision with attached and detached house types. The subject site is split zoned between the R1 and R2 zones. The detached homes are proposed within the R1 zone designation with the attached housing proposed within the R2 designation. Both housing types are permitted outright in their respective zoning designation. This application does not include a proposal for multi-family housing, or any uses considered permitted conditionally. The subject site is not within an overlay zone identified by staff in the pre-application conference. The applicant proposes a standard subdivision and does not include any planned unit developments or master planned communities. All uses proposed with this application are associated with residential development. No outdoor uses, temporary uses, or mixed uses are proposed with this application. To the extent they apply, the above criteria are met.

18.45.040 Lot and development standards

1. *Development Standards. This section provides the general lot and development standards for each of the City's base zoning districts. The standards of this section are organized into two tables: Table 18.45.040.4 applies to residential and residential-commercial zones, and Table 18.45.040.5 applies to nonresidential zones.*
2. *Development Standards. City standards for access, circulation, site and building design, parking, landscaping, fences and screening, and public improvements, among others, are located in HMC Title 18. Notwithstanding the provisions of Tables 18.45.040.4 and 18.45.040.5 and other standards in HMC Title 18. Additional, standards may apply in specific locations, such as at street intersections, within overlay zones, adjacent to natural features, and other areas as may be regulated by this code or subject to State or Federal requirements. For requirements applicable to the City's overlay zones, please refer to Chapter 18.55 HMC.*

3. *Lot and Development Standards for Residential Districts. The development standards in Tables 18.45.040.4 and 18.45.040.5 apply to all new development as of the effective date of HMC Titles 18 and 19 in September 2022.*

4. *Table 18.45.040.4 – Lot and Development Standards for Residential Zones.*

Standard	R-1	R-2	R-3	(Reserve)
Residential Density, per HMC 18.45.060 (dwelling units per (net) acre) – minimum and maximum	Min. 1 per acre Max. 6 per acre (Per Comp Plan)	Min. 2 per acre Max. 12 per acre (Per Comp Plan)	Min. 12 per acre Max. 18 per acre (Per Comp Plan)	
Minimum Lot Area* (square feet)				
Single-family, not attached:				
Corner lot	7,000 sf	6,000 sf	4,000 sf	
Interior lot	6,000 sf	5,000 sf	4,000 sf	
*Single-family, attached (townhome) dwellings:				
Corner lot	7,000 sf	4,000 sf	4,000 sf	
Interior lot	6,000 sf	3,000 sf	2,500 sf	
(*Special Use Provisions Standards apply as per HMC Chapter 18.50)				
Single-family, with accessory dwelling	7,000 sf	6,000 sf	5,000 sf	
Duplex	9,000 sf	7,000 sf	6,000 sf	
Multiple-family or cottage cluster	9,000 sf for the first 3 dwelling units, plus 1,500 for each additional unit.	8,000 sf for the first 3 dwelling units, plus 800 – 1,500 for each additional unit.	8,000 sf for the first 3 dwelling units, plus 800 – 1,500 for each additional unit.	

- Deleted: -
- Deleted: ¶
- Commented [ME23]: These now match HMC 18.40.020
- Deleted: 6
- Commented [ZG24]: Comp Plan uses NET and per HMC 18.40.020, the Code uses GROSS.
Listing both here is confusing to the user.
- Commented [KT25R24]: This Comp Plan/development code conflict is bigger issue that should be resolved ideally at the same time as current emergency amendment text clarifications. More time is needed to determine best way to approach this and understand implications to current pending application.
- Deleted: grass/
- Commented [ZG26]: Changed to "interior" for consistency with other code sections .
- Deleted: Not a corner
- Commented [ZG27]: Changed to "attached (townhome)" for consistency with Table 18.45.030 Uses Allowed, above.
- Deleted: common-wall
- Deleted: Not permitted
- Deleted: Not a corner
- Formatted: Indent: Left: 0"
- Deleted: ¶
- Deleted: ¶

5. *Lot and Development Standards for Nonresidential Districts. The development standards in Table 18.45.040.5 apply to all new development as of the date of adoption of this chapter in the City’s nonresidential zones, as follows:*

Applicant Response: Proposed lots within the R-1 zone are shown to exceed minimum lot area standards with the smallest lots proposed at 6,402 square feet (interior lot) and 7,021 square feet (corner lot). Lot depths within the same zone are proposed to be 80 feet minimum. The minimum lot widths are proposed to be 50 feet (interior) and 60.7 feet (corner).

Proposed lots within the R-2 zone are shown to exceed minimum lot area standards with the smallest lots proposed at 3,002 square feet (interior) and no corner lots. Lot depths within the same zone are proposed to be 80.1 feet minimum. The minimum lot widths are proposed to be 35 feet (interior) and no corner lots. Proposed lots 48 and 49 are along the tightest radius of the knuckle (within the Santiam Street right-of-way) with a proposed lot width at the front property line below the minimum standard, however at the building setback line the minimum standard is shown to be met on the submitted site plan. It is impractical to meet the minimum standard for lot width along the knuckle. As shown on the submitted site plan, the lot widths at the front property line (abutting public right-of-way) are proposed to be 28 feet. A 20% modification to the minimum standard per HMC 19.20.040 is 28 feet and therefore the applicant complies with the applicable standards. See findings addressing HMC 19.20.040 in the submitted project narrative.

All proposed lots take access directly from public right-of-way onto either Sommerville Loop, Santiam Street, or S. 9th Street. No dead-ends or flag lots are proposed with this application. A

landscape plan was submitted to demonstrate compliance with all residential private landscaping standards. Proposed improvements to the Sommerville Loop right-of-way are shown on the typical section sheet of the plans (see sheet 5). Additional findings addressing Chapter 18 of the HMC were submitted with this application.

This application is within a residential plan and zoning designation. The above standards are met.

Table 18.45.040.4 – Lot and Development Standards for Residential Zones (Continued)				
Except as provided by HMC 18.45.040 through 18.45.080, as modified under Chapter 19.40 HMC, Adjustments and Variances, or as approved under Chapter 19.45 HMC, Master Planned Developments.				
Standard	R-1	R-2	R-3	(Reserve)
Minimum Lot Width				
Single-family, attached (townhome):	40 ft (See also HMC 18.50)	40 ft	37.5 ft	
Corner lot				
Interior lot	35 ft (See also HMC 18.50)	35 ft	35 ft	
Duplex				
Corner lot	60 ft	50 ft	40 ft	
Interior lot	50 ft	45 ft	40 ft	
Multiple-family (3 or more dwelling units on a lot, where allowed)		40 ft	85 ft	
Nonresidential uses	120 ft	85 ft	80 ft	
Minimum Lot Depth <i>Street frontage width may be less than minimum lot width where flag lots are allowed, per HMC 19.20.040.</i>				
	1.5 times min. width or 80 feet, whichever is less	1.5 times min. width or 75 feet, whichever is less	1.5 times min. width or 70 feet, whichever is less	
Building or Structure Height. See also HMC 18.45.050, Setback yards exceptions, HMC 18.45.080, Height measurement, exceptions, and transition, HMC 18.70.020(8), Vision Clearance, and HMC 18.75.040, Fences and walls.				
Level site (slope less than 15%), maximum height	30 ft	35 ft	40 ft	

Commented [ME29R28]: Agreed. They are permitted in HMC 18.50, and we talked about it during Planning Commission meetings.

Deleted: or common wall

Commented [ZG28]: Recommend striking aggregate Lot Width dimension because it assumes that Townhomes will only be built as 2-units. However, Townhouses in R-1 can be built in groups of 4 (per HMC 18.50) and there is no limitation on attached units in the R-2 and R-3 zones. Providing a single dimensions simplifies use and administration.

Deleted: Not permitted

Deleted: 80 ft

Deleted: 75 ft

Commented [ZG30]: Insert note "(see also HMC 18.50)"

HMC 18.50 includes other design criteria. It does not set a dimensional standard for lot width. It is also not accurate that the use is "not permitted".

Commented [ME31R30]: Agreed

Deleted: Not permitted

Deleted: 70 ft

Deleted: 70 ft

Deleted: 100 ft

Deleted: 75 ft

Deleted: 75 ft

Commented [KT33]: Based on the original addition of the 37.5 ft under R3 and the original intent described, is it consistent to change as proposed here for Duplexes, which is consistent with the other revised dimensions in other housing types/zoning districts and allows lots for duplexes to be equal to what is allowed for single family, which is consistent with HB2001 and Harrisburg's goals of flexibility and increasing housing? Also Multiple-family is 40 ft in R2 and if original text left in place, a duplex lot is 75 ft, which might be hard to defend and not consistent with HB2001.

Applicant Response: The subject property is split zoned with the east side within the R-1 zoning designation and the west side is within the R-2 zoning designation. Within the R-1 zoned area of the site, the applicant proposes single-family detached homes. Per the submitted site plan, the setback standards are shown for each lot and proposed to be met. The lot areas proposed within the R-1 zoning designation are shown to exceed the interior lot size of 6,000 sf and for corner lots the proposed size exceeds the required 7,000 sf. On the western portion of the site within the R-2 zoning designation, the applicant proposes single-family attached homes. The R-2 zoned lots are proposed to exceed the 3,000 square foot minimum lot area for townhouse lots. The attached homes are shown to be two units with a zero foot setback between units on the shared wall. Front and rear yard setbacks are also shown on the submitted site plan and the applicant does not propose deviation from those standards. Both residential type uses are permitted outright within each zone. No non-residential uses are proposed with this application.

Lots within the R-1 zone are required to have a minimum lot width of 50 feet for interior lots and 60 feet for corner lots. That standard is from the proposed code amendment documents provided to the applicant and the current published Zoning and Development chapter of the HMC. The applicant proposes to meet the minimum of 50 foot wide interior and 60 foot corner lot widths as shown on the proposed tentative plat. All lot depths exceed the minimum standard outlined in the proposed code amendment documents provided to the applicant and the current published Zoning and Development chapter of the HMC. No maximum lot depth standard is listed in the HMC and therefore lot dimension standards are met in the R-1 zone.

Lots within the R-2 zone are required to have a minimum lot width of 35 feet for interior lots (townhouse lots) and 40 feet for corner lots (townhouse lots). That standard is from the proposed code amendment documents provided to the applicant by City Staff. The applicant proposes to meet the minimum lot widths as shown on the proposed tentative plat apart from proposed lots 48 and 49. The applicant proposes to utilize the provisions of HMC chapter 19.20.040 for lot size averaging to allow a 20% reduction in lot width. See findings addressing this chapter in the submitted project narrative. The proposed lot width for lots 48 and 49 is 28 feet, which is within the 20% reduction from the minimum standard of 35 feet. All lot depths exceed the minimum standard outlined in the proposed code amendment documents provided to the applicant and the current published Zoning and Development chapter of the HMC. No maximum lot depth standard is listed in the HMC and therefore lot dimension standards are met in the R-2 zone.

The above criteria are met.

Table 18.45.040.4 – Lot and Development Standards for Residential Zones (Continued)
 Except as provided by HMC 18.45.040 through 18.45.080, as modified under Chapter 19.40 HMC, Adjustments and Variances, or as approved under Chapter 19.45 HMC, Master Planned Developments.

Standard	R-1	R-2	R-3	(Reserve)
Exceptions:				
Alley	5 ft	5 ft	5 ft	
Porch or similar open structure (e.g., balcony, wheelchair ramp, portico, patio, wall) where structure is less than 50% enclosed	5 ft	5 ft	5 ft	
Common walls or zero lot line developments	Not permitted	0 ft at shared common wall; 5 ft at side yard side	0 ft at shared common wall; 5 ft at side yard side	
Rear Setback Yard				
Structure >24 ft height	15 ft	10 ft	10 ft	
Structure 12 ft to 24 ft height	10 ft	5 ft	5 ft	
Structure <12 ft height	5 ft	5 ft	3 ft	
Garage or carport opening, except alley	20 ft	20 ft	20 ft	
Paved parking pad – Minimum size 18 ft by 12 ft, to match size of garage/carport	18 ft x 12 ft Minimum	18 ft x 12 ft Minimum	18 ft x 12 ft Minimum	

Deleted: one side

Deleted: one side

Commented [KT38]: Why 5-10 ft? Is the intent force the building to be a min 5 ft min and 10 ft max? If the max was not an issue, meaning the building could be setback any dim greater than 5 ft, recommend as shown removing the 10 ft. Added clarity to language.

Deleted: – 10 ft

Deleted: – 10 ft

Deleted: other

Deleted: other

Applicant Response: Building setbacks are shown on the submitted site plan to comply with the standards of 18.45.040.4. A general setback has been set for those standards that vary with height and shall be evaluated for compliance prior to issuance of a building permit. All lots show a buildable area reasonable for residential development. The above standards can be met.

18.50 Special Use Standards

18.50.060 Townhomes, attached single-family dwellings, special review criteria.

1. Purpose. The following provisions are intended to promote a compatible building scale where attached single-family (townhome) dwellings are proposed, while minimizing the impact of garages along street fronts and creating a streetscape that is conducive to walking.
2. Applicability. The following standards apply to new attached single-family (townhome) dwellings in all residential zones. The standards are applied through the zoning checklist. Those not meeting these requirements must meet the review standards and criteria of a site plan review pursuant to Chapter 19.15 HMC, prior to issuance of building permits.
3. Standards. Where attached single-family (townhome) dwellings are proposed, the structure(s) shall meet all of the following standards:

- a. *Each building shall contain not more than four consecutively attached dwelling units and not exceed an overall length or width of 125 feet.*
- b. *The primary entrance of each dwelling unit shall orient to a street or an interior courtyard that is not less than 24 feet in width. This standard is met when the primary entrance faces or is within 45 degrees of parallel to an abutting street or courtyard.*
- c. *Where the subject site is served by an existing or planned alley, vehicle access shall be from the alley and all garage entrances shall orient to the alley. Planned alleys shall be at least 24 feet in width.*
- d. *The development standards of Chapter 18.45 HMC and the building and site design standards of Chapters 18.60 through 18.75 HMC shall be met.*
- e. *Every dwelling unit in a townhouse/attached single-family dwelling shall, on the primary entrance side, be composed of not less than 20 percent windows and door surface area, exclusive of the garage door(s).*
- f. *The standards of this subsection (3) shall be met.*
- g. *Attached single-family (townhome) dwellings that include an attached row of three or more dwelling units shall provide a total of five or more off-street parking locations, consistent with HMC 18.80.020(3)(a) and (b).*

Applicant Response: The subject site is located within two zoning designations. The east side of the site is located within the R-1 zoning designation and the applicant proposes single-family detached homes. The western portion of the site is zoned R-2 and allows for attached housing. The applicant proposes duplex style townhouses within the R-2 zone. The duplex style townhouse means only two units share a wall, but each unit is on its own legal lot of record. All entrances are proposed to face the front property line/public street. No courtyards are proposed with this application. No alleys are proposed with this application and all lots have direct access onto a public street. Site design standards are to be evaluated prior to issuance of a building permit. To the extent they apply, the above criteria are met.

18.50.190 Special use standards in the residential zones.

1. *Purpose. The following provisions are intended to encourage a variety of residential uses and compatible uses in the residential zones. Compatible uses within walking distances of residential zones include uses such as small professional offices, personal services providers, transitory rentals, religious and community organizations and facilities and many others typically found in Harrisburg and similar small communities.*
2. *Applicability. The standards in this section are applicable to "S" rated uses, as per Table 18.45.030.*
3. *Standards.*
 - a. *Traffic. The traffic generated by the proposed use shall not exceed the greater of an estimated two times that of a single-family dwelling or two times the use generated per MFD.*

- b. All other City development and building standards as per Table 18.45.040.4 must be met.
- c. Parking. "S" rated uses in the residential zones must provide adequate off-street parking to demonstrate compatibility with existing uses. Parking needs in excess of two times that of an SFD must be provided on site.
- d. RV parks in the R-3 zone may not exceed three acres.
- e. Commercial uses in the R-3 zone may not exceed a gross area of one acre nor structure(s) exceeding 3,000 square feet.

Applicant Response: The subject site is split zoned and includes the R-1 and R-2 zoning designations. A memorandum by a traffic engineer speaking to trip generation and intersection safety was submitted with this application to address the traffic generated by the proposed uses. All uses proposed by the applicant are permitted outright in the residential zoning designation. Standards for uses within the R-3 zone do not apply to this application. To the extent they apply, the above criteria are met.

19.20.40 Lot size averaging, flag lots, and infill development.

1. *Lot Size Averaging Subdivisions. To allow flexibility in subdivision design that meets the intent of the applicable code standards or to address physical constraints, such as topography, existing development, significant trees, and other natural and built features, the approval body may grant a 20 percent modification to the lot area and/or lot dimension (width/depth) standards in Chapter 18.45 HMC; provided, that the overall density of the subdivision does not exceed the allowable density of the district. The City Planning Commission may require screening, buffering, or other transitions as provided in HMC Chapter 18.75 in site design where substandard lots are proposed to abut standard- or larger-sized lots.*
2. *Flag Lots. Flag lots may be created only when a through street cannot be extended to serve abutting uses or future development due to a physical or legal barrier. A flag lot access driveway ("flag pole") shall serve not more than four flag lots taking access off the same flag pole, not including accessory dwellings. The layout of flag lots, the placement of buildings on such lots, and the alignment of shared drives shall be designed so that future street connections can be made as adjacent properties develop, to the extent practicable, and in accordance with the transportation connectivity and block length standards of HMC 18.70.030 and 18.85.020. All flag lot driveways shall be paved from the serving public or private street to the property line of each lot in conformance with the requirements of HMC 18.70.030(4).*
3. *Infill Development and Mid-Block Drives. Mid-block drives are private drives serving four or more dwelling units with reciprocal access easements; such private drives are an alternative to requiring public right-of-way street improvements. Mid-block private drives, at a minimum, shall be paved, have adequate storm drainage, meet the construction specifications to uphold a 75,000-pound vehicle and conform to the standards of subsections (4) and (5) of this section.*
4. *Emergency Vehicle Access. A drive serving more than one lot shall have a reciprocal access and maintenance easement recorded for all lots it serves. Said easement shall be at least 25 feet wide at its most narrow point, paved, and able to carry 75,000/square foot of load and meet the requirements of HMC 18.70.030. A five-foot-wide pedestrian walkway is required to be marked in paint. No fence, structure, or other obstacle shall be placed within the drive area. Emergency*

vehicle apparatus lanes, including any required turnaround, shall conform to applicable building and fire code requirements. Fire sprinklers may also be required for buildings that cannot be fully served by fire hydrants due to distance from hydrant, insufficient fire flow, or adjacency to wildfire areas.

5. *Maximum Drive Length.* The maximum length of a drive serving more than one dwelling is subject to requirements of the Uniform Fire Code, unless approved by the Fire Marshal and City Engineer.

Applicant Response: The applicant is utilizing this code provision to address lot width on proposed lots 48 and 49. As shown on the submitted site plan, the lot widths at the front property line (abutting public right-of-way) are proposed to be 28 feet. However, at the building setback line, both lots exceed the minimum standard of 35 foot wide lots. The minimum lot width in the R-2 zone based on the proposed code revisions provided to the applicant, is 35 feet. A 20% modification to the minimum standard is 28 feet and therefore the applicant complies with the applicable standards.

The subject property has existing wetlands and stormwater issues in large rain events. The applicant proposes to fill the existing wetlands, following all local, state, and federal agency requirements. Additionally, the applicant proposes to mitigate the current stormwater issues by diverting existing stormwater into Tracts A and B as shown on the submitted plans. Currently there is a drainage ditch along Sommerville Loop and the back side which collects stormwater from upstream, funnels it through the subject site, collects in a ditch along the western property line, and then downstream to the west. The quantity of the current stormwater requires a larger water quality facility and is considered a built feature. Additionally, locations of Tracts A and B were chosen due to the existing topography and lot geometry requirements of the HMC. This proposed adjustment does not impact the overall density of the site in either zone.

No flag lots are proposed with this application, the development proposal is not considered infill development and no mid-block lanes are proposed. No additional emergency vehicle access or drive lanes are proposed with this application since the proposal includes a circulation plan avoiding dead-ends and cul-de-sacs.

To the extent they apply, the above criteria are met.

19.20.50 Preliminary plat submission requirements.

Applications for preliminary plat approval shall contain all of the following information:

1. *General Submission Requirements.*
 - a. *Information required for a Type II or Type III review as required (see HMC 19.10.030 or 19.10.040); and*
 - b. *Public Facilities and Services Impact Study.* The City may require additional analysis to demonstrate compliance with City Standards under adopted ordinances and facility master plans based on the extent of required infrastructure and impact on public facilities and services. The impact study shall quantify and assess the effect of the development on the applicable identified public facilities and services. The City shall

advise as to the scope of the study, which shall address the applicable Municipal Code Standards at HMC 18.85 and the adopted public facilities master plans.

(...)

Applicant Response: The applicant understands the general submission requirements.

19.20.070 Preliminary plat approval criteria – Subdivision.

1. *Approval Criteria. The Planning Commission may approve, approve with conditions, or deny a preliminary subdivision plat. The Planning Commission’s decision shall be based on findings of compliance with all of the following approval criteria:*

a. The land division application shall conform to the requirements of this chapter;

b. All proposed lots, blocks, and proposed land uses shall conform to the applicable provisions of Chapter [18.45](#) HMC;

Applicant Response: The requirements of Chapter 18.45 have been addressed previously in this narrative to demonstrate compliance. The applicant does not seek any variances or adjustments to the requirements of this chapter.

c. Access to individual lots, and public improvements necessary to serve the development, including but not limited to water, sewer, and streets, shall conform to Chapters 18.70 and 18.85 HMC;

Applicant Response: The requirements of chapter 18.70 and 18.85 are addressed in the project narrative to demonstrate compliance with applicable standards. The applicant does not seek any variances or adjustments to the requirements of those chapters. Access to individual lots is from public right-of-way via a new or preexisting public street.

d. The proposed plat name is not already recorded for another subdivision, and satisfies the provisions of ORS Chapter [92](#);

Applicant Response: The applicant has proposed the subdivision name Castleberry Crossings. Prior to final plat approval, the applicant will file a subdivision name request with the County Surveyor’s Office. The applicant does not indent to duplicate any other subdivision name per ORS Chapter 92. The applicant can submit an approved subdivision plat name as conditioned upon approval.

e. The proposed streets, utilities, park land or open space dedication, and surface water drainage facilities, as applicable, are consistent with the City of Harrisburg adopted public facilities master plans and comply with applicable engineering standards, and allow for transitions to existing and potential future development on adjacent lands. The preliminary plat shall identify all proposed public improvements and dedications;

Applicant Response: All proposed improvements and dedications are shown on the submitted plans. All right-of-way areas shown on sheet 4 are to be dedicated to the City. A tentative composite utility plan is also included on sheet 7 of the submitted plans. The submitted tentative plat also shows all lands to be dedicated. The information contained

within the preliminary engineering plans and drainage/stormwater report all demonstrate compliance with the Harrisburg Public Facilities Master Plan.

f. All proposed private common areas and improvements, if any, are identified on the preliminary plat and maintenance of such areas is assured through appropriate legal instrument;

Applicant Response: The applicant does not propose any private common areas. The above criterion does not apply.

g. Evidence that any required State and Federal permits, as applicable, have been obtained or can reasonably be obtained prior to development; and

Applicant Response: The applicant has an environmental consultant completing all required local, state and/or federal environmental permits necessary to mitigate the existing wetlands identified on the subject property. The applicant proposes to obtain all required permits prior to work starting on the subject property. Upon approval, the above criterion can be met.

h. Evidence that improvements or conditions required by the City, road authority, Linn County, special districts, utilities, and/or other service providers, as applicable to the project, have been or can be met.

Applicant Response: The extension of S. 9th Street is shown through the site and shows all required frontage improvements. Frontage improvements are also shown along Sommerville Loop, but no additional dedication is required. Santiam Street also includes the same required improvements. No other improvements or conditions were identified to be met with a development application.

2. *Conditions of Approval. The Planning Commission may attach such conditions as are necessary to carry out provisions of this code, and other applicable ordinances and regulations.*

Applicant Response: The applicant supports reasonable conditions necessary for approval of this application and understands the Planning Commissions responsibility in the approval process.

19.40.030 Adjustments.

Adjustments are intended to encourage design proposals that respond to the intent of the code and creatively meet or exceed the specific development standards and allow adjustment to the identified code standards in an efficient and effective manner. Adjustments are subject to the following standards and procedures. (Allowed uses by Zoning District, as provided in Division 2 of HMC Title 18, shall not be adjusted.)

1. *Applicability. The City Administrator or Planning Commission, through a Type II procedure, may adjust the following standards where the criteria in subsection (2) of this section are met:*
 - a. *Setbacks: Up to a 15 percent reduction to a minimum setback.*
 - b. *Lot coverage: Up to a 20 percent increase to the maximum lot coverage.*

- c. *Landscaping/irrigation: Up to a 30 percent reduction in required landscaping and irrigation.*
 - d. *Lot dimensions: Up to a 10 percent decrease to a minimum lot dimension.*
 - e. *Lot area: Up to a 10 percent decrease in minimum lot area.*
 - f. *Other dimensional standards: Up to a 10 percent increase or decrease in a quantitative (numerical) standard not listed above. This option is limited to standards in Division 2 of HMC Title 18 (Table 18.45.030 and Chapter 18.50 HMC, Special Use Standards) and Division 3 of HMC Title 18; it does not include building code requirements, engineering design standards, public safety standards, or standards implementing State or Federal requirements, as determined by the City Administrator.*
2. *Approval Criteria. The City may grant an adjustment only upon finding that all of the following criteria are met. The burden is on the applicant to demonstrate compliance with the criteria.*
- a. *The adjustment allows for a building plan that is compatible with adjacent land uses, and it does not create a conflict with adjacent uses;*
 - b. *Approval of an adjustment is necessary in order for the applicant to develop his property consistent with the "highest and best" uses of the zone or to allow less intensive development consistent with the zoning that could not otherwise occur;*
 - c. *Approval of the adjustment does not create (a) violation(s) of any State or Federal regulation or other adopted ordinance or code standard, and does not create the need for a variance;*
 - d. *An application for an adjustment is limited to not more than six lots per application;*
 - e. *All applicable building code requirements and City Engineering and Public Works design standards shall be met.*

Applicant Response: The applicant proposes to take advantage of this provision and adjust the site area in each zoning designation up to 10% for the purpose of density calculations. The proposed adjustment of up to 10% of the site area per zoning designation for the purposes of density calculations. This adjustment does not impact the building plan in terms of compatibility with adjacent land uses. The proposed adjustment will allow the applicant a slight increase in site area to bring the proposed density into compliance with the new standards of the HMC. Aside from proposed lots 48 and 49 which are utilizing the provisions of HMC 19.20.40 for a lot width reduction, all lots in both zones meet the dimensional standards of the underlying zone. The applicant proposes both attached and detached single-family homes at a range of sizes. As a land use planner with a decade of Oregon experience, it is my professional opinion that the applicant's proposal is the highest and best/most practical use of the site. The proposed adjustment does not create any violations with local, State, or Federal regulations or code standards. No variances are necessary because of this request. All applicable building code requirements, City Engineering and Public Works Standards were not impacted by this adjustment request. Building code requirements are to be evaluated prior to issuance of a building permit and

all applicable Engineering and Public Works standards are to be evaluated for compliance prior to issuance of and site development permits (example: early grading permit). The above criteria are met.

IV. Conclusion

This application narrative, accompanying plan set, and this supplemental narrative addressing newly adopted code demonstrate that all applicable provisions of the Harrisburg Municipal Code are satisfied.

Memorandum

To: City of Harrisburg
Copy: Jennifer Arnold, Emerio Design
From: Jennifer Danziger, PE
Date: December 22, 2023
Subject: Woodhill Crossing Transportation Assessment



RENEWS: 12/31/2025

Introduction

This memorandum addresses the trip generation, trip distribution, and safety assessment for the proposed Woodhill Crossing subdivision to be located at 930 Sommerville Loop in Harrisburg, Oregon. The proposed development includes 15 single-family detached homes and 38 single-family attached homes for a total of 53 homes, as shown in Figure 1 and the attached site plan.



Figure 1: Site Location (©Google Earth 2023)

Project Description

The proposed development includes 53 single-family homes on a 7.91-acres site, Tax Map 15504W15, Lot 3700. The western portion of the site, totaling 4.51 acres, is zoned R-2 (*Multi-Family Residential*) and will be developed with 38 attached homes. The eastern portion of the site, totaling 3.40 acres, is zone R-1 (*Single-Family Residential*) and will be developed with 15 detached homes.

The site will primarily be served by two public street connections to Sommerville Loop. The western connection will be located approximately 740 feet east of 6th Street measured centerline to centerline. The eastern connection will be located approximately 740 feet east of the western connection along the alignment of 9th Street. Additionally, 12 or 13 homes will have direct access to Sommerville Loop with driveways located between the two public streets.

Trip Generation

Trip rates from the *Trip Generation Manual*¹ were used to estimate traffic demand. Specifically, trip rates from land-use code 210, *Single-Family Detached Housing*, and land-use code 215, *Single-Family Attached Housing*, were referenced to estimate the trip generation based on the number of dwelling units (DU). Estimates were calculated using both equations and average rates. The rates yielded slightly higher trip estimates and these are summarized in Table 1 with details attached to this memorandum.

Table 1: Trip Generation

ITE Code	Intensity	Morning Peak Hour			Evening Peak Hour			Daily Trips
		In	Out	Total	In	Out	Total	
210 – Single-Family Detached Housing	15 DU	3	8	11	9	5	14	142
215 – Single-Family Attached Housing	38 DU	5	13	18	13	9	22	274
Total	53 DU	8	21	29	22	14	36	416

The resulting trip generation is 29 morning peak hour, 36 evening peak hour, and 416 daily trips.

Trip Distribution

An approximate trip distribution from the site was developed based on the existing condition traffic volumes from Figure 10. Year 2022 Existing Peak Hour Intersection Volumes as presented in Draft TM2: Transportation System Condition and Deficiencies of the Harrisburg Transportation System Plan (TSP) Update.²

The anticipated distribution of site traffic is assumed to be:

- 25 percent to/from the north on 6th Street
- 20 percent to/from the north on OR 99E via Lasalle Street

¹ Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 11th Edition, 2021.

² <https://storymaps.arcgis.com/stories/cf07ec2d3d2944ab99fc6d84731f66db>



- 50 percent to/from the south on OR 99E via Lasalle Street
- 5 percent to/from the south on 6th Street

With this distribution, no more than 21 trips would be added to any turning movement and no more than 34 trips would be added to any roadway during the morning or evening peak hour.

Transportation Impact Analysis Criteria

Harrisburg Municipal Code (HMC Section) 18.85.020.1.d (1): establishes the criteria for when a transportation impact analysis (TIA) may be required as part of an application for development. The proposed development exceeds the minimum daily trip threshold of 300 trips but, because operations are evaluated based on peak hour traffic, a more important criteria for understanding the potential impact of a project is the threshold of an increase in volume of no more than 20 percent for any particular traffic movement during the peak hours.

Table 2 compares the estimated site trips for the critical PM peak hour with the year 2022 existing volumes from the Harrisburg TSP Update.

Table 2: PM Peak Hour Volume Comparison

Intersection	Impacted Movements	Trip Distribution	Estimated Site PM Peak Hour Volume	TSP 2022 PM Peak Hour Volume	Site Trip Increase	
LaSalle & OR 99E	Inbound	SBL	4	20%	60	7%
		NBR	11	50%	205	5%
	Outbound	WBL	7	50%	205	3%
		WBR	3	20%	75	4%
LaSalle & 6th	Inbound	EBR	15	70%	220	7%
		SBT	6	25%	60	9%
	Outbound	NBL	15	70%	215	7%
		NBT	6	25%	60	9%
Priceboro & 6th	Inbound	NBT	1	5%	190	1%
	Outbound	SBT	1	5%	140	1%

As shown in Table 2, all of the site trips through major intersections are anticipated to add less than 10 percent to any existing traffic movement. The only volumes that might increase by more than 20 percent would be on Sommerville Loop at the site accesses and at the intersection with 6th Street. According to the TSP Draft TM2, the two major intersections along 6th Street north (Lasalle Street) and south (Priceboro Road) of Sommerville Loop are anticipated to operate with low levels of delay (less than 20 seconds for any movement, level of service C or better) through the forecast year of 2045. Since the Sommerville Loop intersection was not included in the TSP analysis, volumes at that location are likely lower than the other intersections. Therefore, the intersection of Sommerville Loop and 6th Street is also likely to operate with low levels of delay through the forecast year of 2045.



Based on the low volume impacts associated with the development and low levels of delay near the project site, a limited transportation assessment that focuses on safety rather than traffic operations is presented in this memorandum.

Crash History

Using data obtained from ODOT’s Crash Data System, a review of approximately five years of the most recent available crash history (January 2017 through December 2021) was performed for Sommerville Loop from 6th Street eastward. The crash data was evaluated based on the number of crashes, the type of collisions, and the severity of the collisions. Crash severity is based on injuries sustained by people involved in the crash, and includes five categories:

- *PDO* - Property Damage Only
- *Injury C* – Possible Injury
- *Injury B* – Suspected Minor Injury
- *Injury A* – Suspected Serious Injury
- *Fatality*

Crash rates provide the ability to compare safety risks at different intersections by accounting for both the number of crashes that have occurred during the study period and the number of vehicles that typically travel through the intersection. Crash rates were calculated using the common assumption that traffic counted during the evening peak hour represents approximately 10 percent of the annual average daily traffic (AADT) at the intersection.

Two crashes were reported on Sommerville Loop in the five-year analysis period. Both occurred at or near the intersection with 6th Street. Table 3 provides a summary of crash types, severities, and rates for the intersection. Detailed crash data is attached.

Table 3: Crash Type Summary

Intersection	Crash Type		Total Crashes	Crash Severity					Est. AADT ¹	Crash Rate	90 th % Rate ²
	Turn	Backing		PDO	C	B	A	Fatal			
6 th Street & Sommerville Loop	1	1	2	0	1	1	0	0	5,250	0.21	0.293

Notes:

1. The daily volume of traffic entering the intersection was estimated based on the PM peak hour volumes on 6th Street north of Priceboro Road. Volumes on Sommerville Loop were not available and thus were conservatively excluded from the intersection estimate.
2. ODOT 90th Percentile Crash Rates are from the Analysis Procedures Manual Version 2 (2019), Exhibit 4.1, p.4-3

Crash Severity

There were no reported crashes resulting in a fatality or Injury A classification.

Pedestrian and Bicycle Collisions

There were no reported crashes involving a pedestrian or bicyclist.

ODOT 90th Percentile Crash Rates

Intersection crash rates were compared to the published statewide 90th percentile crash rates within ODOT’s *Analysis Procedures Manual (APM)* [Exhibit 4.1: Intersection Crash Rates per MEV by Land Type and Traffic](#)



Control. According to the APM, intersections which experience crash rates in excess of 90th percentile crash rates may be indicative of design deficiencies and therefore require a need for further investigation and possible mitigation.

The intersection crash rate at 6th Street & Sommerville Loop does not exceed the 90th percentile rate for the intersection type.

Conclusions

No significant trends or crash patterns were identified for Sommerville Loop or its intersection with 6th Street. No safety mitigation is recommended per the crash data analysis.

Access Spacing

Sommerville Road is classified as a Collector street in the currently adopted Harrisburg TSP. According to HMC Section 18.70.030.7, the minimum spacing between approaches on a collector street is 50 to 100 feet as measured from the edge of one approach to the edge of another:

The site will primarily be served by two public street connections to Sommerville Loop. The western connection will be located approximately 125 east of the driveway serving the adjacent property, as measured edge to edge. The eastern connection will be located approximately 155 feet west of the shared driveway serving the adjacent 4-unit housing development, as measured edge to edge.

The spacing between the two proposed public street connections is approximately 710 feet (measured edge to edge); however, 12 to 13 homes are proposed with direct access to Sommerville Loop between the two public street connections. The driveways for the 10 attached homes are paired with approximately 48 feet between each pairing; the spacing cannot be increased due to the lot width. The driveways for the 2 to 3 detached homes could be designed to meet the 50-foot minimum.

Within the proposed subdivision, the local spacing standard of 20 feet would apply; however, the HMC allows the City Engineer or authorized representative to approve closer spacing, such as paired approaches, to provide for more on-street parking. The layout of the individual driveways pairs approaches to allow for more space for on-street parking. The spacing between the paired approaches is greater than 20 feet.

Conclusion

The access spacing along Sommerville Loop, classified as a Collector Street, may require approval of a variation to allow an approach spacing under 50 feet for the individual homes along the roadway. The access spacing on the local roads exceeds the 20-foot standard with paired approaches to maximize on-street parking availability.

Sight Distance

A sight distance analysis was performed for the planned project driveways. Both intersection sight distance (ISD) and stopping sight distance (SSD) are assessed. The ISD is an operational measure, intended to provide sufficient line of sight along the major street so that a driver could turn from the minor street without impeding traffic flow. The SSD is the minimum requirement to ensure safe operation of the roadway. Stopping sight distance allows an oncoming driver to see a hazard in the roadway, react, and come to a complete stop if necessary to avoid a collision. As long as the available intersection sight distance is at least equal to the



minimum required stopping sight distance for the design speed of the roadway, adequate sight distance is available for safe operation of the intersection.

For Sommerville Loop, sight distance was measured and evaluated in accordance with standards established in *A Policy on Geometric Design of Highway and Streets*³. For intersection sight distance, the driver's eye is assumed to be 14.5 feet from the near edge of the nearest travel lane of the intersecting street and at a height of 3.5 feet above the minor-street approach pavement. The oncoming vehicle driver's eye height along the major-street approach is assumed to be 3.5 feet above the cross-street pavement. The standards for measurement were applied from the future curb location on the site frontage.

The posted speed on Sommerville Loop is 25 mph. A speed of 30 mph, 5 mph over the posted speed was used as the basis for the sight distance evaluation. Based on 30 mph, the recommended ISD is 335 feet for left turns and 290 feet for right turns. The required SSD is 200 feet for vehicles approaching from either direction.

Western Access

The sight lines for the proposed western access are shown in Figure 2 and Figure 3. Photos were taken at the standard height of 3.5 feet as well as 5.5 feet to illustrate the sight lines after the existing roadside scrub is cleared. Available sight distance will exceed the recommended ISD of 335 feet and required SSD of 200 feet in both directions after scrub is cleared from the site.



Figure 2: Western Site Access Looking to the West

³ American Association of State Highway and Transportation Officials (AASHTO), *A Policy on Geometric Design of Highways and Streets*, 7th Edition, 2018.





Figure 3: Western Site Access Looking to the East

Eastern Access

The sight lines for the proposed eastern access are shown in Figure 4 and Figure 5. Photos were taken at the standard height of 3.5 feet. Available sight distance will exceed the recommended ISD of 335 feet and required SSD of 200 feet in both directions after scrub is cleared from the site.



Figure 4: Eastern Site Access Looking to the West





Figure 5: Eastern Site Access Looking to the East

The sight lines for the 12 to 13 driveways, which will connect to Sommerville Road between the two subdivision roadways, should all meet the recommended ISD of 335 feet and required SSD of 200 feet since the street connections to either side have adequate sight lines and the roadway is straight.

Conclusions

The new roadway connections associated with the site and the proposed site driveways on Sommerville Loop are expected to have adequate sight lines.

Findings

The transportation system can accommodate the proposed 53-unit subdivision with minimal impact on traffic operations and safety. Findings of this limited analysis include:

- The site is estimated to generate 29 morning peak hour, 36 evening peak hour, and 416 daily trips.
- Site trips added to the traffic movements at major intersections near the site are expected to increase volumes by less than 10 percent.
- Based on the traffic analysis prepared for the TSP update, most of the surrounding system is forecast to have low levels of delay near the project site with minimal impacts anticipated with the proposed development.
- No significant trends or crash patterns were identified for Sommerville Loop or its intersection with 6th Street. No safety mitigation is recommended per the crash data analysis.
- The access spacing along Sommerville Loop, classified as a Collector Street, may require approval of a variation to allow an approach spacing under 50 feet for the individual homes along the roadway.



- The access spacing on the local roads exceeds the 20-foot standard with paired approaches to maximize on-street parking availability.
- The new roadway connections associated with the site and the proposed site driveways on Sommerville Loop are expected to have adequate sight lines.

Attachments:

Site Plan

Trip Generation Estimates

Crash Data

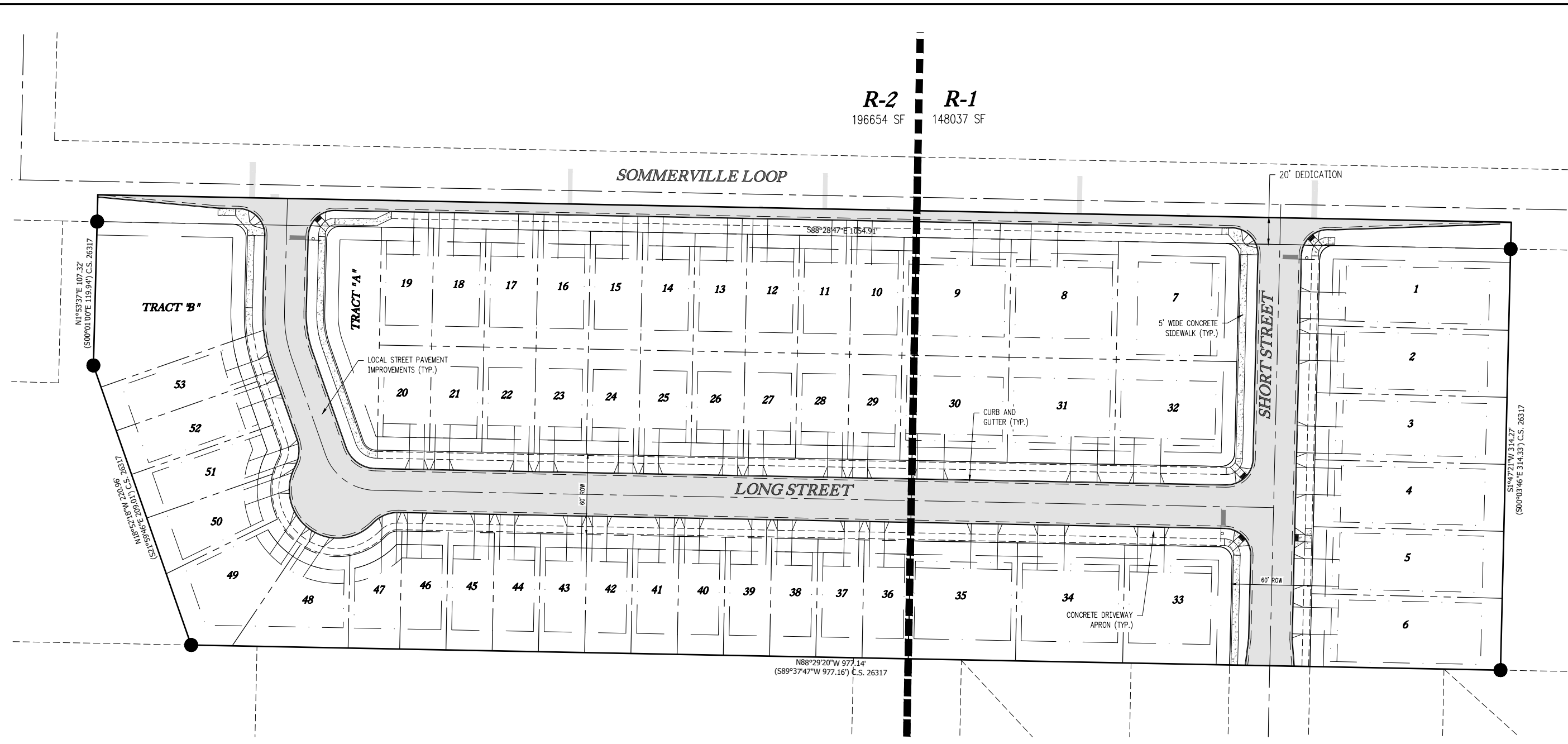
Sight Distance Calculations



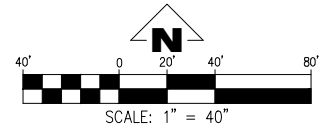
TENTATIVE SITE PLAN

NO.	DATE	DESCRIPTION

EMERIO
 ENGINEERING - SURVEYING - DESIGN
 1500 VALLEY RIVER DRIVE, SUITE 100
 EUGENE, OREGON 97401
 TEL: (603) 748-8812
 FAX: (603) 639-8592
 www.emeriodesign.com



TENTATIVE SITE PLAN



R-2

TOTAL R-2 AREA: 196,654 SF (4.51 AC)
 R-2 ROW AREA: 39,970 SF (0.92 AC)
 R-2 BUILDABLE AREA: 156,684 SF (3.60 AC)
 MAX. DENSITY: 12 UNITS/ACRE
 PROPOSED DENSITY: 10.56 UNITS/ACRE

DETACHED LOT SIZES

- INTERIOR: 5,000 SF (50' WIDE MIN.)
- CORNER: 6,000 SF (60' WIDE MIN.)

TOWNHOUSE LOT SIZES

- INTERIOR: 3,000 SF
- CORNER: 4,000 SF

SETBACKS

- FRONT: 15' OR 10' TO PORCH
- TO GARAGE: 20'
- INTERIOR SIDE FOR ALL HEIGHTS: 4' (0' FOR ATTACHED INTERIOR)
- REAR YARD: BASED ON BUILDING HEIGHT
 - > 24': 15'
 - 12-24': 10'
 - < 12': 5'

R-1

TOTAL R-1 AREA: 148,037 SF (3.40 AC)
 R-1 ROW AREA: 33,367 SF (0.77 AC)
 R-2 BUILDABLE AREA: 114,670 SF (2.63 AC)
 MAX. DENSITY: 6 UNITS/ACRE
 PROPOSED DENSITY: 5.70 UNITS/ACRE

DETACHED LOT SIZES

- INTERIOR: 6,000 SF (50' WIDE MIN.)
- CORNER: 7,000 SF (60' WIDE MIN.)

TOWNHOUSES NOT PERMITTED

SETBACKS

- FRONT/PORCH: 15'
- TO GARAGE: 20'
- INTERIOR SIDE FOR ALL HEIGHTS: 4', 8' TOTAL FOR BOTH INTERIOR SIDES
- REAR YARD: BASED ON BUILDING HEIGHT
 - > 24': 15'
 - 12-24': 10'
 - < 12': 5'



TRIP GENERATION CALCULATIONS
Source: Trip Generation Manual, 11th Edition

Land Use: Single-Family Detached Housing
Land Use Code: 210
Land Use Subcategory: All Sites
Setting/Location: General Urban/Suburban
Variable: Dwelling Units
Trip Type: Vehicle
Formula Type: Rate
Variable Quantity: 15

AM PEAK HOUR

Trip Rate: 0.7

	Enter	Exit	Total
Directional Split	25%	75%	
Trip Ends	3	8	11

PM PEAK HOUR

Trip Rate: 0.94

	Enter	Exit	Total
Directional Split	63%	37%	
Trip Ends	9	5	14

WEEKDAY

Trip Rate: 9.43

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	71	71	142

SATURDAY

Trip Rate: 9.48

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	71	71	142

Source: Trip Generation Manual, 11th Edition



TRIP GENERATION CALCULATIONS
Source: Trip Generation Manual, 11th Edition

Land Use: Single-Family Attached Housing
Land Use Code: 215
Land Use Subcategory: All Sites
Setting/Location: General Urban/Suburban
Variable: Dwelling Units
Trip Type: Vehicle
Formula Type: Rate
Variable Quantity: **38**

AM PEAK HOUR

Trip Rate: 0.48

	Enter	Exit	Total
Directional Split	25%	75%	
Trip Ends	5	13	18

PM PEAK HOUR

Trip Rate: 0.57

	Enter	Exit	Total
Directional Split	59%	41%	
Trip Ends	13	9	22

WEEKDAY

Trip Rate: 7.2

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	137	137	274

SATURDAY

Trip Rate: 8.76

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	166	166	332

Source: Trip Generation Manual, 11th Edition

Stopping Sight Distance***Eastbound***

Travel Speed	30 mph
Reaction Time	2.5 seconds
Acceleration	11.2 ft/sec ²
Grade (percent)	0.00%

SSD 200 feet

Westbound

Travel Speed	30 mph
Reaction Time	2.5 seconds
Acceleration	11.2 ft/sec ²
Grade (percent)	0.00%

SSD 200 feet

Reaction Distance

Travel Speed	30 mph
Travel Speed	44.1 fps
Reaction Time	2.5 seconds

Reaction Distance 110.3 feet

Travel Speed	30 mph
Travel Speed	44.1 fps
Reaction Time	2.5 seconds

Reaction Distance 110.3 feet

Braking Distance

Travel Speed	30 mph
Acceleration	11.2 ft/sec ²
Grade (percent)	0.00%

Braking Distance 86.3 feet

Travel Speed	30 mph
Acceleration	11.2 ft/sec ²
Grade (percent)	0.00%

Braking Distance 86.3 feet

Note: If grades are less than 3%, no adjustment is needed.

Intersection Sight Distance

	<i>Left Turn Looking Left</i>	<i>Left Turn Looking Right</i>	<i>Right Turn Looking Left</i>
Approach Speed	30 mph	30 mph	30 mph
Number of Lanes	2 lanes	2 lanes	2
Vehicle Type (P/S/C)	P Passenger Car	P Passenger Car	P Passenger Car
Extra Crossing Lanes	0	0	
Time Gap	7.5 seconds	7.5 seconds	6.5 seconds
Intersection Sight Distance	335 feet	335 feet	290 feet
Washington County	300 feet	300 feet	300 feet

Notes:

- 1) For Approach speed, use the design speed of the roadway (typically 85th percentile speed).
- 2) For Time Gap, use 7.5 seconds for passenger cars, 9.5 seconds for single-unit trucks, and 11.5 seconds for combination trucks.
- 3) The above values are for 2-lane highways without medians and grades of 3 percent or less.
- 4) For grades in excess of 3 percent on the minor street, add .2 seconds for each percent grade.
- 5) For additional lanes, add 0.5 seconds per lane for passenger cars and 0.7 seconds per lane for trucks.

December 14, 2023

City of Harrisburg Public Works Department
 120 Smith Street, Harrisburg, OR 97446
 (541) 995-6655

Attn: Damien Gilbert, P.E. - Branch Engineering

RE: Woodhill Crossing Subdivision – Stopping Sight Distance

To Damien Gilbert,

The purpose of this letter is to demonstrate that the proposed roadway geometry in the Woodhill Crossing Subdivision layout allows for safe stopping sight distance conditions as vehicles traverse the turn.

Design Speed and Stopping Sight Distance:

The proposed subdivision consists of 53 Lots, 2 open tracts, and 2 streets. The longer street changes direction using a horizontal curve with a centerline radius of 40 feet. The design speed chosen for the new local street is 25 MPH, although vehicles will not be able to clear the turn at the posted speed given the distances from stop-controlled intersections. Using the AASHTO “Guidelines for Geometric Design of Low-Volume Roads, 2019” manual, a stopping sight distance of 155 feet is required for a design speed of 25 MPH per Table 4-8.

Table 4-8. Design Guidelines for Sight Distance on Horizontal Curves for New Construction of Low-Volume Roads (Continued)

U.S. Customary										
All Locations for 401–2,000 veh/day										
Width on Inside of Curve Clear of Sight Obstructions ² (ft)										
Design Speed (mph)	Stopping Sight Distance (ft)	Radius of Curvature (ft)								
		50	100	200	500	1,000	2,000	5,000	10,000	20,000
15	80	15.2	7.9	4.0	1.6	0.8	0.4	0.2	0.1	0.0
20	115	—	16.1	8.2	3.3	1.7	0.8	0.3	0.2	0.1
25	155	—	—	14.8	6.0	3.0	1.5	0.6	0.3	0.2
30	200	—	—	24.5	10.0	5.0	2.5	1.0	0.5	0.3
35	250	—	—	—	15.5	7.8	3.9	1.6	0.8	0.4
40	305	—	—	—	23.1	11.6	5.8	2.3	1.2	0.6
45	360	—	—	—	32.1	16.2	8.1	3.2	1.6	0.8
50	425	—	—	—	—	22.3	11.3	4.5	2.3	1.1
55	495	—	—	—	—	30.5	15.3	6.1	3.1	1.5
60	570	—	—	—	—	40.3	20.3	8.1	4.1	2.0



Line of Sight:

The path traveled of vehicles in the inside lane will be analyzed since they are closest to obstructions that limit their line of sight. In this case, the building on Lot 20 blocks the view ahead as the vehicle approaches the turn. For the driver to observe an object in the road and safely come to a stop within 155', the line of sight needs to extend far enough to ensure the path of travel exceeds the stopping sight distance, as shown in Figure 1 below.

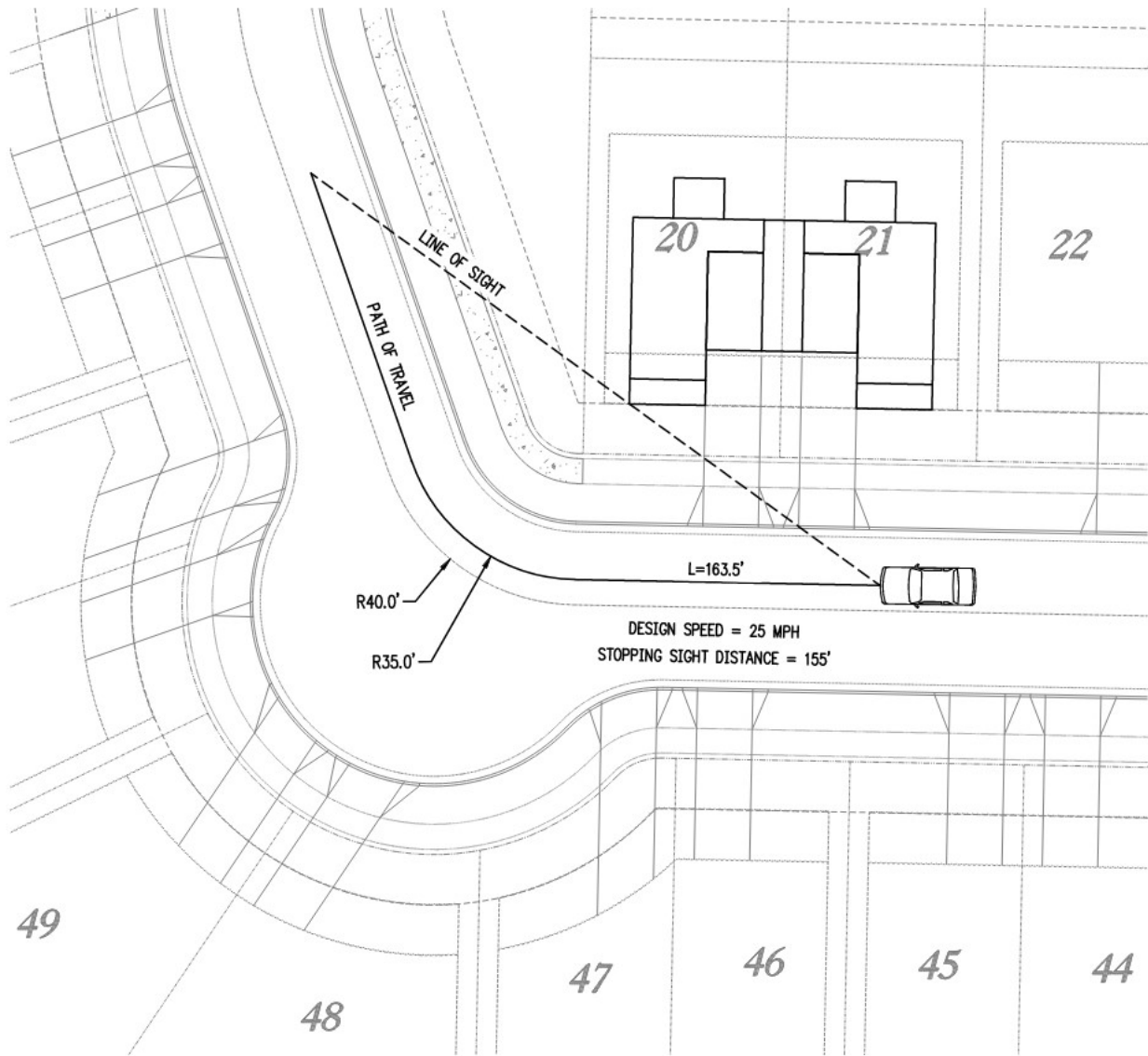


Figure 1



With the proposed building placement, the path traveled (being 5 feet offset from the road centerline) is 163.5 feet. Therefore, the driver will be able to observe the object and come to a stop before reaching it.

Conclusion:

Per city requirements, there is enough site distance available for vehicles to safely navigate a turn with a centerline radius of 40 feet.

If you have any questions, please feel free to contact our office at (503) 746-8812.

Respectfully,
Emerio Design LLC

Keelan Smith, P.E.
Staff Project Engineer



Preliminary Drainage Report for
Woodhill Crossing Subdivision
53-Lot Subdivision
Tax Lot 3700, Tax Map 155-04W-15
City of Harrisburg, Oregon

Emerio Project Number: 1113-001
City of Harrisburg Permit Numbers: TBD
Date: 12/19/2023



Prepared For:
Heather Dewolf
Hayden Homes, LLC
2464 SW Glacier Place
Redmond, OR 97756
(541) 923-6607

Prepared By:
Roy Hankins, PE
Emerio Design, LLC
2677 Willakenzie Road, Suite 1A
Eugene, OR 97401
(541) 521-9797
roy@emeriodesign.com

Table of Contents:

APPENDIX A

- (1) Vicinity Map

APPENDIX B

- (1) Soils Maps- "Soils Survey for Linn County"
- (2) Curve Number Table

APPENDIX C

- (1) Basin Area Spreadsheet
- (2) Swale Sizing Spreadsheet
- (3) Curb Inlet Filter Detail
- (4) HydroCAD Plots - Detention

APPENDIX D

- (1) Pre-Developed Site Map
- (2) Post-Developed Basin Map
- (3) Proxy Treatment Map

Project Overview and Description:

This proposed development will convert approximately 7.91 acres of agricultural fields into a residential development. The existing site of the Woodhill Subdivision development is vacant and covered primarily by a mix of grass and unused agricultural fields and includes a single-family home with an associated gravel driveway and auxiliary buildings. All existing onsite structures and gravel surfaces will be removed as part of the development. The proposed development will convert this area into a 53-lot subdivision with multiple tracts, public streets and improvements along Sommerville Loop. Proposed lots will be a mixture of single-family homes and duplexes. The project is located on Tax Lot 3700 of Tax Map 155-04W-15. See Appendix A(1) for a vicinity map of the project area.

Soil Classification:

The NRCS soil survey of Linn County, Oregon classifies the site soil as Dayton silt loam and Holcomb silt loam, both of which are classified as hydraulic soil group D. Hydraulic soil group D will be applied to onsite and frontage basin areas. The associated curve numbers utilized in this design are 84 and 89 for pre-developed and post-developed pervious areas respectively, and 98 for all impervious areas. Reference Appendix B(1) for a soil classification map and Appendix B(2) for applied curve numbers.

Methodology:

Two hydraulically connected pond volumes located on Tracts A and B will provide detention for the whole development. A flow control manhole will be placed at the downstream end of the pond located on Tract B to restrict flows exiting the detention volumes. A single water quality swale located in the bottom of the pond volume on Tract B will provide water quality for flows from all tributary impervious areas. Frontage improvements along Sommerville Loop will not route to the proposed pond and swale facilities. The rest of the development will be over detained in the proposed pond to adequately restrict post-developed flows, and the frontage will be treated by Contech Curb Inlet Filters.

Basin Delineation:

Onsite basins were created after determining which areas would flow to each stormwater management facility. Proposed low density residential lots are assumed to contain 2,640 SF of new impervious area while medium density lots are assumed to contain impervious area equivalent to the proposed setback areas. See Appendix C(1) for tabulated detention basin areas, and Appendix D(1) and D(2) for the pre-developed and post-developed basin maps, respectively.

Water Quality:

The onsite water quality swale is designed per standards and geometries outlined in section 2.3.12 of the City of Eugene Stormwater Management Manual. The facility will be designed as a grassy swale using an 0.22 in/hr storm intensity to treat all runoff from tributary onsite impervious areas. In total, the swale will treat 3.85 acres (167,694 SF) of impervious area.

The resulting geometries of the proposed swale are shown below:

Bottom Width	12 Feet
Side Slopes	4:1
Length	110 Feet
Slope	0.5%
Residence Time	10.05 Min.
Water Depth	0.31 Feet

The calculation results shown above exhibit that City of Eugene standards are met by treating the required runoff with total residence times over 9 minutes and water depths equal to or below 4 inches. See Appendix C(2) for the swale sizing spreadsheet.

Runoff along the Sommerville Loop frontage will be treated via Contech Curb Inlet Filters. Each of these filters can treat up to 1.5 cfs of runoff. In total, there is 19,167 SF of new impervious area that routes runoff to existing or proposed storm systems along Sommerville Loop. 3,239 SF of this new area is downstream of the proposed treatment curb inlets and will be untreated. 9,658 SF of existing impervious area will route runoff to the curb inlets. A quantity of this existing area equivalent to the untreated new areas will be proxy treated to meet water quality requirements. See Appendix D(3) for a proxy treatment map.

19,167 SF of impervious area produces 0.087 cfs of water quality flow ($Q=CIA=0.9*0.22\text{in/hr}*0.44\text{acres}=0.087\text{ cfs}$). All three proposed curb inlets along the frontage will provide treatment, totaling 4.5 cfs of total treatment capacity, far exceeding the required amount of treatment capacity for the frontage.

Detention:

Per City of Eugene requirements, post-developed flow rates for the 2, 5, and 10-year 24-hour storm events will be restricted to each storm’s respective pre-developed flow rate. Frontage improvements along Sommerville Loop are unable to route runoff to the detention pond volumes. To compensate, the onsite development will be overdetained to provide peak flow matching detention for the whole development. The two proposed pond volumes and the corresponding flow control structure were sized by modeling each in HydroCAD v.10. Flows are restricted by an orifice with the geometries shown below:

- Orifice #1: 6.8” Diameter, 309.00’ Elevation
- Orifice #2: 9.0” Diameter, 312.80’ Elevation

The orifice is set in a flow control manhole per City of Eugene Exhibit 2-7. See Appendix C(4) for pond and orifice geometries as well as pre and post-developed flows, which are summarized before.

Storm Event	Pre to Post-Development Flows	
	Pre-Dev. cfs	Post-Dev. with Detention cfs
2-Year	2.43	2.16
5-Year	3.12	2.73
10-Year	4.42	4.10

As shown in the table above, the detention requirement is met by limiting the peak discharge from each of the return periods from the pre to post-developed conditions. Due to onsite grading restrictions, freeboard will be measured to upstream catch basin and manhole rim elevations. The two pond volumes maintain over a foot of freeboard throughout the entire proposed storm system with the peak 10-year water surface elevation at 313.32' and the lowest upstream structure rim at 314.56'.

Conclusion:

The proposed subdivision satisfies the water quality and detention requirements per City of Harrisburg and City of Eugene.

Appendix A:

Appendix A(1)
Vicinity Map



Appendix B:

Appendix B(1)
Soil Classification



Tables — Hydrologic Soil Group — Summary By Map Unit

Summary by Map Unit — Linn County Area, Oregon (OR639)

Map unit symbol	Map unit name	Rating	Acres in AOI		Percent of AOI
33	Dayton silt loam	D	4.3	50.2%	
46	Holcomb silt loam	D	4.3	49.8%	
Totals for Area of Interest			8.6	100.0%	

Appendix B(2)
Curve Number Table

Table 2-2a Runoff curve numbers for urban areas ^{1/}

Cover description	Average percent impervious area ^{2/}	Curve numbers for hydrologic soil group			
		A	B	C	D
<i>Fully developed urban areas (vegetation established)</i>					
Open space (lawns, parks, golf courses, cemeteries, etc.) ^{3/} :					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50% to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	71	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)			98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	88	98	98
Paved; open ditches (including right-of-way)			89	92	93
Gravel (including right-of-way)			85	89	91
Dirt (including right-of-way)			82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) ^{4/}		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82

Post-Developed Pervious Areas

Pre-Developed Onsite Pervious Areas

Impervious Areas

Appendix C:

Basin Area Tabulated Data
Woodhill Crossing Subdivision

Basin #	Name	Total Area SF	Total Area Acres	Number of Lots	Lot Impervious SF	ROW/Tract Imp SF	Total Impervious SF	Total Pervious (Calc'd) SF
100	Pre-Dev Onsite	315,334	7.24	1	9,381	0	9,381	305,953
101	Post-Dev Onsite	315,334	7.24	53	115,314	52,380	167,694	147,640
200	Pre-Dev Sommerville	39,895	0.92	0	0	12,331	12,331	27,564
201*	Sommerville - Treated	32,590	0.75	0	0	25,586	25,586	7,004
202**	Sommerville - Untreated	7,305	0.17	0	0	5,331	5,331	1,974

*Contains 9,658 SF of existing impervious area

**Contains 2,092 SF of existing impervious area

Woodhill Crossing Subdivision
Water Quality Swale

Appendix C(2)

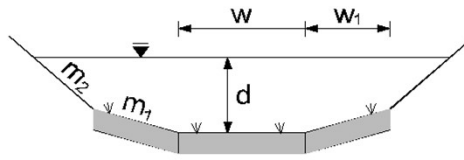
Water Quality Area

Total Impervious = 3.850 ac

Water Quality Flow

= 0.76 cfs

Grassy Swale

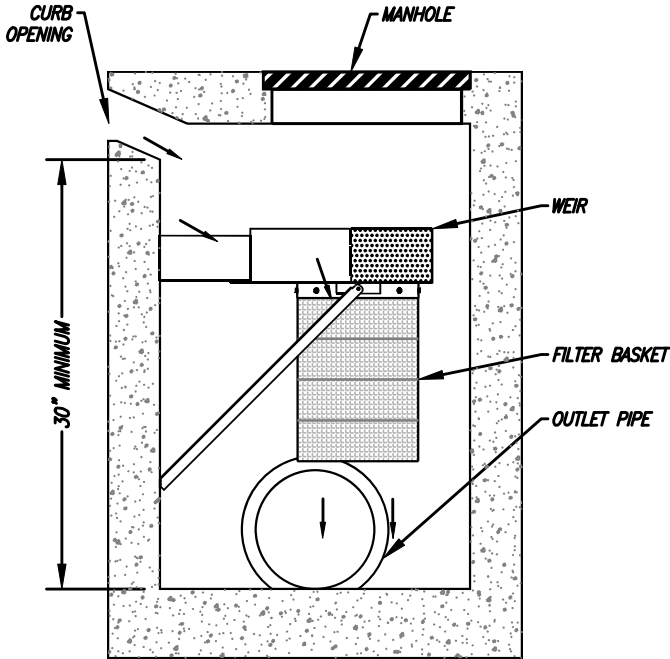


Water Quality Event

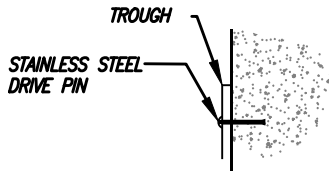
Transverse Properties	X-Sectional Properties
Q = 0.76 cfs	w = 12.0'
s = 0.50%	w ₁ = 2.0'
n = 0.250	m ₁ = 4:1
L = 110.0 LF	m ₂ = 2.5:1
v = 0.18 fps	d = 0.31' ✓
t = 10.05 min ✓	

BIO CLEAN FABRIC FILTER

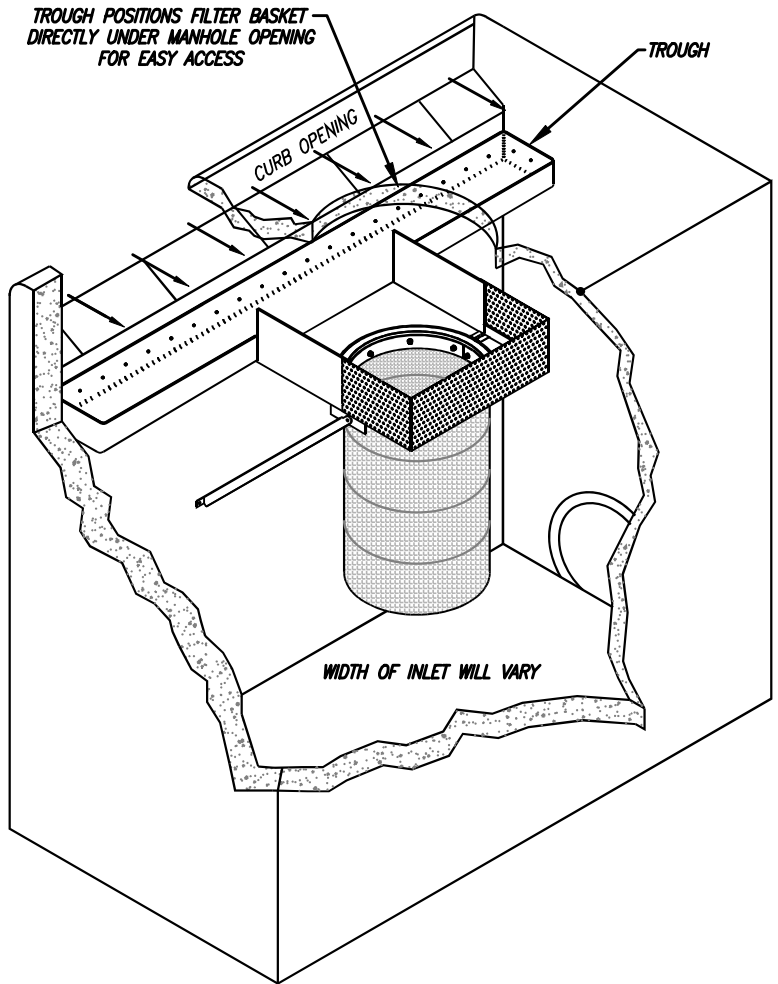
FOR USE IN CURB INLETS



PROFILE VIEW



MOUNTING DETAIL



CONFIGURATION DETAIL

INSTALLATION NOTES

1. TROUGH SYSTEM PROVIDES FOR ENTIRE COVERAGE OF INLET OPENING SO TO DIVERT ALL FLOW TO FILTER.
2. TROUGH SYSTEM TO BE MANUFACTURED FROM MARINE GRADE FIBERGLASS, GEL COATED FOR UV PROTECTION.
3. ALL HARDWARE, FLANGE, FRAME, SHALL BE STAINLESS STEEL.
4. OPTIONAL HYDROCARBON BOOM SHALL BE 2" DIAMETER.
5. FILTER IS LOCATED DIRECTLY UNDER THE MANHOLE FOR EASY REMOVAL AND MAINTENANCE.
6. LENGTH OF TROUGH CAN VARY FROM 2' TO 30'
7. OTHER STANDARD AND CUSTOM MODEL SIZES AVAILABLE – CONTACT CONTECH FOR MORE INFORMATION.
8. BYPASS IS FACILITATED VIA OVERFLOW OF THE TROUGH SYSTEM AND IS EQUAL TO THE CAPACITY OF THE CURB OPENING.
9. ADDITIONAL TREATMENT AND STORAGE CAPACITY CAN BE ACHIEVED BY UTILIZING MULTIPLE FILTER BASKETS.
10. STORAGE CAPACITY BASED ON BASKET HALF FULL.
11. CONCRETE STRUCTURES SOLD SEPARATELY.

NOT TO SCALE

PERFORMANCE NOTES

1. GREATER THAN 80% TOTAL SUSPENDED SOLIDS (TSS) REMOVAL BASED ON THIRD PARTY INDEPENDENTLY OBSERVED FULL-SCALE TESTING.
2. LISTED TREATMENT FLOW RATE BASED UPON OBSERVED FULL SCALE HYDRAULIC FLOW TESTING AND UTILIZING A SAFETY FACTOR OF 2.

MODEL #	TREATMENT FLOW RATE (CFS)	SOLIDS STORAGE CAPACITY (CF)
BIO-CURB-FABRIC-12	1.50	0.88
BIO-CURB-FABRIC-24	2.58	1.77

PROPRIETARY AND CONFIDENTIAL:

THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE SOLE PROPERTY OF QUIKRETE AND ITS COMPANIES. THIS DOCUMENT, NOR ANY PART THEREOF, MAY BE USED, REPRODUCED OR MODIFIED IN ANY MANNER WITH OUT THE WRITTEN CONSENT OF QUIKRETE.



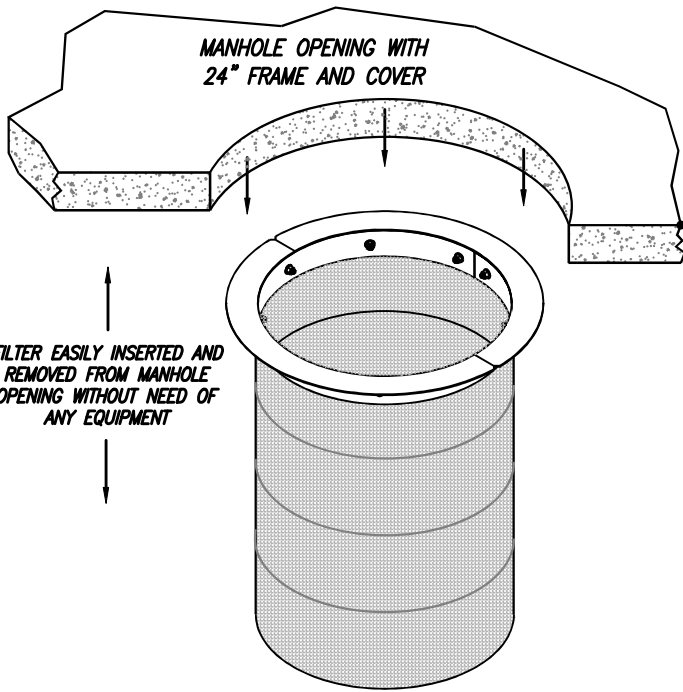
**CURB INLET FILTER
FABRIC
STANDARD DE**

I:\STORWATER\COMPOS\59_FILTER_INSERT\40_STANDARD_DRAWINGS\CIF-FABRIC\FABRIC_CURB_INLET_FILTER.DWG 5/19/2023 9:07 AM

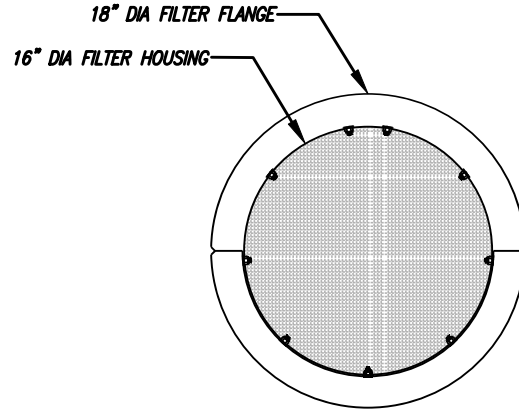
BIO CLEAN FABRIC FILTER

FOR USE IN CURB INLETS

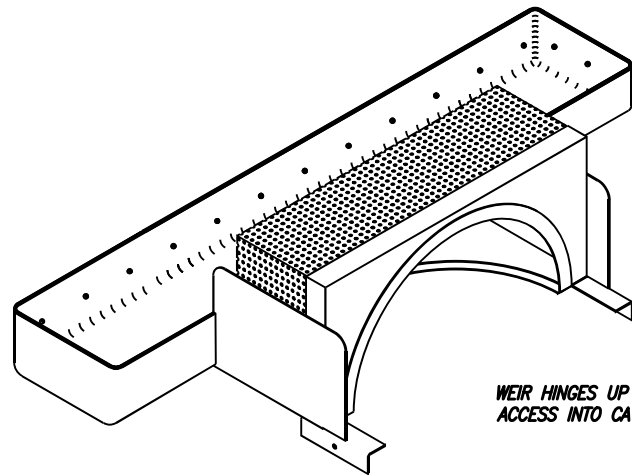
1.



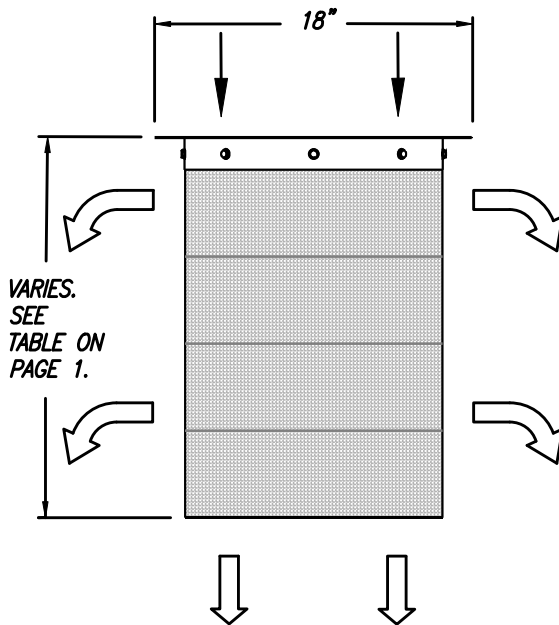
INSTALLATION DETAIL



DETAIL OF DIAMETERS



WEIR DETAIL



FLOW PATH

NOT TO SCALE

FLOW RATES - FABRIC FILTER	
FILTER TREATMENT FLOW RATE	2.58 CFS
FILTER SURFACE AREA = 11.19 SQ FT PER 24" BASKET SAFETY FACTOR = 2	
LOADING RATE APPLIED = 207.29 GPM/SQ FT	
$\text{FILTER TREATMENT FLOW RATE} = 11.19 \times 207.29 / 2 = 1159.79 \text{ GPM} = 2.58 \text{ CFS}$	
*FILTER FLOW RATE CALCULATED BASED UPON INDEPENDENT PERFORMANCE TESTING USING A LOADING RATE OF 207.29 GPM/SQ FT FILTER SURFACE AREA.	
SEE PAGE 1 FOR NOTES	

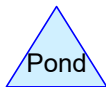
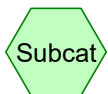
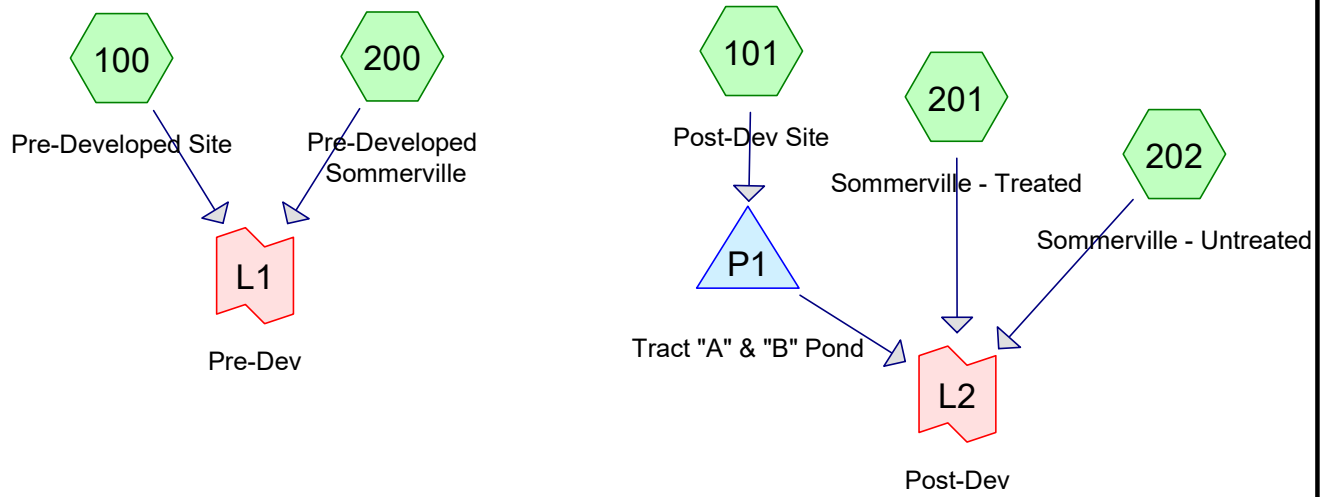
PROPRIETARY AND CONFIDENTIAL:

THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE SOLE PROPERTY OF QUIKRETE AND ITS COMPANIES. THIS DOCUMENT, NOR ANY PART THEREOF, MAY BE USED, REPRODUCED OR MODIFIED IN ANY MANNER WITHOUT THE WRITTEN CONSENT OF QUIKRETE.



CURB INLET FILTER
FABRIC
STANDARD DE

I:\STORWATER\COMMOPS\59 FILTER INSERT\40 STANDARD DRAWINGS\CIF-FABRIC\FABRIC CURB INLET FILTER.DWG 5/19/2023 9:07 AM



Routing Diagram for 1113-001 Woodhill Crossing Pond Sizing
Prepared by {enter your company name here}, Printed 12/19/2023
HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

1113-001 Woodhill Crossing Pond Sizing

Prepared by {enter your company name here}

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Printed 12/19/2023

Page 2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
7.024	84	50-75% Grass cover, Fair, HSG D (100)
5.058	98	Impervious (100, 101, 200, 201, 202)
3.595	89	Pervious (101, 201, 202)
0.633	80	Pervious (200)
16.310	89	TOTAL AREA

1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 2-year Rainfall=3.12"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 3

Summary for Subcatchment 100: Pre-Developed Site

Runoff = 2.05 cfs @ 8.01 hrs, Volume= 0.997 af, Depth= 1.65"

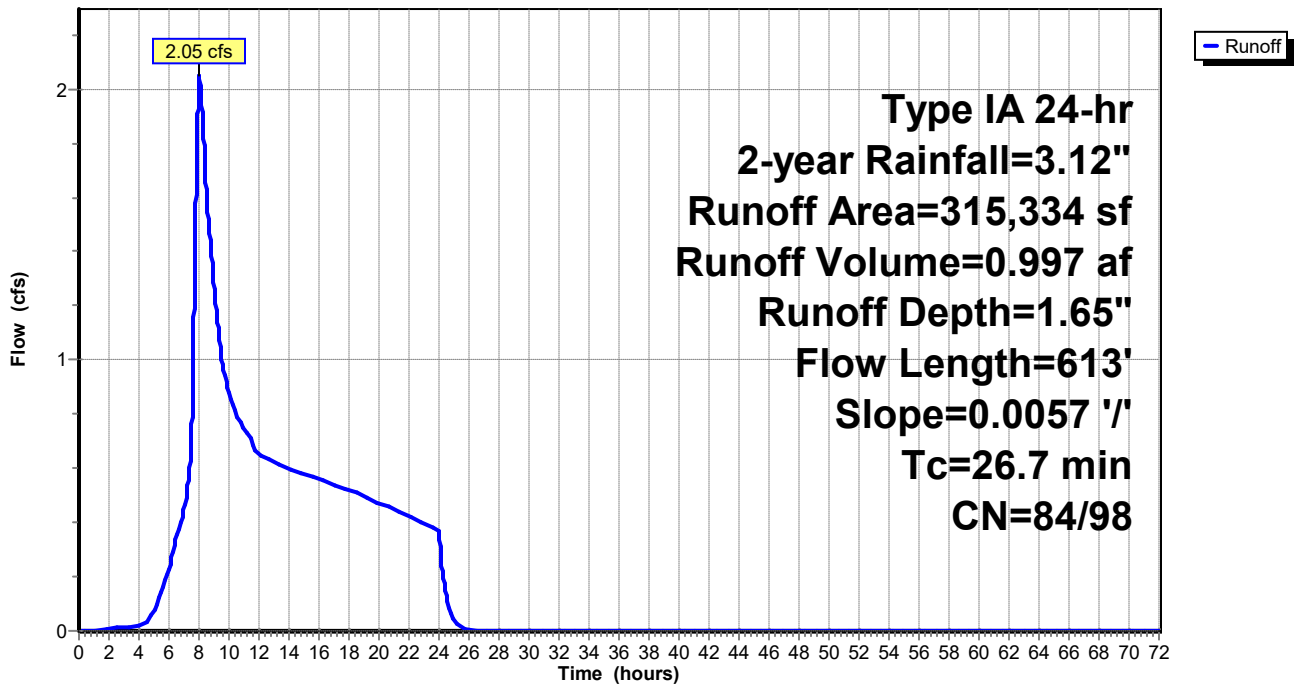
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2-year Rainfall=3.12"

Area (sf)	CN	Description
9,381	98	Impervious
305,953	84	50-75% Grass cover, Fair, HSG D
315,334	84	Weighted Average
305,953	84	97.03% Pervious Area
9,381	98	2.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.0	300	0.0057	0.26		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 3.12"
7.7	313	0.0057	0.68		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
26.7	613	Total			

Subcatchment 100: Pre-Developed Site

Hydrograph



1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 2-year Rainfall=3.12"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 4

Summary for Subcatchment 101: Post-Dev Site

Runoff = 4.51 cfs @ 7.90 hrs, Volume= 1.494 af, Depth= 2.48"

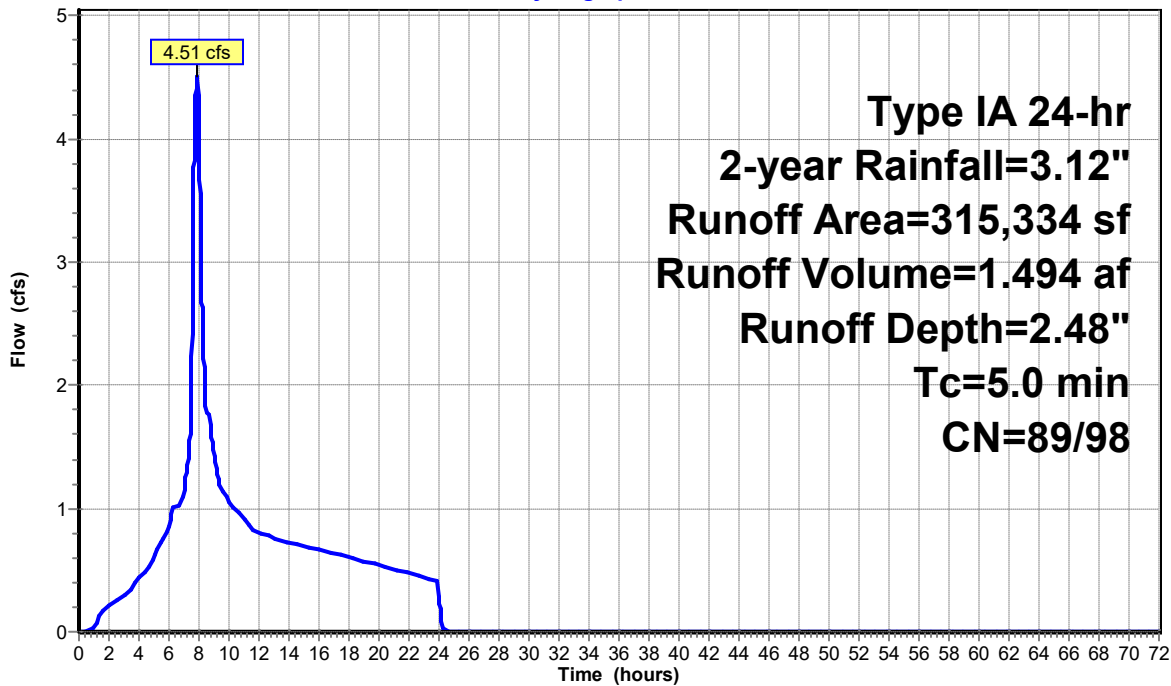
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2-year Rainfall=3.12"

	Area (sf)	CN	Description
*	167,694	98	Impervious
*	147,640	89	Pervious
	315,334	94	Weighted Average
	147,640	89	46.82% Pervious Area
	167,694	98	53.18% Impervious Area

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

Subcatchment 101: Post-Dev Site

Hydrograph



Runoff

1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 2-year Rainfall=3.12"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 5

Summary for Subcatchment 200: Pre-Developed Sommerville

Runoff = 0.39 cfs @ 7.94 hrs, Volume= 0.139 af, Depth= 1.82"

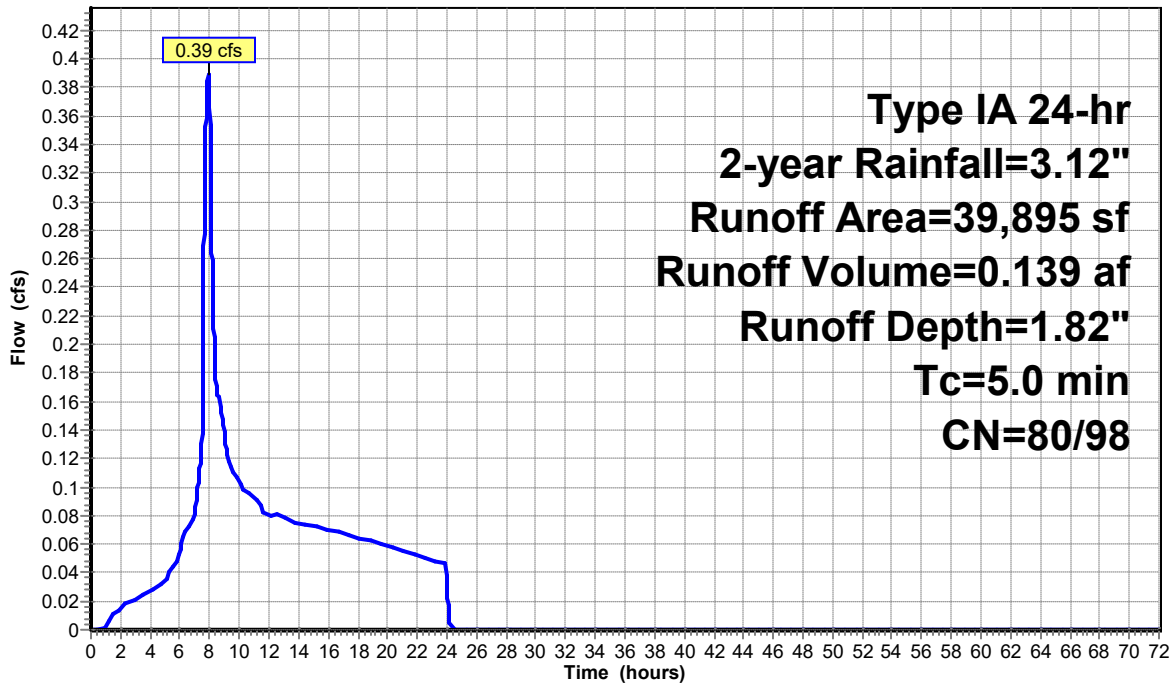
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2-year Rainfall=3.12"

	Area (sf)	CN	Description
*	12,331	98	Impervious
*	27,564	80	Pervious
	39,895	86	Weighted Average
	27,564	80	69.09% Pervious Area
	12,331	98	30.91% Impervious Area

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

Subcatchment 200: Pre-Developed Sommerville

Hydrograph



1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 2-year Rainfall=3.12"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 6

Summary for Subcatchment 201: Sommerville - Treated

Runoff = 0.51 cfs @ 7.89 hrs, Volume= 0.168 af, Depth= 2.70"

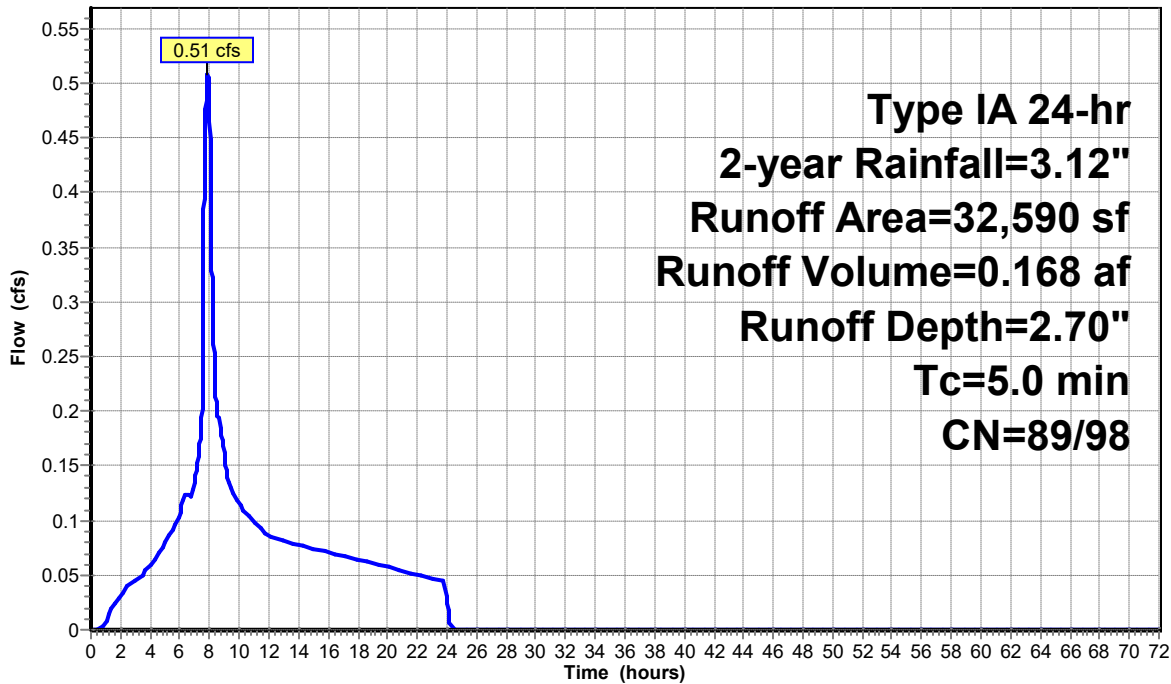
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2-year Rainfall=3.12"

	Area (sf)	CN	Description
*	25,586	98	Impervious
*	7,004	89	Pervious
	32,590	96	Weighted Average
	7,004	89	21.49% Pervious Area
	25,586	98	78.51% Impervious Area

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

Subcatchment 201: Sommerville - Treated

Hydrograph



Runoff

1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 2-year Rainfall=3.12"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 7

Summary for Subcatchment 202: Sommerville - Untreated

Runoff = 0.11 cfs @ 7.89 hrs, Volume= 0.037 af, Depth= 2.65"

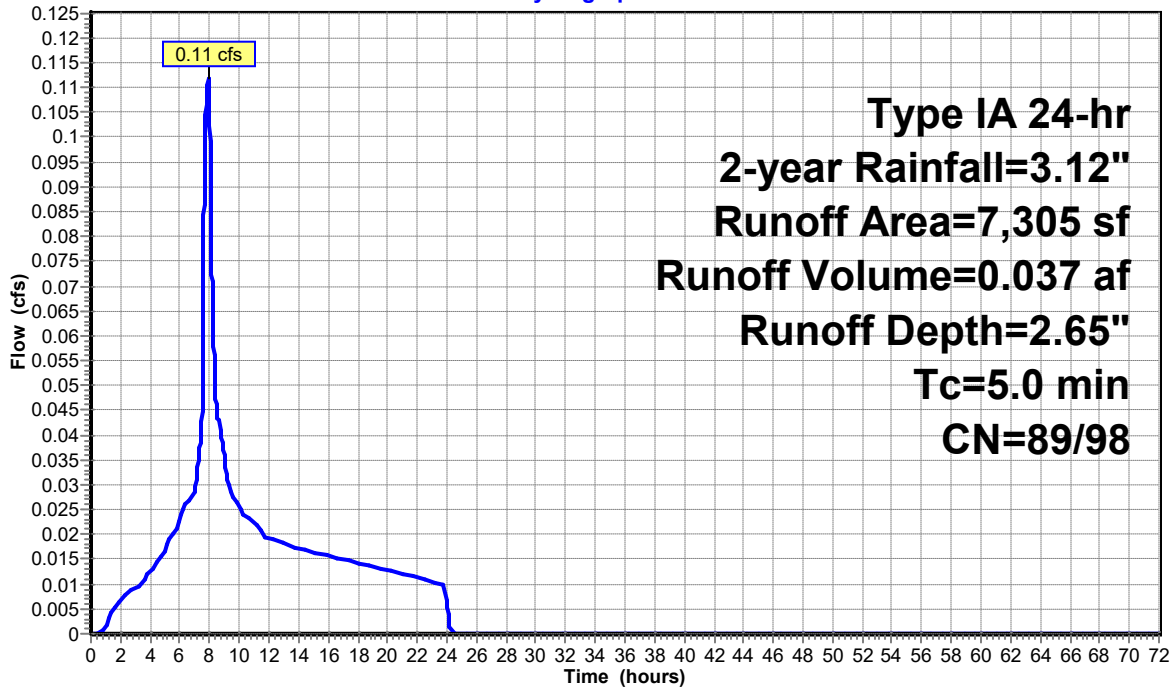
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 2-year Rainfall=3.12"

	Area (sf)	CN	Description
*	5,331	98	Impervious
*	1,974	89	Pervious
	7,305	96	Weighted Average
	1,974	89	27.02% Pervious Area
	5,331	98	72.98% Impervious Area

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

Subcatchment 202: Sommerville - Untreated

Hydrograph



Runoff

1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 2-year Rainfall=3.12"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 8

Summary for Pond P1: Tract "A" & "B" Pond

Inflow Area = 7.239 ac, 53.18% Impervious, Inflow Depth = 2.48" for 2-year event
 Inflow = 4.51 cfs @ 7.90 hrs, Volume= 1.494 af
 Outflow = 1.68 cfs @ 8.75 hrs, Volume= 1.494 af, Atten= 63%, Lag= 50.9 min
 Primary = 1.68 cfs @ 8.75 hrs, Volume= 1.494 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 312.79' @ 8.75 hrs Surf.Area= 7,716 sf Storage= 6,961 cf

Plug-Flow detention time= 22.2 min calculated for 1.494 af (100% of inflow)
 Center-of-Mass det. time= 22.2 min (722.8 - 700.6)

Volume	Invert	Avail.Storage	Storage Description
#1	311.88'	31,812 cf	Tract B (Conic) Listed below (Recalc)
#2	312.88'	5,261 cf	Tract A (Prismatic) Listed below (Recalc)
		37,072 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
311.88	7,512	0	0	7,512
312.88	7,735	7,623	7,623	7,893
313.88	7,956	7,845	15,468	8,277
314.88	8,173	8,064	23,533	8,663
315.88	8,386	8,279	31,812	9,049

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
312.88	1,242	0	0
313.88	1,571	1,407	1,407
314.88	1,918	1,745	3,151
315.88	2,301	2,110	5,261

Device	Routing	Invert	Outlet Devices
#1	Primary	311.00'	15.0" Round Culvert L= 27.5' Ke= 0.900 Inlet / Outlet Invert= 311.00' / 310.71' S= 0.0105 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	309.00'	6.8" Horiz. Low Orifice C= 0.620 Limited to weir flow at low heads
#3	Device 1	312.80'	9.0" Horiz. High Orifice C= 0.620 Limited to weir flow at low heads

Primary OutFlow Max=1.68 cfs @ 8.75 hrs HW=312.79' (Free Discharge)

- 1=Culvert (Passes 1.68 cfs of 5.04 cfs potential flow)
- 2=Low Orifice (Orifice Controls 1.68 cfs @ 6.66 fps)
- 3=High Orifice (Controls 0.00 cfs)

1113-001 Woodhill Crossing Pond Sizing

Prepared by {enter your company name here}

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

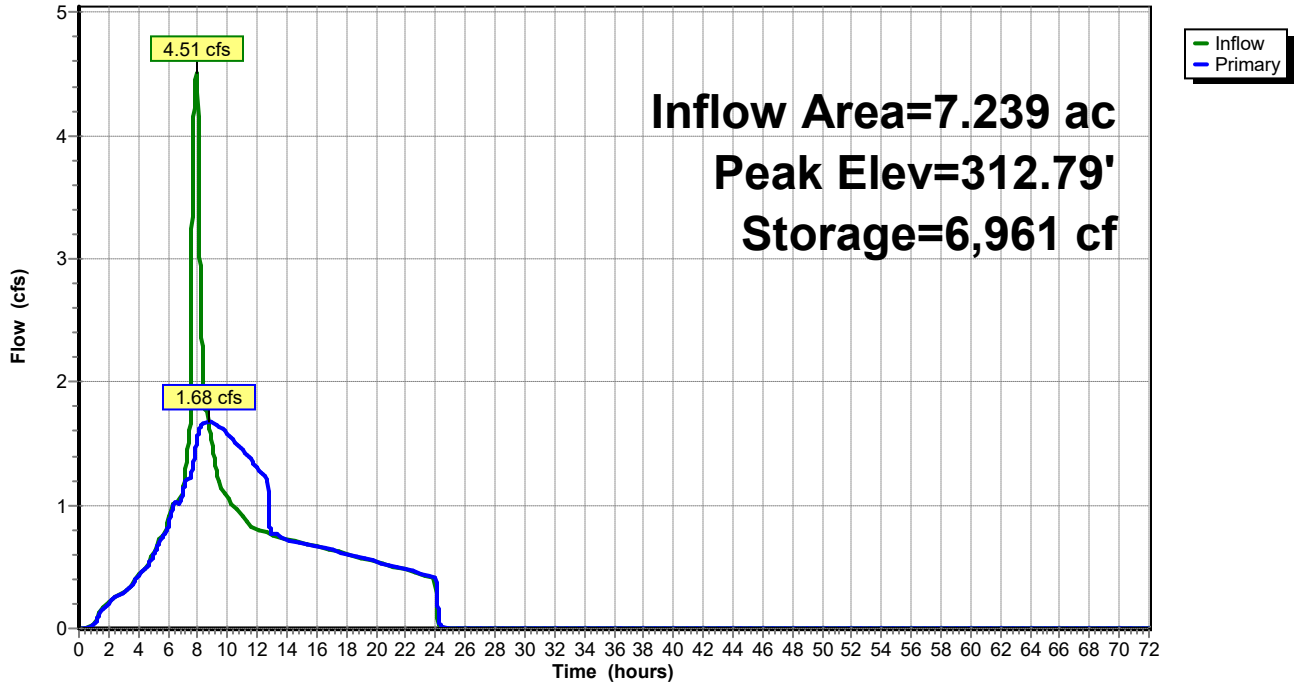
Type IA 24-hr 2-year Rainfall=3.12"

Printed 12/19/2023

Page 9

Pond P1: Tract "A" & "B" Pond

Hydrograph



1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 2-year Rainfall=3.12"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 10

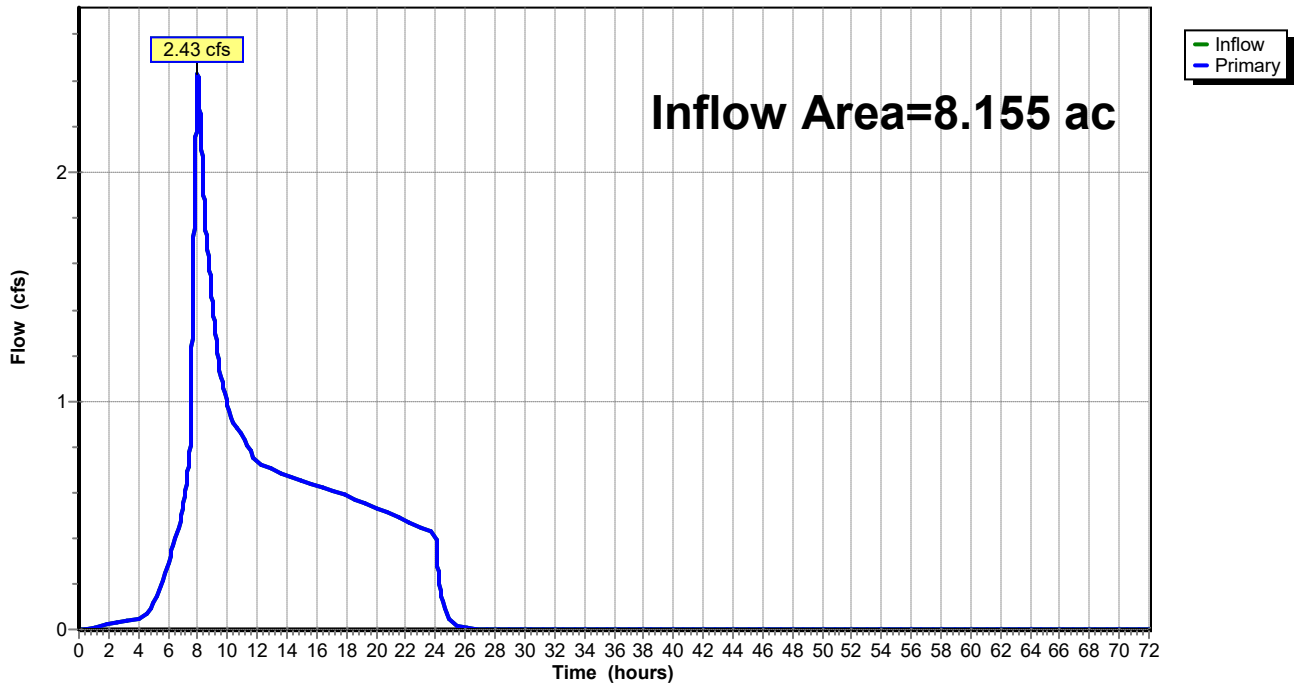
Summary for Link L1: Pre-Dev

Inflow Area = 8.155 ac, 6.11% Impervious, Inflow Depth = 1.67" for 2-year event
Inflow = 2.43 cfs @ 8.01 hrs, Volume= 1.136 af
Primary = 2.43 cfs @ 8.01 hrs, Volume= 1.136 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link L1: Pre-Dev

Hydrograph



1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 2-year Rainfall=3.12"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 11

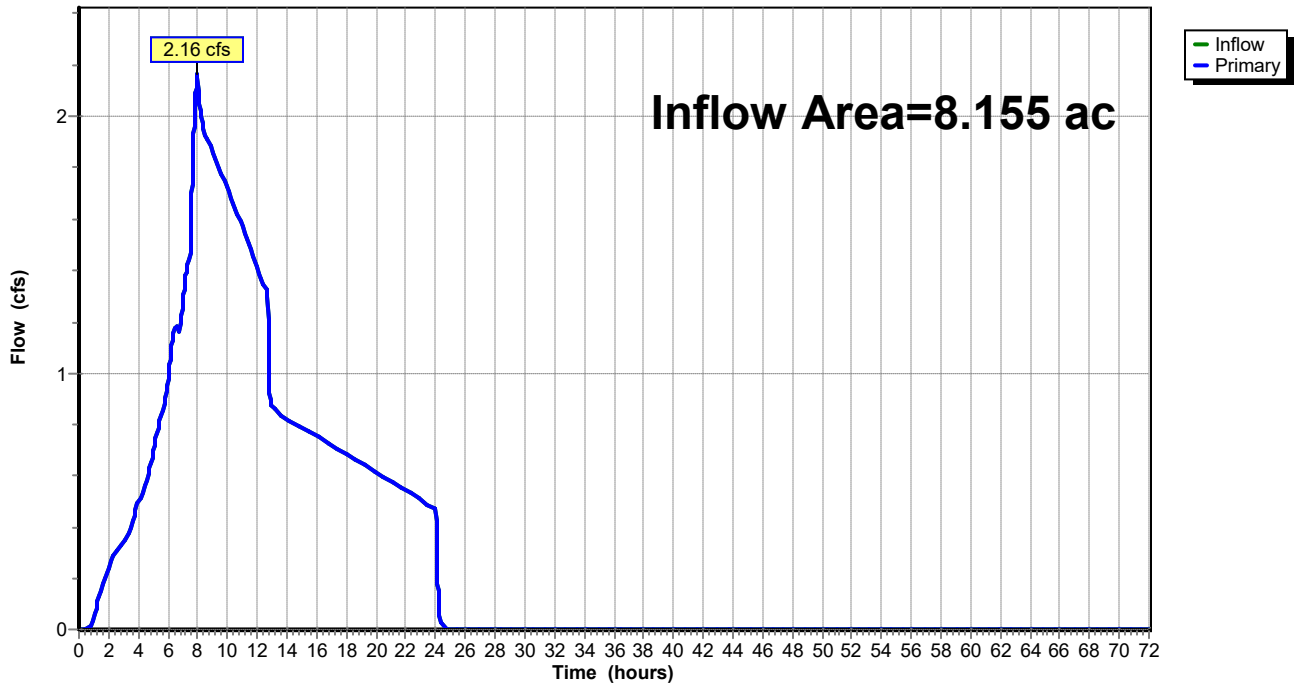
Summary for Link L2: Post-Dev

Inflow Area = 8.155 ac, 55.91% Impervious, Inflow Depth = 2.50" for 2-year event
Inflow = 2.16 cfs @ 8.00 hrs, Volume= 1.699 af
Primary = 2.16 cfs @ 8.00 hrs, Volume= 1.699 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link L2: Post-Dev

Hydrograph



1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 5-year Rainfall=3.60"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 12

Summary for Subcatchment 100: Pre-Developed Site

Runoff = 2.65 cfs @ 8.01 hrs, Volume= 1.244 af, Depth= 2.06"

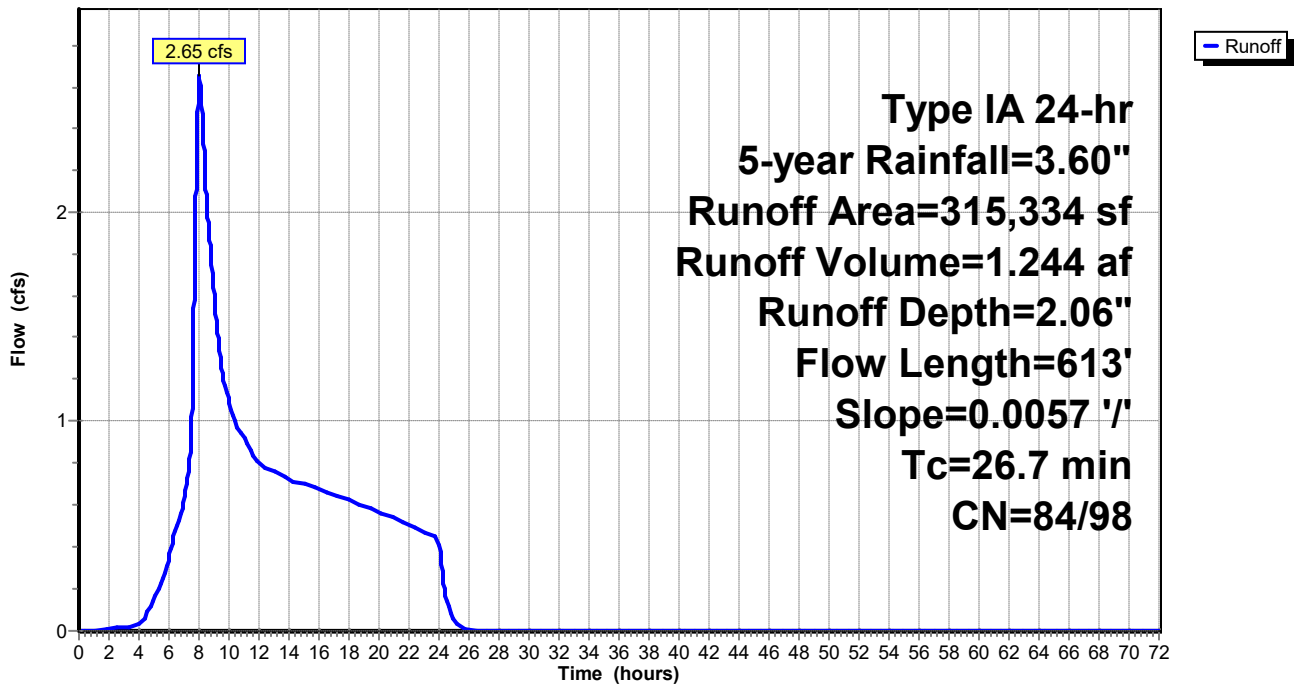
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 5-year Rainfall=3.60"

Area (sf)	CN	Description
9,381	98	Impervious
305,953	84	50-75% Grass cover, Fair, HSG D
315,334	84	Weighted Average
305,953	84	97.03% Pervious Area
9,381	98	2.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.0	300	0.0057	0.26		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 3.12"
7.7	313	0.0057	0.68		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
26.7	613	Total			

Subcatchment 100: Pre-Developed Site

Hydrograph



1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 5-year Rainfall=3.60"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 13

Summary for Subcatchment 101: Post-Dev Site

Runoff = 5.36 cfs @ 7.90 hrs, Volume= 1.772 af, Depth= 2.94"

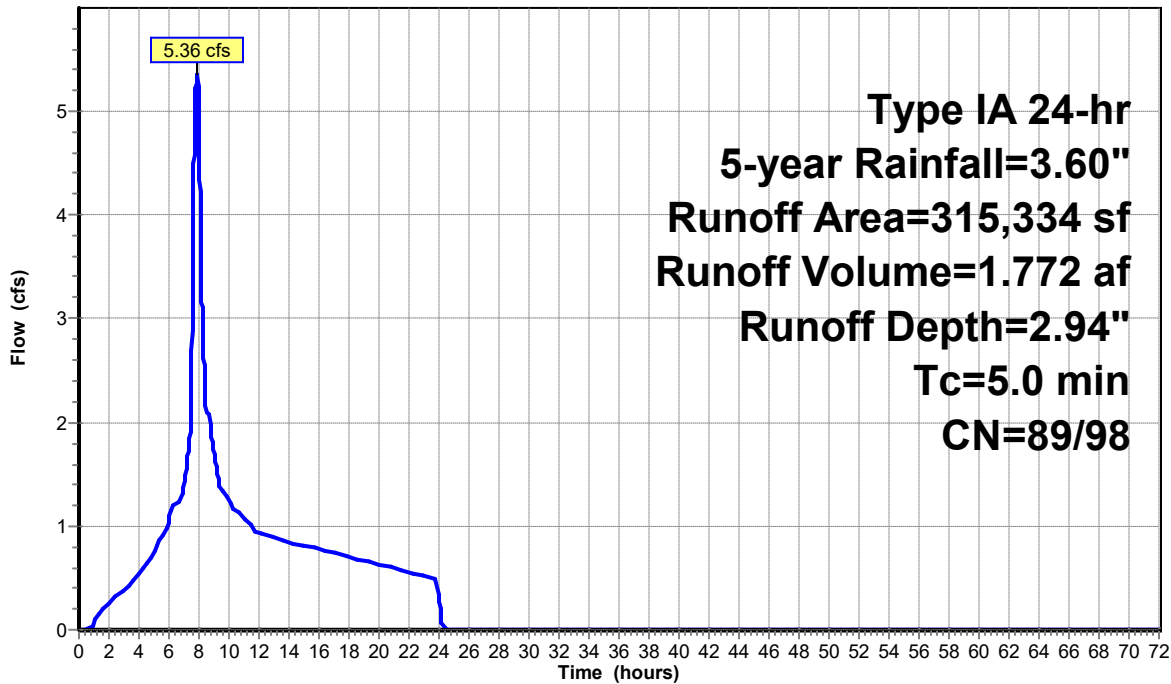
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 5-year Rainfall=3.60"

	Area (sf)	CN	Description
*	167,694	98	Impervious
*	147,640	89	Pervious
	315,334	94	Weighted Average
	147,640	89	46.82% Pervious Area
	167,694	98	53.18% Impervious Area

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

Subcatchment 101: Post-Dev Site

Hydrograph



Runoff

1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 5-year Rainfall=3.60"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 14

Summary for Subcatchment 200: Pre-Developed Somerville

Runoff = 0.48 cfs @ 7.93 hrs, Volume= 0.170 af, Depth= 2.23"

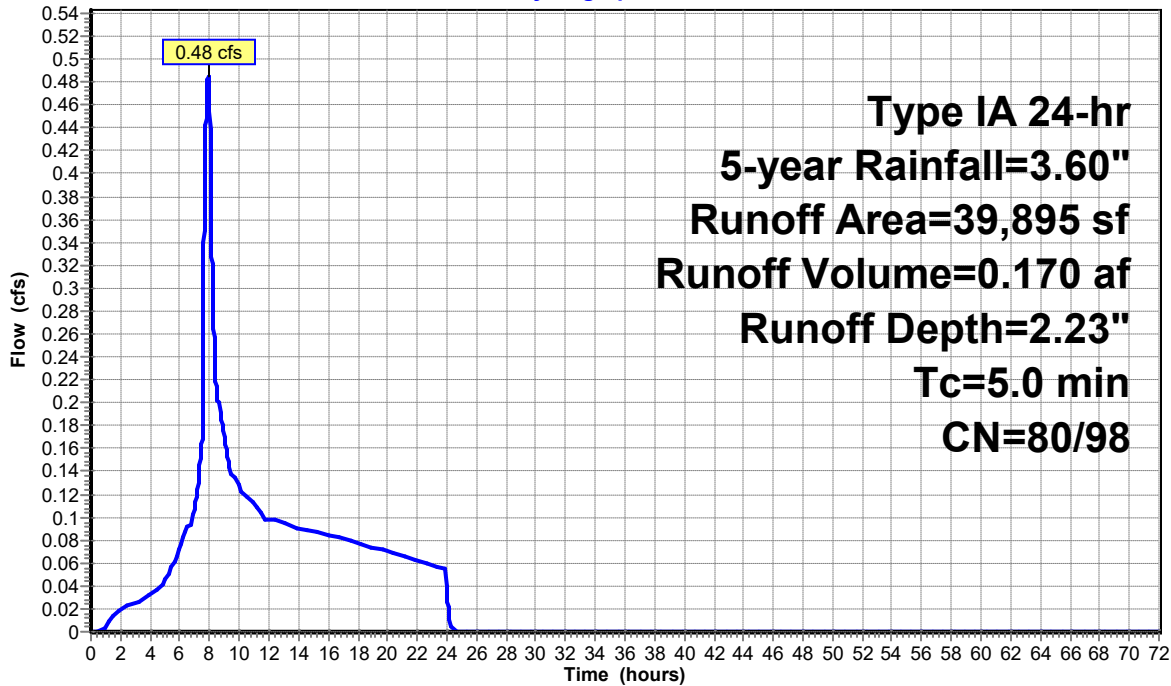
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 5-year Rainfall=3.60"

	Area (sf)	CN	Description
*	12,331	98	Impervious
*	27,564	80	Pervious
	39,895	86	Weighted Average
	27,564	80	69.09% Pervious Area
	12,331	98	30.91% Impervious Area

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

Subcatchment 200: Pre-Developed Somerville

Hydrograph



Runoff

1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 5-year Rainfall=3.60"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 15

Summary for Subcatchment 201: Sommerville - Treated

Runoff = 0.60 cfs @ 7.89 hrs, Volume= 0.198 af, Depth= 3.17"

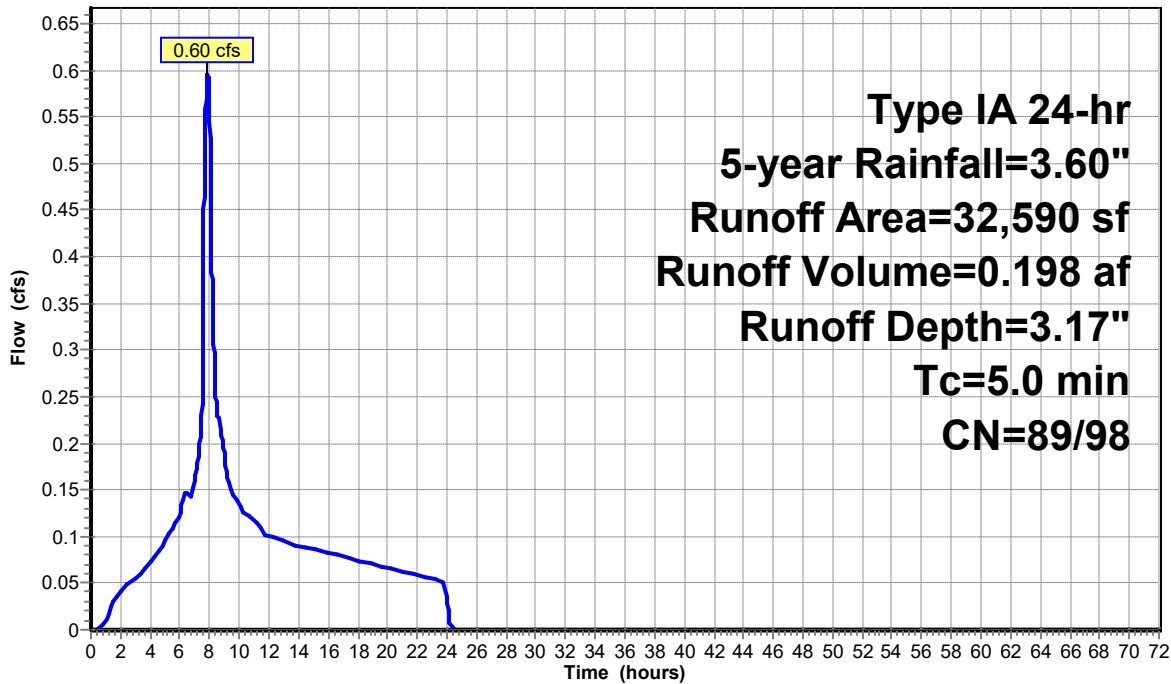
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 5-year Rainfall=3.60"

	Area (sf)	CN	Description
*	25,586	98	Impervious
*	7,004	89	Pervious
	32,590	96	Weighted Average
	7,004	89	21.49% Pervious Area
	25,586	98	78.51% Impervious Area

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

Subcatchment 201: Sommerville - Treated

Hydrograph



Runoff

1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 5-year Rainfall=3.60"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 16

Summary for Subcatchment 202: Sommerville - Untreated

Runoff = 0.13 cfs @ 7.89 hrs, Volume= 0.044 af, Depth= 3.12"

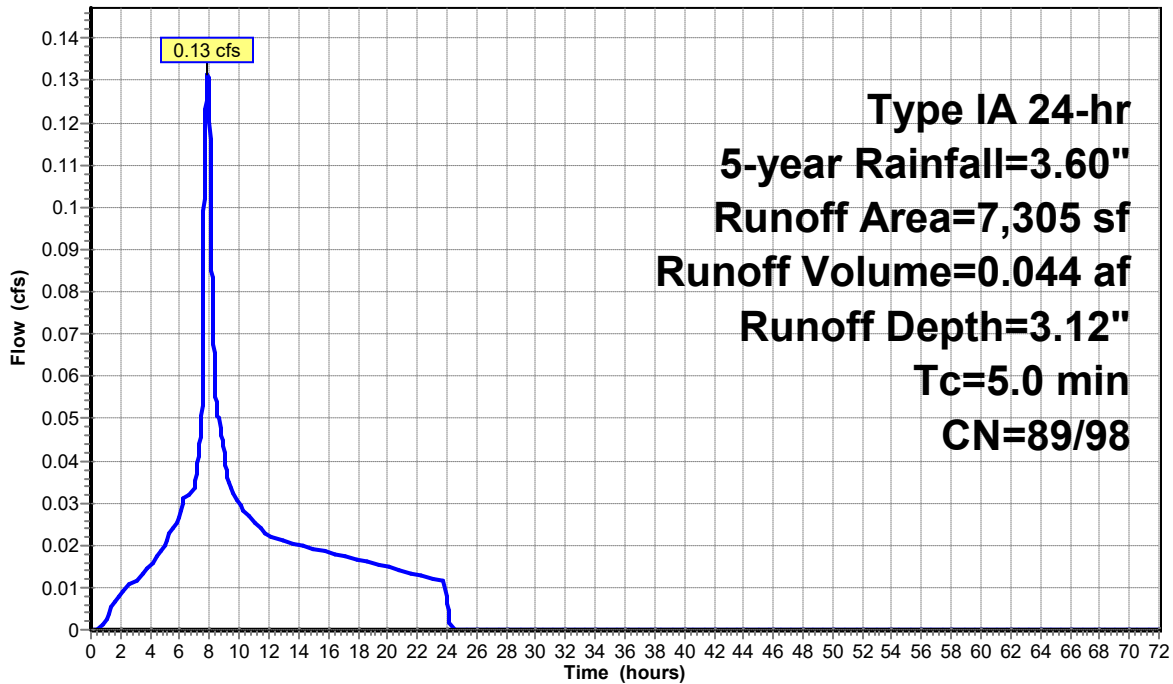
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 5-year Rainfall=3.60"

	Area (sf)	CN	Description
*	5,331	98	Impervious
*	1,974	89	Pervious
	7,305	96	Weighted Average
	1,974	89	27.02% Pervious Area
	5,331	98	72.98% Impervious Area

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

Subcatchment 202: Sommerville - Untreated

Hydrograph



Runoff

1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 5-year Rainfall=3.60"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 17

Summary for Pond P1: Tract "A" & "B" Pond

Inflow Area = 7.239 ac, 53.18% Impervious, Inflow Depth = 2.94" for 5-year event
 Inflow = 5.36 cfs @ 7.90 hrs, Volume= 1.772 af
 Outflow = 2.39 cfs @ 8.38 hrs, Volume= 1.772 af, Atten= 55%, Lag= 29.0 min
 Primary = 2.39 cfs @ 8.38 hrs, Volume= 1.772 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 312.99' @ 8.38 hrs Surf.Area= 9,035 sf Storage= 8,583 cf

Plug-Flow detention time= 26.0 min calculated for 1.772 af (100% of inflow)
 Center-of-Mass det. time= 26.0 min (721.0 - 695.0)

Volume	Invert	Avail.Storage	Storage Description
#1	311.88'	31,812 cf	Tract B (Conic) Listed below (Recalc)
#2	312.88'	5,261 cf	Tract A (Prismatic) Listed below (Recalc)
		37,072 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
311.88	7,512	0	0	7,512
312.88	7,735	7,623	7,623	7,893
313.88	7,956	7,845	15,468	8,277
314.88	8,173	8,064	23,533	8,663
315.88	8,386	8,279	31,812	9,049

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
312.88	1,242	0	0
313.88	1,571	1,407	1,407
314.88	1,918	1,745	3,151
315.88	2,301	2,110	5,261

Device	Routing	Invert	Outlet Devices
#1	Primary	311.00'	15.0" Round Culvert L= 27.5' Ke= 0.900 Inlet / Outlet Invert= 311.00' / 310.71' S= 0.0105 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	309.00'	6.8" Horiz. Low Orifice C= 0.620 Limited to weir flow at low heads
#3	Device 1	312.80'	9.0" Horiz. High Orifice C= 0.620 Limited to weir flow at low heads

Primary OutFlow Max=2.39 cfs @ 8.38 hrs HW=312.99' (Free Discharge)

- 1=Culvert (Passes 2.39 cfs of 5.44 cfs potential flow)
- 2=Low Orifice (Orifice Controls 1.77 cfs @ 7.01 fps)
- 3=High Orifice (Weir Controls 0.62 cfs @ 1.41 fps)

1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 5-year Rainfall=3.60"

Prepared by {enter your company name here}

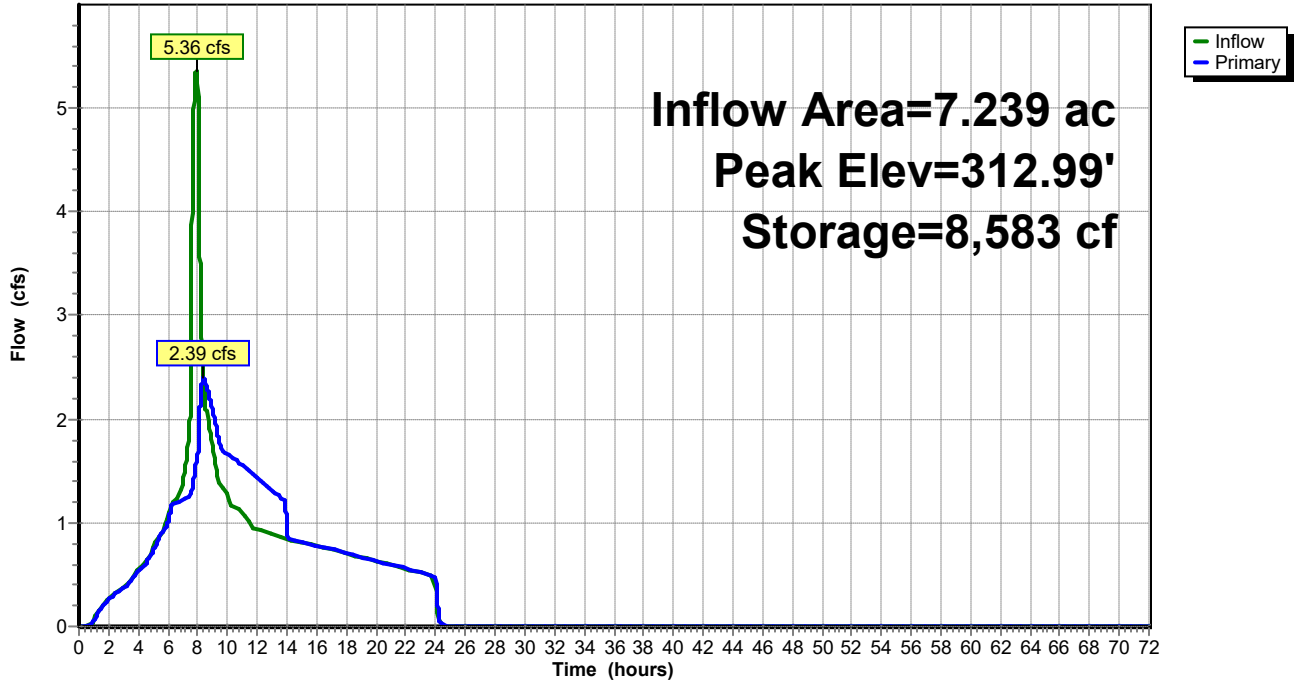
Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 18

Pond P1: Tract "A" & "B" Pond

Hydrograph



1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 5-year Rainfall=3.60"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 19

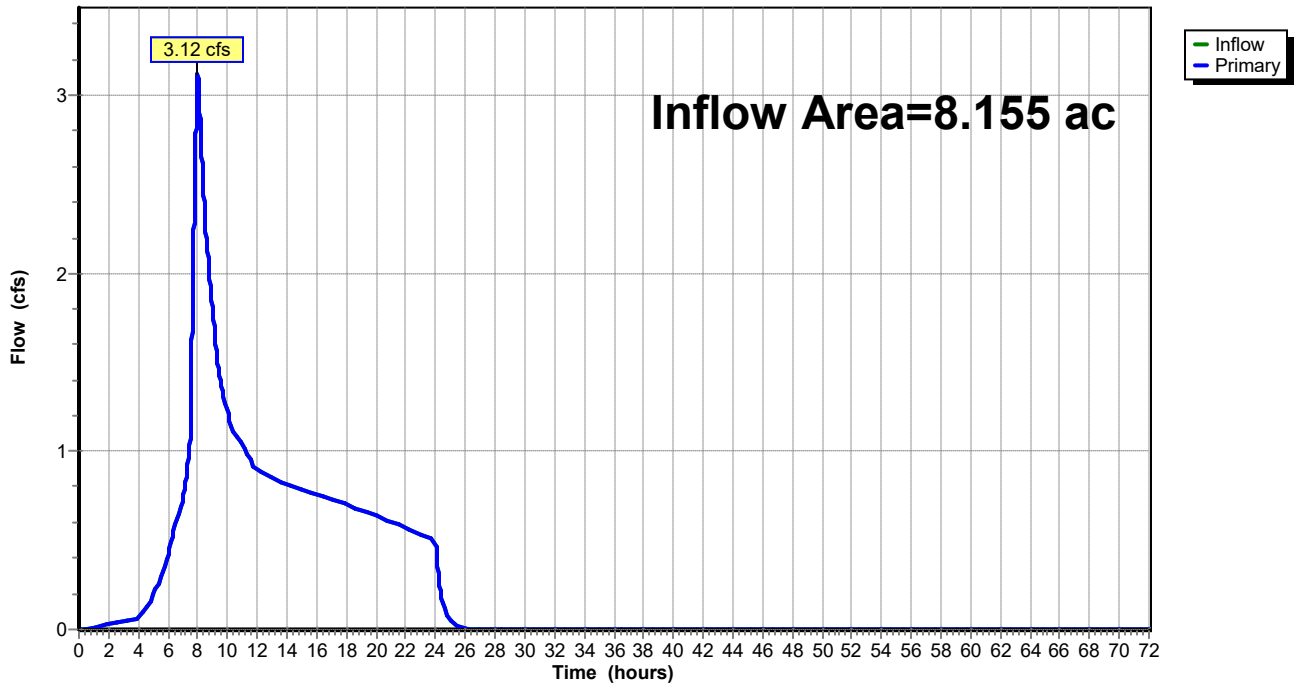
Summary for Link L1: Pre-Dev

Inflow Area = 8.155 ac, 6.11% Impervious, Inflow Depth = 2.08" for 5-year event
Inflow = 3.12 cfs @ 8.00 hrs, Volume= 1.414 af
Primary = 3.12 cfs @ 8.00 hrs, Volume= 1.414 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link L1: Pre-Dev

Hydrograph



1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 5-year Rainfall=3.60"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 20

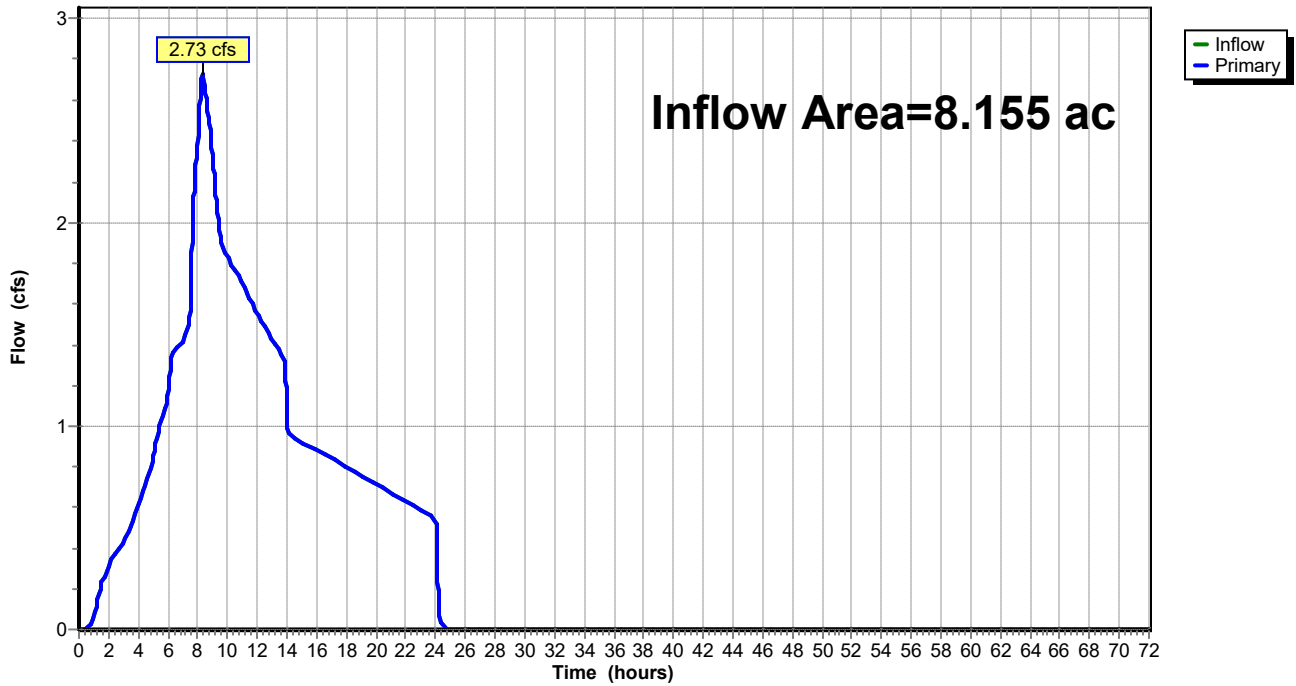
Summary for Link L2: Post-Dev

Inflow Area = 8.155 ac, 55.91% Impervious, Inflow Depth = 2.96" for 5-year event
Inflow = 2.73 cfs @ 8.31 hrs, Volume= 2.013 af
Primary = 2.73 cfs @ 8.31 hrs, Volume= 2.013 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link L2: Post-Dev

Hydrograph



1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 10-year Rainfall=4.46"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 21

Summary for Subcatchment 100: Pre-Developed Site

Runoff = 3.77 cfs @ 8.01 hrs, Volume= 1.703 af, Depth= 2.82"

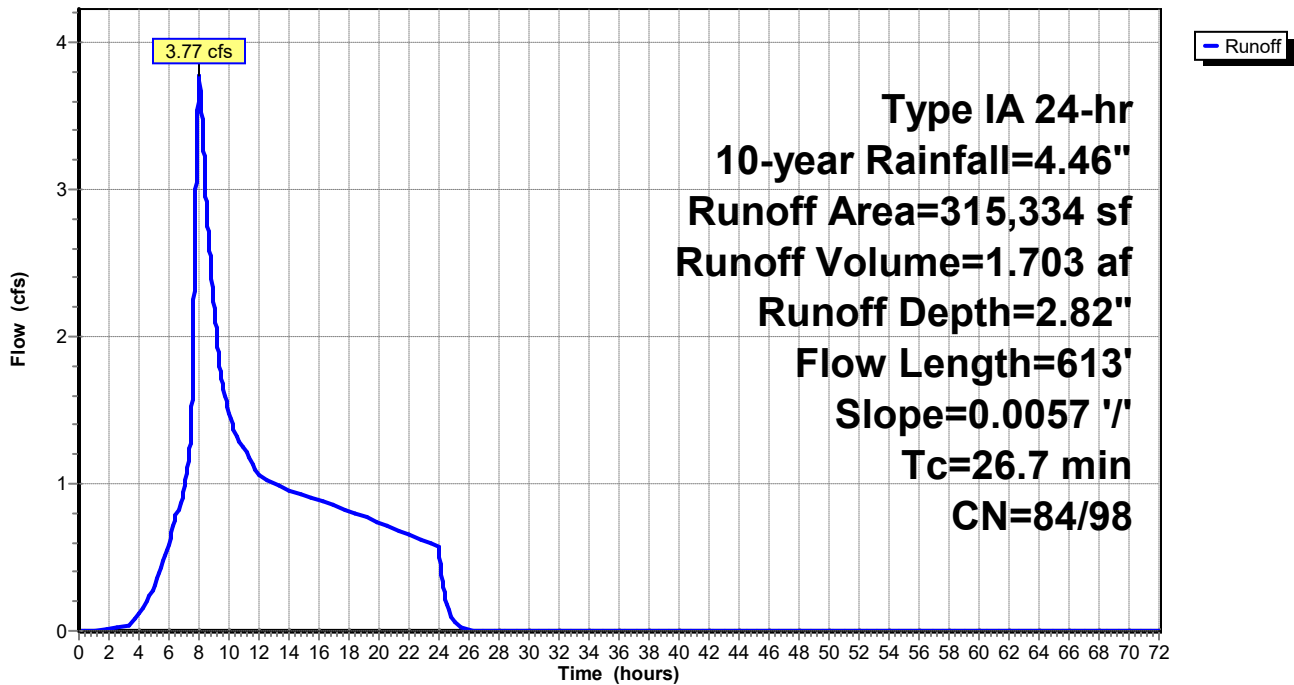
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10-year Rainfall=4.46"

Area (sf)	CN	Description
9,381	98	Impervious
305,953	84	50-75% Grass cover, Fair, HSG D
315,334	84	Weighted Average
305,953	84	97.03% Pervious Area
9,381	98	2.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.0	300	0.0057	0.26		Sheet Flow, Cultivated: Residue<=20% n= 0.060 P2= 3.12"
7.7	313	0.0057	0.68		Shallow Concentrated Flow, Cultivated Straight Rows Kv= 9.0 fps
26.7	613	Total			

Subcatchment 100: Pre-Developed Site

Hydrograph



1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 10-year Rainfall=4.46"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 22

Summary for Subcatchment 101: Post-Dev Site

Runoff = 6.88 cfs @ 7.89 hrs, Volume= 2.275 af, Depth= 3.77"

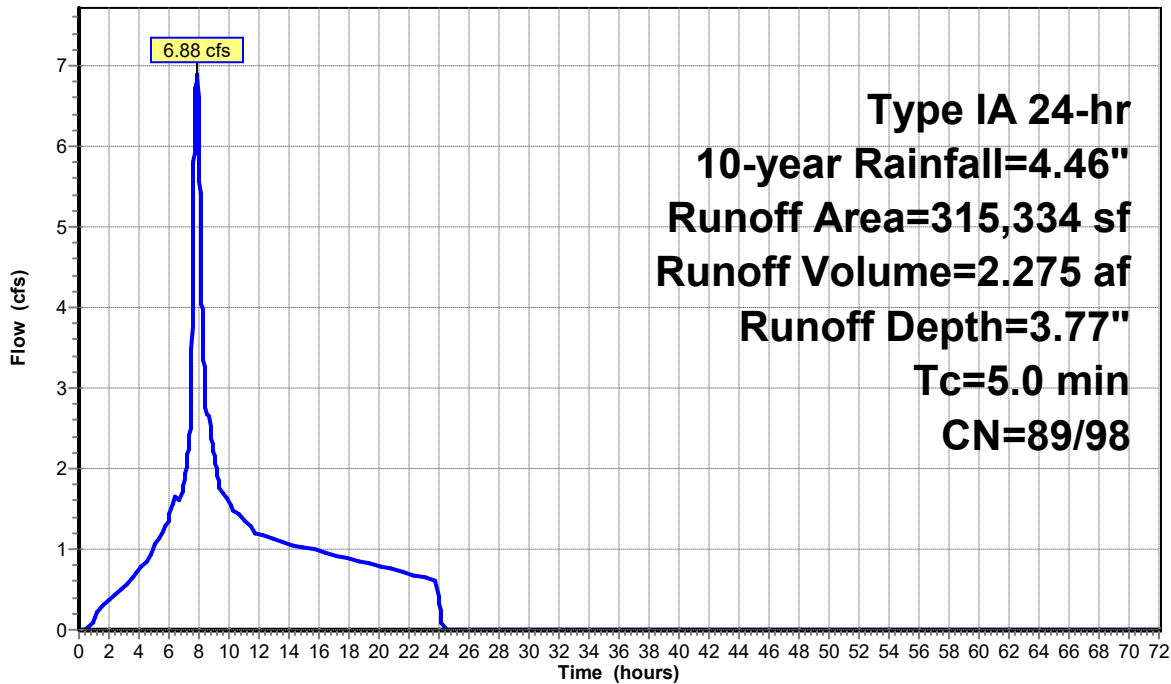
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10-year Rainfall=4.46"

	Area (sf)	CN	Description
*	167,694	98	Impervious
*	147,640	89	Pervious
	315,334	94	Weighted Average
	147,640	89	46.82% Pervious Area
	167,694	98	53.18% Impervious Area

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

Subcatchment 101: Post-Dev Site

Hydrograph



Runoff

1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 10-year Rainfall=4.46"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 23

Summary for Subcatchment 200: Pre-Developed Somerville

Runoff = 0.66 cfs @ 7.92 hrs, Volume= 0.228 af, Depth= 2.98"

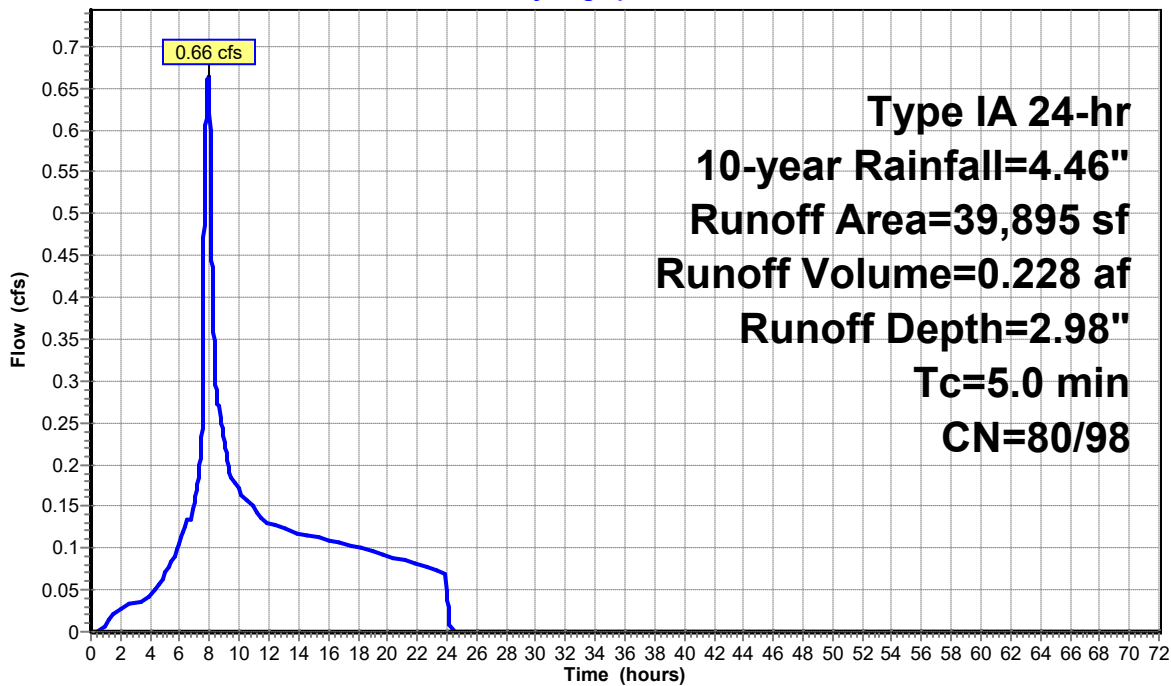
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10-year Rainfall=4.46"

	Area (sf)	CN	Description
*	12,331	98	Impervious
*	27,564	80	Pervious
	39,895	86	Weighted Average
	27,564	80	69.09% Pervious Area
	12,331	98	30.91% Impervious Area

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

Subcatchment 200: Pre-Developed Somerville

Hydrograph



Runoff

1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 10-year Rainfall=4.46"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 24

Summary for Subcatchment 201: Sommerville - Treated

Runoff = 0.75 cfs @ 7.88 hrs, Volume= 0.250 af, Depth= 4.02"

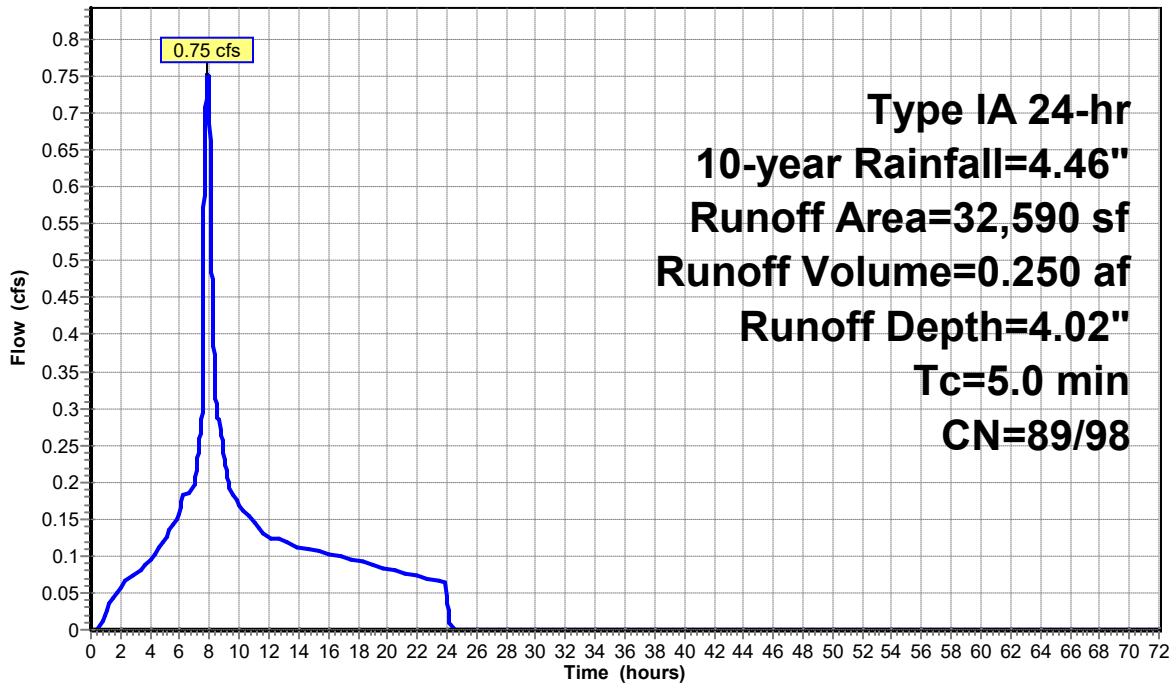
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10-year Rainfall=4.46"

	Area (sf)	CN	Description
*	25,586	98	Impervious
*	7,004	89	Pervious
	32,590	96	Weighted Average
	7,004	89	21.49% Pervious Area
	25,586	98	78.51% Impervious Area

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

Subcatchment 201: Sommerville - Treated

Hydrograph



Runoff

1113-001 Woodhill Crossing Pond Sizing

Prepared by {enter your company name here}

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Type IA 24-hr 10-year Rainfall=4.46"

Printed 12/19/2023

Page 25

Summary for Subcatchment 202: Sommerville - Untreated

Runoff = 0.17 cfs @ 7.88 hrs, Volume= 0.055 af, Depth= 3.96"

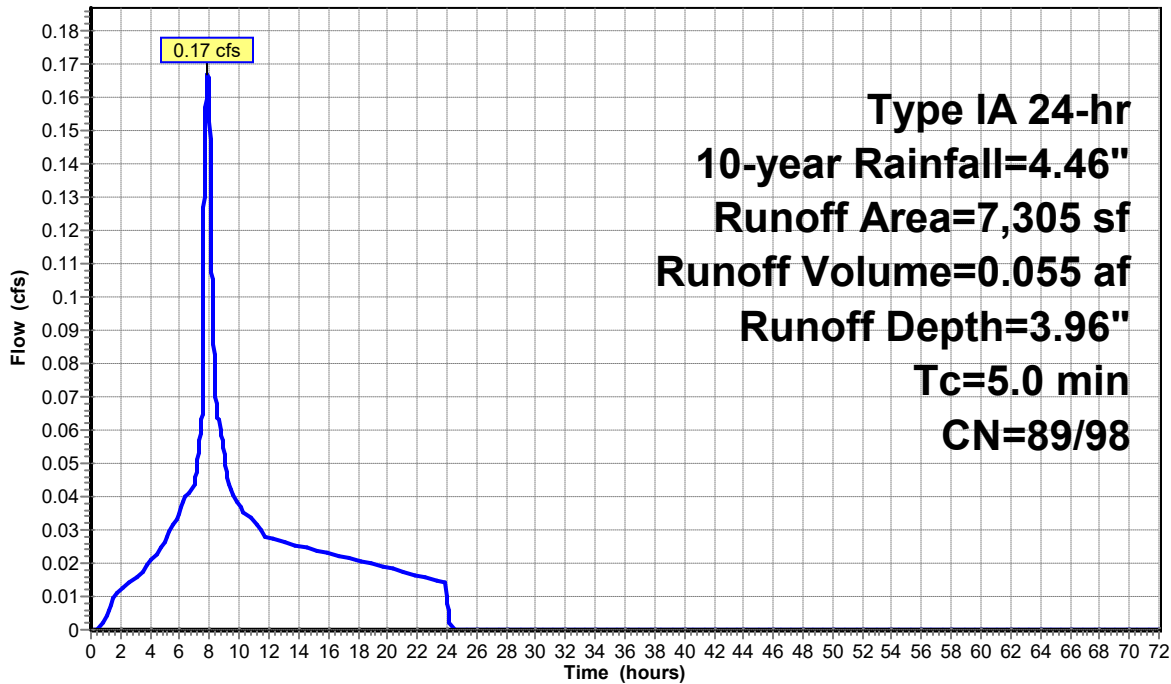
Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type IA 24-hr 10-year Rainfall=4.46"

	Area (sf)	CN	Description
*	5,331	98	Impervious
*	1,974	89	Pervious
	7,305	96	Weighted Average
	1,974	89	27.02% Pervious Area
	5,331	98	72.98% Impervious Area

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

Subcatchment 202: Sommerville - Untreated

Hydrograph



Runoff

1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 10-year Rainfall=4.46"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 26

Summary for Pond P1: Tract "A" & "B" Pond

Inflow Area = 7.239 ac, 53.18% Impervious, Inflow Depth = 3.77" for 10-year event
 Inflow = 6.88 cfs @ 7.89 hrs, Volume= 2.275 af
 Outflow = 3.50 cfs @ 8.29 hrs, Volume= 2.275 af, Atten= 49%, Lag= 23.7 min
 Primary = 3.50 cfs @ 8.29 hrs, Volume= 2.275 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Peak Elev= 313.32' @ 8.29 hrs Surf.Area= 9,220 sf Storage= 11,646 cf

Plug-Flow detention time= 31.5 min calculated for 2.275 af (100% of inflow)
 Center-of-Mass det. time= 31.5 min (718.6 - 687.1)

Volume	Invert	Avail.Storage	Storage Description
#1	311.88'	31,812 cf	Tract B (Conic) Listed below (Recalc)
#2	312.88'	5,261 cf	Tract A (Prismatic) Listed below (Recalc)
		37,072 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
311.88	7,512	0	0	7,512
312.88	7,735	7,623	7,623	7,893
313.88	7,956	7,845	15,468	8,277
314.88	8,173	8,064	23,533	8,663
315.88	8,386	8,279	31,812	9,049

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
312.88	1,242	0	0
313.88	1,571	1,407	1,407
314.88	1,918	1,745	3,151
315.88	2,301	2,110	5,261

Device	Routing	Invert	Outlet Devices
#1	Primary	311.00'	15.0" Round Culvert L= 27.5' Ke= 0.900 Inlet / Outlet Invert= 311.00' / 310.71' S= 0.0105 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Device 1	309.00'	6.8" Horiz. Low Orifice C= 0.620 Limited to weir flow at low heads
#3	Device 1	312.80'	9.0" Horiz. High Orifice C= 0.620 Limited to weir flow at low heads

Primary OutFlow Max=3.50 cfs @ 8.29 hrs HW=313.32' (Free Discharge)

- 1=Culvert (Passes 3.50 cfs of 6.08 cfs potential flow)
- 2=Low Orifice (Orifice Controls 1.91 cfs @ 7.58 fps)
- 3=High Orifice (Orifice Controls 1.59 cfs @ 3.60 fps)

1113-001 Woodhill Crossing Pond Sizing

Prepared by {enter your company name here}

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

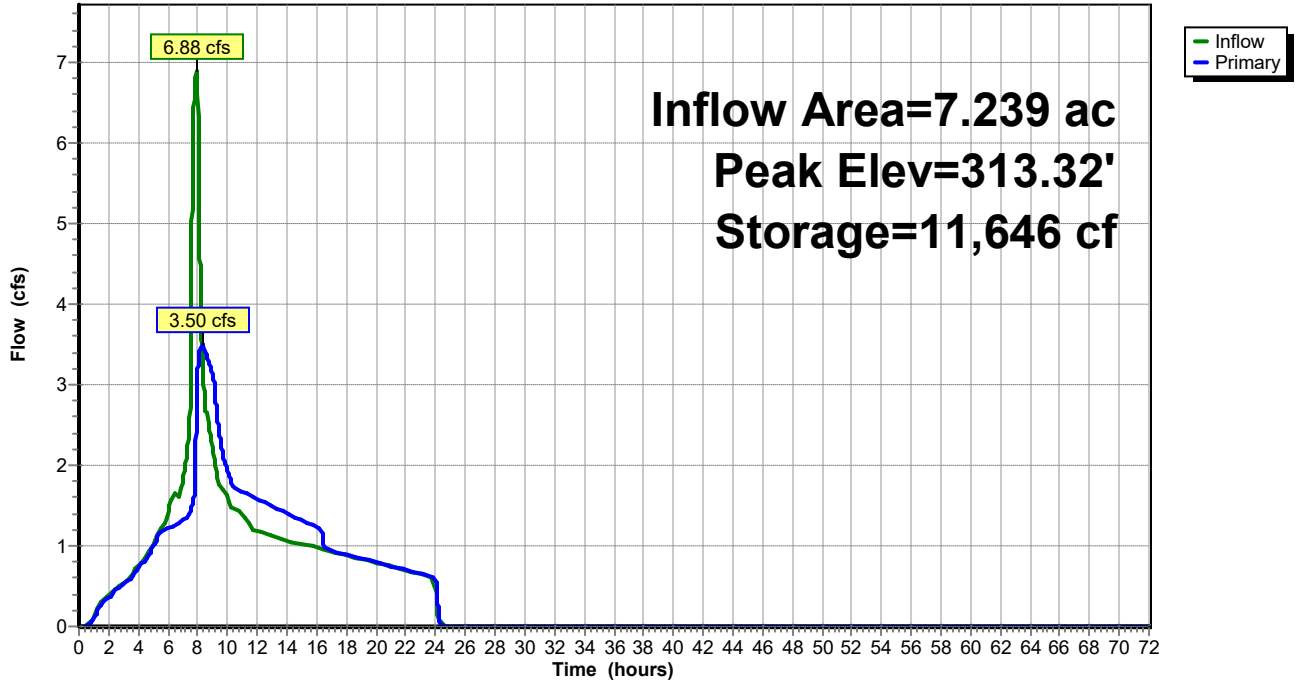
Type IA 24-hr 10-year Rainfall=4.46"

Printed 12/19/2023

Page 27

Pond P1: Tract "A" & "B" Pond

Hydrograph



1113-001 Woodhill Crossing Pond Sizing

Type IA 24-hr 10-year Rainfall=4.46"

Prepared by {enter your company name here}

Printed 12/19/2023

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Page 28

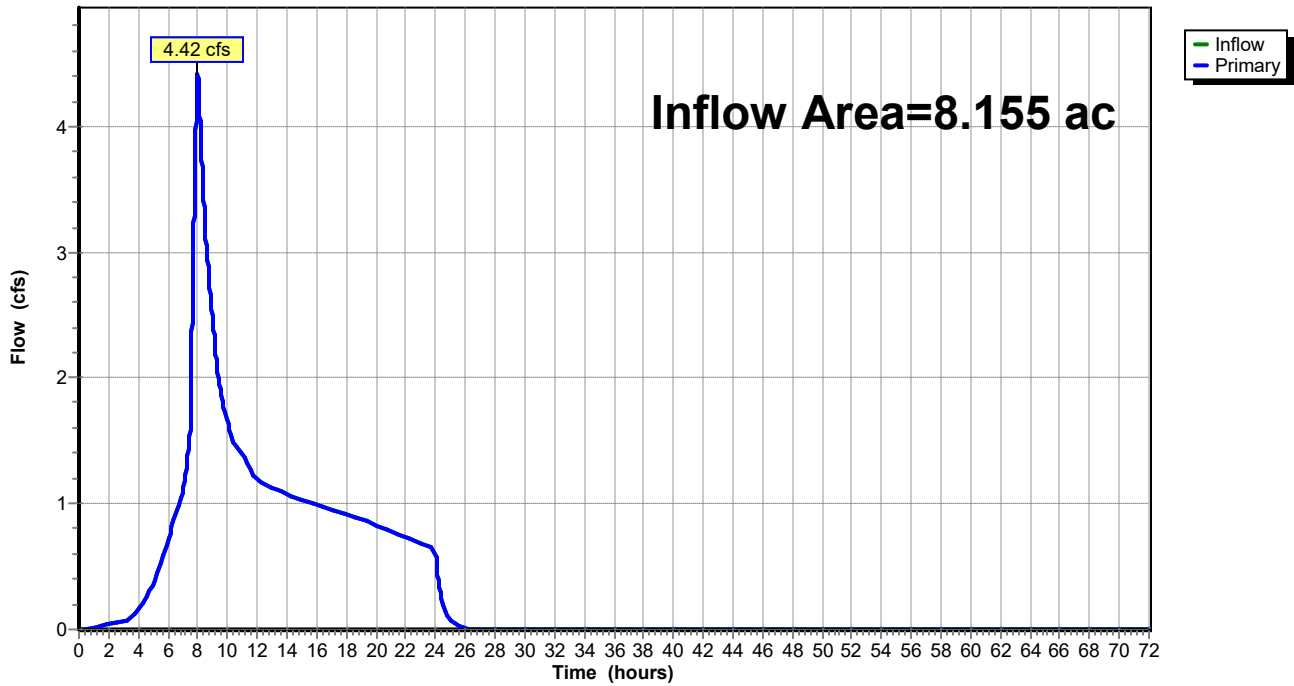
Summary for Link L1: Pre-Dev

Inflow Area = 8.155 ac, 6.11% Impervious, Inflow Depth = 2.84" for 10-year event
Inflow = 4.42 cfs @ 8.00 hrs, Volume= 1.931 af
Primary = 4.42 cfs @ 8.00 hrs, Volume= 1.931 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link L1: Pre-Dev

Hydrograph



1113-001 Woodhill Crossing Pond Sizing

Prepared by {enter your company name here}

HydroCAD® 10.00-24 s/n 04804 © 2018 HydroCAD Software Solutions LLC

Type IA 24-hr 10-year Rainfall=4.46"

Printed 12/19/2023

Page 29

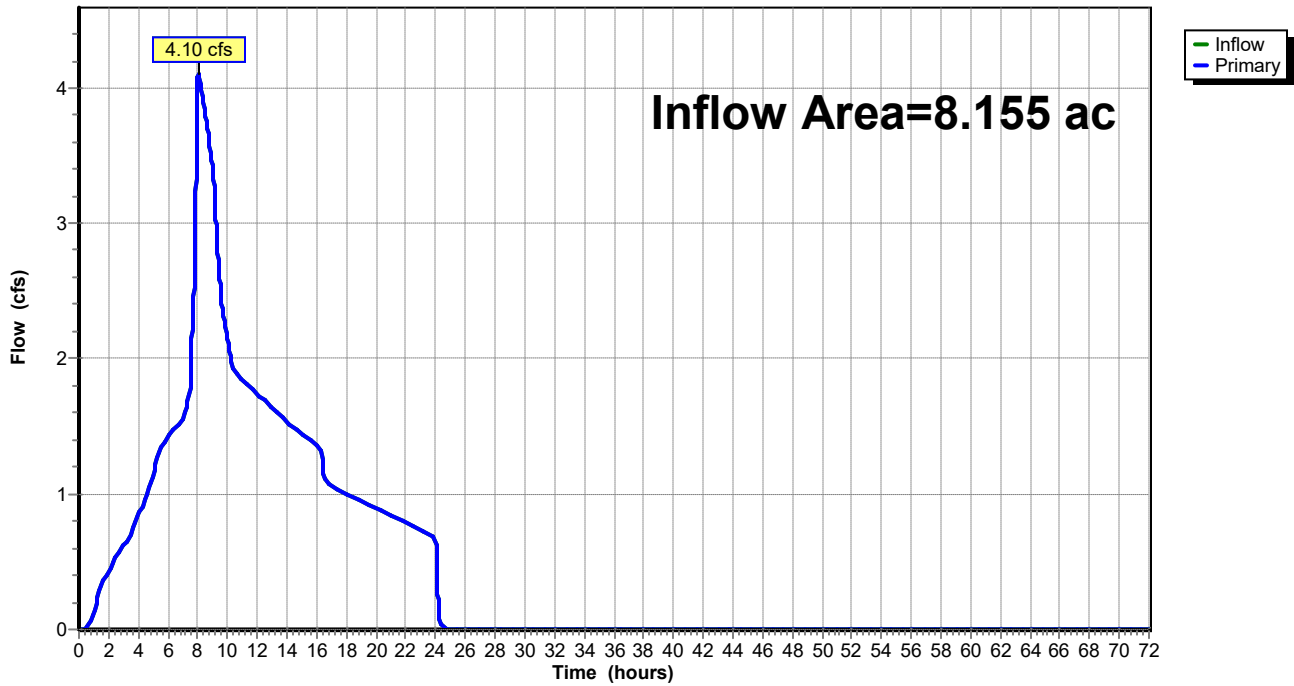
Summary for Link L2: Post-Dev

Inflow Area = 8.155 ac, 55.91% Impervious, Inflow Depth = 3.80" for 10-year event
Inflow = 4.10 cfs @ 8.01 hrs, Volume= 2.581 af
Primary = 4.10 cfs @ 8.01 hrs, Volume= 2.581 af, Atten= 0%, Lag= 0.0 min

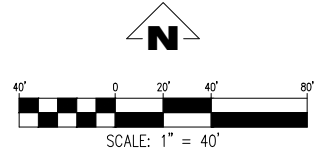
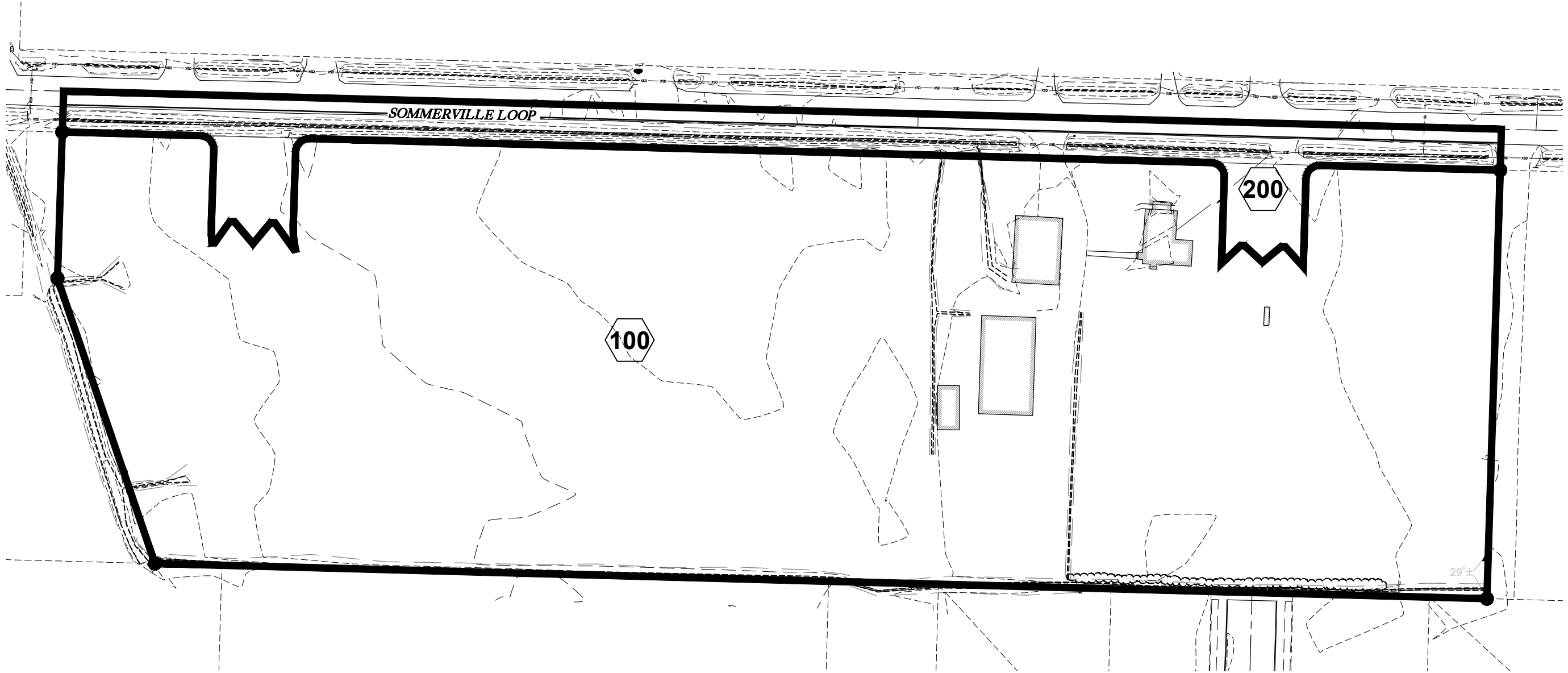
Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Link L2: Post-Dev

Hydrograph



Appendix D:



WOODHILL CROSSING
 TAX MAP 155-04W-15 - TL 3700
 HARRISBURG, OREGON

1.

PRE-DEVELOPED BASIN
 MAP

REVISIONS	
NO.	DESCRIPTION

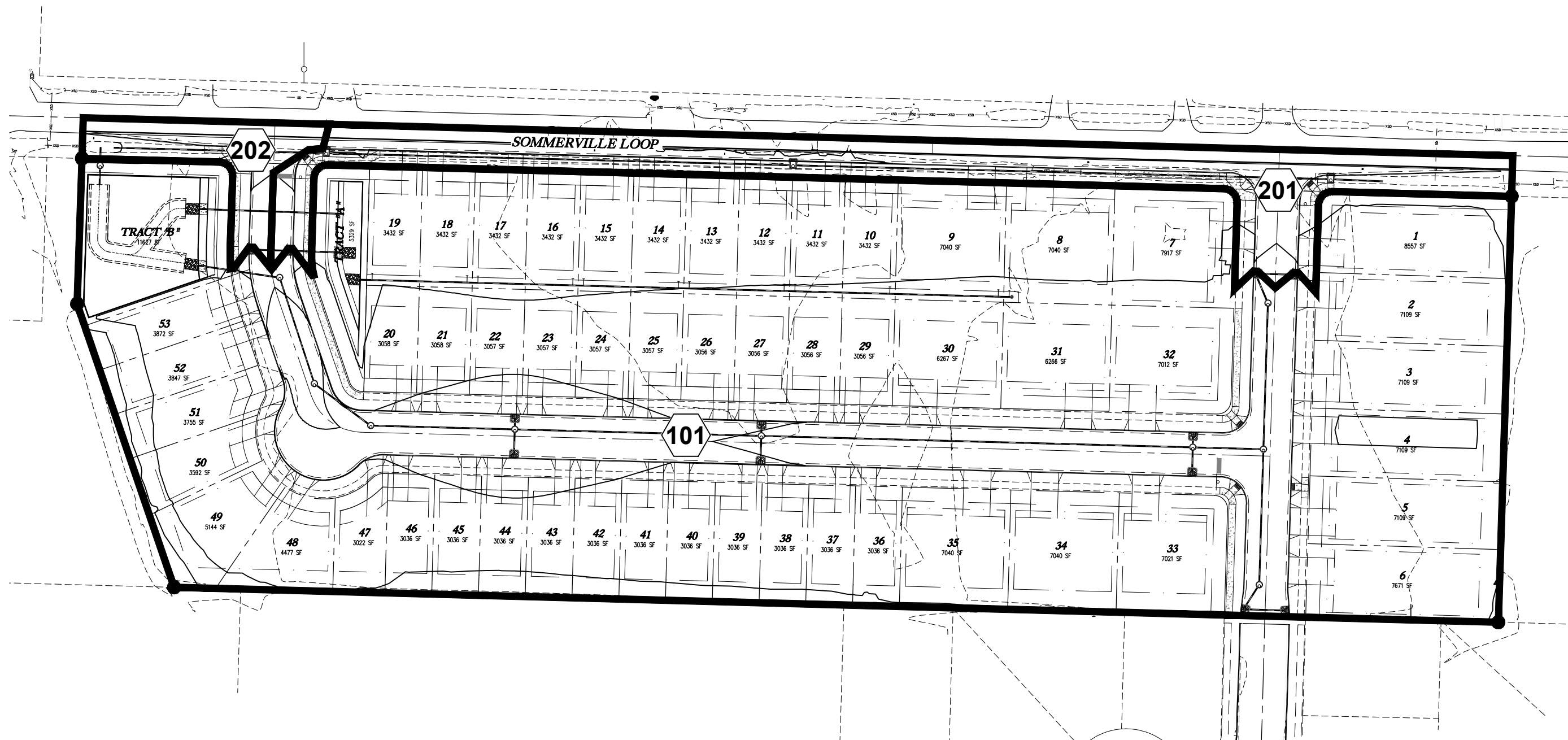
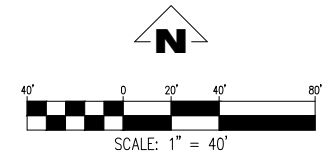
EMERIO
 ENGINEERING • SURVEYING • DESIGN
 1500 VALLEY RIVER DRIVE, SUITE 100
 EUGENE, OREGON 97401
 TEL: (603) 746-8812
 FAX: (603) 639-8992
 www.emeriodesign.com

SHEET
01
 Page 163

POST-DEVELOPED BASIN
 MAP

NO.	DATE	DESCRIPTION

EMERIO
 ENGINEERING - SURVEYING - DESIGN
 1500 VALLEY RIVER DRIVE, SUITE 100
 EUGENE, OREGON 97401
 TEL: (603) 746-8812
 FAX: (603) 639-9592
 www.emeriodesign.com

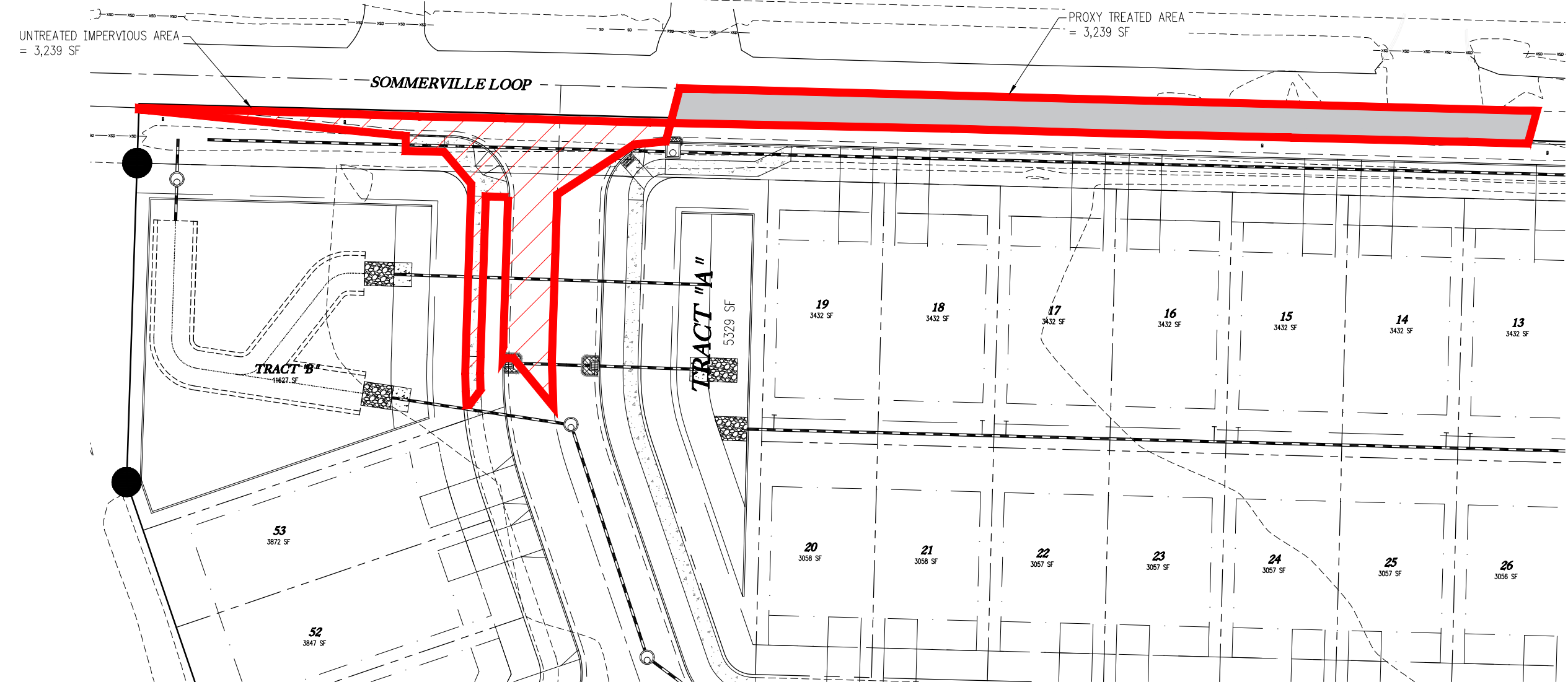
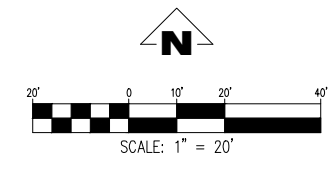


FILE-P:\1113-001\Woodhill Crossing - Hayden Homes\docs\civil\storm\CAD\1113-001_Woodhill_Crossing_Basin_Map_Layout_POST-DEV_BASINS_Plot_Date:12/19/2023 2:56 PM.dwg by: Josh Meyer

PROXY TREATMENT MAP

REVISIONS

EMERIO
 ENGINEERING - SURVEYING - DESIGN
 1500 VALLEY RIVER DRIVE, SUITE 100
 EUGENE, OREGON 97401
 TEL: (603) 746-8812
 FAX: (603) 639-8992
 www.emeriodesign.com



FILE:P:\1113-001 Woodhill Crossing - Hayden Homes\docs\civil\storm\CAD\1113-001 Woodhill Crossing Proxy Layout - POST-DEV BASINS, Plot Date: 12/19/2023 2:50 PM, Dwg: Josh Meyer

CASTLEBERRY CROSSINGS

53-LOT SUBDIVISION
TAX MAP 155-04W-15 - TL3700
HARRISBURG, OREGON

DRAWING INDEX

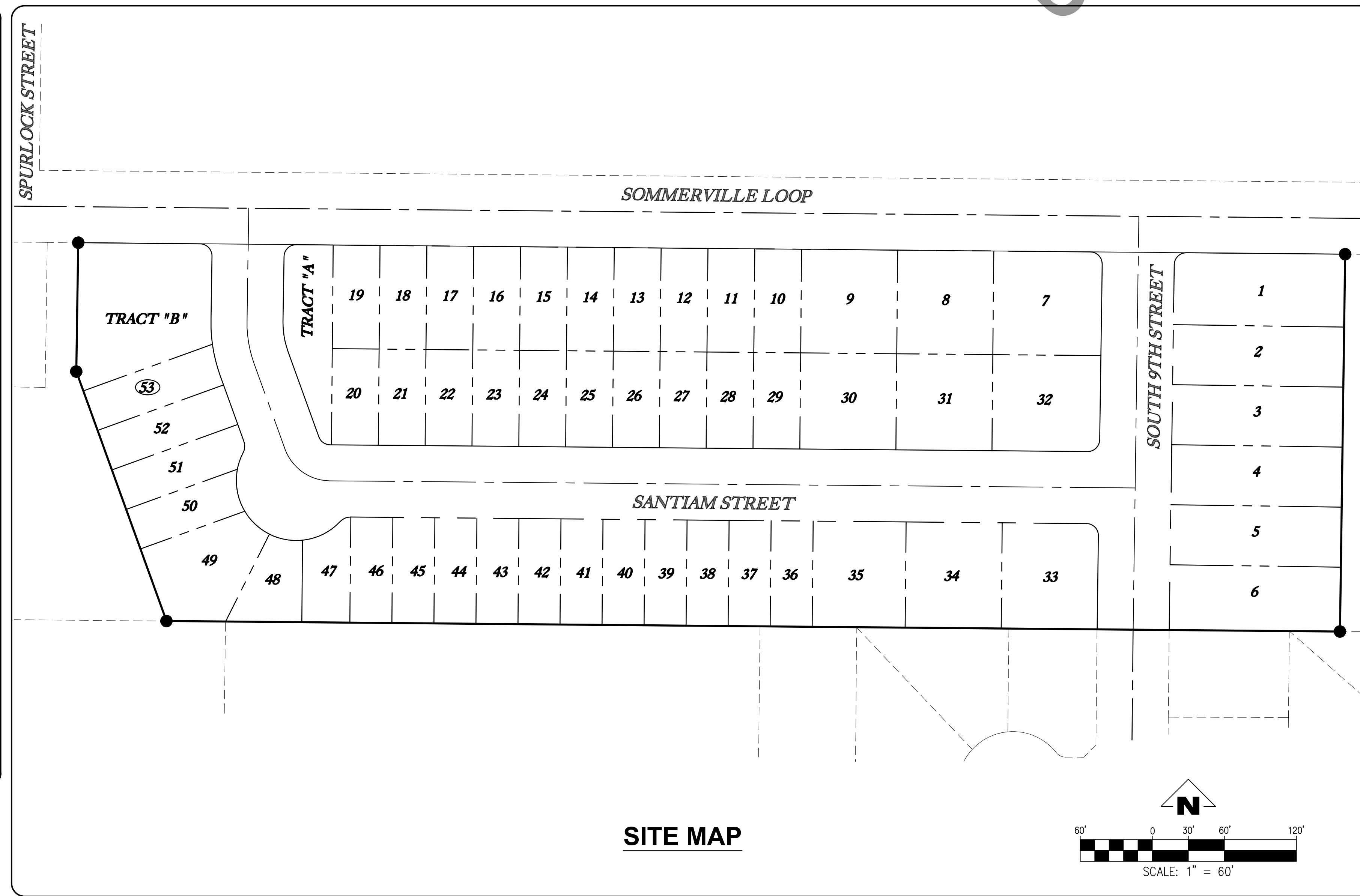
SHEET #	SHEET TITLE
1	COVER SHEET AND INDEX OF DRAWINGS
2	EXISTING CONDITIONS AND DEMOLITION PLAN
3	TENTATIVE PLAT
4	TENTATIVE SITE PLAN
5	TYPICAL STREET SECTIONS
6	TENTATIVE GRADING AND EROSION CONTROL PLAN
7	TENTATIVE COMPOSITE UTILITY PLAN
8	WATER QUALITY FACILITY DETAILS

CASTLEBERRY CROSSINGS
TAX MAP 155-04W-15 - TL 3700
HARRISBURG, OREGON

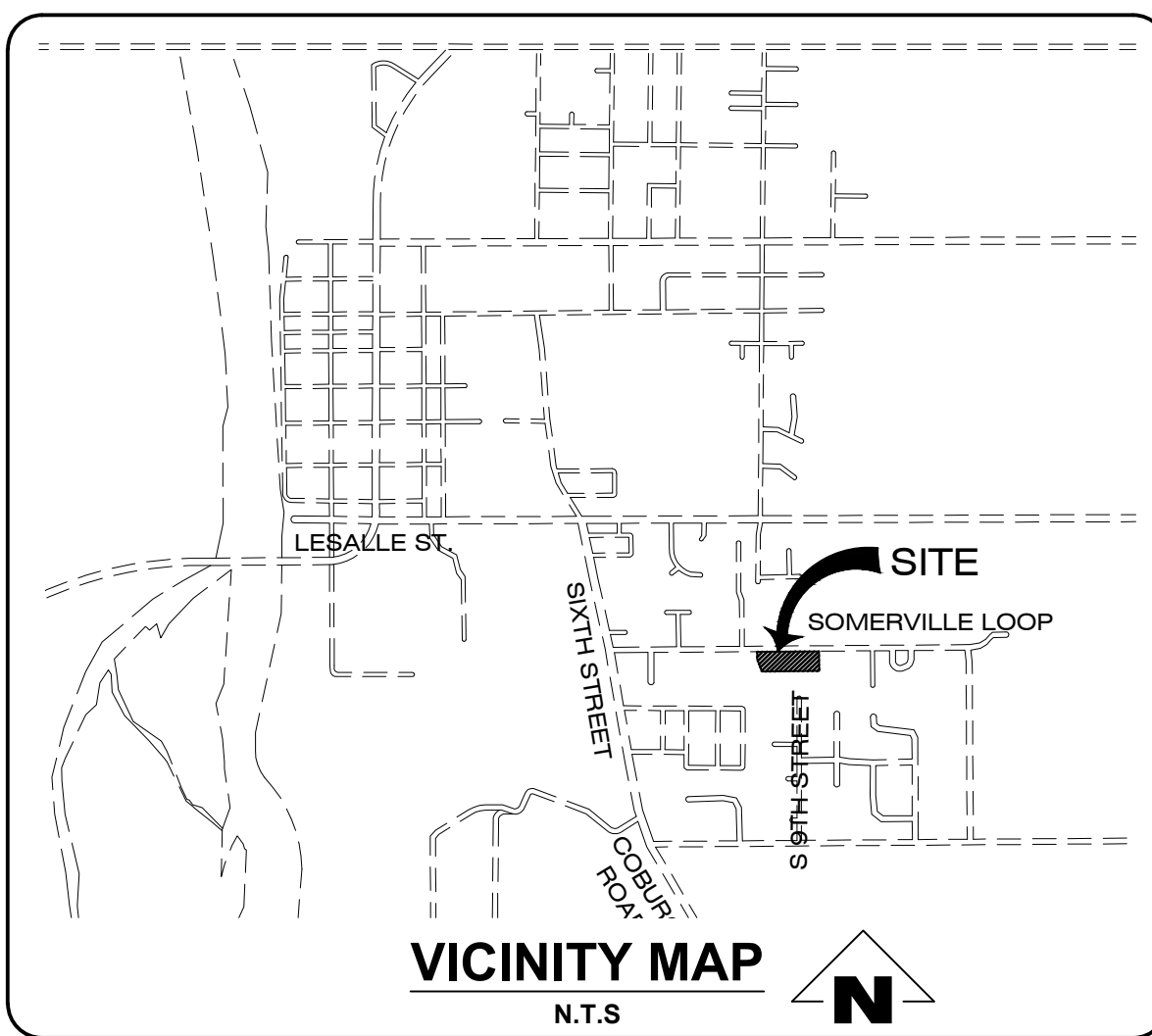
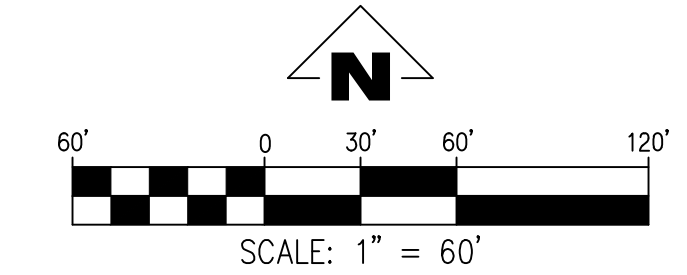
COVER SHEET AND INDEX
OF DRAWINGS

LEGEND

---	BOUNDARY LINE
- - -	EASEMENT
104	EXISTING 1' CONTOUR LINE
105	EXISTING 5' CONTOUR LINE
---	EXISTING CROWN (CENTER LINE OF ROAD)
☀	EXISTING TREE
⊙	EXISTING STORM DRAIN MANHOLE
⊙	EXISTING SANITARY SEWER MANHOLE
⊙	EXISTING CATCH BASIN
⊙	EXISTING CLEANOUT
⊙	EXISTING WATER METER
⊙	EXISTING WATER VALVE
⊙	EXISTING FIRE HYDRANT
⊙	EXISTING MAIL BOX
⊙	EXISTING UTILITY POLE
⊙	EXISTING GUY WIRE
⊙	EXISTING LIGHT
⊙	EXISTING COMMUNICATION PEDESTAL
⊙	EXISTING ELECTRICAL METER
⊙	EXISTING JUNCTION BOX
⊙	EXISTING BOLLARD
⊙	EXISTING DOWNSPOUT
⊙	EXISTING WETLAND FLAG
SD	EXISTING STORM LINE
SS	EXISTING SANITARY SEWER LINE
W	EXISTING WATER LINE
OH	EXISTING OVERHEAD POWER LINE
G	EXISTING GAS LINE
---	EXISTING DITCH LINE
---	EXISTING WETLAND LINE
---	EXISTING HEDGE LINE
---	EXISTING WOODEN FENCE
---	EXISTING RAIL FENCE
X-X	EXISTING CHAIN LINK FENCE
---	PROPOSED STORM LINE
---	PROPOSED SANITARY LINE
---	PROPOSED WATERLINE
---	PROPOSED STORM LATERAL
---	PROPOSED SANITARY LATERAL
---	PROPOSED SINGLE WATER METER
---	PROPOSED STORM MANHOLE
---	PROPOSED CATCH BASIN/AREA DRAIN
---	PROPOSED SANITARY MANHOLE
---	PROPOSED BLOWOFF
---	PROPOSED WATER VALVE
104	PROPOSED 1' CONTOUR LINE
105	PROPOSED 5' CONTOUR LINE
X-X	PROPOSED SEDIMENT FENCE



SITE MAP



VICINITY MAP
N.T.S.

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 952-001-0010 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
Dig Safely.
Call the Oregon One-Call Center
DIAL 811 or 1-800-332-2344

THIS DESIGN COMPLIES WITH ORS 92.044 (7) IN THAT NO UTILITY INFRASTRUCTURE IS DESIGNED TO BE WITHIN ONE (1) FOOT OF A SURVEY MONUMENT LOCATION SHOWN ON A SUBDIVISION OR PARTITION PLAT. NO DESIGN EXCEPTIONS NOT FINAL FIELD LOCATION CHANGES SHALL BE PERMITTED IF THAT CHANGE WOULD CAUSE ANY UTILITY INFRASTRUCTURE TO BE PLACED WITHIN THE PROHIBITED AREA.

VERTICAL DATUM

THE VERTICAL DATUM FOR THIS SURVEY IS BASED UPON POST-PROCESSED GPS STATIC OBSERVATION OF INDEPENDENT CONTROL, PROCESSED THROUGH OPUS. DATUM IS NAVD 88, CONVERTED TO NGVD 29 THROUGH THE VERTCON PROCESS TOOL.

ENGINEER'S NOTE TO CONTRACTOR

THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.

THESE PLANS ARE FULL SIZED ON 22"x34" PAPER, IF 11"x17" SCALE ACCORDINGLY

PROJECT CONTACTS

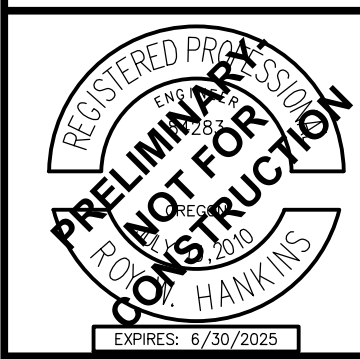
OWNER: HEATHER DEWOLF HAYDEN HOMES, LLC 2464 SW GLACIER PLACE REDMOND, OR 97756 (541) 923-6607	SURVEYOR: UDELL ENGINEERING AND LAND SURVEYING, LLC 63 E. ASH STREET LEBANON, OREGON 97355 CONTACT: BRIAN VANDETTA (541) 451-5125	GEOTECHNICAL ENGINEER: GEOPACIFIC 14835 SW 72nd AVENUE PORTLAND, OR 97224 CONTACT: JAMES D. IMBRIE (503) 598-8445 (P) (503) 941-9281 (F)	CIVIL ENGINEER: EMERIO DESIGN, LLC 1500 VALLEY RIVER DRIVE, SUITE 100 EUGENE, OR 97401 CONTACT: ROY W. HANKINS, P.E. (503) 746-8812 (P)
--	---	---	---

SITE DATA

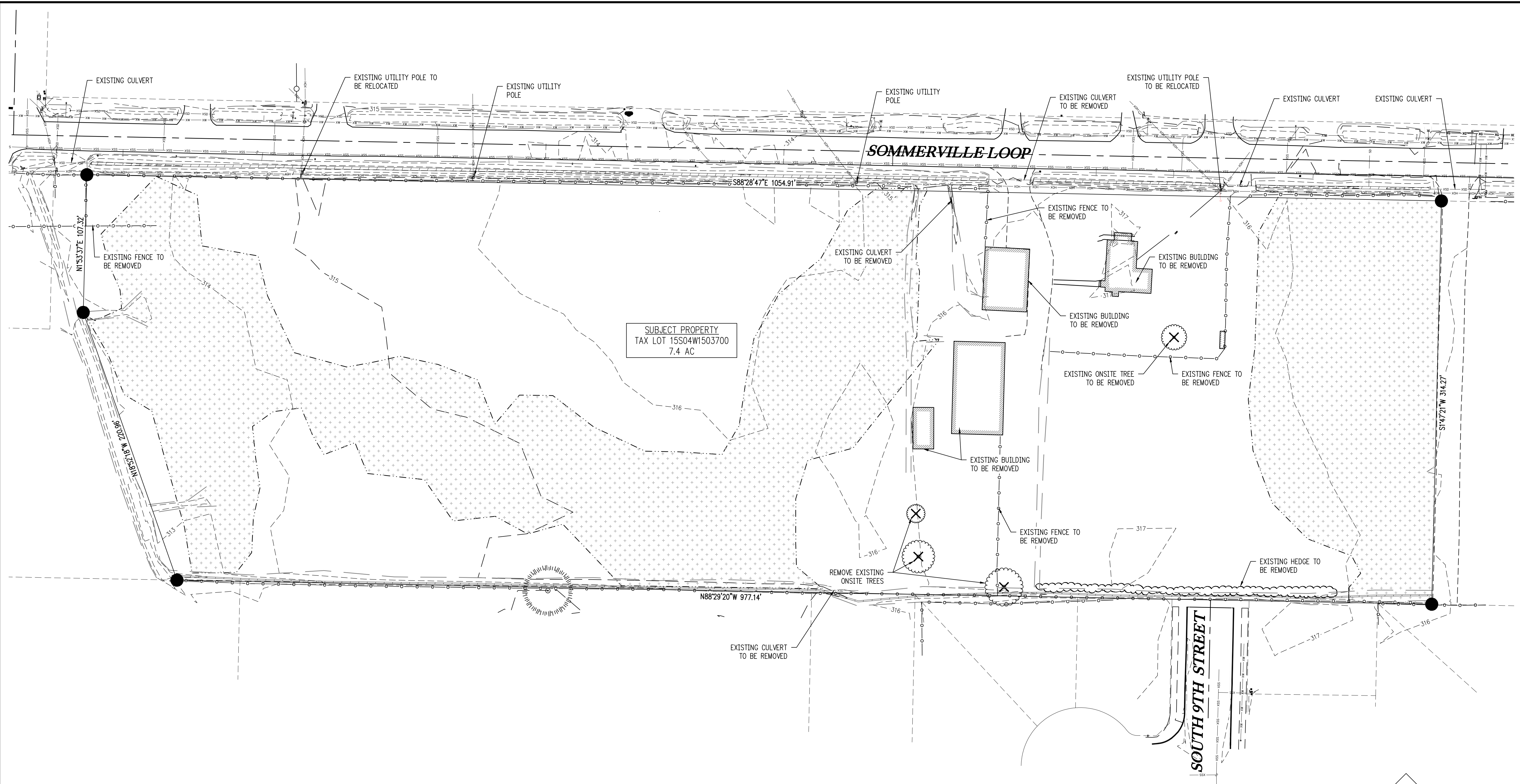
AREA:	7.4 AC
ZONING:	R1/R2
PROPOSED DENSITY:	R1=5.6 UNITS/AC R2=10.4 UNITS/AC
NO. OF LOTS:	53

NO.	DATE	DESCRIPTION

EMERIO
ENGINEERING • SURVEYING • DESIGN
1500 VALLEY RIVER DRIVE, SUITE 100
EUGENE, OREGON 97401
TEL: (503) 746-8812
FAX: (503) 639-9592
www.emeriodesign.com



SHEET
1
OF
8



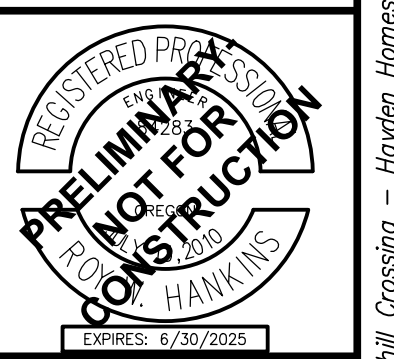
EXISTING CONDITIONS PLAN

**CASTLEBERRY CROSSINGS
TAX MAP 155-04W-15 - TL 3700
HARRISBURG, OREGON**

**EXISTING CONDITIONS AND
DEMOLITION PLAN**

NO.	DATE	DESCRIPTION

EMERIO
ENGINEERING • SURVEYING • DESIGN
1500 VALLEY RIVER DRIVE, SUITE 100
EUGENE, OREGON 97401
TEL: (503) 746-8812
FAX: (503) 639-6562
www.emeriodesign.com



SHEET
2
OF
8

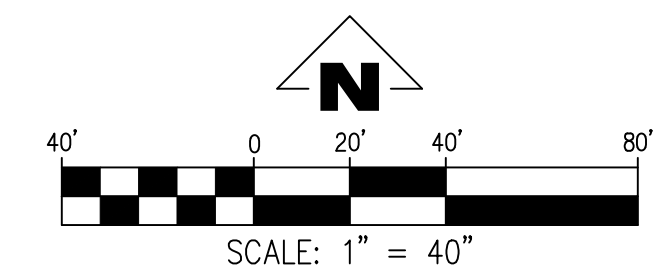
SPURLOCK STREET

SOMMERVILLE LOOP

SOUTH 9TH STREET

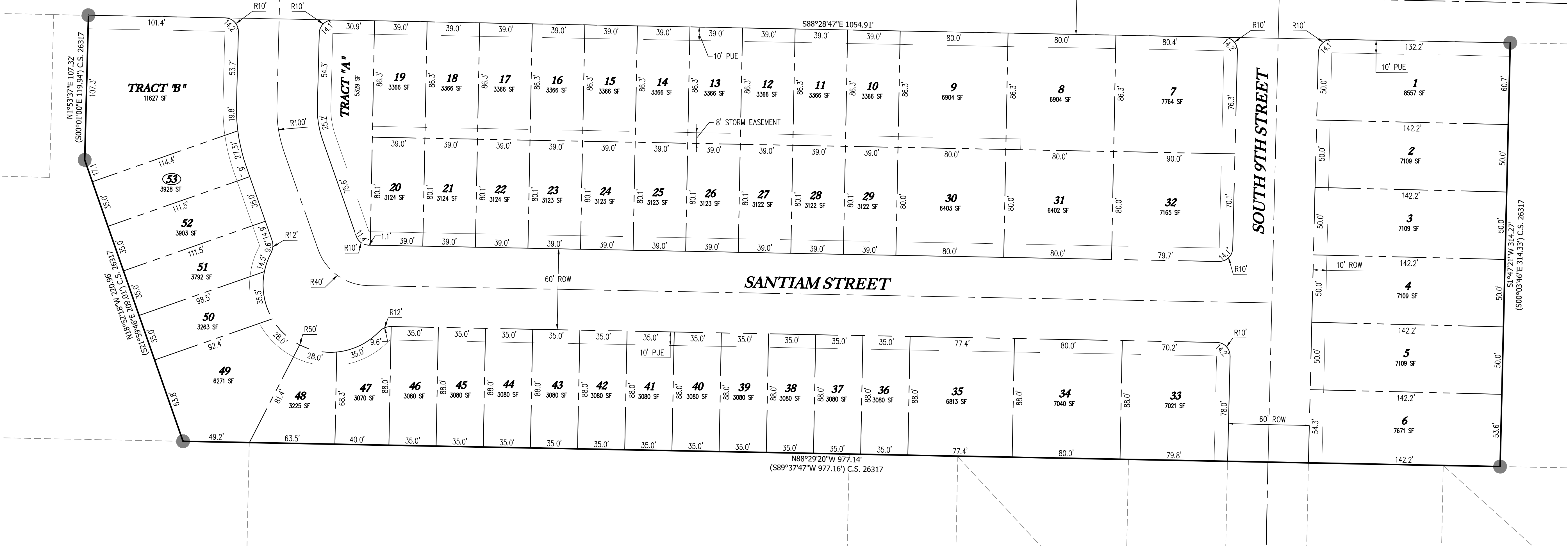
SANTIAM STREET

TENTATIVE PLAT



TENATIVE PLAT NOTES:

- 1 PLAT SHALL BE PROCESSED UNDER A DIFFERENT PERMIT

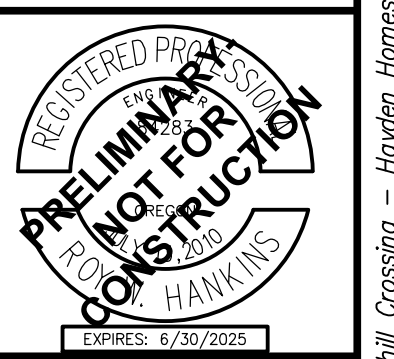


CASTLEBERRY CROSSINGS
 TAX MAP 155-04W-15 - TL 3700
 HARRISBURG, OREGON

TENTATIVE PLAT

NO.	DATE	DESCRIPTION

EMERIO
 ENGINEERING - SURVEYING - DESIGN
 1500 VALLEY RIVER DRIVE, SUITE 100
 EUGENE, OREGON 97401
 TEL: (603) 746-8812
 FAX: (603) 639-6562
 www.emeriodesign.com

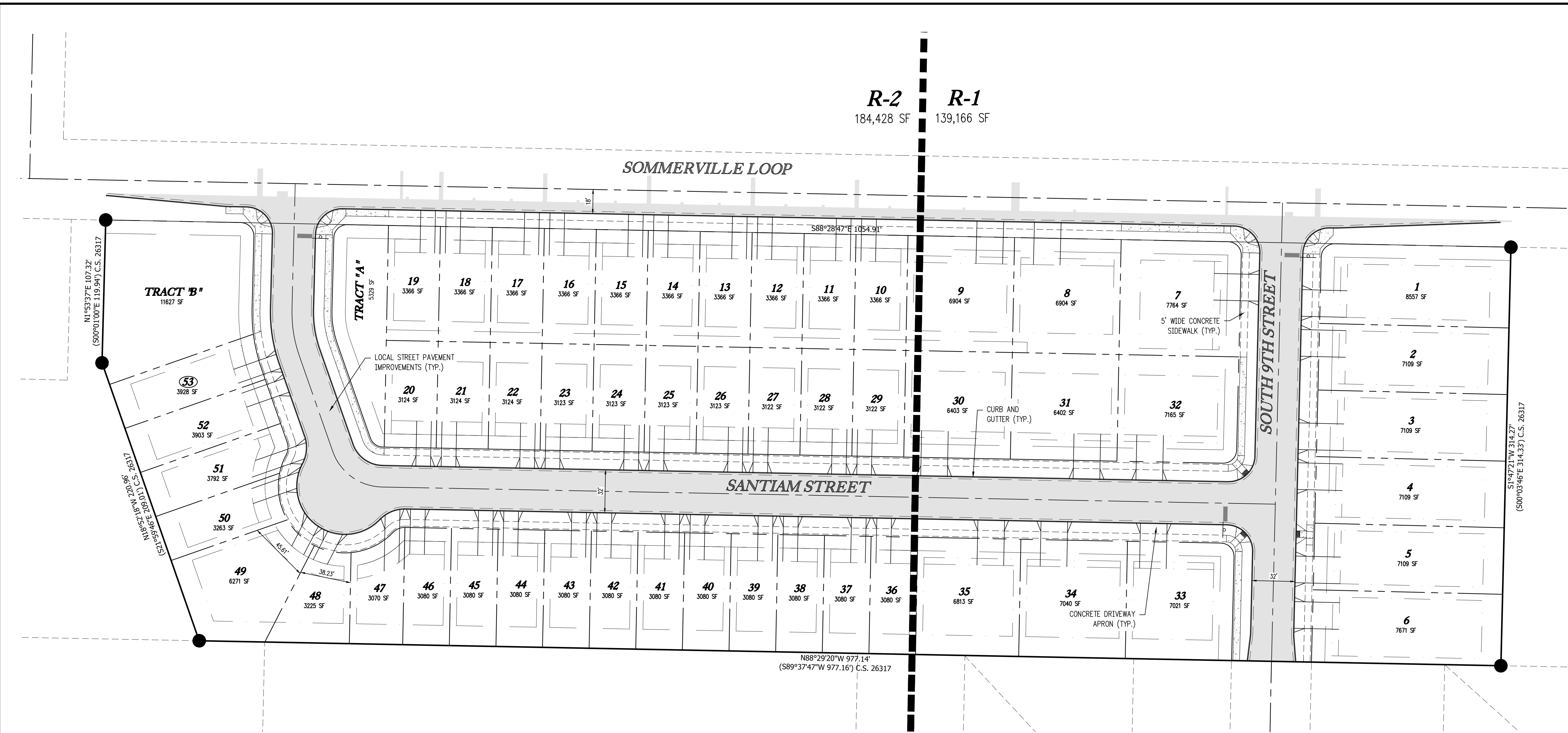
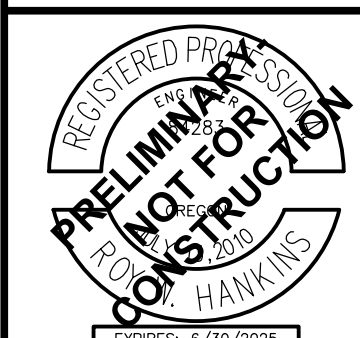


SHEET
3
 OF
8

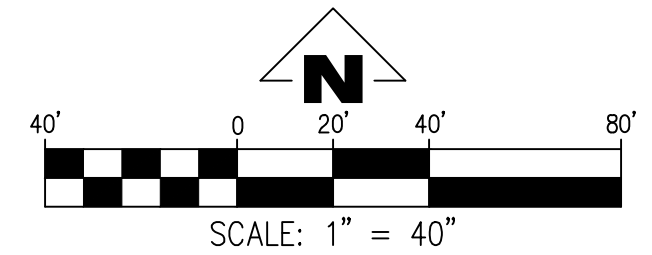
TENTATIVE SITE PLAN

NO.	DATE	DESCRIPTION

EMERIO
ENGINEERING • SURVEYING • DESIGN
1500 VALLEY RIVER DRIVE, SUITE 100
EUGENE, OREGON 97401
TEL: (603) 746-8812
FAX: (603) 639-6592
www.emeriodesign.com



TENTATIVE SITE PLAN



R-2
TOTAL R-2 AREA: 184,428 SF (4.2 AC)
R-2 ROW AREA: 39,971 SF (0.9 AC)
R-2 BUILDABLE AREA: 144,457 SF (3.3 AC)
10% ADJUSTMENT (HMC 19.40.30): 158,903 SF (3.6 AC)
MAX. DENSITY: 12 UNITS/ACRE
PROPOSED DENSITY: 10.4 UNITS/ACRE

DETACHED LOTS NOT PROPOSED

TOWNHOUSE LOT SIZES

- INTERIOR: 3,000 SF
- CORNER: 4,000 SF

SETBACKS

- FRONT: 15' OR 10' TO PORCH
- TO GARAGE: 20'
- INTERIOR SIDE: 6'
- REAR YARD: BASED ON BUILDING HEIGHT
 - > 24': 15'
 - 12-24': 10'
 - < 12': 5'

R-1
TOTAL R-1 AREA: 139,166 SF (3.2 AC)
R-1 ROW AREA: 33,388 SF (0.8 AC)
R-1 BUILDABLE AREA: 105,778 SF (2.4 AC)
10% ADJUSTMENT (HMC 19.40.30): 116,356 SF (2.7 AC)
MAX. DENSITY: 6 UNITS/ACRE
PROPOSED DENSITY: 5.6 UNITS/ACRE

DETACHED LOT SIZES

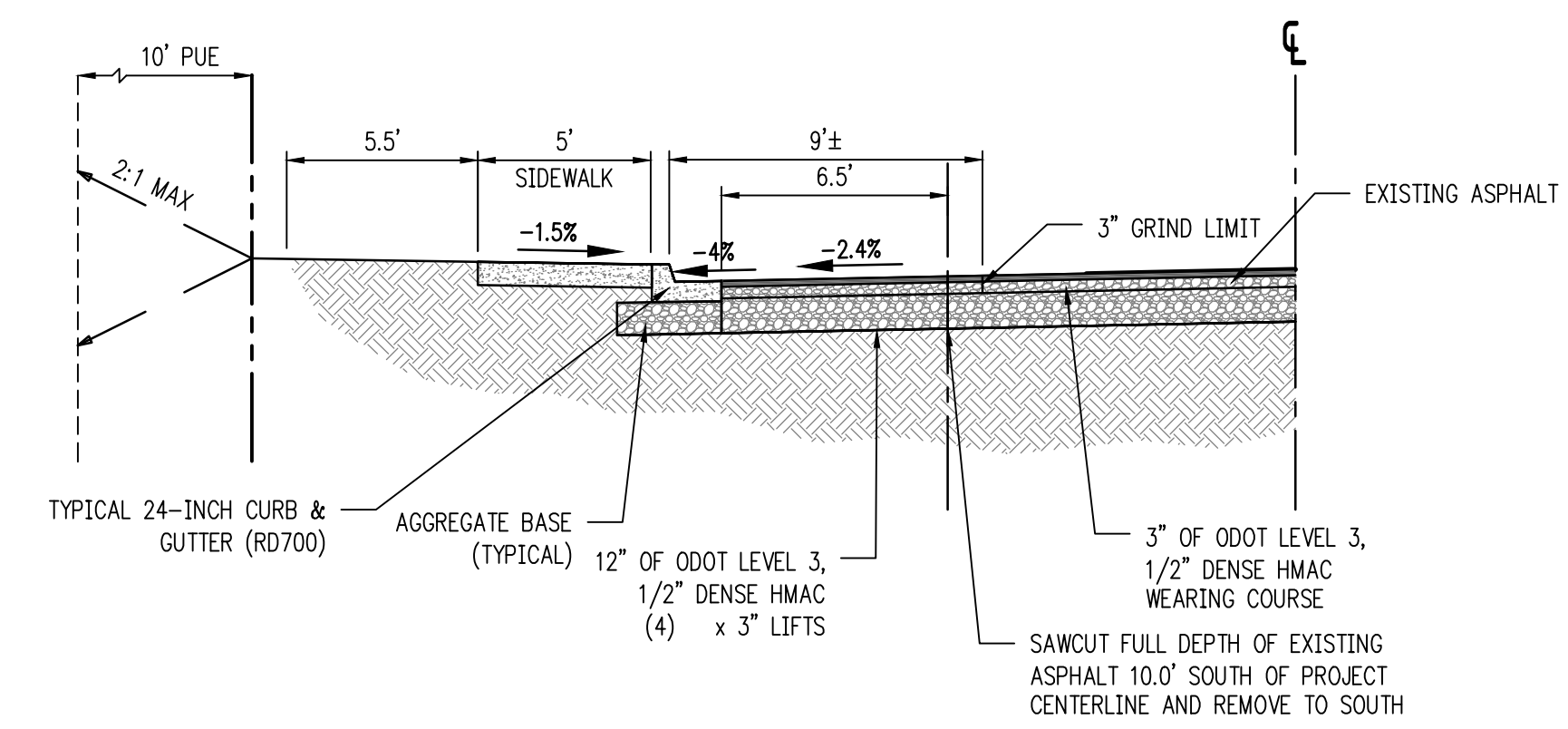
- INTERIOR: 6,000 SF (50' WIDE MIN.)
- CORNER: 7,000 SF (60' WIDE MIN.)

TOWNHOUSES NOT PERMITTED

SETBACKS

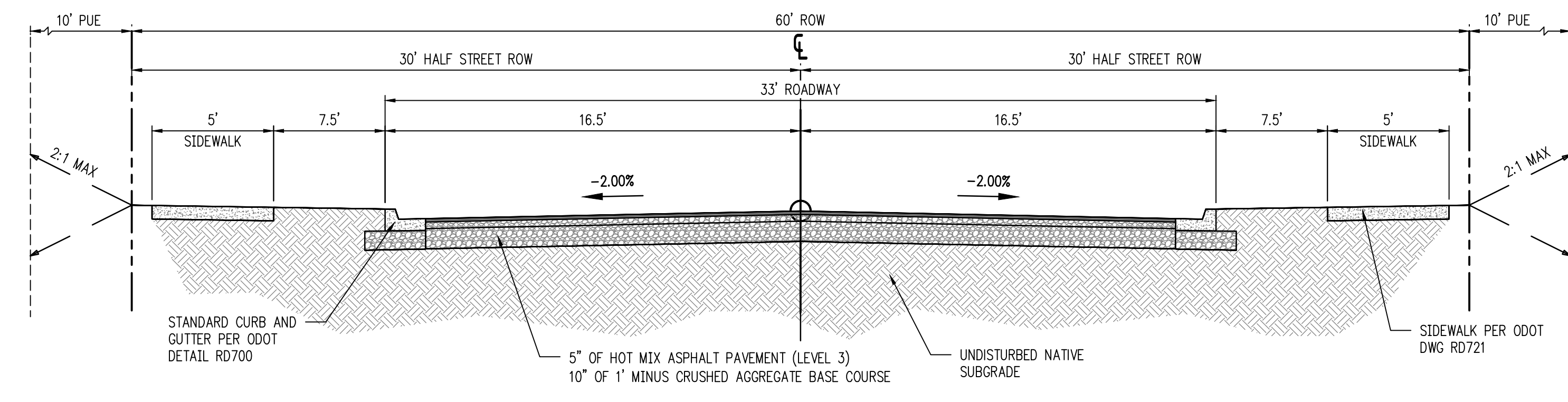
- FRONT/PORCH: 15'
- TO GARAGE: 20'
- INTERIOR SIDE: 6'
- REAR YARD: BASED ON BUILDING HEIGHT
 - > 24': 15'
 - 12-24': 10'
 - < 12': 5'

TYPICAL STREET SECTIONS



SOMMERVILLE SAWCUT - TYPICAL SECTION

SCALE: NTS

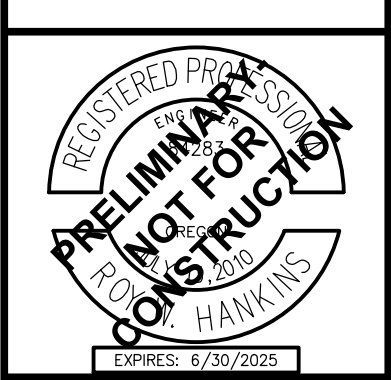


SANTIAM STREET & SOUTH 9TH STREET - TYPICAL SECTION

SCALE: NTS

REVISIONS	
NO.	DESCRIPTION

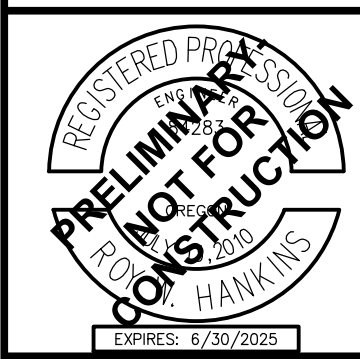
EMERIO
 ENGINEERING • SURVEYING • DESIGN
 1500 VALLEY RIVER DRIVE, SUITE 100
 EUGENE, OREGON 97401
 TEL: (603) 746-8812
 FAX: (603) 639-6562
 www.emeriodesign.com



**TENTATIVE GRADING AND
EROSION CONTROL PLAN**

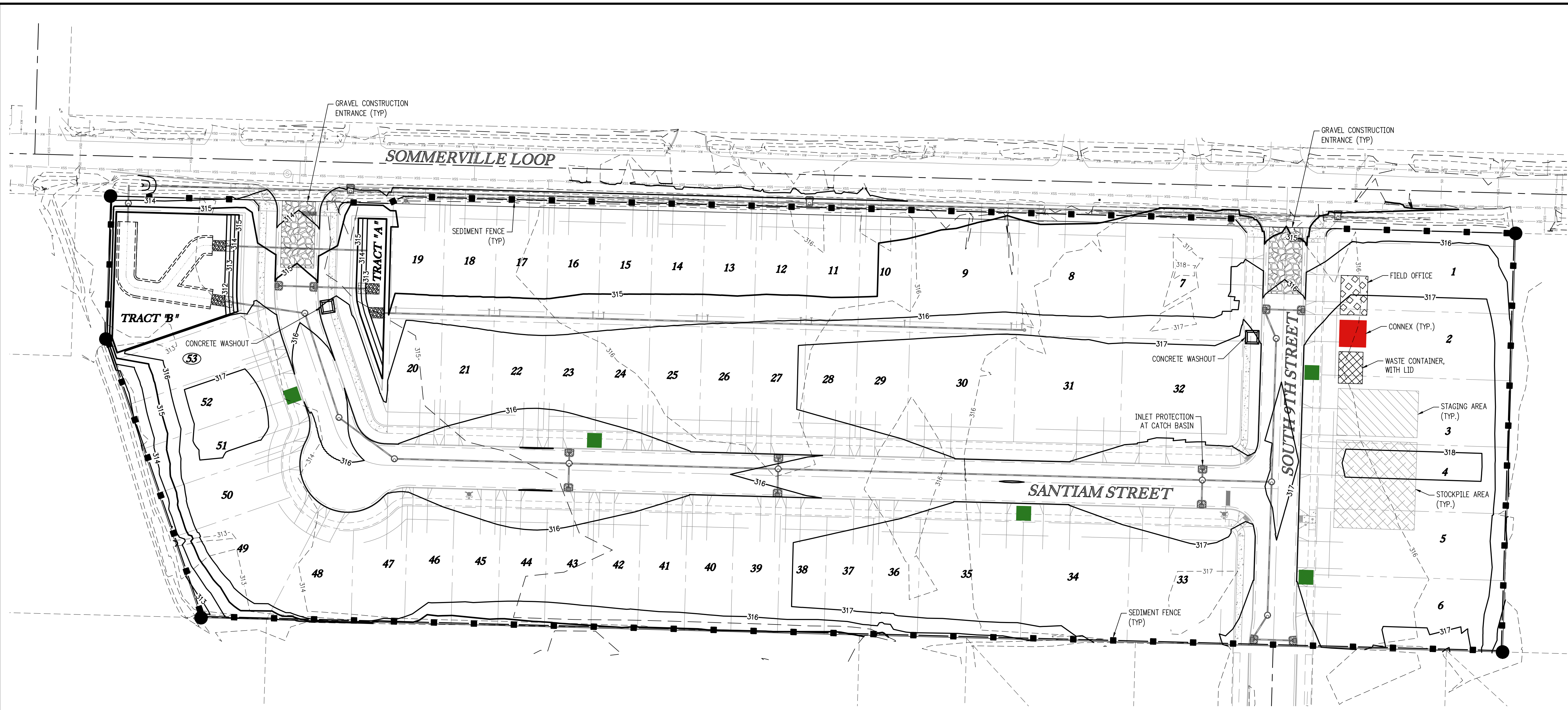
REVISIONS	
NO.	DATE

EMERIO
ENGINEERING • SURVEYING • DESIGN
1500 VALLEY RIVER CURVE, SUITE 100
EUGENE, OREGON 97401
TEL: (603) 746-8812
FAX: (603) 639-9592
www.emeriodesign.com



SHEET
6
OF
8

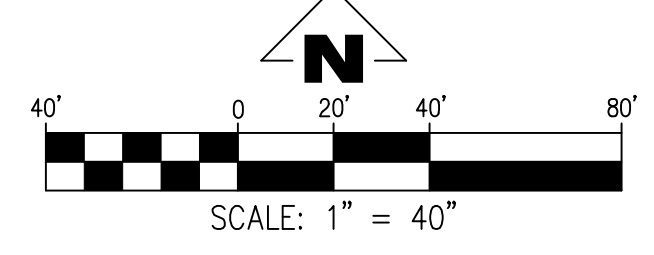
E.P. 1113-001, Woodhill Crossing - Hayden James (dwg) plan 1113-001_06pgrad, Layout: 06 TENTATIVE GRADING AND EROSION CONTROL PLAN, Plot Date: 1/26/2024 1:07 PM, Dwg. Keelan Smith



TENTATIVE GRADING AND EROSION CONTROL PLAN

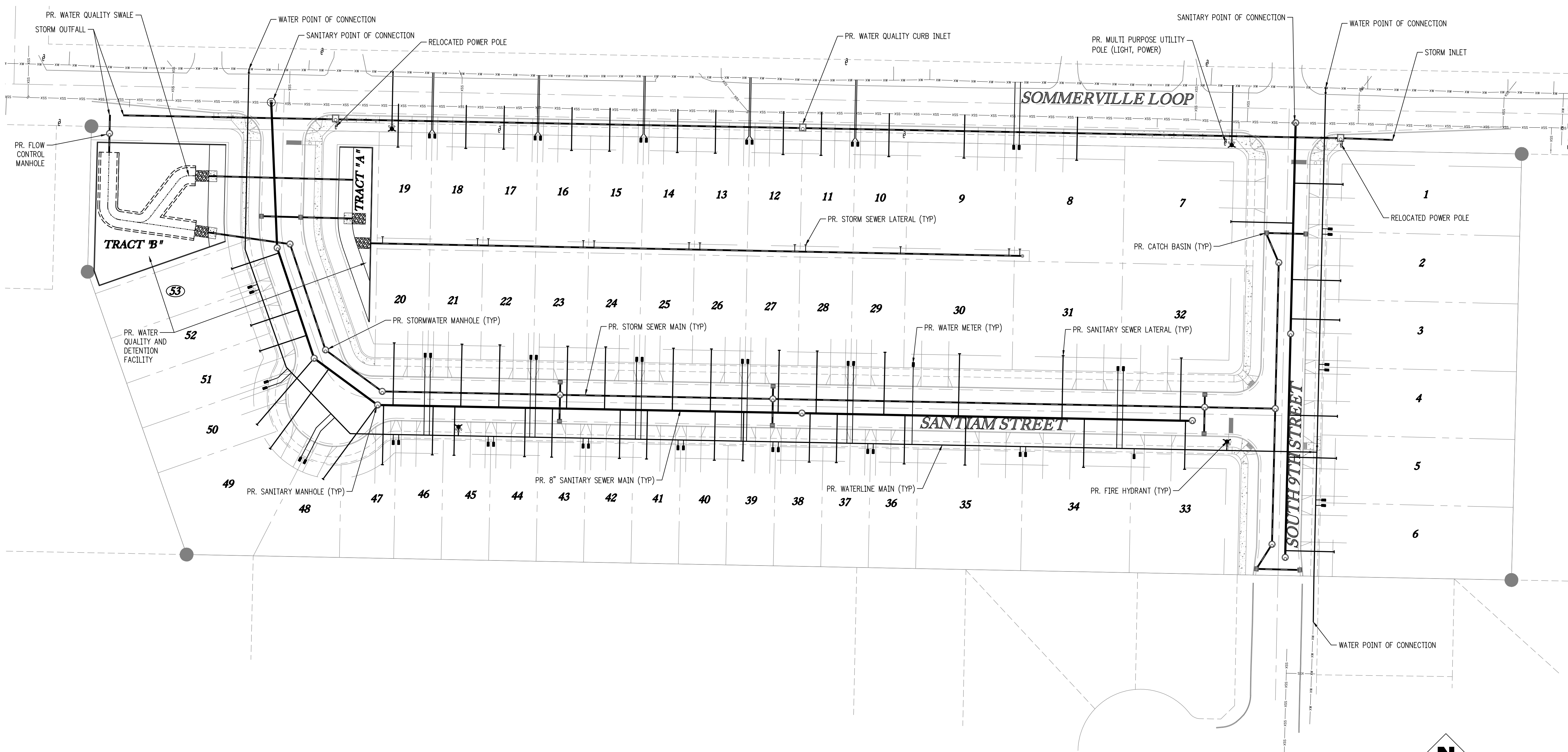
LEGEND

- BOUNDARY OF SITE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SILT FENCE
- STRAW WATTLE
- LIMITS OF CONSTRUCTION (ORANGE CONSTRUCTION FENCING)
- DIRECTION OF STORMWATER FLOW
- STAGING AREA - FOR MATERIALS, FUEL (GAS AND OIL), AND EQUIPMENT
- STOCKPILE AREA (COVER WITH PLASTIC SHEETING, AS NECESSARY)
- GRAVEL CONSTRUCTION ENTRANCE
- BIOFILTER BAGS SURROUNDING SILTSACK-LINED CATCH BASIN
- BIO-FILTER BAG
- CONCRETE WASHOUT
- FIELD OFFICE
- CONNEX
- SANITARY STATION
- WASTE CONTAINER, WITH LID

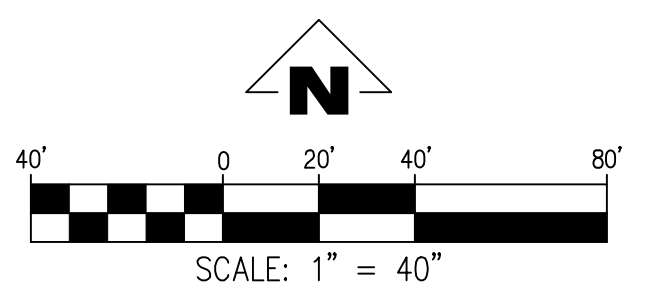


GENERAL NOTES:

- A. SEE 1200-C DRAWINGS UNDER SEPARATE PROCESS
- B. SITE GRADING SHALL NOT RESULT IN THE IMPOUNDMENT OF STORM WATER ON ADJACENT PROPERTIES.
- C. 6" STRIPPINGS SHALL BE PLACED ON TOP OF STRUCTURAL FILL FOR ALL LOTS.



TENTATIVE COMPOSITE UTILITY PLAN

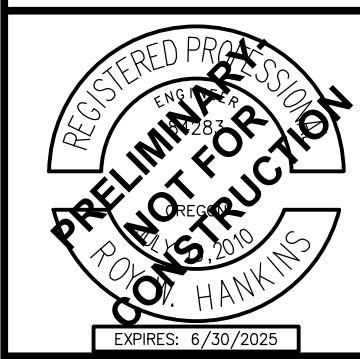


CASTLEBERRY CROSSINGS
TAX MAP 155-04W-15 - TL 3700
HARRISBURG, OREGON

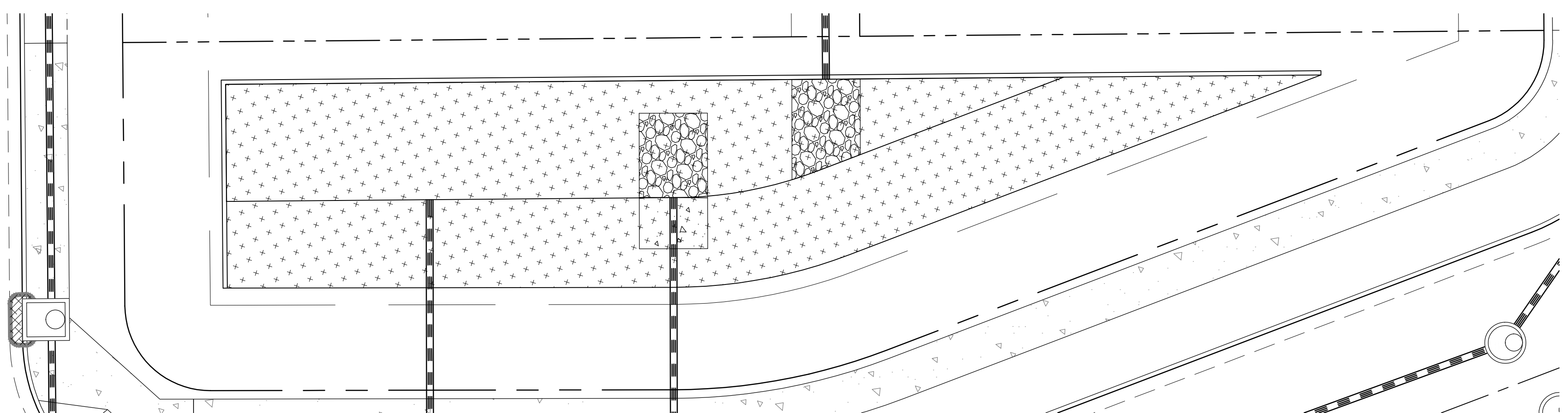
TENTATIVE COMPOSITE
UTILITY PLAN

NO.	DATE	DESCRIPTION

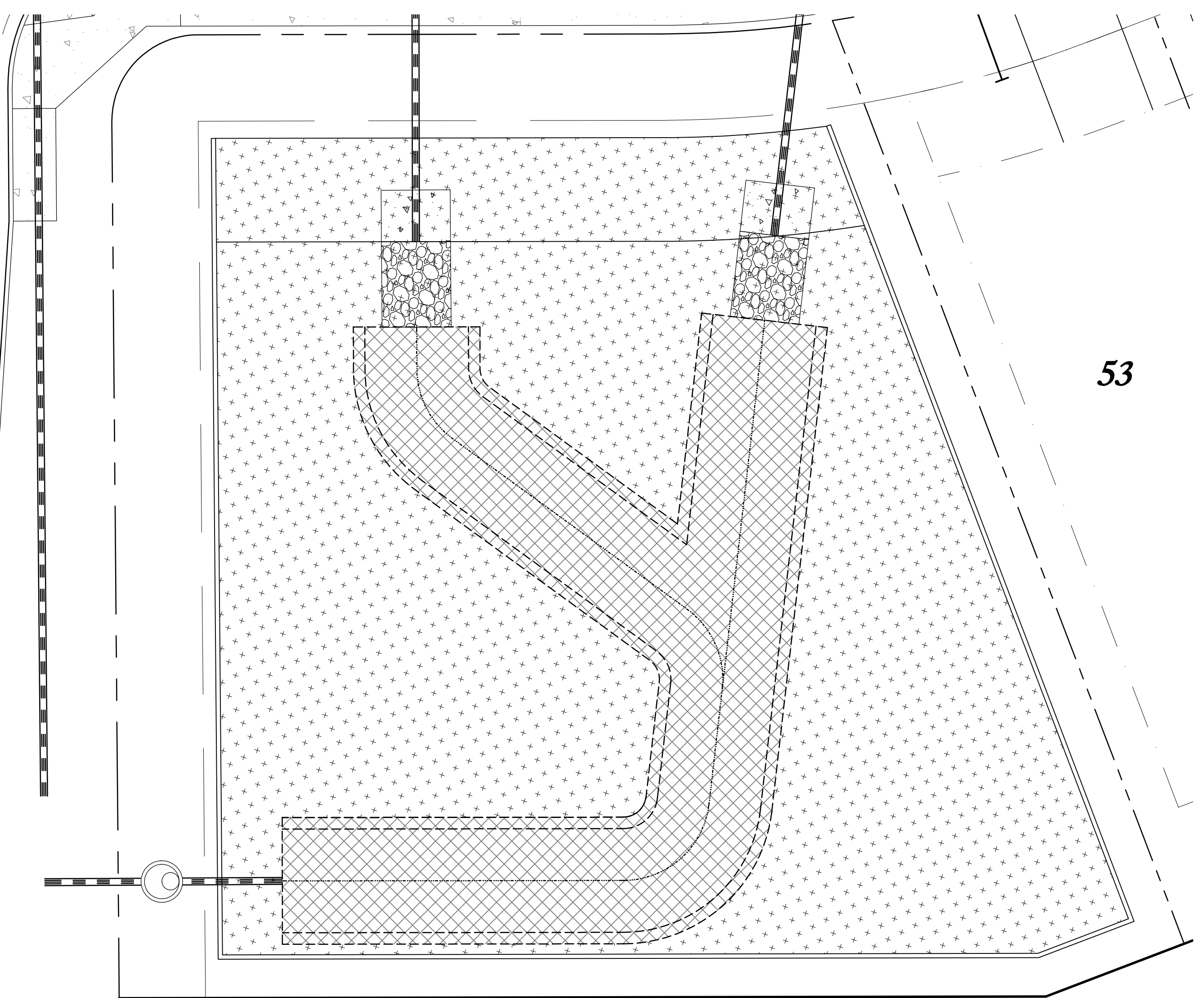
EMERIO
ENGINEERING • SURVEYING • DESIGN
 6445 SW CALLEBROOK PLACE, SUITE 100
 BEAVERTON, OREGON 97008
 TEL: (503) 746-8812
 FAX: (503) 639-6562
 www.emeriodesign.com



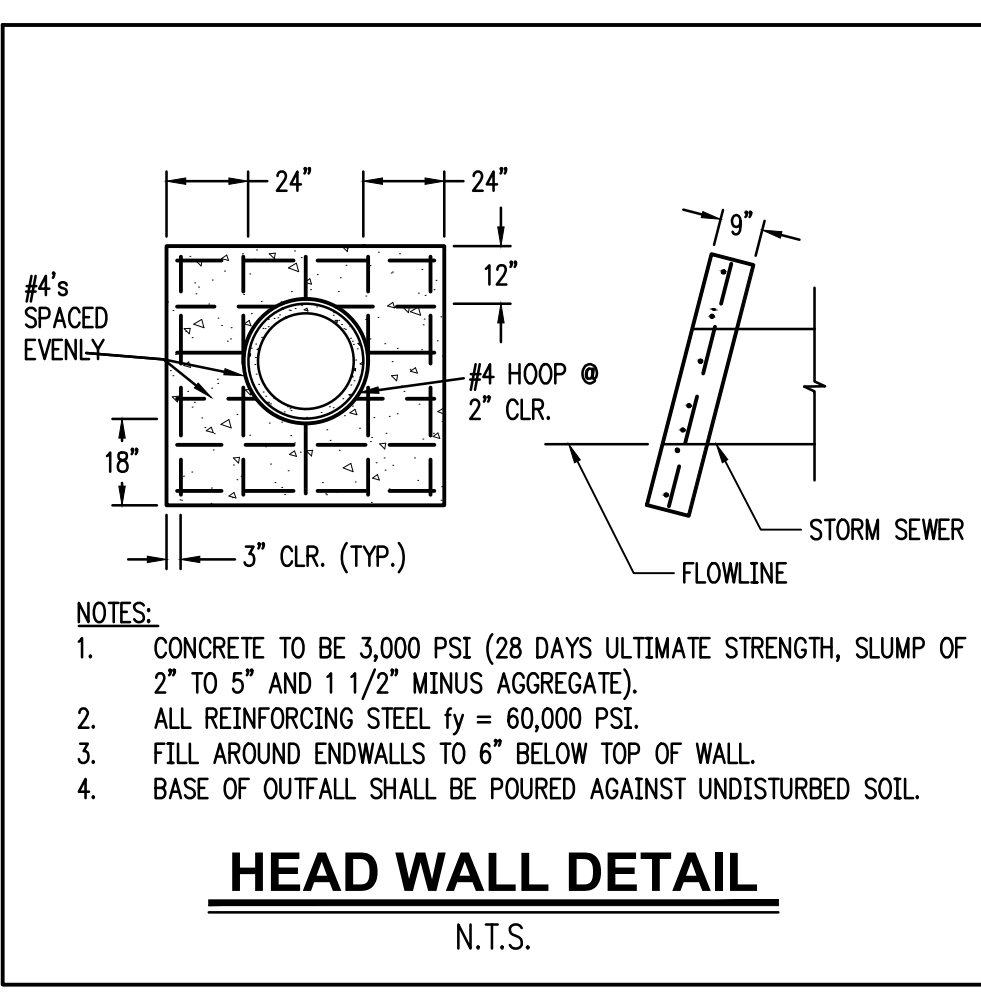
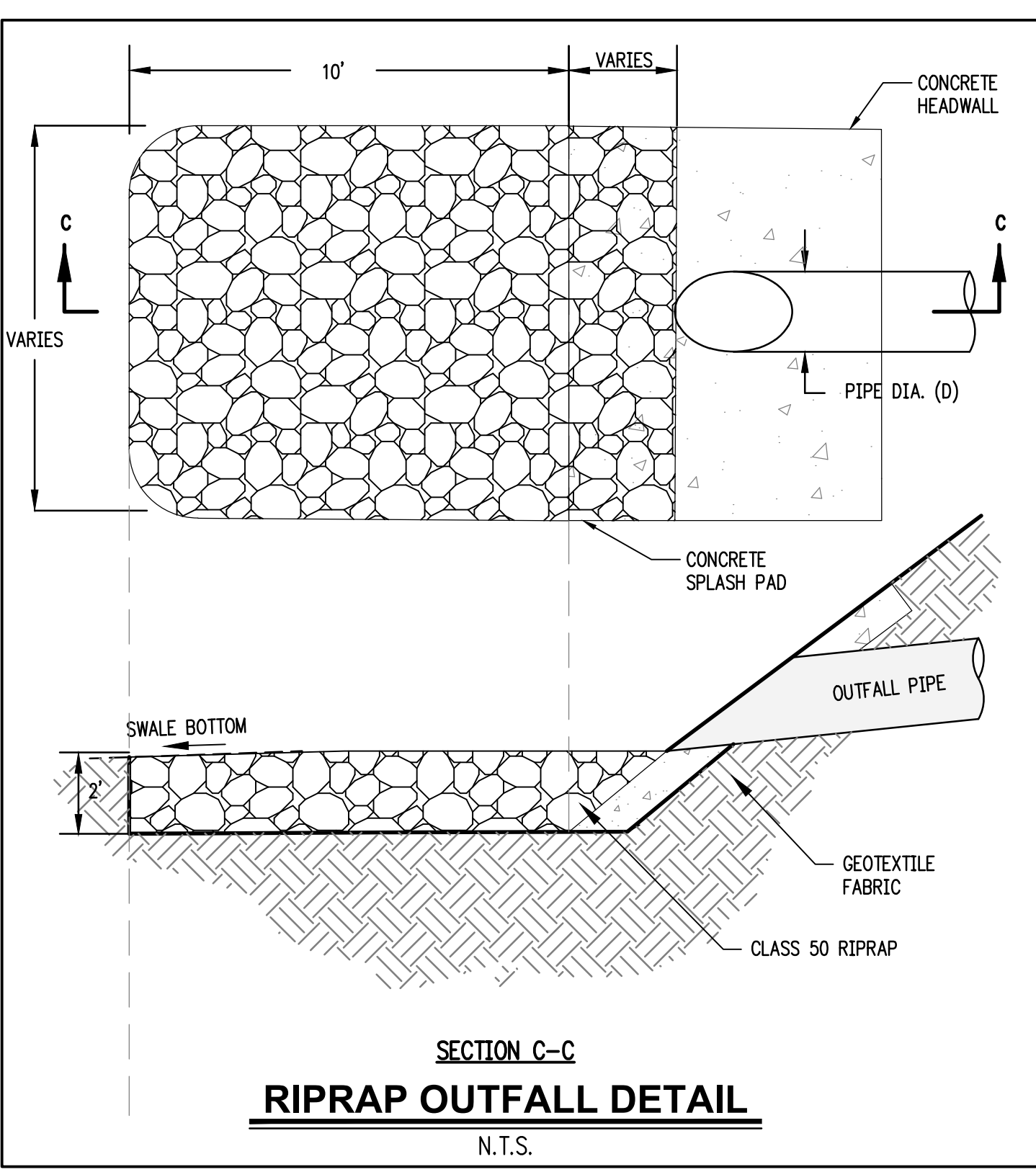
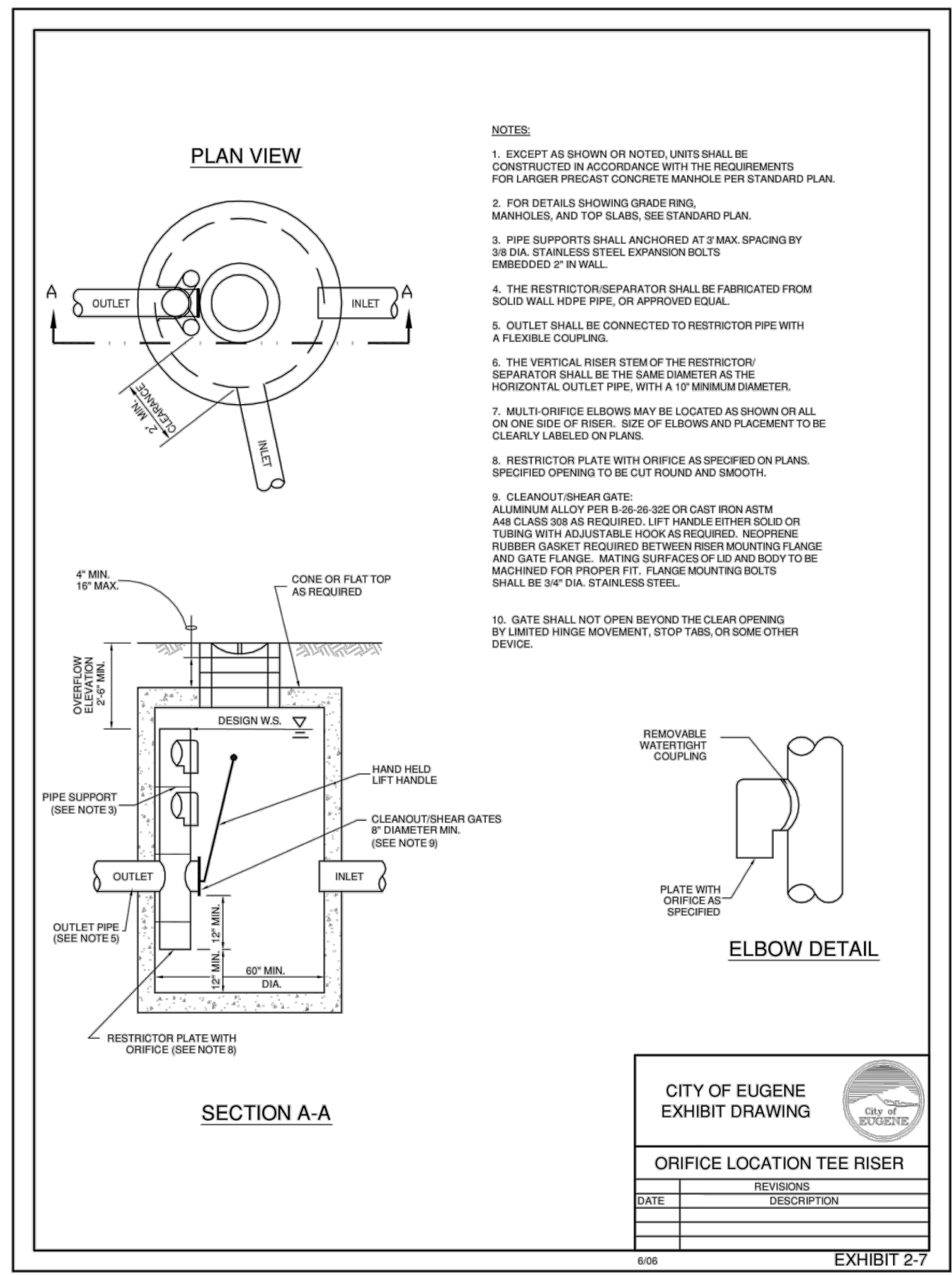
SHEET
7
 OF
8



STORM WATER QUALITY FACILITY PLANTING PLAN (TR. A)



STORM WATER QUALITY FACILITY PLANTING PLAN (TR. B)



TENTATIVE GRASS SEED MIX (100% COVERAGE OF ALL AREAS OTHER THAN TREATMENT AREA) *SEE LANDSCAPING PLAN

COMMON NAME	SCIENTIFIC NAME	% OF MIXTURE BY PURE LIVE SEED	
DWARF TALL FESCUE	<i>Lolium arundinoceum</i>	40	FACU
DWARF PERENNIAL RYE	<i>Lolium perenne</i>	30	FACU
CREeping RED FESCUE	<i>Festuca rubra</i>	25	FACU
COLONIAL BENTGRASS	<i>Agrostis tenuis</i>	5	OBL

ALL AREAS OF DISTURBED SOILS ABOVE THE TREATMENT AREA OF THE WATER QUALITY SWALE SHALL BE RESEED WITH FOLLOWING SEED MIX. THE HYDROSEED APPLICATION RATE SHALL BE 120 LBS. PER ACRE.

* AVAILABLE THROUGH SUNMARK SEEDS INTERNATIONAL, INC. 1-888-214-7333.

TYPICAL WATER QUALITY & DETENTION POND - TENTATIVE PLANTING TABLE *SEE LANDSCAPING PLAN

Plant Communities	Treatment Area = 2,282 SF @ 6/SF = 13,692 PLANTS	Minimum Species Composition	Plant Category	Water Requirements	Light Requirements	Minimum Rooting Size	Minimum Plant Height	Spacing Format
Rossi Sedge (<i>Carex rossi</i>)	3,423	Herb	Moist	Sun	Plug	6"	Mass	
Slough Sedge (<i>Carex obnupta</i>)	3,423	Herb	Moist	Moist	Plug	6"	Mass	
Creeping Spike Rush (<i>Eleocharis microcarpus</i>)	3,423	Herb	Moist	Wet	Part	6"	Mass	
Small Fruited Bulrush (<i>Scirpus microcarpus</i>)	3,423	Herb	Moist	Wet	Plug	6"	Mass	
	13,692							

CASTLEBERRY CROSSINGS
TAX MAP 155-04W-15 - TL 3700
HARRISBURG, OREGON

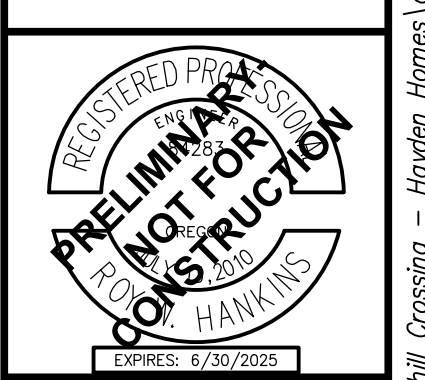
WATER QUALITY FACILITY DETAILS

REVISIONS

NO.	DATE	DESCRIPTION

EMERIO
ENGINEERING • SURVEYING • DESIGN

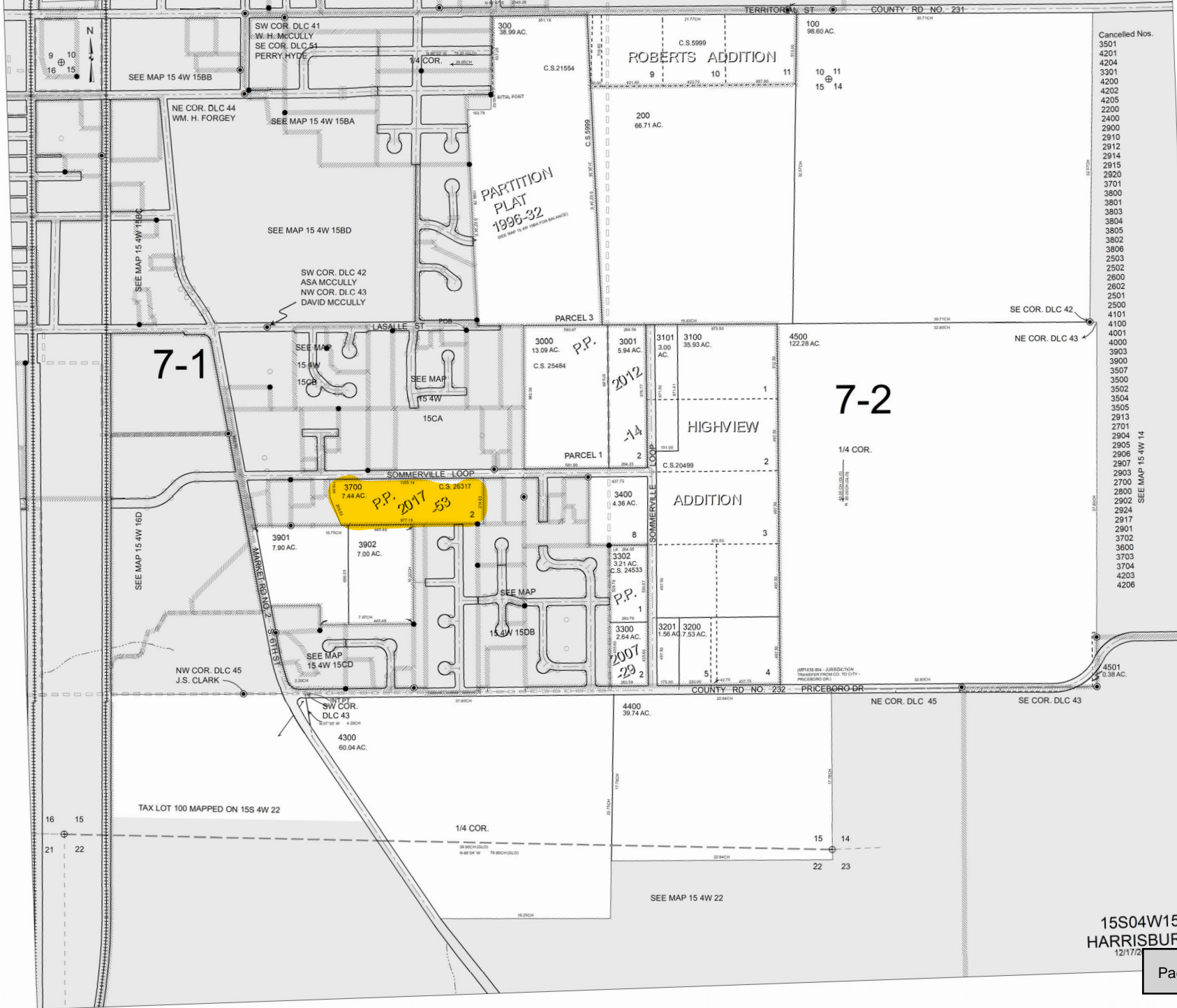
6446 SW CALLEDOCK PLACE, SUITE 100
BEAVERTON, OREGON 97008
TEL: (503) 746-8812
FAX: (503) 639-9592
www.emeriodesign.com



SHEET **8** OF **8**

SECTION 15 T.15S. R.4W. W.M.
Linn County
1" = 400'

FOR ASSESSMENT AND
TAXATION ONLY

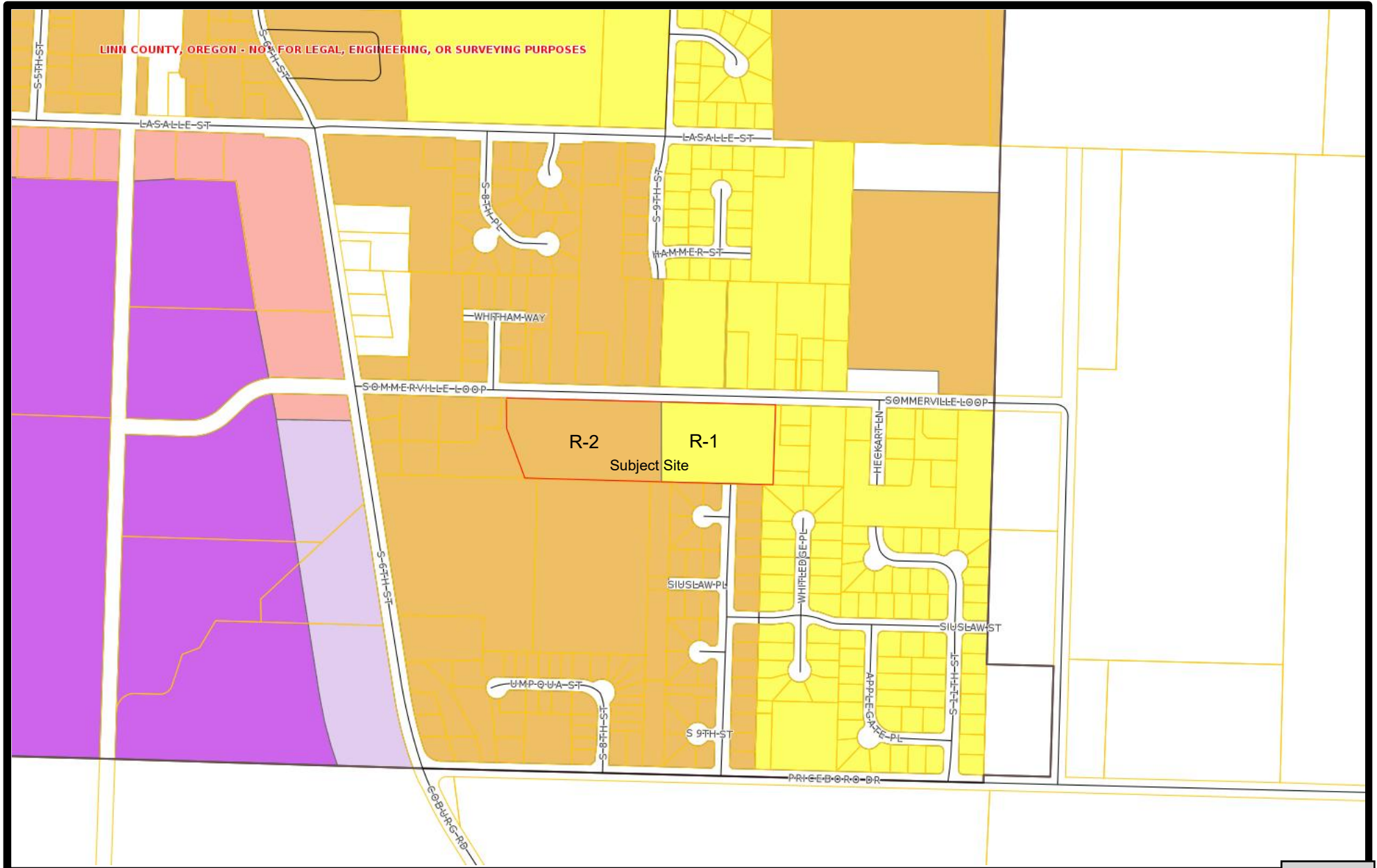


- Cancelled Nos.
- 3501
 - 4201
 - 4204
 - 3301
 - 4200
 - 4202
 - 4205
 - 2200
 - 2400
 - 2900
 - 2910
 - 2912
 - 2914
 - 2915
 - 2920
 - 3701
 - 3800
 - 3801
 - 3803
 - 3804
 - 3805
 - 3802
 - 3806
 - 2503
 - 2502
 - 2600
 - 2602
 - 2501
 - 4101
 - 4100
 - 4001
 - 4000
 - 3903
 - 3900
 - 3507
 - 3500
 - 3502
 - 3504
 - 3505
 - 2913
 - 2701
 - 2904
 - 2905
 - 2906
 - 2907
 - 2903
 - 2700
 - 2800
 - 2902
 - 2924
 - 2917
 - 2901
 - 3702
 - 3600
 - 3703
 - 3704
 - 4203
 - 4206

930 Sommerville Loop - Aerial Photo



930 Sommerville Loop - Zone Map



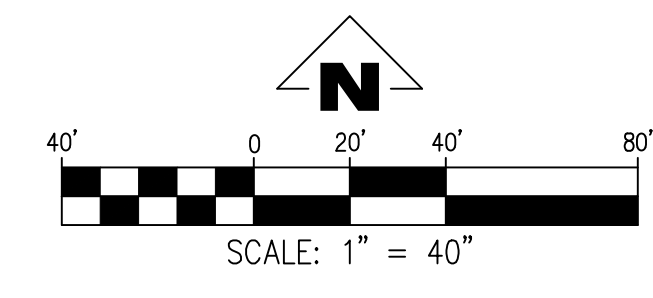
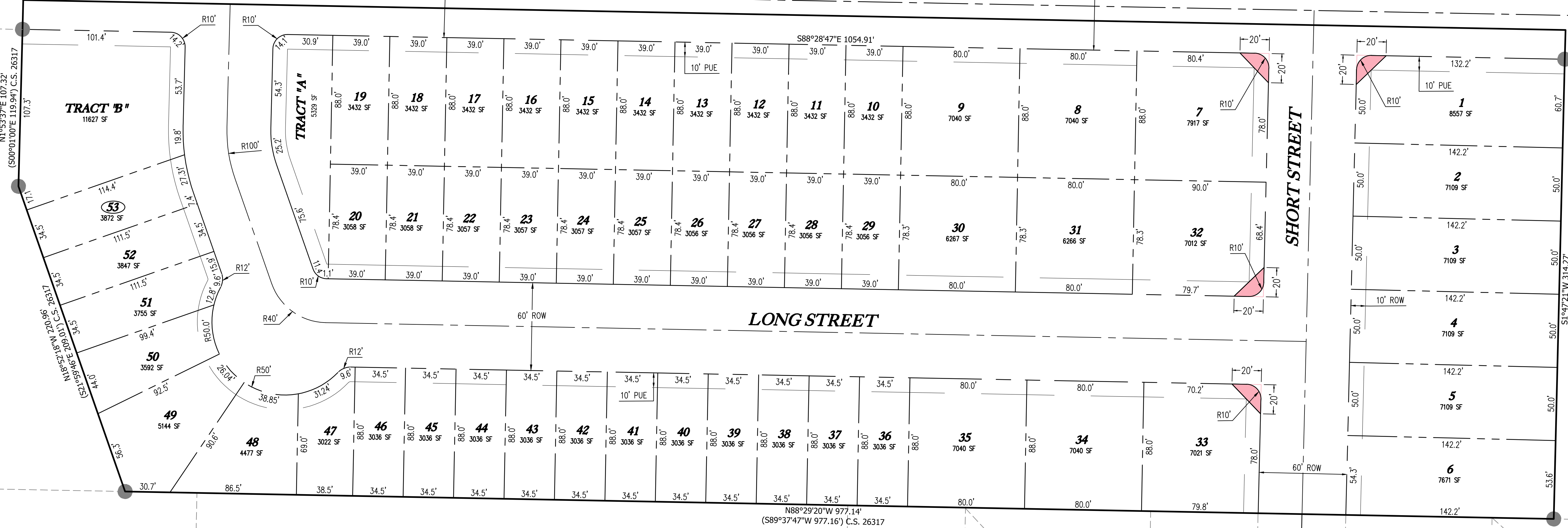
SPURLOCK STREET


SOMMERVILLE LOOP

SHORT STREET

LONG STREET

TENTATIVE PLAT



 - 20' X 20' CLEAR VISION AREA

WOODHILL CROSSING
TAX MAP 155-04W-15 - TL 3700
HARRISBURG, OREGON

CLEAR VISION EXHIBIT

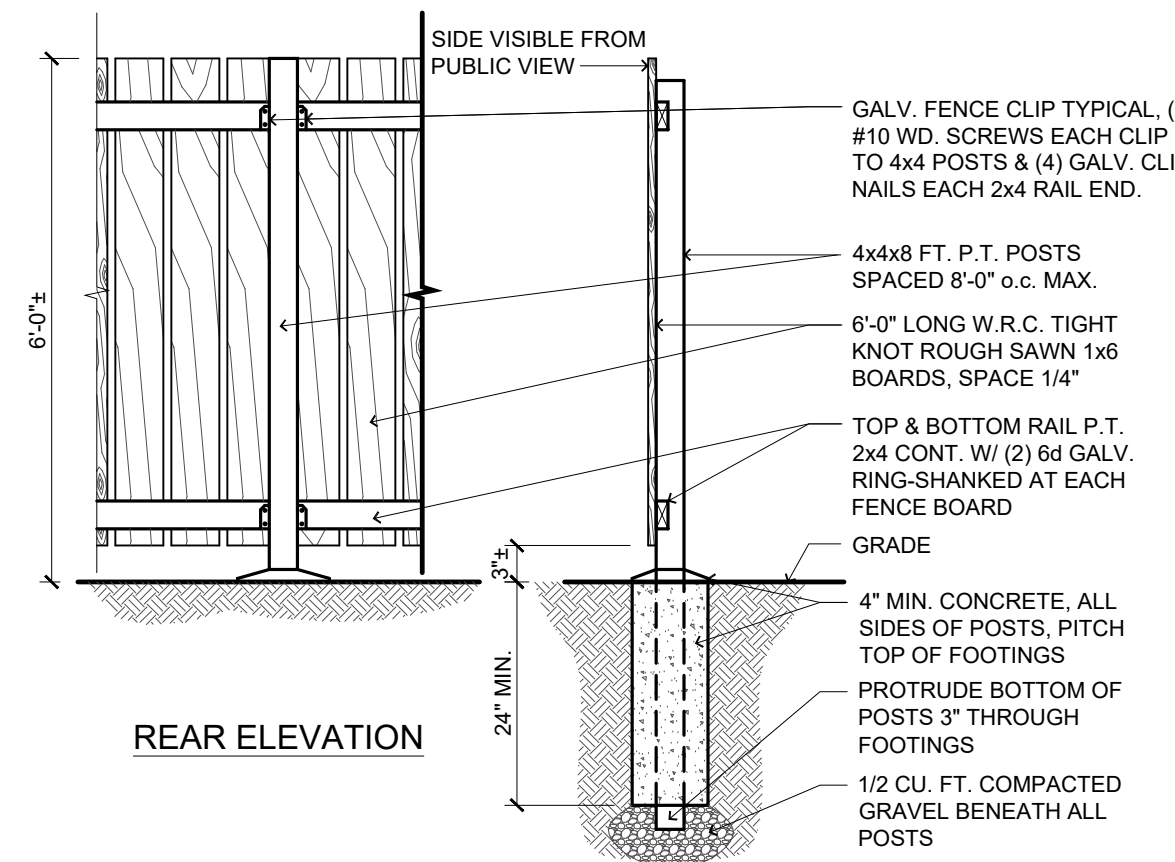
NO.	DATE	REVISIONS	DESCRIPTION

EMERIO
ENGINEERING • SURVEYING • DESIGN
1500 VALLEY RIVER DRIVE, SUITE 100
EUGENE, OREGON 97401
TEL: (503) 746-8812
FAX: (503) 639-9592
www.emeriodesign.com

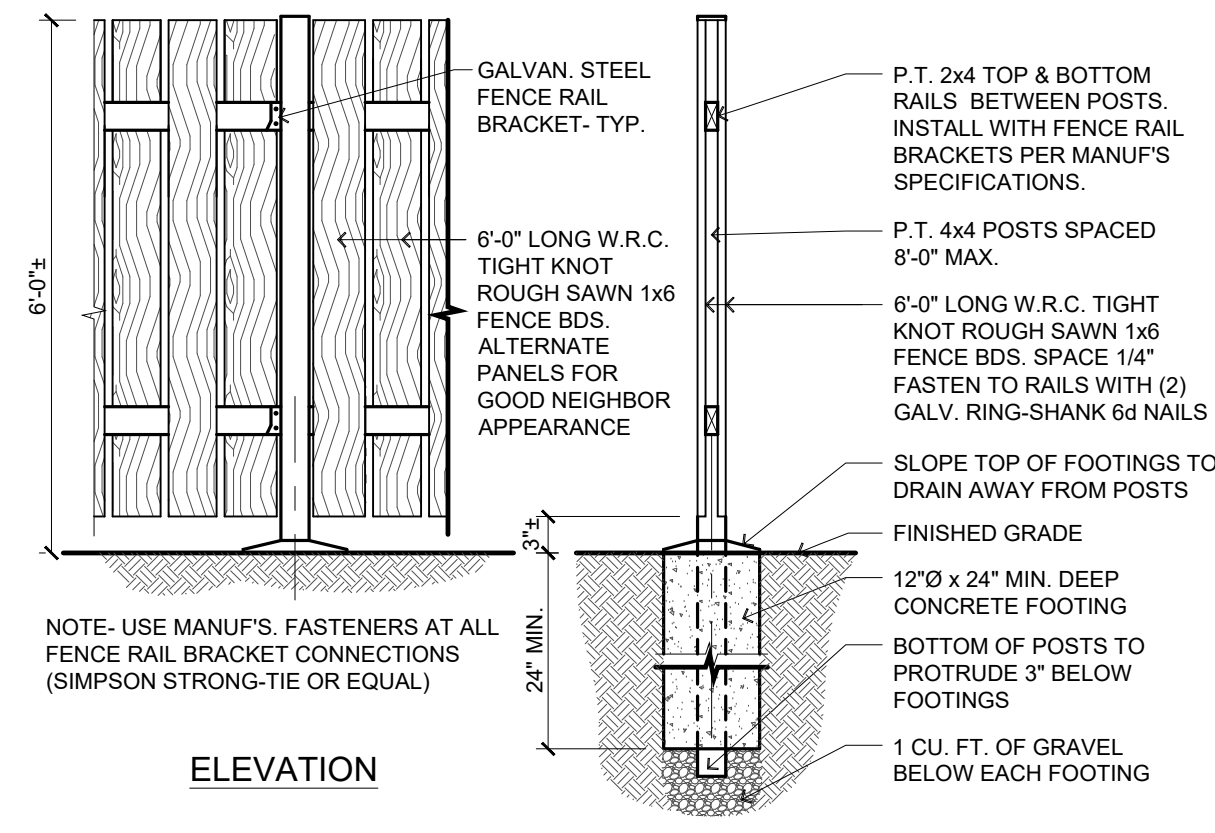
SHEET

OF

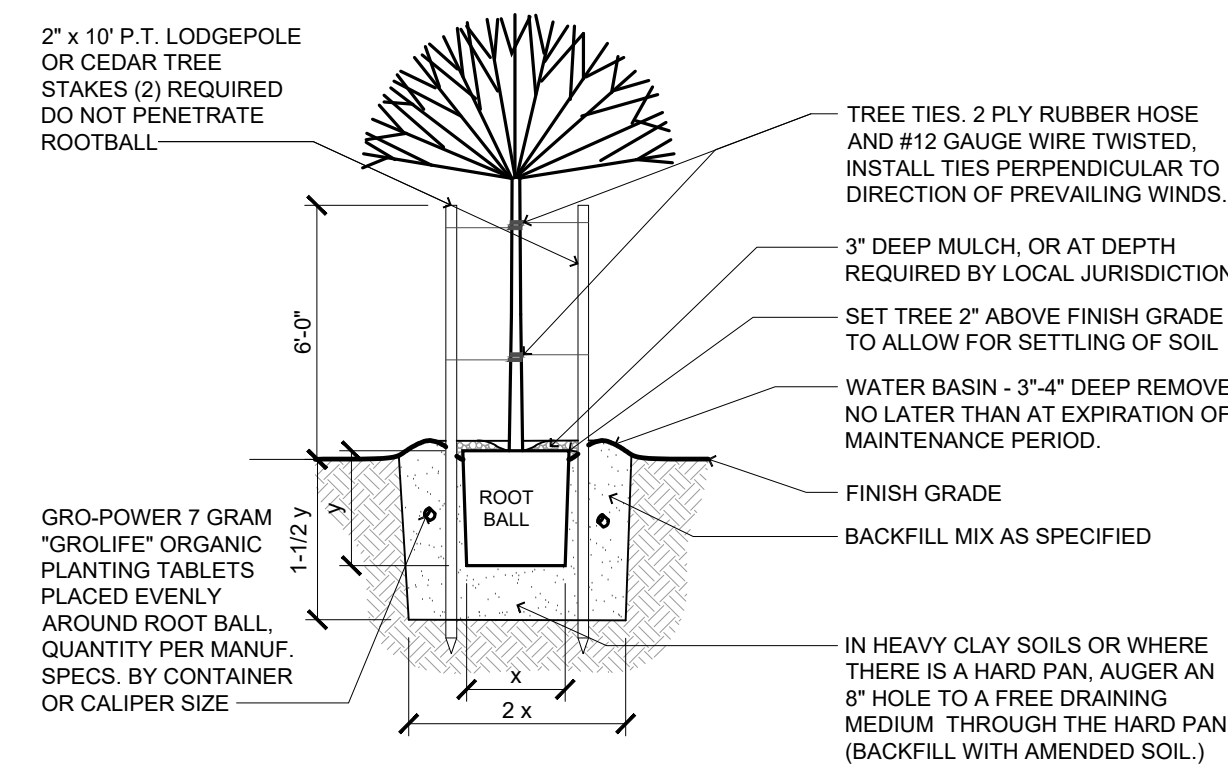
REVISIONS



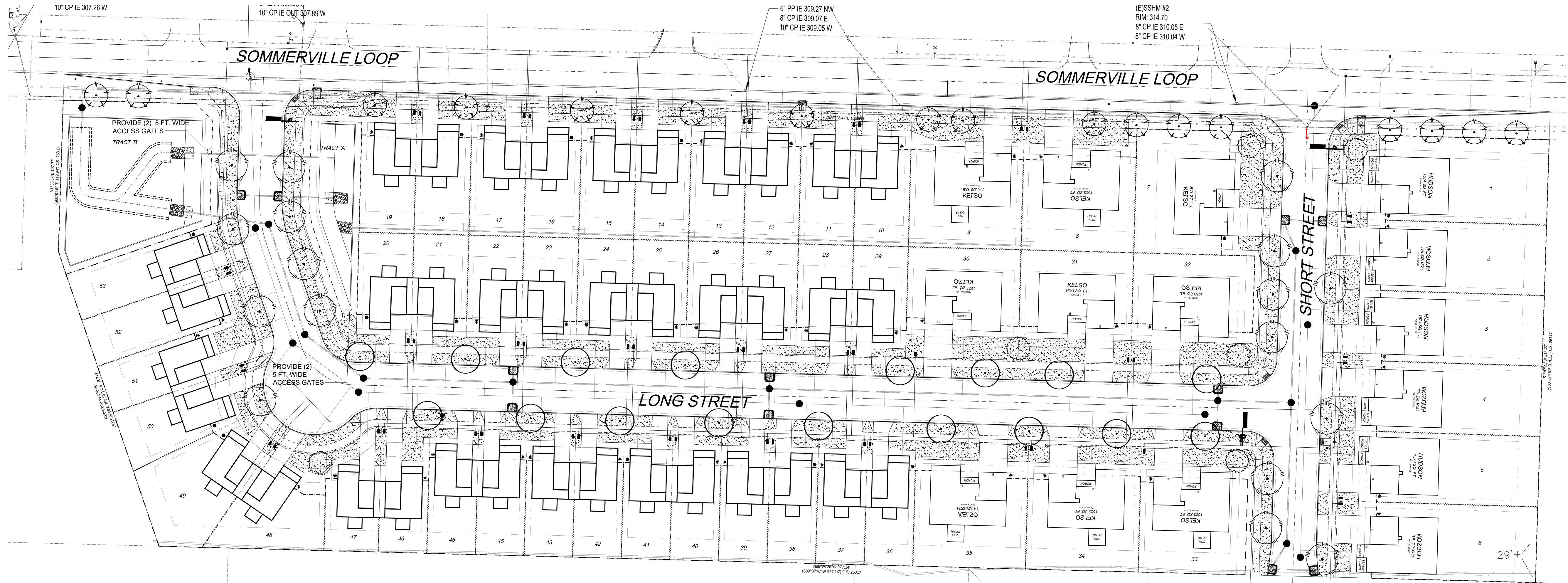
1 PRIVACY FENCE SECTION
ONE-SIDED CEDAR FENCE
SCALE: N.T.S.



2 6 FT. FENCE SECTION
CEDAR- GOOD NEIGHBOR STYLE
SCALE: N.T.S.



3 TREE PLANTING SECTION
SCALE: NOT TO SCALE



STREET TREE SCHEDULE

SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	REMARKS
DECIDUOUS TREES						
	17	Acer griseum	Paperbark Maple (power-line friendly)	2.00" caliper	B&B	Standard form- limbed at 7 ft.
	17	Cornus nuttallii 'Eddie's White Wonder'	Hybrid Western Dogwood	2.00" caliper	B&B	Standard form- limbed at 7 ft.
	17	Ginkgo biloba 'Fairmount'	Fairmount Maidenhair Tree	2.00" caliper	B&B	Standard form- limbed at 7 ft.

NOTES

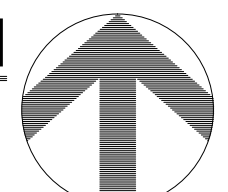
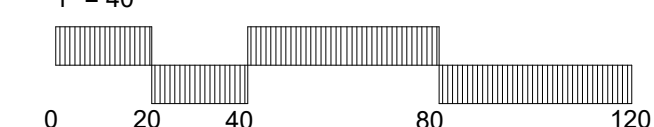
- Refer to Sheets L2 - L4 for private front-yard and stormwater tract landscaping.
- Homeowner is responsible for private backyard landscaping and irrigation.
- Tract A and Tract B Stormwater BMP's and Public R.O.W. landscaping shall be irrigated from a separate irrigation water meter / irrigation system installed by Developer.
- Developer is responsible for temporary irrigation of private front-yard landscaping until establishment or until purchase of home by private Owner, whichever occurs sooner.
- All planting areas, excluding stormwater BMP's, to receive soil preparation with 5 cysd. of organic compost and 40# of 20-5-10 fertilizer spread evenly / 1000 s.f. of area and thoroughly tilled into soil.
- Planting pit backfill mix to consist of 50% on-site soil, 50% organic compost mixed thoroughly and Agriform or equal 20-10-5 planting tablets per manufacturer's specifications. Plants in Stormwater BMP's to planted directly into soil (no fertilizers shall be used).
- Refer to Civil plans for Stormwater BMP soil specifications.
- All shrubs beds to receive a 2" minimum layer of fresh bark mulch excluding Stormwater BMP areas.

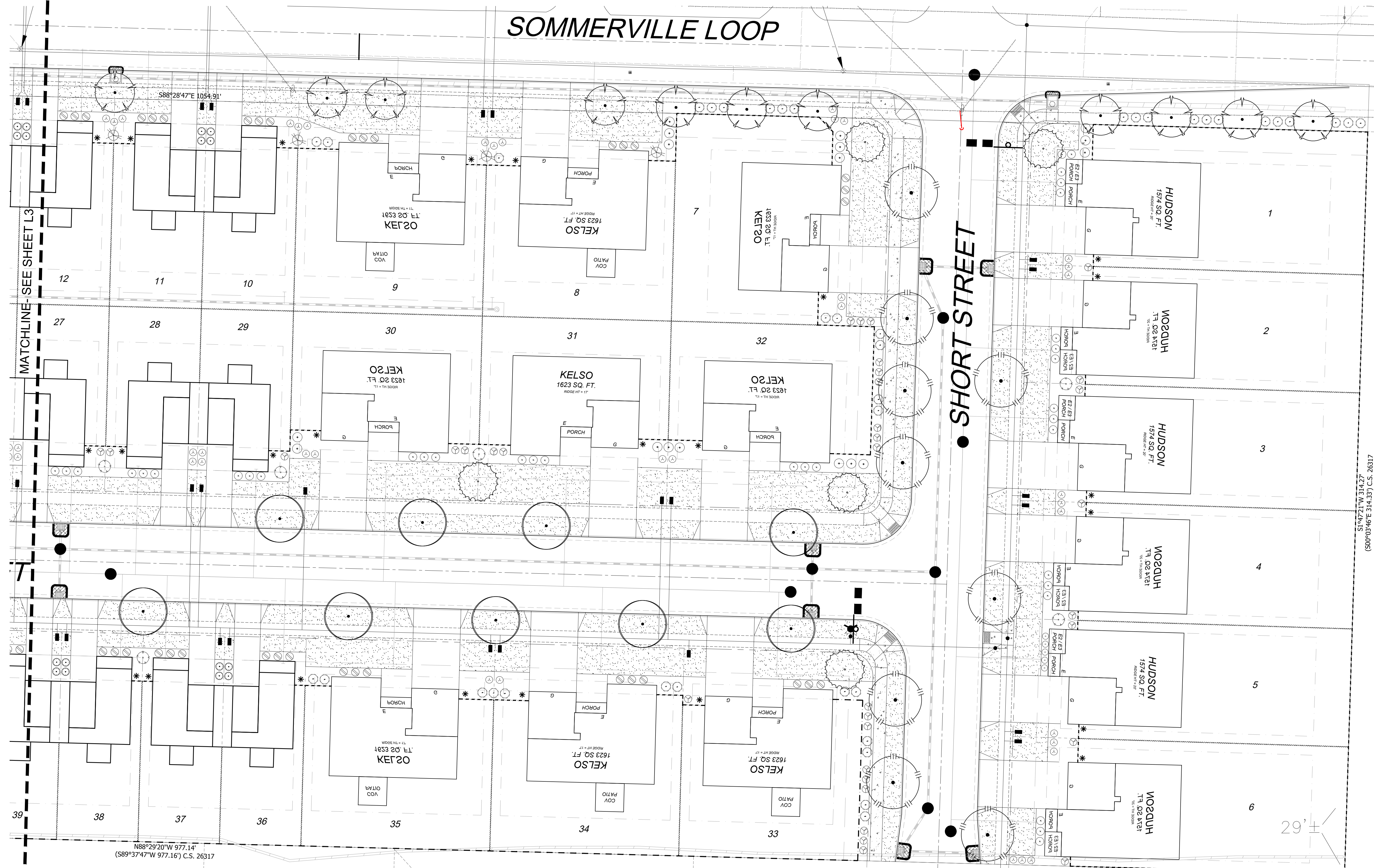
FENCING KEY

- SYMBOL** **DESCRIPTION**
- 6 FT. SINGLE SIDED CEDAR FENCE, SEE DETAIL 1 THIS SHEET
 - 6 FT. GOOD-NEIGHBOR CEDAR FENCE, SEE DETAIL 2 THIS SHEET
 - 4 FT. HIGH BLACK VINYL COATED CHAIN-LINK FENCE
 - INDICATES LOCATION OF 3 FT. WIDE GATE

STREET TREE & FENCE MASTER PLAN

DATE: 12/21/2023
1" = 40'





SOMMERVILLE LOOP

SHORT STREET

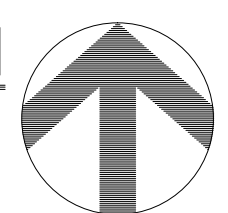
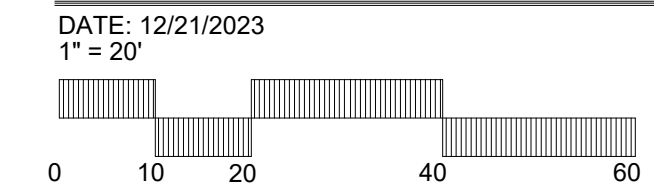
MATCHLINE-SEE SHEET L3

N88°29'20"W 977.14'
(S89°37'47"W 977.16') C.S. 26317

S142°27'11"W 314.27'
(S00°03'46"E 314.33') C.S. 26317

NOTE
1. Refer to Sheet L4 for Planting Schedule

MASTER LANDSCAPE PLAN



NO.	DATE	REVISIONS	DESCRIPTION

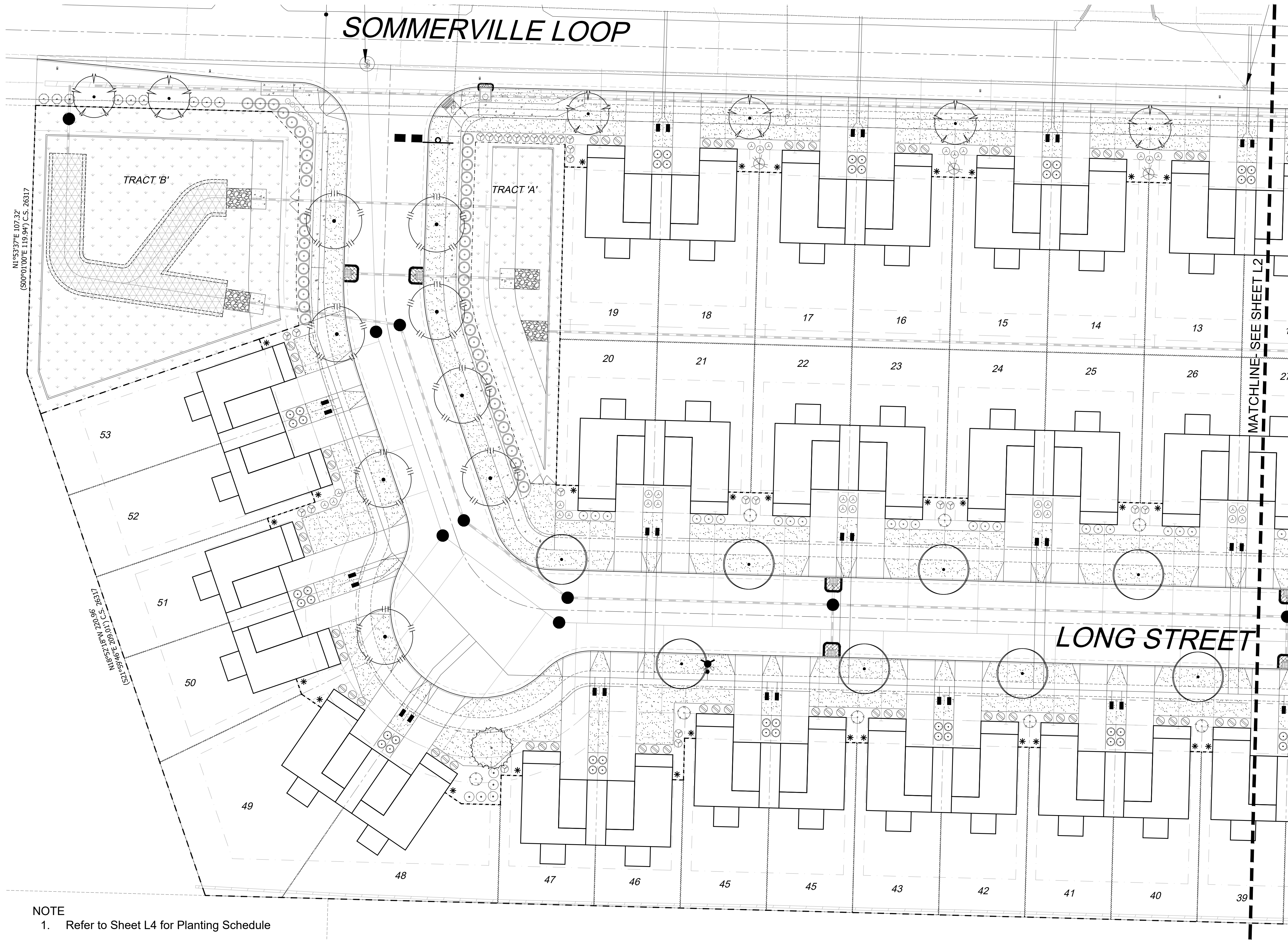
EMERIO
ENGINEERING • SURVEYING • DESIGN
1500 VALLEY RIVER DRIVE, SUITE 100
EUGENE, OREGON 97401
TEL: (503) 746-8812
FAX: (503) 639-8592
www.emeriodesign.com

REGISTERED
PRELIMINARY
NOT FOR
CONSTRUCTION
LANDSCAPE ARCHITECT

SHEET
L2
OF
4

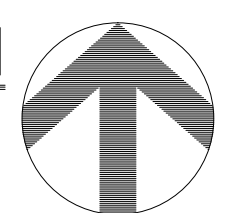
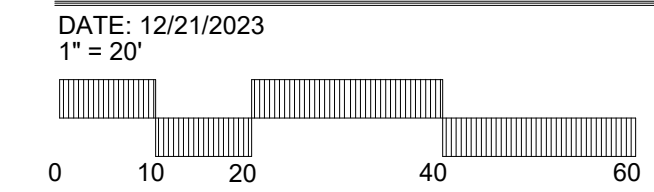
WOODHILL CROSSING
TAX MAP 155-04W-15 - TL 3700
HARRISBURG, OREGON

lenity
architecture
155 Valley River Drive, Suite 2701
Eugene, Oregon 97401
P: 503 399 1090 F: 503 699 0585
www.lenityarchitecture.com



NOTE
 1. Refer to Sheet L4 for Planting Schedule

MASTER LANDSCAPE PLAN



WOODHILL CROSSING
TAX MAP 155-04W-15 - TL 3700
HARRISBURG, OREGON

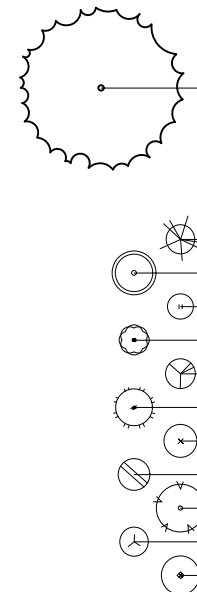
lenity
 architecture
 1550 Valley River Drive, Suite 100
 Eugene, Oregon 97401
 Tel: (503) 746-8812
 Fax: (503) 699-8592
 www.lenityarchitecture.com

REVISIONS	
NO.	DATE

EMERIO
 ENGINEERING • SURVEYING • DESIGN
 1500 VALLEY RIVER DRIVE, SUITE 100
 EUGENE, OREGON 97401
 TEL: (503) 746-8812
 FAX: (503) 699-8592
 www.emeriodesign.com

REGISTERED
 LANDSCAPE ARCHITECT
 PRELIMINARY
 NOT FOR
 CONSTRUCTION
 12/21/2023

SHEET
L3
 OF



PLANTING SCHEDULE

SYMBOL	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE	REMARKS
ORNAMENTAL TREES						
	6	Malus 'Prairifire'	Prairifire Flowering Crabapple	1.50" caliper	B&B	Standard form
SHRUBS						
	7	Chamaecyparis obtusa 'Nana Gracilis'	Dwarf Hinoki Cypress	5 gal.	Container	
	48	Escallonia 'Newport Dwarf'	Newport Dwarf Escallonia	2 gal.	Container	
	5	Ilex crenata 'Helleri'	Dwarf Japanese Holly	2 gal.	Container	
	56	Mahonia repens	Creeping Mahonia	2 gal.	Container	
	61	Nandina domestica 'Compacta'	Compact Heavenly Bamboo	2 gal.	Container	
	50	Osmanthus heterophyllus 'Goshiki'	Goshiki Holly-leaved Osmanthus	5 gal.	Container	
	56	Rhapiolepis umbellata 'Minor'	Dwarf Yeddo Hawthorn	2 gal.	Container	
	102	Rhododendron 'Clipinense'	Clipinense Rhododendron	2 gal.	Container	
	14	Ribes sanguineum	Pink Winter Currant	5 gal.	Container	
	67	Rosa x 'Nostraum'	Pink Carpet Rose	2 gal.	Container	
	22	Viburnum tinus 'Spring Bouquet'	Spring Bouquet Laurustinus	5 gal.	Container	
GRASSES / PERENNIALS						
	7	Lavandula angustifolia 'Munstead'	Dwarf English Lavender	1 gal.	Container	-
GROUND COVERS						
No Symbol		Ajuga reptans 'Burgundy Lace'	Carpet Bugle	2 25" pots @ 18" o.c.	Container	Private yard planter beds
No Symbol		Arctostaphylos uva-ursi 'Wood's Compact'	Kinnikinnick	3 5" pots @ 24" o.c.	Container	Right-of-Way planter beds
		NA	Perennial Ryegrass & Fine Fescue Blend			Seeded or sod lawn areas at discretion of Developer

STORMWATER BMP PLANTING SCHEDULE

	Water Quality Swale (2300 sq. ft.)		Plugs 6 / Sq. ft.	Install Geojute Plus fabric in water quality swale
	Juncus patens	Spreading Rush	3450	
	Scirpus microcarpus	Small-fruited Bulrush	3450	
	Carex obnupta	Slough Sedge	3450	
	Carex rossii	Rossi Sedge	3450	
	Detention Basin Area	Native Water Quality Seed Mix	1 lb. P.L.S. / 1000 sq. ft.	Hydroseed Vendor: Summark Seeds Int'l., Inc. (503) 241-7333
	Elymus glaucus	Blue Wildrye		
	Festuca rubra rubra	Native Red Fescue		
	Deschampsia caespitosa	Tufted Hairgrass		
	Glyceria occidentalis	Western Mannagrass		
	Beckmannia syzigachne	American Sloughgrass		

PLANTING SCHEDULES

DATE: 12/21/2023

REVISIONS

NO.	DATE	DESCRIPTION

EMERIO
 ENGINEERING • SURVEYING • DESIGN
 1500 VALLEY RIVER DRIVE, SUITE 100
 EUGENE, OREGON 97401
 TEL: (503) 746-8812
 FAX: (503) 639-6592
 www.emeriodesign.com



SHEET
L4
 OF

4

WOODHILL CROSSING
TAX MAP 155-04W-15 - TL 3700
HARRISBURG, OREGON

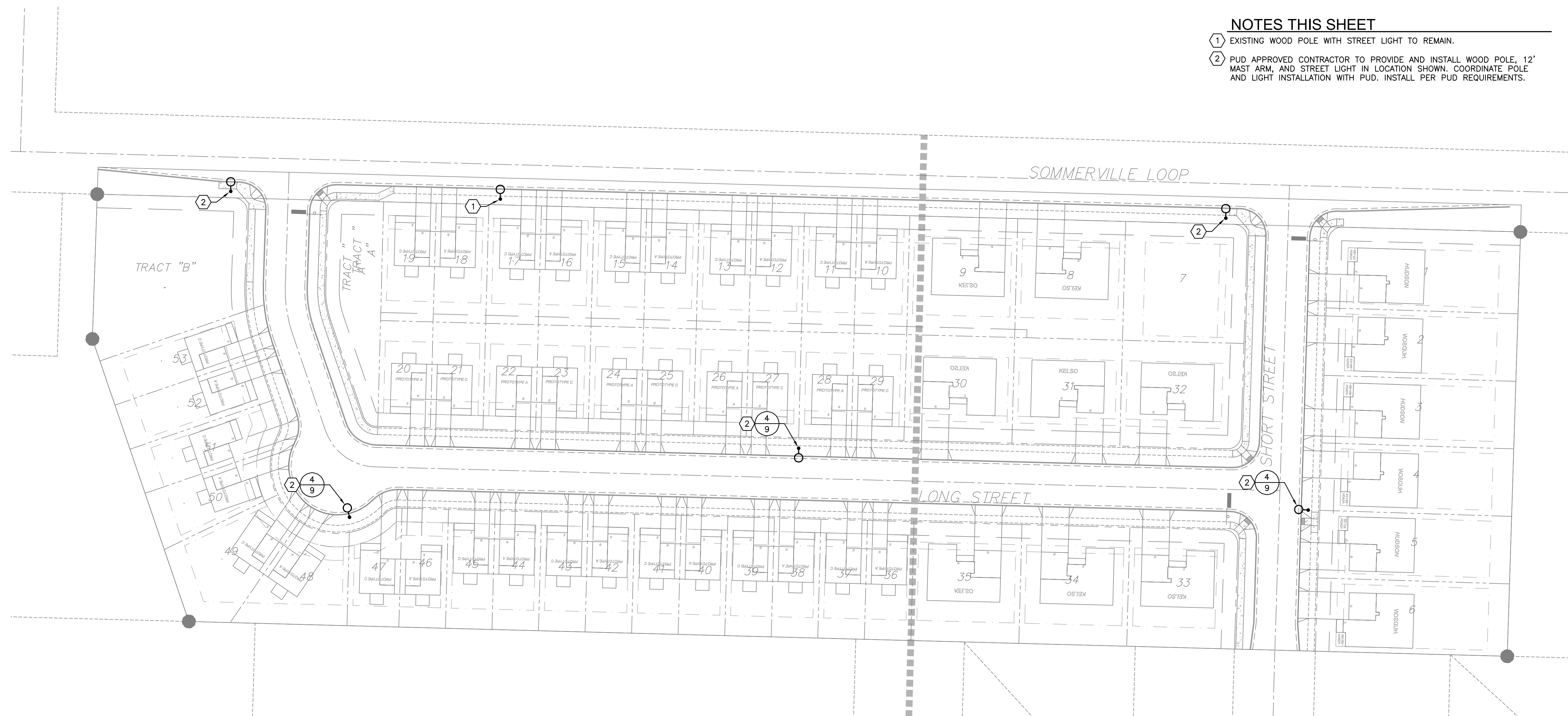
lenity
 architecture
 1550 Valley River Drive, Suite 100
 Eugene, Oregon 97401
 Phone: (503) 399-1090
 Fax: (503) 639-6592
 www.lenityarchitecture.com

GENERAL NOTES

- A. SEE SHEET 9 FOR NOTES, LEGEND, AND DETAILS.
- B. CABINETS, POLES, JUNCTION BOXES & CONDUIT NEED TO STAY WITHIN CITY'S RIGHT-OF-WAY. BRING ANY CONFLICTS TO THE IMMEDIATE ATTENTION OF THE PROJECT MANAGER SO A MAINTENANCE EASEMENT CAN BE ACQUIRED, OR THE DESIGN CAN BE MODIFIED.
- C. ALL SPLICES IN UNDERGROUND BOXES OR DIRECT BURIED SHALL BE INSULATED AND WATERPROOFED, USING SCOTCHCAST EPOXY SPLICING COMPOUNDS SUITED FOR THE PURPOSE.
- D. PROVIDE AND INSTALL CONDUIT, CONDUCTORS, AND PULL-BOXES. ROUTE AND TRENCH PER PUD DESIGN. VERIFY FINAL PUD DESIGN BEFORE START OF WORK.
- E. ALL NEW STREET LIGHTS TO BE 135W LED LEVEL 5 TYPE PACIFIC POWER LIGHT. COORDINATE PROCUREMENT OF LIGHTS WITH UTILITY.
- F. SEE DETAILS 1/9, 2/9, AND 3/9 FOR TRENCHING AND HANDHOLE INFORMATION.

NOTES THIS SHEET

- ① EXISTING WOOD POLE WITH STREET LIGHT TO REMAIN.
- ② PUD APPROVED CONTRACTOR TO PROVIDE AND INSTALL WOOD POLE, 12' MAST ARM, AND STREET LIGHT IN LOCATION SHOWN. COORDINATE POLE AND LIGHT INSTALLATION WITH PUD. INSTALL PER PUD REQUIREMENTS.



① SITE PLAN - LIGHTING
 SCALE: 1" = 40'-0"
 SCALE IN FEET
 1" = 40'-0"

REVISIONS	
NO.	DATE

EMERIO
 ENGINEERING • SURVIVING • DESIGN
 1500 VALLEY RIVER DRIVE, SUITE 100
 EUGENE, OREGON 97401
 TEL: (503) 746-8812
 FAX: (503) 639-6592
 www.emeriodesign.com

PRELIMINARY - NOT FOR CONSTRUCTION

R&W
 ENGINEERING, INC.
 9615 S.W. Allen Boulevard
 Suite 107
 Beaverton, Oregon 97005
 Phone: (503) 726-3328
 Office: (503) 292-6000
 E-mail: rweg@rweg.com
 Project No. 1402.002.001 Contact: S. HOLMAN

GENERAL REQUIREMENTS

- CONFORM TO CURRENT CODE INCLUDING OSSC, NEC, BUILDING CODE, AND LOCAL REQUIREMENTS.
- PROVIDE COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEMS AS SPECIFIED, AS SHOWN ON DRAWINGS, AS REQUIRED, AND AS INTENDED.
- EQUIPMENT SHALL BE NEW AND OF LIKE MATERIALS THROUGH AUTHORIZED DISTRIBUTORS. PROVIDE EQUIPMENT OF SAME SYSTEM AND TYPE BY SAME MANUFACTURER. EQUIPMENT SHALL BE LISTED FOR ITS USE AND SHALL MEET OREGON LISTING REQUIREMENTS. REFER TO OAR 918-306-00 FOR MORE INFORMATION ON OREGON LISTING REQUIREMENTS.
- WARRANT WORK, MATERIALS, AND EQUIPMENT FOR NOT LESS THAN ONE-YEAR. THIS REQUIREMENT SHALL NOT LIMIT, RESTRICT, OR OTHERWISE LESSEN ANY WARRANTY PROVIDED BY EQUIPMENT MANUFACTURER'S STANDARD WARRANTY IF GREATER THAN ONE-YEAR.
- PROVIDE SUBMITTALS FOR ELECTRICAL EQUIPMENT. PROVIDE STANDARD CUT-SHEETS CLEARLY INDICATING MODELS TO BE INSTALLED.
- GROUND SYSTEMS PER NEC ARTICLE 250, AS INDICATED, AND AS SHOWN.
- ALL ELECTRICAL WORK TO COMPLY WITH NFPA 70E ARC FLASH RULES, WHICH WILL INCLUDE AN ARC FLASH ANALYSIS AND ARC FLASH LABEL FOR THE CONTROLLER CABINET.
- ELECTRICAL WORK SHALL BE PERFORMED UNDER ELECTRICALLY SAFE WORK CONDITIONS WITH LOCK-OUT TAG-OUT PER NFPA 70E. KEEP POWER DISRUPTIONS TO A MINIMUM AND NOTIFY OWNER IN ADVANCE OF POWER DISRUPTIONS.
- CALL U-DIG 811 AT LEAST 2-BUSINESS DAYS BEFORE DIG OR TRENCH PER OAR 952-001-0010 THROUGH -0090. SCAN & MARK SUGGESTED ROUTING FOR UTILITIES & IRRIGATION PRIOR TO TRENCHING ACTIVITIES; DO NOT DISTURB UTILITIES OR PIPING, AVOID CONFLICTS. WHERE FEASIBLE, MARK THE ANTICIPATED ROUTE(S) WITH WHITE PAINT; THIS HELPS LOCATING PERSONNEL FIND THE RIGHT AREA AND LOCATE NEARBY FACILITIES AS ACCURATELY AS POSSIBLE.

GENERAL NOTES

- NOT ALL ABBREVIATIONS ARE USED. ABBREVIATIONS LISTED APPLY TO ELECTRICAL AND INSTRUMENTATION DRAWINGS AND DETAILS.
- MEANING OF ABBREVIATIONS SHALL DEPEND ON CONTEXT OF USAGE. SEEK CLARIFICATION FROM ENGINEER PRIOR TO BIDDING IF MEANING IS UNCLEAR.
- COMMON NON-ELECTRICAL ABBREVIATIONS SUCH AS COMPASS DIRECTIONS (N, S, E, W, ETC.) AND CHEMICAL COMPOUNDS (O2, CL2, ETC.) ARE NOT INCLUDED.
- ADDITIONAL ABBREVIATIONS FOR INSTRUMENTATION AND CONTROL ELEMENTS MAY BE INCLUDED ON SEPARATE LEGEND SHEET IF APPLICABLE.
- POWER UTILITY: PACIFIC POWER (PACIFICORP).
- CONTACT AND COORDINATE ALL REQUIREMENTS AND RESPONSIBILITIES WITH SERVING UTILITY COMPANIES PRIOR TO SUBMITTING BID.
- ALL SERVICE INSTALLATION WORK SHALL BE IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE SERVING UTILITIES.
- THIS INSTALLATION SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NFPA-70, '20 EDITION) AS AMENDED BY OESC 918-305. ALL WORK SHALL BE PERFORMED IN A NEAT AND WORKMANLIKE MANNER WITHIN STANDARD OF CARE FOR PROFESSION PER NEC 110.12 AND NECA-1. PLANS MAY INDICATE WORK OR STANDARDS WHICH EXCEEDS CODE MINIMUMS. SPECIFICATIONS AND PLAN DRAWINGS ARE TO BE TAKEN TOGETHER AND UNDERSTOOD AS ONE.
- ALL STREET LIGHTS OWNED BY PACIFIC POWER.
- PUD APPROVED CONTRACTOR TO PROVIDE AND INSTALL STREET LIGHTS, CONDUIT, AND CONDUCTORS. COORDINATE ROUTING AND STREET LIGHT PROCUREMENT WITH UTILITY.
- STREET LIGHTS TO BE FED WITH 240V UNDERGROUND FEED. COORDINATE LOCATION OF SOURCE TRANSFORMER(S) WITH UTILITY. COORDINATE CONNECTION TO TRANSFORMER(S) WITH UTILITY.

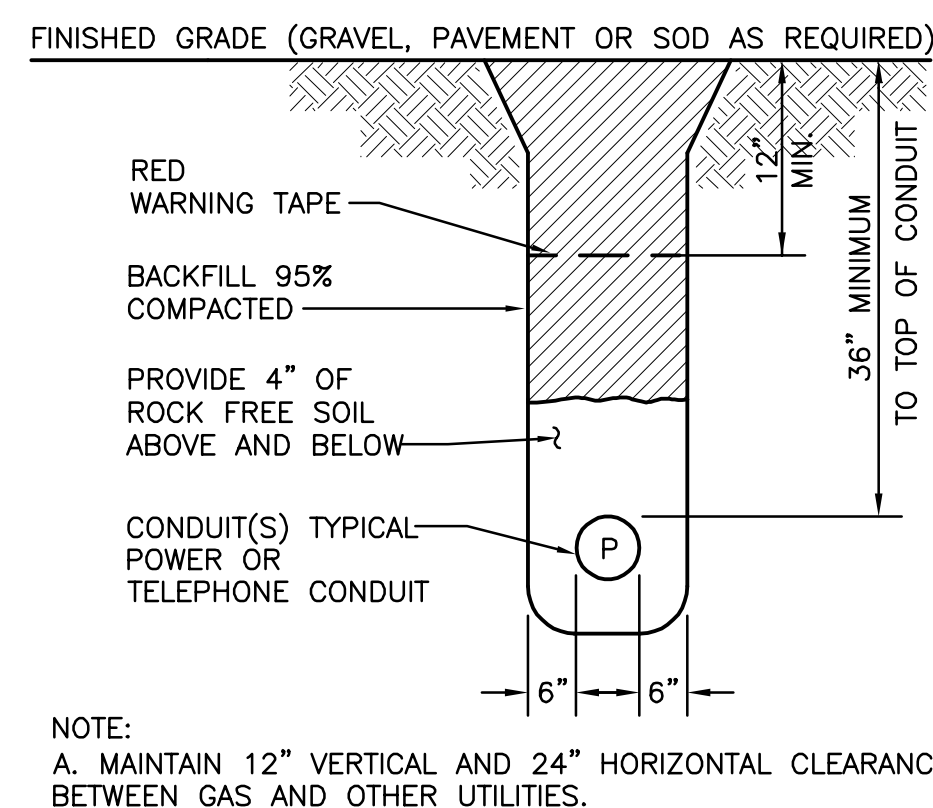
RACEWAY / CONDUCTORS FOR POLE-MOUNT LIGHTING

- PROVIDE NO SMALLER THAN 1" RACEWAY.
- PROVIDE SCHEDULE 40 PVC FOR UNDERGROUND RACEWAY.
- PROVIDE NO SMALLER THAN #10 AWG STRANDED COPPER XHHW 600V CONDUCTORS..
- EVERY UTILIZED RACEWAY SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR.
- A MINIMUM OF (1) 2-INCH CONDUIT SHALL RUN BETWEEN JUNCTION BOXES AND A MINIMUM OF (2) 1-INCH CONDUIT SHALL RUN FROM THE JUNCTION BOX TO THE LIGHT POLE. THE CONDUIT SHALL BE SCHEDULE 40 PVC EXCEPT ALL ELBOWS SHALL BE FIBERGLASS; NO SPLICING ALLOWED WITHIN THE CONDUIT. CONDUIT SHALL BE USED TO MAKE THE CONNECTION BETWEEN THE JUNCTION BOX AND THE POLE. A LOCATE TRACE WIRE SHALL BE INSTALLED IN EACH SPARE CONDUIT PER ODOT/APWA STANDARDS SECTION 960.42A. ALL CONDUIT ENDS SHALL HAVE A BUSHING INSTALLED AND AN APPROVED CONDUIT PLUG.

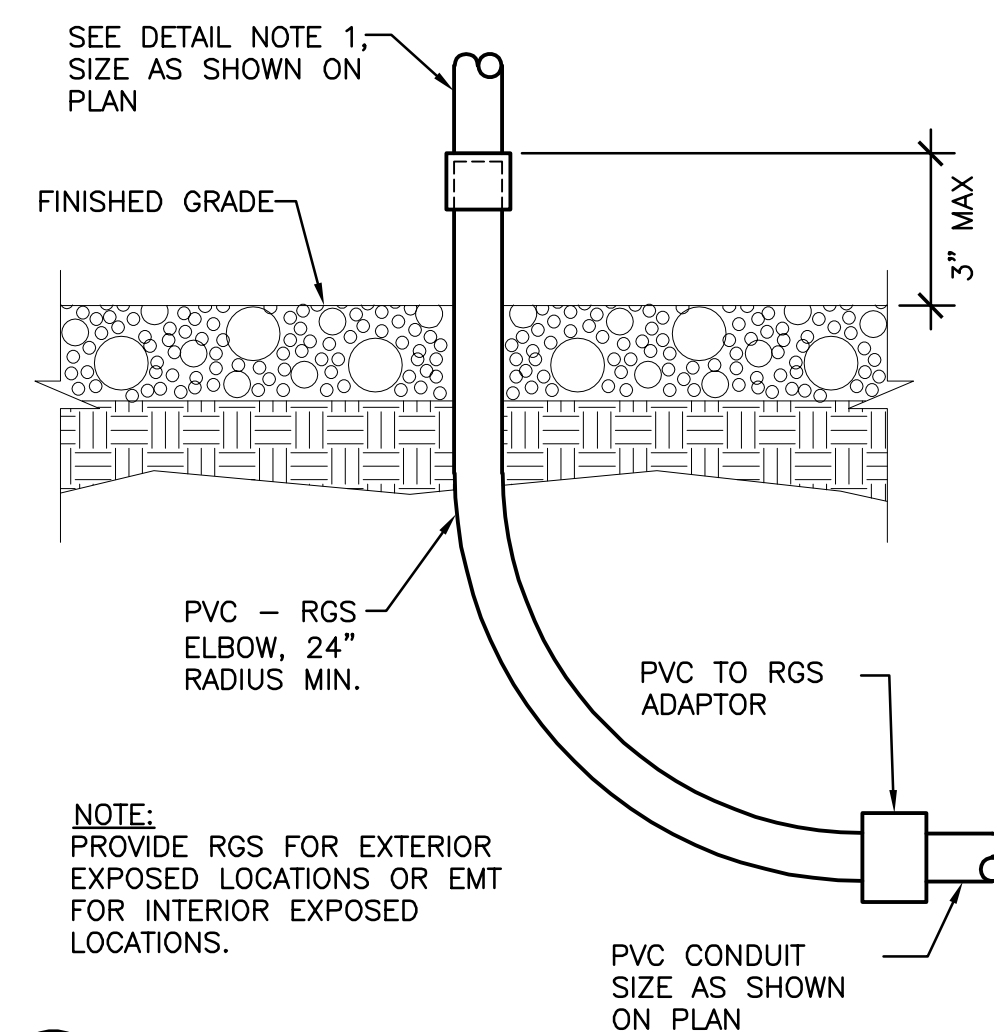
SYMBOL LEGEND AND ABBREVIATIONS

FC	FOOTCANDLE
GND	GROUND
J-BOX	JUNCTION BOX
LM	LUMENS
NEC	NATIONAL ELECTRIC CODE
PVC	POLYVINYL CHLORIDE
TYP.	TYPICAL
WP	WEATHERPROOF
	JUNCTION BOX
	POLE-MOUNTED LUMINAIRE
	CONDUIT - BELOW GRADE
	SHEET NOTE
	SHEET DETAIL

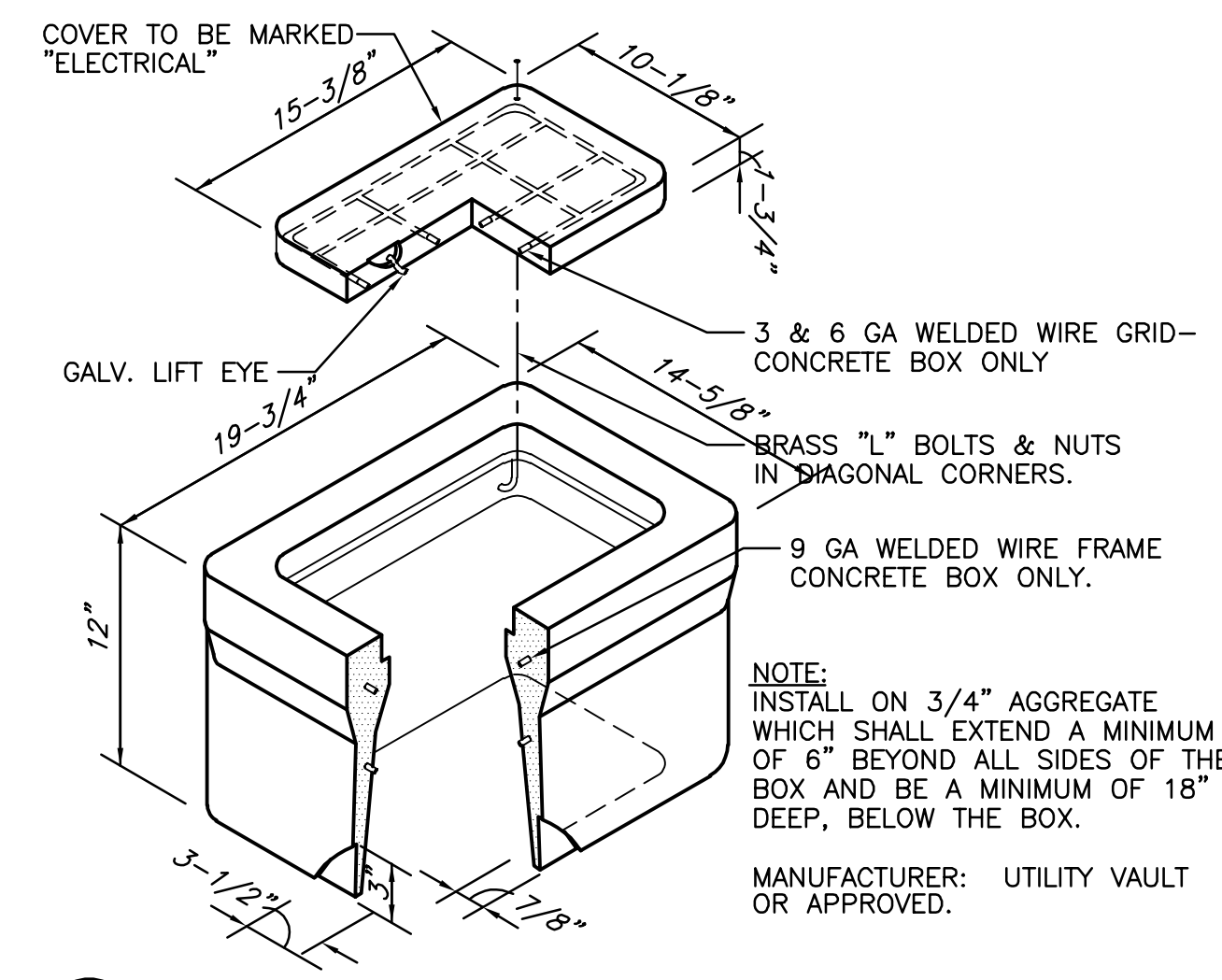
NOTE: NOT ALL ABBREVIATIONS OR SYMBOLS USED.



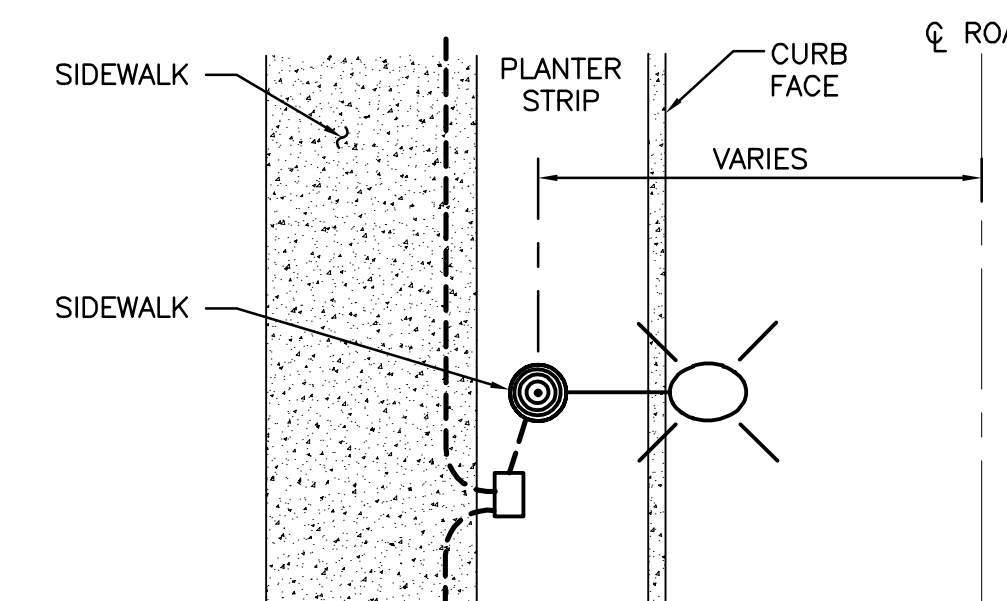
1 POWER CONDUIT TRENCH DETAIL
E9 NOT TO SCALE



2 CONDUIT GRADE TRANSITION DETAIL
E9 NOT TO SCALE



3 FLUSH HANDHOLE/SPLICE BOX DETAIL
E9 NOT TO SCALE



4 TYPICAL STREET LIGHT DETAIL
E9 NOT TO SCALE

WOODHILL CROSSING
TAX MAP 155-04W-15 - TL 3700
HARRISBURG, OREGON

ELECTRICAL LEGEND,
NOTES, AND DETAILS

NO.	DATE	DESCRIPTION

EMERIO
ENGINEERING - SURVIVING - DESIGN
1500 VALLEY RIVER DRIVE, SUITE 100
EUGENE, OREGON 97401
TEL: (503) 746-8812
FAX: (503) 639-6592
www.emeriodesign.com

PRELIMINARY -
NOT FOR
CONSTRUCTION

R&W
ENGINEERING, INC.
9615 S.W. Allen Boulevard
Suite 107
Beaverton, Oregon 97005
Phone: (503) 726-3328
Office: (503) 292-6000
E-mail: rweg@rweg.com
Project No.: 1402.002.001 Contact: S. HOLMAN

SHEET
9 OF
10

TECHNICAL MEMORANDUM



DATE: February 13, 2024

PROJECT: CASTLEBERRY CROSSINGS

TO: Michele Eldridge, City Administrator
Chuck Scholz, Public Works Director

FROM: Damien Gilbert, P.E., City Engineer

RE: Tentative Plan Engineering Comments

Exhibit C

Thank you for the opportunity to review the subject application. I have examined the applicant's materials, and offer the following planning level review comments related to public facilities for your consideration:

Exhibit D: Clear Vision Exhibit needs to include vision triangles on both intersections as well as the 'curve' within the project, and must be signed by the engineer of record to be approved. If the applicant is relying on vision clearance on private property, there shall be an easement recorded on the plat.

Exhibit E: Landscape Plan must be signed and sealed by the design professional of record to be approved.

Exhibit F: Lighting Plan must be signed and sealed by the engineer of record to be approved.

Exhibit G: Transportation Assessment addresses the applicable criteria, and the City Engineer concurs with the conclusions.

Exhibit H: Storm Drainage Report must be signed by the engineer of record to be approved. The applicant did not size the system to detain the 25-year storm as required. The report shall be revised and resubmitted to demonstrate accommodate the 25-year storm.

Exhibit I: Sight Distance Memo must be signed and sealed by the engineer or record to be approved.

All public improvements, including but not limited to, traffic control devices, detailed storm detention and conveyance system, sanitary sewer conveyance system, water distribution system, and roadway design details, are subject to review and approval under a future review of the privately engineered public improvement construction plans and specifications.

Sheet 5/8 includes a detail titled Summerville Sawcut-Typical Section. Based on Harrisburg Collector Street Standards, the Typical Section shall include the following minimum requirements from the existing paved centerline, south, and the associated necessary right of way:

- 11-foot vehicular travel lane
- 8-foot on-street parking lane
- 0.5-foot curb
- 6-foot planter strip
- 6-foot sidewalk
- 0.5-foot construction/maintenance setback to new right of way line
- 10-foot PUE

The proposed residential development is expected to be a significant pedestrian generator on a collector roadway without a connected pedestrian system and the route to schools. The applicant shall include a safe pedestrian connection across the collector roadway to the public sidewalk system north of the development, such as a Rectangular Rapid Flashing Beacon and the associated public improvements and traffic control devices.

Please let me know if there are any questions.

Thank you |