PUD-2025-02

CUP-2025-04

SUB-2025-02

Attachment #1

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TUALATIN, OR 97062
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December 12, 2025

Barbara Fryer, AICP
City of Cornelius
Community Development Department
1355 N Barlow Street
Cornelius, OR 97113

RE: Completeness Review Letter for a Type III Planned Unit Development and Conditional Use Permit Site (PUD-2025-04/CUP-2025-02) and a Type III Preliminary Subdivision Plat (Sub-2025-02) for the 'Laurel Crown' Planned Unit Development.

Dear Barbara:

Thank you for reviewing the submitted materials for the Laurel Crown PUD/CUP and subdivision application. Per your review letter dated December 2, 2025, we are submitting the following materials to address staff's request for information and additional findings in support of the application.

1. Please have the property owner of record, Hillsboro School District 1J, sign the land use application.

Response: The necessary authorized signatures have been obtained. Please refer to the updated Exhibit B for the requested information.

2. Within the text and graphics on Page 2, please clearly reference that Parcels 1 and 2 are the subject of an approved land partition (LP-01-25). Also, please note in this executive summary and throughout the document that the proposed subdivision is on Parcel 2 of the approved land division. On any of the graphics that reference Parcel 1 of an unrecorded partition plat, include some demarcation that the proposal is on Parcel 2 of the unrecorded partition plat.

Response: The requested information has been added to the land use narrative. Notes have been added to figures and other materials that reference parcels of the approved land division or unrecorded partition plat. Please see Exhibit J for the unrecorded Final Partition Plat.

3. Within Table 1, Page 3, please add a column that denotes inside the UGB and outside the UGB for clarity.

Response: The requested information has been added to Table 1 in the form of an additional column labeled "Inside/Outside UGB."

4. Please clarify in the paragraph at the top of Page 3 that this proposed application for development is moot if these other processes (CPA and street vacation) are not approved by City Council.

Response: The requested clarification regarding the sequence of needed approvals has been added to the executive summary to better explain the application's reliance on pending approvals.

5. Please clearly identify the correct acreages. County records show the existing tax lot is 36.94 acres. Please clearly break down these calculations and use the calculations from LP-01-25 in the discussion of the partitioned lot sizes. Please include a discussion that identified how much additional land is gained in each parcel (1 and 2) if the City Council vacates the right of way. Please do not pre-suppose that it will be vacated. It is a legislative City Council decision.

Response: The accurate parcel areas from the approved partition (LP-01-25) have been provided within the updated materials. Please refer to the narrative or sheet P04 for further information.

6. **Please identify how many lots are proposed with this project. On the Land Use Application and throughout the narrative, -/+ 230 lots is not acceptable. Please provide the exact number of proposed lots. The traffic study used 240 lots in the analysis, but the plan sheets show 230 lots – both in the traffic study and in the application narrative. Please indicate why there is a change from the traffic study to the current proposal and note that the findings in the traffic study hold with fewer households – if the number is 230 not 240.**

Response: Within the traffic study, the number of lots analyzed (240 total) was deliberately chosen in order to present a conservative estimate of vehicle trips to and from the Laurel Crown PUD, which is planned to provide 230 lots. The traffic study demonstrates that even with the increased number of homes (240 units), the transportation network surrounding and serving the site has excess capacity for the forecast increase in traffic and safety and delay issues can be avoided. Further information is available within the updated Transportation Impact Study (Exhibit F) and relevant responses within the written narrative. The narrative has been updated to clarify that 230 lots are planned where appropriate.

7. **On the top of page 9, in the response to (g), the applicant notes that the Laurel Crown subdivision does not plan to include half streets as a part of the project. Please explain that the proposed construction of S. 345th Avenue is not a full street improvement or leave it off of the plan sets.**

Response: The improvements to SW 345th Avenue are dependent on a future development agreement between the Applicant and City of Cornelius. Therefore, improvements of SW 345th Avenue have been omitted from the plans except where those improvements would tie into streets associated with the project.

8. **On page 10, there is no discussion of the street naming policies or the proposed street name network. Please provide a narrative that addresses the questions shown on page 10 in response to (1). The street naming policy is attached for your information.**

Response: Discussion has been added regarding the street names selected within the Laurel Crown PUD. The selected street names meet the City's adopted policies and guidance.

9. **Also on page 10, (bottom in response to (4) Blocks), please include a response to the requirement that residential development on proposed sites of five acres or greater, must submit a site plan that identifies conceptual connection that are consistent with Figure 8-3 of the TSP. Include information about the other request to move the collector from S. 29th Boulevard to S. 345th Avenue. There will be a condition of approval that voids the subdivision if the Planning Commission chooses to approve it based on the facts and findings in the record and the CPA is not approved, an ordinance is not adopted by City Council, or the ordinance otherwise becomes invalid.**

Response: Responses to subsections (D)(4)(a), (b), and (c) have been included and expanded within the application narrative to address conceptual connections to adjacent properties, the existing conditions on the site, and the pending TSP amendment application.

10. **On page 12, discussion regarding item (8) is inadequate. Please discuss the proposed park system. Also note if ay of the proposed parks are, or are not, identified in the Parks Master Plan. Tracts A, B, C, and D are acceptable for city ownership and maintenance. Only Tract A counts in the usable open space calculations. Tracts E and F are not acceptable to the city for maintenance, ownership, or inclusion as usable open space.**

Response: Additional information regarding the planned park, open spaces, and City ownership and maintenance has been included within the updated written narrative.

11. **Page 19, CMC 18.10.040(G) requires specific calculations. Please ensure that each calculation is included in the submittal.**

Response: The calculations that are applicable at this time and can be provided at this time have been provided. Please see the Preliminary Plans (Exhibit A) for additional information.

12. **Page 24 – Table 2 Density Calculations appear to be off. The text of the land partition (LP-01-25) notes that Parcel 2 consists of 28.31 acres with the S. 29th Boulevard ROW, 30.53 acres with the S. 29th Boulevard ROW vacation, and 30.32 with the dedication of right of way. These numbers need to be consistent and spelled out in detail so that there is no question which number is correct. Using the numbers from the partition, the net acreage is 30.32 acres, with 230 units, results in 7 DU/acre – not the identified 11.7. Similar to the Laurel Garden project, a table is necessary to show the calculations made to start with the 28.31 acres of land in Parcel 2 and to arrive at the net area shown of 19.6 acres. A graphic would be helpful in understanding the amount of land by zone as well.**

Using rough GIS calculations, the acreage is significantly different that the applicant's calculations:

Zoning	GIS SF	Acres	Acre*75%	Minimum	Maximum
A-2	891130	20.45753	15.34315	214.8041	383.5787
R-7	865040	19.85859	14.89394	74.4697	297.8788
		Total number of units		289.2738	681.4575

If a deviation to the density standards is proposed, please provide justification as part of the PUD application.

Response: A table detailing the area counted towards the net acreage of the project, minimum and maximum densities based on that area, and planned density is provided as part of Sheet P03. To determine the net acreage (19.65 acres), the area of rights-of-way, stormwater facilities, park area, and open space tracts was subtracted from the gross acreage of Parcel 2 (30.38 acres) of the approved land partition (LP-01-25). The proposal meets the aggregated density standards of the A-7 and R-2 areas within the boundaries of the Laurel Crown subdivision; therefore, deviations to the density standards are not needed.

13. **Please indicate through this application if the intent is to vary from the maximum height standard of the zones (page 25 (C) Height in the R-7 zone and page 32 (C) Height in the A-2 zone). This is the section of the application for you to address all standards of the zoning districts that you wish to vary from through the PUD process. It is not a deferred decision.**

Response: A variance from the maximum height standards of the R-7 and A-2 districts is not sought as part of this application. The homes are not planned to exceed the 35-foot maximum height of the R-7 district; therefore, no deviation from these standards is required.

14. **On page 28, the response about pavement width for driveways notes that some townhomes may share a driveway. However, page 49 states that shared driveway access is not required. Please elaborate on page 49 that while not required, the application includes some (identify the anticipated number) shared driveways for the townhome product.**

Response: This assessment is correct and the response has been updated.

15. **At the top of page 29, (E) requires the applicant to identify the location of the mailbox cluster. The postmaster sets the locational criteria that should be addressed in response to this criterion, and the mailbox location needs to be identified on the map or in an exhibit in the submittal. It cannot be deferred to the end.**

Response: A plan has been created to identify the planned locations of mailbox clusters that meet the locational criteria set by the USPS and Postmaster. Please refer to Sheets P11A and P11B of the Preliminary Plans (Exhibit A) for further information.

16. **Page 29 of the narrative states that off-street parking paving is not applicable. Off-street parking areas (driveways) must be a paved surface.**

Response: Off-street parking areas, including garages and driveways, are planned to be paved. This item has been clarified within the written narrative.

17. **On pages 29 and 30, (G) identifies the required open space. As noted, the open space is required to be usable open recreational area and may include indoor recreation. All areas shall be maintained by the owner or HOA or dedicated to the city. The precise number of homes is required, as 230 homes require 69,000 SF of usable open space, while 240 homes require 72,000. Open Space Tract A is acceptable. Tracts B, C, D, E, and F are not acceptable in meeting this open space requirement by the definition listed in the code section. Tract B is an access easement to allow for maintenance of Tract C – the stormwater facility. Tract D is a walkway to and from the Hillsboro School District property currently planned for a future elementary school. Tracts E and F are entryway areas that are 1,352 SF and 2,106 SF, respectively. These areas are not usable for active open space. Please correct the calculations on Plan Sheet P04. Open Space Tract A is 59,339 SF and is the only tract that is usable open space. The required 69,000 SF of usable open space is not met.**

Response: Per further discussion with the City and with additional information and clarification added to the written narrative and Preliminary Plans (Exhibit A), Tracts A and B (69,211 square feet) are useable open space and counted towards the 69,000 square feet of useable open space required for 230 homes.

18. **Please describe in more detail the proposed park. While Sheet P17 provides a pictorial representation, there is little to no description in the narrative.**

Response: Additional description has been provided within the narrative.

19. **The plan sheets identify that Tracts A through F shall be owned and maintained by the City of Cornelius. Ownership and maintenance of the entryway tracts E and F is not appropriate for the City. Please remove the notation that the city will own and maintain these tracts identified on Sheets P08A, P08B, and P08C (and any other plan sheets in the application).**

Response: The reference has been updated on Plan Sheets P08A, P08B, and P08C have been modified as requested and a short explanation has been provided within the Executive Summary.

20. **Beginning on page 34, the policies of the Comprehensive Plan are required to be addressed for conditional use permits. Please address all of the applicable City Comprehensive Plan Goals. Please note: the Chapter numbers and goal numbers in the Comprehensive Plan do not align with the Comprehensive Plan Chapter and goal numbers of the submittal. For example, on page 34, Chapter III is referenced in the narrative as Land Use. Chapter III is the Urbanization Chapter – not the Land Use Chapter. Chapter IV Land Use does list the policies that are noted in the land use application submittal. Both the "Residential" Section and the "Medium Density Residential" section of the Comprehensive Plan have relevant policies. Please add discussion of Policy 1 from both the Residential and Medium Density Residential sections about the density of each Comprehensive Plan designation and how the development meets the density intended in each designation. Chapter V Housing, Policy 2 is also applicable. Finally, additional discussion of Chapter IX, the Transportation System Plan, is necessary to note that a separate application proposes to move the North-South Collector designation on S. 29th Boulevard (north of Dogwood) east to S. 345th Avenue. Page 50 of Chapter IX notes that North-South Collectors includes 29th Avenue. It should also be noted that the current East-West Collectors includes Dogwood Street.**

Response: Discussion with Staff has clarified these Comprehensive Plan items. The sections have been updated with responses to the applicable sections of the Comprehensive Plan, including transportation items regarding the designated East-West and North-South Collector roadways.

21. **The discussion of CUP criterion (3) (page 37 of the application submittal) does not adequately demonstrate how the proposal meets the criteria. This is a key finding about the "minimum impact on the livability and appropriate development of other properties in the surrounding area." This section of the narrative should be much more robust with more discussion about compatibility, options for future development of abutting property, and other neighborhood benefits.**

Response: Additional findings addressing the criteria have been added to the written narrative.

22. **On page 38, CUP criteria (3) and (4) appear to be repeated.**

Response: The appropriate CUP criteria have been addressed.

23. **On page 39, PUD criterion (A), please provide the standard and the requested adjustment. It appears that the information in this section is the adjustment, but the requirement should also be cited to inform the reader that these truly are "slight" adjustments. The graphics shown on P09 may be beneficial to add to the narrative section to help the reader understand where the variances are occurring and what type of variance is being requested. Please note: For alley loaded garages, the alley is considered the rear yard of the home, so the minimum setback to alley-loaded garages is 10-feet. Perhaps a table showing the required standard and the proposed deviations would clarify the information for the reader.**

Response: A table reflecting the requested adjustments has been added to the written narrative.

24. **Also, on page 39, in the same response, the narrative notes that "providing sufficient off-street parking" is a factor of this development. Yet on page 29, under (F)(2), the narrative states that the planned improvements do not include an off-street parking area. Please align the two sections.**

Response: The intent of this response was to state that an off-street parking lot would not be provided. Each home will provide parking spaces within a garage and additional parking spaces within a driveway.

25. **Please ensure that all references to the subject property size are consistent. On page 39, the subject property is referenced as 31.2 acres.**

Response: The property areas have been verified and are consistent with the surveyed existing conditions and other area calculations for the proposed subdivision.

26. **Please provide an analysis within the Traffic Study that supports the statements on page 42 that the streets are adequate to support the anticipated traffic. Please include citations about the number of cars that collectors typically carry and the existing traffic numbers and projected numbers with full buildout. Please also include analysis in the Traffic Study and the narrative for the trip distribution if 345th is not developed and opened. This section of the narrative should be more robust and clearly articulate how, using engineering standards, the transportation system works without mitigation.**

Response: An updated Traffic Study has been included with this resubmittal. Analysis of typical collector traffic rates and other requested information has been included.

27. **Please expand the transportation findings on pages 45 through 47. At a minimum, the conclusions that were summarized in the Traffic Analysis should be repeated in this section – especially with regard to the discussion of mitigation.**

Response: The transportation criteria have been further addressed based on the information included within the updated Transportation Impact Study (Exhibit F).

28. **On page 48, 18.143.050 (A) expand the narrative on the City's access spacing standards and how the proposed development meets, or doesn't meet, the City's access spacing standards.**

Response: Findings addressing the City's access spacing standards have been added to the narrative.

29. **On page 49, the narrative doesn't address the driveway spacing standards and whether the development meets it or not.**

Response: Findings addressing the City's driveway spacing standards have been provided within the updated written narrative.

30. **Expand the narrative on page 49 addressing direct access to arterials and collectors. Discuss how the project includes alleys to provide access to garages along S. 29th Boulevard and Dogwood Street to eliminate direct access to the collectors.**

Response: Text describing the planned access for lots adjacent to collector roadways has been added to the written narrative.

31. **Page 52, Table 1 is mislabeled. The yellow highlighted area (copied below) should be 'Maximum' not minimum.**

(A) Off-street parking shall be provided based on the primary use of the site according to the following standards and regardless of the parking zone in which the use is located (see Map 1 following this chapter).

Table 1 Minimum and Maximum Required Off-Street Vehicle and Bicycle Parking Requirements (unless otherwise noted, standard is per 1,000 sf of gross floor area)

Land Use	Minimum Parking Standards	Minimum Parking Standards		Minimum Bicycle Parking Standards
		Zone A	Zone B	
RESIDENTIAL				
Detached Single Dwelling Units	1.0/dwelling unit	None	None	None
Middle Housing	1.0/DU	None	None	None

Response: This application includes a ±230-lot subdivision for detached single-unit dwellings and middle housing (townhouses). As illustrated on the Preliminary Parking Plan in Exhibit A, parking for new dwellings is planned to be provided on each lot in accordance with the requirements of this chapter. The provision of off-street parking can be reviewed upon

Response: Table 1 has been corrected.

32. **Please provide a graphic showing the solar orientation of the lots.**

Response: A graphic showing the solar orientation of the lots has been provided as Figure 2 within the written narrative.

33. **Please remove the statement that the city agrees to construct SW 345th Avenue from the drawings. This assumes that the city will construct the roadway as part of the project. This is a negotiation after the land use entitlements have been received. As such, remove the words "by city" from Sheets P06, P11A, P11B, P11C, P15A, P15B, P15C, P16A, P16B, P16C, P20A, P20B, P20C, P21A, P21B, and P21C.**

Response: The statements regarding construction of SW 345th Avenue have been modified accordingly. The references have been removed from the applicable sheets.

34. **Amend the application to address the aforementioned completeness issues.**

Response: The completeness issues have been satisfied and/or addressed by the additional or updated information included within this resubmittal.

35. **Provide the following as part of your final submittal:**

- **Five (5) bound copies of the complete application packet,**
- **One full electronic copy of the application packet (link to a download, CD or thumb-drive),**
- **One copy of the application packet that is unbound and 8 ½" x 11" in size, and**

- Three sets of full-size plan sheets.

Response: The updated application package has been resubmitted via the methods listed above.

Thank you for your review of these application materials. This letter and the updated application materials provide all of the requested information for this application. In accordance with Oregon Revised Statute (ORS) 227.178(2)(a), the application is complete on December 12, 2025 (upon your receipt of the hard copies of the materials). If you have any questions, please contact me at (503)-563-6151. We appreciate your assistance in reviewing our application.

Sincerely,

AKS ENGINEERING & FORESTRY, LLC



Glen Southerland, AICP
12965 SW Herman Road, Suite 100
Tualatin, OR 97062
503-563-6151 | southerlandg@aks-eng.com

Attachments:

Updated Subdivision/PUD Application Package

- Five (5) bound copies
- One electronic copy
- One 8.5” x 11” unbound copy
- Three full size plan sets

Laurel Crown Planned Unit Development
Consolidated Land Use Application

Date:	November 2025 Updated December 2025
Submitted to:	City of Cornelius Community Development Department 1355 North Barlow Street Cornelius, OR 97113
Applicant:	Holt Homes 1301 SE Tech Center Drive, Suite 150 Vancouver, WA 98683
AKS Job Number:	4636-05

AKS ENGINEERING & FORESTRY
12965 SW Herman Road, Suite 100
Tualatin, OR 97062
(503) 563-6151

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Laurel Crown Planned Unit Development
Consolidated Land Use Application

Submitted to:
City of Cornelius
Community Development Department
1355 North Barlow Street
Cornelius, OR 97113

Applicant:
Holt Homes
1301 SE Tech Center Drive, Suite 150
Vancouver, WA 98683

Property Owner:
Hillsboro School District
3083 NE 49th Place
Hillsboro, OR 97124

Applicant's Consultant:
AKS Engineering & Forestry, LLC
12965 SW Herman Road, Suite 100
Tualatin, OR 97062
Phone: (503) 563-6151

Contact: Glen Southerland, AICP
Email: southerlandg@aks-eng.com

Contact: Melissa Slotemaker, AICP
Email: slotemakerm@aks-eng.com

Site Location:
West of SW 345th Avenue, south of E Baseline Street/Tualatin Valley Highway and Southern Pacific Railroad right-of-way, north of S Ginger Street

Washington County Assessor's Map:
1S303A, Tax Lot 100

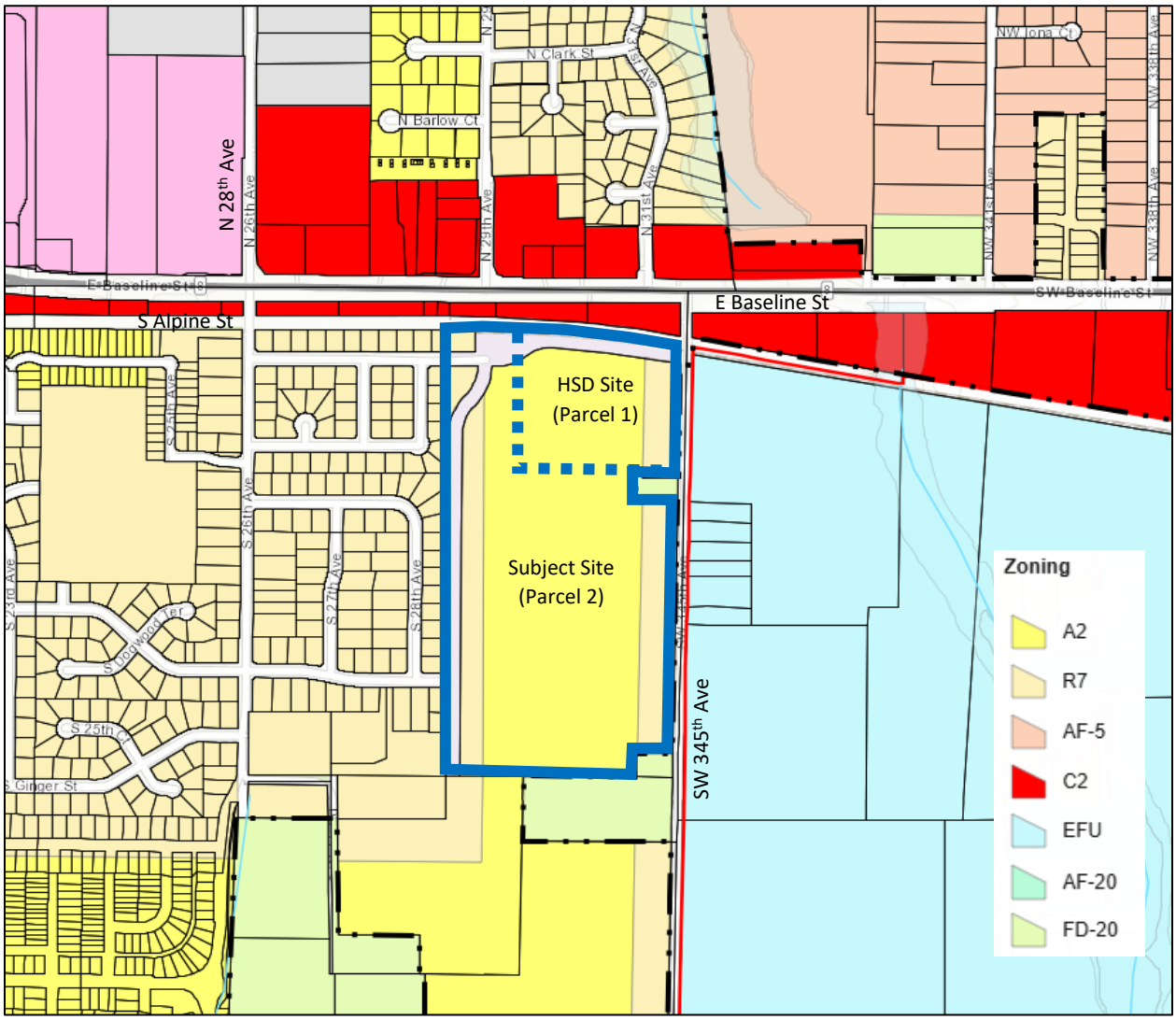
Site Size:
±30.38 acres (Parcel 2 of approved partition LP-01-25)

Land Use District:
Low-Density Residential (R-7)
Multi-Unit Residential (A-2)

I. Executive Summary

AKS Engineering & Forestry, LLC, (AKS) is submitting this consolidated land use application on behalf of Holt Homes (Applicant) for a Planned Unit Development (PUD)/Conditional Use Permit (CUP) and Subdivision associated with a property within the City of Cornelius (City). The subject site is planned to be located in the Low-Density Residential (R-7) and Multi-Unit Residential (A-2) zoning districts. The planned subdivision, "Laurel Crown," is designed as an extension to the Laurel Woods PUD to the south and is planned to include 230 lots for detached single-unit and attached single-unit (townhome) dwellings.

Figure 1: Vicinity Map and Zoning



The subject site was annexed into the Metro Urban Growth Boundary (UGB) in 2014 by House Bill 4078 and designated to be zoned R-7 and A-2 upon annexation into city limits. The property was annexed into the City through an expedited annexation application as approved by City File No. AN-01-18. The subject site (Parcel 2) was previously part of a larger property split by an approved land partition (LP-01-25) that included area reserved by the Hillsboro School District (HSD) for a future high school site (Parcel 1). School

district planning has led to a revised forecast for the area that no longer requires a high school but may need a smaller-footprint elementary school, instead.

Two other City approvals are needed separate from this application to facilitate the planned residential layout included in this application. A Comprehensive Plan Map Amendment to the June 2020 *Cornelius Transportation System Plan* (TSP) has been submitted under a separate application, currently under review by the City. That application proposes changes to the TSP map to relocate a Collector street from S 29th Boulevard to SW 345th Avenue. A City-initiated right-of-way vacation is also required to remove the dedicated but unbuilt S 29th Boulevard roadway from the site. The right-of-way vacation will be handled independently and concurrently with this application but has not yet been approved by City Council. This subdivision and PUD application depends upon the other City approvals and will be void without them.

The PUD involves a number of extensions of surrounding streets and construction of new streets. These include an extension of SW Dogwood Street, a roundabout at the corner of SW Dogwood Street and SW 29th Avenue, and other local street improvements. SW 345th Avenue is anticipated to be widened at the intersection with E Baseline Street/OR 8 (Tualatin Valley Highway) to accommodate two northbound turn lanes. This improvement was included in the original Development Agreement for the Laurel Woods PUD as a City project using Transportation Development Tax (TDT) funds for construction. The Applicant will work with the City to incorporate the same improvement, and additional improvements of SW 345th Avenue as required by the City, into a new Development Agreement once a land use decision is issued on the Laurel Crown PUD.

After years of experience and involvement with earlier phases of Laurel Woods south of this site, Holt Homes has the desire to create a neighborhood of high-quality housing that contributes to the long-term desirability of this area, and which can accommodate housing demand across a range of age and income levels.

This application includes a PUD to allow for flexibility to certain code standards within the site area that will allow the project to better meet the intent of the Cornelius Comprehensive Plan and serve the City's needs more effectively. A number of public benefits are provided by the PUD to compensate for the flexibility to the code. The Laurel Crown PUD provides a public neighborhood park that includes active and passive recreational activities, a dog park, pedestrian trail connections to adjacent multi-use paths, and flexible use lawn areas. Additionally, the active recreational areas will include amenities for public use.

This written narrative, together with preliminary plans and other documentation included in the application materials, establishes that the application complies with the applicable approval criteria. This documentation represents substantial evidence and provides the basis for the Planning Commission to approve the application.

II. Site Description/Setting

The subject property is located within the City of Cornelius, HSD, the Washington County Sheriff's Department District, and the Clean Water Services (CWS) Service District. The subject property is currently unimproved and contains farmland. The subject site is 28.15 acres in size following approved land partition LP-01-25. The project is dependent on two other applications including a right-of-way vacation involving 2.22 acres of SW 29th Avenue north of SW Dogwood Street. Following approval of the right-of-way vacation, the total area of the partition

The following table describes adjacent uses.

Table 1: Description of Surrounding Land Uses

Area	Zoning	Land Uses	Inside/Outside UGB
North	Highway Commercial (C-2)	Highway commercial	Inside UGB
East	Exclusive Farm Use (EFU)	Farmland within Washington County	Outside UGB
South	Multi-Unit Residential (A-2) Low-Density Residential (R-7) Future Development – 20-Acre (FD-20)	Laurel Woods residential subdivision Rural residential and agricultural uses	Inside UGB
West	Multi-Unit Residential (A-2) Low-Density Residential (R-7)	Residential	Inside UGB

III. Applicable Review Criteria

This application involves the development of land for housing. Oregon Revised Statutes (ORS) 197A.400(1) states that a local government may apply only clear and objective standards, conditions, and procedures regulating the provision of housing, and that such standards, conditions, and procedures cannot have the effect, either in themselves or cumulatively, of discouraging housing through unreasonable cost or delay. In addition, this application involves a "limited land use decision" as that term is defined in ORS 197.015(12). The significance of this statutory provision is also discussed below.

Oregon Courts and the Land Use Board of Appeals (LUBA) have generally held that an approval standard is not clear and objective if it imposes on an applicant "subjective, value-laden analyses that are designed to balance or mitigate impacts of the development" (Rogue Valley Association of Realtors v. City of Ashland, 35 OR LUBA 139, 158 [1998] aff'd, 158 OR App 1 [1999]). ORS 197.831 places the burden on local governments to demonstrate that the standards and conditions placed on housing applications can be imposed only in a clear and objective manner. While this application addresses all standards and conditions, the Applicant reserves the right to object to the enforcement of standards or conditions that are not clear and objective and does not waive its right to assert that the housing statutes apply to this application. The exceptions in ORS 197A.400(2) do not apply to this application.

ORS 197.195(1) describes how certain standards can be applied to a limited land use application. The applicable land use regulations for this application are found in the Cornelius Municipal Code (CMC). Pursuant to ORS 197.195(1), comprehensive plan provisions (as well as goals, policies, etc. from within the adopted elements of the comprehensive plan) may not be used as a basis for a decision or an appeal of a decision on a limited land use application unless they are specifically incorporated into the land use regulations. While this application may respond to comprehensive plan and/or related documents, such a response does not imply or concede that said provisions are applicable approval criteria. Similarly, the Applicant does not waive its right to object to the attempted implementation of these provisions unless they are specifically listed in the applicable land use regulations, as is required by ORS 197.195(1).

Pursuant to ORS 197.522, if this application is found to be inconsistent with the applicable land use regulations, the Applicant may offer an amendment or propose conditions of approval to make the application consistent with applicable regulations. In fact, the local government is obligated to consider

and impose any conditions of approval proposed by the applicant if such conditions would allow the local government to approve an application that would not otherwise meet applicable approval criteria.

CORNELIUS MUNICIPAL CODE

Title 17 SUBDIVISIONS

Chapter 17.05 LAND DIVISIONS

17.05.040 Subdivisions.

(A) Procedure Type – Preliminary Plats. The community development director shall coordinate and assemble through the facilities and design review process the reports and data submitted by the applicant, affected city departments and any governmental agencies having an interest in subdivisions. The community development director shall determine whether the subdivision meets the criteria in subsection (C) of this section.

Response: This procedure is understood.

(B) Scope of Regulations.

(1) This section shall not apply to any lot or lots forming a part of a subdivision created and recorded prior to the effective date of Ordinance No. 428, except where there is proposed a replatting or modification of lot sizes or the layout and construction of streets or other land improvements requiring a replatting or survey recording. Nor is this section intended to repeal or in any way impair or interfere with existing provisions of other laws or ordinances, except those specifically repealed by Ordinance No. 428, or with private restrictions placed upon property by deed, covenant or other private agreement, or with restrictive covenants running with the land to which the city is a party. However, where this section imposes a greater restriction upon the land than is imposed or required by existing provisions of law, ordinance, contract or deed, this section shall control.

Response: This Consolidated Land Use application does not involve a subdivision created prior to the effective date of Ordinance No. 428 or the replatting of, or modifications to, an existing subdivision. This standard is not applicable.

(2) Where an application involves no variance request(s) and/or where modifications to the standards specified in this chapter have been previously approved by the planning commission through the planned unit development process, the community development director may take action to approve or deny the land division pursuant to the Type II procedure provided in CMC 18.10.070(A)(2).

Response: This Consolidated Land Use application includes a CUP for a PUD and a Subdivision and is therefore being processed through a Type III procedure. This standard is not applicable.

(3) In cases where applications involve a variance requiring a public hearing, the planning commission shall make the decision regulating land divisions that the community development director would otherwise make. In this case, the process and timeline for approval or denial of the subdivision shall be consistent with a Type III review procedure as described in CMC 18.15.010(C). The community development director shall prepare a report summarizing the factors involved including proposed findings, reasons, conclusions and recommendations, and shall place the report on the commission's

agenda in a manner consistent with the commission's adopted rules for public hearings. If the materials do not meet the applicable requirements, the community development director shall advise the applicant of the deficiencies and submit the report to the commission with a recommendation for denial.

Response: Again, this application includes a CUP for a PUD and is being processed through a Type III procedure, with review by the Planning Commission. This application does not include a variance. Therefore, this standard is not applicable.

(4) Neighborhood Review Meeting. Prior to submitting a land division application that is subject to a variance request, the applicant shall conduct a neighborhood review meeting regarding the proposed land division application. The neighborhood review meeting must be held at an accessible location within the Cornelius city limits.

Response: This application does not include a variance. A neighborhood meeting to discuss the planned subdivision was held on October 15, 2025 within an accessible location at Free Orchards Elementary School. Therefore, this standard is met as applicable.

(5) The applicant may withdraw the application at any time.

Response: This standard is understood.

(C) Approval Criteria. In order to approve a preliminary plat, findings of fact shall be made to support the following conclusions:

(1) The proposal conforms with the city's comprehensive plan; and

Response: As demonstrated by the application materials and discussed herein, the planned subdivision conforms with the City's Comprehensive Plan. The proposal generally conforms with the assigned Comprehensive Plan Map designations of Low Density Residential and Medium Density Residential; however, proposed home types and planned lot layouts may not align exactly with the designation boundaries. See responses to Chapter 18.110 for additional findings pertaining to the Comprehensive Plan. This criterion is met as applicable.

(2) The proposal complies with all applicable statutory and ordinance requirements and regulations; and

Response: As demonstrated by the Preliminary Plans (Exhibit A) and discussed herein, the planned PUD complies with the applicable statutory and ordinance requirements and regulations. This criterion is met.

(3) Adequate public facilities are available to serve the proposal; and

Response: As demonstrated by the Preliminary Plans (Exhibit A), the Transportation Impact Study (Exhibit F), the Preliminary Stormwater Report (Exhibit G), and discussed herein, there are adequate public facilities available to serve the planned PUD. See responses to Section 18.110.030 for additional findings regarding public facilities. This criterion is met.

(4) All proposed lots conform to the size and dimensional requirements of this chapter; and

Response: This application includes a PUD allowing for modifications to certain development standards. The subject site is within the R-7 and A-2 zoning districts. As demonstrated by

the Preliminary Plans (Exhibit A) and discussed in responses to Chapter 18.110, while the planned subdivision includes an average density that meets the overall density for the site (see Table 3 below), smaller area and dimensional standards than allowed within the zones are needed to meet the planned density. The PUD process allows flexibility to dimensional requirements to create a more livable and functional neighborhood that aligns with site characteristics and adjacent neighborhoods. Therefore, this standard is not applicable to this project due to the inclusion of a PUD in the application.

> **(5) All proposed improvements meet city standards; and**

Response: As demonstrated by the Preliminary Plans (Exhibit A) and discussed herein, the planned PUD improvements meet City standards. See additional findings below. Therefore, this criterion is met.

> **(6) That the phasing plan, if requested, can be carried out in a manner which meets the objectives of the above criteria and provides necessary public improvements for each phase as it develops.**

Response: Three phases are planned for the 230-lot subdivision. Public improvements and the location of phases are shown within the Preliminary Plans (Exhibit A) and are planned to adequately serve each phase as they are constructed. Therefore, this criterion is met.

> **(D) Special Conditions.**
>
> **(1) No preliminary plat of a subdivision shall be approved which bears a name using a word which is the same as, similar to, or pronounced the same as a word in the name of any other subdivision in Washington County, except for the words "town," "city," "place," "court," "addition," or similar words, unless the land platted is contiguous to and platted by the same party that platted the subdivision bearing that name or unless the party files and records the consent of the party that platted the subdivision bearing that name. All plats must continue the block numbers of the plat of the same name last filed.**

Response: The planned PUD is named "Laurel Crown," which is similar to the adjacent PUD to the south ("Laurel Woods"). The adjacent subdivision is contiguous and was platted by the same party that is submitting this application. Therefore, this standard is met.

> **(2) No preliminary plat shall be approved unless it bears the signature of the chairman of the planning commission and the community development director.**

Response: This standard is understood and this application is submitted for approval.

> **(3) Streets. No preliminary plat for a proposed subdivision shall be approved unless:**
>
> **(a) General. The location, width and grade of streets shall be considered in relation to existing and planned streets, to topographical conditions, to public convenience and safety, and to the proposed use of the land to be served by such streets. Where location is not shown in the comprehensive plan, the arrangement of the streets in a division shall either:**

(i) Provide for the continuation or appropriate projection of existing principal streets in surrounding areas; or

(ii) Conform to standards adopted by the city. All streets shall be designed in accordance with adopted Cornelius public works standards and the adopted Cornelius transportation system plan.

Response: As demonstrated by the Preliminary Plans (Exhibit A), the planned street network considers and incorporates adjacent streets and projects them through the subdivision. A City-initiated vacation of the unbuilt portion of S 29th Boulevard, north of S Dogwood Street, is happening concurrently with this application. As a result, the planned subdivision no longer includes the extension of S 29th Boulevard through the site. Additionally, as described in the separate CPMA application, the TSP Functional Classification map is being updated to move the Collector designation from S 29th/Alpine Street to SW 345th Avenue. Future connections to SW 345th Avenue will occur after Phase 3 of Laurel Crown following the construction of a new roundabout at the S Dogwood Street intersection and completion of S Cherry Place. The planned roads meet the applicable Local and Collector street standards. Therefore, this standard is met as applicable.

(b) Reserve Strips. Reserve strips or street plugs controlling the access to streets will not be approved unless necessary for the protection of the public welfare or of substantial property rights, and in such cases as they may be required. The control and disposal of the land composed of such strips shall be placed within the jurisdiction of the city under conditions approved by the community development director.

Response: The planned street network does not include reserve strips. This standard is not applicable.

(c) Alignment. As far as practical, all streets other than minor streets or cul-de-sacs shall be in alignment with existing streets by continuations of the center lines thereof.

Response: As demonstrated by the Preliminary Plans (Exhibit A), the planned improvements include the extension of S Dogwood Street, S Alpine Street, and S 29th Boulevard as well as the continuations of S 30th Avenue. These streets are aligned along the center lines of the existing street and include full street improvements. This standard is met.

(d) Future Extension of Streets. In the case of dead-end stub streets that will connect to streets on adjacent sites in the future, notification that the street is planned for future extension shall be posted on the stub street until the street is extended and shall inform the public that the dead-end street may be extended in the future.

Response: This planned subdivision includes street stubs at the end of S Alpine Street and S 32nd Avenue. Appropriate signage informing residents that the street is planned for future extension will be provided. This standard will be met upon the completion of street construction.

(e) **Intersection Angles. Streets shall be laid out so as to intersect at an angle as near to a right angle as practical except where topography requires a lesser angle, such as for special intersection design.**

Response: As demonstrated by the Preliminary Plans (Exhibit A), intersections within the planned subdivision are oriented at right angles to the degree possible. This standard is met.

(f) **Existing Streets. Whenever existing streets adjacent to or within a tract are of inadequate width, additional right-of-way shall be provided at the time of land division.**

Response: The subject site abuts SW 345th Avenue, a County road, along its eastern boundary. As shown on the Preliminary Plans (Exhibit A), additional dedication of right-of-way was conditioned with the approved partition (LP-01-25) along the boundary of the subject site.

(g) **Half Streets. Half streets, while generally not acceptable, may be approved where essential to the reasonable development of the land division when in conformity with the other requirements of these regulations, and when the community development director finds it will be practical to require the dedication of the other half when the adjoining property is divided. The community development director may require up to an additional 10 feet of right-of-way and improvements to provide for a safe travel surface. Whenever a half street is adjacent to a tract to be divided, the other half of the street shall be platted within such tract. Reserve strips and street plugs may be required to preserve the objectives of half streets.**

Response: Half streets are not required to serve the subdivision. Full improvements will be resolved via a development agreement or with future development.

(h) **Cul-De-Sacs, Hammerheads, and Woonerfs. The use of cul-de-sac designs and closed-end street systems shall be limited to situations where topography, existing development, barriers such as railroads or highways, or environmental constraints such as major streams and rivers prevent full street extensions. If cul-de-sacs are used, they shall be designed in accordance with adopted Cornelius public works standards. In any instance, no more than 25 dwelling units shall be served by a cul-de-sac. Unless otherwise approved by the city engineer, no more than six dwelling units shall be served by a woonerf. In proposed development or where redevelopment potential exists, and a street connection is not proposed, one or more accessways may be required to connect a cul-de-sac to public streets, to other accessways, or to property lines to allow for future connections. Redevelopment potential exists when assessed building value per square foot is less than 50 percent of the mean value per square foot of surrounding buildings on lots within a 500-foot distance as measured from any point of the property line. An accessway will not be required where the impacts from new development, redevelopment or both are low and do not provide reasonable justification for the estimated costs of such accessway.**

(i) Accessways linking cul-de-sacs shall be as short as possible and, wherever practical, straight enough to allow one end of the path to be seen from the other.

(ii) Accessways linking cul-de-sacs shall be lighted to a minimum level of one-half foot-candle. Lighting shall have cut-off fixtures so that no glare is emitted beyond the accessway and onto adjacent properties.

Response: The planned subdivision does not include cul-de-sacs, hammerheads, or woonerfs. The above standards are not applicable.

(i) Grades and Curves. Grades shall not exceed six percent on major or secondary arterials, 10 percent on collector streets, or 12 percent on any other street. In flat areas, allowance shall be made for finished street grades having a minimum slope of one-half percent.

Response: As demonstrated by the Preliminary Plans (Exhibit A), the planned street network meets the standards for grades and curves provided above.

(j) Lots Abutting Arterial Streets. Where a land division abuts or contains an existing or proposed arterial street, the community development director may require frontage roads, reverse frontage lots with suitable depth, screen planting contained in a nonaccess reservation along the rear or side property line, or such other treatment as may be part of an approved street design plan or may be necessary for adequate protection of residential properties, to provide separation of through and local traffic, and be aesthetically pleasing.

Response: The subject site does not abut an Arterial street (OR 8/E Baseline Street). This standard is not applicable.

(k) Trees. Trees shall be installed along street frontages in accordance with the adopted Cornelius public works standards. Actual location and spacing of trees shall be at the discretion of the city engineer.

Response: As demonstrated by the Preliminary Plans (Exhibit A), the planned subdivision includes street trees along street frontages in accordance with the City's Public Works Standards. This standard is met.

(l) The streets and roads shall be named in accordance with standards and plans established by the planning commission.

Response: Per the City's street-naming standards, streets within the subdivision are named after trees and arranged alphabetically to the greatest degree feasible. Due to the southward shift of S Dogwood Street located west of the proposed subdivision, an additional "C" street is needed; therefore, S Chestnut Street was selected. This standard is met.

(m) The minimum street width shall comply with the standards and design identified in Chapter 5 of the adopted Cornelius public works standards.

The city and the planning commission shall consider in their traffic analysis, congestion management solutions as

mandated by Title 6 of the Metro's Urban Growth Management Functional Plan.

Response: As demonstrated by the Preliminary Plans (Exhibit A), the planned public streets comply with the standards and design for streets in the City's Public Works Standards. A traffic analysis has been prepared and is available as part of Exhibit F. This standard is met.

(4) Blocks. The lengths, widths, and shapes of blocks shall be designed with due regard to providing adequate building sites suitable to the special needs of the type of use contemplated, needs for convenient access, circulation, control and safety of street traffic, limitations and opportunities of topography, and conformance with the adopted Cornelius public works standards. Application of conditions in subsections (D)(4)(a), (b) and (c) of this section shall be reviewed and may be approved by the city. Mixed-use and residential development on proposed sites of five acres or greater must submit a site plan that identifies conceptual street connections that are consistent with Figure 8-3 of the TSP.

Response: The project involves a residential subdivision located on a site of greater than five acres in size. A site plan has been provided illustrating consistency with the Transportation System Plan's conceptual street connections as outlined in Figure 8-3 and modified through the Applicant's TSP amendment application submitted concurrently with this CUP/PUD and subdivision application.

(a) Physical or topographic conditions make an accessway connection impracticable. Such conditions include but are not limited to freeways, railroads, slopes in excess of city standards for maximum slopes, or wetlands or other bodies of water which make provision of a connection impracticable.

Response: These situations are not present on the subject site or affect the project's ability to provide practicable connections. This standard does not apply.

(b) Existing buildings or other development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment.

Response: As demonstrated by the Preliminary Plans (Exhibit A), the planned subdivision includes a street network that provides appropriate access and adequate building sites for the planned residential uses and street connectivity in accordance with the City's Public Works Standards. See additional information regarding the planned traffic circulation in the Transportation Impact Study (Exhibit F). This standard is met.

(c) Where accessways would violate provisions of leases, easements, covenants, or restrictions written and recorded as of May 1, 2000.

Response: These situations are not present on the subject site. This standard does not apply.

(d) Variances. A variance to street spacing standards may be granted pursuant to Chapter 18.115 CMC if resources are present that are mapped on the Natural Resources Map, where street spacing can be achieved at a minimum of 800 feet and no greater than 1,200 feet. Where habitat quality or the length of the crossing required prevents a full street

connection, an exception to the street spacing standards may be granted, pursuant to Chapter 18.115 CMC.

Response: This application does not include a variance to street spacing standards. This standard is not applicable.

(e) An accessway will not be required where the impacts from new development, redevelopment or both are low and do not provide reasonable justification for the estimated costs of such accessway.

Response: This standard is understood.

(f) Exceptions to the above standards may be granted when blocks are divided by one or more pathways, where spacing is no more than 330 feet as measured from the right-of-way or easement line and in conformance with provisions of Chapter 18.115 CMC (Variances). Pathways shall be located to minimize out-of-direction travel by pedestrians and may be designed to accommodate bicycles.

Response: This application does not include an exception to the above standards. This standard is not applicable.

(5) Easement.

(a) Utility Lines. Easements for sewers, drainage, water mains, electric lines, or other utilities shall be dedicated. Easements for water, sewer, or drainage on interior lot lines shall be 20 feet in width, the center line of which shall be the lot lines. Easements for water, sewer, or drainage along exterior lot lines shall be 20 feet in width, except no easement will be required for those lot lines paralleling a street or other public way. Tie-back easements shall be six feet wide and 20 feet long along lot side lines at change of direction points of the lot lines. Easements for utilities such as electrical, gas, cable, and fiber optics (public utility easement, or PUE) shall be dedicated along all right-of-way frontages, including woonerfs, and shall be eight feet in width. A PUE is not required along the right-of-way of an alley, unless a parcel on an alley does not also front on a street or woonerf directly.

Response: As demonstrated by the Preliminary Plans (Exhibit A), the planned subdivision includes dedications for public utility easements (PUEs) in accordance with the requirements above. This standard is met.

(b) Watercourses. Where a land division is traversed by a watercourse, drainage way, channel, or stream, 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 the purpose, may be required. Streets or parking ways parallel to watercourses may be required. Watercourse easements and drainage rights-of-way shall be consistent with Clean Water Services (CWS) standards.

Response: The subject site does not contain identified watercourses, drainage ways, or other water features. This standard does not apply.

(6) **Lot Size and Shape. Lot size, width, shape and orientation shall conform to the requirements of this chapter for the applicable zoning district.**

(a) **Where a tract is subdivided into larger parcels than the minimum lot size under the city zoning regulations, such parcels shall be arranged so as to allow the opening of future streets and logical further resubdivisions.**

Response: The applicable standards for lot size, width, shape, and orientation are addressed within their respective chapters.

(b) **Lot configurations shall meet the provisions of Chapter 18.155 CMC (Solar Access for New Development).**

Response: This application includes a PUD allowing modifications to certain development standards, including minimum lot size and width. The subject site is within the R-7 and A-2 zoning districts. As demonstrated by the Preliminary Plans (Exhibit A) and discussed in responses to Chapter 18.110, the planned subdivision combines density across the site and meets the overall density standards (see Table 3 below). To the degree the lot-related standards above are not modified through the subdivision, they are planned to be met. See findings in response to Chapter 18.155 below for additional findings related to solar access.

(7) **Access. Each lot shall abut upon a public street for a distance of at least 20 feet.**

Response: As demonstrated by the Preliminary Plans (Exhibit A), the planned lots each have at least 20 feet of frontage on a public street. This standard is met.

(8) **Dedications. Public streets, sidewalks, pedestrian ways, bike paths, parks, open space, and other public rights-of-way required by or reasonably related to the development shall be dedicated or otherwise conveyed to the city or the appropriate jurisdiction for maintenance. Further, any park or open space proposed may be required to be dedicated to the public if it is designated in the city's comprehensive plan. An appropriate instrument granting or conveying the park or open space must be approved by the jurisdiction to whom the park or open space is being dedicated prior to final plat approval.**

Response: The listed situations, as applicable, have been addressed within these findings. Public streets, sidewalks, pedestrian ways and bike paths, parks, and open spaces that are intended to be conveyed to the City.

The subject site is included in the *City of Cornelius Parks Master Plan* (October 2009) as a future Hillsboro School District high school. Approximately half of the site is shown within the Park Service Areas for Dogwood Park and Alpine Park. The addition of the planned City neighborhood park within the Laurel Crown PUD will extend the park service areas to the edge of the UGB and increase service to nearby neighborhoods. Tracts A and B are park and recreational open space area and are planned to be conveyed to the City following Preliminary PUD/CUP and Preliminary Subdivision approval but prior to final plat approval. Tract C is a stormwater tract also planned to be conveyed to the City following this preliminary approval but prior to final plat approval. Tracts D and E are planned to serve as community green space maintained by the Laurel Crest Homeowners

Association; however, Tract E will also serve as potential pedestrian access to Parcel 1 of approved land partition LP-01-25 and will have a utility and public access easement recorded prior to the final plat approval.

(9) Utilities. All utilities shall be placed underground per standards identified by the city engineer.

Response: As demonstrated by the Preliminary Plans (Exhibit A), utilities included with the subdivision are planned to be located underground. This standard is met.

(10) Street Trees. Trees shall be installed along street frontages in accordance with the adopted Cornelius public works standards.

Response: As demonstrated by the Preliminary Street Tree Plans in the Preliminary Plans (Exhibit A), the planned subdivision includes street trees along street frontages in accordance with the City's Public Works Standards. This standard is met.

(11) Homeowners' Associations and Declarations. When a homeowners' association agreement or other restrictive covenants are to be recorded with the development, a copy of the appropriate documents shall be submitted for review by the city attorney prior to recordation of the final plat. The city shall review such documents to ensure that common areas are properly maintained and that other restrictions required by the city are included.

Response: This standard is understood and planned to be met.

(12) Variances. The planning commission may authorize a variance from these regulations when, in its opinion, undue hardship may result from strict compliance. Application for a variance shall be submitted in writing by the subdivider, at the time the preliminary plat is filed, for consideration by the planning commission. The variance request shall address the criteria found in Chapter 18.115 CMC. It should also state fully the grounds for the application and all the facts relied upon by the petitioner.

Response: This application does not include a variance. This standard is not applicable.

(13) Planned Unit Development (PUD). A planned unit development approved by the planning commission shall not be subject to the provisions of this section, except as identified in Chapter 18.110 CMC, Planned Unit Development (PUD) Conditional Use.

Response: The project includes an application for a PUD. The requirements of Chapter 18.110 are reviewed later within this written narrative.

(E) Compliance with Approval.

(1) Requirements Prior to Commencement of Work. Prior to any construction, improvements or land development, the developer shall perform the following:

(a) The developer shall file detailed plans and specifications for all public improvements or land development together with a detailed cost estimate and an estimate of time reasonably necessary to complete such improvements for approval by the city engineer or designee.

(b) These submitted plans shall include a plan for erosion control during construction, which conforms to the standards established by resolution of the city council.

(c) The developer shall enter into a contract with the city of Cornelius to make, install and complete within the time fixed, but in no case more than two years from the date of execution of said contract without written approval by the city engineer and community development director, all improvements in accordance with the approved plans prior to acceptance of the improvements by the city and/or plat recordation. If the developer chooses to bond for said improvements prior to acceptance of the improvements (to allow plat recordation to occur prior to completion of the public improvements), the developer shall cause to be filed with the city recorder a security acceptable to the city manager payable to the city of Cornelius in a principal sum determined from the approved estimate of the costs of said improvements of this section. The security shall assure the performance of the said contract and the completion of the said improvements, free of liens. Notwithstanding any of the above, a security shall be provided for any improvements to be performed within public rights-of-way and/or public easements.

(d) The amount of the security shall be based on an estimate of the cost of the work approved by the city engineer in accordance with the following schedule:

(i) Public and private improvements within public rights-of-way and/or public easements, and all erosion control measures, in conformance with city and Clean Water Services standards, equals 150 percent of cost estimate.

(e) Fees. The fees, deposits and charges to be paid by the subdivider may be established or amended by resolution of the council in accordance with the provisions of CMC 18.05.080, General Provisions.

Response: These requirements are understood and planned to be met.

(2) Improvement Procedures. All improvements shall conform to the requirements of this chapter and any other improvements standards or specifications adopted by resolution of the city council and shall be installed in accordance with the following procedures:

(a) Improvement work shall not be commenced until plans have been checked for adequacy and approved by the city. To the extent necessary for evaluation of the land division proposal, such plans may be required before approval of the final plat.

(b) Improvement work shall not be commenced until the developer has secured the appropriate development permit. If work has been discontinued for any reason, it shall not be resumed until the city has been notified and consented in writing.

(c) All required improvements shall be constructed under the inspection and to the specifics of the city engineer, adopted Cornelius public works standards, and Cornelius Municipal

Code. The city may require changes in typical sections and details if unusual conditions arise during construction to warrant such change in the interests of the city or the developer. Upon acceptance of the required improvements, the city engineer shall notify the developer that the improvements are acceptable as per Cornelius Municipal Code. Acceptance shall be in writing.

(d) All underground utilities, sanitary sewers, storm drains and cable communication system facilities installed in streets shall be constructed prior to the surfacing of such streets. Stubs for service connections for all underground utilities, sanitary sewers and cable communication system facilities shall be placed to such length as will obviate the necessity for disturbing the street improvements when service connections are made.

(e) A map showing all public improvements as built shall be filed with the city engineer upon completion of said improvements.

Response: These procedures are understood and planned to be met.

(3) Improvement Requirements. Improvements to be installed at the expense of the developer are as follows:

(a) Streets.

(i) All streets, including alleys.

(ii) Streets adjacent but only partially within the partition or subdivision.

(iii) The extension of the land division streets to the intercepting paving line of existing streets with which the land division streets intersect.

(iv) Arterial or collector streets which intersect with streets within the development that provide ingress or egress to the development or on which there are traffic impacts reasonably related to the development.

(v) All streets shall be built in accordance with adopted Cornelius public works standards and the adopted Cornelius transportation system plan.

(b) Surface Drainage and Storm Sewer System. Drainage facilities shall be provided within the land division to connect the land division drainage to drainage ways or storm sewers outside the land division. Design of drainage shall be in accordance with adopted Cornelius public works standards and shall allow for the extension of the system to serve other areas.

(c) Sanitary Sewers. Sanitary sewers shall be designed in accordance with adopted Cornelius public works standards and installed to serve the land division and to connect the land division to existing mains.

(d) Water System. Water lines with valves and fire hydrants serving the land division, connecting the land division to city mains, shall be installed in conformance with the adopted

Cornelius public works standards. The design and construction by the developer shall take into account provisions for extension beyond the land division and to adequately grid the city system.

(e) Street Trees. Street trees shall be planted along street frontages in accordance with the following:

(i) For all land divisions, the developer shall pay a per tree security to the city. The surety bond shall be based upon the number of trees included in an approved street tree plan.

(ii) Trees shall be planted in accordance with the adopted Cornelius public works standards.

(f) Bike and Pedestrian Ways. Bike and pedestrian ways shall be constructed according to adopted Cornelius public works standards.

(g) Other improvements reasonably related to the impacts of the development which may be required at the partial or total expense of the developer:

(i) Improvement of arterial and collector streets providing primary access to land division streets.

(ii) Signals, traffic control devices, and traffic calming devices.

(iii) Intersection improvements.

(iv) Parks and open space shall be improved as required by the city and appropriate jurisdiction.

(v) Land parcels to be reserved for any special purpose, other than for sale, are to be distinguished from lots intended for sale.

(h) Street Lights. Street lights shall be installed in accordance with adopted Cornelius public works standards.

(i) Curb cuts and driveway installations are not required of the developer but, if installed, shall be according to adopted Cornelius public works standards.

(j) Internal sidewalks or pathways shall be provided to ensure safe and convenient pedestrian circulation throughout the development.

Response: These requirements are understood, and the required improvements have been shown on the relevant Preliminary Plans (Exhibit A).

(4) Preliminary Approval. After approval of the preliminary plat in the manner indicated in this section, the subdivider may proceed with the final surveying, and preparation of the final plat.

Response: This procedural requirement is understood.

(5) Final Plat Approval. The community development director shall review the final plat for compliance with the approved preliminary plat. If the community development director determines that the final plat conforms to the approved preliminary plat, the community development director shall so certify and sign the final plat. If the

final plat does not conform, it shall be returned to the developer to correct the deficiencies and must be resubmitted for approval within the time established by the community development director.

(a) Supplemental Information – Final Plat. The following data shall accompany the final plat:

(i) A preliminary lot, book title report issued by a title insurance company in the name of the owner of the land, showing all parties having any record title interest in the premises.

(ii) A copy of deed restrictions, including building setback lines, if any are applicable to the subdivision, and a copy of any dedication which required separate documents.

(iii) A certificate by the city engineer certifying that the subdivider has complied with one of the following alternatives:

A. All improvements have been installed in accordance with the requirements of these regulations and with the action of the community development director or the planning commission giving tentative approval of the preliminary plat and a maintenance bond posted with the city as provided in this subsection.

B. An agreement has been executed and assurance of performance posted with the city as provided in this subsection.

(b) In subdivisions that are to be served by community water systems and/or community sewage collecting and treatment systems, a certificate from the Washington County department of public health indicating that these systems have had the necessary official public health clearance and approval by the legally responsible regulating agency.

(c) The following certificates, which may be combined where appropriate:

(i) The final plat shall contain a certificate signed and acknowledged by all parties having any record title interest in the land subdivided.

(ii) An affidavit signed by the engineer or the surveyor responsible for the survey and final map, the signature of such engineer or surveyor to be accompanied by his seal.

(iii) Provisions for all other certifications now or hereafter required by law.

(6) Filing of Final Plat. Approval of the final plat by the city as provided by this regulation shall be conditioned on its prompt recording. The developer shall, without delay, submit the final plat for signatures of other public officials required by law. Approval of the final plat shall be null and void if the plat is not submitted to the Washington County recorder for recordation within 30 days after the date the last required approving signature has been obtained. The city may request

developer to provide proof that the developer has submitted the final plat to the Washington County recorder for recordation.

(a) Prior to submittal of any building permit applications the applicant shall provide to the planning department one copy of the recorded final plat signed by all public officials.

Response: These final plat standards are understood and will be met with future submittals to the City.

(F) Modifications. Changes, alterations or enlargements to previously approved preliminary or final subdivision plats shall require a new request for approval through the Type II process.

Response: This provision is understood.

[…]

Title 18 ZONING

Chapter 18.10 APPLICATION PROCEDURE

18.10.010 Plan/zone conformance.

Properties proposed for development or use permits must be appropriately designated for the proposed use on the comprehensive plan and zoned in accordance with said plan, or the application must include a request for the appropriate plan amendment and zone change.

Response: The subject site is designated for R-7 and A-2 zoning. As demonstrated in the responses to the applicable R-7 and A-2 standards in Sections 18.20 and 18.35 below, the planned residential use is appropriate for the zoning districts. This requirement is met.

18.10.020 Procedures for processing development permit.

(A) An application for development permit shall be processed under one of the three procedures set forth in CMC 18.15.010.

(B) When an application and proposed development plan is submitted the community development director shall determine the appropriate procedure specified by the code, together with the determination of affected departments, public agencies, and property owners. Where there is a question as to the appropriate type of procedure, the application shall be processed in accordance with CMC 18.15.010(C).

(C) The community development director shall be responsible for the coordination of the development permit application and decision-making procedure and shall only issue a development permit to an applicant whose application and proposed development is found in compliance with all of the applicable provisions set forth in the comprehensive plan and this title. Before issuing the development permit, the community development director shall be provided with the detail required to establish full compliance with the requirements of this code.

Response: This application is anticipated to be processed through a Type III procedure as described in CMC 18.15.010(C) and directed by City staff. The Planning Commission will act as the decision-making body. The procedures are understood.

18.10.030 Neighborhood review meeting.

(A) Prior to submittal of a Type III request which requires review by the planning commission, and for the application to be complete, the applicant shall

provide an opportunity to meet with neighboring property owners, residents and businesses by conducting a neighbourhood meeting.

(B) The purpose of the neighborhood review meeting is to allow the neighbors and residents to become familiar with the proposal and to identify any issues, which may be associated with an application. The intention of the meeting is for submittal of an application that is more responsive to neighbourhood concerns, reducing the likelihood for delays and appeals of the application.

(C) The applicant shall send by regular mail a written notice announcing the neighborhood review meeting to the community development director and property owners within 250 feet of the subject property. The notice shall include the date, time and location of the meeting and a brief description of the nature and location of the proposal. The neighbourhood review meeting must be held at an accessible location within the Cornelius city limits. The notice shall be deposited in the mail in the city, not less than 20 days prior to the required neighborhood review meeting.

(D) At the neighborhood review meeting, the applicant shall present the proposed application to the neighbors in attendance.

(E) The applicant shall not be required to hold more than one neighborhood review meeting provided such meeting is held within 180 days prior to submitting a land use or design review application for one specific site.

Response: On October 15, 2025, a neighborhood review meeting was held in accordance with the above requirements. Please see Exhibit H for details and documentation of the meeting.

18.10.040 Application documents.

An application for a building or development permit, which is subject to site design review as set forth in Chapter 18.100 CMC shall consist of the materials and information specified in this section, plus any other materials or information required by this code. Required documents shall be submitted to the community development director as follows:

(A) A completed permit application form including identification of the project coordinator, or professional design team if application is in a commercial zone or for a planned unit development.

Response: A completed application with the signature of the owner and applicant is attached to this narrative as Exhibit B.

(B) A narrative addressing the approval criteria, including an explanation of intent; stating the nature of the proposed development, reasons for the permit request, pertinent background information, information required by the development standards and as required by other sections of this code because of the type of development proposal or the area involved or that may have a bearing in determining the action to be taken.

Response: This written narrative addresses the applicable approval criteria and supplies the pertinent information needed to review the application and come to a decision regarding the

(C) Proof that the property affected by the application is in the exclusive ownership of the applicant or that the applicant has the consent of all individuals or partners in ownership of the affected property. Legal description of the property affected by the applicant.

Response: Ownership Information has been provided as part of Exhibit C demonstrating that the Hillsboro School District is the current owner of the property. A signed land use application has been included as Exhibit B.

> **(D)** The application shall include conceptual and quantitatively accurate representations of the entire development sufficient to judge the scope, size, and impact of the development on the community, public facilities, and adjacent properties; and except as otherwise specified in this code.

Response: Appropriate conceptual plans and descriptions have been provided in order to allow an assessment of the CUP/PUD and subdivision applications to determine

> **(E)** The number of required documents for completeness review, facilities and design review and planning commission review shall be identified on the application checklist.

Response: The required documents identified through the Pre-App, application checklist, and Pre-App notes have been provided.

> **(F)** Site plans and architectural renderings drawn to scale, showing the proposed layout of all structures and other improvements per the approved city application checklist, including an erosion control plan for any building or land development permit. Such a plan shall conform to the standards established by Clean Water Services (CWS) and shall conform to CMC 13.30.020, Clean Water Services of Washington County rules adopted.

Response: Site plans have been provided per the City's application checklist and other applicable requirements.

> **(G)** The total land area, in square feet devoted to various uses such as total site area, building area (gross and net rentable), parking and paved coverage, landscaped area coverage, and average residential density per net acre. The percentage of site coverage for each use shall also be calculated.

Response: To the degree possible, the required areas have been provided. The total land area, right-of-way, and open space areas are provided within the Preliminary Plans. Building area and coverage, parking area, and landscaped area are not known at this time, but are planned to meet the relevant City minimum and maximum standards and can be reviewed as applicable at the time of building permits. The applicable submittal requirements above are included in this consolidated application. The average residential density per acre is 11.7 dwelling units per net acre. Please see the Density Calculations shown in Table 2 or on Sheet P03 of the Preliminary Plans (Exhibit A).

> **(H)** Documentation of Neighborhood Review Meeting, if Required.
>
> **(1)** A copy of the notice sent to surrounding property owners within 250 feet of the subject parcel.
>
> **(2)** A copy of the mailing list used to send out meeting notices.
>
> **(3)** Repealed by Ord. 2017-01.
>
> **(4)** An affidavit of mailing notices.
>
> **(5)** Representative copies of written materials and plans presented at the neighborhood review meeting.

(6) Notes of the meeting, including the meeting date, time, and location, the names and addresses of those attending, and oral and written comments received.

(I) An application fee as set by the city council.

Response: The required documentation has been provided with this application as part of Exhibit H.

18.10.050 Complete submittal required.

Application materials shall be submitted to the community development director who shall have the date of submission indicated on each copy submitted. Within 30 calendar days from the date of submission, the community development director shall determine whether an application is complete.

(A) If the community development director determines that the application is incomplete or otherwise does not conform to the provisions of the code, the applicant shall immediately be notified of the negative determination in writing by mail conveying an explanation and a submittal deadline for completion or correction of the application. However, if the application remains incomplete for more than 30 days from the date of notice of negative determination, the materials submitted shall be returned to the applicant and the file shall be closed. If an application is returned and the file closed, resubmittal shall require a new application.

(B) If an application is determined to be complete and in conformance with the provisions of the code, the community development director shall accept it and note the date of acceptance on the application form. The community development director shall then schedule the appropriate review and notify the applicant in writing of the date of the final decision or hearing as set forth in Chapter 18.15 CMC.

[…]

Response: The completeness review process and timeline are understood. These standards are met.

18.10.060 Filing fee.

The council shall by resolution establish fees and deposits to be paid for all development permits.

Response: The applicable application fees are included in this application submittal.

18.10.070 Jurisdiction and powers.

[…]

(B) Authority of Planning Commission.

(1) As specified in Chapter 2.65 CMC, the commission shall have authority to administer and enforce all the provisions of Chapter 18.15 CMC.

(2) At their earliest regularly scheduled meeting following the date of complete submission, the commission shall review and approve, approve with conditions, or deny the proposed development. However, if the commission finds that additional information or time is necessary to render a reasonable decision, the matter may be continued to a date certain. The applicant shall be immediately notified in writing of any such continuation or delay together with the scheduled date of review.

Response: The Planning Commission is the decision-making body for Type III applications. The Planning Commission will hold a hearing to render a decision on the PUD/CUP and

Subdivision applications. The timeline to schedule a hearing and process to allow a continuation of a hearing is understood.

[…]

Chapter 18.15 REVIEW PROCEDURES

18.15.010 Application review.

Applications for site development permits and land divisions shall be reviewed as follows. A zone change shall be reviewed in accordance with the procedures set forth in CMC 18.125.010.

[…]

(C) Type III – Commission Review. A Type III request, as set forth in CMC 18.10.070(B), shall be processed with notice and a public hearing pursuant to CMC 18.15.040, as follows:

(1) All Type III requests shall require a preapplication meeting between the applicant and the design review team. The purpose of a preapplication meeting is to obtain a preliminary understanding of the proposed project and to collectively discuss considerations related to planning and land use; building; fire, life, and safety; and public works standards. The community development director shall make available a preapplication meeting request form to be completed and submitted by the applicant to the community development department. Following receipt of the preapplication meeting request form, CDD staff shall schedule a preapplication meeting with the applicant at the earliest available regularly scheduled pre-application meeting date.

(2) Prior to submittal of a Type III request which requires review by the planning commission, and for the application to be complete, the applicant shall provide an opportunity to meet with neighboring property owners, residents and businesses by conducting a neighborhood review meeting.

(3) Once a complete application is accepted, the community development director shall schedule a public hearing before the planning commission at their next regularly scheduled meeting where legally sufficient notice can be provided to the public prior to the hearing. Notice shall be provided pursuant to CMC 18.15.030.

(4) The community development director shall prepare a staff report, including conclusionary findings. Said report shall be forwarded to the commission and made available to interested parties at least seven days prior to the date of public hearing. At the public hearing, the staff, any applicant, and interested persons may present information relevant to the policies, criteria, and standards pertinent to the proposal, giving reasons why the application should or should not be approved or proposing modifications or conditions and the reasons the person believes they are necessary for approval. The hearing body shall make a finding for each of the applicable policies, criteria and standards. The decision, including findings, of the hearing body shall be written and adopted, setting forth all conditions of approval or basis for denial and relevant time periods for compliance with said conditions.

(5) The community development director shall provide notice of final decision to the applicant and interested parties. The notice shall indicate the date the action is to become effective, conditions

attached, if any, and the right of appeal pursuant to CMC 18.15.090. The notice shall invite persons to submit information within 10 days relevant to the standards pertinent to the proposal and giving reasons why the application should or should not be approved or proposing conditions the person believes are necessary for approval according to the standards. The notice shall also advise the person of the right to appeal the decision on the proposed development if the person's concerns are not resolved. If the application is approved and no appeal filed within the time period allowed, the community development director shall issue a development permit consistent with the standards and conditions of approval.

(6) A decision of the commission may be appealed by the applicant or affected party pursuant to CMC 18.15.090.

[…]

Response: A pre-application conference and a neighborhood review meeting were both held prior to the submittal of this application. Please see Exhibit H for information from the neighborhood meeting and Exhibit I for information from the pre-application conference. The remaining noticing, hearing, and decision requirements as described above are understood.

Chapter 18.20 LOW-DENSITY RESIDENTIAL ZONE (R-7)

[…]

18.20.020 Permitted uses.

The following uses and their accessory uses are permitted outright in an R-7 zone:

(A) Detached single-unit dwellings – site built, manufactured off site, or prefabricated.

(B) Middle housing

(C) Underground public utilities

[…]

Response: This application includes a 230-lot subdivision intended for detached single-unit dwellings and townhomes. This standard is met.

18.20.030 Conditional uses.

The following uses may be permitted when in accordance with Chapter 18.105 CMC:

[…]

(G) A planned unit development, including mixed uses approved by the planning commission and as provided for under Chapter 18.110 CMC.

[…]

Response: As described in the Executive Summary, this application includes a PUD to allow flexibility to certain code standards. Therefore, this application includes a CUP to establish a PUD for the planned subdivision. See responses to Chapter 18.110 below for additional findings.

18.20.040 Prohibited uses.

The following uses shall be prohibited within the R-7 zone:

(A) Recreational vehicles or other movable temporary dwellings used as a residence or accessory sleeping units, except as lodging for guests not to exceed two weeks.

(B) More than one dwelling unit on a single lot, except for an accessory dwelling unit or a duplex as approved through CMC 18.20.030.

(C) Retail sales, except for when over the Internet and where applicable in compliance with the home occupation permit requirements.

(D) Heavy manufacturing and processing.

(E) Parking and storage of construction equipment, semi-tractors and trailers.

(F) The raising of animals other than normal household pets.

(G) Freestanding wind turbines.

Response: This application does not include the prohibited uses listed above. This standard is met.

18.20.050 Area, density and lot requirements.

(A) Maximum Density. The average density over the entire development shall not exceed five dwellings per net acre for detached single-unit dwellings and 20 dwellings per net acre for townhouses. Maximum density does not apply to duplexes, triplexes, quadplexes, or cottage clusters. A net acre is equal to 32,670 square feet, and excludes roads, common open space, floodplains, riparian setbacks, and slopes over 25 percent.

Response: The following table (also included on the Zoning Map Sheet in Exhibit A) provides density calculations for the entire development:

Table 2: Density Calculations

DENSITY CALCULATIONS

DISTRICT	HOUSING TYPE	GROSS AREA (SF)	GROSS AREA (ACRES)	DEDICATED ROW AREA (ACRES)	STORMWATER FACILITIES - TRACT C (ACRES)	PUBLIC OPEN SPACE - TRACTS A&B (ACRES)	NET AREA (ACRES)	MAX. DENSITY (DU/ACRE)	MIN. DENSITY (DU/ACRE)	CALCULATED MAX DENSITY (UNITS)	CALCULATED MIN DENSITY (UNITS)
R-7	Detached	426,849	9.80	3.10	0.28	0.62	5.80	5	4	29	23
	Attached						0.00	20	4	0	0
A-2	Detached	896,326	20.58	5.33	0.36	0.96	3.07	14	8	43	25
	Attached						10.86	25	8	272	87
TOTAL		1,323,175	30.38	8.43	0.64	1.58	19.73			343	135

PLANNED # OF UNITS: 230 UNITS
PLANNED DENSITY: 11.7 DU/ACRE

As demonstrated by the table above, the planned PUD does not exceed the maximum density requirement for the subject site when the R-7 and A-2 calculations are combined for the entire net site area. Therefore, with the flexibility provided through the PUD process, this requirement is met. See responses to Chapter 18.110 below for additional information.

(1) Lot Size.

HOUSING TYPE	MINIMUM LOT SIZE
Detached single-unit dwelling, duplex, and triplex	6,000 square feet
Townhouse	1,500 square feet

(2) In the case of flag lots, the pole portion of the lot shall not count towards the required lot area.

Response: The site is located in the R-7 and A-2 zoning districts, each of which has a different minimum lot size. Through the PUD, this application includes a range of lot sizes, between ±1,900 and ±6,500 square feet, with larger lots lining the perimeter of the subdivision and smaller lots concentrated on the interior. Some detached single-unit lots will be smaller than 6,000 square feet in area; however, townhome lots will not be less than 1,500 square feet in area. Though the location of these lots may not follow the zoning boundaries precisely, they are generally located as originally envisioned. As demonstrated by the Preliminary Plans (Exhibit A), this approach creates a more livable and functional neighborhood that aligns with site characteristics and adjacent neighborhoods. The Preliminary Plans (Exhibit A), this approach provides a diversity of lot sizes and home types which create a more livable and functional neighborhood that aligns with site characteristics and adjacent neighborhoods. Therefore, with the flexibility permitted through the PUD process, this standard is met. See responses to Chapter 18.110 below for additional information.

(B) Minimum Density. The minimum density allowed is four dwellings per net acre. Any land partition or subdivision shall make provisions to ensure that the minimum density is protected when further partitioning is possible.

Response: As discussed in response to Chapter 18.110 below, this application includes a PUD to allow density across the entire site. Through the PUD, the minimum and maximum densities were calculated by looking at the overall site. As demonstrated by Table 3 above, the minimum density requirement for the total site is met.

(C) Maximum Height. Building height, as defined in CMC 18.195.080, shall not exceed 35 feet, except for:

(1) A chimney, radio, television antenna, or solar feature.

(2) Affordable housing with a 30-year affordability covenant compliant with ORS 456.270 through 456.295 as affordable to 80 percent area median income or less for each unit, or the average of the units is affordable at 60 percent area median income or less, is entitled to 150 percent of the existing density and 24 additional feet.

Response: This application includes a subdivision for attached and detached single-unit dwellings. The maximum height standard above can be reviewed upon submission of building permits for new dwellings; however, the maximum height is not planned to be exceeded. This requirement is not applicable to this application.

(D) Minimum Yard Area Setbacks.

(1) Front Yard. The front, as measured from the furthest extension of the home, including porch or decks, shall not be less than 10 feet. Accessory structures, garages or carports shall not be less than 20 feet.

(2) Rear Yard. No rear yard shall be less than 10 feet in depth.

(3) Side Yard. The minimum width of side yards shall be not less than five feet, as measured from the foundation of the home. On corner lots the side yard facing the street shall not be less than 10 feet.

Townhouses shall have a zero-foot side yard setback on the side where the common wall is located.

(4) No accessory building or other structure or building shall be closer than three feet from a side or rear property line; see CMC 18.150.010.

[…]

(6) All setbacks shall be measured from Clean Water Services (CWS) required buffer areas, where applicable.

Response: This application includes a 230-lot subdivision for attached and detached single-unit dwellings. As demonstrated by the Preliminary Setback Plan in Exhibit A, the lots have been planned to include slightly smaller side and garage setbacks than those within Cornelius Municipal Code. Adjustments to setbacks include side setbacks and garage setbacks for detached homes. Detached side setbacks are planned for adjustment to four feet from five feet and garage setbacks for detached homes adjusted from 20 feet to 18 feet. The setback requirements for the new dwellings can be further assessed at the time of building permit submittal. Further details regarding these adjustments are available within narrative responses to Section 18.110 within Table 3. These requirements are met as applicable.

(E) Minimum Lot Shape.

(1) No lot shall be less than 60 feet in width or less than 60 feet in depth, except as may be approved as part of a planned unit development. No townhouse lot shall be less than 20 feet in width.

Response: As demonstrated by the Preliminary Plat in Exhibit A, the planned PUD includes lots less than 60 feet in width or depth. As noted, lots less than 60 feet in width are permitted through the PUD process where flexibility is needed. The planned subdivision does not include lots intended for townhouses that are less than 20 feet in width. Therefore, this requirement is met as applicable.

(2) In the case of in-fill development on parcels, as defined by the city's current vacant land inventory, the commission may allow the lot width to be reduced to 50 feet.

(3) In the case of in-fill development on parcels, as defined by the current city vacant land inventory, the lot width at the street may be reduced to not less than 20 feet for a single lot and not less than 30 feet for two dwelling units. A flag design shall serve no more than two lots.

Response: The planned improvements do not constitute in-fill development. These requirements are not applicable.

(F) Middle Housing Land Division. If a duplex, triplex, quadplex, or cottage cluster has been divided by a middle housing land division, the area, density, and lot requirements that are applicable to the lot shall apply to the middle housing primary lot, not to the middle housing secondary lot.

Response: This application does not include a middle housing land division. This requirement is not applicable.

18.20.060 Site development standards.

(A) Perimeter Requirements. If topographical or other barriers within the development do not provide adequate buffering between a subdivision and

adjacent nonresidential development, the reviewing body may impose one or more of the following requirements.

(1) Where the subdivision abuts an arterial or collector street or an existing planned unit development, the reviewing body may require that a perimeter landscaped strip, no more than 25 feet wide, and/or sound mitigation structures be established along the abutting property line. All required building setbacks shall be measured from the inner edge of the perimeter strip, which shall be set aside as a separate tract, and provisions for pedestrian connections through the landscape strip may also be required.

Response: The subject site abuts the existing Laurel Woods PUD to the south and is designed as an extension to the Laurel Woods PUD. It is understood that additional buffering and sound mitigation may be required; however, given that the planned subdivision is designed as an extension of the existing residential use to the south, it is not anticipated that additional buffering or sound mitigation will be necessary.

The project site is also located adjacent to several Collector streets – S Dogwood Street, S 29th Boulevard, and (upon approval by City Council) SW 345th Avenue. Since S Dogwood Street runs interior to the site, a landscaped strip would not be desirable and would only interfere with the planned street grid and lot layout. The S 29th Boulevard right-of-way abuts a neighborhood park and stormwater facility, accomplishing much the same effect, but doing so in a way that does not disrupt the street grid or lot layout of the site. An additional Collector street is planned along the eastern boundary of the site. The project plans to construct a multi-use path along the western edge of SW 345th Avenue adjacent to the site. The opposite side of the street mainly consists of rural residential and agricultural uses and does not pose a buffering or noise issue.

(2) Where the subdivision abuts an existing or planned nonresidential area, the reviewing body may require that a perimeter landscaped strip, no more than 50 feet wide, be established along the abutting property line. All required building setbacks shall be measured from the inner edge of the perimeter strip, which shall be set aside as a separate tract, and provisions for pedestrian connections through the landscape strip may also be required.

Response: As demonstrated by the Preliminary Plans (Exhibit A) and discussed above within the Site Description, the subject site abuts residential land to the south and west. Properties east and other property south of the subject site generally contain rural residential and agricultural uses. Therefore, a perimeter landscape strip to minimize conflict between the planned PUD and adjacent nonresidential uses is not anticipated to be necessary.

(3) All driveways and landscaped areas shall comply with vision clearance standards set forth in subsection (B) of this section.

Response: This standard is understood and planned to be met.

(B) Vehicular Access, Internal Circulation and Clear Vision Areas.

(1) Where possible, vehicular access to residential subdivisions shall be from abutting arterial or collector streets. Access to individual lots shall be primarily from local streets or alleyways when the alleyway is developed to current public works standards. Direct lot access to

arterials or collector streets shall not be permitted, unless there is no alternative as determined by the city engineer.

Response: As demonstrated by the Preliminary Plans (Exhibit A), primary access to Phase 1 of the planned PUD will be from S Dogwood Street, which is designated as a Collector street, and S 29th Avenue, also a Collector street. As future phases are constructed, additional access will be available from S Alpine Street (Phase 2) and SW 345th Avenue (Phase 3). As demonstrated by the Preliminary Street Plan in Exhibit A, driveway access to individual lots will be taken from local roads or alleyways within the subdivision and not from Collector streets. Therefore, this standard is met.

(2) The minimum street width shall comply with the adopted public works standards.

Response: As demonstrated by the Preliminary Street Plans (Sheets P10 through P11C of Exhibit A), the planned streets meet the minimum width requirements of the adopted 2020 *Public Works Standards*.

(3) Public and/or private alleys or both shall be constructed to city standards as approved by the city engineer.

Response: Several alleys are planned as part of Phase 1 adjacent to S Dogwood Street. These alleys are planned as public right-of-way with two 10-foot travel lanes. This requirement is met.

(4) Clear vision areas shall be provided at all roadway and driveway intersections in accordance with the vision clearance standards set forth in CMC 18.150.070.

Response: This standard is understood and planned to be met. Please see the response to Section 18.150.070 for additional information. Clear vision areas can be further reviewed upon submission of building permits for future dwellings within the subdivision.

(C) Access Streets – Sidewalks – Drainage.

(1) All streets shall be designed in accordance with Chapter 5 of the adopted public works standards.

Response: As demonstrated by the Preliminary Plans (Exhibit A), streets within the planned subdivision are designed in accordance with Chapter 5 of the adopted Public Works Standards. This standard is met.

(2) All driveways for new construction shall have minimum pavement width of 12 feet and shall not be more than 25 feet in width at the curb. Each driveway shall have a concrete curb apron designed to comply with public works standards, and not more than two lots may be served by one shared driveway,

Response: As demonstrated by the Street Plan in the Preliminary Plans (Exhibit A), new lots are planned to be served by driveways between 12 and 25 feet in width at the curb. Driveways are planned to comply with the applicable Public Works Standards. Applicable driveways may be greater than 25 feet in width; however, the curb cut and apron are planned to reduce down to the maximum permissible width at the curb. Up to two townhome units are planned to be served by a shared driveway. This standard is met.

(3) Cul-de-sacs shall serve no more than 12 residential lots and meet current public works design standards.

Response: The planned PUD does not include cul-de-sacs. This standard is not applicable.

> **(4)** **For all new construction, curbs, gutters, sidewalks and street trees shall be provided along the entire lot frontage, per Chapter 5 of the adopted public works standards, and shall meet ADA accessibility standards. In the case of remodels or garage additions to an existing house, no sidewalk shall be required if one does not exist, but the driveway apron and paved driveway shall be required.**

Response: As discussed above and demonstrated by the Preliminary Plans (Exhibit A), the planned PUD is anticipated to include the improvements described above in accordance with Chapter 5 of the adopted Public Works Standards and Americans with Disabilities Act (ADA) accessibility standards. This standard is met.

> **(5)** **Storm drainage shall meet current public works design standards and shall comply with Clean Water Service (CWS) standards for water quality and quantity.**

Response: As demonstrated on the Preliminary Plans and discussed in the Preliminary Stormwater Report (Exhibits A and G, respectively), stormwater facilities are planned to meet current public works design standards and CWS standards for water quality and quantity. This standard is met. See Exhibit G for further discussion on stormwater facilities.

> **(D)** **Lighting Streets. Streets and walkways shall be lighted during the hours of darkness in accordance with public works standards.**

Response: This standard is understood and planned to be met.

> **(E)** **Mailboxes. Except for in-fill partitioning, clustered mailboxes shall be provided, consistent with the locational criteria set by the post master. They shall be of uniform style.**

Response: Mailbox locations meeting the criteria set by the USPS Postmaster have been added to the plan set. Please see the Street Plans (Sheets P11A through P11C) for further information.

> **(F)** **Parking and Loading Space.**
>
> **(1)** **Off-Street Parking.**
>
> **(a)** **Resident. One covered parking space shall be provided for each home either on an individual lot or in an off-street parking bay within 100 feet from the dwelling being served.**
>
> **(b)** **Guest. Where on-street parking is prohibited on both sides of a street, guest parking shall be provided in off-street parking bays at the rate of one parking space for every three detached single-unit dwelling sites along the street section. Guest parking should be within 100 feet of the homes being served.**

Response: As demonstrated by the Preliminary Parking Plan (Exhibit A), on-street parking is planned to be provided for guests on one side of the street within the planned PUD. Resident paved parking is planned to be provided on each lot with a minimum of one garage space and one driveway space per unit and can be reviewed upon submission of building permits for future homes. Parking is demonstrated on the included Parking Plans (Sheets P15A through P15C) These standards are met as applicable.

(c) **Parking and Storage of Recreational Vehicles and Vehicles of Similar Size. Recreational vehicles such as camping trailers, boats, campers, motor homes, and other such vehicles and vehicles of similar size shall only be parked or stored within an area specifically designated and designed for such use, and shall not be located in the public right-of-way.**

Response: This standard is understood. Areas specifically designed for recreational vehicle (RV) parking are not included with the planned improvements.

(2) **Paving and Design. Off-street parking areas shall be paved and designed in accordance with the standards of the off-street parking regulations of the zoning ordinance.**

Response: The planned improvements do not include an off-street parking lot; however, individual residential lots will have paved driveways available for parking. This standard is met as applicable.

(G) **Open Space. Within residential developments containing 20 or more lots or units there shall be, at least, 300 square feet of recreational space per unit provided in public open space for single-family development. Such space may be considered as part of any required landscaping, but must be designed in a manner that affords residents usable open area, such as lawns, patios, etc. Delineated wetlands recognized by the Division of State Lands may apply 20 percent of their area located on the subject parcel(s) to the open space requirement. Calculate the total square footage of delineated wetland area on the subject parcel(s) and multiply it by 20 percent. Streets, access drives and parking lots shall not be considered open space. Open space must be a usable open recreational area, and may include a club house or indoor recreation facility. All outdoor area shall be landscaped and maintained by the owner, or a homeowners' association, according to the approved development plans, unless the open space is dedicated to and accepted by the city as a public park.**

Response: As demonstrated on the Preliminary Product Distribution Plan in the Preliminary Plans (Exhibit A), the planned PUD includes open space tracts meeting the area requirements of this section. The number of planned units (230 homes) requires 69,000 square feet of open space. The subdivision is planned to provide over 69,000 square feet, meeting this requirement. Open space Tract A is over 59,000 square feet in area and planned to serve as a park area for residents. Tract B is nearly 10,000 square feet in size and is planned to serve as open space and pedestrian connectivity. Amenities are planned to include a fenced dog run, open lawns that are able to be used for a variety of play or recreational uses, copious seating, including covered and accessible options, and a children's play structure.

Open space Tract E is planned to be used for potential pedestrian connectivity to Parcel 1 of the partition approved through LP-01-25. Tract E may not serve its intended purpose if a future school refuses connection due to security purposes and would not be recreational open space. Open space Tract D is planned to be used for entry landscaping and signage. Tract C is reserved for a stormwater facility. This standard is met.

(H) **Middle Housing Land Division. If a duplex, triplex, quadplex, or cottage cluster has been divided by a middle housing land division, the site**

development standards that are applicable to the lot shall apply to the middle housing primary lot, not to the middle housing secondary lot.

Response: This standard is understood.

Chapter 18.35 MULTI-UNIT RESIDENTIAL ZONE (A-2)

[…]

18.35.020 Permitted uses.

The following uses and their accessory uses are permitted outright in an A-2 zone:

[…]

(B) Middle housing developments.

[…]

18.35.030 Conditional uses.

The following uses may be permitted when in accordance with Chapter 18.105 CMC:

[…]

(E) A planned unit development, including office and retail sales and other mixed uses approved by the planning commission and conditional uses as provided for under Chapter 18.110 CMC.

[…]

(H) Site-built detached single-family dwelling, including a residential home consistent with state law; and detached single-family manufactured housing, subject to CMC 18.20.070.

(1) On a single, undividable infill lot, approval of a single-family detached dwelling or manufactured housing shall be processed as a Type II procedure. Approval of more than one single-family detached unit within the A-2 zone shall require a Type III procedure.

Response: As described in the Executive Summary, this application includes a PUD to allow flexibility to certain code standards. Additionally, this application includes lots for detached single-unit dwellings within the A-2-zoned portion of the property. Therefore, a CUP is required and included with this application.

18.35.040 Prohibited uses.

The following uses shall be prohibited within the A-2 zone:

(A) Recreational vehicles or other movable temporary dwellings used as a residence, or accessory sleeping units, except as lodging for guests not to exceed two weeks.

(B) Manufacturing, processing, and bulk storage, except as permitted as a home occupation.

(C) Parking and storage of construction equipment, semi-tractors and trailers.

(D) The raising of animals other than normal household pets.

(E) Retail sales, except for when over the Internet and where applicable in compliance with the home occupation requirements.

(F) Heavy manufacturing and processing.

(G) Freestanding wind turbines.

(H) More than one single-family detached or common-wall single-family dwelling unit on a single lot or parcel. This does not apply to accessory dwelling units, duplexes, or cottage clusters.

Response: This application does not include the prohibited uses listed above. This standard is met.

18.35.050 Area, density and lot requirements.

Lot area and density requirements shall be calculated based on net acreage. A net acre is equal to 32,670 square feet, and excludes roads, common open space, floodplains, riparian setbacks, and slopes over 25 percent.

(A) Maximum Density. The average density over the entire development shall not exceed 14 dwellings per net acre for detached single-unit dwellings, or 25 units per net acre for townhouses or multi-unit dwellings. This maximum density does not apply to middle housing.

Response: Please see Table 3 and the response to Section 18.20.050 for the density calculations that apply to the entire PUD area. This requirement is met.

(1) Lot Size.

HOUSING TYPE	MINIMUM LOT SIZE
Detached single-unit dwelling and duplex	3,100 square feet
Triplex	5,000 square feet
Quadplex and cottage cluster	7,000 square feet
Townhouse	1,500 square feet

(2) In the case of flag lots, the pole portion of the lot shall not count towards the required lot area.

Response: The site is located in the R-7 and A-2 zoning districts, each of which has a different minimum lot size. Through the PUD, this application includes a range of lot sizes, between ±1,900 and ±6,500 square feet, with larger lots lining the perimeter of the subdivision and smaller lots concentrated on the interior. On the A-2 portions of the subject site, detached single-unit dwellings are on lots greater than 3,100 square feet and townhomes are planned for lots greater than 1,500 square feet in size. See responses to Chapter 18.110 below for additional information.

(B) Minimum Density. The minimum density allowed is eight dwellings per net acre for single-family, and 11 for multi-family development. Any land partition or subdivision shall make provisions to ensure that the minimum density is protected when further partitioning is possible and initial development is less than the minimum density.

Response: As discussed in response to Chapter 18.110 below, this application includes a PUD to allow for density sharing across the entire site. This approach is intended to create a more cohesive and functional neighborhood that better aligns with site characteristics and adjacent neighborhoods. Through the PUD, the minimum and maximum densities were calculated by looking at the site as a whole. As demonstrated by Table 3 above, the minimum density requirement for the overall site is met.

(C) Maximum Height. Building height, as defined in CMC 18.195.080, shall not exceed 45 feet, except for:

(1) A chimney, radio, television antenna, or solar feature;

(2) Affordable housing with a 30-year affordability covenant compliant with ORS 456.270 through 456.295 as affordable to 80 percent area

median income or less for each unit, or the average of the units is affordable at 60 percent area median income or less, is entitled to 150 percent of the existing density and 24 additional feet; or

(3) As approved by the planning commission as part of a planned unit development.

Response: This application includes a PUD for detached and attached single-unit dwellings. The maximum height standard above will be met and can be reviewed upon submission of building permits for new dwellings. Variances from the maximum height of the A-2 district are not intended at this time. As such, these standards are met.

(D) Setback Requirements. Except as provided in CMC 18.150.010, in an A-2 zone the minimum yard area setback requirements shall be as follows:

(1) Front Yard. The front, as measured from the foundation of the structure, including porch or deck, shall not be less than 10 feet. Accessory structures, garages or carports shall not be less than 20 feet.

Response: Flexibility is needed for the front garage setback standard. While many homes within the PUD are planned to gain vehicle access from alleys and others are able to meet the front setback standard, some homes may require a reduced garage setback of 18 feet rather than the standard 20 feet. This adjustment will help with variation in front façades while still allowing vehicles to park within a driveway.

(2) Rear Yard. No rear yard shall be less than 10 feet in depth for a single-story structure, plus five feet per additional story as measured from the foundation of the structure.

Response: A PUD adjustment is required for the rear yard standard. Each lot is planned to meet the minimum 10-foot rear yard standard. Many of the homes within the Laurel Crown PUD are planned to be more than one story in height. Many more are planned to be townhomes, which are traditionally two or three stories high. Requirements for additional setback distance increases land costs and subsequently increases home prices. Rear yard setback flexibility will allow for certainty when planning homes for the sites, allowing for consistent and reasonable rear yard setback requirements for each lot, independent of the home planned.

(3) Side Yard. For single-family residences, the minimum width of side yards shall be not less than five feet, as measured from the foundation of the home. On corner lots the side yard facing the street shall not be less than 10 feet. For multi-family residences, no side yard shall be less than five feet in depth for a single story structure, plus five feet per additional story as measured from the foundation of the structure. On corner lots the side yard facing the street shall not be less than 10 feet.

Response: Side yard setback flexibility is required for detached single-family dwellings. A four-foot side yard can provide eight feet between detached homes. Reduced side setbacks can amount to additional homes that can be provided on the subject site, which has a higher density zoning designation than other sites within the City.

(4) Building Separation. Buildings within a complex shall be separated by at least 10 feet, plus five feet per additional story.

Response: This standard does not apply to homes on individual lots.

(5) No accessory building or other structure or building shall be closer than three feet from a side or rear property line.

Response: This standard is understood.

[…]

(G) Minimum Lot Dimensions.

(1) No detached single-unit dwelling, duplex, triplex, quadplex, or cottage cluster lot shall be less than 30 feet in width abutting a public street, nor less than 60 feet in depth, except as may be approved as part of a planned unit development.

Response: As demonstrated by the Preliminary Plat in Exhibit A, the planned PUD does not include detached single-unit dwellings on lots of less than 30 feet in width where abutting a public street or less than 60 feet in depth. This requirement is met.

[…]

(3) No townhouse lot shall be less than 20 feet in width abutting a public street, nor less than 60 feet in depth, except as may be approved as part of a planned unit development.

Response: The Laurel Crown PUD does not include townhome lots less than 20 feet in width or 60 feet in depth. Therefore, this standard is met.

Chapter 18.105 CONDITIONAL USE PERMIT

Response: Within the Cornelius Municipal Code, planned unit developments (PUDs) are considered conditional uses within both the R-7 and A-2 zoning districts. As such, the applicable standards of 18.105 and 18.110 related to conditional use permits and planned unit developments have been addressed within those respective sections of this written narrative.

[…]

18.105.030 Procedures

(A) Application. A request for a conditional use or modification of an existing conditional use may be initiated by a property owner or his authorized agent by filing an application form prescribed by the community development director and shall be filed with the community development director.

Response: An application form from the Community Development Department is included as part of this submittal.

(B) Approval Criteria. The approval, approval with conditions or denial of an application for conditional use or to enlarge or to alter a conditional use shall be based on findings of fact with regard to each of the following approval standards:

(1) The proposed development will comply with the comprehensive plan;

(2) The applicable requirements of the zoning district are satisfied; and

Response: The Cornelius City Council approved Ordinance No. 2015-06 on November 16, 2015, which amended the City's Comprehensive Plan and supporting documents to identify the

desired development type and density (Residential R-7 and A-2) in South Cornelius as well as the infrastructure improvements that would be necessary to support future residential development in this area.

Subsequently, through Case File No. AN-01-24, the City annexed the subject site. As part of their decision to approve Case File No. AN-01-24, the Cornelius City Council found the annexation to be in compliance with the City's Comprehensive Plan, the CMC, and the Metro Code. The planned use of the site matches the allowed uses of both the Comprehensive Plan designation and the zoning district assigned to the site; therefore, these standards are met. This narrative demonstrates compliance with the applicable development standards of the applicable zoning designations and responses to applicable Comprehensive Plan policies are provided below.

CORNELIUS COMPRHENSIVE PLAN (2019)

Chapter III Land Use

Low-Density residential

1. Overall density of development will be an average of five (5) units per net acre. This equals standard lot sizes of 6,500 square feet, allowing for streets and open spaces. Many areas are already developed at smaller lot sizes such as (5,000 sq. ft.), so the overall density will likely be in the upper range.

Response: As part of the Laurel Crown PUD, the density and lot sizes are further refined from these policies listed within the Cornelius Comprehensive Plan. In order to create a cohesive PUD, Laurel Crown requests adjustment to the minimum lot size requirement of the R-7 Low Density Residential zone. These changes result in an overall density of 11.7 dwelling units per net acre.

2. Residential development shall coincide with the provision of public streets, curbs, sidewalks, water, storm drainage, and sanitary sewerage facilities. These public facilities shall be capable of adequately serving all intervening properties as well as the proposed development. They will be designed to meet zoning, subdivision, and public works standards.

Response: As shown on the Preliminary Plans (Exhibit A), all new residential lots will be served by public streets, curbs, sidewalks, water service, stormwater service, and sanitary sewage service in compliance with the City's Zoning Ordinance and adopted Engineering Design Standards. Further, these public facilities have been sized and located so that service can be extended to adjacent properties at such time it is desirable by those properties.

3. A storm water drainage plan will be submitted with all proposed subdivisions and land partitions to show how storm water will be handled to avoid effects on other property. Storm sewers consistent with Clean Water Services (CWS) standards for water quality and quantity shall be required as a condition of approving subdivisions or land partitions. Further, development designs shall be coordinated with CWS to insure compliance with new METRO Title 3 criteria and Federal Clean Water Act standards.

Response: As shown on the Preliminary Plans (Exhibit A), and further detailed in Exhibit G, the application includes a stormwater drainage and management plan which demonstrates

how stormwater runoff will be appropriately conveyed, treated, and then released, in accordance with all applicable local, regional, and state stormwater requirements. This policy is met.

Medium Density Residential

1. **The maximum overall density for medium-density residential development shall be fourteen (14) dwelling units per net acre.**

Response: The Cornelius Municipal Code requires between 8 and 14 single-unit dwellings per net acre or between 8 and 25 multi-unit dwellings per net acre. The overall project density is 11.7 dwelling units per net acre, meeting the maximum density within the Comprehensive Plan.

2. **Residential subdivisions will be developed according to zoning and subdivision regulations.**

Response: As explained in this narrative and the accompanying exhibits, this Conditional Use PUD and Tentative Subdivision has been developed in accordance with the applicable zoning and subdivision regulations. This policy is met.

4. **Residential development shall coincide with the provision of public streets, curbs, sidewalks, water, storm drainage, and sanitary sewerage facilities. These public facilities shall be capable of adequately serving all intervening properties as well as the proposed development. They will be designed to meet zoning, subdivision, and public works standards.**

Response: As shown on the Preliminary Plans (Exhibit A), all new residential lots will be served by public streets, curbs, sidewalks, water service, stormwater service, and sanitary sewer service in compliance with the City's Zoning Ordinance and adopted Engineering Design Standards. Further, these public facilities have been sized and located so that service can be extended to adjacent properties at such time it is desirable by those properties. This policy is met.

5. **A storm water drainage plan will be submitted with all proposed subdivisions, land partitions, and site development plans to show how storm water will be handled to avoid effects on other property. Storm sewers consistent with CWS standards for water quality and quantity shall be required as a condition of approving all developments. Further, development designs shall be coordinated with CWS to insure compliance with METRO Title 3 criteria and Federal Clean Water Act standards.**

Response: As shown on the Preliminary Plans (Exhibit A) and further detailed in Exhibit G, the application includes a stormwater drainage and management plan which demonstrates how stormwater runoff will be appropriately conveyed, treated, and then released, in accordance with all applicable local, regional, and state stormwater requirements. This policy is met.

Chapter IV Housing

2. **Promote and encourage housing types and densities throughout town, available at various prices and rents, to households of all incomes, age, sex, and race.**

Response: The Laurel Crown PUD is designed with a variety of housing sizes and styles so that homes can be offered at a wide range of prices to encourage diverse households in terms of income, age, sex, and race.

3. Promote and encourage open spaces and buffers in new subdivisions and other housing developments.

Response: As shown on the Preliminary Plans (Exhibit A), the site is planned to include ±1.6 acres (±69,000 square feet) of open space. Open spaces include a neighborhood park and are connected by sidewalks and a multiuse pathway running along S 29th Boulevard that connects to the open space and park system in the Laurel Woods PUD to the south. This policy is met.

4. Develop strategies for promoting higher end housing options.

Response: As discussed above, the planned subdivision includes 230 lots for attached and detached single-unit homes. Amenities such as a neighborhood playground and dog run are planned to be provided within Tract A. The neighborhood's proximity to the Tualatin River and several neighborhood parks and multi-use paths are expected to create a desirable place to live and add value to the homesites for prospective residents. This policy is met.

5. Develop minimum density standards that comply with regional mandates.

Response: The City's A-2 and R-7 zoning districts provide density standards that comply with the minimum density thresholds established in Metro's 2023 *Urban Growth Management Functional Plan*. This PUD distributes the density allowed by the underlying zoning districts throughout the site to achieve a net residential density of ±11.7 units per net acre. This policy is met.

Chapter VII Public Facilities and Services

3. The city shall encourage development of local recreation options.

Response: As illustrated within Exhibit A, the planned PUD includes ±1.6 acres (±70,000 square feet) of recreational open space within ±30.4 total acres of project area. The open space is intended for general recreational use by residents. This policy is met.

4. The city shall continue to maintain an adequate water supply and to improve the overall water distribution system.

Response: Adequate water supply is in place to provide service to future homes on this site. As shown on the Preliminary Plans (Exhibit A), the application will result in significant water system infrastructure investment on the site. This policy is met.

Chapter VIII Transportation System Plan

North-South Collectors

N/S. 4th Avenue, S. 12th Avenue, N/S. 14th Avenue, S. 20th Avenue, N/S. 26th Avenue, N/S. Hobbs Rd-29th Avenue and N 341st Avenue.

East-West Collectors

S Dogwood Street, S Linden Street, Flax Plan Road, S Davis Street, S Heather Street, N Holladay Street, and N Barlow Street (between East Lane and NW 334th Ave)

> **The north-south circulation pattern is reasonably good, but S Dogwood and N Davis Streets are the only east/west rights-of-way other than the Tualatin Valley Highway (Adair and Baseline Streets) that extend through most of the city. The major north/south routes are 10th and 19th/20th Avenues. There are currently traffic signals at 4th, 10th, 14th, 19th/20th, Fred Meyer Access, and 26th Avenues on the Tualatin Valley Highway.**
>
> **Several new collector streets are needed in Cornelius to support future development and comply with the Metro Regional Transportation Functional Plan.**

Response: The project involves the extension of S Dogwood Street and half-street improvements to SW 345th Avenue. The TSP Amendment application, submitted separately from this CUP/PUD application, proposes to relocate the Collector designation from S 29th Street to SW 345th Avenue which will provide better connectivity and collector spacing at their intersection with E Baseline Street / OR 8 (TV Highway). These improvements will help support current and future development within the City of Cornelius by providing extension of a logical grid of local and Collector streets throughout the southeastern portion of the City.

> **1. Safety. Develop a transportation system that maintains and improves individual health and safety by maximizing pedestrian and bicycle transportation options, public safety and service access, and safe and smooth connections.**
>
> **2. Transportation System Management. Emphasize effective and efficient management of the transportation system for all users.**
>
> **3. Travel Choices and Livability. Develop and maintain a well-connected transportation system that offers convenient and available pedestrian, bicycle and transit trips, facilitates access to daily needs and services, and enhances livability.**
>
> **5. Fiscal Responsibility. Sustain an economically viable transportation system for existing and future users that protects and improves existing transportation assets while cost-effectively enhancing the total system.**

Response: As shown on the Preliminary Plans (Exhibit A), the application includes a robust network of new streets and accessways that have been designed to accommodate the full range of users anticipated in this area. New streets throughout the project area connect with existing abutting streets and are arranged in a quasi-grid. Through a combination of safe walking, bicycling, and motor vehicle facilities, and short block lengths, the transportation layout included in this application will promote walking and bicycling for a greater number of daily trips as compared to typical suburban and auto-oriented subdivision layouts. This enhanced pedestrian and bicycle access will in turn provide greater opportunities for passive and active recreation and will directly contribute to enhanced livability for Cornelius' residents. These policies are met.

> **(3) That the location, size, design, and functional characteristics of the proposed use are such that it can be made reasonably compatible with and have a minimum impact on the livability and appropriate development of other properties in the surrounding neighborhood;**

Response: The area is zoned for residential uses and, while the intended use of this specific site has changed, the residential use is appropriate for the SE UGB area. The planned improvements include a 230-lot subdivision intended for attached and detached single-unit dwellings. The design details of the homes have not yet been determined, but single-unit attached and detached homes, by their nature are compatible with the surrounding residential neighborhoods. As the same homebuilder is involved with the project, the homes within the Laurel Crown PUD will be very similar in quality to those in the adjacent Laurel Woods neighborhood.

Additional improvements include public streets, open space, and the utility improvements necessary to serve the subdivision. The utilities serving the site have the necessary capacity to serve the new homes without detriment to the existing neighborhoods. The Laurel Crown PUD will add additional parks to the City park system, providing additional amenities for residents of the new subdivision and existing neighborhoods nearby. Impacts to local intersections has been determined to be negligible in comparison to background traffic rates. Please see the Transportation Impact Study (Exhibit F) for additional information. The additional transportation connections provided by the Laurel Crown PUD will allow for greater circulation options for the area south of E Baseline Street/OR 8/TV Highway and increased safety through the addition of pedestrian and bicycle facilities.

The project has been designed to impact adjacent developed properties to a minimal degree. Residential uses are designed to abut existing residences and traffic corridors have been rerouted to improve traffic circulation and relieve future issues such as noise. The subdivision has conceptually designed future development for adjacent undeveloped properties that will not impede their future development and allow their eventual connection to City streets and utilities without issue.

The location, size, and design of the planned subdivision is compatible with and will not adversely impact surrounding properties and uses. The functional characteristics of the PUD are similar to the adjacent residential subdivision/PUD to the south and west. This criterion is met.

> **(4) The granting of the proposal will provide for a facility that is consistent with the overall needs of the city.**

Response: The planned PUD conforms with the goals and policies of the Comprehensive Plan and provides needed housing and improved facilities to the City. This criterion is met.

> **(C) Modifications. A request to substantially modify an existing conditional use permit shall be processed in the same manner as a new request for a conditional use permit. Minor modifications of an existing conditional use permit may be approved by the community development director. When an interpretation is discretionary, notice shall be provided in accordance with Chapter 18.15 CMC.**

Response: This application does not include a modification to an existing conditional use permit. This standard is not applicable.

(D) Public Hearing Required. A public hearing shall be scheduled for each application requiring action by the planning commission. The hearing shall be conducted at the next regularly scheduled planning commission meeting where legally sufficient notice can be provided to the public prior to the hearing, following receipt and verification of a completed application. Notice of the time, place and purpose of the public hearing shall be given in accordance with the requirements of CMC 18.15.030.

(E) Notification of Action. The community development director shall notify the applicant of the conditional use decision rendered by the planning commission, in writing within five days after the decision has been made.

(F) Time Limit on Approvals. A conditional use permit shall become void two years after the date of final approval or after such time less than two years as may be specified as a condition of approval unless prior to that time a building permit has been issued for the project and substantial construction has taken place.

(G) Special Conditions.

(1) The permit granted pursuant to the provisions of this section shall run with the land and shall continue to be valid upon a change of ownership of the site or structure unless otherwise specified in conditions attached to the permit.

(2) The applicant shall file a copy of the approved conditional use permit with the Washington County Department of Records and Elections. Building permits shall not be issued until the applicant has provided evidence satisfactory to the city of compliance.

Response: The above-mentioned conditional use permit procedures are understood.

Chapter 18.110 PLANNED UNIT DEVELOPMENT (PUD) CONDITIONAL USE

[…]

18.110.020 Development requirements.

The following standards and requirements shall govern the application of a planned unit development and apply in a planned unit development conditional use:

(A) A planned unit development may include any uses and conditional uses permitted in an underlying or abutting zone. Standards governing area, density, off-street parking, or other requirements shall be guided by the standards of the zone that most nearly portrays the character of the zone in which the planned unit development is proposed.

Response: The planned improvements include a new 230-lot subdivision for detached and attached single-unit dwellings in the R-7 and A-2 zoning districts. This application includes a PUD to provide flexibility to certain code standards. A PUD is processed through a CUP; therefore, this application also includes a CUP application.

The objective of the planned improvements is to construct a subdivision for attached and detached single-unit housing. Rather than design the planned subdivision in strict conformance with the existing zone district boundaries as established by the Comprehensive Plan, this application plans to blend the planned densities across the site through the PUD process. The purpose of this density averaging is to create a more livable and functional neighborhood that aligns with site characteristics and adjacent neighborhoods (namely, the Laurel Woods PUD to the south of the site). This includes transitioning from larger-lot detached single-unit homes on the perimeter of the site to smaller-lot single-unit detached homes and attached single-unit homes (townhomes) on the interior of the site. This application includes new residential lots that satisfy the

equivalent density required per the adopted zoning configuration, but in a manner that more evenly distributes density across the site.

Some slight adjustments to specific development standards are required for the PUD, including:

Table 3: Summary of Requested Adjustments

Adjustment	Current Standard	Requested Standard	Requested Percent Change
R-7 Zone (§ 18.20.050(A) and (D))			
Minimum Lot Size	6,000 square feet	3,200 square feet	47%*
Minimum Garage Setback	20 feet	18 feet	10%
Minimum Side Setback (detached homes)	5 feet	4 feet	20%
A-2 Zone (§ 18.35.050(D))			
Minimum Side Setback (detached homes)	5 feet	4 feet	20%
Minimum Garage Setback	20 feet	18 feet	10%
Other			
Driveway Separation Standard (§18.143.050.(C))	100 feet (Collector)	25 feet	75%
* Note: This adjustment affects 39 lots within the R-7 zone. Overall average lot size (both R-7 and A-2) is 3,722 square feet.			

An adjustment to the minimum lot size is needed in order to provide an adequate overall unit density between the A-2 zone and the slim R-7 outer perimeter of the subject site. The slight adjustment to the minimum front garage setbacks of two feet will allow parking in the driveway while also providing the additional space needed to construct homes on the lots. Additionally, the Applicant proposes to add a commensurate 18-foot garage setback that would apply to homes accessing an alley, providing additional parking area than would typically be available for alley-access homes with a 10-foot rear setback. A one-foot side setback adjustment is requested for detached homes to allow for greater flexibility in building placement on lots. This side setback is not requested for attached homes, as the Applicant would like to ensure the space needed for maintenance and livability is provided between attached structures.

Decreased driveway separation standards, while typically handled on a case-by-case basis during permit review, are needed to allow driveway access for homes abutting Collector roadways such as S Dogwood Street. These lots, some of which do not have alley access, would need to be greater than 100 feet in width in order to meet the City standard. The decrease in separation allows for the needed safety for backing vehicles while allowing for greater density through appropriately sized lots and greater variety through the provision of attached homes that have varying façades (garage front vs. rear), setbacks, and character. The decreased standard allows homes to be built on Lots 41, 52-54, 71-73, and 84 that would otherwise require alley access or larger lots.

With these adjustments, the typical building setbacks will appear as follows:

Figure 2: Typical Detached Alley-Load Building Setbacks

Figure 3: Typical Detached Street-Load Building Setbacks

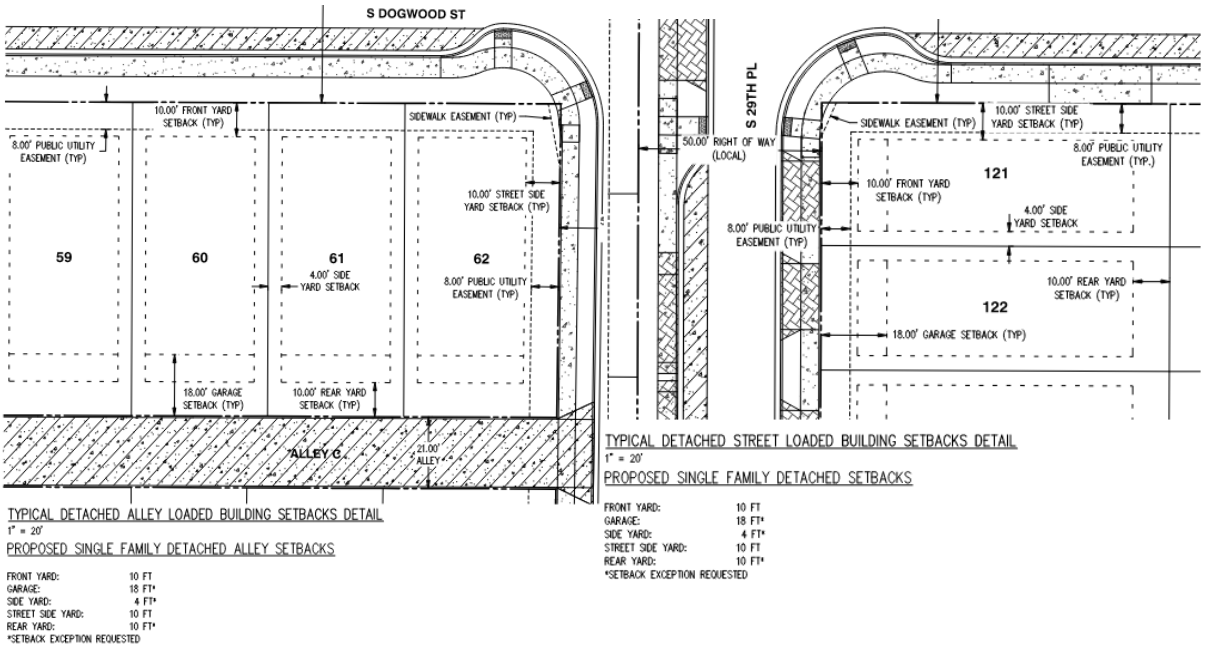
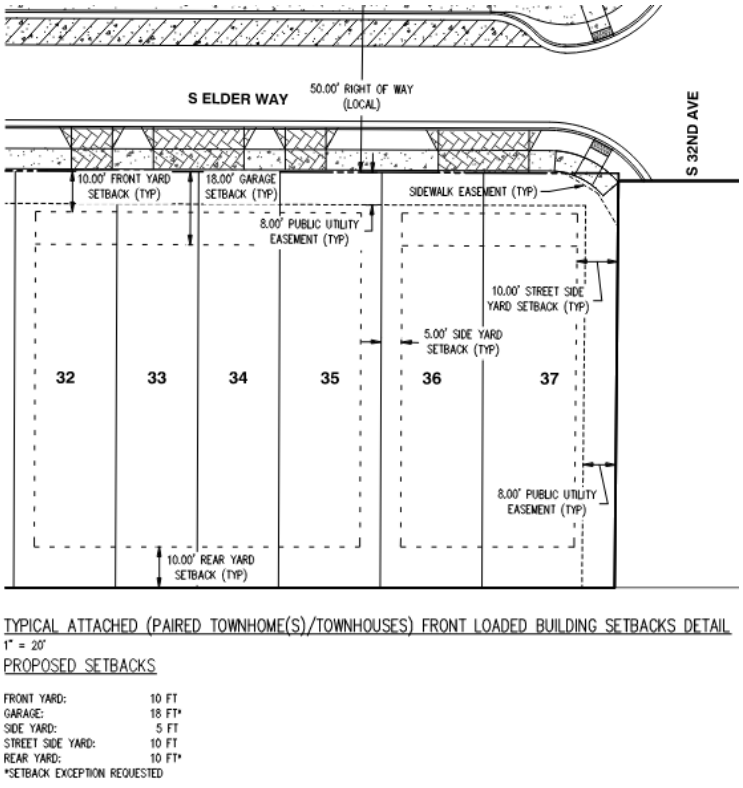


Figure 4: Typical Attached Front-Load Building Setbacks



These adjustments will allow for the construction of a cohesive neighborhood of attached and detached homes, providing sufficient off-street parking, while still allowing an

adequate number of homes of different sizes to be built to attract a wide range of homeowners.

(B) **Planned unit developments shall not be less than one acre in area.**

Response: The subject property is ±30.4 acres in area. This standard is met.

(C) **Approval compliance, required by CMC 17.05.040(E), for subdivision improvements shall be required to ensure that a development proposal, as submitted, is completed within the required time limit.**

Response: This standard is understood and planned to be met.

18.110.030 Procedures.

The following procedures shall be observed in applying and acting on a planned unit development request:

(A) **Application Requirements.**

(1) **The community development director shall provide forms that specify the information required for submission of a planned unit development (PUD). The applicant shall prepare site plan(s) with other supplementary material as may be required and shall submit the necessary number of copies to the community development director.**

Response: The required application forms, site plans, and supplemental materials are provided along with this application narrative.

(2) **Applicability of Planned Unit Development Regulations. The requirements for a planned unit development set forth in these sections are in addition to the conditional use permit (CUP) procedures, authority and standards of Chapter 18.105 CMC. The applicant must submit a request for a PUD in conjunction with an application for a CUP.**

Response: As discussed in responses to CMC Chapter 18.105 above, this application includes a CUP. The necessary forms, plans, and supplemental materials for a CUP are included with this application.

(3) **Plans submitted for planned unit developments shall be subject to design review of site plans, which shall include any and all information describing the proposed lot and street layout, relationship to adjacent properties and major road systems, locations of building masses (size, type, and function) and building design. The applicant may provide an alternative to the building design information by submitting a justification why it is necessary and appropriate to deviate from this requirement. Open spaces, parks and greenways, as well as any recreation facilities, shall be specified.**

Response: As discussed elsewhere in this narrative, this application includes a CUP, PUD, and Subdivision. This consolidated land use application is being processed through a Type III procedure. The necessary forms, plans, and supplemental materials for this consolidated land use application are included with this submittal and include the information required by this section. The Applicant is committed to providing a high-quality housing product that contributes to the long-term desirability of this neighborhood, and which can accommodate housing demand across a range of age and income levels. It is not possible

at this time to provide building elevations and more specific information related to the future homes on these lots. This application does not include a request for flexibility or adjustment to building design standards for residential dwellings. Therefore, building design details are not provided herein. This requirement is met as applicable.

> **(4)** An applicant shall submit the required documents as prescribed by the community development director on the application checklist. Once the application is deemed complete, the applicant will provide the necessary copies as determined by the community development director for review by the planning commission. The preliminary plan shall include the following information:
>
> **(a)** Proposed land uses, building locations, and housing unit densities.
>
> **(b)** Proposed circulation pattern indicating the status of street ownership.
>
> **(c)** Proposed open space uses.
>
> **(d)** Proposed grading and drainage pattern.
>
> **(e)** Proposed method of water supply and sewerage disposal.
>
> **(f)** Economic and supporting data to justify any proposed commercial and industrial elements in an area not so zoned.
>
> **(g)** Relations of the proposed development to the surrounding areas and the comprehensive plan.

Response: The necessary materials for the applications discussed herein are included along with this narrative. The required information listed in this section is provided in the Preliminary Plans (Exhibit A). This requirement is met.

> **(5)** Prior to the public hearing before the planning commission, the community development director shall distribute copies of the request to the facilities and design review committee to review and to prepare their recommendation to the planning commission.

Response: This requirement is understood.

> **(B)** Approval Criteria. In order to approve a PUD, findings of fact shall be made to support the following conclusions:
>
> **(1)** There are special physical or geographic conditions or objectives of development which warrant a departure from the standard title requirements.

Response: Special physical conditions and development objectives exist that warrant a departure from the standard requirements in the underlying zoning districts. The subject site is bordered by SW 345th Avenue and the UGB to the east. The Portland & Western line comprises a portion of the site's northern boundary with the remainder comprised by a future HSD school site. The site is also bound by existing subdivisions to the south (Laurel Woods) and west (Old Oak, Braukman Park, and Dimeo's Quail Run) and therefore must account for the extension of streets and utilities from this subdivision to create a cohesive neighborhood.

These limitations warrant flexibility in the application of development standards in order to develop the site in an efficient and attractive manner. Nonetheless, given these

physical constraints, the PUD closely respects the standard requirements applicable to subdivisions in the A-2 and R-7 zoning districts. This PUD provides the opportunity to average allowable densities and reduced setbacks throughout the site to create a more organic and cohesive arrangement of lot sizes that will in turn promote a mix of residents who are expected to exhibit a broad range of ages, incomes, and other demographic characteristics. This criterion is met.

(2) Resulting development will be consistent with overall planning and zoning objectives of the city.

Response: As demonstrated by the Preliminary Plans (Exhibit A) and discussed herein, the planned PUD is consistent with the overall objectives of the Comprehensive Plan and the Master Plan for the Southeast UGB area. This criterion is met.

(3) The area around the development can be planned to be in substantial harmony with the proposed plan.

Response: As demonstrated by the Preliminary Plans (Exhibit A) and discussed herein, this application satisfies the minimum and maximum residential density thresholds established for development on this site while simultaneously providing parks and open space, transportation infrastructure, and other public improvements, that will ensure the long-term health, safety, and well-being of new and existing residents in the City of Cornelius. The planned neighborhood park will promote active use by residents of the community. Streets and utilities are planned to be extended through the site to its eastern boundary to allow future extension of these services when adjacent property is annexed and improved. Street stubs have been planned in order for future street extensions and connections to be made as adjacent properties develop. Therefore, this PUD ensures that new development on this site will minimize adverse impacts to existing adjacent properties while also providing ideal opportunities for the future development of adjacent properties that will likely develop at some point in the future. This criterion is met.

(4) If the applicant is proposing phasing the project, then identify the schedule for phasing. If the applicant is not proposing to phase the project, then identify the time frame for completion.

Response: This application includes phasing of the project. The project is planned to be completed in three phases, with a final buildout projected for 2029. Phase 3 construction, Final Plat approval and preliminary grading and construction plans are planned to be obtained prior to expiration of the land use application. This criterion is met.

(5) Provide findings that economically justify a proposed commercial or industrial development.

Response: This residential PUD does not include any commercial or industrial development. This criterion does not apply.

(6) The streets are adequate to support the anticipated traffic and the development will not overload the streets outside the planned area.

Response: The planned subdivision includes 230 lots intended for attached and detached single-unit dwellings. Access to the subdivision is planned via extensions of S 29th Boulevard and S

Dogwood Street through the subject site. Secondary emergency access is planned to be provided via SW 345th Avenue, during Phase 1 and 2. This access is not planned to be used for residential traffic. The Laurel Crown PUD is planned to connect to SW 345th Avenue when the roadway is improved (generally during/with Phase 3 construction). SW 345th Avenue currently has sufficient width to provide emergency access to first responders. Construction of the project is expected to begin after the completion of street and utility improvements as part of Phase 1 of the Laurel Crown PUD to ensure streets and utilities can be adequately extended through the subject site.

As demonstrated by the Preliminary Plans (Exhibit A) and the Transportation Impact Study (Exhibit F), and discussed with staff during the pre-application conference, the existing and planned streets are adequate to support the anticipated traffic generated by the subdivision, and the subdivision will not overload streets outside of the subject site. No significant safety patterns or sight distance issues were identified. The studied intersections did not warrant new traffic signals or other mitigation. While separated left and right turn lanes will be required at the SW Tualatin Valley Highway/OR 8/E Baseline Street intersection with SW 345th Avenue, this condition would be needed even without trips from the Laurel Crown subdivision. Traffic from the subdivision is not forecast to measurably increase traffic from 2029 background conditions. This criterion is met.

(7) Proposed utility and drainage facilities are adequate for the population densities and type of development proposed.

Response: As demonstrated by the Preliminary Plans and Preliminary Stormwater Report (Exhibits A and G, respectively), the planned utility improvements are adequate to serve the subdivision and its affiliated improvements. This criterion is met.

(C) Other Requirements.

(1) The planning commission shall notify the applicant whether, in its opinion, the foregoing provisions have been satisfied and if not, whether they can be satisfied with further plan revision.

(2) Following this meeting, the applicant may proceed when approval is given by the commission.

(3) Conditions. In addition to the requirements of this chapter, the commission may attach conditions it finds are necessary to carry out the purposes, objectives and standards of the planned unit development conditional use.

(4) Zoning Map. Planned developments shall be established as conditional uses with other regular zones, and an approved planned unit development shall be identified on the zoning map or map amendments with the letters PD in addition to the abbreviated designation of the pre-established zoning.

(5) Availability of Plan. A certified print of the approved development plan shall be maintained without charge in the office of the community development director.

(6) Building Permits. Building permits in a planned unit development shall be issued only in accordance with the approved development plan. Any major changes in the approved development plan shall be submitted to the planning commission for processing as an

amendment to the ordinance codified in this title. Minor amendments to the approved development plan may be processed as a Type II process. Minor amendments include, for example, those that reduce residential density; increase public amenities or public open space areas; or result in minor shifts in building heights or locations, easement configuration, or other interior site improvements. The classification of a minor versus major amendment to an approved development plan shall be at the discretion of the community development director.

Response: The above requirements are understood and can be met as applicable.

(D) Approval of Plan and Time Limitation on Development.

(1) Before a planned unit development shall be approved by the commission, a preliminary subdivision plat shall be prepared to be considered in conjunction with the planned unit development plan. This requirement shall not apply in the event subdivision of the land would not be required under the subdivision regulations of the city.

Response: A Preliminary Plat for the planned subdivision is included with the Preliminary Plans (Exhibit A). This requirement is met.

(2) If no construction has begun or no use established in the planned unit development within one year after approval of the final plan, the final plan shall lapse and be of no further legal effect. In its discretion and for finding of good cause, the commission may extend for one year the period for beginning of construction or the establishment of use. The applicant shall present his case for cause before the planning commission at its regularly scheduled meeting

Response: This requirement is understood and can be met as applicable.

Chapter 18.130 COMPREHENSIVE PLAN

18.130.010 Comprehensive plan adopted.

[…]

(B) The city recorder shall endorse the number of Ordinance No. 808, and the date of its adoption upon a copy of the comprehensive plan, which shall be kept on file in the office of the community development director as the official copy of the plan. All amendments to the plan shall be by ordinance, and the ordinances shall be endorsed upon the official comprehensive plan of development on file in the office of the city recorder.

[…]

Response: A separate application includes a Comprehensive Plan Map Amendment for the relocation of a designated Collector route from S 29th Boulevard to SW 345th Avenue. An amendment to the 2020 Cornelius TSP, as an adopted supplement to the Cornelius Comprehensive Plan, requires an ordinance for adoption, approved by the Cornelius City Council. These standards do not apply to this application for a Subdivision, PUD, and CUP.

Chapter 18.143 TRANSPORTATION FACILITIES

18.143.020 General provisions.

(A) All transportation facilities shall be designed and improved in accordance with the standards of this code and the adopted Cornelius public works standards. In addition, when development abuts or impacts a transportation

facility under the jurisdiction of one or more other governmental agencies, the city shall condition the development to obtain permits required by the other agencies.

Response: As demonstrated by the Preliminary Plans (Exhibit A), the planned improvements include several new streets, several extensions of existing streets, two roundabout intersections, and an expanded street right-of-way. These phased improvements are planned to improve pedestrian connectivity, safety, and overall traffic flow. The planned street improvements conform with the requirements of this code and the applicable Public Works Standards. Further responses pertaining to street improvements can be found elsewhere in this narrative. This standard is met as applicable.

(B) In order to protect the public from potentially adverse impacts of the proposal, to fulfill an identified need for public services related to the development, or both, development shall provide traffic capacity, traffic safety, and transportation improvements in proportion to the identified impacts of the development.

Response: As demonstrated by the Preliminary Plans (Exhibit A) and discussed in the Transportation Impact Study (Exhibit F), this application includes improvements commensurate with the demonstrated traffic impacts of the planned subdivision. The 2029 full-buildout scenarios analyzed within the Transportation Impact Study do not predict a measurable impact to surrounding intersection operations over the background scenario. This standard is met.

(C) For applications that meet the threshold criteria of CMC 18.143.030(B), Analysis Threshold, this analysis or limited elements thereof may be required.

Response: As discussed and confirmed by the city engineer, the planned PUD will generate trips exceeding the threshold criteria of Section 18.143.030(B). Therefore, a traffic analysis is required and has been included as Exhibit F. See responses to Section 18.143.030(B) below for additional findings.

(D) The decision-making authority may impose development conditions of approval per this title. Conditions of approval may be based on the traffic impact analysis.

Response: This provision is understood.

(E) Dedication of rights-of-way shall be determined by the decision-making authority.

Response: This provision is understood and is planned to be met as applicable.

(F) Traffic calming may be approved or required by the decision-making authority in a design of the proposed and/or existing streets within the area of influence or any additional locations identified by the city engineer. Traffic calming measures shall be designed to city standards.

Response: This provision is understood. While traffic calming has not been determined to be required, it can be provided if deemed appropriate by the city engineer.

(G) Intersection performance shall be determined using the Highway Capacity Manual, Sixth Edition, published by the Transportation Research Board. The city engineer may approve a different intersection analysis method prior to use when the different method can be justified. Terms used in this subsection are defined in the Highway Capacity Manual, Sixth Edition.

Response: This provision is understood and can be met as applicable.

> **(H)** City street intersections shall maintain a level of service (LOS) of "D" during the p.m. peak hour of the day. An LOS of "E" may be accepted for local street approaches or driveway access points that intersect with collector or arterial streets, if these intersections are found to operate safely.

Response: As discussed in the Transportation Impact Study (Exhibit F), all studied intersections will maintain a level of service (LOS) that conforms with the requirements of this code following the planned improvements. This standard is met.

18.143.030 Traffic impact analysis.

For each development proposal that exceeds the analysis threshold of subsection (B) of this section, the application for land use or design review approval shall include a traffic impact analysis as required by this code. The traffic impact analysis shall be based on the type and intensity of the proposed land use change or development and its estimated level of impact to the existing and future local and regional transportation systems.

> **(A)** Engineer Certification. The traffic impact analysis shall be prepared and certified by a traffic engineer or civil engineer licensed in the state of Oregon.
>
> **(B)** Analysis Threshold. A traffic impact analysis is required when the proposed land use change or development will generate 200 vehicles or more per day (vpd) in average weekday trips as determined by the city engineer.

Response: As discussed in Exhibit F, the project proposes to add 2,130 total net new trips with full buildout through Phase 3. Therefore, a traffic analysis is required and has been included as Exhibit F. These standards are met.

> **(C)** A traffic impact analysis or some elements of a traffic impact analysis may be required when projects that generate less than 200 average daily vehicle trips and the volume threshold under subsection (B) of this section is not met, but the city engineer finds that the traffic impacts attributable to the development have the potential to significantly impact the safe and efficient operation of the existing public transportation system.

Response: This scenario does not apply to the application.

> **(D)** Study Area. The traffic impact analysis shall evaluate the area of influence of the proposed development and all segments of the surrounding transportation system where users are likely to experience a change in the quality of traffic flow. At a minimum, the analysis will consider all road segments, access points, and intersections within the influence area. The city engineer may identify additional locations for study if existing traffic operation, safety, or performance is marginal or substandard. Prior to report preparation, the applicant shall submit the proposed scope and analysis assumptions of the traffic impact analysis. The city engineer shall determine whether the scope and analysis assumptions are adequate.

Response: The study intersections and study area were determined by the City Engineer and are outlined within the Transportation Impact Study (Exhibit F). This standard is met.

> **(E)** Traffic impact analysis shall be based on the type and intensity of proposed land use change or development and its estimated level of impact to the existing and future local and regional transportation systems.
>
> > **(1)** The traffic impact analysis report shall at a minimum contain the following information:

(a) A description of the proposal and/or development including the intended use of the site.

(b) Vicinity map shall identify the influence area map, which includes the existing traffic conditions, the functional classification of the subject roads, existing right-of-way and pavement widths, striping, channelization, and all existing driveways and intersections within the influence area.

(c) Traffic forecasts of future traffic within the influence area.

(d) Traffic impact shall be analyzed to evaluate access, safety, feasibility, operation and performance, considering the movement of site-generated traffic relating to existing conditions, traffic flow, access points and intersections within the influence area. Mitigation for identified deficiencies shall be recommended to provide safe and efficient traffic flow.

(e) Technical appendices and other information that demonstrates the technical adequacy of the analysis.

Response: The required analysis contains information that meets the listed requirements, providing a description of the proposal, vicinity maps, future traffic forecasts, traffic impact, and technical appendices supporting the analysis as required. A conservative estimate of 240 units was analyzed within the Transportation Impact Study to establish that the impact of the proposed project would also meet City and ODOT standards. For further information, please refer to the Transportation Impact Study (Exhibit F). These standards are met.

(2) Traffic Forecasts. The report shall include complete documentation of trip generation calculations including Institute of Transportation Engineers' (ITE) trip generation use code(s), from the most recent published edition. Traffic flow diagrams displaying distribution, assignment, existing, added and total traffic shall be included. Intersections, access points and turning movements within the area of influence shall be included.

Response: Traffic forecasts based upon the most recent ITE trip generation information and current traffic counts is provided within the TIS. Flow diagrams demonstrate the distribution and current and forecast trips and significant intersections, turning movements, and other aspects of the vicinity are analyzed. This standard is met.

(3) Trip Generation. Estimates for trip generation shall be made for peak-hour traffic. The peak-hour traffic in the analysis will be justified and will at a minimum include the a.m. and p.m. peak hours. Trip generation estimates shall be based on the most recent issue of the ITE trip generation. The city engineer may approve different trip generation rates when trip generation rates are not available in ITE's trip generation or different rates are justified.

Response: Trip generation was determined using the most recent edition of the ITE Trip Generation Manual. The trips generated by the project's number of detached and attached units was calculated based on these industry standard rates. No special rate was determined as needed by the Applicant or City Engineer. This standard is met.

(4) Trip Distribution and Assignment. Traffic generated by the proposed development shall be logically distributed and assigned to the street

system within the influence area and any additional locations identified by the city engineer. The trip distribution information shall be based on Washington County, Metro, or ODOT for local traffic patterns no more than 12 months old, or alternative data approved by the city engineer.

Response: Trip distribution was analyzed based on accepted local traffic patterns within the area. Diagrams are available depicting the forecast vehicular movements and traffic volumes within the TIS (Exhibit F). This standards is met.

(5) Performance analysis shall be based on safety considerations that evaluate conflicting turning movements among driveways, intersections and internal traffic. Geometric design concerns shall be addressed and operational improvements shall be considered, evaluated and recommended when determined to be necessary by the standards of Washington County, ODOT or the city engineer. Adequate sight distance shall be addressed at the proposed road access point(s) of the existing and the ultimate road configuration based on the improvements identified in the city transportation system plan. Bicycle, pedestrian and transit issues shall be identified and evaluated. Other operational, circulation, safety, capacity and improvement issues shall be evaluated and addressed as required by the code and the city engineer.

Response: Safety needs were analyzed and found to not exceed the standard incident rate. Sight distance issues were not identified at the studied intersections or project intersections. Other issues were not identified by the Traffic Engineer. Please refer to the TIS (Exhibit F) for further information. This standard is met.

(6) The traffic impact analysis shall identify traffic impacts attributable to a development and the appropriate mitigation measures where a development causes traffic impacts that bring a road below acceptable levels of service, or impacts a road that is already operating below acceptable levels of service, or impacts a road that has a documented safety problem. Mitigation measures shall be implemented as a condition of approval. Mitigation shall include alternative methods to safely and efficiently improve traffic flow through improvements that address the identified deficiencies. Improvements shall be consistent with those identified in the transportation system plan. If traffic signal warrants are met in conformance with the Highway Capacity Manual and the Manual of Uniform Traffic Control Devices, traffic signals shall be required with development. Before a signal can be installed on a state highway, a traffic signal and location shall have been approved by the State Highway Engineer.

Response: The required analysis contains information that meets the listed requirements, providing a description of the proposal, vicinity maps, future traffic forecasts, traffic impact, and appendices as required. As the 2029 full buildout scenario would not create measurable increases in traffic over background conditions, mitigation measures were not recommended strictly due to impacts from the Laurel Crown PUD project; however, the SW 345th Avenue/SW Tualatin Valley Highway will require separated left and right turn lanes under 2029 background conditions. For further information, please refer to the Transportation Impact Study (Exhibit F). This standards are met.

(7) State and County Facilities. Access to state (ODOT) and/or Washington County facilities or both requires approval from those agencies. Traffic analyses shall meet ODOT and county requirements, in addition to those of the city for a traffic impact analysis.

Response: Washington County currently has jurisdiction over SW 345th Avenue east of the site. Approval from the County will be sought as required.

18.143.040 Street design cross-sections per transportation system plan.

Street cross-sections include the right-of-way, paved section, sidewalk and planter strip widths. The functional classification of a street as designated in the transportation system plan shall determine its design and width. Identification of functional classifications for streets in the city limits is found in the adopted Cornelius transportation system plan. Street design standards, which are based on functional classification and use, are found in the adopted Cornelius public works standards. Full street connections shall be provided at intervals consistent with the adopted Cornelius public works standards for the identified street classification, except as modified by Chapter 18.115 CMC, or where prevented by topography, barriers such as railroads or freeways, or environmental constraints such as major streams and rivers.

(A) Deviations to Adopted Street Cross-Sections. A deviation from the adopted street cross-sections and/or widths or both shall require demonstration of a hardship or other exceptional circumstances resulting from conditions of the property. Hardship or exceptional circumstances may include, but are not limited to, unique topographic conditions, environmental protection requirements, and existing development and buildings. A request for a deviation shall comply with this title and, where applicable, the transportation planning rule (TPR).

Response: Cross sections for adjacent existing and new internal streets will meet the applicable regulations. Deviations from the standard adopted street cross-sections are not planned at this time. See the Preliminary Street Cross Sections Sheet in Exhibit A.

18.143.050 Access standards.

Access standards establish requirements and regulations for safe and efficient vehicle access to and from a site and enhance general circulation within a site.

(A) Access Spacing. Access spacing shall be designed in conformance with the adopted Cornelius public works standards.

(1) Access spacing for all state facilities shall be coordinated with the Oregon Department of Transportation (ODOT).

Response: The project does not require access to a state facility; therefore, this standard does not apply.

(B) An access report shall be submitted with all new development and/or redevelopment proposals that demonstrates the street/driveway is safe as designed and meets adequate stacking, site distance, deceleration distance, on-site circulation and deceleration requirements as set by the city, American Association of State Highway and Transportation Officials (AASHTO), and relevant agencies.

(C) Driveway/Access Points. The location and number of driveways or access points have a direct effect on safe and efficient traffic flow. The following access management standards shall apply toward new driveways:

(1) Driveway spacing shall be designed in accordance with adopted public works standards. In some cases, driveway setbacks may be greater than the standard depending upon the influence area, as determined by city engineer review of a traffic impact report submitted by the applicant's traffic engineer. If the subject property has less than 150 feet of street frontage, the applicant shall first investigate a shared access as an option. If a shared access is not possible, the driveway shall be placed as far from the intersection as possible.

Response: Per the Public Works Standards, an adjustment is needed to the City's driveway spacing standards. These standards require distance between Collector streets and driveways exceed 100 feet. Because of the nature of the subdivision and desire for greater density in this area of the City, smaller lots are provided that cannot provide the desired driveway separation. Please refer to Table 3 for greater details regarding this request.

(2) Based on the applicants' proposal and its compliance with the comprehensive plan, transportation system plan and the development and zoning code, the city shall require the closing or consolidation of existing driveways or other vehicle access points, the recording of reciprocal access easements (i.e., for shared driveways), and installation of traffic control devices or other measures as a condition of approval to mitigate the impacts of the development.

(3) New developments shall provide cross-over easements to ensure potential shared driveway access points where existing conditions (i.e., surrounding land uses, lot configurations, physical characteristics, etc.) warrant consideration.

Response: Shared driveway access with adjacent off-site properties is not needed; however, shared driveways are planned for some new attached home lots in order to maximize the provided on-street parking, utility, and street tree locations. Approximately 42 homes, generally attached structures, are planned to share driveways. Where necessary, cross-over easements will be established. These standards are met.

(4) Access to arterials shall only be from public streets. When a site that has private access onto a principal arterial is redeveloped, the private access shall be eliminated if alternate access exists or can be developed to the site.

(5) Direct access to a collector street shall only be considered if there is no alternative way to access the site. If direct access is permitted by the city, the applicant shall be required to mitigate for any safety or neighborhood traffic management impacts deemed applicable by the city engineer. In no case shall the design of driveways, drive aisles or service drives require or encourage the backward movement or other maneuvering of a vehicle within a street, except for single-family and duplex residences.

[…]

Response: Direct access to Collector and/or Arterial streets has not been designed as part of the project. The Preliminary Plans (Exhibit A) demonstrate that the project's driveways and alleys allow for safe neighborhood traffic management and that access is not provided to Collector roadways. These requirements are met.

18.143.060 Transit supportive amenities.

(A) New commercial, industrial and institutional buildings developed on sites adjacent to major transit stops shall provide transit-related improvements. Major transit stops are identified as part of the regional transit system or as otherwise defined in Chapter 18.195 CMC. Properties are considered "at" a major transit stop when they are within 200 feet of the stop. A proposed development that is adjacent to or includes an existing or planned major transit stop will be required to plan for access to the transit stop and provide for transit improvements, in consultation with TriMet and consistent with an agency adopted or approved plan at the time of development. Requirements apply where the subject parcel(s) or portions thereof are within 200 feet of a major transit stop. Development requirements and improvements may include the following:

(1) Intersection or mid-block traffic management improvements to allow for pedestrian crossings at major transit stops.

(2) Building placement within 20 feet of the transit stop, a transit street or an intersection street, or a pedestrian plaza at the stop or a street intersections.

(3) Transit passenger landing pads accessible to disabled persons to transit agency standards.

(4) An easement or dedication for a passenger shelter and an underground utility connection to a major transit stop if requested by TriMet.

(5) Lighting to TriMet standards.

(6) Intersection and mid-block traffic management improvements as needed and practicable to enable marked crossings at major transit stops.

Response: This section does not apply to the project.

(B) For an existing use or proposed use on a site located within one-quarter mile from a bus stop where at least 10 off-street parking spaces are required, the applicant may apply for a reduction in the number of required spaces by 10 percent through the provision of transit supportive amenities, subject to city approval.

Response: The subject site is located within ¼ mile of a bus stop along the OR 8/E Baseline Street; however, a reduction in the number of parking spaces is not sought.

18.143.070 Intelligent transportation systems.

Intelligent transportation systems (ITS) manage and enhance operational performance through advanced technologies and management techniques to help relieve congestion, promote safety and provide suitable transportation strategies.

In order to provide for efficient installation of future intelligent transportation systems (ITS), all roadway improvement projects, including private development with frontage improvements, shall install three-inch conduit to support local interconnect infrastructure. The location, design and type of conduit shall be approved by the city engineer.

Response: The Applicant will install 3-inch conduit along applicable roadways as required.

Chapter 18.145 OFF-STREET PARKING AND LOADING

18.145.010 General provisions.

(A) The provision and maintenance of off-street parking and loading spaces are continuing obligations of the property owner. No building or other permit shall be issued until plans are presented that show property that is and will remain available for exclusive use as off-street parking and loading space as required by this title. The subsequent use of property for which the building permit is issued shall be conditional upon the unqualified continuance and availability of the amount of parking and loading space required for the specific use. Use of property in violation of the off-street parking and loading requirements located herein shall be a violation of this code. Should the owner or occupant of a lot or building change the use to which the lot or building is put, thereby increasing off-street parking or loading requirements, it shall be a violation of this code to begin or maintain the altered use until the required increase in off-street parking or loading is provided, except as provided in the central mixed use (CMU) and corridor commercial (CC) zoning districts (see CMC 18.145.020(C)).

Response: This standard is understood and can be met as applicable.

(B) Unless otherwise provided, required parking and loading spaces shall not be located in a required yard.

Response: As demonstrated on the Preliminary Parking Plans (Exhibit A), required parking spaces are located within garages and are not within a required yard. Therefore, this standard is met as applicable.

(C) Owners of two or more uses, structures, or parcels of land may agree to utilize jointly the same parking and loading spaces when the hours of operation do not overlap; provided, that satisfactory legal evidence is presented to the community development director in the form of deeds, leases, or contracts to establish the joint use.

Response: This application does not include joint use parking. This standard is not applicable.

(D) A plan drawn to scale, indicating how the off-street parking and loading requirement is to be fulfilled, shall accompany the request for a building permit, site plan review, or certificate of occupancy. The plan shall show all those elements necessary to indicate that these requirements are being fulfilled and shall include but not be limited to:

(1) Delineation of individual parking and loading spaces and their dimensions;

(2) Circulation area necessary to serve spaces;

(3) Access to streets, alleys and properties to be served;

(4) Curb cuts;

(5) Location and dimensions of all landscaping, including the type and size of plant material to be used, as well as any other nonliving landscape material incorporated into the overall plan, excluding single- and two-family residences and multi-family uses with not more than four units in the core residential zone; and

(6) Specifications as to signs and bumper guards, excluding single- and two-family residences and multi-family uses with not more than four units in the core residential zone.

(E) Requirements for types of buildings and uses not specifically listed herein shall be determined by the community development director, based upon the requirements of comparable uses listed.

Response: On-site parking will be reviewed upon submission of individual building permits. These standards can be met.

18.145.020 Off-street parking.

(A) At the time of erection of a new structure or at the time of enlargement or change in use of an existing structure within any zone in the city, off-street parking spaces shall be provided in accordance with CMC 18.145.030. If parking space has been provided in connection with an existing use or is added to an existing use, the parking space shall not be eliminated if elimination would result in less space than is specified in the standards of this section when applied to the entire use. In cases of enlargement of a building or use of land existing on the effective date of the ordinance codified in this title, the number of parking spaces required shall be based only on floor area or capacity of such enlargement.

Response: This application includes a 230-lot subdivision for attached and detached single-unit dwellings. Parking for new dwellings is planned to be provided on each lot in accordance with the requirements of this chapter. The provision of off-street parking can be reviewed upon submittal of building permits for future dwellings. This standard is met as applicable.

[…]

(E) Parking spaces in public streets or alleys shall not be eligible as fulfilling any part of the parking requirements, except as allowed in the central mixed use and core commercial zoning districts.

(F) Required parking spaces shall be available for the parking of operable motor vehicles for residents, customers, patrons, and employees only, and shall not be used for the storage or sale of vehicles or other materials and shall not be rented, leased or assigned to any other person or organization not using or being directly served by the use.

(G) Off-street parking spaces for dwellings shall be located on the same lot with the dwelling, unless specified elsewhere in the code.

Response: These standards are understood and are met as applicable.

18.145.030 Required off-street parking spaces.

(A) Off-street parking shall be provided based on the primary use of the site according to the following standards and regardless of the parking zone in which the use is located (see Map 1 following this chapter).

Table 1 Minimum and Maximum Required Off-Street Vehicle and Bicycle Parking Requirements (unless otherwise noted, standard is per 1,000 sf of gross floor area)

Land Use	Minimum Parking Standards	Maximum Parking Standards		Minimum Bicycle Parking Standards
		Zone A	Zone B	
RESIDENTIAL				
Detached Single Dwelling Units	1.0/dwelling unit	None	None	None
Middle Housing	1.0/DU	None	None	None

Response: This application includes a 230-lot subdivision for detached single-unit dwellings and middle housing (townhouses). As illustrated on the Preliminary Parking Plan in Exhibit A, parking for new dwellings is planned to be provided on each lot in accordance with the

requirements of this chapter. The provision of off-street parking can be reviewed upon submittal of building permits for future dwellings. This standard is met as applicable.

[…]

Chapter 18.150 SPECIAL USE REGULATIONS

18.150.070 Clear vision zones.

Except in the central mixed use (CMU) zoning district, a clear vision zone shall be maintained on the corners of all property adjacent to the intersection of two streets, a street and a railroad, or a driveway providing vehicular access to a public street.

Response: As demonstrated by the Preliminary Plans (Exhibit A), clear vision areas are planned to be maintained at all street and alley intersections within the PUD in accordance with the requirements of this section. Clear vision zones are illustrated on the Preliminary Street Plans, Preliminary Subdivision Plat Plans, and Preliminary Parking Plans within Exhibit A. This standard is met.

[…]

Chapter 18.155 SOLAR ACCESS FOR NEW DEVELOPMENT

18.155.020 Applicability.

All development shall be designed throughout to accommodate active and/or passive solar installations to the extent reasonably feasible.

Response: This application includes a 230-lot subdivision for detached and attached single-unit dwellings that are planned to be constructed following the completion of site improvements and recordation of the final plat. The subdivision as designed does not prevent future dwellings from adding rooftop photometric systems or other green energy features. The standards of this chapter are met as applicable.

18.155.030 Solar-oriented residential lots.

At least 65 percent of the lots less than 10,000 square feet in area in single- and two-family residential developments must conform to the definition of a "solar-oriented lot" (see CMC 18.195.190) in order to preserve the potential for solar energy usage.

Response: The lots within the planned PUD are less than 10,000 square feet and are intended for single-unit attached and detached homes and are subject to the standards of this section. As defined in Section 18.195.190, a "solar-oriented lot" is:

(1) A lot with a front lot line oriented to within 30 degrees of a true east-west line. When the lot line abutting a street is curved, the "front lot line" shall mean the chord or straight line connecting the ends of the curve. For a flag lot, the "front lot line" shall mean the lot line that is most parallel to the closest street, excluding the "pole portion of the flag lot"; or

(2) A lot which, when a straight line is drawn from a point midway between the side lot lines at the required front yard setback to a point midway between the side lot lines at the required rear yard setback, is oriented to within 30 degrees of true north along said line; or

(3) A corner lot with a south lot line oriented to within 30 degrees of a true east-west line, which south lot line adjoins a public street or permanently reserved open space; provided, however, that the abutting street right-of-way or open space has a minimum north-

south dimension of at least 50 feet. For the purposes of this definition, "permanently reserved open space" shall include, without limitation, parks, cemeteries, golf courses and other similar outdoor recreation areas, drainage ditches and ponds, irrigation ditches and reservoirs, lakes, ponds, wetlands, open spaces reserved on plats for neighborhood use and other like and similar permanent open space.

Figure 5: Solar Orientation Layout



As demonstrated by Figure 4 and the Preliminary Plans (Exhibit A), 96 of the 230 lots within the planned PUD (±42 percent) meet the definition of a solar-oriented lot as defined above. The site is largely laid out in a grid pattern, with blocks oriented primarily east to west and north to south. The Laurel Crown layout is largely predetermined by the existing subdivisions adjacent to the site, namely where streets have been stubbed for continuation. As such, the alternative standard is reviewed as part of evaluation of Section 18.155.060 herein.

18.155.040 Access to sunshine.

The elements of the development plan (e.g., buildings, circulation, open space and landscaping) shall be located and designed, to the maximum extent feasible, to protect access to sunshine for planned solar energy systems or for solar-oriented rooftop surfaces that can support a solar collector or collectors capable of providing for the anticipated hot water needs of the buildings in the project between the hours of 9:00 a.m. and 3:00 p.m. PST, on December 21st.

Response: As described herein, the planned PUD layout maximizes access to sunshine for solar-oriented utilities. The layout does not prohibit rooftop solar systems from being provided in the future. Therefore, this standard is met as applicable.

18.155.050 Shading.

(A) The physical elements of the development plan shall be, to the maximum extent feasible, located and designed so as not to cast a shadow onto structures on adjacent property greater than the shadow which would be cast

by a 25-foot hypothetical wall located along the property lines of the project between the hours of 9:00 a.m. and 3:00 p.m., PST, on December 21st. This provision shall not apply to structures within the central mixed use (CMU) and corridor commercial (CC) zoning districts.

Response: The PUD is not planned to include elements creating a shadow exceeding that of a 25-foot-tall wall located along the property line. Buildings will be set back from property lines. Standard 6-foot-tall fences are anticipated along the property lines, which are below 25 feet. Therefore, this standard is met as applicable.

(B) The impact of trees shall be evaluated on an individual basis considering the potential impacts of the shading and the potential adverse impacts that the shading could create for the adjacent properties in terms of blocking sunlight in indoor living areas, outdoor activity areas, gardens, and similar spaces benefiting from access to sunlight.

Response: The site is currently used as an agricultural field and has no tree cover. This standard is understood and planned to be met.

18.155.060 Alternative compliance.

Upon request by an applicant, the planning commission may approve an alternative site layout that may be substituted in whole or in part for a plan meeting the standards of this chapter.

(A) Procedure. Alternative compliance plans shall be prepared and submitted in accordance with submittal requirements for plans as set forth in this section. The plan shall clearly identify and discuss the modifications and alternatives proposed and the ways in which the plan will equally or better accomplish the purpose of this chapter than a plan which complies with the standards of this chapter.

(B) Review Criteria. In approving an alternative plan, the planning commission shall find that the proposed alternative plan accomplishes the purposes of this chapter equally or better than a plan which complies with the standards of this chapter.

In reviewing the proposed alternative plan, the planning commission shall take into account whether the alternative design enhances neighborhood continuity and connectivity, fosters nonvehicular access, and preserves existing natural or topographic conditions on the site.

Response: As previously stated and shown within the Preliminary Plans (Exhibit A), 42 percent of the planned lots within the Laurel Crown PUD meet the definition of a solar oriented lot. The maximum number of solar oriented lots while providing open space and creating a cohesive circulation plan in accordance with the other provisions of this code.

The layout of the PUD is dependent on the existing adjacent residential subdivisions. Existing roadways have been stubbed to the subject site and are required to extend into the site to provide the needed connectivity prescribed by the TSP. The extension of these streets results in a grid layout and blocks primarily oriented north-south.

The continuation of the streets and connections with existing developments allow for improved pedestrian and bicycle connections and the configuration of homes and streets also does not prevent the use of solar panels in the PUD. The planned street network provides the maximum number of east-west connections while maintaining the

connectivity and extension of the existing network as required by this code. Therefore, the layout included in the Preliminary Plans balances accomplishing the purpose of this chapter while also meeting the other applicable standards of the Cornelius Municipal Code.

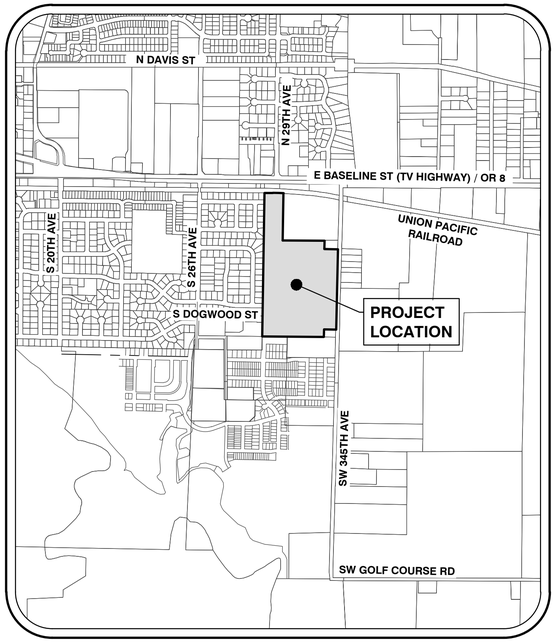
IV. Conclusion

The required findings have been made and this written narrative and accompanying documentation demonstrates that the application is consistent with the applicable provisions of the City of Cornelius Municipal Code. The evidence in the record is substantial and supports approval of the application. Therefore, the City can rely on this narrative and the application materials to approve this application.

Exhibit A: Preliminary Plans [Updated]

LAUREL CROWN

PLANNED UNIT DEVELOPMENT PRELIMINARY PLANS



VICINITY MAP

1"=1000'



SITE MAP

1"=150'

LEGEND

	EXISTING	PROPOSED		EXISTING	PROPOSED
DECIDUOUS TREE			STORM DRAIN CLEAN OUT		
CONIFEROUS TREE			STORM DRAIN CATCH BASIN		
FIRE HYDRANT			STORM DRAIN AREA DRAIN		
WATER BLOWOFF			STORM DRAIN MANHOLE		
WATER METER			GAS METER		
WATER VALVE			GAS VALVE		
DOUBLE CHECK VALVE			GUY WIRE ANCHOR		
AIR RELEASE VALVE			UTILITY POLE		
SANITARY SEWER CLEAN OUT			POWER VAULT	P	P
SANITARY SEWER MANHOLE			POWER JUNCTION BOX		
SIGN			POWER PEDESTAL		
STREET LIGHT			COMMUNICATIONS VAULT	C	C
MAILBOX			COMMUNICATIONS JUNCTION BOX		
			COMMUNICATIONS RISER		

	EXISTING	PROPOSED
RIGHT-OF-WAY LINE		
BOUNDARY LINE		
PROPERTY LINE		
CENTERLINE		
DITCH		
CURB		
EDGE OF PAVEMENT		
GUTTER		
EASEMENT		
FENCE LINE		
GRAVEL EDGE		
POWER LINE	PWR	PWR
OVERHEAD WIRE	OHW	OHW
COMMUNICATIONS LINE	COM	COM
FIBER OPTIC LINE	CFO	CFO
GAS LINE	GAS	GAS
STORM DRAIN LINE	STM	STM
SANITARY SEWER LINE	SAN	SAN
WATER LINE	WAT	WAT
RECLAIMED WATER LINE	NPWAT	NPWAT

APPLICANT/DEVELOPER
THE HOLT GROUP, INC.
CONTACT: JOE SCHIEWE
1301 SE TECH CENTER DRIVE, SUITE 150 VANCOUVER, WA 98683

OWNER
HILLSBORO SCHOOL DISTRICT
3083 NE 49TH PLACE, HILLSBORO OR 97124

PLANNING/CIVIL ENGINEERING/ SURVEYING/NATURAL RESOURCES/LANDSCAPE ARCHITECTURE/ARBORIST FIRM
AKS ENGINEERING & FORESTRY, LLC
CONTACT: MELISSA SLOTEMAKER, AICP, GLEN SOUTHERLAND, AICP
12965 SW HERMAN ROAD, SUITE 100 TUALATIN, OR 97062
PH: 503-563-6151

GEOTECHNICAL ENGINEER
GEOPACIFIC ENGINEERING, INC.
CONTACT: BEN ANDERSON, PE, GE
14835 SW 72ND AVE, PORTLAND, OR 97224

PROJECT LOCATION:
LOCATED WEST OF SW 345 AVE, SOUTH OF TV HIGHWAY, EAST OF S 28TH AVE, NORTH OF S GINGER ST, IN CORNELIUS, OREGON.

VERTICAL DATUM
ELEVATIONS ARE BASED ON WASHINGTON COUNTY BENCHMARK NO. 351, LOCATED 120 FEET SOUTH OF THE INTERSECTION OF SW 345TH AVENUE AND TUALATIN VALLEY HIGHWAY. ELEVATION = 179.803 FEET (NGVD 29).

PROPERTY DESCRIPTION:
TAX LOT 100 LOCATED IN THE NORTHEAST 1/4 OF SECTION 3, TOWNSHIP 1 SOUTH, RANGE 3 WEST, WILLAMETTE MERIDIAN, WASHINGTON COUNTY, OREGON

EXISTING LAND USE:
AGRICULTURE LAND

PROJECT PURPOSE:
230 LOT SUBDIVISION IN THE CITY OF CORNELIUS R7 & A2 ZONING DISTRICTS

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P03 SITE ZONING MAP
P04 PRELIMINARY PRODUCT DISTRIBUTION PLAN
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P06 PROJECT PHASING PLAN
P07 PROJECT KEY MAP
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P18A EXISTING CONDITIONS PLAN (SOUTH)
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P18C EXISTING CONDITIONS PLAN (NORTH)
P19A DEMOLITION AND TREE REMOVAL PLAN (SOUTH)
P19B DEMOLITION AND TREE REMOVAL PLAN (CENTRAL)
P19C DEMOLITION AND TREE REMOVAL PLAN (NORTH)
P20A GRADING AND EROSION CONTROL PLAN (SOUTH)
P20B GRADING AND EROSION CONTROL PLAN (CENTRAL)
P20C GRADING AND EROSION CONTROL PLAN (NORTH)
P21A COMPOSITE UTILITY PLAN (SOUTH)
P21B COMPOSITE UTILITY PLAN (CENTRAL)
P21C COMPOSITE UTILITY PLAN (NORTH)

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COVER SHEET
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER OREGON DEC. 29, 2001 PAUL A. SELLKE
PRELIMINARY NOT FOR CONSTRUCTION
RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
CHECKED BY:	PAS

P00

AKS DRAWING FILE: 4636-05 PRELIM COVER.DWG | LAYOUT: COVER

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PRELIMINARY NEIGHBORHOOD CONCEPT PLAN

LAUREL CROWN PUD

THE HOLT GROUP, INC.
CORNELIUS, OREGON

PRELIMINARY
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DATE:	12/12/2025
DESIGNED BY:	NKP
DRAWN BY:	NKP
CHECKED BY:	PAS

P01

AKS DRAWING FILE: 4636-05 COLOR SHEETS.DWG | LAYOUT: MASTER PLAN

S 30TH AVE

S CHESTNUT ST

S DOGWOOD (COLLECTOR)

ALLEY A

S 29TH PL

S 29TH BLVD (COLLECTOR)

TRACT A
NEIGHBORHOOD PARK

OPEN LAWN AREA

DOG PARK

PLAYGROUND

112 106 107 108

129 111 110 109

130 1

11 10 5

PEDESTRIAN SIDEWALKS



SHADE STRUCTURE



DOG PARK



SEATING



NEIGHBORHOOD PLAYGROUND



N

SCALE: 1"=20 FEET

20 0 4 10 20

ORIGINAL PAGE SIZE: 11" x 17"

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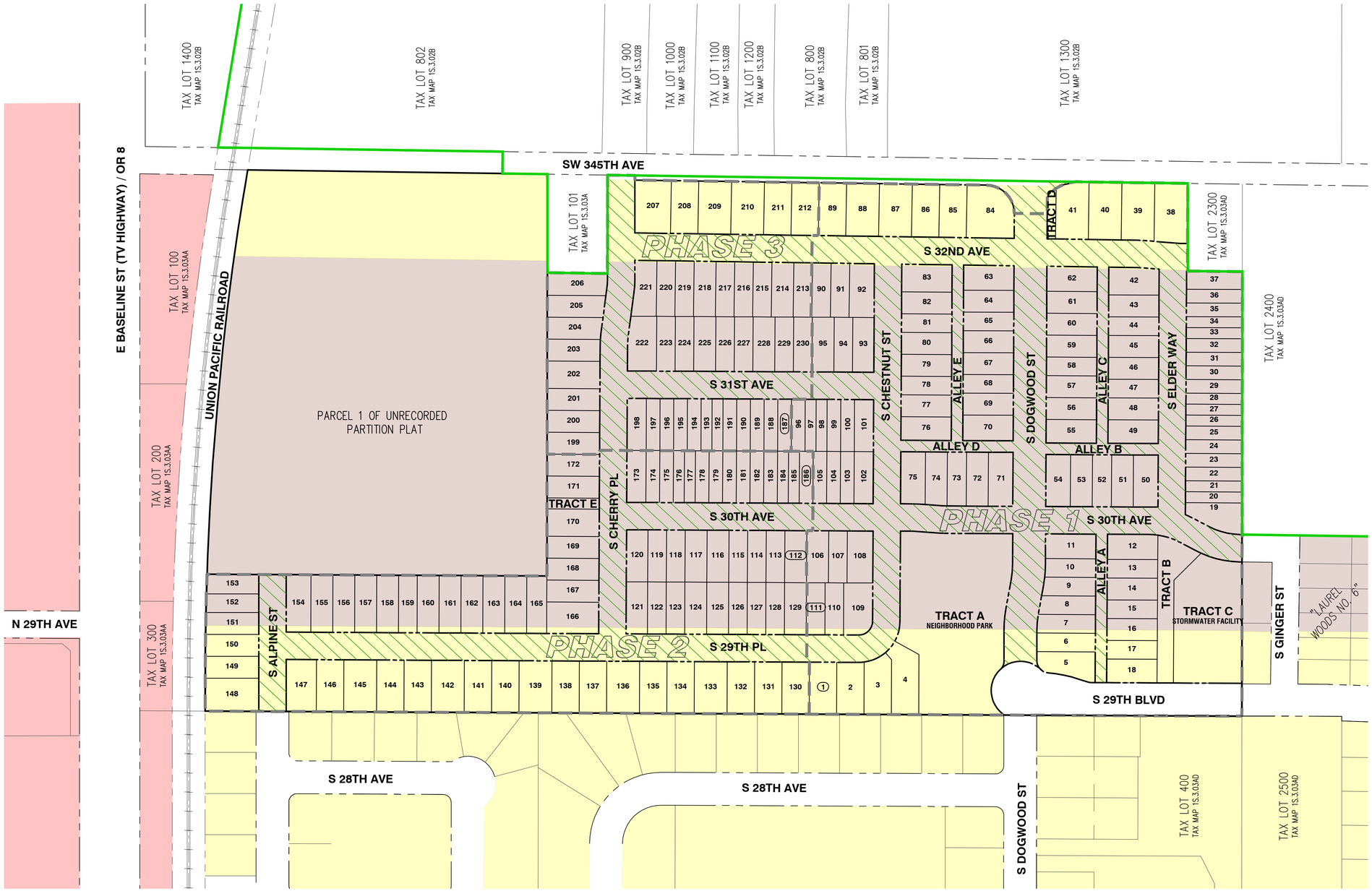
NEIGHBORHOOD PARK AMENITY PLAN
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED LANDSCAPE ARCHITECT
797
PRELIMINARY NOT FOR CONSTRUCTION
OREGON
JONATHAN P. SCHLOSSBERG
07/01/13
RENEWS: 06/30/2026

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	BNF
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P02

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PARCEL AREA

PARCEL 2 AREA (ACRES)	FUTURE VACATED ROW AREA (ACRES)	TOTAL AREA (ACRES)
28.15	2.22	30.38

DENSITY CALCULATIONS

DISTRICT	HOUSING TYPE	GROSS AREA (SF)	GROSS AREA (ACRES)	DEDICATED ROW AREA (ACRES)	STORMWATER FACILITIES - TRACT C (ACRES)	PUBLIC OPEN SPACE - TRACTS A&B (ACRES)	COMMUNITY GREEN SPACE - TRACTS D&E (ACRES)	NET AREA (ACRES)	MAX. DENSITY (DU/ACRE)	MIN. DENSITY (DU/ACRE)	CALCULATED MAX. DENSITY (UNITS)	CALCULATED MIN. DENSITY (UNITS)
R-7	Detached	426,849	9.80	3.10	0.28	0.62	0.03	5.77	5	4	29	23
	Attached							0.00	20	4	0	0
A-2	Detached	896,326	20.58	5.33	0.36	0.96	0.04	10.82	14	8	151	87
	Attached							3.07	25	8	77	25
TOTAL			30.38	8.43	0.63	1.59	0.07	19.65			257	134

PLANNED # OF UNITS: 230 UNITS
PLANNED DENSITY: 11.7 DU/ACRE

LEGEND:

- PHASE BOUNDARY
- CITY LIMITS
- C2 – HIGHWAY COMMERCIAL
- A2 – MULTI-UNIT RESIDENTIAL
- R7 – LOW DENSITY RESIDENTIAL
- DEDICATED ROW

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SITE ZONING MAP
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 29, 2001
PAUL A. SELLKE
PRELIMINARY
NOT FOR CONSTRUCTION
RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
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P03

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PRODUCT DISTRIBUTION

COLOR	MINIMUM LOT DIMENSIONS	HOUSE TYPE	LOADING	PHASE 1	PHASE 2	PHASE 3	TOTAL	% OF TOTAL
	20' x 95'	TOWNHOUSES	FRONT	17	8	4	29	12.6%
	25' x 95'	PAIRED TOWNHOME(S)	FRONT	12	6	8	26	11.3%
	34' x 95'	SINGLE FAMILY DETACHED	FRONT	10	16	13	39	17.0%
	34' x 92'	SINGLE FAMILY DETACHED	ALLEY	17	0	0	17	7.4%
	40' x 92'	SINGLE FAMILY DETACHED	ALLEY	29	0	0	29	12.6%
	40' x 95'	SINGLE FAMILY DETACHED	FRONT	12	24	12	48	20.8%
	50' x 95'	SINGLE FAMILY DETACHED	FRONT	8	15	4	27	11.7%
	60' x 95'	SINGLE FAMILY DETACHED	FRONT	6	6	3	15	6.5%
			TOTAL	111	75	44	230	100%

TOTAL PROJECT AREA:
±1,323,175 SF (±30.38 AC)

TOTAL RIGHT OF WAY AREA:
±373,969 (±8.59 AC)

TOTAL TRACT AREA:

RECREATIONAL OPEN SPACE	±69,211 SF (±1.59 AC)
STORMWATER FACILITY	±27,503 SF (±0.63 AC)
COMMUNITY GREEN SPACE	±3,262 SF (±0.07 AC)
TOTAL AREA	±99,976 SF (±2.29 AC)

TOTAL LOT AREA:
±856,056 SF (±19.65 AC)

RECREATIONAL OPEN SPACE REQUIRED:
230 DU x 300 SF/DU = 69,000 SF = 1.58 AC

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PRELIMINARY PRODUCT DISTRIBUTION PLAN

LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER OREGON JULY 09, 2001 PAUL A. SELLKE
PRELIMINARY NOT FOR CONSTRUCTION
RENEWAL DATE: 6/30/26

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P04

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LEGEND

- ARTERIAL ROAD – EXISTING
- COLLECTOR RD – EXISTING
- COLLECTOR RD – PLANNED
- MINI-ROUNDABOUT – PLANNED
- MINI-ROUNDABOUT – FUTURE*
- COLLECTOR RD – FUTURE*
- LOCAL RD – EXISTING
- LOCAL RD – PLANNED
- LOCAL RD – FUTURE (CONCEPTUAL)
- MULTI USE PATH – EXISTING
- MULTI USE PATH – PLANNED
- MULTI USE PATH – FUTURE*

NOTE: ALL INTERNAL LOCAL AND COLLECTOR STREETS HAVE SIDEWALK ON BOTH SIDES. SEE STREET CROSS-SECTIONS ON P10 FOR DETAILS.

*FUTURE PLANNED OFFSITE IMPROVEMENTS

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CIRCULATION PLAN
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

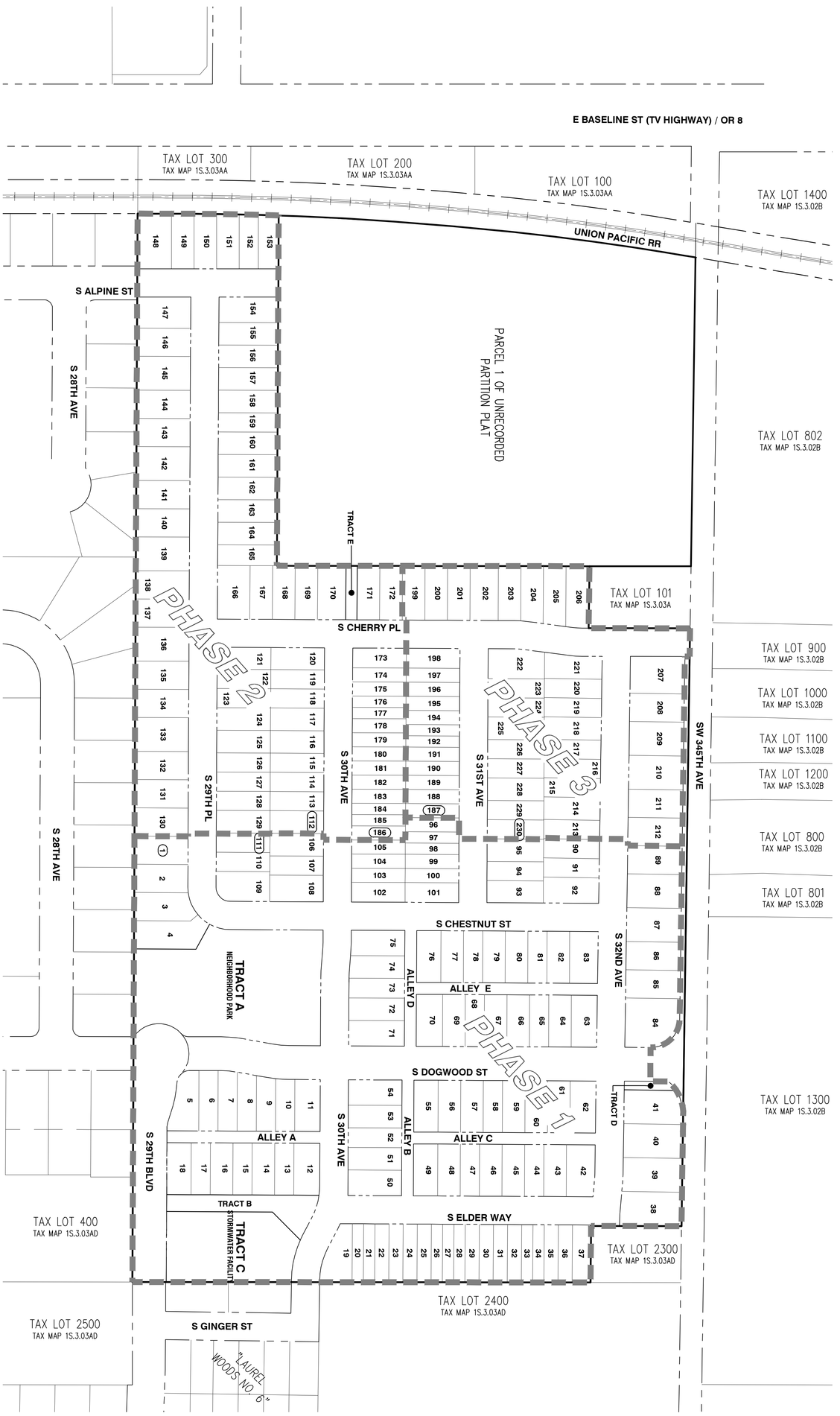
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OREGON
JULY 09, 2010
PAUL A. SELLKE
PRELIMINARY
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P05

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P06

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	NRM
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REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 29, 2007
PAUL A. SELLKE
RENEWAL DATE: 6/30/26
PRELIMINARY
NOT FOR CONSTRUCTION

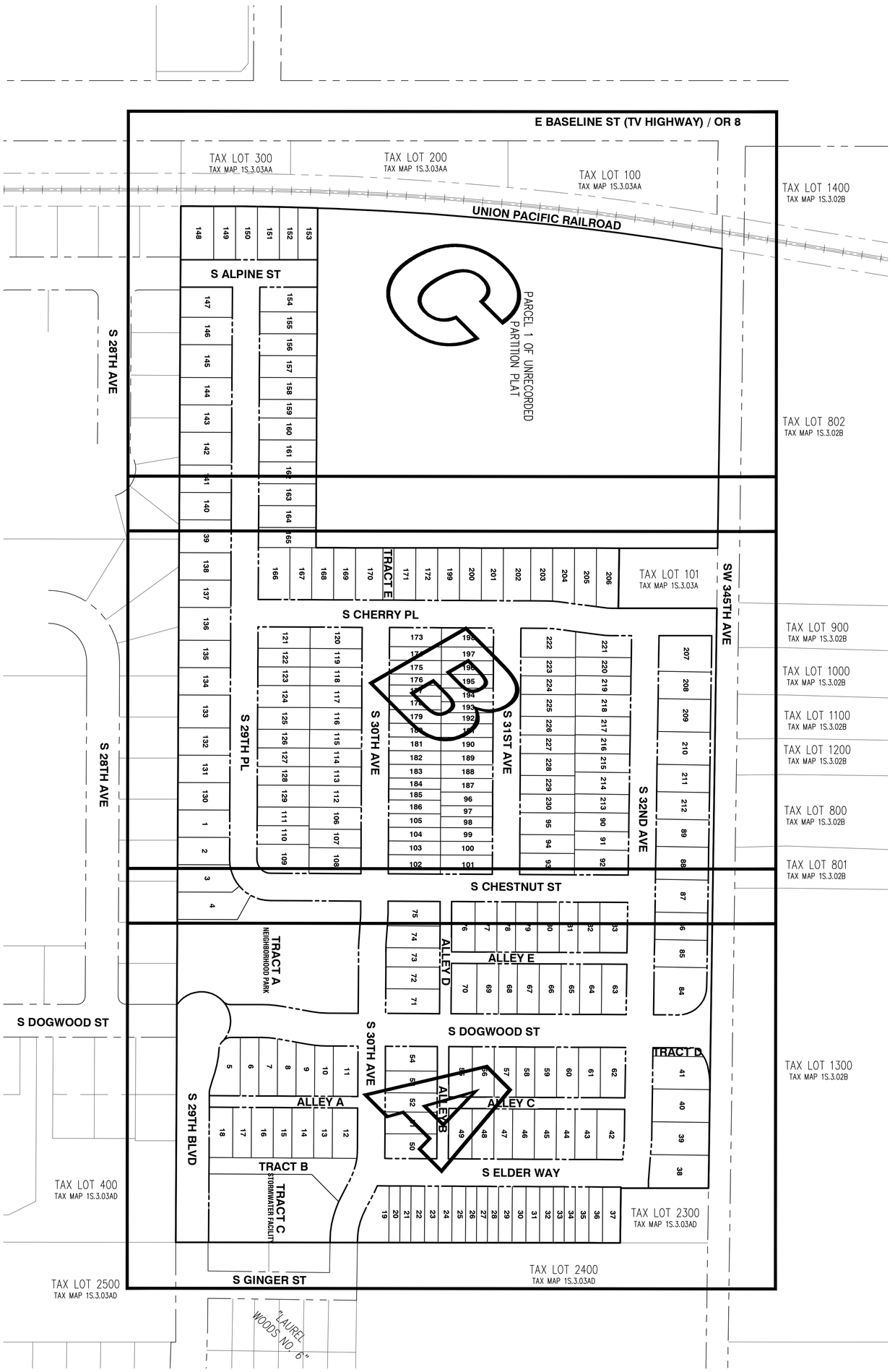
PROJECT PHASING PLAN
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

HOLT HOMES
Built for the Pacific Northwest

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P07

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MRM
DRAWN BY:	MRM
CHECKED BY:	PAS

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 28, 2007
CHRISTOPHER A. SELLKE
RENEWAL DATE: 6/30/26
PRELIMINARY
NOT FOR CONSTRUCTION

PROJECT KEY MAP
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

HOLT HOMES
Built for the Pacific Northwest

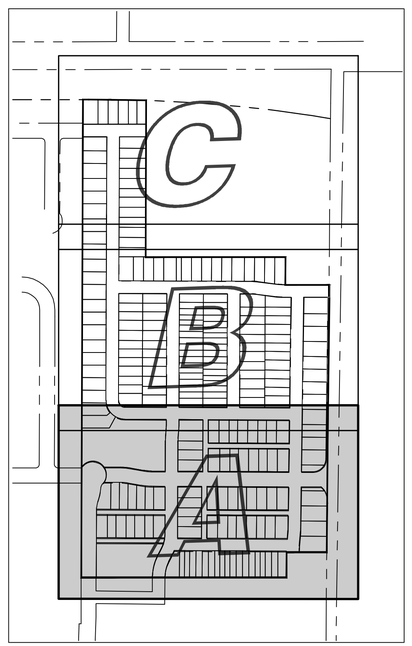
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SCALE: 1"= 50 FEET
ORIGINAL PAGE SIZE: 22" x 34"



SHEET KEY MAP

NOTES:

1. TRACTS "A", "B", AND "C" SHALL BE OWNED AND MAINTAINED BY THE CITY OF CORNELIUS.
2. TRACT "C" SHALL HAVE AN EASEMENT TO CLEAN WATER SERVICES FOR STORM SEWER, SURFACE WATER, DRAINAGE, AND DETENTION OVER ITS ENTIRETY.
3. TRACT "D" SHALL BE A COMMUNITY GREEN SPACE AND SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION (HOA).
4. TRACT "E" SHALL BE A COMMUNITY GREEN SPACE TRACT FOR UTILITY AND POTENTIAL PEDESTRIAN ACCESS TO PARCEL 1 OF APPROVED LAND PARTITION (LP-01-25). TRACT SHALL BE OWNED AND LANDSCAPING MAINTAINED BY THE HOA. TRACT "E" SHALL HAVE A UTILITY AND ACCESS EASEMENT TO PARCEL 1 OVER ITS ENTIRETY.

THE PURPOSE OF THIS PRELIMINARY PLAT IS TO SHOW THE PROPOSED LOT DIMENSIONS AND AREAS FOR PLANNING PURPOSES. THIS IS NOT AN OFFICIAL PLAT AND IS NOT TO BE USED FOR SURVEY PURPOSES.

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PRELIMINARY SUBDIVISION PLAT (SOUTH)

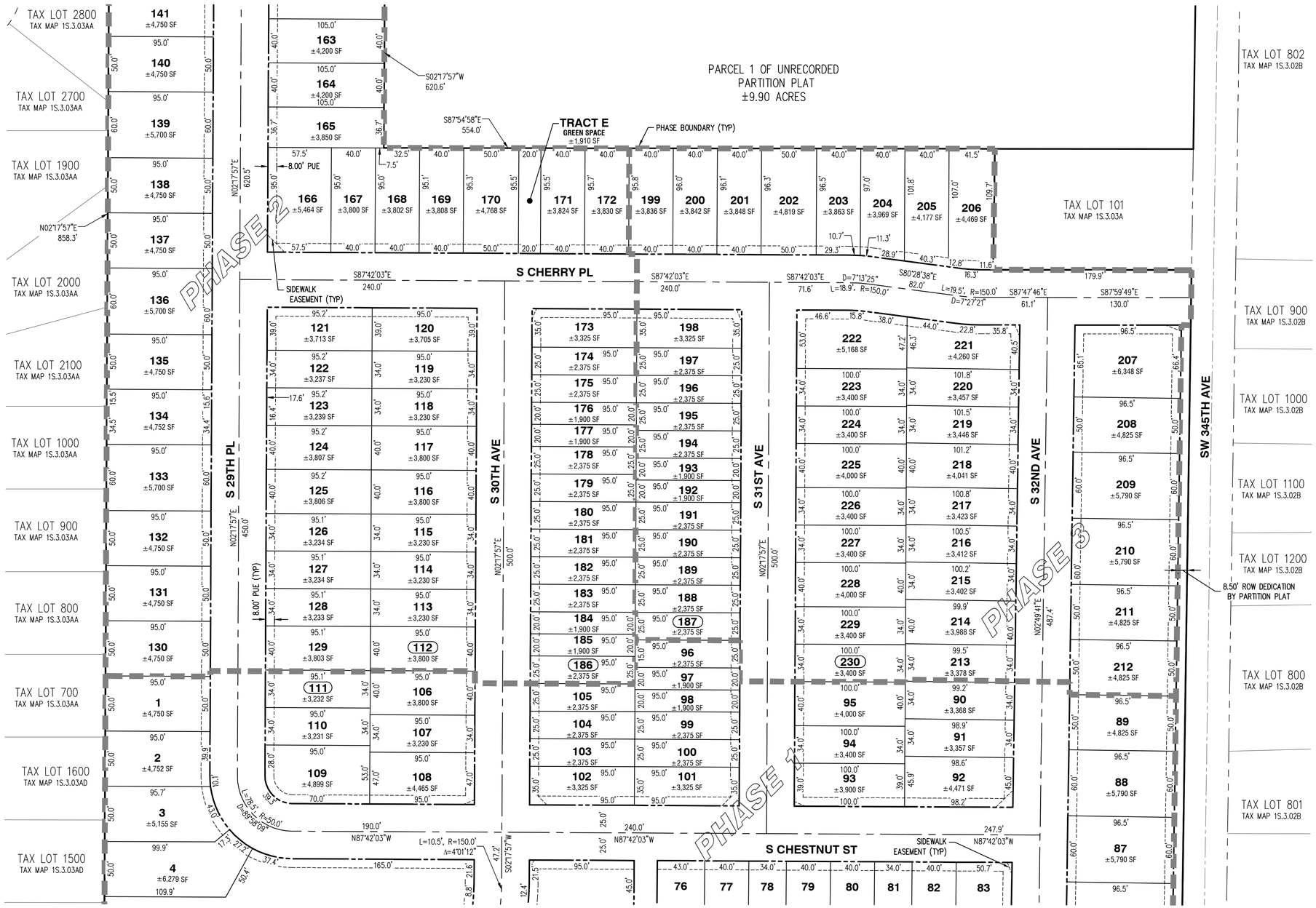
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THE HOLT GROUP, INC.
CORNELIUS, OREGON

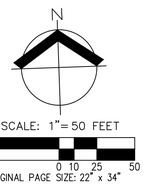
REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 09, 2008
PAUL A. SELLKE
PRELIMINARY NOT FOR CONSTRUCTION
RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
CHECKED BY:	PAS

P08A

AKS DRAWING FILE: 4636-05 PRELIM PLAT.DWG | LAYOUT: P08A

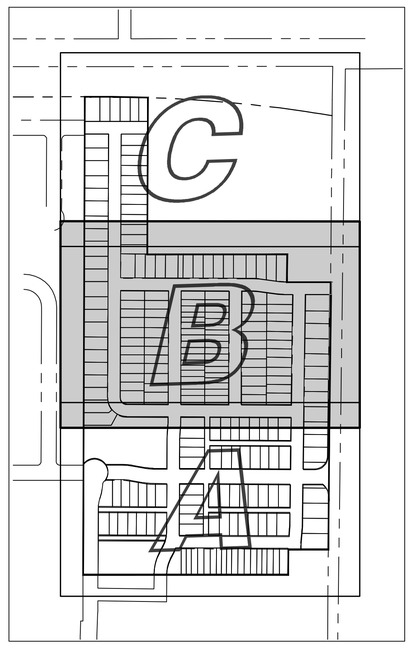




NOTES:

1. TRACTS "A", "B", AND "C" SHALL BE OWNED AND MAINTAINED BY THE CITY OF CORNELIUS.
2. TRACT "C" SHALL HAVE AN EASEMENT TO CLEAN WATER SERVICES FOR STORM SEWER, SURFACE WATER, DRAINAGE, AND DETENTION OVER ITS ENTIRETY.
3. TRACT "D" SHALL BE A COMMUNITY GREEN SPACE AND SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION (HOA).
4. TRACT "E" SHALL BE A COMMUNITY GREEN SPACE TRACT FOR UTILITY AND POTENTIAL PEDESTRIAN ACCESS TO PARCEL 1 OF APPROVED LAND PARTITION (LP-01-25). TRACT SHALL BE OWNED AND LANDSCAPING MAINTAINED BY THE HOA. TRACT "E" SHALL HAVE A UTILITY AND ACCESS EASEMENT TO PARCEL 1 OVER ITS ENTIRETY.

THE PURPOSE OF THIS PRELIMINARY PLAT IS TO SHOW THE PROPOSED LOT DIMENSIONS AND AREAS FOR PLANNING PURPOSES. THIS IS NOT AN OFFICIAL PLAT AND IS NOT TO BE USED FOR SURVEY PURPOSES.



SHEET KEY MAP

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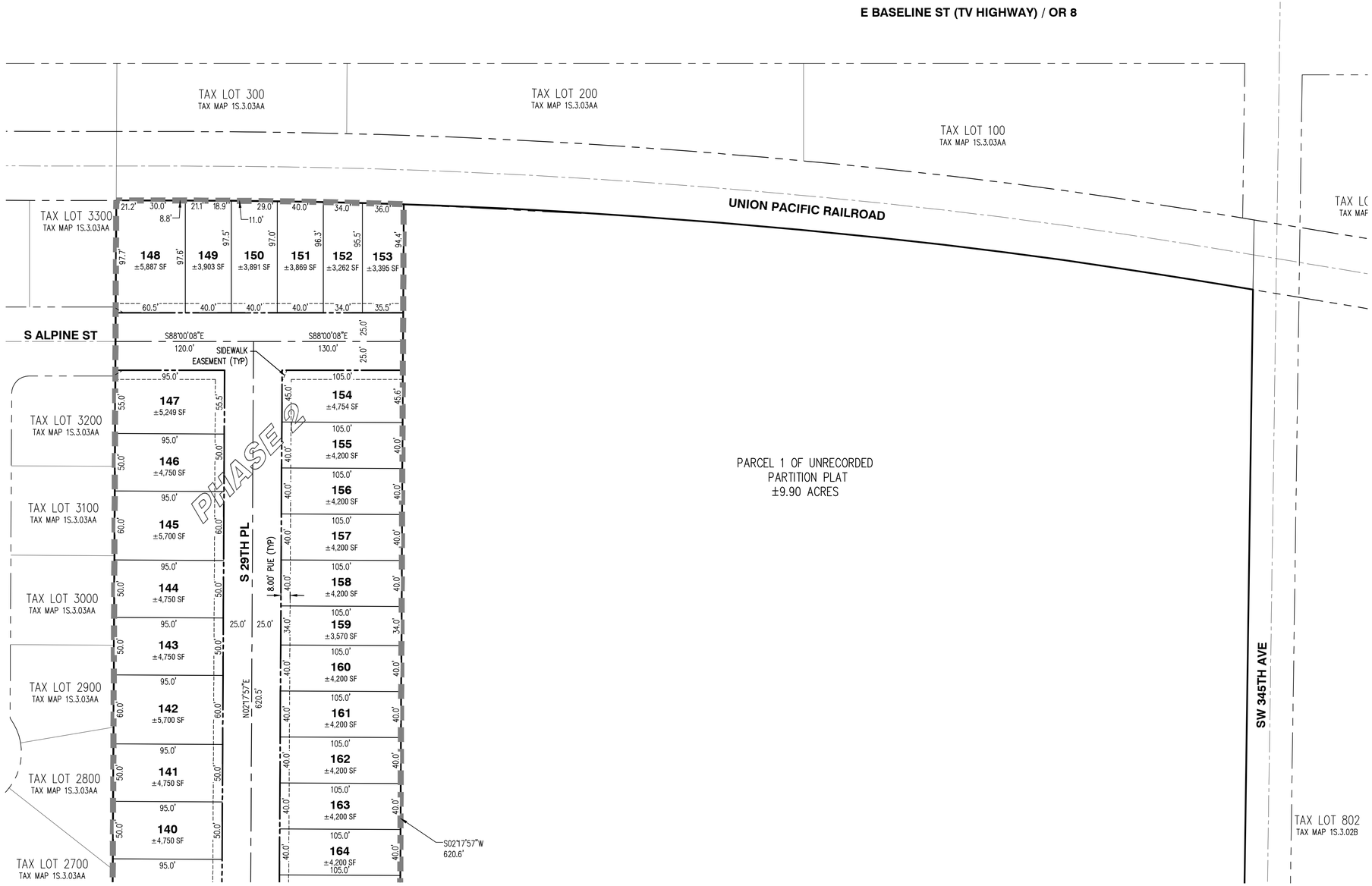
PRELIMINARY SUBDIVISION PLAT (CENTRAL)
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 09, 2001
PAUL A. SELLKE
PRELIMINARY
NOT FOR CONSTRUCTION
RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
CHECKED BY:	PAS

P08B

AKS DRAWING FILE: 4636-05 PRELIM PLAT.DWG | LAYOUT: P08B



N

SCALE: 1"= 50 FEET

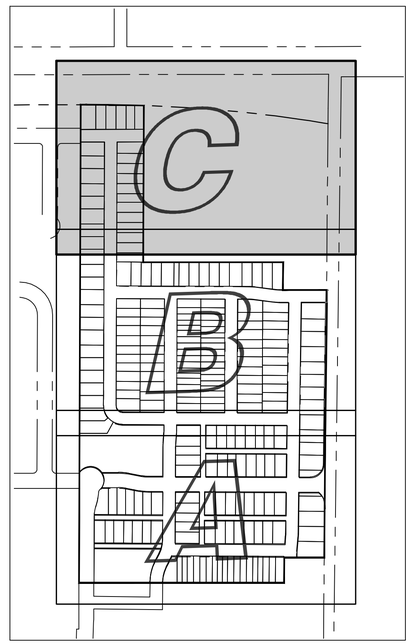
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NOTES:

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SHEET KEY MAP

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PRELIMINARY SUBDIVISION PLAT (NORTH)

LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

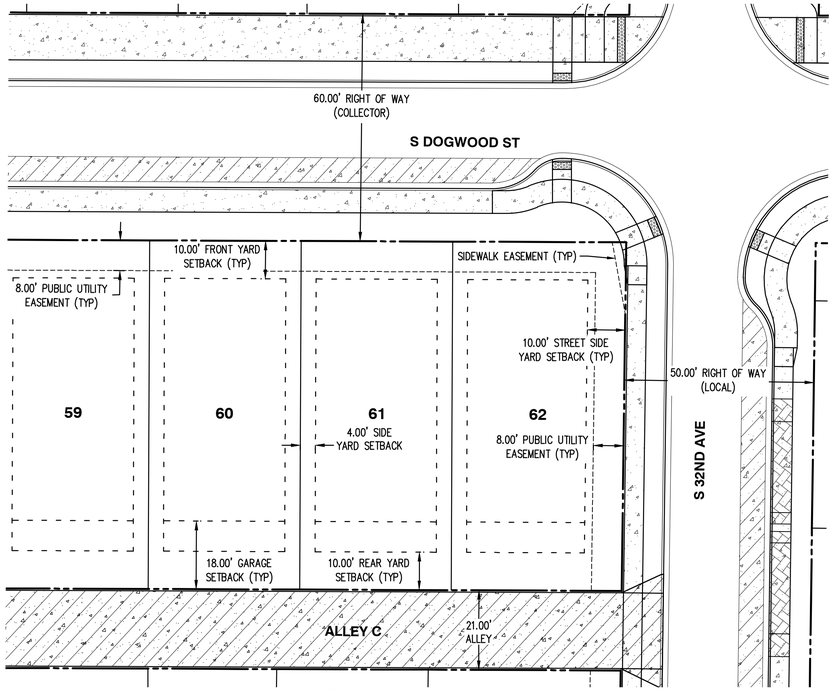
REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 09, 2001
PAUL A. SELLKE
PRELIMINARY
NOT FOR CONSTRUCTION

RENEWAL DATE: 6/30/26

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P08C

AKS DRAWING FILE: 4636-05 PRELIM PLAT.DWG | LAYOUT: P08C



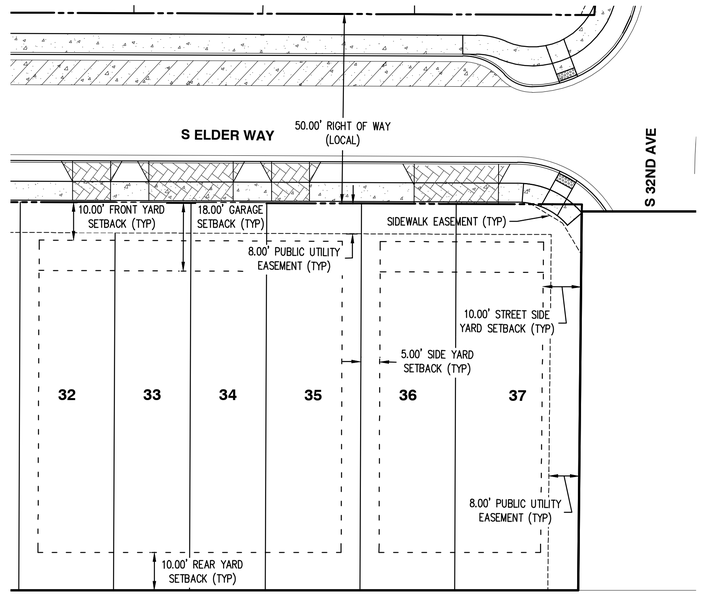
TYPICAL DETACHED ALLEY LOADED BUILDING SETBACKS DETAIL

1" = 20'

PROPOSED SINGLE FAMILY DETACHED ALLEY SETBACKS

FRONT YARD:	10 FT
GARAGE:	18 FT*
SIDE YARD:	4 FT*
STREET SIDE YARD:	10 FT
REAR YARD:	10 FT*

*SETBACK EXCEPTION REQUESTED



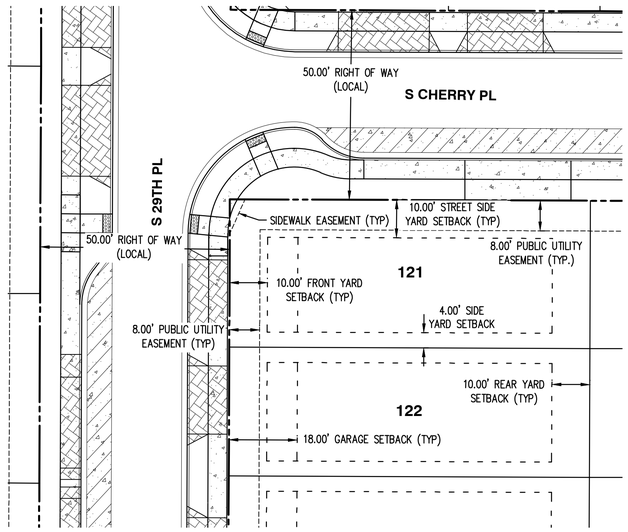
TYPICAL ATTACHED (PAIRED TOWNHOME(S)/TOWNHOUSES) FRONT LOADED BUILDING SETBACKS DETAIL

1" = 20'

PROPOSED SETBACKS

FRONT YARD:	10 FT
GARAGE:	18 FT*
SIDE YARD:	5 FT
STREET SIDE YARD:	10 FT
REAR YARD:	10 FT*

*SETBACK EXCEPTION REQUESTED



TYPICAL DETACHED STREET LOADED BUILDING SETBACKS DETAIL

1" = 20'

PROPOSED SINGLE FAMILY DETACHED SETBACKS

FRONT YARD:	10 FT
GARAGE:	18 FT*
SIDE YARD:	4 FT*
STREET SIDE YARD:	10 FT
REAR YARD:	10 FT*

*SETBACK EXCEPTION REQUESTED

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TYPICAL LOT SETBACK DETAILS

LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 09, 2001
PAUL A. SELLKE
RENEWAL DATE: 6/30/26

PRELIMINARY
NOT FOR CONSTRUCTION

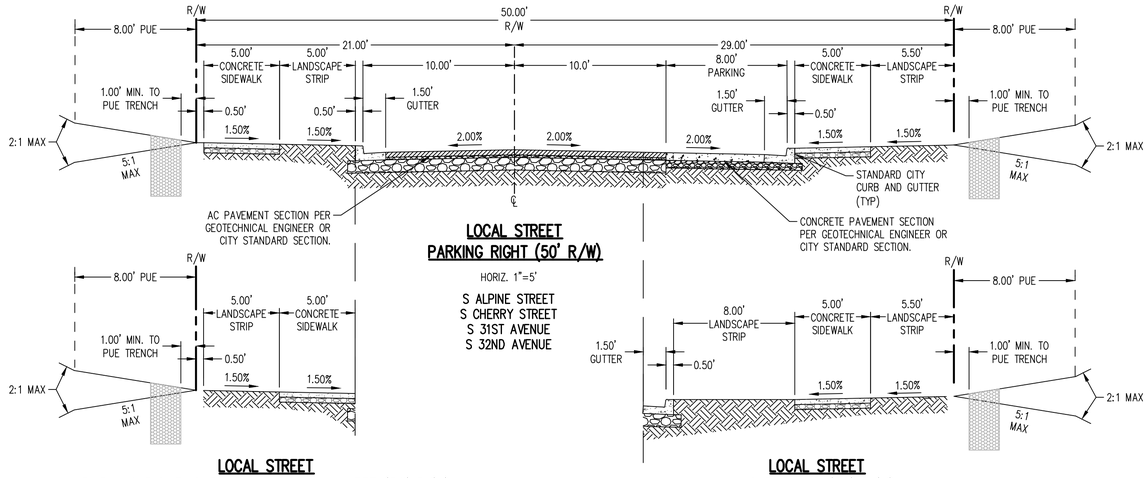
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ORIGINAL PAGE SIZE: 22" x 34"

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P09

AKS DRAWING FILE: 4636-05 TYP LOT SETBACK PLAN.DWG | LAYOUT: P09



LOCAL STREET
PARKING RIGHT (50' R/W)

HORIZ. 1"=5'

S ALPINE STREET
S CHERRY STREET
S 31ST AVENUE
S 32ND AVENUE

LOCAL STREET
PARKING RIGHT–CURB TIGHT SIDEWALK LEFT (50' R/W)

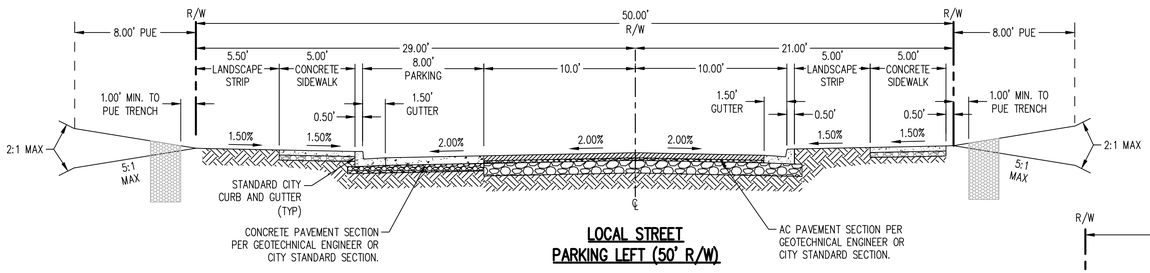
HORIZ. 1"=5'

S CHERRY STREET

LOCAL STREET
NO PARKING (50' R/W)

HORIZ. 1"=5'

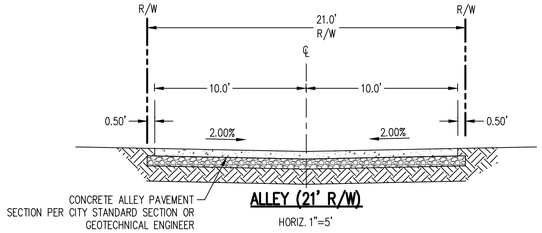
S 32ND AVENUE



LOCAL STREET
PARKING LEFT (50' R/W)

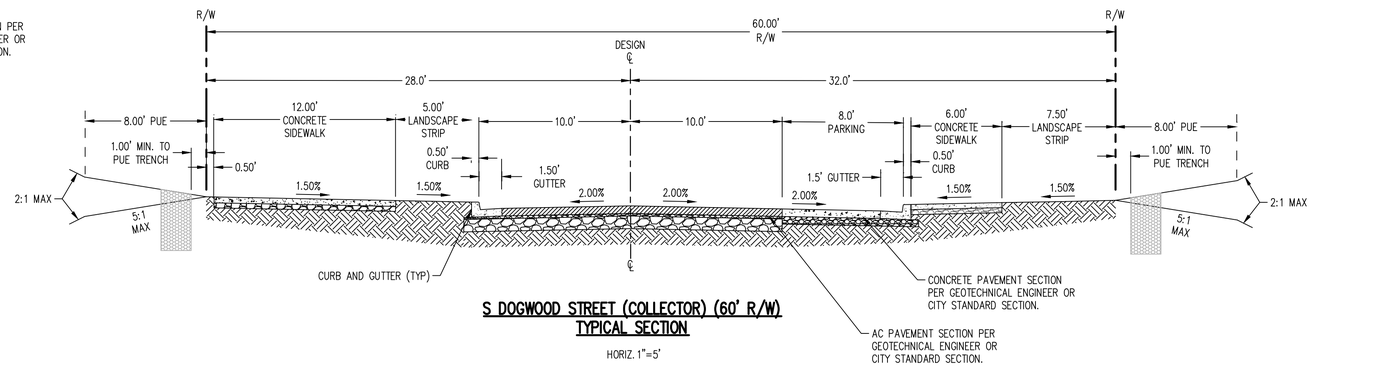
HORIZ. 1"=5'

S 29TH PLACE
S 30TH AVENUE
S CHESTNUT STREET
S ELDER WAY



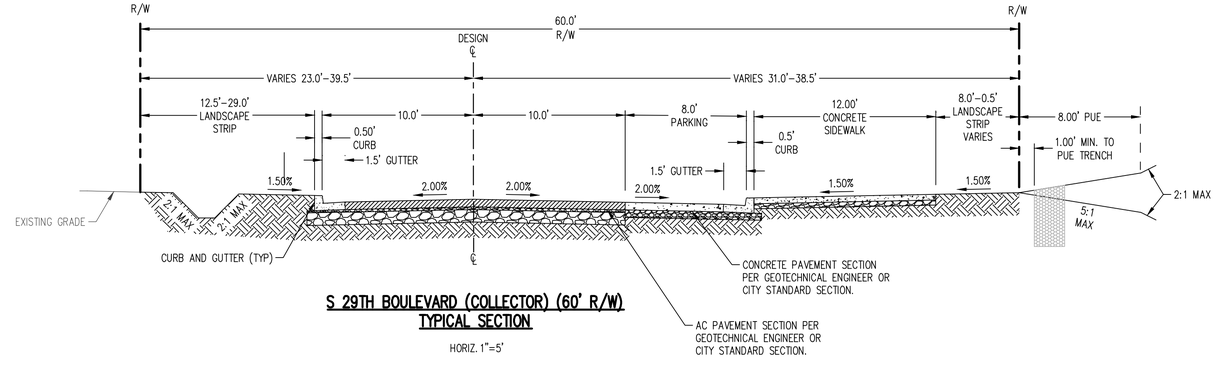
ALLEY (21' R/W)

HORIZ. 1"=5'



S DOGWOOD STREET (COLLECTOR) (60' R/W)
TYPICAL SECTION

HORIZ. 1"=5'



S 29TH BOULEVARD (COLLECTOR) (60' R/W)
TYPICAL SECTION

HORIZ. 1"=5'

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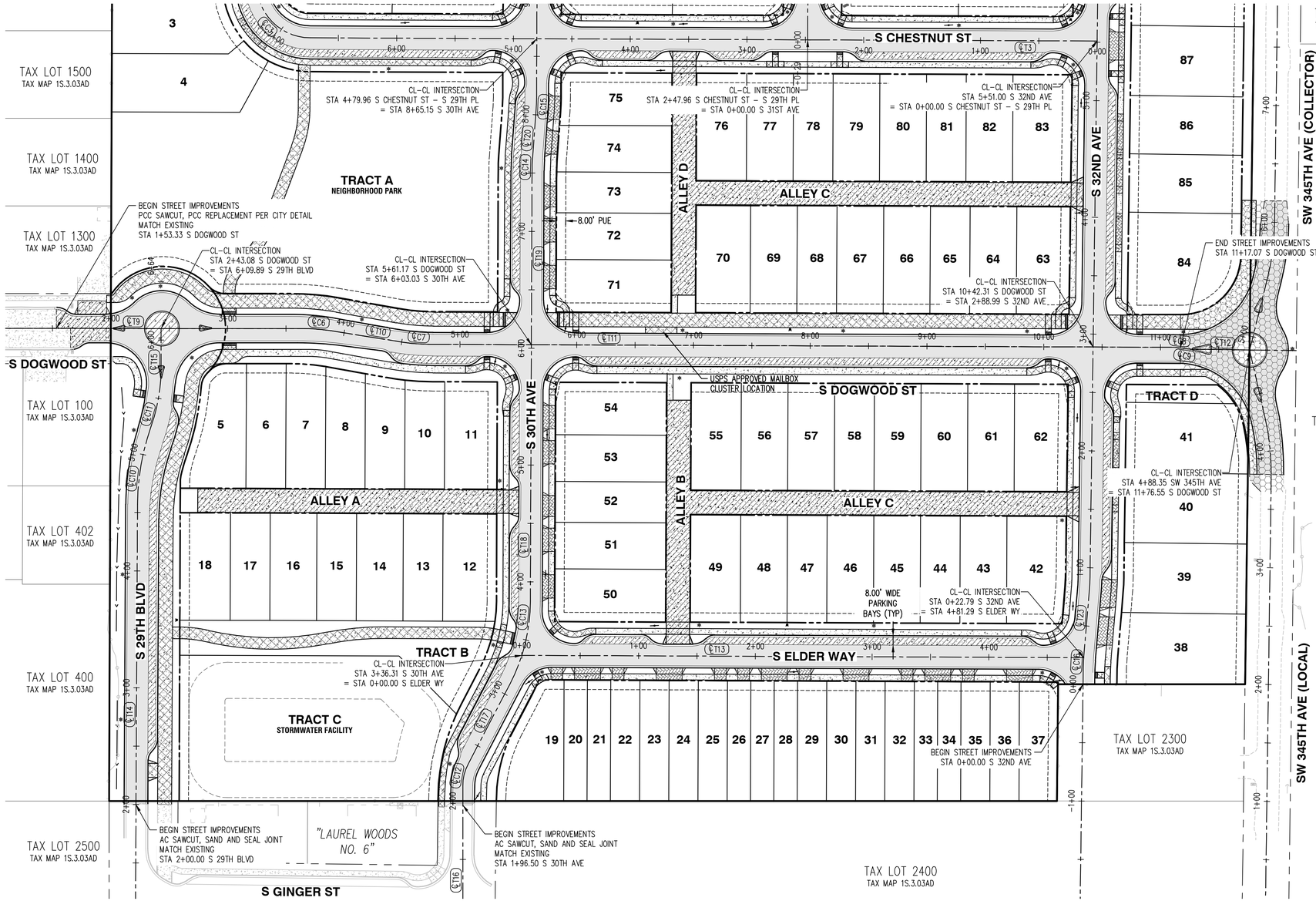
HOLT HOMES
Built for the Pacific Northwest

STREET CROSS SECTIONS
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
DECEMBER 09, 2001
MARK A. SELLKE
PRELIMINARY
NOT FOR CONSTRUCTION
RENEWAL DATE: 6/30/26

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DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
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AKS DRAWING FILE: 4636-05 PRELIM XSECTIONS.DWG | LAYOUT: P10



SCALE: 1"= 50 FEET
50 0 10 25 50
ORIGINAL PAGE SIZE: 22" x 34"

LEGEND

- – CONCRETE SIDEWALK CONSTRUCTED BY DEVELOPER
- – CONCRETE SIDEWALK CONSTRUCTED BY HOME BUILDER
- – AC PAVEMENT SECTION BY DEVELOPER
- – CONCRETE PAVEMENT BY DEVELOPER
- – CONCRETE DRIVEWAY APPROACH BY HOME BUILDER
- – OFFSITE IMPROVEMENTS

S DOGWOOD ST ALIGNMENT TABLE

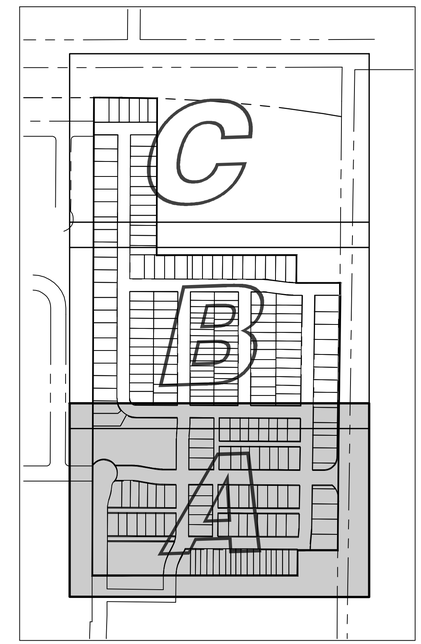
CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄T9	0+00.00		365.29'			S87°53'40"E
℄C6	3+65.29	150.00'	23.54'	8°59'27"	23.51	S83°23'56"E
℄T10	3+88.83		61.98'			S78°54'12"E
℄C7	4+50.81	150.00'	23.03'	8°47'50"	23.01	S83°18'08"E
℄T11	4+73.84		637.55'			S87°42'03"E
℄C8	11+11.39	40.00'	7.78'	11°08'53"	7.77	S82°07'37"E
℄C9	11+19.17	40.00'	7.39'	10°35'01"	7.38	S81°50'41"E
℄T12	11+26.56		89.84'			S87°08'11"E

S 29TH BLVD ALIGNMENT TABLE

CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄T14	2+00.00		257.12'			N02°21'17"E
℄C10	4+57.11	202.00'	67.76'	19°13'07"	67.44	N11°57'50"E
℄C11	5+24.87	150.00'	50.97'	19°28'03"	50.72	N11°50'22"E
℄T15	5+75.84		87.67'			N02°06'20"E

S ELDER WY ALIGNMENT TABLE

CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄T13	0+00.00		510.37'			S87°42'03"E



SHEET KEY MAP

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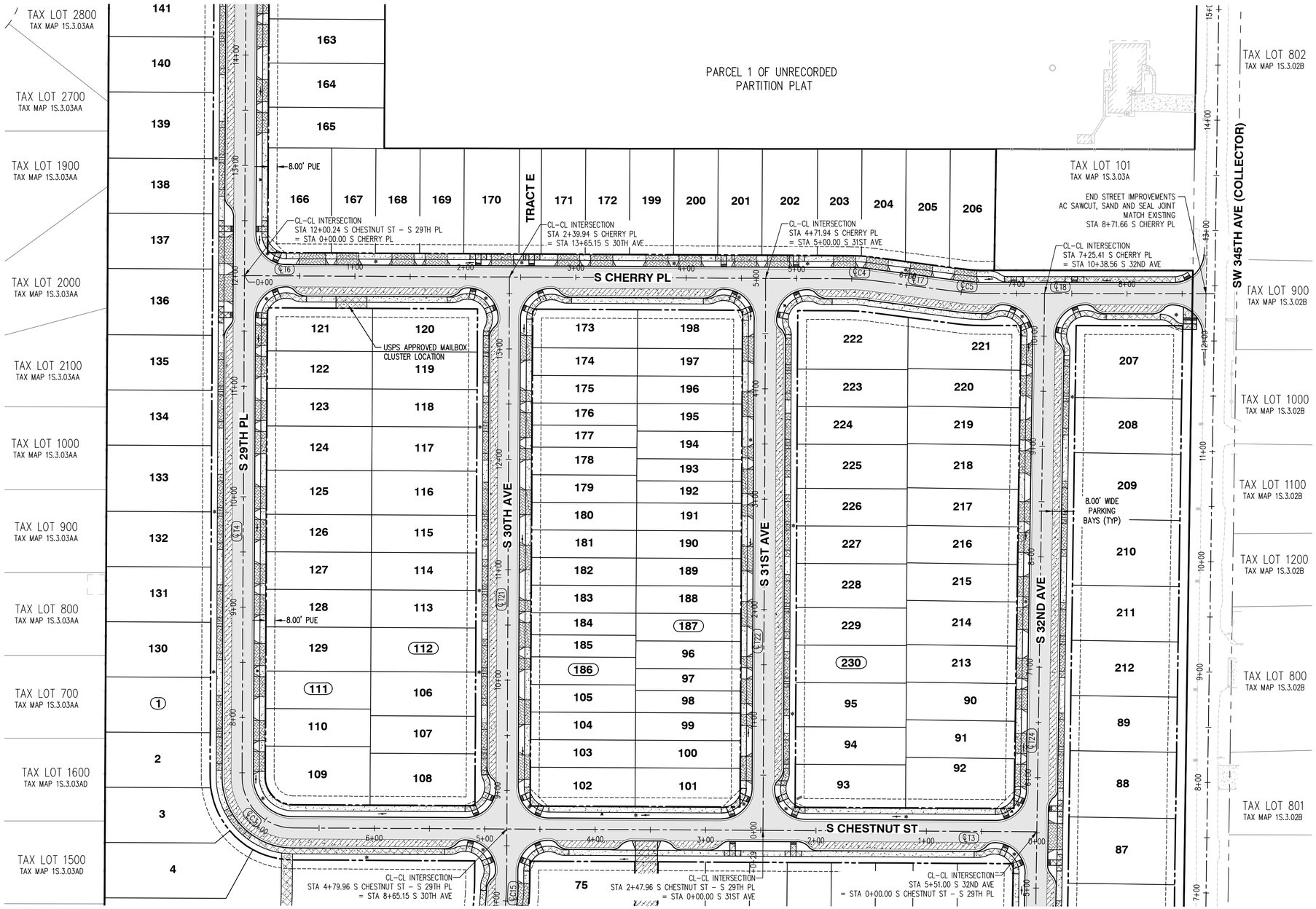
STREET PLAN (SOUTH)
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

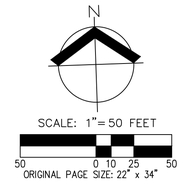
REGISTERED PROFESSIONAL ENGINEER
OREGON
DEC. 29, 2001
PAUL A. SELLKE
PRELIMINARY
NOT FOR CONSTRUCTION
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DESIGNED BY:	MBM
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CHECKED BY:	PAS

P11A

AKS DRAWING FILE: 4636-05 PRELIM STREETS.DWG | LAYOUT: P11A





LEGEND

- – CONCRETE SIDEWALK CONSTRUCTED BY DEVELOPER
- – CONCRETE SIDEWALK CONSTRUCTED BY HOME BUILDER
- – AC PAVEMENT SECTION BY DEVELOPER
- – CONCRETE PAVEMENT BY DEVELOPER
- – CONCRETE DRIVEWAY APPROACH BY HOME BUILDER

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S CHERRY PL ALIGNMENT TABLE

CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄T6	0+00.00		547.80'			S87°42'03"E
℄C4	5+47.80	154.00'	19.42'	7°13'25"	19.40	S84°05'20"E
℄T7	5+67.22		82.02'			S80°28'38"E
℄C5	6+49.24	146.00'	19.00'	7°27'21"	18.99	S84°12'18"E
℄T8	6+68.24		211.19'			S87°55'58"E

S 30TH AVE ALIGNMENT TABLE

CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄T16	0+00.00		213.00'			N02°04'02"E
℄C12	2+13.00	40.00'	19.23'	27°33'07"	19.05	N15°50'36"E
℄T17	2+32.23		77.50'			N29°37'09"E
℄C13	3+09.73	154.00'	73.43'	27°19'12"	72.74	N15°57'33"E
℄T19	3+83.17		368.84'			N02°17'57"E
℄T18	3+83.17		368.84'			N02°17'57"E
℄C14	7+52.01	150.00'	10.52'	4°01'12"	10.52	N04°18'33"E
℄T20	7+62.53		41.18'			N06°19'09"E
℄C15	8+03.71	154.00'	10.89'	4°03'02"	10.89	N04°17'38"E
℄T21	8+14.60		550.55'			N02°16'06"E

S 31ST AVE ALIGNMENT TABLE

CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄T22	0+00.00		500.00'			N02°16'06"E

S 32ND AVE ALIGNMENT TABLE

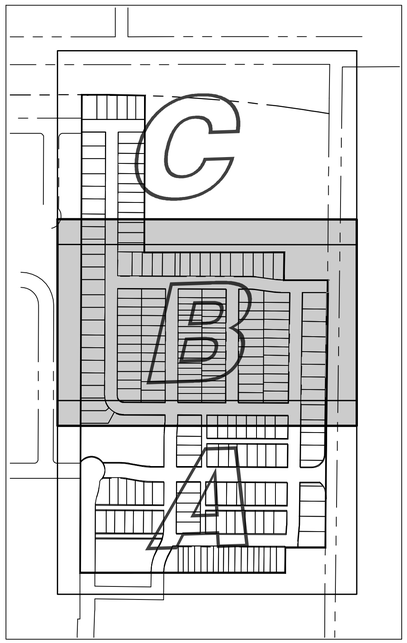
CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄C16	0+13.54	154.00'	10.82'	4°01'27"	10.81	N04°50'25"E
℄T23	0+24.36		57.22'			N06°51'08"E
℄T24	0+91.83		946.73'			N02°49'41"E

S CHESTNUT ST - S 29TH PL ALIGNMENT TABLE

CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄T3	0+00.00		673.98'			N87°42'03"W
℄C3	6+73.98	46.00'	72.23'	89°58'09"	65.04	N42°42'58"W
℄T4	7+46.21		334.39'			N02°16'06"E
℄T5	10+80.60		740.20'			N02°17'57"E

SEE SHEET P11A FOR REMAINING CURVE/TANGENT LOCATIONS FOR S 30TH AVE AND S 32ND AVE

SEE SHEET P11C FOR REMAINING CURVE/TANGENT LOCATIONS FOR S 29TH PL



SHEET KEY MAP

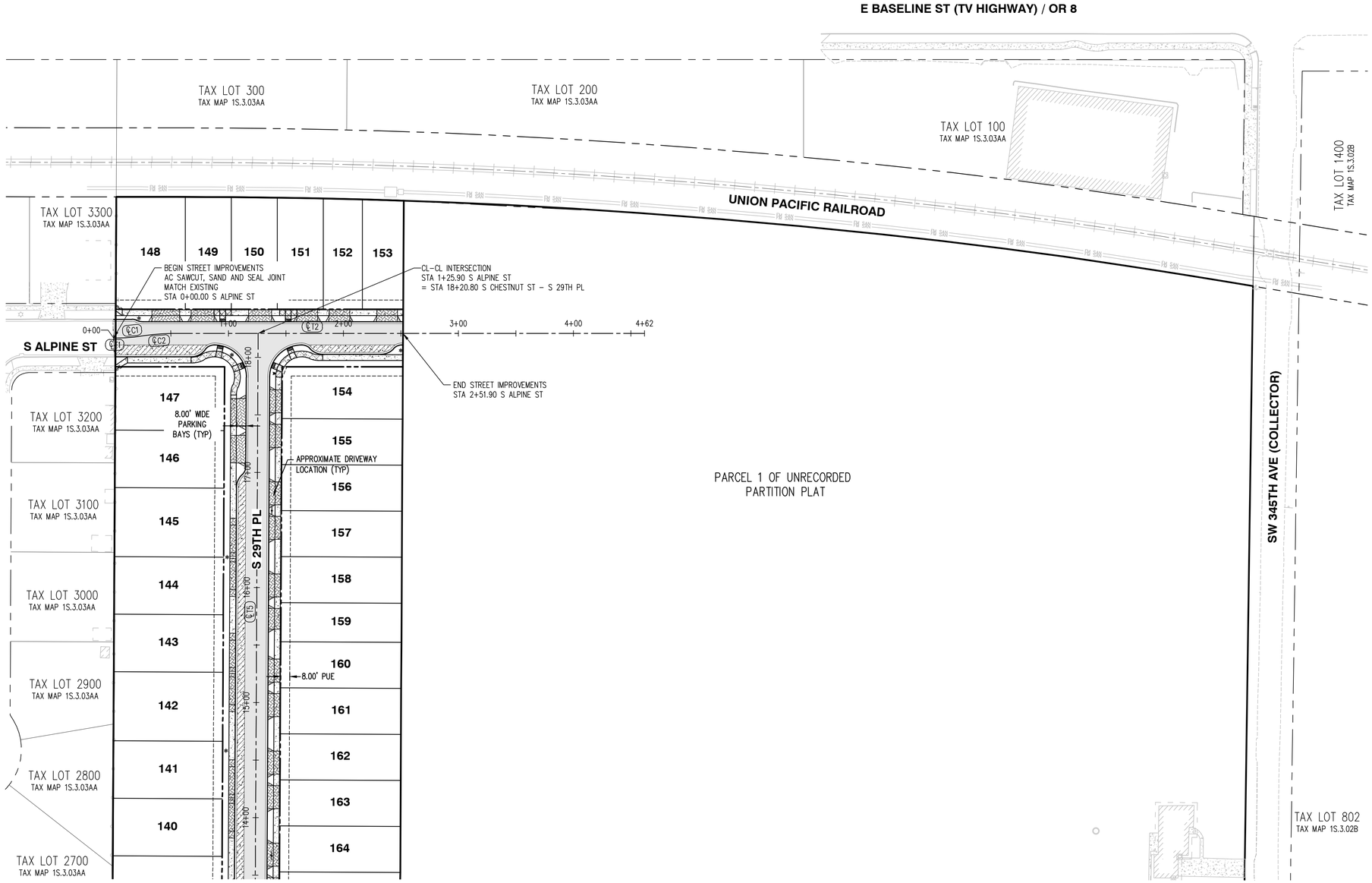
STREET PLAN (CENTRAL)
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

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P11B

AKS DRAWING FILE: 4636-05 PRELIM STREETS.DWG | LAYOUT: P11B



S ALPINE ST ALIGNMENT TABLE						
CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄T1	0+00.00		1.66'			S88°00'08"E
℄C1	0+01.66	150.00'	24.52'	9°22'00"	24.49	N87°18'52"E
℄C2	0+26.18	150.00'	24.52'	9°22'00"	24.49	N87°18'52"E
℄T2	0+50.70		411.18'			S88°00'08"E

N

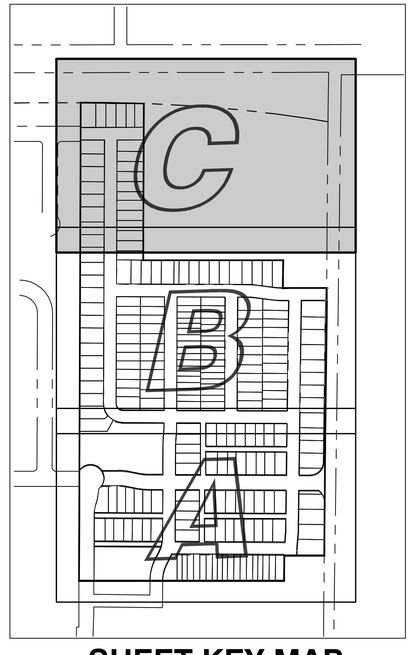
SCALE: 1"= 50 FEET

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ORIGINAL PAGE SIZE: 22" x 34"

LEGEND

- – CONCRETE SIDEWALK CONSTRUCTED BY DEVELOPER
- – CONCRETE SIDEWALK CONSTRUCTED BY HOME BUILDER
- – AC PAVEMENT SECTION BY DEVELOPER
- – CONCRETE PAVEMENT BY DEVELOPER
- – CONCRETE DRIVEWAY APPROACH BY HOME BUILDER



SHEET KEY MAP

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THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 09, 2001
PAUL A. SELLKE

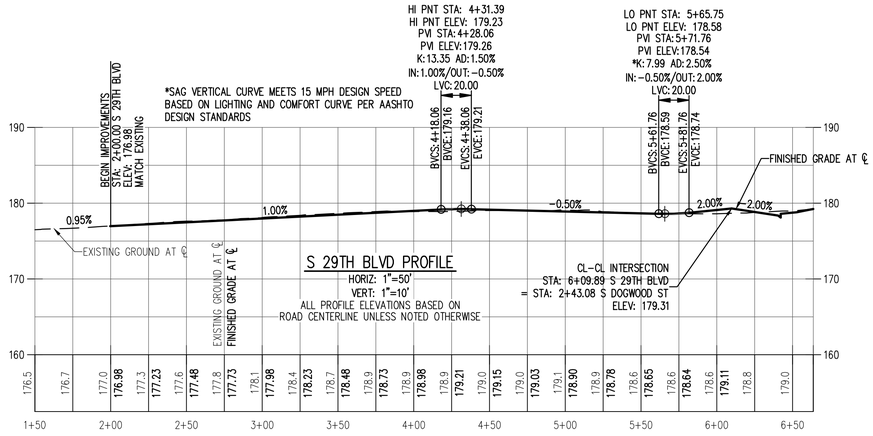
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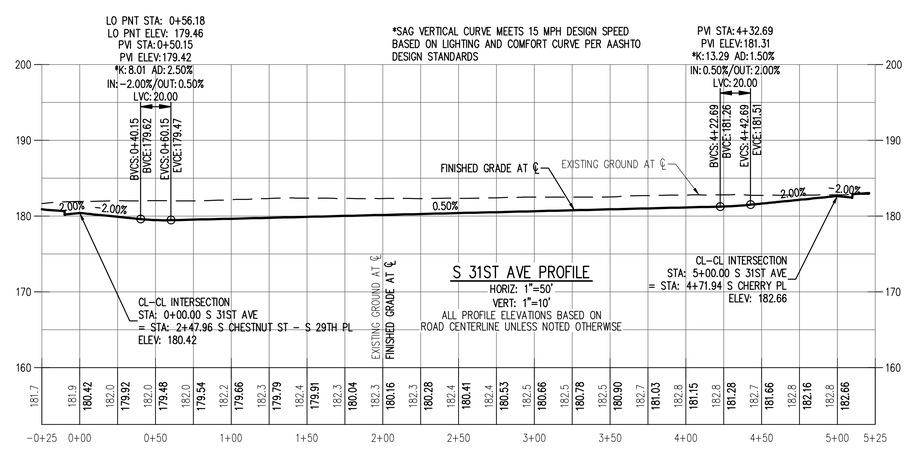
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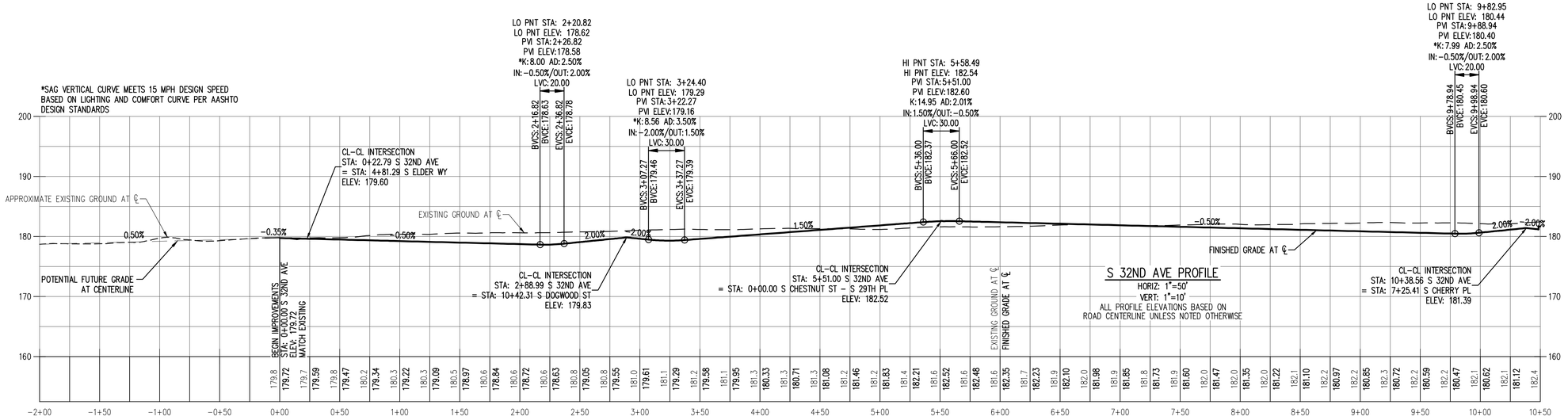
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DATE:	12/12/2025
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DRAWN BY:	MBM
CHECKED BY:	PAS

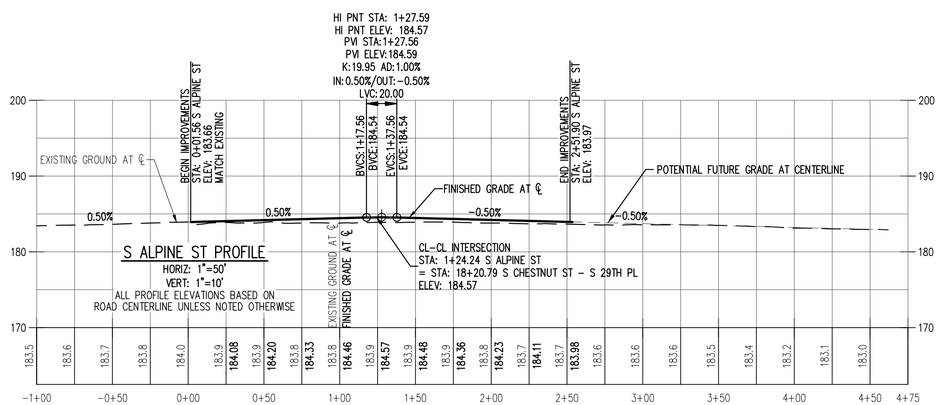
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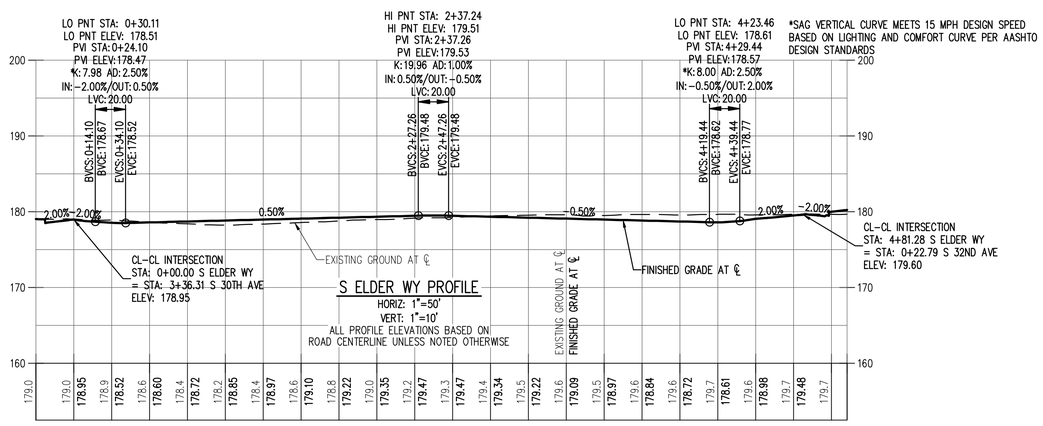
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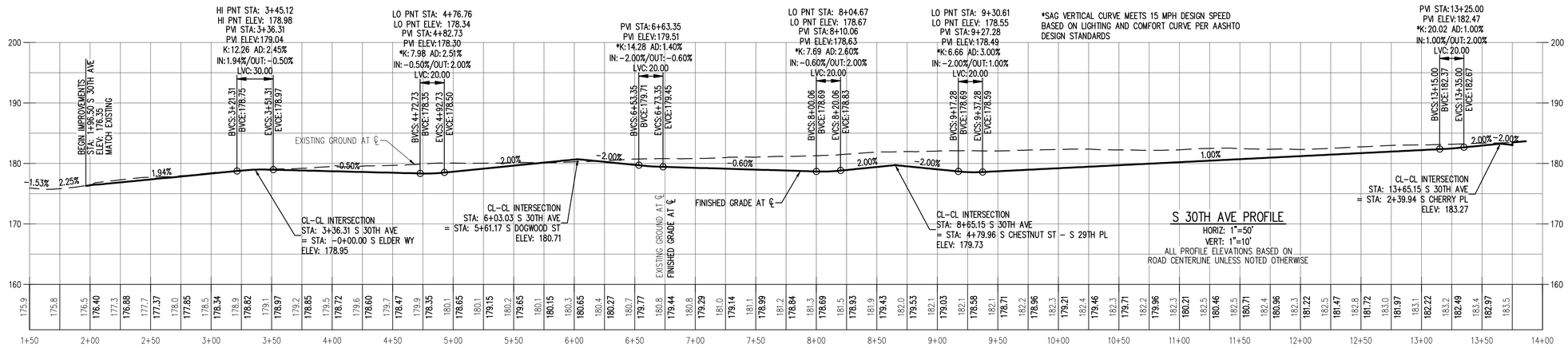
STREET PROFILES
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

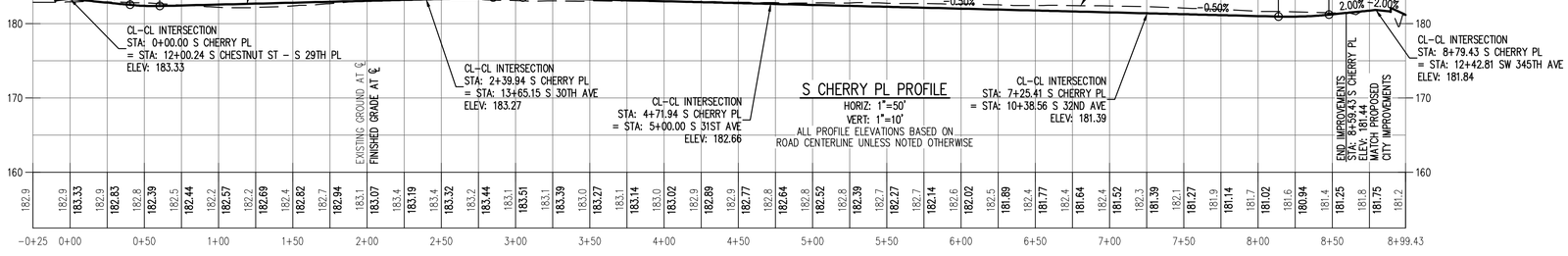
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OREGON
JULY 29, 2011
PAUL A. SELLKE
PRELIMINARY
NOT FOR CONSTRUCTION
RENEWAL DATE: 6/30/26

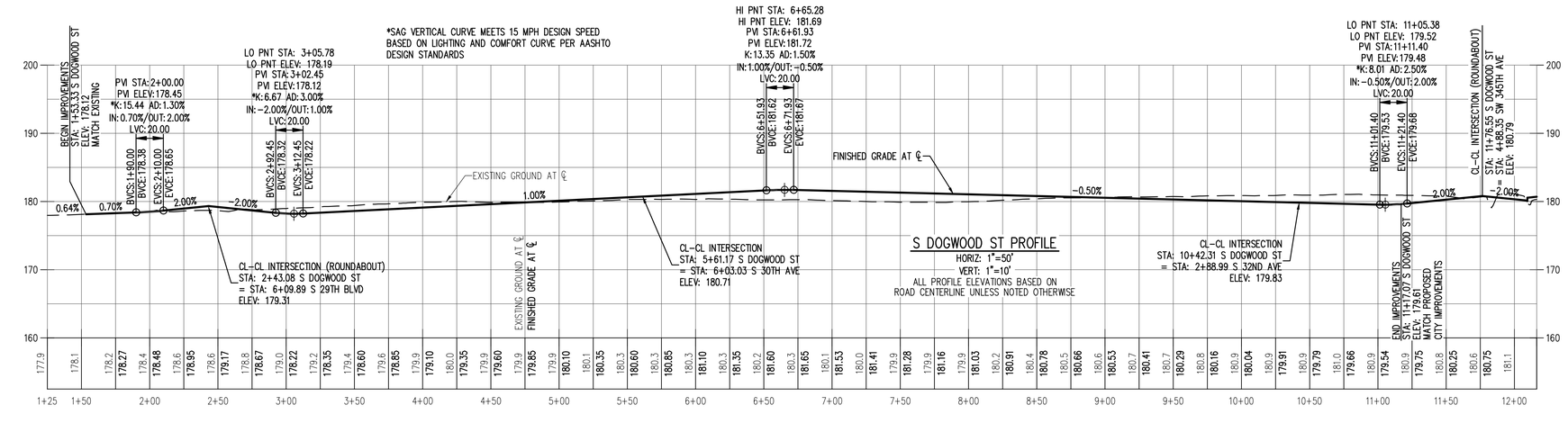
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DATE:	12/12/2025
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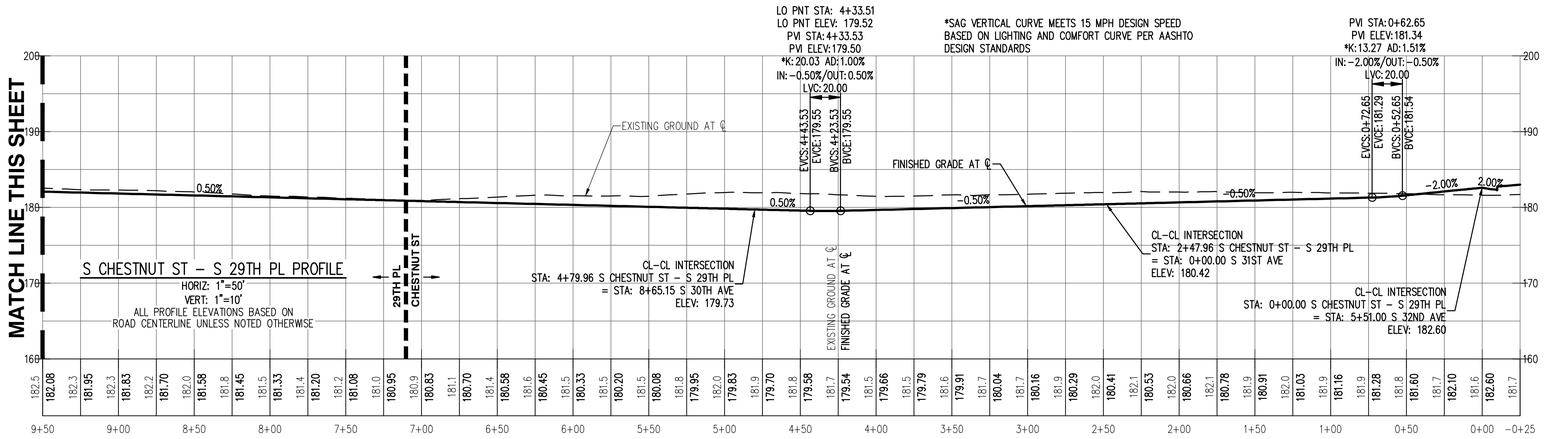
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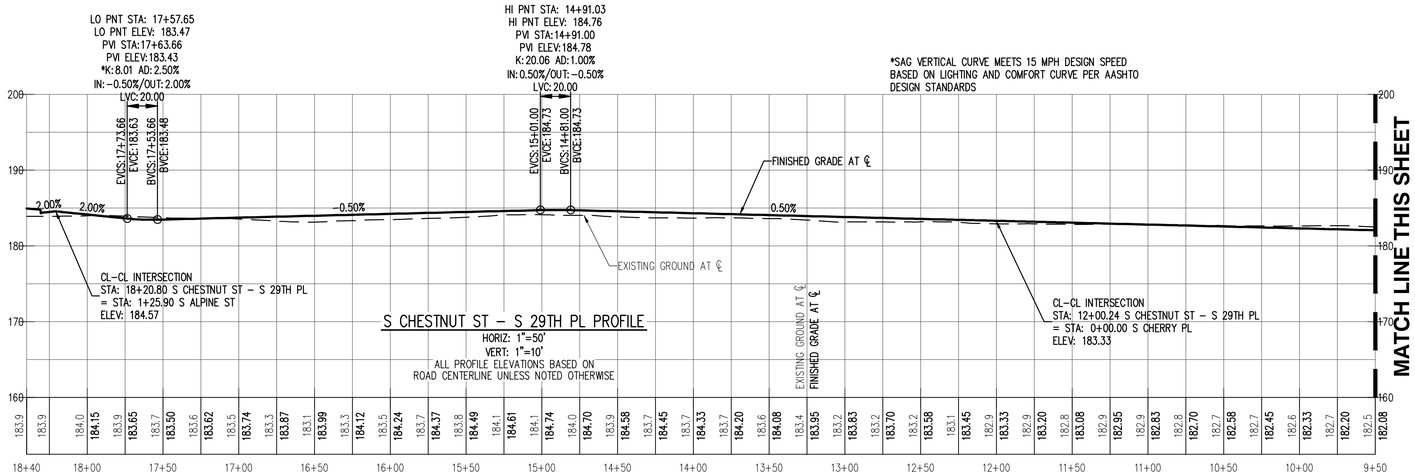
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P13

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JANUARY 29, 2001
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P14

AKS DRAWING FILE: 4636-05 PRELIM PROFILES.DWG | LAYOUT: P14



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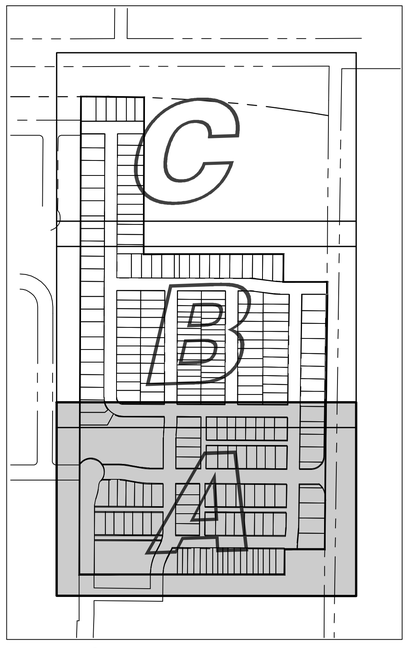
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LEGEND

- ON-STREET PARKING: 158 SPACES
- DRIVEWAY PARKING: 441 SPACES
- GARAGE PARKING: 441 SPACES



SHEET KEY MAP

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P15A

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TAX LOT 2800
TAX MAP 1S.3.03AA

TAX LOT 2700
TAX MAP 1S.3.03AA

TAX LOT 1900
TAX MAP 1S.3.03AA

TAX LOT 2000
TAX MAP 1S.3.03AA

TAX LOT 2100
TAX MAP 1S.3.03AA

TAX LOT 1000
TAX MAP 1S.3.03AA

TAX LOT 900
TAX MAP 1S.3.03AA

TAX LOT 800
TAX MAP 1S.3.03AA

TAX LOT 700
TAX MAP 1S.3.03AA

TAX LOT 1600
TAX MAP 1S.3.03AD

TAX LOT 1500
TAX MAP 1S.3.03AD

PARCEL 1 OF UNRECORDED
PARTITION PLAT

TAX LOT 101
TAX MAP 1S.3.03A

TAX LOT 802
TAX MAP 1S.3.02B

TAX LOT 900
TAX MAP 1S.3.02B

TAX LOT 1000
TAX MAP 1S.3.02B

TAX LOT 1100
TAX MAP 1S.3.02B

TAX LOT 1200
TAX MAP 1S.3.02B

TAX LOT 800
TAX MAP 1S.3.02B

TAX LOT 801
TAX MAP 1S.3.02B

TRACT E

S CHERRY PL

S 29TH PL

S 30TH AVE

S 31ST AVE

S 32ND AVE

SW 345TH AVE

S CHESTNUT ST

APPROXIMATE CURB TIGHT DRIVEWAY (TYP)

APPROXIMATE DRIVEWAY (TYP)

8.0' WIDE PARKING BAYS (TYP)

N

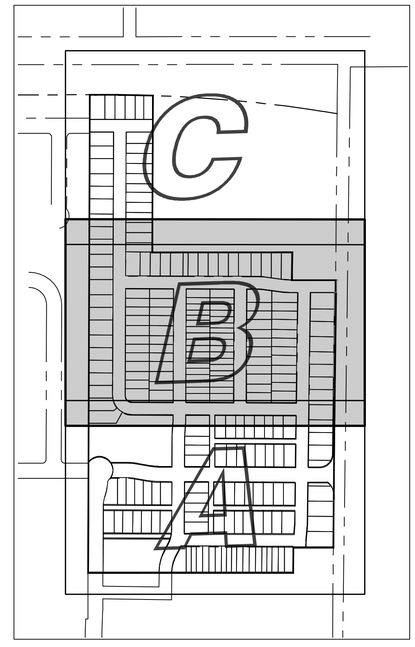
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LEGEND

- – ON-STREET PARKING: 158 SPACES
- – DRIVEWAY PARKING: 441 SPACES
- – GARAGE PARKING: 441 SPACES



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CORNELIUS, OREGON

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OREGON
JANUARY 09, 2001
PAUL A. SELLKE

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P15B

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E BASELINE ST (TV HIGHWAY) / OR 8

TAX LOT 300
TAX MAP 1S.3.03AA

TAX LOT 200
TAX MAP 1S.3.03AA

TAX LOT 100
TAX MAP 1S.3.03AA

TAX LOT 1400
TAX MAP 1S.3.02B

UNION PACIFIC RAILROAD

TAX LOT 3300
TAX MAP 1S.3.03AA

S ALPINE ST

TAX LOT 3200
TAX MAP 1S.3.03AA

TAX LOT 3100
TAX MAP 1S.3.03AA

TAX LOT 3000
TAX MAP 1S.3.03AA

TAX LOT 2900
TAX MAP 1S.3.03AA

TAX LOT 2800
TAX MAP 1S.3.03AA

TAX LOT 2700
TAX MAP 1S.3.03AA

S 29TH PL

148 149 150 151 152 153

147 146 145 144 143 142 141 140

154 155 156 157 158 159 160 161 162 163 164

PARCEL 1 OF UNRECORDED
PARTITION PLAT

SW 345TH AVE

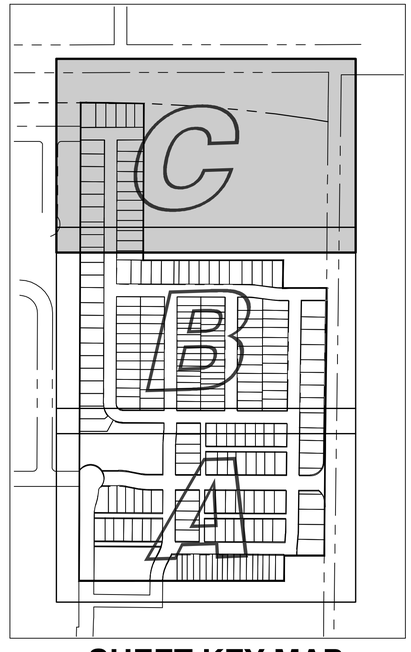
TAX LOT 802
TAX MAP 1S.3.02B

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ORIGINAL PAGE SIZE: 22" x 34"

LEGEND

- E – ON-STREET PARKING: 158 SPACES
- D – DRIVEWAY PARKING: 441 SPACES
- G – GARAGE PARKING: 441 SPACES



SHEET KEY MAP

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PARKING PLAN (SOUTH)

LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 09, 2001
PAUL A. SELLKE
PRELIMINARY
NOT FOR CONSTRUCTION
RENEWAL DATE: 6/30/26

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P15C

AKS DRAWING FILE: 4636-05 PRELIM PARKING.DWG | LAYOUT: P15C



PRELIMINARY TRACT B PLANT SCHEDULE

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
SHRUBS					
○	8	CORNUS SERICEA 'VARIEGATA'	VARIEGATED RED TWIG DOGWOOD	2 GAL. CONT.	48" o.c.
○	9	PHYSOCARPUS OPULIFOLIUS 'CENTER GLOW'	CENTER GLOW NINEBARK	5 GAL. CONT.	60" o.c.
○	13	ROSA X 'RADTKO'	DOUBLE KNOCK OUT RED ROSE	3 GAL. CONT.	48" o.c.
⊛	9	VIBURNUM CARLESII	KOREANSPICE VIBURNUM	5 GAL. CONT.	60" o.c.
○	9	VIBURNUM DAVIDII	DAVID VIBURNUM	2 GAL. CONT.	48" o.c.

GROUND COVERS

	5,524 SF ±	LAWN
	27,496 SF ±	STORMWATER FACILITY PLANTED TO CWS STANDARDS

PRELIMINARY STREET TREE KEY

SYMBOL	BOTANICAL / COMMON NAME
STREET TREES	
	CARPINUS BETULUS 'FASTIGIATA' PYRAMIDAL EUROPEAN HORNBEAM
	CERCIDIPHYLLUM JAPONICUM KATSURA TREE
	GINKGO BILOBA 'SARATOGA' SARATOGA GINKGO
	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER' SHADEMASTER HONEY LOCUST
	NYSSA SYLVATICA 'ODOM' AFTERBURNER TUPELO

SYMBOL	BOTANICAL / COMMON NAME
STREET TREES	
	OSTRYA VIRGINIANA AMERICAN HOPHORNBEAM
	PARROTIA PERSICA 'VANESSA' VANESSA PERSIAN PARROTIA
	PHELLODENDRON X 'HIS MAJESTY' HIS MAJESTY CORKTREE
	QUERCUS FRAINETTO 'SCHMIDT' FOREST GREEN OAK
	TILIA TOMENTOSA 'STERLING' STERLING SILVER LINDEN

SYMBOL	BOTANICAL / COMMON NAME
STREET TREES	
	ULMUS PROPINQUA 'JFS-BIEBERICH' EMERALD SUNSHINE ELM
	ZELKOVA SERRATA 'GREEN VASE' GREEN VASE ZELKOVA
GROUND COVERS	
	LAWN

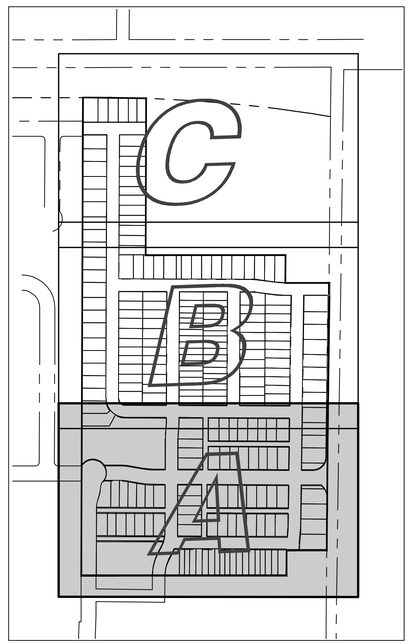
*SEE SHEET P16C FOR QUANTITIES

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LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED 797 LANDSCAPE ARCHITECT OREGON KRISTOPHER A. HOLM 06/30/26

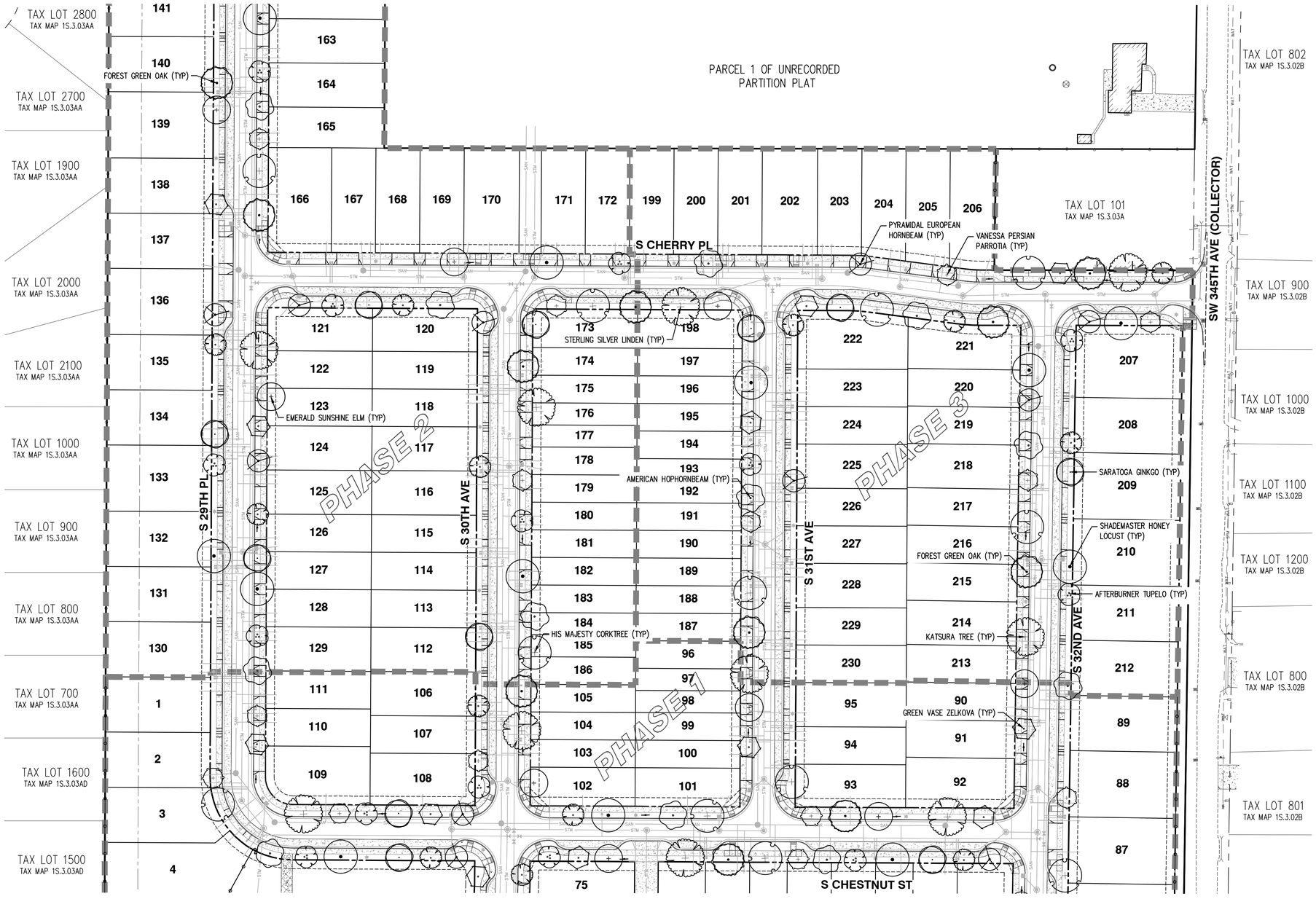
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DATE:	12/12/2025
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CHECKED BY:	KAH

P16A

AKS DRAWING FILE: 4636-05 PRELIM LANDSCAPE.DWG | LAYOUT: P16A



PRELIMINARY STREET TREE KEY

SYMBOL	BOTANICAL / COMMON NAME
STREET TREES	
	CARPINUS BETULUS 'FASTIGIATA' PYRAMIDAL EUROPEAN HORNBEAM
	CERCIDIPHYLLUM JAPONICUM KATSURA TREE
	GINKGO BILOBA 'SARATOGA' SARATOGA GINKGO
	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER' SHADEMASTER HONEY LOCUST

SYMBOL	BOTANICAL / COMMON NAME
STREET TREES	
	NYSSA SYLVATICA 'ODOM' AFTERBURNER TUPELO
	OSTRYA VIRGINIANA AMERICAN HOPHORNBEAM
	PARROTIA PERSICA 'VANESSA' VANESSA PERSIAN PARROTIA
	PHELLODENDRON X 'HIS MAJESTY' HIS MAJESTY CORKTREE

SYMBOL	BOTANICAL / COMMON NAME
STREET TREES	
	QUERCUS FRAINETTO 'SCHMIDT' FOREST GREEN OAK
	TILIA TOMENTOSA 'STERLING' STERLING SILVER LINDEN
	ULMUS PROPINQUA 'JFS-BIEBERICH' EMERALD SUNSHINE ELM

SYMBOL	BOTANICAL / COMMON NAME
STREET TREES	
	ZELKOVA SERRATA 'GREEN VASE' GREEN VASE ZELKOVA
GROUND COVERS	
	LAWN

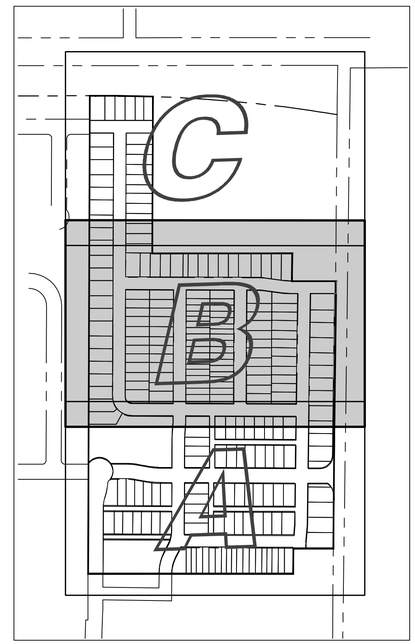
*SEE SHEET P16C FOR QUANTITIES

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SCALE: 1"=50 FEET

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ORIGINAL PAGE SIZE: 22" x 34"



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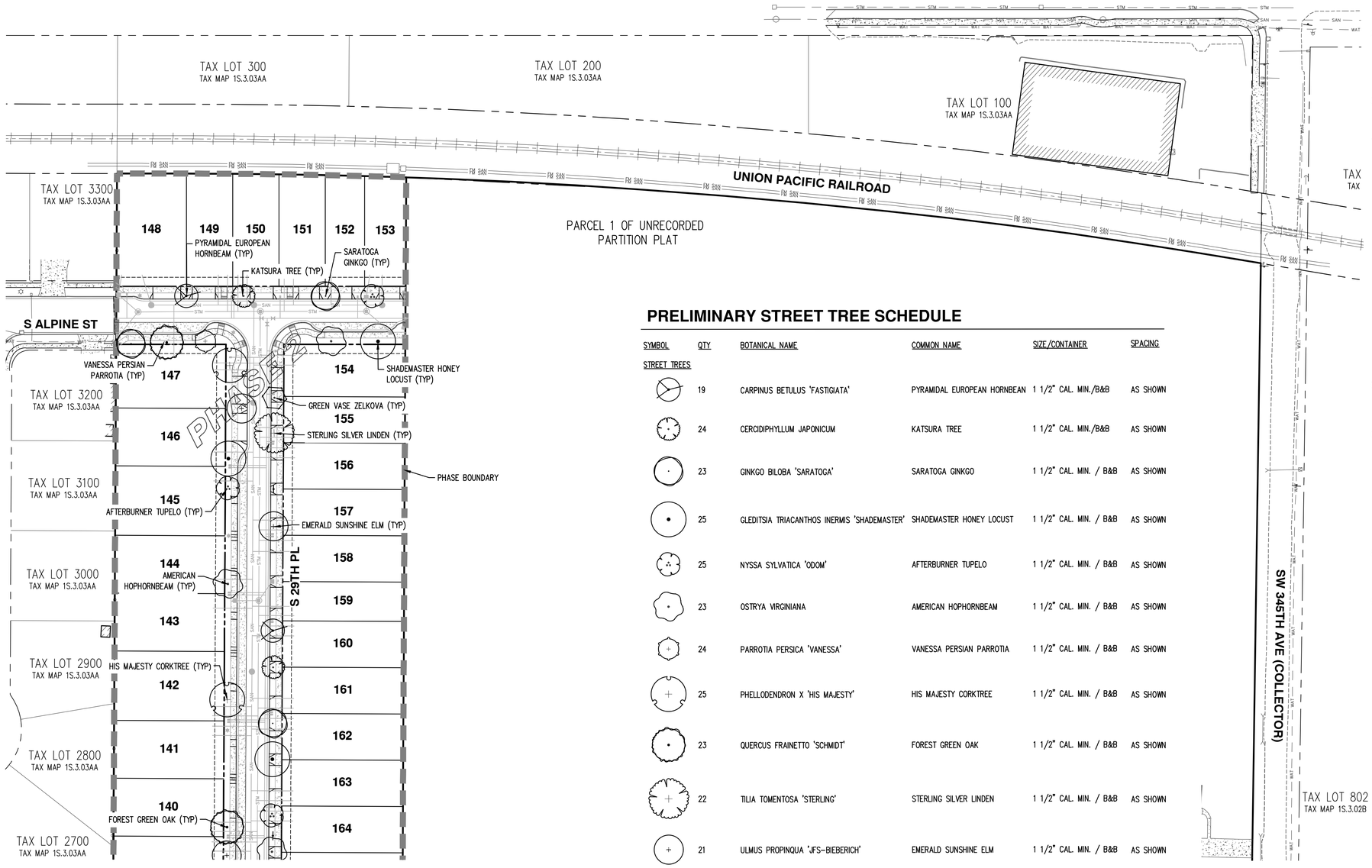
STREET TREE PLAN (CENTRAL)
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED
797
PROFESSIONAL LANDSCAPE ARCHITECT
OREGON
12/05/13
RENEWS: 06/30/2026

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	BNF
DRAWN BY:	BNF
CHECKED BY:	KAH

P16B

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PRELIMINARY STREET TREE SCHEDULE

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
STREET TREES					
	19	CARPINUS BETULUS 'FASTIGIATA'	PYRAMIDAL EUROPEAN HORNBEAN	1 1/2" CAL. MIN./B&B	AS SHOWN
	24	CERCIDIPHYLLUM JAPONICUM	KATSURA TREE	1 1/2" CAL. MIN./B&B	AS SHOWN
	23	GINKGO BILOBA 'SARATOGA'	SARATOGA GINKGO	1 1/2" CAL. MIN. / B&B	AS SHOWN
	25	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER'	SHADEMASTER HONEY LOCUST	1 1/2" CAL. MIN. / B&B	AS SHOWN
	25	NYSSA SYLVATICA 'ODOM'	AFTERBURNER TUPELO	1 1/2" CAL. MIN. / B&B	AS SHOWN
	23	OSTRYA VIRGINIANA	AMERICAN HOPHORNBEAM	1 1/2" CAL. MIN. / B&B	AS SHOWN
	24	PARROTIA PERSICA 'VANESSA'	VANESSA PERSIAN PARROTIA	1 1/2" CAL. MIN. / B&B	AS SHOWN
	25	PHELLODENDRON X 'HIS MAJESTY'	HIS MAJESTY CORKTREE	1 1/2" CAL. MIN. / B&B	AS SHOWN
	23	QUERCUS FRAINETTO 'SCHMIDT'	FOREST GREEN OAK	1 1/2" CAL. MIN. / B&B	AS SHOWN
	22	TILIA TOMENTOSA 'STERLING'	STERLING SILVER LINDEN	1 1/2" CAL. MIN. / B&B	AS SHOWN
	21	ULMUS PROPINQUA 'JFS-BIEBERICH'	EMERALD SUNSHINE ELM	1 1/2" CAL. MIN. / B&B	AS SHOWN
	22	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA	1 1/2" CAL. MIN./B&B	AS SHOWN
SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
GROUND COVERS					
	3,271 SF±	LAWN		SEED OR SOD	

PERCENT BY QUANTITY			PERCENT BY QUANTITY			PERCENT BY QUANTITY		
FAMILY	MAX. %	PROPOSED %	GENUS	MAX %	PROPOSED %	SPECIES	MAX %	PROPOSED %
BETULACEAE	30%	15.8%	CARPINUS	20%	7.5%	BETULUS	10%	7.6%
			OSTRYA	20%	8.2%	VIRGINIANA	10%	8.2%
CERCIDIPHYLLACEAE	30%	8.2%	CERCIDIPYLLUM	20%	8.2%	JAPONICUM	10%	8.2%
GINKGOACEAE	30%	7.9%	GINKGO	20%	7.9%	BILOBA	10%	7.9%
FABACEAE	30%	9.0%	GLEDITSIA	20%	8.9%	TRIACANTHOS	10%	8.9%
CORNALES	30%	8.6%	NYSSA	20%	8.9%	SYLVATICA	10%	8.9%
HAMAMELIDACEAE	30%	8.9%	PARROTIA	20%	8.6%	PERSICA	10%	8.6%
FAGACEAE	30%	8.2%	QUERCUS	20%	8.2%	FRAINETTO	10%	8.2%
MALVACEAE	30%	8.2%	TILIA	20%	8.3%	TOMENTOSA	10%	8.3%
RUTACEAE	30%	8.5%	PHELLODENDRON	20%	8.9%	X	10%	8.5%
ULMACEAE	30%	15.8%	ULMUS	20%	7.9%	PROPINQUA	10%	7.9%
			ZELKOVA	20%	7.9%	SERRATA	10%	7.9%

NOTE: STREET TREE LEGEND INCLUDES ALL TREES FOR THIS PHASE. QUANTITIES SHOWN ARE AN ESTIMATE BASED ON CITY OF CORNELIUS SPACING STANDARDS AND ESTIMATED DRIVEWAY LOCATION. FINAL TREE SPACING AND QUANTITIES TO VARY BASED ON FINAL UTILITY, LIGHTING, AND DRIVEWAY LOCATIONS. TREE VARIETY MAY VARY DEPENDING ON AVAILABILITY AT TIME OF PLANTING. ANY CHANGES TO STREET TREE VARIETY REQUIRES CITY ENGINEER APPROVAL. STREET TREES SHALL BE PLANTED IN A DIVERSE PATTERN AT A REPEAT FREQUENCY OF NOT MORE THAN HALF THE NUMBER OF DIFFERENT TREES IN THE PLANT LIST PER CITY PUBLIC WORKS REQUIREMENTS.

STREET TREES AND VEGETATIVE GROUNDCOVER IN PLANTER STRIPS IN FRONT OF STORMWATER FACILITY AND OPEN SPACE TRACTS SHALL BE PLANTED AT THE TIME OF DEVELOPMENT. ALL OTHER STREET TREES AND VEGETATIVE GROUNDCOVER IN FRONT OF INDIVIDUAL LOTS SHALL BE PLANTED AND MAINTAINED BY THE HOMEOWNER/HOMEBUILDER AT TIME OF LOT CONSTRUCTION.

PRELIMINARY LANDSCAPE NOTES:

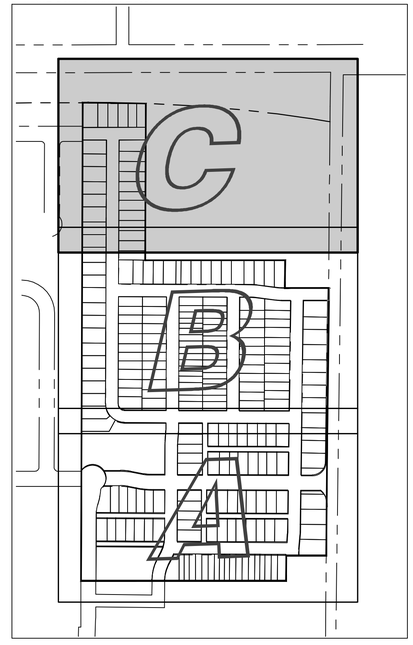
1. ALL PLANTS AND LANDSCAPING SHALL CONFORM TO THE CITY OF CORNELIUS DESIGN STANDARDS AND TO AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.2. PLANT IN ACCORDANCE WITH ACCEPTED GOOD PRACTICE INDUSTRY STANDARDS, SUCH AS THOSE ADOPTED BY THE OREGON LANDSCAPE CONTRACTORS BOARD.
2. PLAN IS INTENDED TO SHOW DESIGN INTENT. FIELD ADJUSTMENTS, INCLUDING CHANGES TO PLANT LOCATION, QUANTITIES, SPECIES, SPACING, SIZES, AND SUBSTITUTIONS OF EQUAL VALUE TO SITE FURNISHINGS AND EQUIPMENT, ETC. MAY BE ALLOWED WITH APPROVAL BASED ON UNFORESEEN SITE CONDITIONS, PLANT AVAILABILITY, FINAL UTILITY AND HARDSCAPING LAYOUT, ETC. SUBSTITUTIONS OR REVISIONS SHALL COMPLY WITH CITY OF CORNELIUS DESIGN STANDARDS
3. TREES SHALL BY HEALTHY, VIGOROUS, EVENLY BRANCHED, AND FREE FROM DISEASE AND MECHANICAL INJURY. ROOT BALL SIZES SHALL ENCOMPASS ENOUGH OF THE ROOT SYSTEM TO ENSURE HEALTHY ESTABLISHMENT AND FULL RECOVERY OF THE TREE.
4. STREET TREES SHALL CONFORM TO CITY OF CORNELIUS PUBLIC WORKS 5.11 S STANDARDS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING SPACING AND DIVERSITY REQUIREMENTS:
   - STREET TREE SPACING SHALL BE DEPENDANT ON MATURE CANOPY SPREAD, HOWEVER SPACING SHALL NOT EXCEED 30' O.C. ± UNLESS SPACING CONFLICTS WITH HARDSCAPING (DRIVEWAYS, CURB RETURNS, SIDEWALK DROPS), LIGHT POLES, ABOVE AND BELOW GROUND UTILITIES, ETC. CONFLICTS WITH SUCH IMPEDIMENTS SHALL BE RESOLVED BY FIELD ADJUSTING STREET TREES.
   - STREET TREE SELECTION SHALL MAINTAIN A MAXIMUM OF 10% OF ANY ONE SPECIES (OR A MINIMUM OF 10 DIFFERENT SPECIES), A MAXIMUM OF 20% OF ANY GENUS (OR A MINIMUM OF TREES FROM 5 DIFFERENT GENERA), AND A MAXIMUM OF 30% OF ANY FAMILY (OR A MINIMUM OF TREES FROM 4 DIFFERENT FAMILIES).
   - STREET TREES SHALL BE PLANTED IN A RANDOM PATTERN. THE INTERVAL BETWEEN IDENTICAL STREET TREES SHALL BE EQUAL TO HALF THE NUMBER OF DIFFERENT TREES IN THE PLANTING LIST (FOR EXAMPLE, IF THE PLANTING LIST INCLUDES 12 DIFFERENT TREES, TREES OF THE SAME SPECIES CAN BE PLANTED NO CLOSER THAN EVERY 6TH TREE ALONG A STREET).
   - MAINTAIN A MINIMUM OF 5' O.C. FROM FIRE HYDRANTS OR UTILITY PEDESTALS
   - MAINTAIN A MINIMUM OF 10' O.C. FROM DIRECTIONAL TRAFFIC SIGNS AND UTILITY POLES
   - MAINTAIN A MINIMUM OF 15' O.C. (DECIDUOUS TREES) AND 20' O.C. (EVERGREEN/CONIFER TREES) FROM STOP AND YIELD SIGNS
   - MAINTAIN A MINIMUM OF 15' O.C. (COLUMNAR PROFILE TREES ONLY) AND 20' O.C. (ALL OTHER TREES) FROM STREET LIGHTS
5. ALL SHRUBS AND GROUNDCOVER PLANTS SHALL BE HEALTHY, WELL-FORMED, SYMMETRICAL, AND FULLY ROOTED (BUT NOT ROOT BOUND) IN THE CONTAINERS IN WHICH THEY ARE PURCHASED. THEY SHOULD BE TYPICAL FOR THEIR SPECIES AND BE FREE FROM DISEASE, PESTS, AND MECHANICAL INJURY.
6. HATCHED AREAS ARE MEANT TO CONVEY GENERAL PLANT LOCATIONS. PLANT COVERAGE, SPACING, AND LAYOUT SHALL BE CONSISTENT WITH THE SPACING LISTED IN THE PLANT LEGEND FOR FULL COVERAGE. FIELD ADJUST AS REQUIRED AROUND EXISTING PLANTINGS, UTILITIES, ETC.
7. IRRIGATION: WATER-EFFICIENT, BELOW GROUND IRRIGATION SHALL BE PROVIDED FOR ALL HOA / CITY MAINTAINED LANDSCAPING (OPEN SPACE TRACTS AND ASSOCIATED STREET FRONTAGES). IRRIGATION SYSTEM SHALL BE 'DESIGN-BUILD' BY THE LANDSCAPE CONTRACTOR WITH CONSIDERATION TO PLANT PLACEMENT AND MATURE GROWTH, MINIMIZING OVERSPRAY ONTO HARD SURFACES AND NON-IRRIGATED AREAS, AND OVERALL WATER EFFICIENCY. CONTRACTOR SHALL PROVIDE CITY APPROVED DOUBLE CHECK VALVE DEVICES AND NECESSARY PERMITS PRIOR TO INSTALLING IRRIGATION SYSTEM.
8. SOIL PREPARATION: ALL PLANTING BEDS (EXCLUDING STORMWATER FACILITY) SHALL HAVE ADEQUATE TOPSOIL TO PROMOTE HEALTHY PLANT GROWTH. TOPSOIL SHALL BE RICH, DARK BROWN IN COLOR AND FREE OF ROOTS, PLANTS, WEED SEEDS, SOD, STONES, CLAY LUMPS, ALKALI SALTS, DEBRIS, AND OTHER EXTRANEOUS MATERIAL HARMFUL TO PLANT GROWTH.
9. CONTRACTOR SHALL WARRANT ALL PLANT MATERIAL INSTALLED WITHIN THE PROJECT SCOPE FOR A PERIOD OF 1-YEAR (365-DAYS) AFTER FINAL ACCEPTANCE AGAINST DEFECTS AND DEATH, AND SHALL REPLACE AT NO ADDITIONAL COST TO THE OWNER, ANY PLANT THAT FAILS TO THRIVE DURING THAT PERIOD.

N

SCALE: 1"= 50 FEET

50 0 10 25 50

ORIGINAL PAGE SIZE: 22" x 34"



SHEET KEY MAP

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HOLT HOMES
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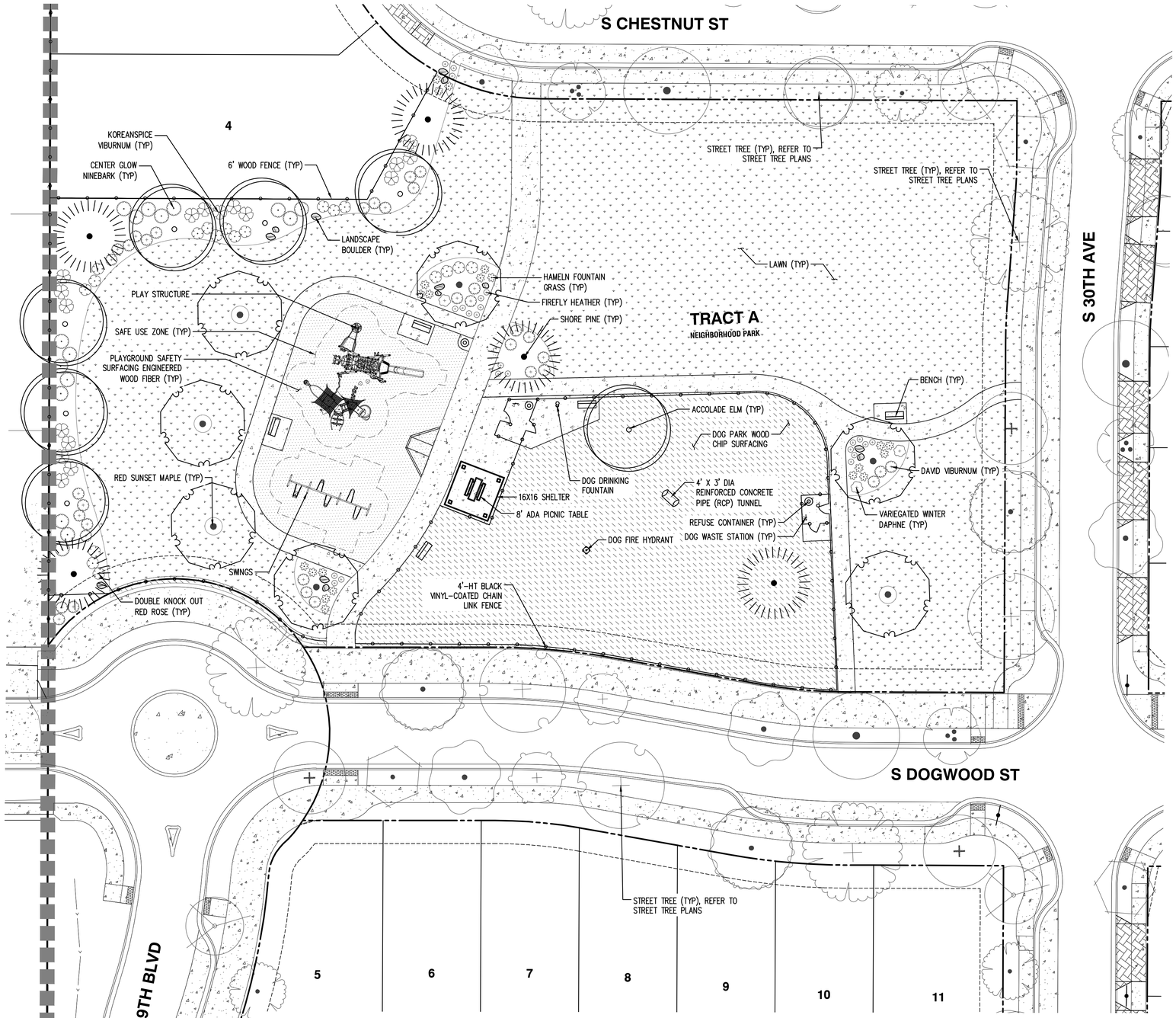
STREET TREE PLAN (NORTH)
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED
797
PRELIMINARY
NOT FOR CONSTRUCTION
BRENDAN N. FOLEY
OREGON
JANUARY 13, 2015
LANDSCAPE ARCHITECT
RENEWS: 06/30/2026

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	BNF
DRAWN BY:	BNF
CHECKED BY:	KAH

P16C

AKS DRAWING FILE: 4636-05 PRELIM LANDSCAPE.DWG | LAYOUT: P16C



N

SCALE: 1"=20 FEET

20 0 4 10 20

ORIGINAL PAGE SIZE: 22" x 34"

PRELIMINARY PARK PLANT SCHEDULE

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
TREES					
	7	ACER RUBRUM 'RED SUNSET'	RED SUNSET MAPLE	2" CAL. B&B	AS SHOWN
	5	PINUS CONTORTA	SHORE PINE	7'-8' HT. B&B	AS SHOWN
	7	ULMUS X 'ACCOLADE'	ACCOLADE ELM	2" CAL. B&B	AS SHOWN

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
SHRUBS					
	23	CALLUNA VULGARIS 'FIREFLY'	FIREFLY HEATHER	1 GAL. CONT.	24" o.c.
	3	DAPHNE ODORA 'VARIEGATA'	VARIEGATED WINTER DAPHNE	2 GAL. CONT.	48" o.c.
	21	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	1 GAL. CONT.	36" o.c.
	16	PHYSOCARPUS OPULIFOLIUS 'CENTER GLOW'	CENTER GLOW NINEBARK	5 GAL. CONT.	60" o.c.
	19	ROSA X 'RADTKO'	DOUBLE KNOCK OUT RED ROSE	3 GAL. CONT.	48" o.c.
	17	VIBURNUM CARLESII	KOREANSPICE VIBURNUM	5 GAL. CONT.	60" o.c.
	35	VIBURNUM DAVIDII	DAVID VIBURNUM	2 GAL. CONT.	48" o.c.

GROUND COVERS		
12,129 SF±	DOG PARK WOOD CHIP SURFACING	
33,237 SF±	LAWN	SEED OR SOD
4,433 SF±	PLAYGROUND SAFETY SURFACING ENGINEERED WOOD FIBER	
AS SHOWN	LANDSCAPE BOULDERS: ANGULAR BASALT, ONSITE OR LOCAL SOURCES PREFERRED, NATURAL GRAYS AND TANS. PLACE SPLIT FACE TOWARDS PRIMARY VIEW FOR A NATURAL APPEARANCE, A MINIMUM OF 1/3 OF THE TOTAL BOULDER HEIGHT SHALL BE BURIED FOR STABILITY; SIZE BOULDERS ACCORDINGLY. APPROXIMATE SIZE VARIANCES SHALL BE: –APPROXIMATELY (1/4) OF THE TOTAL WITH A MINIMUM OF 24" EXPOSED HEIGHT ABOVE GRADE –APPROXIMATELY (1/2) OF TOTAL WITH A MINIMUM OF 36" EXPOSED HEIGHT ABOVE GRADE –APPROXIMATELY (1/4) OF TOTAL WITH A MINIMUM 42" EXPOSED HEIGHT ABOVE GRADE	

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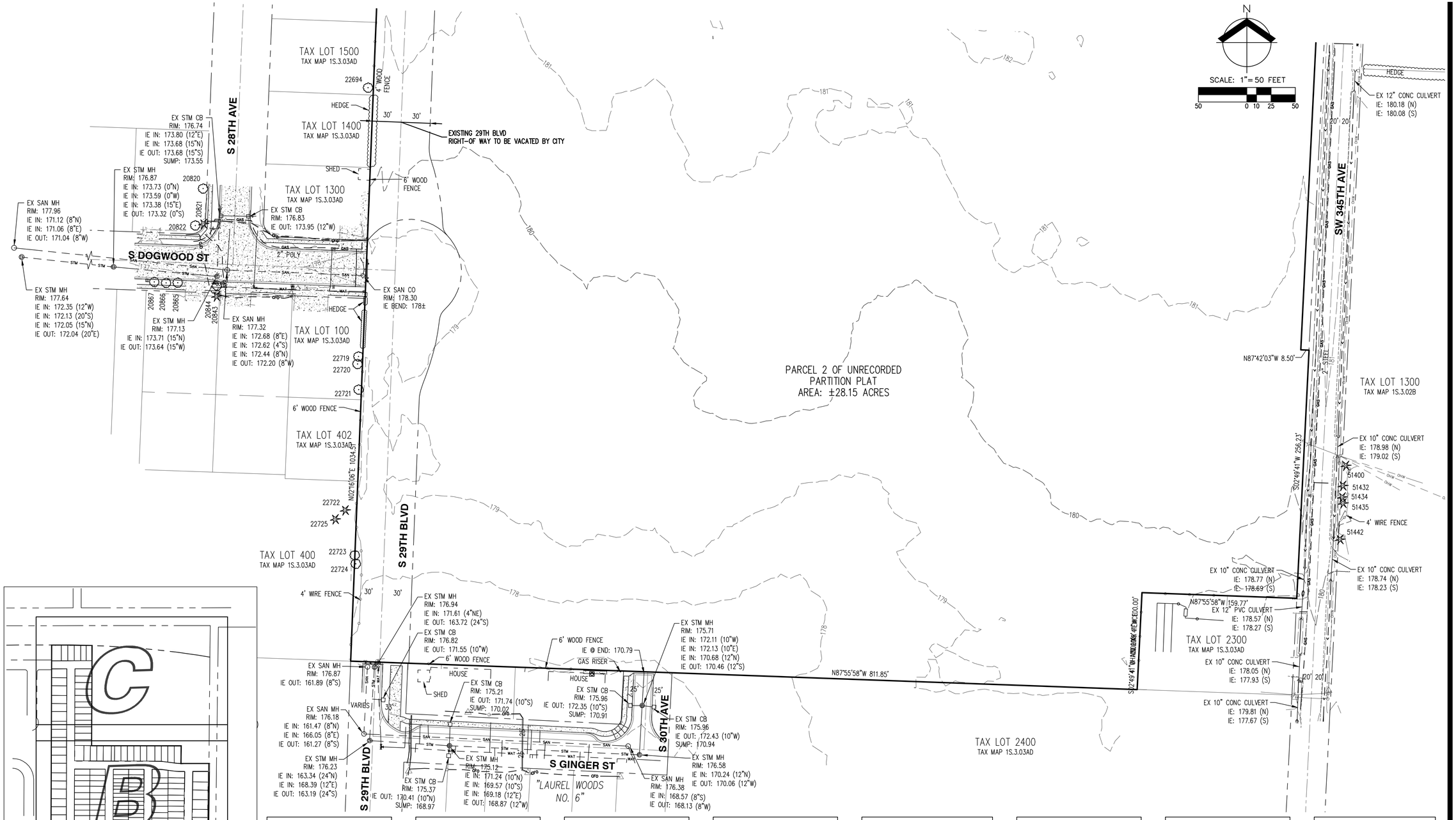
TRACT A OPEN SPACE PLAN
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED LANDSCAPE ARCHITECT
OREGON
JANUARY 7, 2005
KRISTIN A. HOWALD
797
PRELIMINARY NOT FOR CONSTRUCTION
12/16/25
RENEWS: 06/30/2026

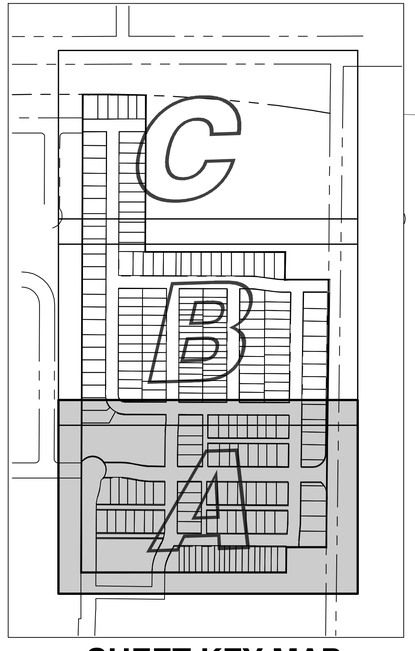
JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	BNF
DRAWN BY:	BNF
CHECKED BY:	KAH

P17

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SHEET KEY MAP



TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
10185	CONIFEROUS	9,7,17
10190	DECIDUOUS	6
10215	DECIDUOUS	7
10220	DECIDUOUS	19
10264	DECIDUOUS	14
10265	DECIDUOUS	15
10266	DECIDUOUS	13
10339	DECIDUOUS	6
10372	DECIDUOUS	7,13
10373	DECIDUOUS	15
10377	DECIDUOUS	16

TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
20166	DECIDUOUS	13
20237	DECIDUOUS	6
20246	DECIDUOUS	8
20329	DECIDUOUS	16
20820	DECIDUOUS	26
20821	CONIFEROUS	18
20822	DECIDUOUS	14
20843	CONIFEROUS	12
20844	DECIDUOUS	14
20865	DECIDUOUS	6,7,9
20866	DECIDUOUS	6,8

TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
20867	DECIDUOUS	11
22155	DECIDUOUS	6,7
22519	DECIDUOUS	24
22665	CONIFEROUS	18
22672	DECIDUOUS	12
22673	DECIDUOUS	9
22680	CONIFEROUS	12,20
22682	CONIFEROUS	6,9,18
22683	CONIFEROUS	6
22686	CONIFEROUS	8
22694	DECIDUOUS	11

TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
22719	DECIDUOUS	10
22720	DECIDUOUS	11
22721	DECIDUOUS	6
22722	CONIFEROUS	36
22723	DECIDUOUS	8,10,11
22724	DECIDUOUS	9,10,12
22725	CONIFEROUS	15
50005	DECIDUOUS	9
50006	DECIDUOUS	6
50007	DECIDUOUS	7
50008	DECIDUOUS	12

TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
50009	DECIDUOUS	6
50010	DECIDUOUS	6
50011	DECIDUOUS	6,6
50012	DECIDUOUS	8
50530	DECIDUOUS	8,12,15
50886	DECIDUOUS	7,8,10
50887	DECIDUOUS	8,10
51400	CONIFEROUS	21
51432	CONIFEROUS	18,22,22,22
51434	CONIFEROUS	7,9
51435	CONIFEROUS	13,11

TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
51442	CONIFEROUS	30
51702	DECIDUOUS	8,9,10
51703	CONIFEROUS	20
51704	DECIDUOUS	7,7
51727	DECIDUOUS	8,10,13
51730	CONIFEROUS	8,10,12
51732	CONIFEROUS	27
51733	CONIFEROUS	10
51742	CONIFEROUS	18
51765	DECIDUOUS	8
51812	DECIDUOUS	16,17

TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
51813	DECIDUOUS	24
51814	DECIDUOUS	35
51815	CONIFEROUS	20
51816	DECIDUOUS	9,9,13,15
51817	DECIDUOUS	14
51818	DECIDUOUS	12
51819	DECIDUOUS	17
51820	DECIDUOUS	32
51821	DECIDUOUS	12
51834	DECIDUOUS	15
51846	DECIDUOUS	24,24,24

TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
51847	DECIDUOUS	18,27
51848	DECIDUOUS	17
51849	DECIDUOUS	7
51850	DECIDUOUS	6
51854	DECIDUOUS	10
51855	DECIDUOUS	8
51856	DECIDUOUS	15

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EXISTING CONDITIONS PLAN (SOUTH)

LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

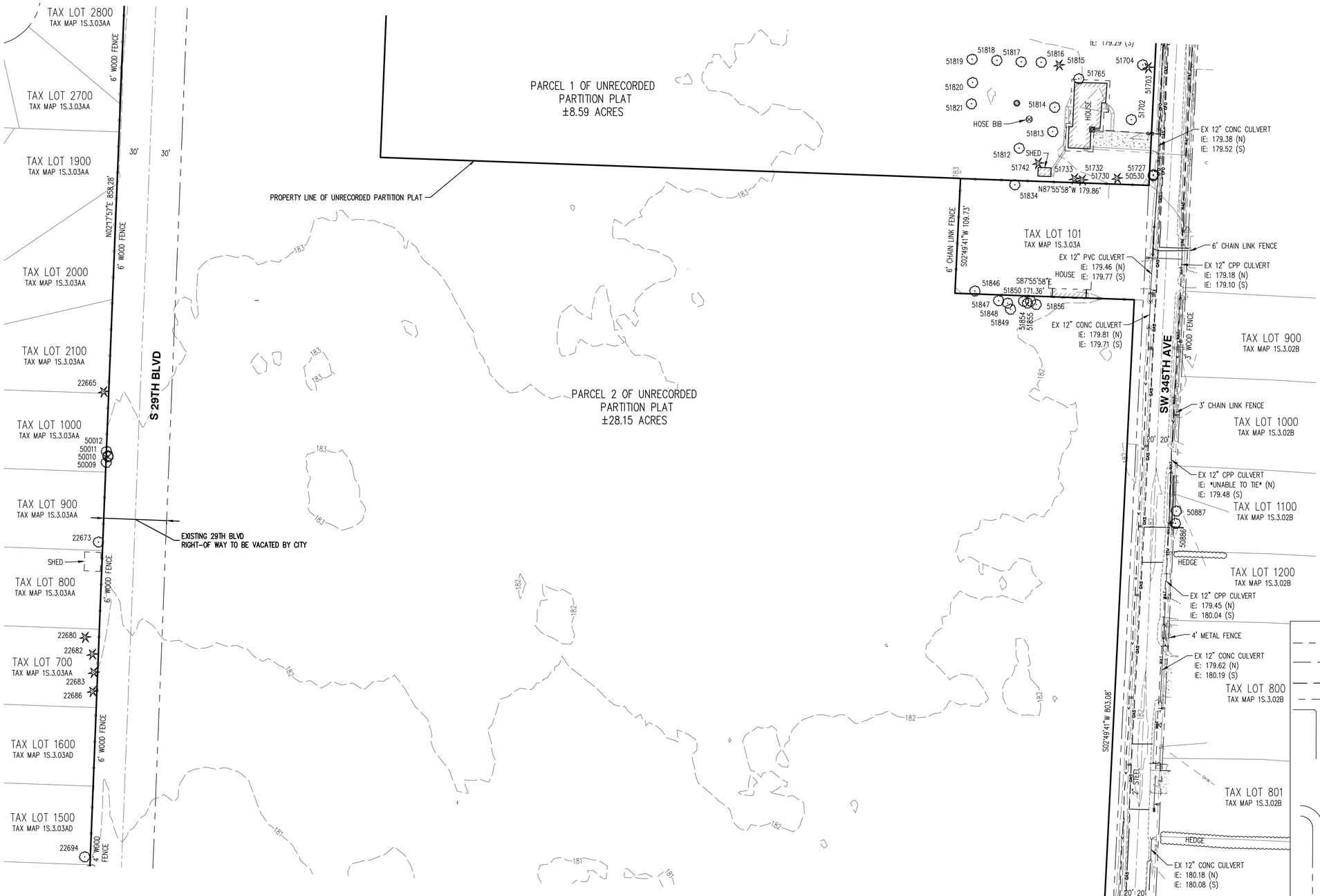
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OREGON
NOV 9, 2024
ERIC NYGREN
091799PLS
RENEWS: 12/31/2026

PRELIMINARY
NOT FOR CONSTRUCTION

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
CHECKED BY:	PAS

P18A

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SHEET KEY MAP

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EXISTING CONDITIONS PLAN (CENTRAL)

LAUREL CROWN PUD

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CORNELIUS, OREGON

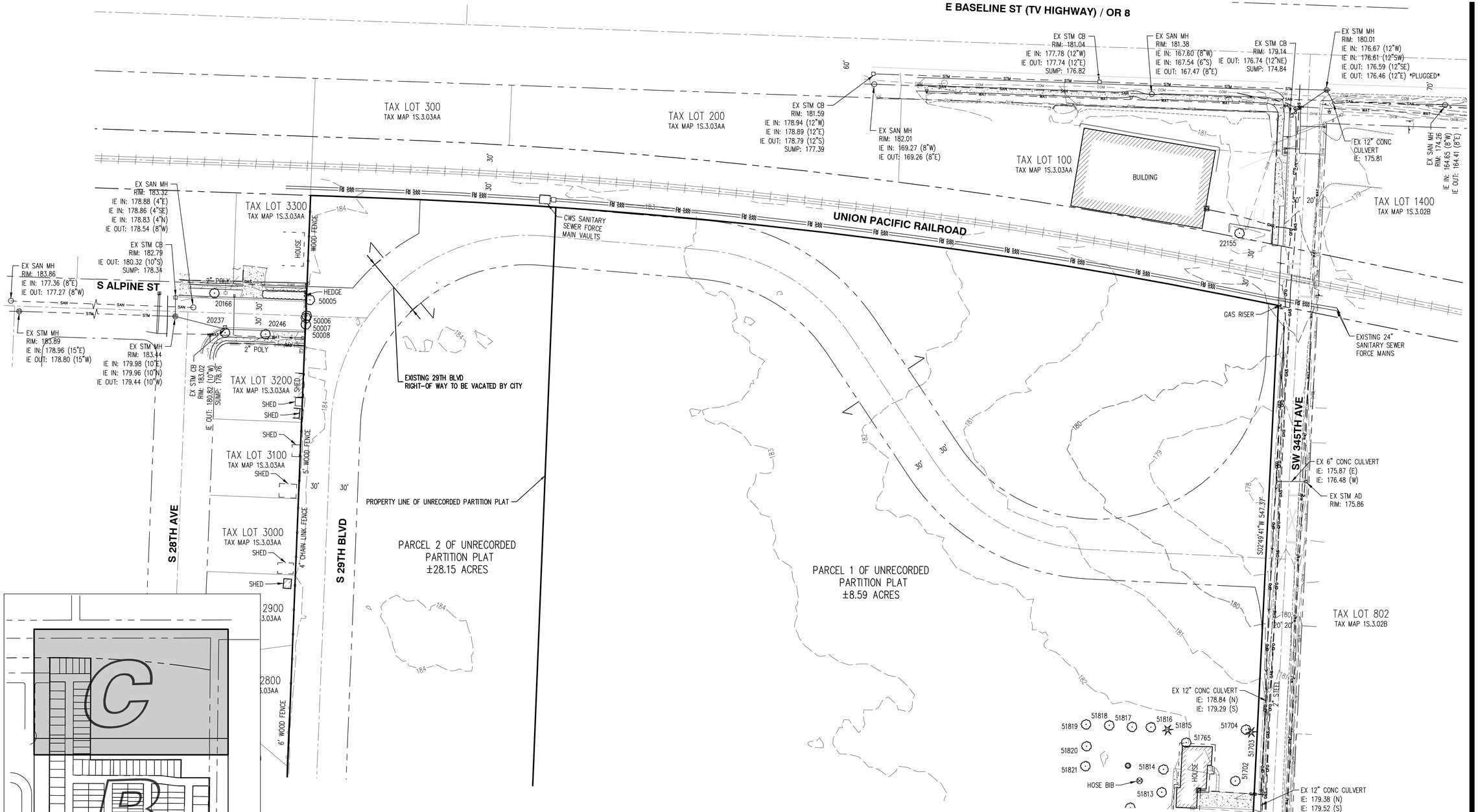
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OREGON
NOV 9, 2024
CRAIG NYGREN
091799PLS
RENEWS: 12/31/2026

PRELIMINARY
NOT FOR CONSTRUCTION

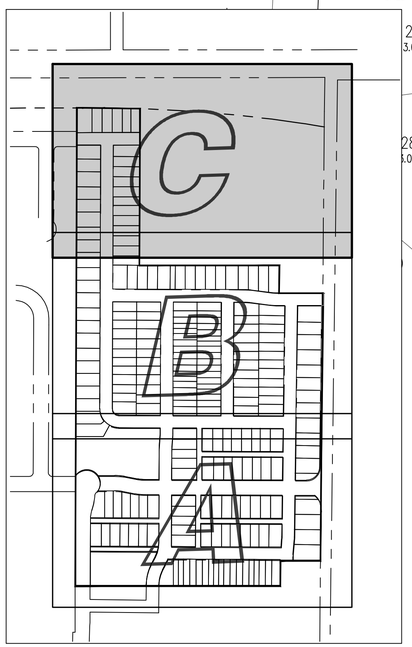
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CHECKED BY:	PAS

P18B

AKS DRAWING FILE: 4636-05 PRELIM EXCOND.DWG | LAYOUT: P18B



SHEET KEY MAP



NOTES:

1. UTILITIES SHOWN ARE BASED ON UNDERGROUND UTILITY LOCATE MARKINGS AS PROVIDED BY OTHERS, PROVIDED PER UTILITY LOCATE TICKET NUMBERS 19284978, 19284985, 19285016, 19285150, 19285172, 19285193, 19285201, 19285213, 2528949, AND 25261587–25261591. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND LOCATES REPRESENT THE ONLY UTILITIES IN THE AREA. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
2. FIELD WORK WAS CONDUCTED OCTOBER 21–30, 2019, AND SEPTEMBER 2–19, 2025.
3. VERTICAL DATUM: ELEVATIONS ARE BASED ON WASHINGTON COUNTY BENCHMARK NO. 351, LOCATED AT THE SE CORNER OF TUALATIN VALLEY HIGHWAY AND SW 345TH AVENUE. ELEVATION = 179.803 FEET (NGVD29).
4. THIS MAP DOES NOT CONSTITUTE A PROPERTY BOUNDARY SURVEY.
5. SURVEY IS ONLY VALID WITH SURVEYOR'S STAMP AND SIGNATURE.
6. BUILDING FOOTPRINTS ARE MEASURED TO SIDING UNLESS NOTED OTHERWISE. CONTACT SURVEYOR WITH QUESTIONS REGARDING BUILDING TIES.
7. CONTOUR INTERVAL IS 1 FOOT.
8. TREES WITH DIAMETER OF 6" AND GREATER ARE SHOWN. TREE DIAMETERS WERE DETERMINED BY VISUAL INSPECTION. TREE INFORMATION IS SUBJECT TO CHANGE UPON ARBORIST INSPECTION.

N

SCALE: 1"= 50 FEET

50 0 10 25 50

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EXISTING CONDITIONS PLAN (NORTH)

LAUREL CROWN PUD

THE HOLT GROUP, INC.

CORNELIUS, OREGON

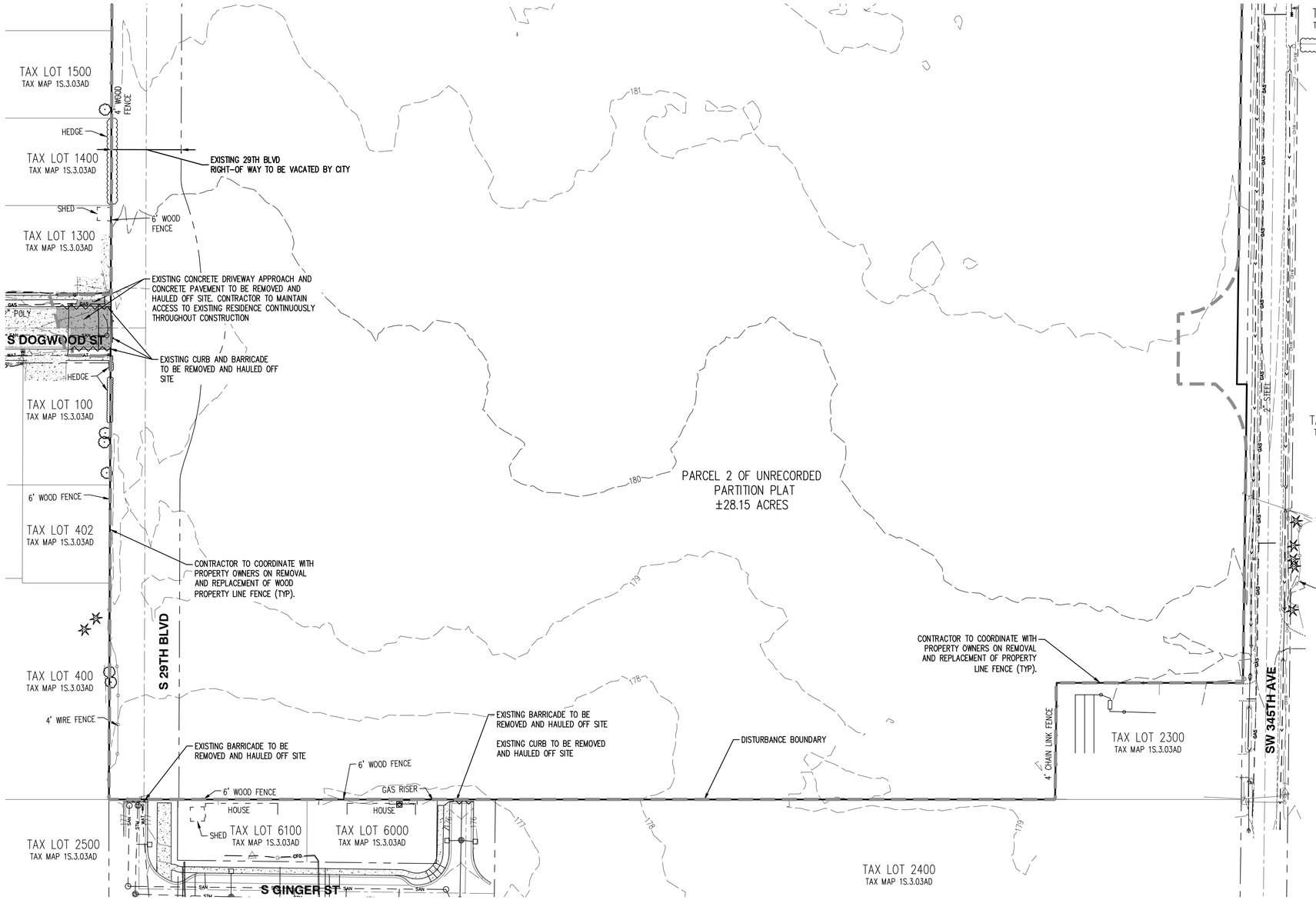
REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
JULY 9, 2024
ERIC NYGREN
091799PLS
RENEWS: 12/31/2026

PRELIMINARY
NOT FOR CONSTRUCTION

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
CHECKED BY:	PAS

P18C

AKS DRAWING FILE: 4636-05 PRELIM EXCOND.DWG | LAYOUT: P18C



N

SCALE: 1"=50 FEET

50 0 10 25 50

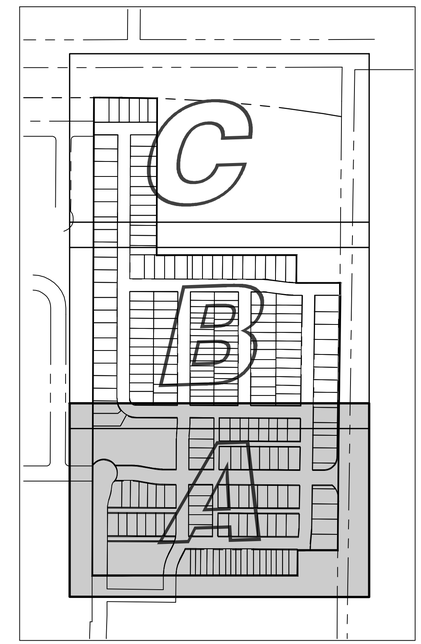
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LEGEND

- EXISTING GROUND CONTOUR (1 FT) — 229 —
- EXISTING GROUND CONTOUR (5 FT) — 230 —
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- DISTURBANCE BOUNDARY

GENERAL NOTES:

1. CONTRACTOR TO COORDINATE THE REMOVAL OF ALL NECESSARY PRIVATE UTILITIES WITH THE APPROPRIATE UTILITY PROVIDERS.
2. CONTRACTOR TO ABANDON ANY EXISTING WELLS, SEPTIC TANKS, AND DRAIN FIELDS FOUND DURING CONSTRUCTION PER APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.
3. CONTRACTOR TO COORDINATE WITH DEVELOPER AND ADJACENT PROPERTY OWNERS FOR PERIMETER FENCE REMOVAL IF NEW FENCES ARE PROPOSED.



SHEET KEY MAP

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DEMOLITION AND TREE REMOVAL PLAN (SOUTH)

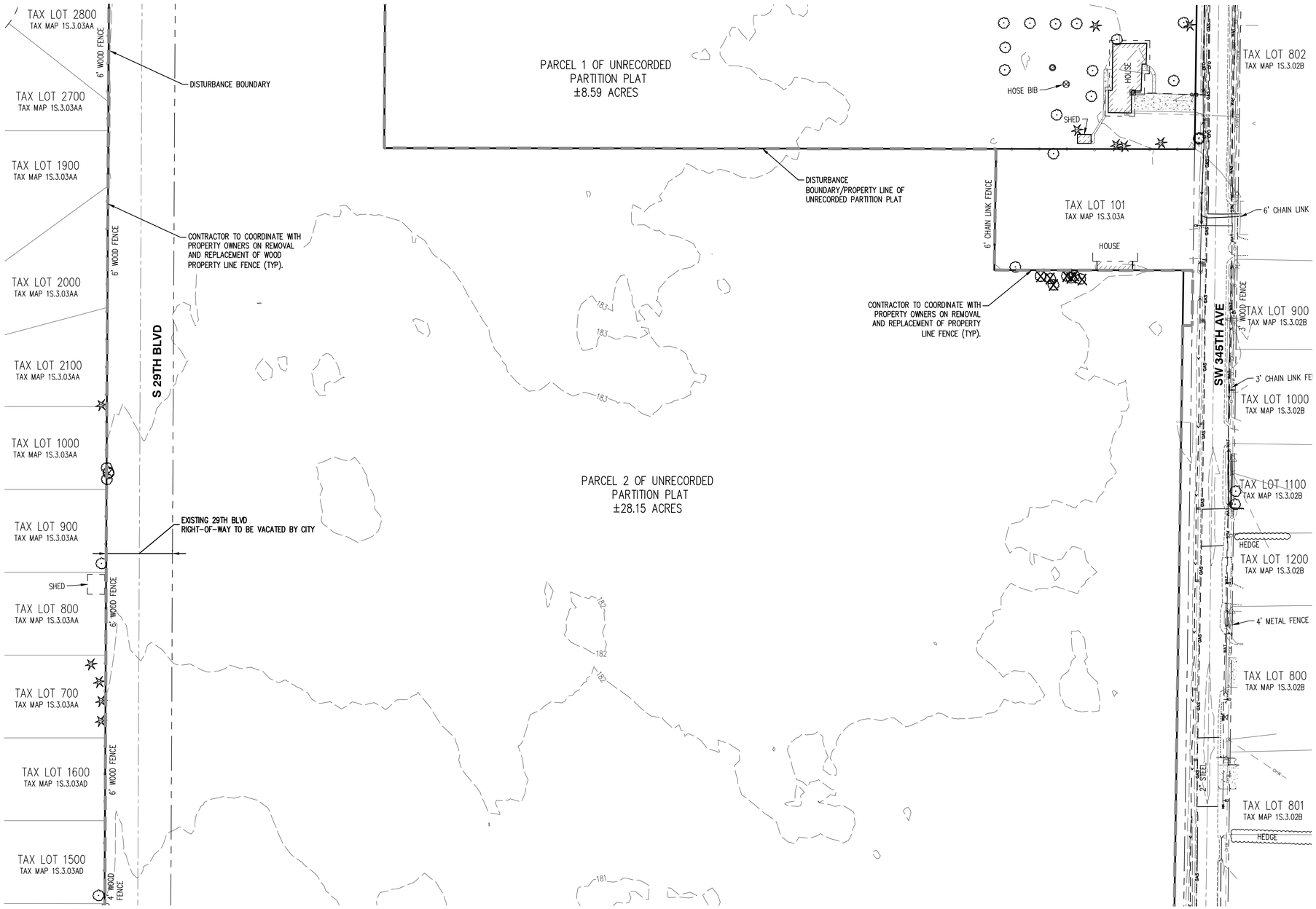
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 29, 2001
PAUL A. SELLKE
PRELIMINARY NOT FOR CONSTRUCTION
RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
CHECKED BY:	PAS

P19A

AKS DRAWING FILE: 4636-05 PRELIM DEMO AND TREE REMOVAL | LAYOUT: P19A



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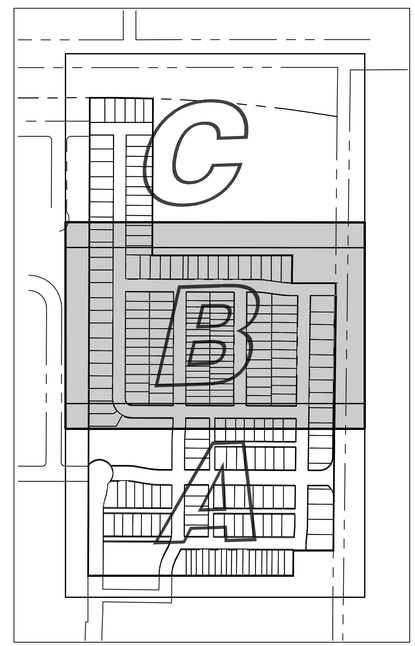
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ORIGINAL PAGE SIZE: 22" x 34"

LEGEND

- EXISTING GROUND CONTOUR (1 FT) — 229 —
- EXISTING GROUND CONTOUR (5 FT) — 230 —
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- DISTURBANCE BOUNDARY



SHEET KEY MAP

GENERAL NOTES:

1. CONTRACTOR TO COORDINATE THE REMOVAL OF ALL NECESSARY PRIVATE UTILITIES WITH THE APPROPRIATE UTILITY PROVIDERS.
2. CONTRACTOR TO ABANDON ANY EXISTING WELLS, SEPTIC TANKS, AND DRAIN FIELDS FOUND DURING CONSTRUCTION PER APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.
3. CONTRACTOR TO COORDINATE WITH DEVELOPER AND ADJACENT PROPERTY OWNERS FOR PERIMETER FENCE REMOVAL IF NEW FENCES ARE PROPOSED.

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD, STE 100
TUALATIN, OR 97062
503.563.6151
WWW.AKS-ENG.COM

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HOLT HOMES
Built for the Pacific Northwest

DEMOLITION AND TREE REMOVAL PLAN (CENTRAL)

LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

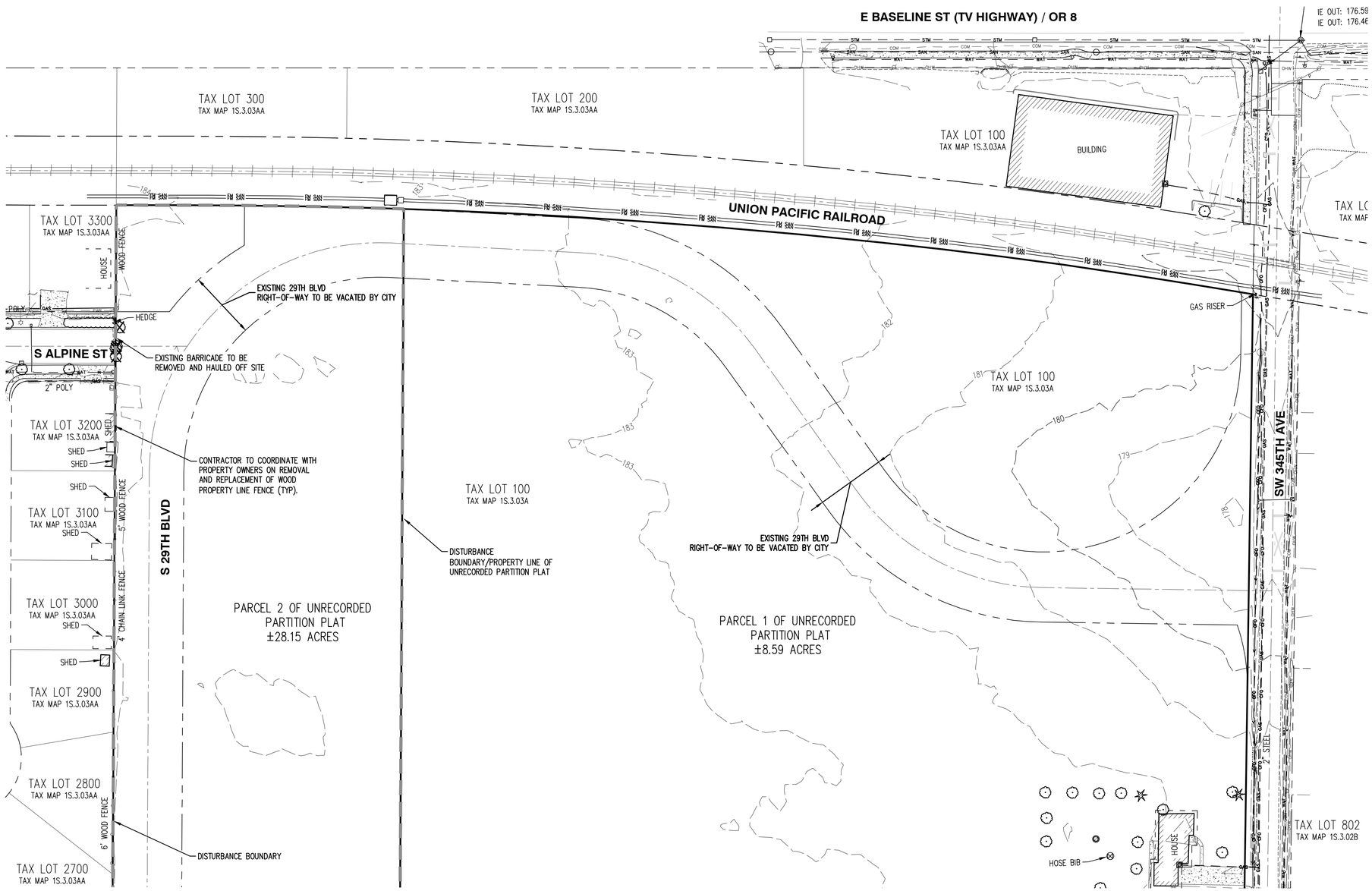
REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 29, 2001
PAUL A. SELLKE
PRELIMINARY NOT FOR CONSTRUCTION

RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
CHECKED BY:	PAS

P19B

AKS DRAWING FILE: 4636-05 PRELIM DEMO AND TREE REMOVAL | LAYOUT: P19B



N

SCALE: 1"=50 FEET

50 0 10 25 50

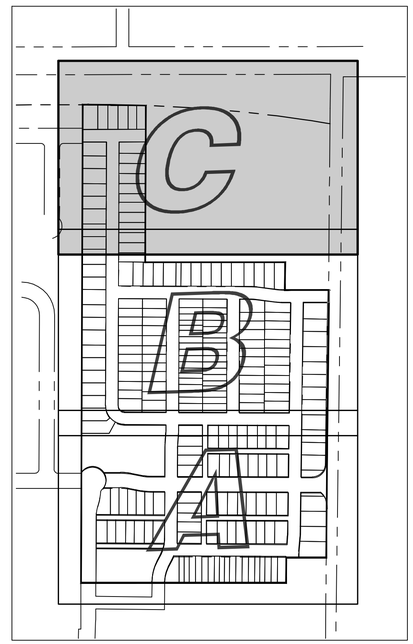
ORIGINAL PAGE SIZE: 22" x 34"

LEGEND

- EXISTING GROUND CONTOUR (1 FT) — 229 —
- EXISTING GROUND CONTOUR (5 FT) — 230 —
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- DISTURBANCE BOUNDARY

GENERAL NOTES:

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SHEET KEY MAP

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LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 09, 2013
PAUL A. SELLKE

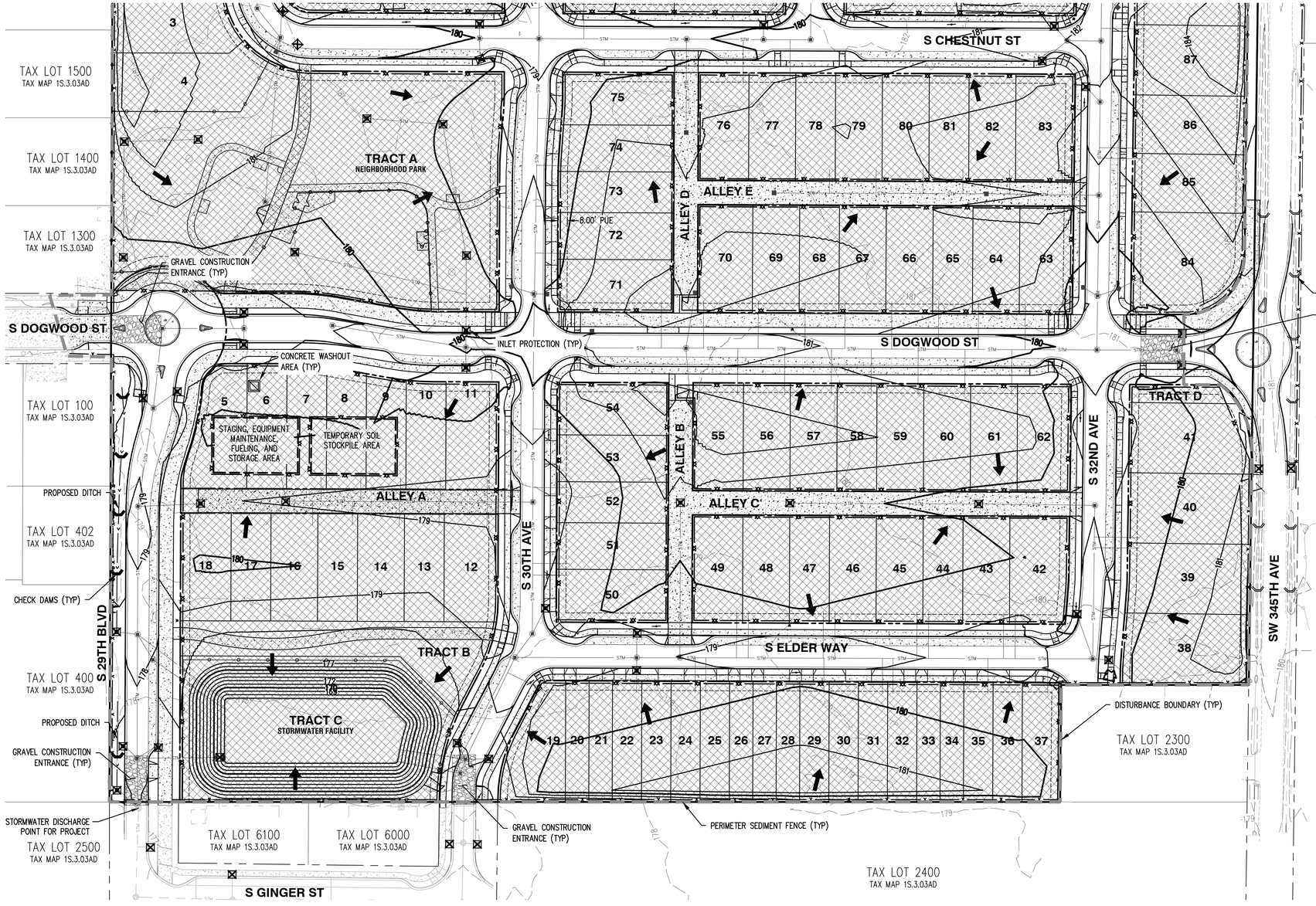
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P19C

AKS DRAWING FILE: 4636-05 PRELIM DEMO AND TREE REMLDWG | LAYOUT: P19C



N

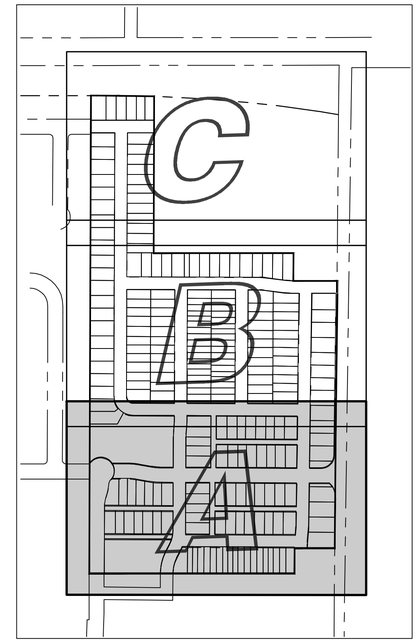
SCALE: 1"= 50 FEET

50 0 10 25 50

ORIGINAL PAGE SIZE: 22" x 34"

LEGEND

- EXISTING GROUND CONTOUR (1 FT)
- EXISTING GROUND CONTOUR (5 FT)
- FINISHED GRADE CONTOUR (1 FT)
- FINISHED GRADE CONTOUR (5 FT)
- PERIMETER SEDIMENT FENCE (TO BE INSTALLED PRIOR TO GRADING)
- SEDIMENT FENCE (TO BE INSTALLED AFTER GRADING)
- INLET PROTECTION (TYP)
- CHECK DAM BIOFILTER BAG
- CONCRETE WASHOUT AREA
- DRAINAGE FLOW DIRECTION
- GRAVEL CONSTRUCTION ENTRANCE
- DISTURBANCE BOUNDARY
- INTERIM STABILIZATION



SHEET KEY MAP

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GRADING AND EROSION CONTROL PLAN (SOUTH)

LAUREL CROWN PUD

THE HOLT GROUP, INC.
CORNELIUS, OREGON

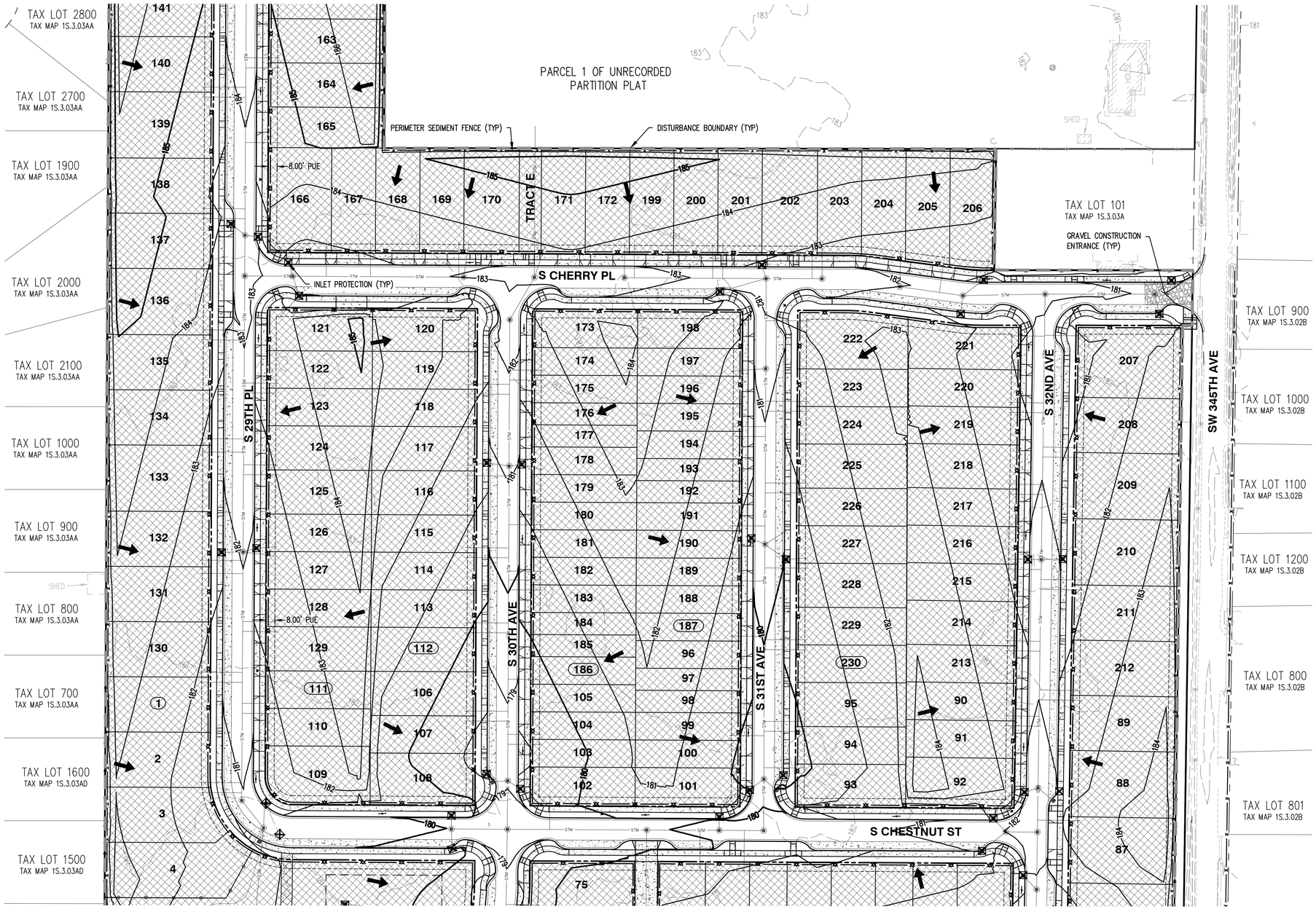
REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2001
PAUL A. SELLKE
RENEWAL DATE: 6/30/26

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P20A

AKS DRAWING FILE: 4636-05 PRELIM GRADING AND ESC.DWG | LAYOUT: P20A



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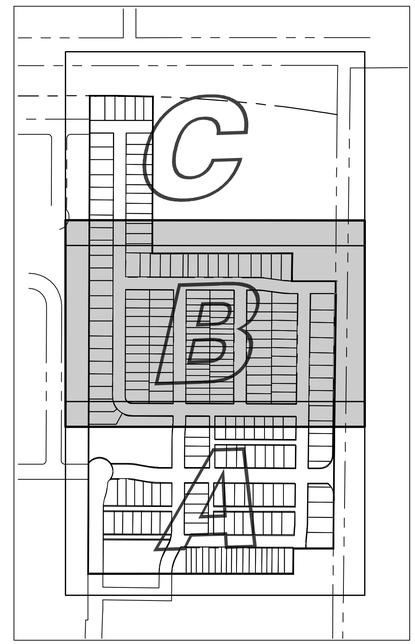
SCALE: 1"= 50 FEET

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ORIGINAL PAGE SIZE: 22" x 34"

LEGEND

- EXISTING GROUND CONTOUR (1 FT) — 159 —
- EXISTING GROUND CONTOUR (5 FT) — 160 —
- FINISHED GRADE CONTOUR (1 FT) — 159 —
- FINISHED GRADE CONTOUR (5 FT) — 160 —
- PERIMETER SEDIMENT FENCE (TO BE INSTALLED PRIOR TO GRADING) — x —
- SEDIMENT FENCE (TO BE INSTALLED AFTER GRADING) — xx —
- INLET PROTECTION (TYP)
- CHECK DAM BIOFILTER BAG
- CONCRETE WASHOUT AREA
- DRAINAGE FLOW DIRECTION
- GRAVEL CONSTRUCTION ENTRANCE
- DISTURBANCE BOUNDARY
- INTERIM STABILIZATION



SHEET KEY MAP

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E BASELINE ST (TV HIGHWAY) / OR 8

TAX LOT 300
TAX MAP 1S.3.03AA

TAX LOT 200
TAX MAP 1S.3.03AA

TAX LOT 100
TAX MAP 1S.3.03AA

BUILDING

TAX LOT 1400
TAX MAP 1S.3.02B

UNION PACIFIC RAILROAD

TAX LOT 3300
TAX MAP 1S.3.03AA

GRAVEL CONSTRUCTION ENTRANCE (TYP)

S ALPINE ST

INLET PROTECTION (TYP)

TAX LOT 3200
TAX MAP 1S.3.03AA

S 29TH PL

PERIMETER SEDIMENT FENCE (TYP)

TAX LOT 3100
TAX MAP 1S.3.03AA

TAX LOT 3000
TAX MAP 1S.3.03AA

DISTURBANCE BOUNDARY (TYP)

8.00' PUE

TAX LOT 2900
TAX MAP 1S.3.03AA

TAX LOT 2800
TAX MAP 1S.3.03AA

TAX LOT 2700
TAX MAP 1S.3.03AA

PARCEL 1 OF UNRECORDED
PARTITION PLAT

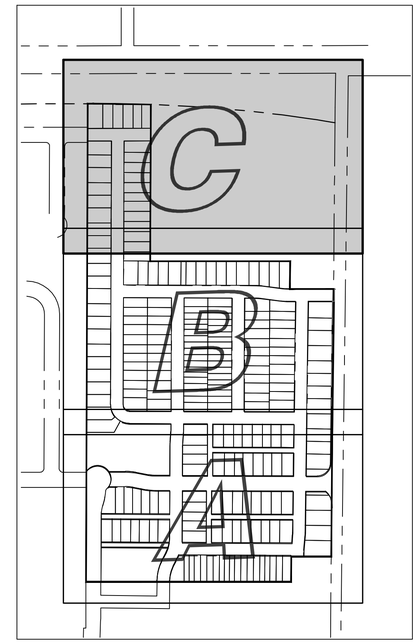
SW 345TH AVE

TAX LOT 802
TAX MAP 1S.3.02B

LEGEND

EXISTING GROUND CONTOUR (1 FT)	159
EXISTING GROUND CONTOUR (5 FT)	160
FINISHED GRADE CONTOUR (1 FT)	159
FINISHED GRADE CONTOUR (5 FT)	160
PERIMETER SEDIMENT FENCE (TO BE INSTALLED PRIOR TO GRADING)	
SEDIMENT FENCE (TO BE INSTALLED AFTER GRADING)	
INLET PROTECTION (TYP)	
CHECK DAM BIOFILTER BAG	
CONCRETE WASHOUT AREA	
DRAINAGE FLOW DIRECTION	
GRAVEL CONSTRUCTION ENTRANCE	
DISTURBANCE BOUNDARY	
INTERIM STABILIZATION	

SCALE: 1" = 50 FEET
50 0 10 25 50
ORIGINAL PAGE SIZE: 22" x 34"



SHEET KEY MAP

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LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 09, 2008
PAUL A. SELLKE

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P20C

AKS DRAWING FILE: 4636-05 PRELIM GRADING AND ESC.DWG | LAYOUT: P20C

TAX LOT 801
TAX MAP 1S.3.02B

TAX LOT 1500
TAX MAP 1S.3.03AD

TAX LOT 1400
TAX MAP 1S.3.03AD

TAX LOT 1300
TAX MAP 1S.3.03AD

TAX LOT 100
TAX MAP 1S.3.03AD

TAX LOT 402
TAX MAP 1S.3.03AD

TAX LOT 400
TAX MAP 1S.3.03AD

TAX LOT 2500
TAX MAP 1S.3.03AD

TAX LOT 6100
TAX MAP 1S.3.03AD

TAX LOT 6000
TAX MAP 1S.3.03AD

TAX LOT 2400
TAX MAP 1S.3.03AD

TAX LOT 2300
TAX MAP 1S.3.03AD

TAX LOT 1300
TAX MAP 1S.3.02B

TRACT A
NEIGHBORHOOD PARK

TRACT B

TRACT C
STORMWATER FACILITY

TRACT D

S CHESTNUT ST

S DOGWOOD ST

S ELDER WAY

S GINGER ST

S 29TH BLVD

S 30TH AVE

S 32ND AVE

SW 345TH AVE

ALLEY A

ALLEY B

ALLEY C

ALLEY D

ALLEY E

PHASE 1

PHASE BOUNDARY (TYP)

8.00' PUE

STORMWATER AREA DRAIN (TYP)

STORMWATER LATERAL (TYP)

SANITARY LATERAL (TYP)

CURB INLET (TYP)

STORMWATER MANHOLE (TYP)

DOMESTIC WATER SERVICE (TYP)

PROPOSED DITCH

PROPOSED STREET LIGHT (TYP)

AREA DRAIN (TYP)

SANITARY MANHOLE (TYP)

FIRE HYDRANT (TYP)

TOP OF FACILITY

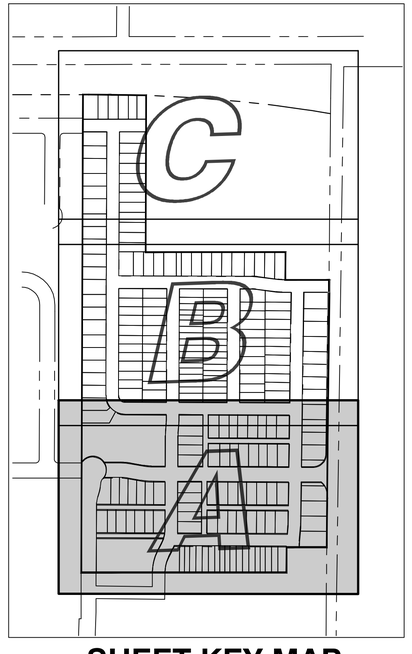
BOTTOM OF FACILITY

GRATED MANHOLE

DITCH INLET (TYP)

STORMWATER FACILITY OUTLET CONTROL STRUCTURES

SCALE: 1"=50 FEET
50 0 10 25 50
ORIGINAL PAGE SIZE: 22" x 34"



SHEET KEY MAP

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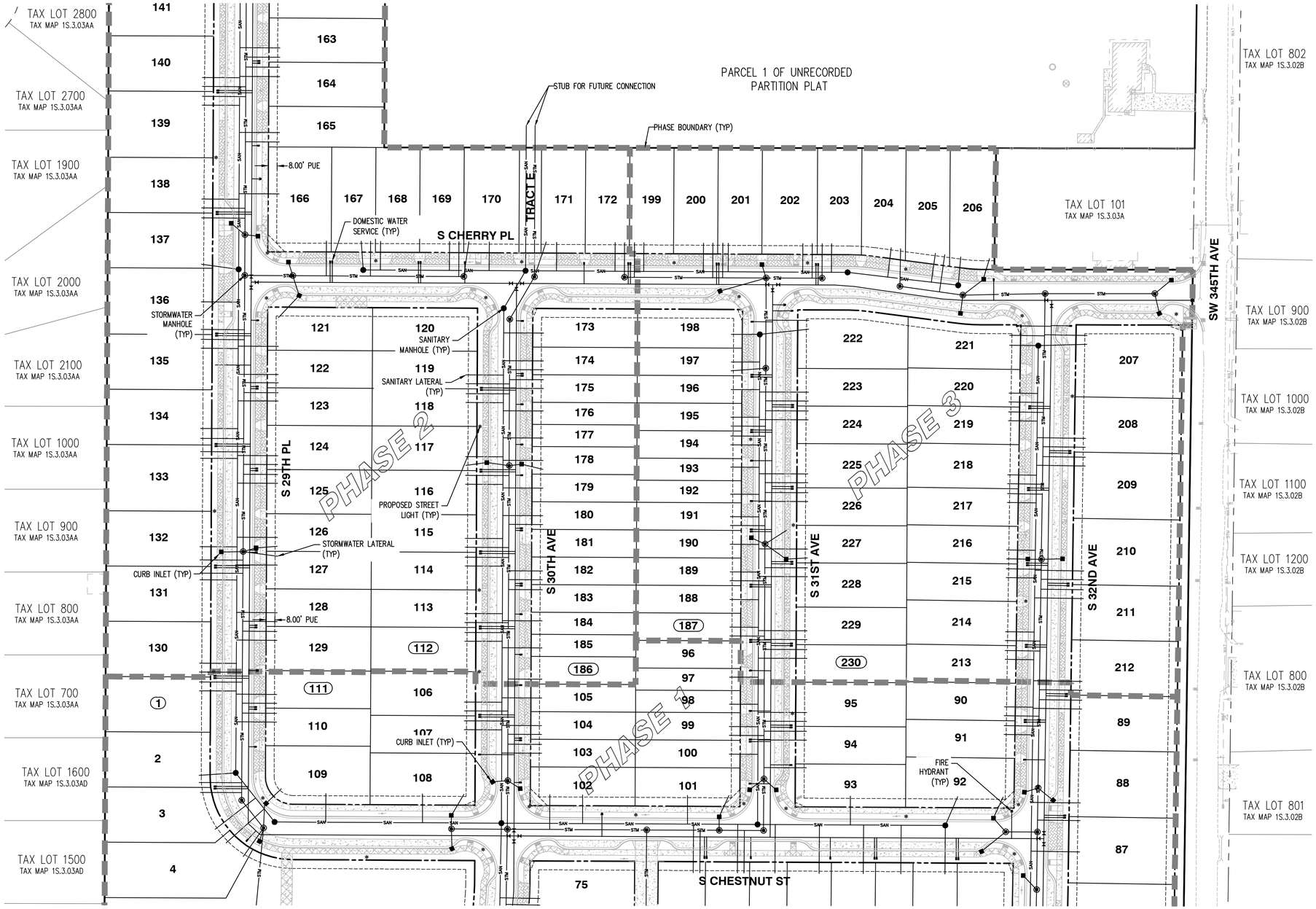
COMPOSITE UTILITY PLAN (SOUTH)
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

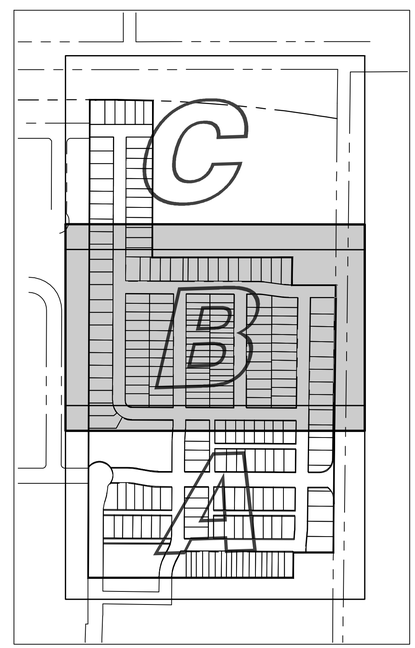
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P21A

AKS DRAWING FILE: 4636-05PRELIM COMP UTILDWG | LAYOUT: P21A





SHEET KEY MAP

SCALE: 1"= 50 FEET
50 0 10 25 50
ORIGINAL PAGE SIZE: 22" x 34"

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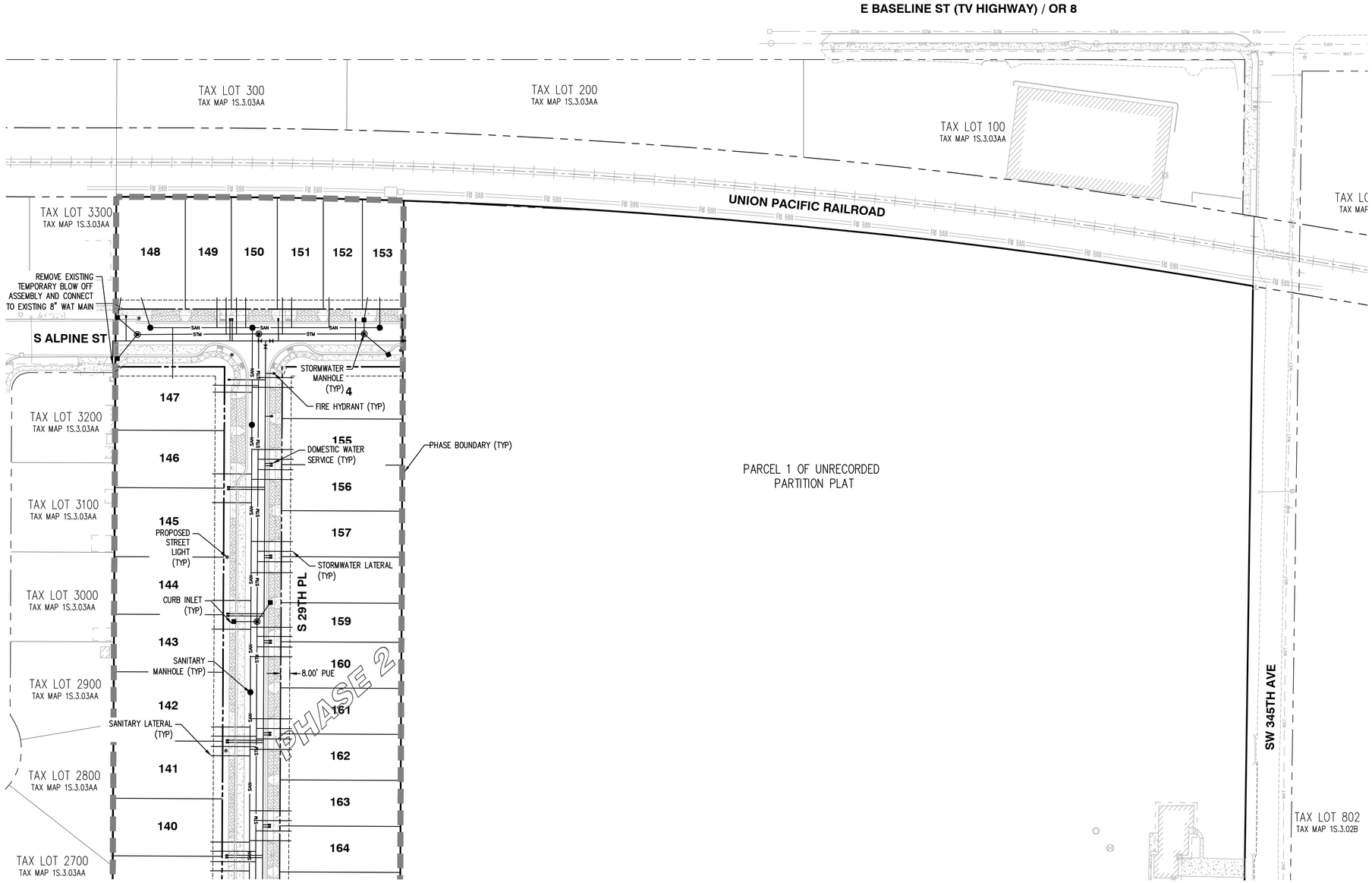
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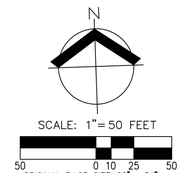
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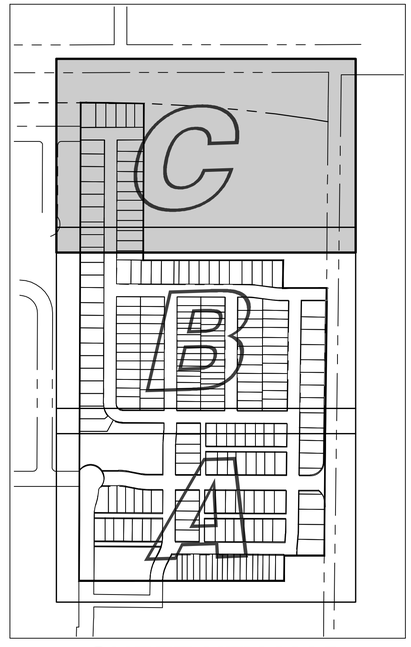
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P21B

AKS DRAWING FILE: 4636-05PRELIM COMP UTILDWG | LAYOUT: P21B







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P21C

AKS DRAWING FILE: 4636-05PRELIM COMP UTILDWG | LAYOUT: P21C

Exhibit B: Application Forms and Checklist [Updated]

Docusign Envelope ID: 56EEDD90-67F7-486E-A36E-8F4542BD2367

Cornelius
Oregon's Family Town

Land Use Application

Community Development
Located at 1300 S. Kodiak Circle, Cornelius, Oregon 97113
www.ci.cornelius.or.us

OFFICIAL USE ONLY

Date Received:_____ Date Complete:_____ ↓ File Number ↓

Application Fee: _____ Receipt Number:_____ _____

Application Type

Applicant's Consultant
Glen Southerland
AKS Engineering & Forestry, LLC
southerlandg@aks-eng.com
503.563.6151

Type I – *administrative review without public notice*

☐ **Design Review I** ☐ **Lot Line Adjustment** ☐ **Administrative Relief**
☐ **Land Partition—Final Plat** ☐ **Subdivision—Final Plat**

☐ **Other *please describe:*** _____

Type II – *administrative review with public notice*

☐ **Design Review II** ☐ **Land Partition—Preliminary Plat** ☐ **Subdivision—Preliminary Plat**

☐ **Other *please describe:*** _____

Type III – *public hearing(s) required with public notice*

☐ **Design Review III** ☑ **Conditional Use Permit** ☑ **Planned Unit Development**
☐ **Comprehensive Plan Amendment** ☐ **Zone Map Amendment** ☐ **Zone Text Amendment**
☐ **Annexation** ☐ **ROW/Easement Vacation** ☑ **Subdivision—Preliminary Plat**

☐ **Other *please describe:*** _____

Applicant Information

Name: Holt Holdings OR, LLC Signature: DocuSigned by: Kiara Tuttle C61076CE7D7417...

Holt Holdings OR, LLC
By: Holt Group Holdings, LLC, a Delaware limited liability company
Its: Sole Member
LD Director Reviewed/Approved: X
By: _____
Name: _____
Date: _____
Title: Authorized Signer

Mail Address: 1301 SE Tech Center Drive, Suite 150, Vancouver, WA 98683

Phone: Please contact Applicant's Consultant Fax: Please contact Applicant's Consultant E-mail: Please contact Applicant's Consultant

Property Owner Information

Name: Hillsboro School District, 1J Signature: DocuSigned by: Saidele Haghighi Khoshkhou 60E330825AADAE8...

Mail Address: 3083 NE 49th Place #200, Hillsboro, OR 97124

Phone: Please contact Applicant's Consultant Fax: Please contact Applicant's Consultant E-mail: Please contact Applicant's Consultant

Subject Site Information

Property Address: 305 SW 345 Avenue, Cornelius, OR 97123

Map & Tax Lot Number(s): 1S303A, Tax Lot 100

Current Zoning: Low-Density Residential (R-7) Multi-Unit Residential (A-2) Total Size of Site: ±30.53 AC

Existing Use: Farmland

Proposed Use: 230 detached single-unit and attached single-unit dwellings.

Cornelius
Oregon's Family Town

Conditional Use Permit – Planned Unit Development Submittal Checklist

Community Development
Located at 1300 S. Kodiak Circle, Cornelius, Oregon 97113
www.ci.cornelius.or.us

Written Narrative Requirements

_____ A. **Checklist:** Please provide one completed and signed copy of this checklist.

_____ B. **Description of proposal**: Please describe the existing conditions on-site and the changes proposed to the site, structure, landscaping, parking, and land use, including the number of parcels created. Provide findings verifying that the intended use is allowed by the City's Development Code.

_____ C. **Approval criteria findings:** Please provide a narrative that evaluates and verifies that the proposal meets the approval criteria identified below:

Conditional Use Permit, Section 18.105.030(B) of the Development Code.

1. *The proposal conforms with the City's Comprehensive Plan;*

2. *The applicable requirements of the zoning district are satisfied; and*

3. *That the location, size, design, and functional characteristics of the proposed use are such that it can be made reasonably compatible with and have a minimum impact on the livability and appropriate development of other properties in the surrounding neighborhood;*

4. *The granting of the proposal will provide for a facility that is consistent with the overall needs of the city.*

Planned Unit Development, Section 18.110.030(B) of the Development Code.

1. *There are special physical or geographic conditions or objectives of development, which warrant a departure from the standard title requirements.*

2. *Resulting development will be consistent with overall planning and zoning objectives of the city.*

3. *The area around the development can be planned to be in substantial harmony with the proposed plan.*

4. *If the applicant is proposing phasing the project, then identify the schedule for phasing. If the applicant is not proposing to phase the project, then identify the time frame for completion.*

5. *Provide findings that economically justify a proposed commercial or industrial development.*

6. *The streets are adequate to support the anticipated traffic and the development will not overload the streets outside the planned area.*

7. *Proposed utility and drainage facilities are adequate for the population densities and type of development proposed.*

N/A

D. Please provide the hours of operation, total number of employees, and maximum number of employees per shift.



E. **Site Analysis Information:**

1. Existing building area: N/A sq. ft.
   Proposed building addition or subtraction: N/A sq. ft.

2. Existing building height: N/A ft.
   Proposed building height: N/A ft.

3. Existing parking area: N/A sq. ft.
   Existing number of parking spaces: N/A # sp.
   Proposed parking addition or subtraction: N/A sq. ft.
   Proposed number of parking spaces: N/A # sp.
   Proposed use: Residential PUD
   Parking requirement: N/A

4. Existing landscaped area: N/A sq. ft.
   Percentage of site: N/A %
   Proposed landscape addition or subtraction: N/A sq. ft.
   Percentage of site: N/A %

✓ F. **Additional Requirements:** Please be advised that special studies, investigations and reports may be required to ensure that the proposal does not adversely affect the surrounding community, and does not create hazardous conditions for persons or improvements on the site. These studies may include investigations and reports on noise attenuation, air quality, traffic control, soil conditions, flooding of waters and storm water run-off, natural resources, tree preservation, and other concerns.

✓ G. **Neighborhood Review Meeting:** information required (*Dev. Code Section 18.10.030*.)

✓ 1. A copy of the notice sent to surrounding property owners.
✓ 2. A copy of the mailing list used to send out meeting notices.
✓ 3. An affidavit of mailing.
✓ 4. Representative copies of written materials and plans presented at the Neighborhood Review Meeting.
✓ 5. Notes of the meeting, including the meeting date, time, and location, the names and addresses of those who attended, and oral and written comments received.

Plan Requirements

All plans, except architectural renderings, elevations or both, shall be presented at a minimum of 1" = 20'. Architectural elevations may be presented at an architectural scale. Each of the following plans and drawings shall be submitted on 24" x 36" (maximum size) separate sheets. Please also include one (1) full set of plans that is 8 ½" x 11" in size. Please include all of the following information for each plan.

✓ A. **Existing Conditions Plan:**

✓ 1. North arrow, scale and date of plan.
✓ 2. Vicinity map.
✓ 3. The entire lot(s), including area and property lines dimensioned.
✓ 4. Points of existing access, interior streets, driveways, and parking areas.

5. Location of all existing buildings and structures, including refuse storage locations, pedestrian and bike paths, or both, swimming pools, tennis courts, and tax lots.
6. Existing right-of-way and improvements.
7. Dimension from centerline to edge of existing right-of-way.
8. Existing topographical information, showing 2 ft. contours and appropriate spot elevations for features such as walls, retaining walls (top and bottom elevations), catch basins, stairs, sidewalks, and parking areas.
9. Surrounding development and conditions within 100-ft. of the property; such as zoning, land uses, buildings, driveways, and trees.
10. Location of existing public and private utilities, easements, and 100-year floodplain.
11. Sensitive areas, as defined by the Clean Water Services (CWS) standards.
12. Wetland boundaries, upland wooded area boundaries, riparian area boundaries, rock out-cropping's and streams. *Wetlands must be professionally delineated*.

B. **<u>Dimensioned Site Plan</u>:**

1. North arrow, scale and date of plan.
2. The entire lot(s), including area, property lines dimensioned and labeled "front," "side," and "rear."
3. Points of access, interior streets, driveways, and parking areas.
4. Proposed land uses including housing densities and the location of buildings and structures.
5. Proposed right-of-way, dedications and improvements.
6. Dimension from centerline to edge of proposed right-of-way.
7. Dimensions of all improvements, including setbacks, parking spaces, driveways, and distance between buildings.
8. Location of storm water quality and detention facilities, or both.
9. Boundaries of development phases, if applicable.
10. Sensitive areas, as defined by the Clean Water Services standards.
11. Wetland boundaries, upland wooded area boundaries, riparian area boundaries, rock out-cropping's and streams. *Wetlands must be professionally delineated.*
12. Topographical information (2 ft. contour lines) of existing and proposed grades on-site and for surrounding properties within 100 ft. of the subject property.

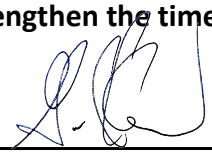
✓ 13. Location and schematic massing of proposed buffering, screening, and landscaped areas.

✓ 14. Other pertinent landscape features, including walls, retaining walls, berms, fences, and fountains.

N/A C. **Architectural Renderings, Elevations, or both:** Please provide information that identifies the general character of the buildings and structures, by indicating dimensions, materials, colors, and textures proposed. This includes buildings, retaining walls, refuse storage facilities, play structures, accessory facilities, and fences.

N/A D. **Sensitive Area Pre-Screening or Service Provider Letter**: Please provide a completed and signed Pre-Screening or CWS Service Provider Letter.

I have provided the items required in this submittal checklist. I understand that any missing information, omissions or both may deem my project incomplete, which may lengthen the time to process the request.



Signature

11/12/2025
Date

Glen Southerland, AICP
Print Name

(503) 563-6151
Telephone Number

Cornelius
Oregon's Family Town

Subdivision - Preliminary Plat Submittal Checklist

Community Development
Located at 1300 S. Kodiak Circle, Cornelius, Oregon 97113
www.ci.cornelius.or.us

Written Narrative Requirements

✓ A. **Checklist:** Please provide one completed copy of this five-page checklist.

✓ B. **Description of proposal**. Please describe the existing conditions on-site and the changes proposed to the site, structure, landscaping, parking, and land use, including the number of lots created. Provide findings verifying that the intended use is allowed within the particular zoning of the site by the City's Development Code.

✓ C. **Approval criteria findings**: Please provide a detailed narrative that evaluates and verifies the proposal meets the all of the approval criteria identified below.

Section 17.05.040(C) of the Development Code

1. *The proposal conforms with the City's Comprehensive Plan.*
2. *The proposal complies with all applicable statutory and ordinance requirements.*
3. *All proposed lots conform to the size and dimensional requirements of this ordinance; and*
4. *Adequate public facilities are available to serve the proposal*
5. *All proposed improvements meet City standards; and*
6. *That the phasing plan, if requested, can be carried out in a manner, which meets the objectives of the above criteria and provides necessary public improvements for each phase as it develops.*

Section 18.155, of the Development Code

If the subject parcel is located in the R-10 or R-7 zones, or it will be developed with a single-family dwelling, the proposal shall meet the Solar Access Protection design standards identified in *Section 18.155*. The

applicant will state which option is chosen and provide a list of those lots meeting the Basic Solar Standard, and those lots proposed for Exemption from, or Adjustment to the Basic Solar Standard.



D. **Additional Requirements:** Please be advised that special studies, investigations and reports may be required to ensure that the proposal does not adversely affect the surrounding community, and does not create hazardous conditions for persons or improvements on the site. These studies may include investigations and reports on noise attenuation, air quality, traffic control, soil conditions, flooding of waters and storm water run-off, natural resources, tree preservation, and other concerns. A pre-application meeting is highly recommended to identify all of the additional requirements that may be required.

All applicable requirements from Metro, Clean Water Services, Oregon Department of Transportation, Division of State Lands and other applicable agencies will need to be addressed within the application.



E. **Fee Ownership:** If applying for a Fee Ownership Land Division please provide findings specifically addressing each of the approval criteria found in *Section 17.05.050*, of the City's Planning Code, in addition to the approval criteria listed in item "C" above.

1. *As a whole, the development of which the unit is a part meets ordinance criteria for lot area, lot dimensions, setbacks, parking, lot coverage, landscaping, public facilities and street frontage.*

2. *The development as a whole, the unit for which fee ownership is desired and any unit affected by the division shall meet all building, plumbing and fire code standards.*

3. *Ingress and egress is provided to all lots.*

4. *Parking is provided in accordance with ordinance standard for the individual unit either on the new lot or through easements as described in subsection 6, below. If assigned parking is provided, it shall meet ordinance standards.*

5. *Adequate public facilities are provided to the new lot.*

6. *The applicant provides deed covenants required that address: parking, maintenance of buildings and utilities, landscaping and common areas, ingress and egress. The deed covenants must be approved by the City Attorney and Community Development Director.*

N/A F. **Sensitive Area Pre-Screening Site Assessment Letter**: Please provide a copy a completed and signed Sensitive Area Pre-Screening Site Assessment Letter or form from the City of Cornelius City Engineer or Clean Water Services (CWS). Please contact the City if you have questions.

✓ G. **Neighborhood Review Meeting:** information required (*Dev. Code Section 18.10.030.*). (Only required for Type III Reviews)

✓ 1. A copy of the notice sent to surrounding property owners.
✓ 2. A copy of the mailing list used to send out meeting notices.
✓ 3. An affidavit of mailing notice.
✓ 4. Representative copies of written materials and plans presented at the Neighborhood Review Meeting.
✓ 5. Notes of the meeting, including the meeting date, time, and location, the names and addresses of those who attended, and oral and written comments received.

Plan Requirements

All plans shall be presented at a minimum scale of 1" = 20', and on a maximum sheet size of 24" x 36". Please provide staff three (3) full sheets sets for review, one (1) 8 ½" x 11" sheet set and one electronic PDF file, which include all of the following information.

✓ A. **Existing Conditions Plan** includes the following:

✓ 1. North arrow, scale and date of plan.
✓ 2. Vicinity map.
✓ 3. All existing lot sizes, lot lines and dimensions.
✓ 4. Points of existing access, interior streets, driveways, and parking areas.
✓ 5. Location of all existing buildings and structures, including refuse storage locations and pedestrian/bike paths.
✓ 6. Existing right-of-way and improvements, including sidewalk dimensions.
✓ 7. Dimension from right-of-way centerline to edge of existing property line and to required right-of-way dedication.
✓ 8. Dimensions of all improvements, including setbacks.
✓ 9. Location of existing public and private utilities.
✓ 10. Topographical information, (2 ft. contour lines) of existing grades.
✓ 11. Existing trees larger than 6" in dbh (diameter at breast height), including genus, species and size. Dbh is measured at 54" above grade.
✓ 12. Location of existing wetlands, 100-year floodplain, streams or other natural resources.

B. **Proposed Preliminary Plat** includes the following:

1. The dimension of all new lots with their size (sq. ft.), the location, widths and names of all existing, proposed streets and public ways within or adjacent to the plat. Please include illustrations of all easements for utilities, other encumbrances and railroad right-of-ways. New streets shall be designated with proposed street names.
2. Dimension from right-of-way centerline to edge of existing property line and to required right-of-way dedication.
3. Location of existing and proposed easements.
4. Location of at least one temporary bench mark within the plat boundaries.
5. Square footage of all proposed lots.
6. The total gross acreage of the subdivision plat.
7. Identify and label on the plat all lots in conformance with the Solar Ordinance requirements.
8. Delineation showing minimum/proposed setback requirements within each lot/parcel.

C. **Preliminary Plat Reduction & Electronic PDF:** Provide one proposed preliminary plat that is reduced to 8.5" x 11" and provide staff an electronic PDF copy of the proposed plans.

D. **Proposed Improvement Plan** includes the following:

1. North arrow, scale and date of plan.
2. All proposed lot sizes, lot lines and dimensions.
3. Dimension from right-of-way centerline to edge of existing and proposed property line and to required right-of-way dedication.
4. Existing and proposed right-of-way and improvements, including sidewalk dimensions.
5. Topographical information, (2 ft. contour lines) of existing and proposed grades and fill.
6. Preliminary location of proposed public water, sewer, stormwater and private utilities such as electric, cable and telephone. Please include any proposed easements, and 100-year floodplain.
7. Preliminary plans and profiles of proposed sanitary and storm sewers, showing that gravity service is feasible for all lots.
8. Existing trees, larger than 6" dbh, proposed to be saved and removed. Include genus, species, and size. Proposed location of street trees and their size and species.
9. Cross-section of all street and bike path improvements.

✓ 10. Preliminary location of proposed stormwater quality/quantity facility and preliminary sizing calculations showing location has sufficient space for a facility meeting current requirements

✓ E. **Landscape Plan**:

✓ 1. Submit proposed detailed landscaping plan of any proposed common space, landscaped areas within the public right-of-way (ROW) and other non-buildable tracts.

I have provided the items required in this submittal checklist. I understand that any missing information, omissions or both may deem my project incomplete, which may lengthen the time to process the request.



Signature

11/12/2025

Date

Glen Southerland, AICP

Print Name

(503) 563-6151

Telephone Number

Exhibit C: Ownership Information

First American Title Insurance Company

1 SW Columbia Street, Ste 1600
Portland, OR 97204
Phn - (503)222-3651 (800)929-3651
Fax - (877)242-3513

Order No.: 7000-4308061
October 01, 2025

FOR QUESTIONS REGARDING YOUR CLOSING, PLEASE CONTACT:

JOYCE JAMESON**,** Escrow Officer/Closer
Phone: (503)350-5005 - Fax: (866)656-1602- Email:jjameson@firstam.com
First American Title Insurance Company
4350 Galewood St., Ste. 125, Lake Oswego, OR 97035

FOR ALL QUESTIONS REGARDING THIS PRELIMINARY REPORT, PLEASE CONTACT:

Blake Spencer, Title Officer
Toll Free: (800)929-3651 - Direct: (503)219-8730 - Email: BlSpencer@firstam.com

Preliminary Title Report

This report is for the exclusive use of the parties herein shown and is preliminary to the issuance of a title insurance policy and shall become void unless a policy is issued, and the full premium paid.

Please be advised that any provision contained in this document, or in a document that is attached, linked or referenced in this document, that under applicable law illegally discriminates against a class of individuals based upon personal characteristics such as race, color, religion, sex, sexual orientation, gender identity, familial status, disability, national origin, or any other legally protected class, is illegal and unenforceable by law.

County Tax Roll Situs Address: 305 SW 345th Ave, Cornelius, OR 97123

2021 ALTA Owners Standard Coverage	Liability	$ 16,791,500.00	Premium	$	24,090.00
2021 ALTA Owners Extended Coverage	Liability	$	Premium	$	
2021 ALTA Lenders Standard Coverage	Liability	$	Premium	$	
2021 ALTA Lenders Extended Coverage	Liability	$	Premium	$	
Endorsement			Premium	$	
Govt Service Charge			Cost	$	30.00
City Lien/Service District Search			Cost	$	
Other			Cost	$	

Proposed Buyer: Holt Holdings OR, LLC, an Oregon limited liability company

We are prepared to issue Title Insurance Policy or Policies of First American Title Insurance Company, a Nebraska Corporation in the form and amount shown above, insuring title to the following described land:

The land referred to in this report is described in Exhibit A attached hereto.

and as of September 25, 2025 at 8:00 a.m., title to the fee simple estate is vested in:

Hillsboro School District 1J

Subject to the exceptions, exclusions, and stipulations which are ordinarily part of such Policy form and the following:

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.

2. Facts, rights, interests or claims which are not shown by the public records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.

3. Easements, or claims of easement, not shown by the public records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.

4. Any encroachment (of existing improvements located on the subject land onto adjoining land or of existing improvements located on adjoining land onto the subject land), encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject land.

5. Any lien, or right to a lien, for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.

The exceptions to coverage 1-5 inclusive as set forth above will remain on any subsequently issued Standard Coverage Title Insurance Policy.

In order to remove these exceptions to coverage in the issuance of an Extended Coverage Policy the following items are required to be furnished to the Company; additional exceptions to coverage may be added upon review of such information:

A. Survey or alternative acceptable to the company
B. Affidavit regarding possession
C. Proof that there is no new construction or remodeling of any improvement located on the premises. In the event of new construction or remodeling the following is required:
   i. Satisfactory evidence that no construction liens will be filed; or
   ii. Adequate security to protect against actual or potential construction liens;
   iii. Payment of additional premiums as required by the Industry Rate Filing approved by the Insurance Division of the State of Oregon

6. Water rights, claims or title to water, whether or not shown by the public record.

7. Any claim to (a) ownership of or rights to minerals and similar substances, including but not limited to ores, metals, coal, lignite, oil, gas, uranium, clay, rock, sand, and gravel located in, on, or under the Land or produced from the Land, whether such ownership or rights arise by lease, grant, exception, conveyance, reservation, or otherwise; and (b) any rights, privileges, immunities, rights of way, and easements associated therewith or appurtenant thereto, whether or not the interests or rights excepted in (a) or (b) appear in the Public Records.

8. Taxes for the fiscal year 2025-2026 a lien due, but not yet payable

9. The assessment roll and the tax roll disclose that the within described premises were specially zoned or classified for Farm use. If the land has become or becomes disqualified for such use under the statute, an additional tax or penalty may be imposed.

10. City liens, if any, of the City of Cornelius.

    Note: There are no liens as of September 12, 2025. All outstanding utility and user fees are not liens and therefore are excluded from coverage.

11. Statutory powers and assessments of Clean Water Services.

12. Limited access provisions contained in Deed to the State of Oregon, by and through its State Highway Commission recorded May 23, 1956 as Book 382, Page 129, which provides that no right of easement or right of access to, from or across the State Highway other than expressly therein provided for shall attach to the abutting property.

13. Non-Statutory Development Agreement and the terms and conditions thereof:

Between:	City of Cornelius, a municipal corporation of the State of Oregon
And:	Holt Properties-OR, Inc., an Oregon corporation
Recording Information:	April 13, 2016 as Fee No. 2016 027543

Modification and/or amendment by instrument:
Recording Information: August 03, 2017 as Fee No. 2017 061561

Collateral Assignment of Non-Statutory Development Agreement recorded June 25, 2021 as Fee No. 2021 072481

14. Reservation of utilities in vacated street area and the right to maintain the same as set forth in Ordinance No. 2021-06, a copy of which was
Recorded February 09, 2022 as Fee No. 2022 010039.

15. Any conveyance or encumbrance by Hillsboro School District 1J, should be executed pursuant to a proper resolution of the shareholders voted on at a duly called meeting of the shareholders in accordance with the By-Laws or other authority of the corporation.

Certified copies of the resolution authorizing the conveyance and encumbrances and of the minutes of the meeting of the shareholders and copies of the By-Laws or other authority for such conveyance or encumbrance should be furnished for examination.

The resolution should specify the officers authorized to sign on behalf of the corporation.

16. Unrecorded leases or periodic tenancies, if any.

- END OF EXCEPTIONS -

NOTE: We find no matters of public record against Holt Holdings OR, LLC that will take priority over any trust deed, mortgage or other security instrument given to purchase the subject real property as established by ORS 18.165.

NOTE: Taxes for the year 2024-2025 PAID IN FULL

Tax Amount:	$7,106.57
Map No.:	1S303A000100
Property ID:	R402497
Tax Code No.:	007.29

NOTE: This Preliminary Title Report does not include a search for Financing Statements filed in the Office of the Secretary of State, or in a county other than the county wherein the premises are situated, and no liability is assumed if a Financing Statement is filed in the Office of the County Clerk covering Crops on the premises wherein the lands are described other than by metes and bounds or under the rectangular survey system or by recorded lot and block.

NOTE: According to the public record, the following deed(s) affecting the property herein described have been recorded within 24 months of the effective date of this report: NONE

NOTE: We find no outstanding voluntary liens of record affecting subject property. An inquiry should be made concerning the existence of any unrecorded lien or other indebtedness which could give rise to any security interest in the subject property.

NOTE: Washington County Ordinance No. 289, filed in Washington County, Oregon, imposes a tax of $1.00 per $1,000.00 or fraction thereof on the transfer of real property located within Washington County.

Certain conveyances may be exempt from said ordinance, in which case, Washington County will require a correct and timely filing of an Affidavit of Exemption. For all deeds/conveyance documents which are recorded (including situations to meet lender requirements) either the transfer tax must be paid or affidavit acceptable to the County must be filed.

THANK YOU FOR CHOOSING FIRST AMERICAN TITLE!
WE KNOW YOU HAVE A CHOICE!

Recording Information

For county recording requirements and fees visit
https://www.washingtoncountyor.gov/at/recording

NOTE: Non-standard Document Fee of $20.00, if applicable, will be imposed by the county clerk for documents presented for recording that fail to meet the requirements established by ORS 205.27

You can also calculate fees by using our Title Fee Calculator at https://facc.firstam.com/.

Exhibit "A"

Real property in the County of Washington, State of Oregon, described as follows:

All that portion of the following lying South of the Southerly line of the Southern Pacific Railroad right of way:

Beginning at an iron pipe on the West line of County Road No. 528, which beginning point bears South 89°40' West 811.4 feet and North 0°24' East 182.5 feet from the Southeast corner of the Wm. McLinn Donation Land Claim No. 40 in Township 1 South, Range 3 West, of the Willamette Meridian, in the County of Washington and State of Oregon, said Beginning Point being also the Northeast corner of that certain 4.07 acre tract of land conveyed to C.B. Buchanan by deed recorded in Book 211, Page 280 of Washington County, Oregon Deed Records; running thence South 89°38' West 971.15 feet to an iron pipe marking the Northwest corner of the said Buchanan Tract, being also the Southeast corner of that certain 20 acre tract of land conveyed to Wm. Mann and Myrtle Mann as described in Book 149, Page 348 of said Deed Records; thence North 0°10' West along the East line of the said Mann Tract and said East line extended, a distance of 2062.4 feet to an iron pipe on the Southerly line of the Tualatin Valley (State) Highway; thence North 89°36' East on said boundary line 991.5 feet to a point on the West line of County Road No. 528; thence South 0°24' West along said West line, 2063.1 feet to the Place of Beginning.

Except part of Section 3, Township 1 South, Range 3 West, of the Willamette Meridian, in the County of Washington and State of Oregon, described as follows:

Beginning at an iron pipe on the East line of that tract conveyed to J.A. Oppenlander and wife in Book 216, Page 637, North 0°24' East 1159.2 feet from the Southeast corner thereof, said Beginning Point being on the West line of County Road No. 528, and bears South 89°40' West 811.4 feet and North 0°24' East 1341.7 feet from the Southeast corner of the Wm. McLinn Donation Land Claim No. 40 in said Township and Range, running thence South 89°38' West parallel with the South line of the said Oppenlander Tract 180.0 feet to an iron pipe; thence North 0°24' East 110.0 feet to an iron pipe; thence North 89°38' East parallel with the South line of the said Oppenlander Tract, 180.0 feet to an iron pipe on the East line thereof; thence South 0°24' West on said East line and on the West line of said county road, 110.0 feet to the Place of Beginning.

Also, except part of Section 3, Township 1 South, Range 3 West, of the Willamette Meridian, in the County of Washington and State of Oregon, described as follows:

Beginning at the Southeast corner of that tract conveyed to J.A. Oppenlander et ux, by deed recorded in Book 216, Page 637; thence running North 0°24' East on the East line of said tract and on the West line of County Road No. 528, a distance of 100 feet; thence running South 89°38' West parallel with the South line of said Oppenlander Tract 160 feet; thence running South 0°24' West parallel with the West line of said County Road, 100 feet to the South line of said Oppenlander Tract; thence running North 89°38' East on the South line of said tract, 160 feet to the Place of Beginning.

Excepting therefrom any portion thereof lying within the boundaries of public roads.

Further excepting therefrom that portion conveyed to the City of Cornelius by Deed recorded March 31, 2017 as Fe No. 2017 025867.

NOTE: This legal description was created prior to January 1, 2008.

First American Title Insurance Company

SCHEDULE OF EXCLUSIONS FROM COVERAGE

ALTA LOAN POLICY (07/01/21)

The following matters are excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. a. any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) that restricts, regulates, prohibits, or relates to:
      i. the occupancy, use, or enjoyment of the Land;
      ii. the character, dimensions, or location of any improvement erected on the Land;
      iii. the subdivision of land; or
      iv. environmental remediation or protection.
   b. any governmental forfeiture, police, regulatory, or national security power.
   c. the effect of a violation or enforcement of any matter excluded under Exclusion 1.a. or 1.b.

   Exclusion 1 does not modify or limit the coverage provided under Covered Risk 5 or 6.
2. Any power of eminent domain. Exclusion 2 does not modify or limit the coverage provided under Covered Risk 7.
3. Any defect, lien, encumbrance, adverse claim, or other matter:
   a. created, suffered, assumed, or agreed to by the Insured Claimant;
   b. not Known to the Company, not recorded in the Public Records at the Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   c. resulting in no loss or damage to the Insured Claimant;
   d. attaching or created subsequent to the Date of Policy (Exclusion 3.d. does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
   e. resulting in loss or damage that would not have been sustained if consideration sufficient to qualify the Insured named in Schedule A as a bona fide purchaser or encumbrancer had been given for the Insured Mortgage at the Date of Policy.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business law.
5. Invalidity or unenforceability of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury law or Consumer Protection Law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights law, that the transaction creating the lien of the Insured Mortgage is a:
   a. fraudulent conveyance or fraudulent transfer;
   b. voidable transfer under the Uniform Voidable Transactions Act; or
   c. preferential transfer:
      i. to the extent the Insured Mortgage is not a transfer made as a contemporaneous exchange for new value; or
      ii. for any other reason not stated in Covered Risk 13.b.
7. Any claim of a PACA-PSA Trust. Exclusion 7 does not modify or limit the coverage provided under Covered Risk 8.
8. Any lien on the Title for real estate taxes or assessments imposed by a governmental authority and created or attaching between the Date of Policy and the date of recording of the Insured Mortgage in the Public Records. Exclusion 8 does not modify or limit the coverage provided under Covered Risk 2.b. or 11.b.
9. Any discrepancy in the quantity of the area, square footage, or acreage of the Land or of any improvement to the Land.

ALTA OWNER'S POLICY (07/01/21)

The following matters are excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. a. any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) that restricts, regulates, prohibits, or relates to:
      i. the occupancy, use, or enjoyment of the Land;
      ii. the character, dimensions, or location of any improvement on the Land;
      iii. the subdivision of land; or
      iv. environmental remediation or protection.
   b. any governmental forfeiture, police, regulatory, or national security power.
   c. the effect of a violation or enforcement of any matter excluded under Exclusion 1.a. or 1.b.

   Exclusion 1 does not modify or limit the coverage provided under Covered Risk 5 or 6.
2. Any power of eminent domain. Exclusion 2 does not modify or limit the coverage provided under Covered Risk 7.
3. Any defect, lien, encumbrance, adverse claim, or other matter:
   a. created, suffered, assumed, or agreed to by the Insured Claimant;
   b. not Known to the Company, not recorded in the Public Records at the Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
   c. resulting in no loss or damage to the Insured Claimant;
   d. attaching or created subsequent to the Date of Policy (Exclusion 3.d. does not modify or limit the coverage provided under Covered Risk 9 or 10); or
   e. resulting in loss or damage that would not have been sustained if consideration sufficient to qualify the Insured named in Schedule A as a bona fide purchaser had been given for the Title at the Date of Policy.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights law, that the transaction vesting the Title as shown in Schedule A is a:
   a. fraudulent conveyance or fraudulent transfer;
   b. voidable transfer under the Uniform Voidable Transactions Act; or
   c. preferential transfer:
      i. to the extent the instrument of transfer vesting the Title as shown in Schedule A is not a transfer made as a contemporaneous exchange for new value; or
      ii. for any other reason not stated in Covered Risk 9.b.
5. Any claim of a PACA-PSA Trust. Exclusion 5 does not modify or limit the coverage provided under Covered Risk 8.
6. Any lien on the Title for real estate taxes or assessments imposed or collected by a governmental authority that becomes due and payable after the Date of Policy. Exclusion 6 does not modify or limit the coverage provided under Covered Risk 2.b.
7. Any discrepancy in the quantity of the area, square footage, or acreage of the Land or of any improvement to the Land.

SCHEDULE OF STANDARD EXCEPTIONS

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.
2. Facts, rights, interests or claims which are not shown by the public records but which could be ascertained by an inspection of the land or by making inquiry of persons in possession thereof.
3. Easements, or claims of easement, not shown by the public records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.
4. Any encroachment (of existing improvements located on the subject land onto adjoining land or of existing improvements located on adjoining land onto the subject land), encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject land.
5. Any lien" or right to a lien, for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.

NOTE: A SPECIMEN COPY OF THE POLICY FORM (OR FORMS) WILL BE FURNISHED UPON REQUEST Rev. 07-01-21

Privacy Notice

Last Updated and Effective Date: December 1, 2024

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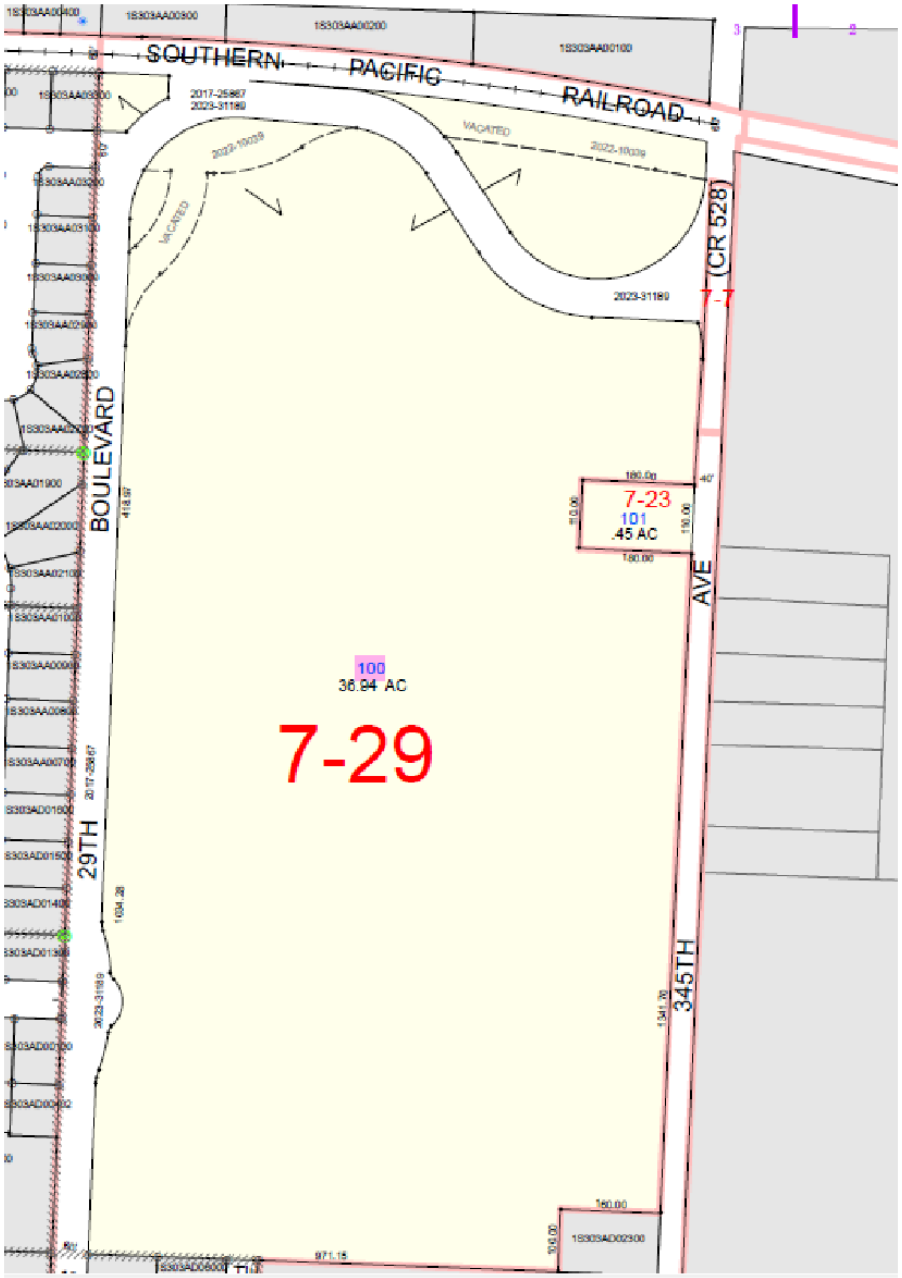
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First American

This map is provided as a courtesy by First American Title Insurance Company to assist in the locating of said premises and the company assumes no liability for its accuracy or for matters that may be disclosed by a survey.

Exhibit D: Washington County Assessor's Map

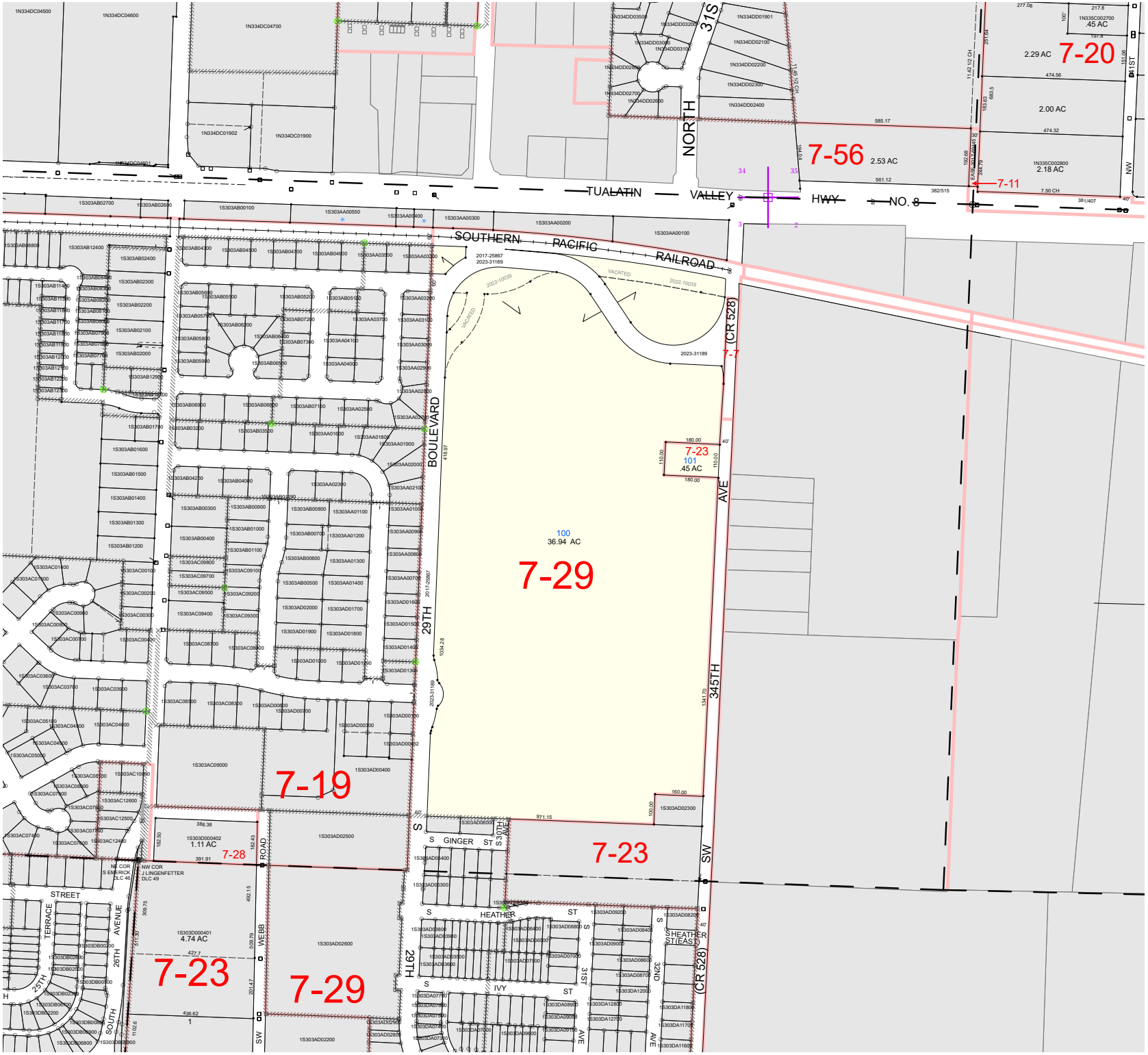

1S303A
WASHINGTON COUNTY OREGON
NE 1/4 SECTION 3 T1S R3W
SCALE 1"= 200'
7-20
7-56
7-11
7-7
7-23
7-29
7-19
7-28
NORTH
TUALATIN VALLEY HWY NO. 8
SOUTHERN PACIFIC RAILROAD
BOULEVARD
29TH
345TH AVE
(CR 528)
SW ROAD
WEBB STREET
HEATHER ST
IVY ST
GINGER ST
SECTION 3
FOR ADDITIONAL MAPS VISIT OUR WEBSITE AT
www.washingtoncountyor.gov/gis
Cancelled Taxlots For: 1S303A
602, 190, 280, 2200, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2005, 2006, 102, 103, 104, 105, 200, 270, 290, 300, 390, 400, 500, 600, 601, 690, 700, 701, 702, 790, 800, 900, 1000, 1100, 1200, 1300, 1400, 1500, 1700, 1800, 1900, 2000, 2001, 2002, 2003, 2004, 2007, 2008, 1600
Feet
0 100 200 400 600
Assessment CARTOGRAPHY Taxation
PLOT DATE: 8/2/2023
FOR ASSESSMENT PURPOSES ONLY - DO NOT RELY ON FOR OTHER USE
Map areas delineated by either gray shading or a cross-hatched pattern are for reference only and may not indicate the most current property boundaries. Please consult the appropriate map for the most current information.
CORNELIUS
1S303A

Exhibit E: Clean Water Services (CWS) Service Provider Letter

Clean Water Services

SENSITIVE AREA PRE-SCREENING SITE ASSESSMENT

Clean Water Services File Number 25-003034

1. **Jurisdiction:** Washington County

2. **Property Information** (example: 1S234AB01400)
   Tax lot ID(s): 1S303A000100

   ***OR* Site Address:** 305 SW 345th
   City, State, Zip: Cornelius,OR,97113
   Nearest cross street:

3. **Owner Information**
   Name:
   Company: Hillsboro School District
   Address: 3083 NE 49th Place #200
   City, State, Zip: Hillsboro,OR,97124
   Phone/fax:
   Email:

4. **Development Activity** (check **all** that apply)
   - ☐ Addition to single family residence (rooms, deck, garage)
   - ☐ Lot line adjustment
   - ☐ Minor land partition
   - ☐ Residential condominium
   - ☐ Commercial condominium
   - ☒ Residential subdivision
   - ☐ Commercial subdivision
   - ☐ Single lot commercial
   - ☐ Multi lot commercial

   Other

4. **Applicant Information**
   Name: Maggie Gordon
   Company: AKS Engineering & Forestry, LLC
   Address: 12965 SW Herman Road, Suite 100
   City, State, Zip: Tualatin,OR,97062
   Phone/fax: 5035636151
   Email: gordonm@aks-eng.com

6. **Will the project involve any off-site work?** ☐ Yes ☒ No ☐ Unknown
   Location and description of off-site work:

7. **Additional comments or information that may be needed to understand your project:**
   We already have an SPL for a partition plat for this property - 25-001854. Sending this in for a subdivision. Anything that could be done to expedite, would be appreciated. Thank you.

This application does NOT replace Grading and Erosion Control Permits, Connection Permits, Building Permits, Site Development Permits, DEQ 1200-C Permit or other permits as issued by the Department of Environmental Quality, Department of State Lands and/or Department of the Army COE. All required permits and approvals must be obtained and completed under applicable local, state, and federal law.

By signing this form, the Owner or Owner's authorized agent or representative, acknowledges and agrees that employees of Clean Water Services have authority to enter the project site at all reasonable times for the purpose of inspecting project site conditions and gathering information related to the project site. I certify that I am familiar with the information contained in this document, and to the best of my knowledge and belief, this information is true, complete, and accurate.

Print/type name Maggie Gordon Print/type title Project Coordinator

Signature ONLINE SUBMITTAL Date 10/29/2025

FOR DISTRICT USE ONLY

- ☐ Sensitive areas potentially exist on site or within 200' of the site. **THE APPLICANT MUST PERFORM A SITE ASSESSMENT PRIOR TO ISSUANCE OF A SERVICE PROVIDER LETTER.** If Sensitive Areas exist on the site or within 200 feet on adjacent properties, a Natural Resources Assessment Report may also be required.
- ☒ Based on review of the submitted materials and best available information sensitive areas do not appear to exist on site or within 200' of the site. This Sensitive Area Pre-Screening Site Assessment does NOT eliminate the need to evaluate and protect water quality sensitive areas if they are subsequently discovered. This document will serve as your Service Provider Letter as required by Resolution and Order 19-5, Section 3.02.1, as amended by Resolution and Order 19-22. All required permits and approvals must be obtained and completed under applicable local, State and federal law.
- ☐ Based on review of the submitted materials and best available information the above referenced project will not significantly impact the existing or potentially sensitive area(s) found near the site. This Sensitive Area Pre-Screening Site Assessment does NOT eliminate the need to evaluate and protect additional water quality sensitive areas if they are subsequently discovered. This document will serve as your Service Provider Letter as required by Resolution and Order 19-5, Section 3.02.1, as amended by Resolution and Order 19-22. All required permits and approvals must be obtained and completed under applicable local, state and federal law.
- ☒ **THIS SERVICE PROVIDER LETTER IS NOT VALID UNLESS** 1 **CWS APPROVED SITE PLAN(S) ARE ATTACHED.**
- ☐ The proposed activity does not meet the definition of development or the lot was platted after 9/9/95 ORS 92.040(2). **NO SITE ASSESSMENT OR SERVICE PROVIDER LETTER IS REQUIRED.**

Reviewed by alex gallluzzo Date 11/04/25

Once complete, email to: **SPLReview@cleanwaterservices.org** • Fax: **(503) 681-4439**

OR mail to: SPL Review, Clean Water Services, 2550 SW Hillsboro Highway, Hillsboro, Oregon 97123

Revised 2/2020

Approved by: Alex Galluzzo
Date 11/04/25
Attachment 1 of 1

Clean Water Services

N

SCALE: 1" = 80 FEET
80 0 16 40 80
ORIGINAL PAGE SIZE: 22" x 34"

ACTIVE RR CROSSING WITH GATES (CONSTRUCTED CONCURRENTLY BY CITY BY PHASE 3)

14-FT SOUTHBOUND LANE WITH 11-FT NORTHBOUND LEFT AND RIGHT TURN LANES (CONSTRUCTED CONCURRENTLY BY CITY BY PHASE 3)

CHERRY PLACE OPEN TO 345TH AVE

SW 345TH AVE (COLLECTOR)

8.5' ROW DEDICATION

10-FT LANES (TYP) WITH 6-FT SIDEWALK ON WEST SIDE ONLY (CONSTRUCTED BY CITY CONCURRENTLY BY PHASE 3)

BY CITY

BY CITY

10-FT LANES (TYP) WITH 12-FT MULTI-USE PATH ON WEST SIDE ONLY (CONSTRUCTED BY CITY CONCURRENTLY BY PHASE 3)

MINI-ROUNDABOUT (CONSTRUCTED BY CITY CONCURRENTLY BY PHASE 3)

PHASE 1 CONNECTION CONSISTS OF TEMPORARY GRAVEL ACCESS ROAD TO 345TH AVE WITH GATES FOR EMERGENCY ACCESS ONLY

8.5' ROW DEDICATION

TRACT C

TRACT D

32ND AVE

SCHOOL PARCEL

PHASE 3

31ST AVE

CHESTNUT ST

ALLEY C

DOGWOOD ST (COLLECTOR)

CONSTRUCTED DURING PHASE 1 BY DEVELOPER WITH OVERSIZE IMPROVEMENTS ELIGIBLE FOR TDT CREDITS

ALLEY E

ELDER WAY

PHASE 1

EXISTING ROW TO BE VACATED BY CITY

TRACT F

CHERRY PL

30TH AVE

30TH AVE

PHASE 2

TRACT A
OPEN SPACE PARK

TRACT E
STORMWATER FACILITY

TRACT B

29TH PL

EXISTING ROW TO BE VACATED BY CITY

ALPINE ST

EXISTING ROW TO BE VACATED BY CITY

28TH AVE

MINI-ROUNDABOUT TO BE CONSTRUCTED BY DEVELOPER DURING PHASE 1 WITH OVERSIZE IMPROVEMENTS ELIGIBLE FOR TDT CREDITS

CONSTRUCTED DURING PHASE 1 BY DEVELOPER WITH OVERSIZE IMPROVEMENTS ELIGIBLE FOR TDT CREDITS

AKS DRAWING FILE: 4636-05 20251027 PRELIM PTNLDWG | LAYOUT: LAYOUT

DATE: 10/29/2025 AKS JOB: 4636-05

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PRELIMINARY TRANSPORTATION NETWORK
LAUREL CROWN

THE HOLT GROUP, INC.
CORNELIUS, OREGON

EXHIBIT D

Exhibit F: Transportation Impact Study [Updated]

lancaster mobley

Laurel Crown Subdivision

Transportation Impact Study

Cornelius, Oregon



EXPIRES: 06/30/27

Date:
December 11, 2025

Prepared for:
Joe Schiewe
Holt Homes

Prepared by:
Todd Mobley, PE
Ken Kim, PE

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Executive Summary

1. The proposed Laurel Crown Subdivision will include the development of 181 single-family detached housing units and 59 single-family attached housing units located at 305 SW 345th Avenue in Cornelius, Oregon. Access to the site will be provided via a total of five proposed public street connections to S Alpine Street, S Dogwood Street, S 29th Avenue, S 30th Avenue, and SW 345th Avenue. The project will be constructed in three phases, with the final phase connecting to SW 345th Avenue. A site plan is attached in the appendix.
2. The trip generation calculations show that the proposed project is projected to generate an additional 155 morning peak hour trips, 204 evening peak hour trips, and 2,130 average weekday trips.
3. Based on the most recent five years of available crash data, no significant trends or crash patterns were identified at any of the study intersections that were indicative of safety concerns. Accordingly, no safety mitigation is recommended.
4. Traffic signal warrants are not projected to be met at the intersection of SW Tualatin Valley Highway (OR 8) & SW 345th Avenue under year 2029 conditions, regardless of whether or not the proposed development is constructed. Therefore, no new traffic signals are necessary or recommended as part of the proposed development application.
5. All study intersections are currently operating acceptably per the agency standards and are projected to continue operating acceptably through the 2029 buildout year of the site. Accordingly, no operational mitigation is necessary or recommended at the study intersections.
6. A street connection to SW 345th Avenue will result in a significant redistribution of existing and background trips, which will trigger the need for separate northbound left and right-turn lanes on SW 345th Avenue at SW Tualatin Valley Highway. These improvements will be needed at the time of the eventual street connection, even without trips from the proposed Laurel Crown subdivision.
7. In general, changes in 95th percentile queuing between the year 2029 background and buildout conditions are anticipated to be small. Although several of the 95th percentile queues are estimated to extend beyond available storage, most of the queues would be present under both background and buildout conditions. The proposed Laurel Crown Subdivision will not measurably change any of these queues.

Project Description

Introduction

The proposed Laurel Crown Subdivision will include the development of 181 single-family detached housing units and 59 single-family attached housing units located at 305 SW 345th Avenue in Cornelius, Oregon. Access to the site will be provided via a total of five proposed public street connections to S Alpine Street, S Dogwood Street, S 29th Avenue, S Ginger Street, and SW 345th Avenue. The project will be constructed in three phases, with the final phase connecting the drive access to SW 345th Avenue. A site plan is attached in the appendix.

The report conducts safety and capacity/level of service analyses at the following intersections during the morning and evening peak hours:

1. SW Tualatin Valley Highway (OR 8) & S 20th Avenue
2. SW Tualatin Valley Highway (OR 8) & S 26th Avenue
3. S Dogwood Street & S 26th Avenue
4. SW Tualatin Valley Highway (OR 8) & SW 345th Avenue

The purpose of this study is to determine whether the transportation system within the vicinity of the site is capable of safely and efficiently supporting the existing and proposed uses, and to determine any mitigation that may be necessary to do so. Detailed information on traffic counts, trip generation calculations, safety analyses, and level of service calculations is included in the appendices to this report.

Location Description

The project site is located southwest of the intersection of SW Tualatin Valley Highway at SW 345th Avenue in Cornelius, Oregon. The site consists of a single property (Tax Lot: 1S303A000100) which encompasses an approximate total area of 36.94 acres. The site is surrounded by residential uses to the west and south, agriculture and residential uses to the east, and commercial uses to the north of the site. The project will be constructed in three phases, with ultimately two street connections provided to SW 345th Avenue. The timing of those connections is dependent on the timing of the City-led improvement of SW 345th Avenue. Figure 1 presents an aerial image of the nearby vicinity with the project site outlined in yellow. A site plan is included in Appendix A.



Figure 1: Aerial Photo of Site Vicinity (Image from Google Earth)

Vicinity Streets

The proposed development is expected to impact six roadways near the site. Table 1 provides a description of these vicinity roadways.

Table 1: Vicinity Roadway Descriptions

Street Name	Jurisdiction	Functional Classification[1]	Cross-Section	Speed (MPH)	Curbs & Sidewalks	On-Street Parking	Bicycle Facilities
SW Tualatin Valley Highway (OR 8)	ODOT	Statewide Highway (STA[2]) City Arterial	5 Lanes	40/50	Partially Both Sides	Not Permitted	Both Sides
S Dogwood Street	City	Collector	2 Lanes	25	Partial Both Sides	Permitted	None
S 20th Avenue	City	Collector	2 Lanes	25/30	Partial Both Sides	Partial Permitted	None
S 26th Avenue	City	Collector	2 Lanes	25	Partial Both Sides	Partial Permitted	None
S 29th Boulevard	City	Collector	2 Lanes	25	Both Sides	Permitted	East Side (Multi-Use Path)
SW 345th Avenue	City/County	Local/Collector	2 Lanes	25	None	Not Permitted	None

Notes:
1. Functional Classification from Figure 8-1 in the 2020 Cornelius Transportation System Plan.
2. STA = Special Transportation Area, west of S 20th Avenue.

Study Intersections

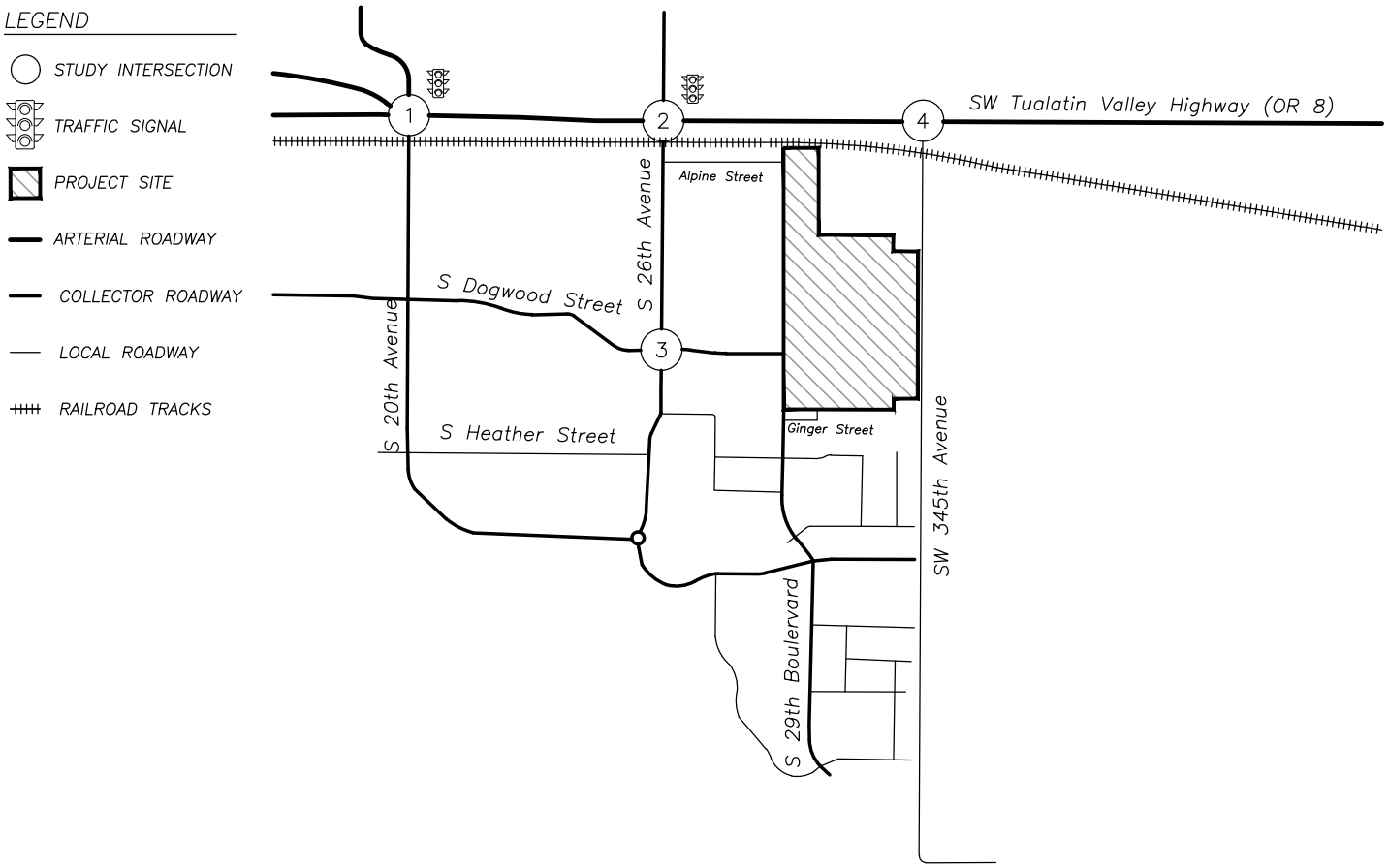
Based on coordination with agency staff, four intersections were identified for analysis. A summarized description of these study intersections, under their future planned/proposed lane configurations, is provided in Table 2.

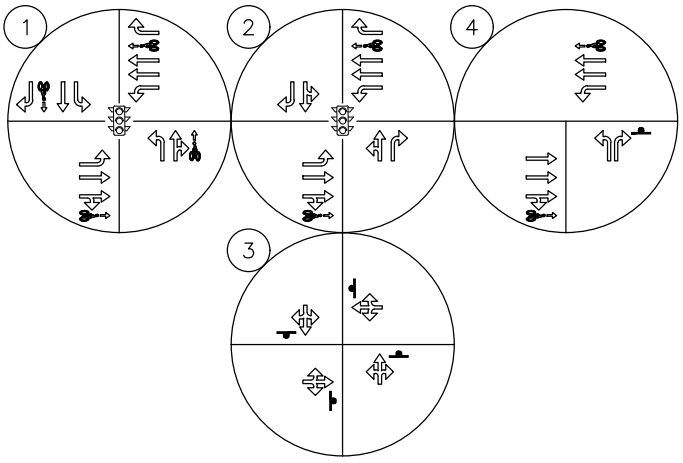
Table 2: Study Intersection Descriptions

Intersection		Geometry	Traffic Control	Phasing/Stopped Approaches
1	SW Tualatin Valley Highway (OR 8) & S 20th Avenue	Four-Legged	Signalized	EB/WB Protected Left-turns, NB/SB Permitted Left-turns
2	SW Tualatin Valley Highway (OR 8) & S 26th Avenue	Four-Legged	Signalized	EB/WB Protected & FYA Left-turns, NB/SB Permitted Left-turns
3	S Dogwood Street (OR 8) & S 26th Avenue	Four-Legged	Stop-Controlled	All-Way Stop Control
4	SW Tualatin Valley Highway (OR 8) & SW 345th Avenue	Three-Legged	Stop-Controlled	Stop-Controlled NB Approach

** The school driveway is an entrance only but some vehicles were observed exiting the driveway.*

A vicinity map showing the project site, vicinity streets, and study intersection configurations is shown in Figure 2.





no scale

lancaster mobley

VICINITY

Figure 2

Laurel Crown Subdivision

12/11/2025

Site Trips

Trip Generation

The proposed development will include the construction of 181 single-family detached and 59 single-family attached housing units while removing the existing single-family detached house. The project will be completed over three phases. Phase 1 will include the construction of 85 single-family detached and 30 single-family attached housing units with the proposed access along Dogwood Street, S 29th Avenue, and S 30th Avenue. Phase 2 will include the construction of 62 single-family detached and 16 single-family attached housing units with additional access along Alpine Street. Phase 3 will include the construction of 34 single-family detached and 13 single-family housing units with additional access along SW 345th Avenue.

To estimate the number of trips that will be generated by the existing and proposed uses, rates from the *Trip Generation Manual*[1] were used. Data from Land Use Code (LUC) 210, *Single-Family Detached Housing* and LUC 215, *Single-Family Attached Housing* were used to estimate trip generation of the existing and proposed uses based on the number of dwelling units.

The project will be constructed in three phases, with the final phase providing connections to SW 345th Avenue. Based on this, there will be the highest impact at the intersections of S 20th Avenue and S 26th Avenue along SW Tualatin Valley Highway after the completion of Phase 2, and then this impact will be spread to SW 345th Avenue after the completion of phase 3 with access to SW 345th Avenue. To compare the benefit of the SW 345th Avenue connection at full buildout, analysis was done both with and without this connection in place. Therefore, these three separate scenarios will be analyzed for the buildout conditions.

The trip generation calculations show that the proposed project is projected to generate an additional 155 morning peak hour trips, 204 evening peak hour trips, and 2,130 average weekday trips. The trip generation estimates are summarized in Table 3. Detailed trip generation calculations are included in the technical appendix.

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

Table 3: Trip Generation Summary

Land Use Assumption (ITE Code)	Intensity	Morning Peak Hour			Evening Peak Hour			Weekday Trips
		In	Out	Total	In	Out	Total	
Phases 1 & 2								
Single-Family Detached Housing (210)	147 units	26	77	103	87	51	138	1,386
Single-Family Attached Housing (215)	46 unit	6	16	22	15	11	26	332
Total Trips		32	93	125	102	62	164	1,718
Phase 3								
Single-Family Detached Housing (210)	34 units	6	18	24	20	12	32	320
Single-Family Attached Housing (215)	13 unit	1	5	6	5	3	8	92
Total Trips		7	23	30	25	15	40	412
Total Net New Trips		39	116	155	127	77	204	2,130

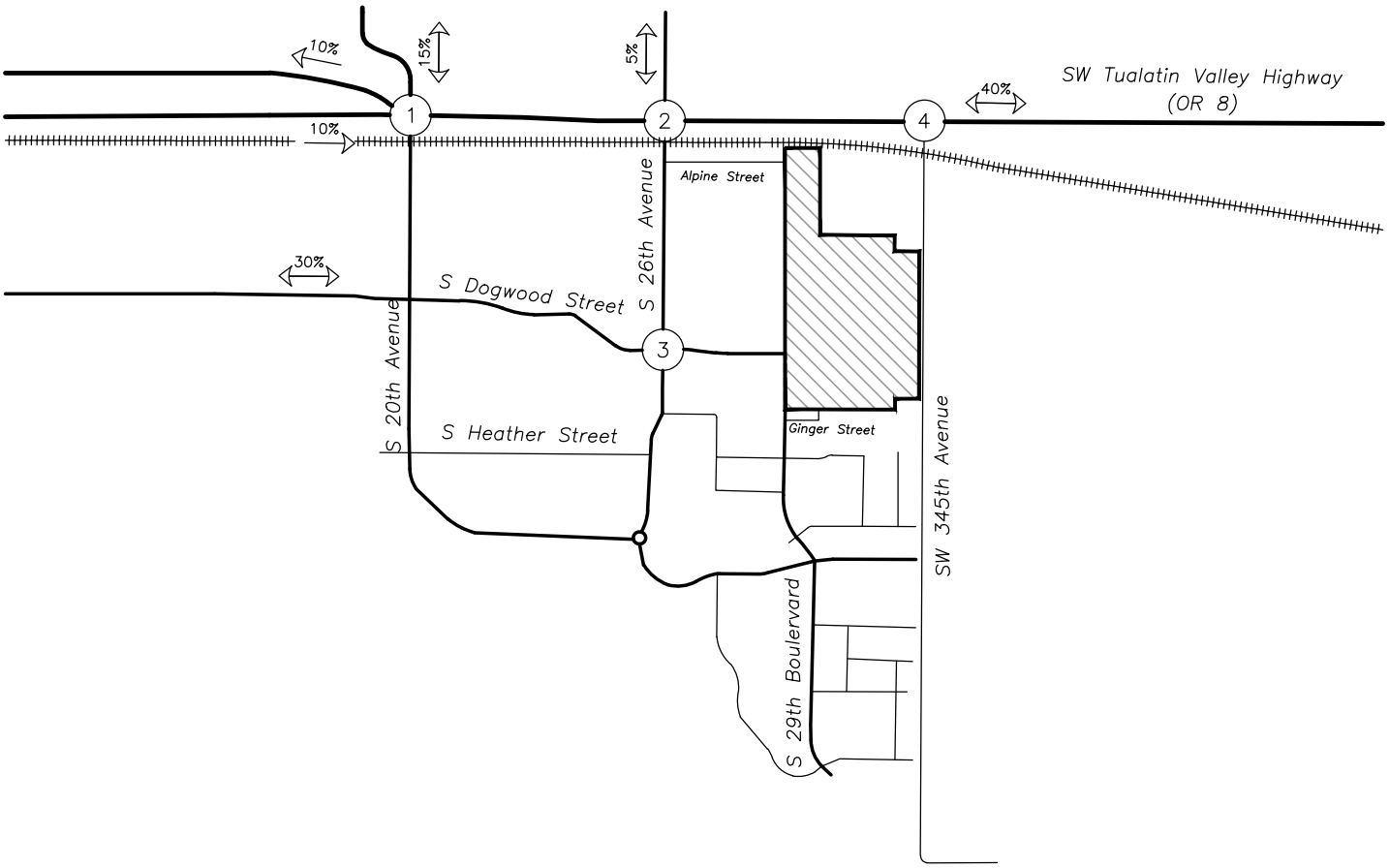
Trip Distribution

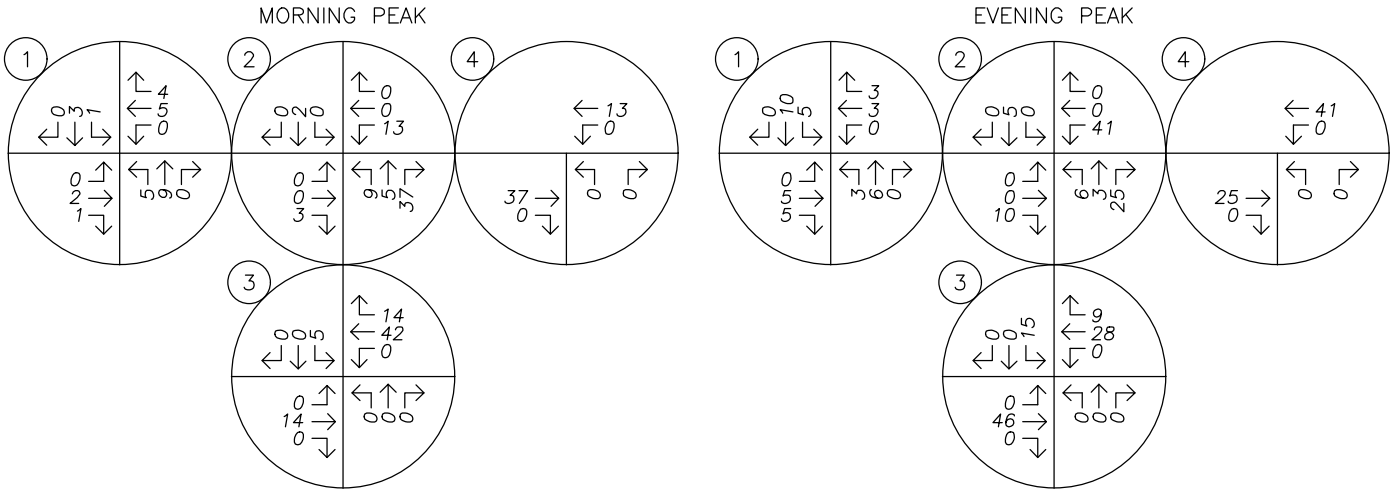
The trip distribution for the site was estimated based on the trip distribution used for the Laurel Woods Development TIA prepared in October 2016[2] and existing travel patterns at the study intersections that have been taken since much of Laurel Woods has been constructed and occupied. The following trip distribution was estimated and used for analysis:

- Approximately 40 percent of trips will travel to/from the east along SW Tualatin Valley Highway
- Approximately 30 percent of trips will travel to/from the west along S Dogwood Street
- Approximately 15 percent of trips will travel to/from the north along N 20th Avenue
- Approximately 10 percent of trips will travel to/from the west along SW Tualatin Valley Highway
- Approximately 5 percent of trips will travel to/from the north along N 26th Avenue

The trip distribution and assignment for the site trips generated during the morning and evening peak hours for three scenarios are shown in Figure 3, Figure 4, and Figure 5.

[2] Kittelson & Associates, Inc, *Transportation Impact Analysis Laurel Woods Development, Cornelius, Oregon,* October 2016.





LEGEND

XX% *PERCENT OF PROJECT TRIPS*

NET NEW TRIP GENERATION			
	IN	OUT	TOTAL
AM	32	93	125
PM	102	62	164

no scale

lancaster mobley

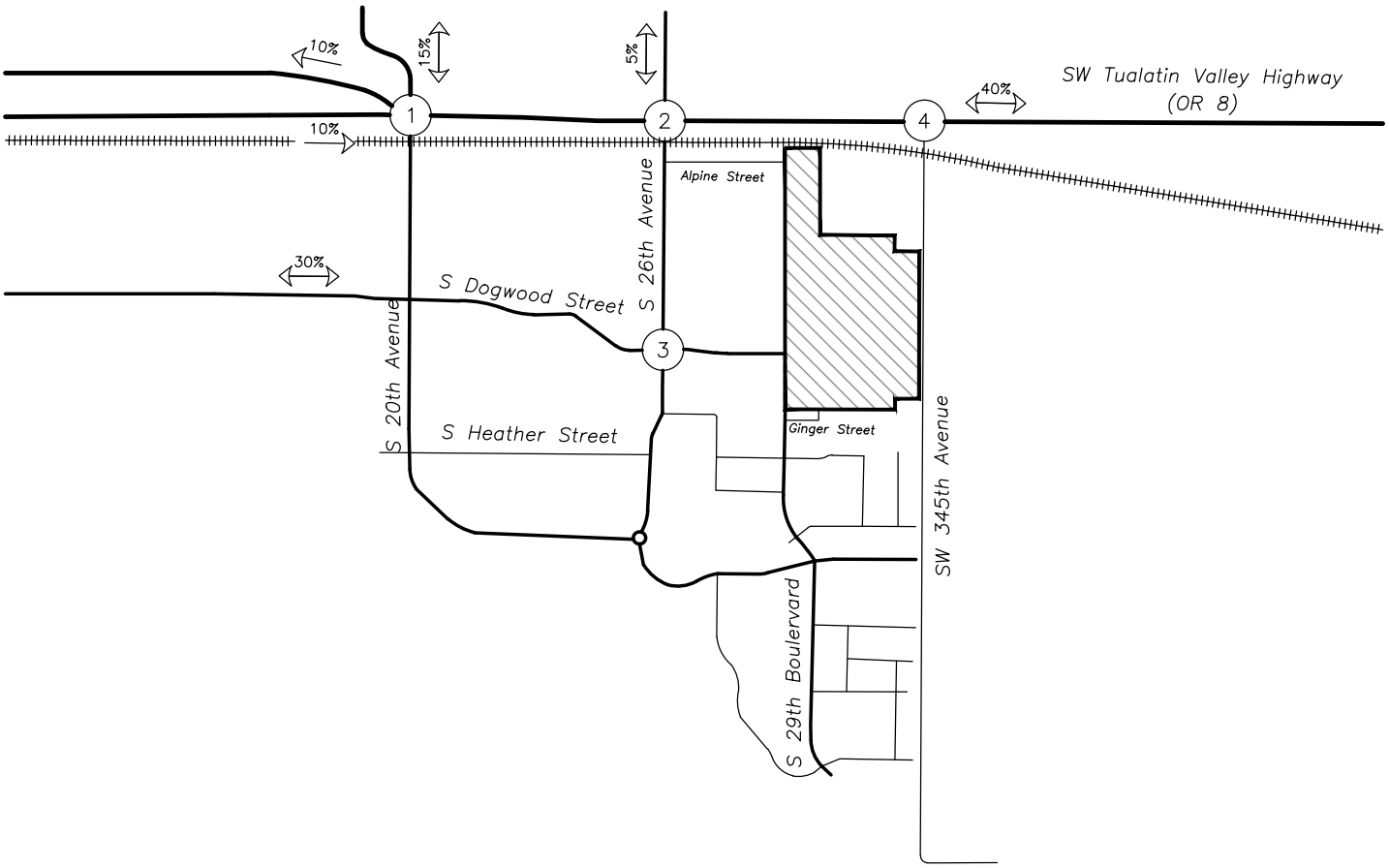
SITE TRIP DISTRIBUTION & ASSIGNMENT

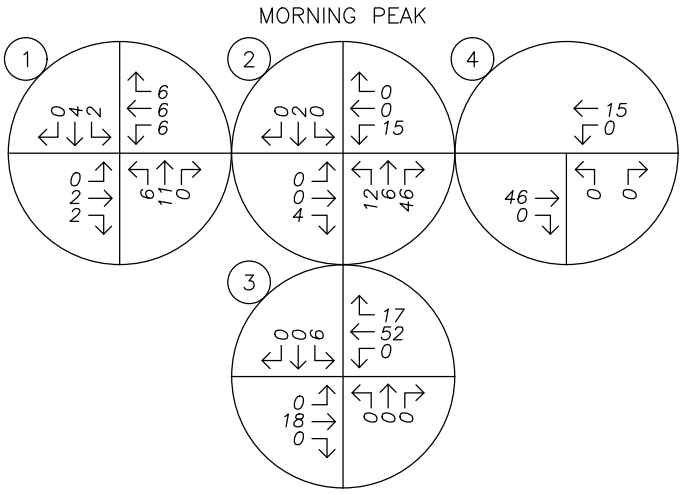
Proposed Development Plan - Phase 1&2 Site Trips
AM & PM Peak Hours

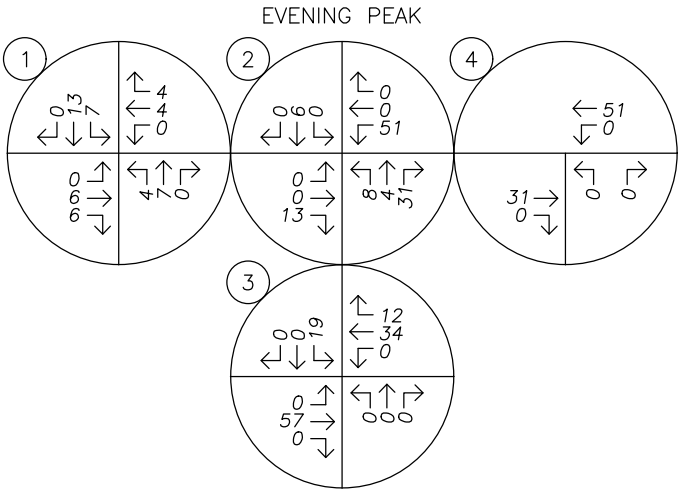
Figure 3

Laurel Crown Subdivision

12/11/2025







LEGEND

XX% *PERCENT OF PROJECT TRIPS*

NET NEW TRIP GENERATION			
	IN	OUT	TOTAL
AM	39	116	155
PM	127	77	204

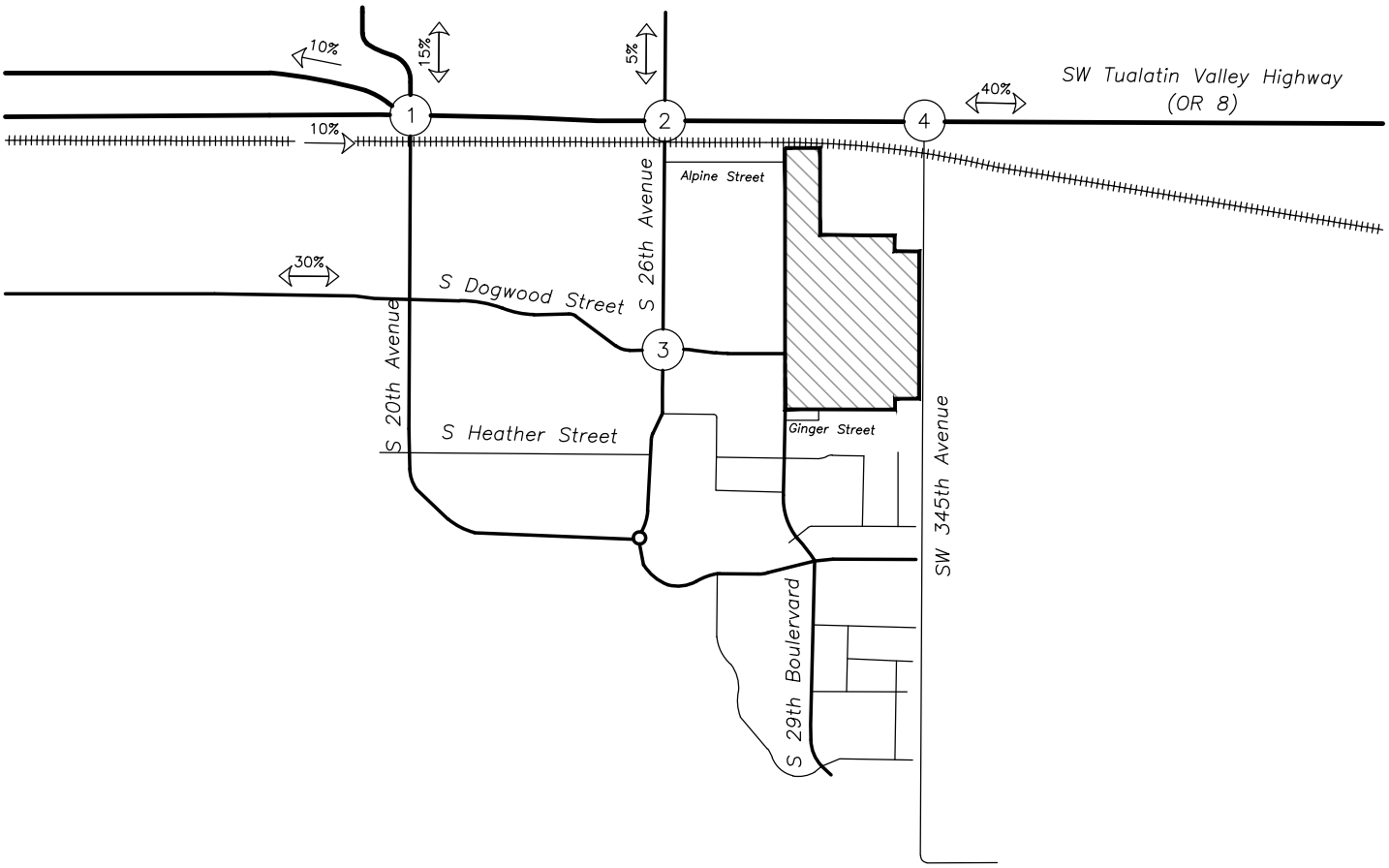
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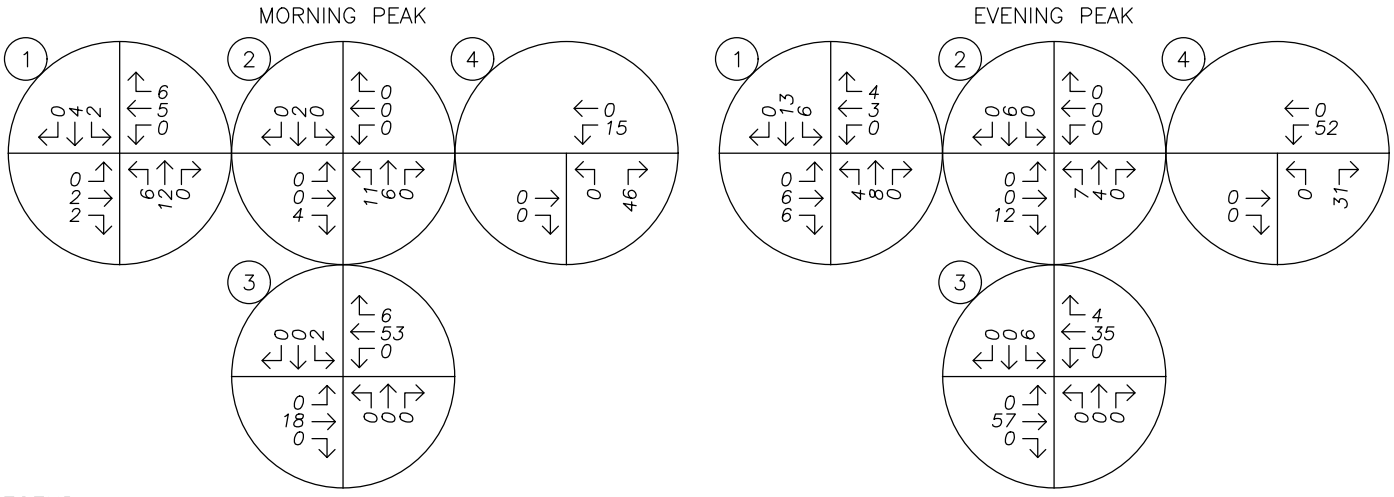
lancaster mobley

SITE TRIP DISTRIBUTION & ASSIGNMENT

Proposed Development Plan - Full w/o 345th Connection
AM & PM Peak Hours

Figure 4
Laurel Crown Subdivision
12/11/2025





LEGEND

XX% *PERCENT OF PROJECT TRIPS*

NET NEW TRIP GENERATION			
	IN	OUT	TOTAL
AM	39	116	155
PM	127	77	204

no scale

lancaster mobley

SITE TRIP DISTRIBUTION & ASSIGNMENT

Proposed Development Plan - Full w/ 345th Connection
AM & PM Peak Hours

Figure 5

Laurel Crown Subdivision

12/11/2025

Traffic Volumes

Existing Conditions

Traffic counts were conducted at the study intersections from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM on the following dates.

- SW Tualatin Valley Highway (OR 8) & S 20th Avenue (Tuesday, September 10, 2024)
- SW Tualatin Valley Highway (OR 8) & S 26th Avenue (Tuesday, September 10, 2024)
- S Dogwood Street & S 26th Avenue (Tuesday-Thursday, December 3-5, 2024)
- SW Tualatin Valley Highway (OR 8) & SW 345th Avenue (Tuesday, July 15, 2025)

Data was used from each intersection's morning and evening peak hours. For the intersection at S Dogwood Street along S 26th Avenue, tube counts were conducted along S Dogwood Street on the dates presented above. Traffic volumes along S 26th Avenue were estimated via volume balancing with the intersections of SW Tualatin Valley Highway and S Heather Street (Collected on Tuesday, September 10, 2024) along S 26th Avenue. Raw count data is included in Appendix C.

In order to approximate the existing year 2025 traffic volumes, a conservative compounded growth rate of three percent per year over a one-year period was applied to the traffic counts collected in 2024.

Figure 6 shows the year 2025 existing traffic volumes at the study intersections during the morning and evening peak hours.

Background Conditions

To provide an analysis of the impact of the proposed development on the nearby transportation facilities, an estimate of future traffic volumes is required. It is expected that phase 1 and phase 2 will be constructed and in operation by year 2028, and phase 3 with the site access to SW 345th Avenue will be constructed and in operation by year 2029. In order to approximate the future year 2028 and 2029 traffic volumes at the study intersections, a conservative compounded growth rate of three percent per year over a three and four-year period, respectively, were applied to all turning movements and study intersections. To compare the impact of SW 345th Avenue connection with full buildout condition, with and without SW 345th Avenue connection scenarios were evaluated under the future year 2029 condition. In addition to the general growth, traffic from the remaining phases of the Laurel Woods and Laurel Gardens developments were added to the network volumes.

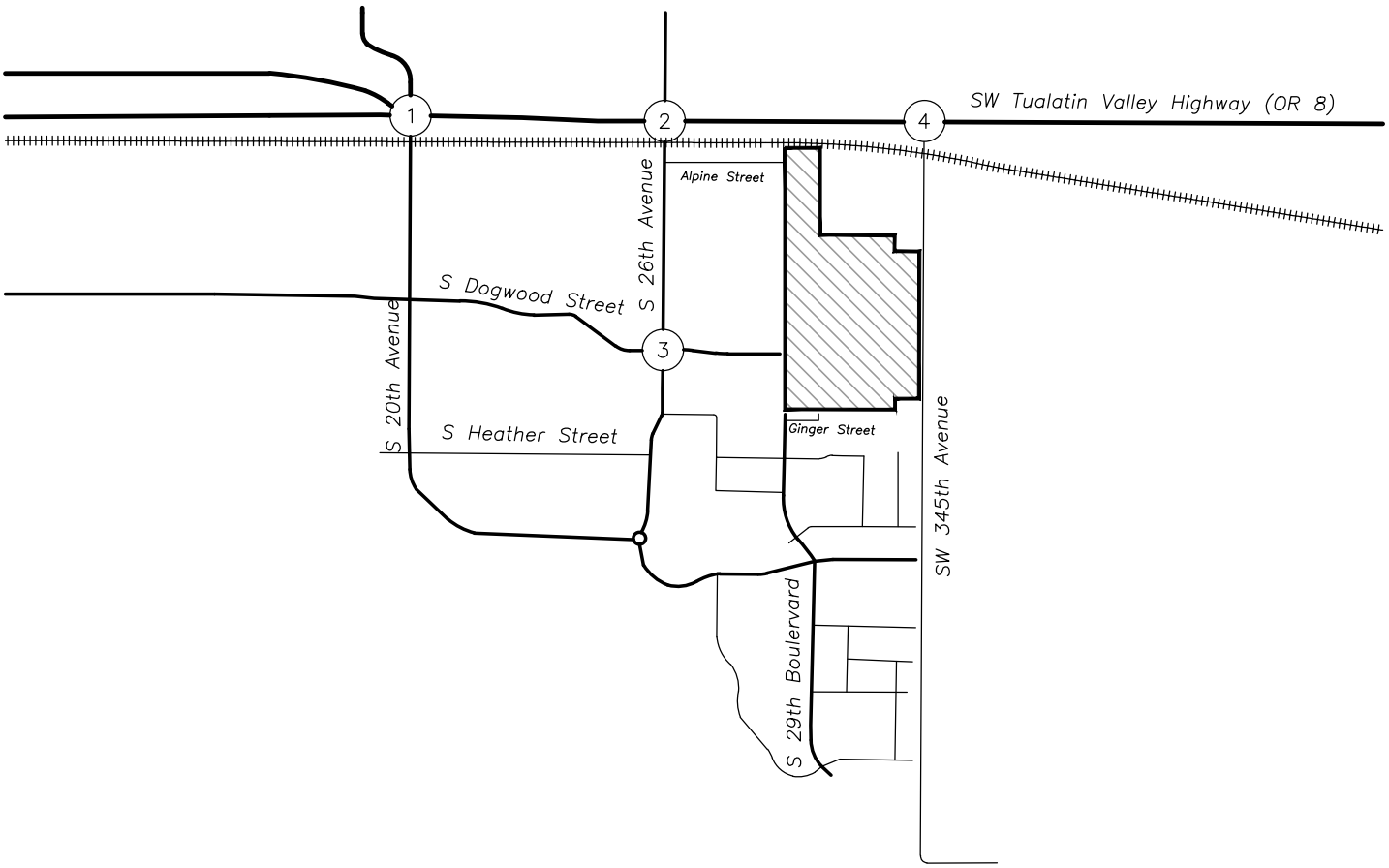
Figure 7, Figure 8, and Figure 9 show the morning and evening peak hours volumes under the year 2028, year 2029 background conditions without, and with SW 345th Connection.

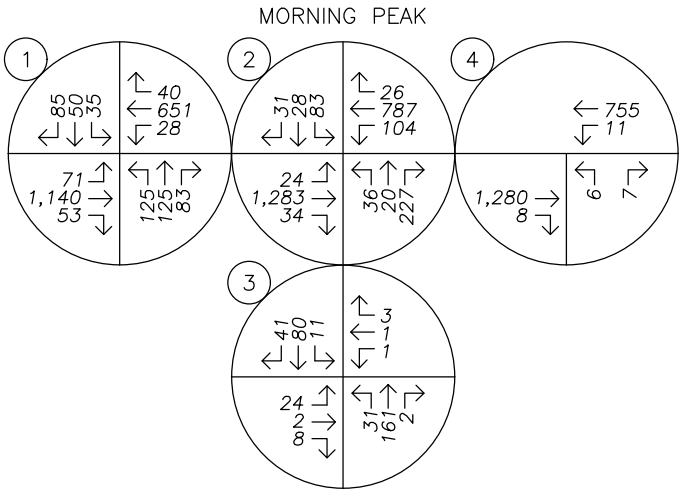
Buildout Conditions

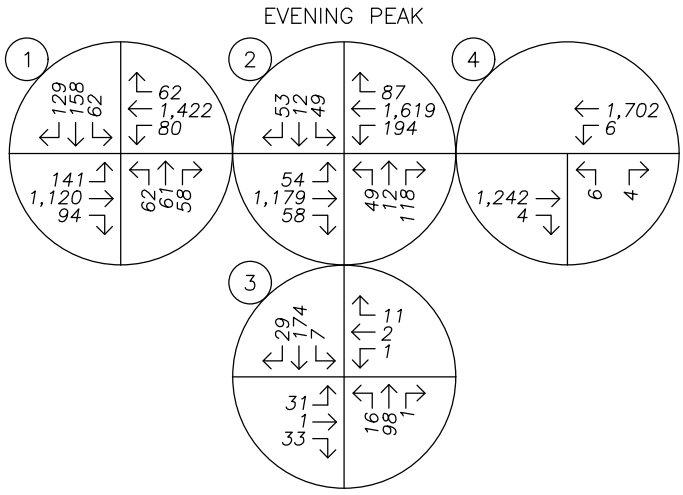
The net new peak hour trips calculated to be generated by the proposed development, as described earlier in the *Site Trips* section, were added to the projected background traffic volumes to obtain the expected 2028 and 2029 site buildout volumes. Three scenarios were considered for the buildout conditions. The first scenario was

the completion of phase 1 and phase 2 without the site access to SW 345th Avenue in 2028. The second scenario was the full buildout without the site access to SW 345th Avenue in 2029. The third scenario was the full buildout with the site access to SW 345th Avenue in 2029.

Figure 10, Figure 11, and Figure 12 show the morning and evening peak hour volumes under the year 2028, year 2029 buildout conditions without, and with SW 345th Connection.



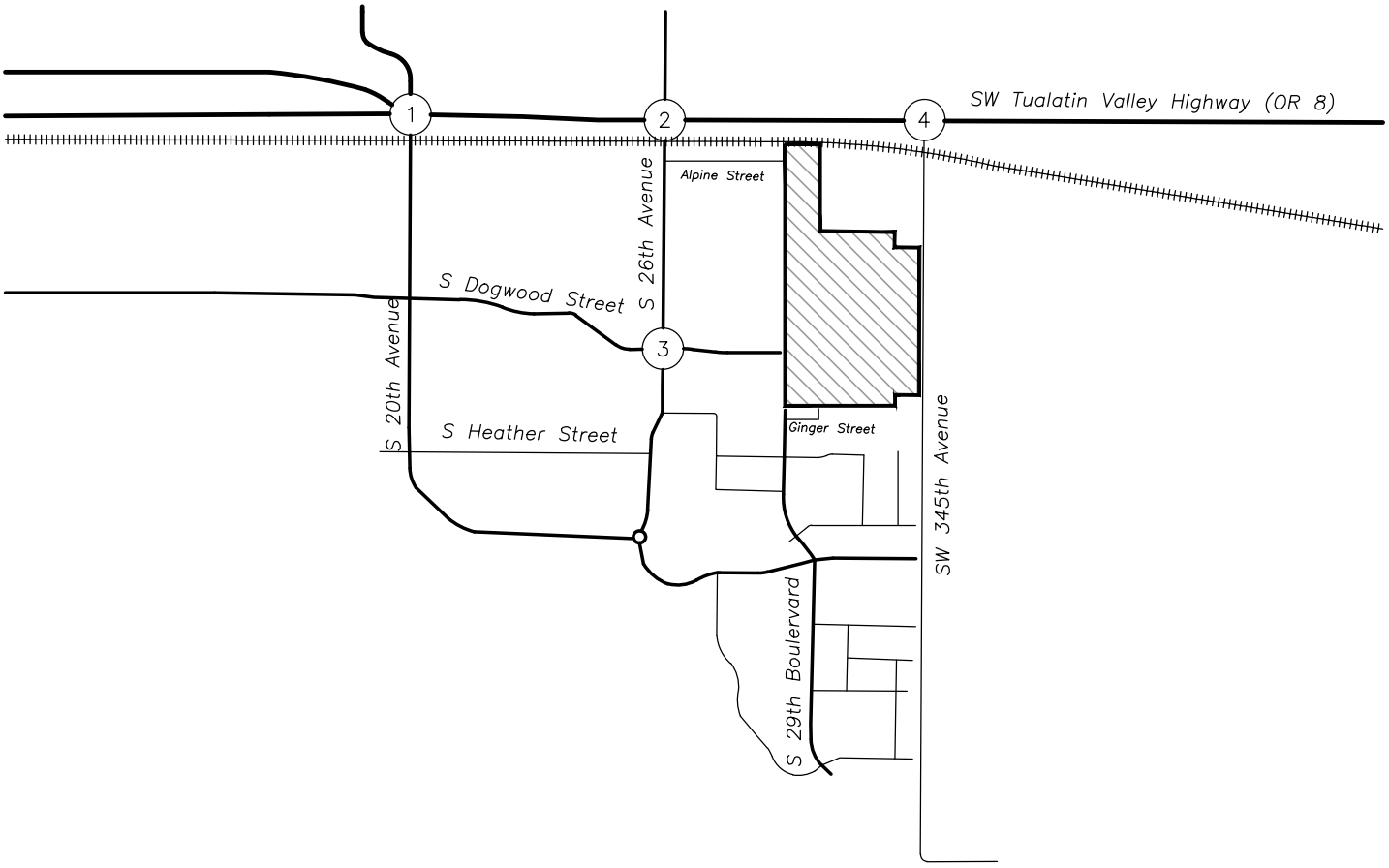


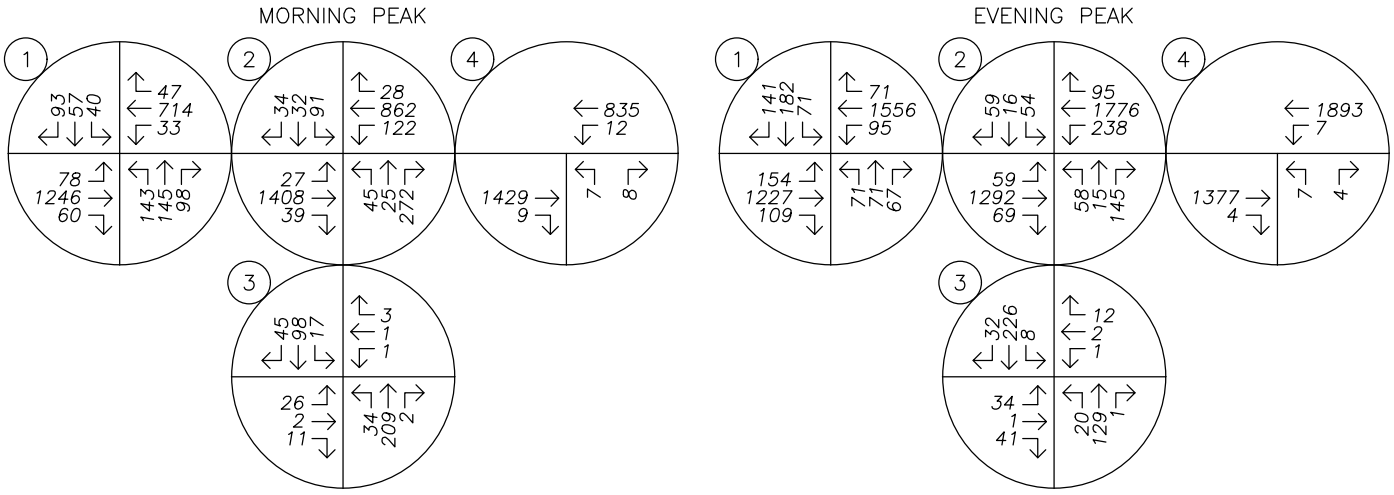


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TRAFFIC VOLUMES
2025 Existing Conditions
AM & PM Peak Hours

Figure 6
Laurel Crown Subdivision
12/11/2025

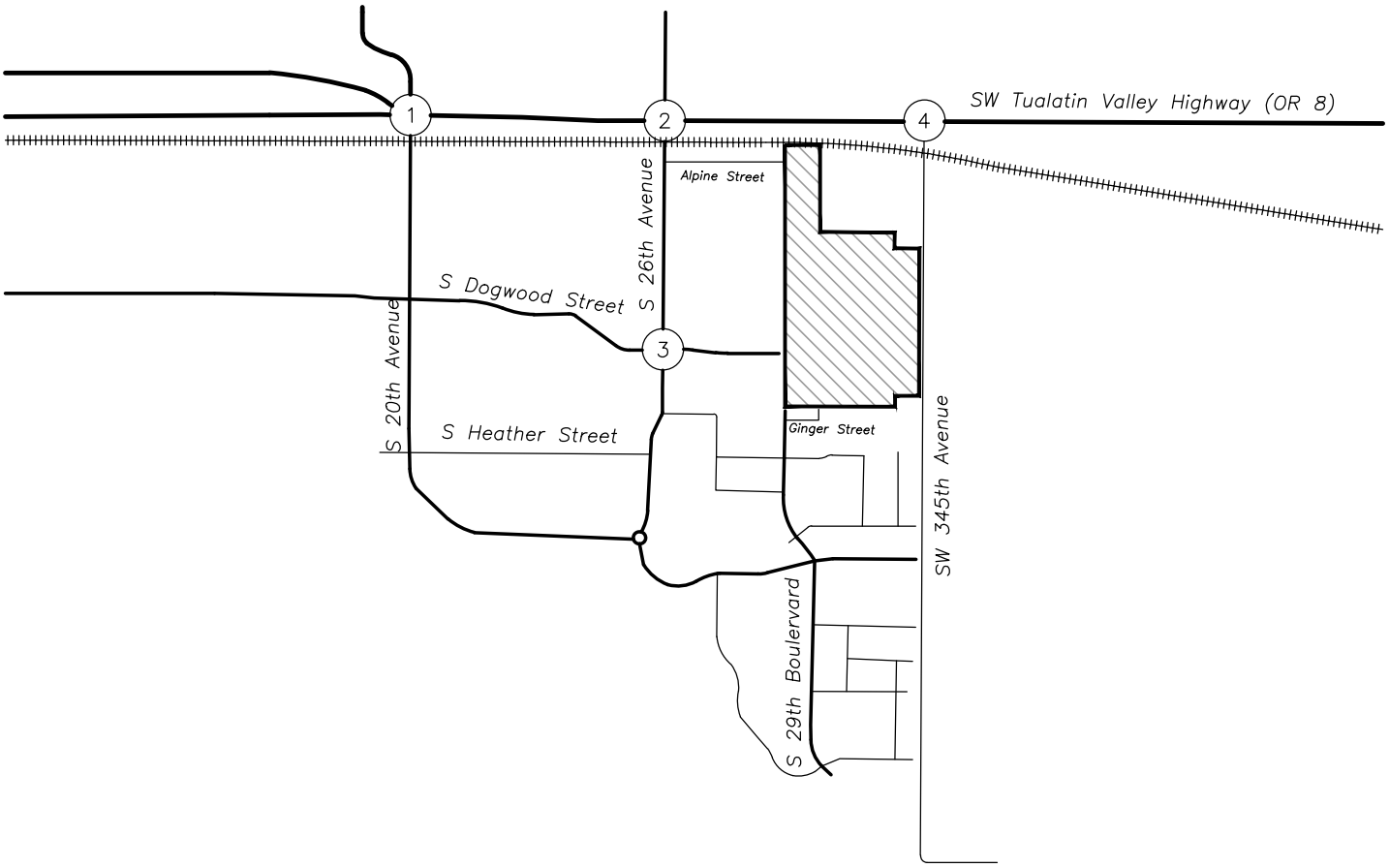


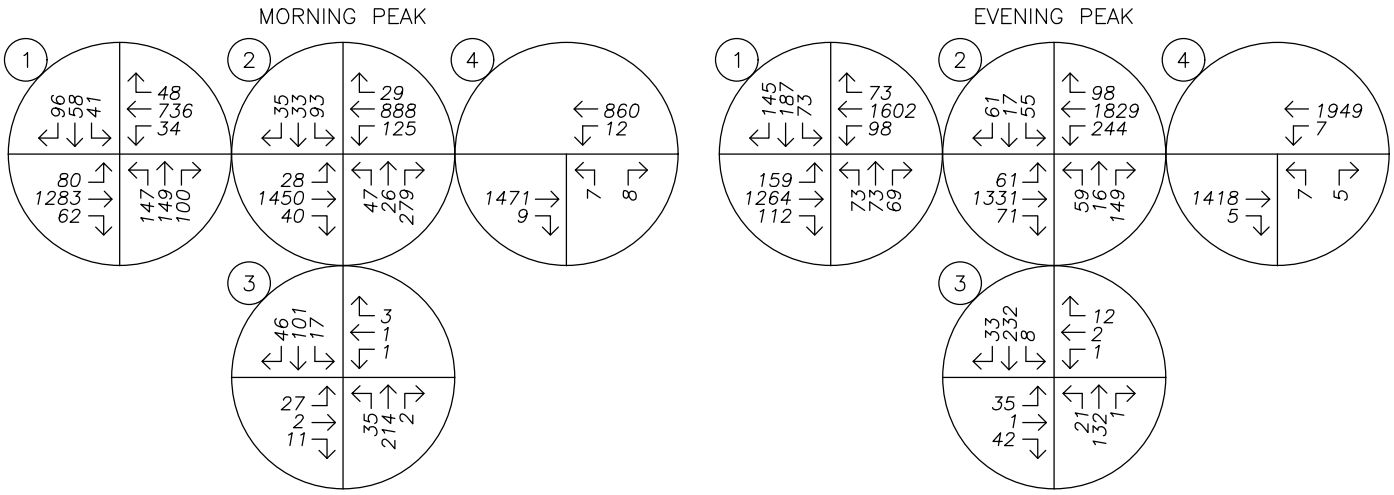


no scale

TRAFFIC VOLUMES
2028 Background Conditions
AM & PM Peak Hours

Figure 7
Laurel Crown Subdivision
12/11/2025





no scale

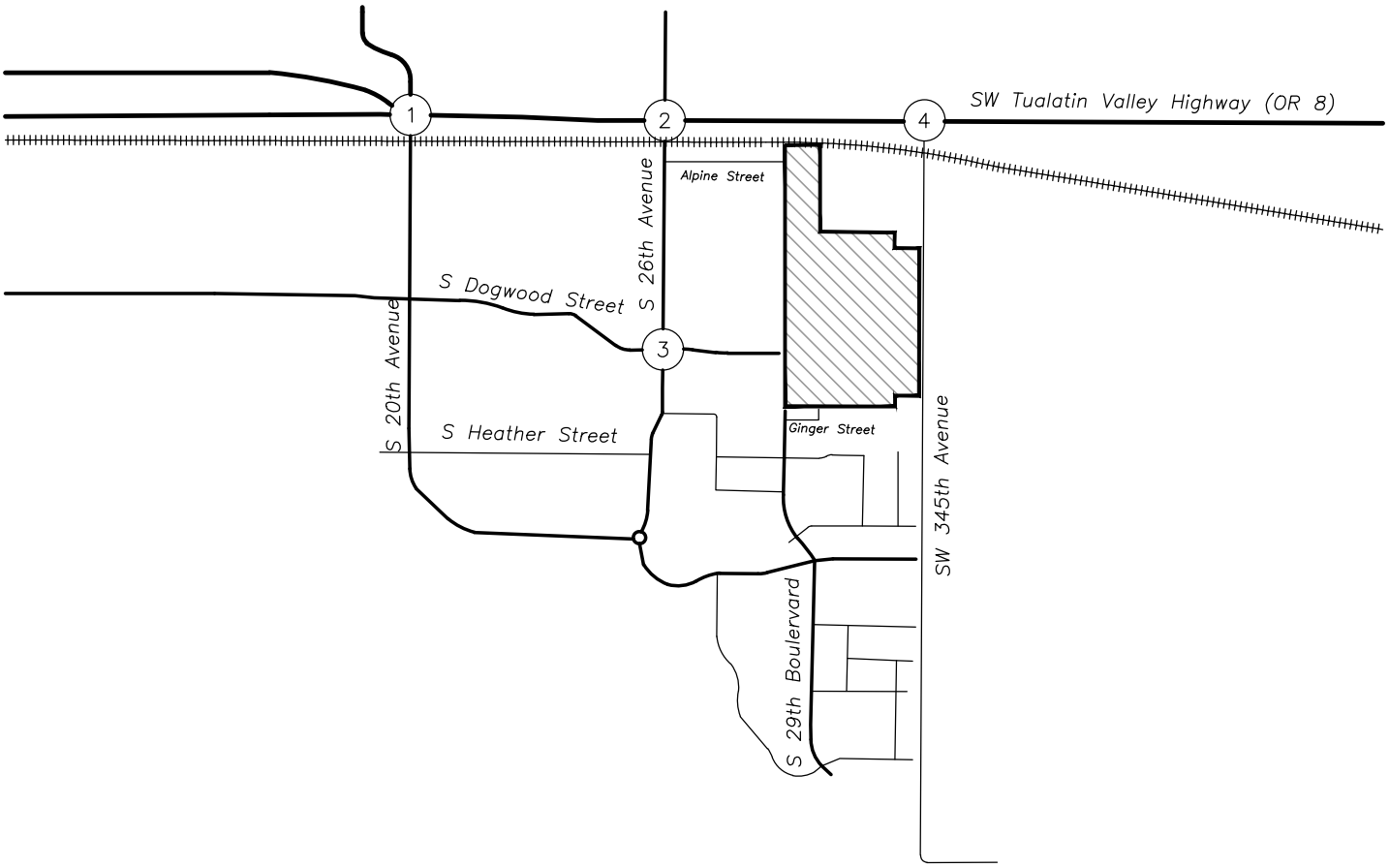
TRAFFIC VOLUMES

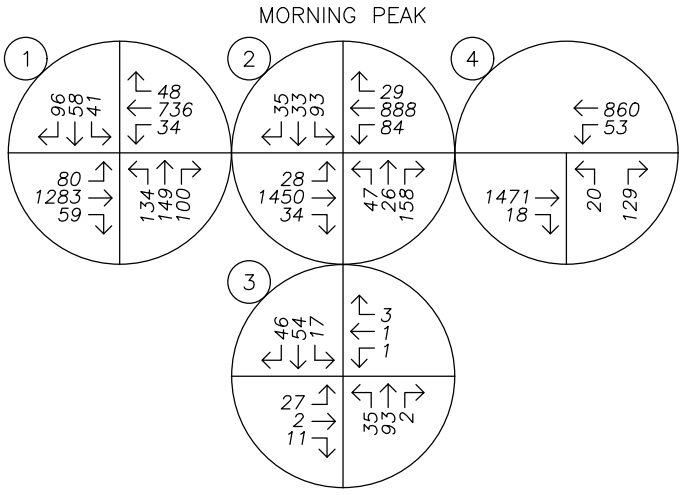
2029 Background Conditions without 345th Connection
AM & PM Peak Hours

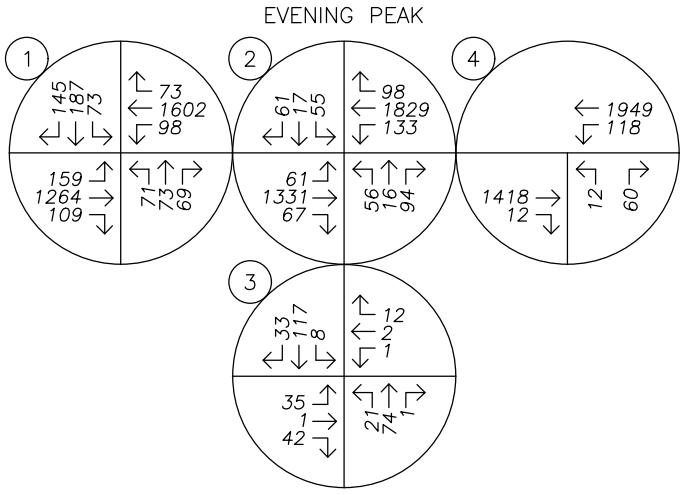
Figure 8

Laurel Crown Subdivision

12/11/2025







no scale

lancaster mobley

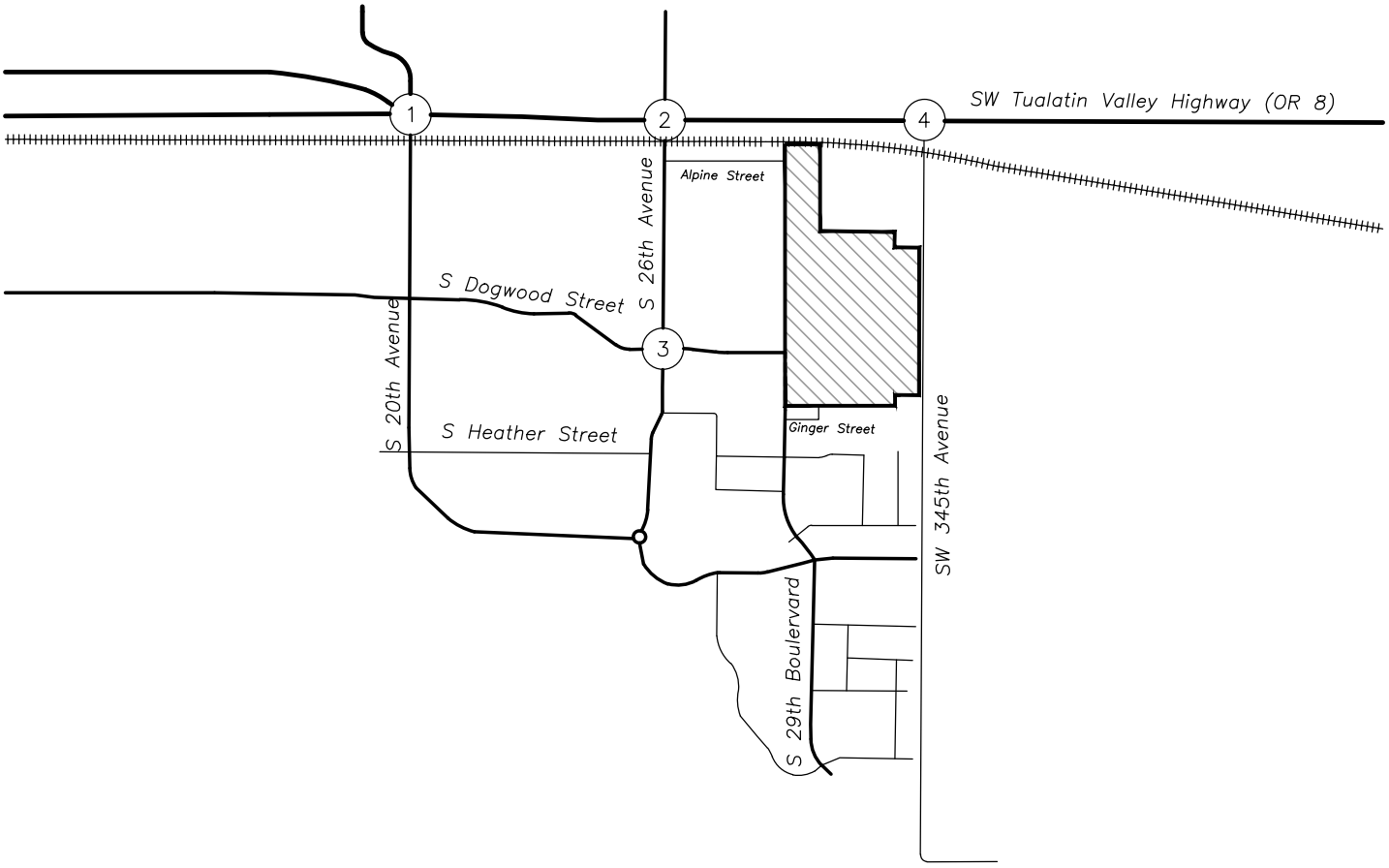
TRAFFIC VOLUMES

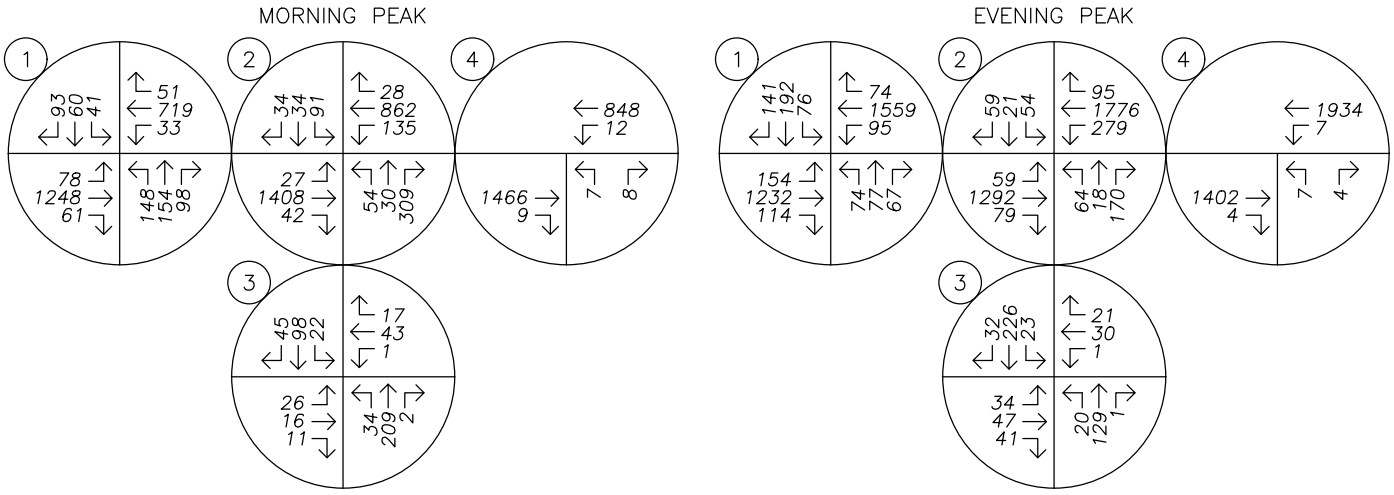
2029 Background Conditions with 345th Connection
AM & PM Peak Hours

Figure 9

Laurel Crown Subdivision

12/11/2025

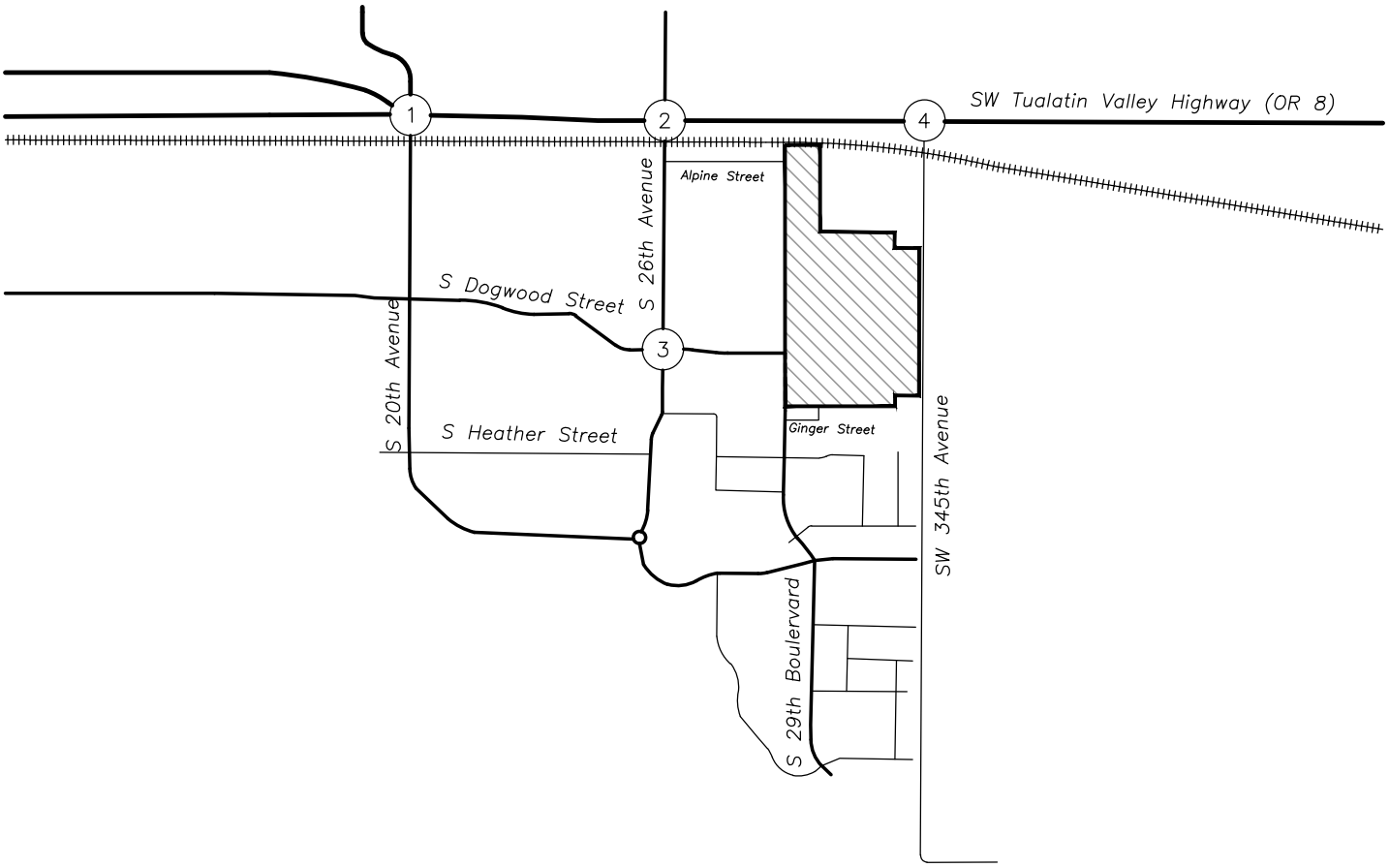


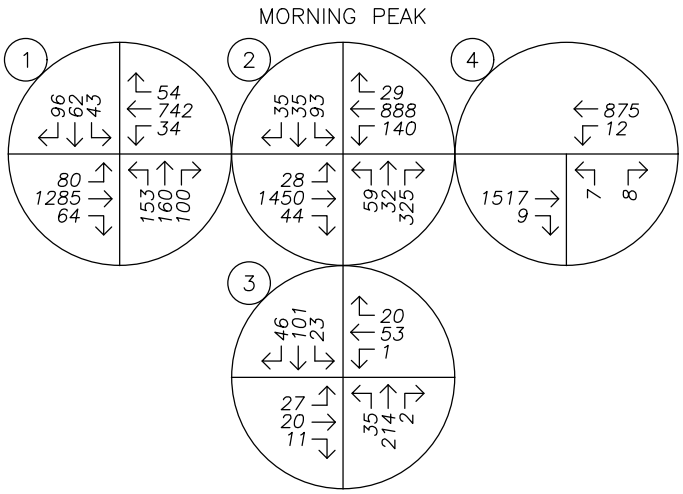


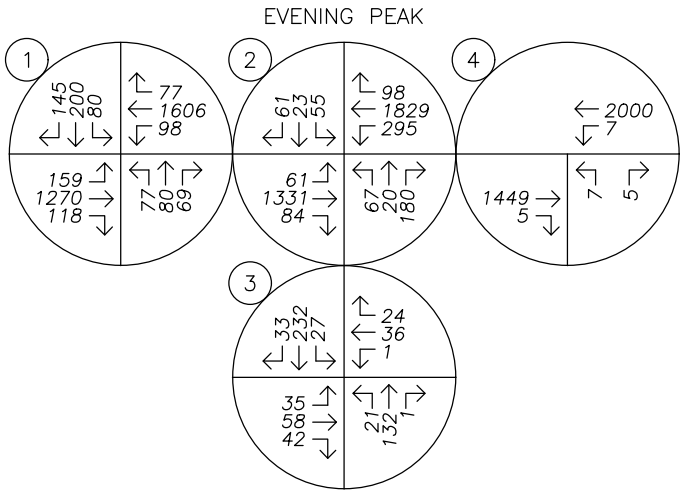
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TRAFFIC VOLUMES
2028 Buildout Conditions - Phase 1&2
AM & PM Peak Hours

Figure 10
Laurel Crown Subdivision
12/11/2025







no scale

lancaster mobley

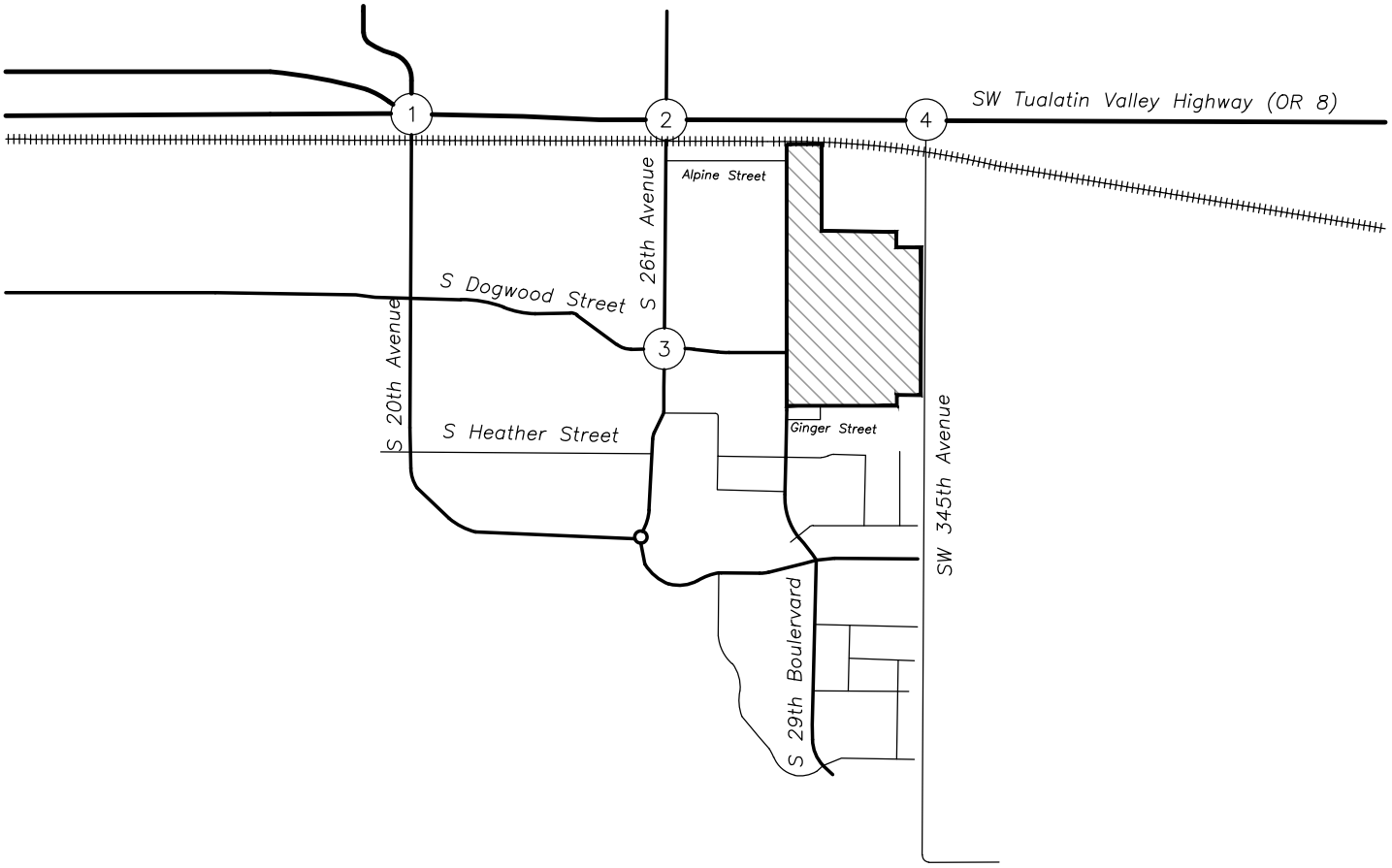
TRAFFIC VOLUMES

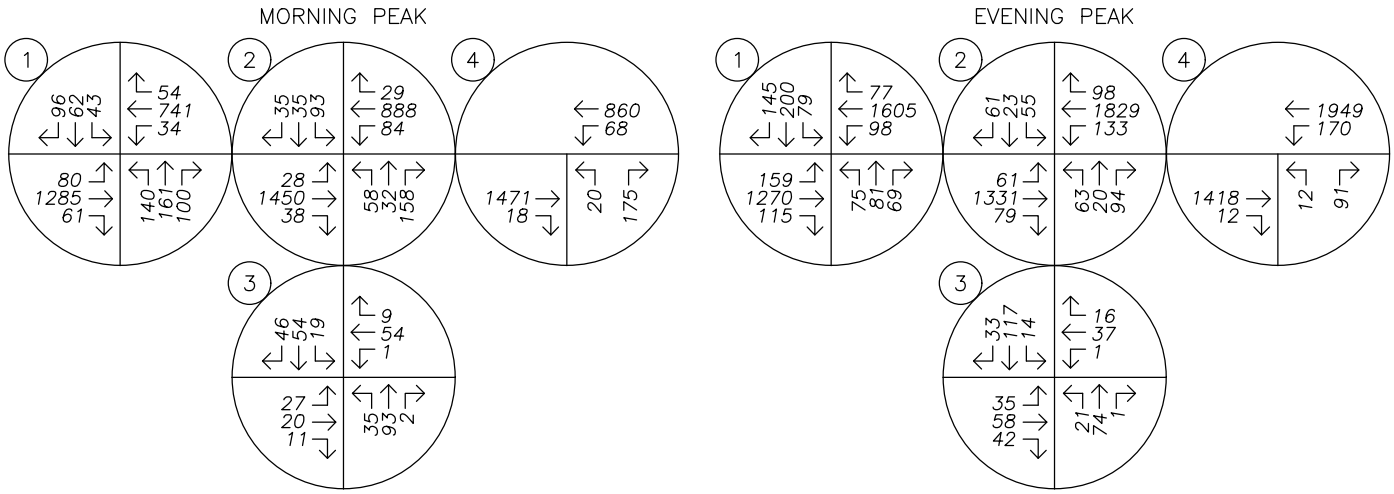
2029 Full Buildout Conditions without 345th Connection
AM & PM Peak Hours

Figure 11

Laurel Crown Subdivision

12/11/2025





no scale

TRAFFIC VOLUMES

2029 Full Buildout Conditions with 345th Connection
AM & PM Peak Hours

Figure 12

Laurel Crown Subdivision

12/11/2025

Safety Analysis

Crash History Review

Using data obtained from ODOT's Crash Data System, a review of approximately five years of the most recent available crash history (January 2019 through December 2023) was performed at the study intersections. 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:

- Property Damage Only (PDO)
- Possible Injury (Injury C)
- Suspected Minor Injury (Injury B)
- Suspected Serious Injury (Injury A)
- Fatal Injury

The study intersections adhere to the crash analysis methodologies within ODOT's APM. According to *Exhibit 4-1: Intersection Crash Rates per MEV by Land Type and Traffic Control* of the APM, intersections which experience crash rates in excess of their respective 90th percentile crash rates should be "flagged for further analysis". Crash rates in excess of 90th percentile crashes per million entering vehicles (CMEV) may be indicative of design deficiencies and therefore require a need for further investigation and possible mitigation.

For intersections in urban settings, the following 90th percentile rates are applicable to the study intersections:

- Unsignalized, three-leg intersection: 0.293 CMEV;
- Signalized, three-leg intersection: 0.509 CMEV;
- Unsignalized, four-leg intersection: 0.408 CMEV; and
- Signalized, four-leg intersection: 0.860 CMEV.

Table 4 provides a summary of crash types while Table 5 summarizes crash severities and rates for each of the study intersections. Detailed crash data reports are provided in Appendix D.

Table 4: Crash Type Summary

Intersection		Crash Type							Total Crashes
		Rear End	Turn	Angle	Side Swipe	Fixed Object	Other	Ped/ Bike	
1	SW Tualatin Valley Highway (OR 8) & S 20th Avenue	9	0	1	1	0	0	0	11
2	SW Tualatin Valley Highway (OR 8) & S 26th Avenue	18	6	0	0	2	0	2	28
3	S Dogwood Street (OR 8) & S 26th Avenue	0	0	0	1	0	0	0	1
4	SW Tualatin Valley Highway (OR 8) & SW 345th Avenue	0	0	0	0	0	0	0	0

Table 5: Crash Severity and Rate Summary

Intersection		Severity					Total Crashes	Est. ADT	Crash Rate
		PDO	C	B	A	Fatal			
1	SW Tualatin Valley Highway (OR 8) & S 20th Avenue	4	5	2	0	0	11	34,490	0.175
2	SW Tualatin Valley Highway (OR 8) & S 26th Avenue	10	8	9	1	0	28	34,840	0.440
3	S Dogwood Street (OR 8) & S 26th Avenue	1	0	0	0	0	1	4,040	0.136
4	SW Tualatin Valley Highway (OR 8) & SW 345th Avenue	0	0	0	0	0	0	29,640	0

Crash Severity

None of the crashes reported in the five-year analysis period resulted in a fatality but a crash resulted in a Suspected Serious Injury (Injury A) at the intersection of SW Tualatin Valley Highway (OR 8) at S 26th Avenue. The crash occurred when a driver of westbound vehicle ran off the road while another driver of westbound vehicle was avoiding maneuver and struck an animal, traffic signal, and hydrant.

Pedestrian and Bicycle Collisions

Two crashes at the intersection of SW Tualatin Valley Highway (OR 8) at S 26th Avenue involved a pedestrian within the five-year analysis period as described below:

- The first pedestrian-related crash occurred when the driver of a southbound right-turning vehicle failed to yield right-of-way and struck a pedestrian at the intersection. The crash was classified as *Injury B*.
- The second pedestrian-related crash occurred when the driver of a northbound left-turning vehicle failed to yield right-of-way and struck a bicyclist at the intersection. The crash was classified as *Injury B*.

Based on the review of crash history, no geometric deficiencies are evident at any study intersections. None of the study intersections were identified to have crash rates exceeding 1.00 or ODOT 90th percentile crash rates for similar intersections. Accordingly, no safety mitigation is necessary or recommended at these intersections.

Warrant Analysis

Preliminary traffic signal warrant was examined for the study intersection of SW Tualatin Valley Highway (OR 8) & SW 345th Avenue to determine whether the installation of a new traffic signal will be warranted at the intersection by the 2029 future year. Based on the preliminary analysis following a review of Warrant 1 in the *Manual on Uniform Traffic Control Devices*, or MUTCD, traffic signal warrants are not projected to be met at the unsignalized study intersection of SW Tualatin Valley Highway (OR 8) & SW 345th Avenue under year 2029 conditions, regardless of whether or not the proposed development is constructed with access to SW 345th Avenue. Therefore, no new traffic signals are necessary or recommended as part of the proposed development application. Detailed information on the warrants analyses is included in Appendix D.

Operational Analysis

An operational analysis was conducted for each of the study intersections per the signalized intersection analysis methodologies in the *Highway Capacity Manual* (HCM)[3]. Intersections are generally evaluated based on the average control delay experienced by vehicles and are assigned a grade according to their operation. The level of service (LOS) of an intersection can range from LOS A, which indicates little or no delay experienced by vehicles, to LOS F, which indicates a high degree of congestion and delay. The volume-to-capacity (v/c) ratio is a measure that compares the traffic volumes (demand) against the available capacity of an intersection.

Performance Standards

The study area includes intersections under the jurisdiction of the City of Cornelius and ODOT. The following performance standards apply:

- Per Cornelius Municipal Code (CMC) section 18.143.020, "City street intersections shall maintain a level of service (LOS) of "D" during the p.m. peak hour of the day. An LOS of "E" may be accepted for local street approaches or driveway access points that intersect with collector or arterial streets if these intersections are found to operate safely".
- OR 8 (SW Tualatin Valley Highway) within the study area is part of a Regional Center and is also designated as a Special Transportation Area. Per the Oregon Highway Plan Table 7, the performance target is 1.1 for the 1st highest hour and 0.99 for the second highest hour.

Delay & Capacity Analysis

The LOS, delay and v/c results of the capacity analysis are shown in Table 6 for the morning and evening peak hours. Detailed calculations as well as tables showing the relationship between delay and LOS are included in the appendix to this report.

[3] Transportation Research Board, *Highway Capacity Manual* 7th Edition, 2022.

Table 6: Capacity Analysis Summary

Intersection & Scenario	Performance Standard	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
1. SW Tualatin Valley Highway & S 20th Avenue							
2025 Existing	1.1/0.99 (ODOT)	B	16	0.66	B	15	0.74
2028 Background		B	19	0.74	B	17	0.81
2029 Background		B	19	0.75	C	21	0.85
2029 Background w/ access to SW 345th		B	19	0.75	C	21	0.84
2028 Buildout - Ph 1&2		B	19	0.74	C	20	0.82
2029 Buildout - Ph 1,2,&3 w/o access to SW 345th		B	20	0.76	C	22	0.85
2029 Buildout - Ph 1,2,&3 w/ access to SW 345th		B	20	0.76	C	22	0.85
2. SW Tualatin Valley Highway & S 26th Avenue							
2025 Existing	1.1/0.99 (ODOT)	C	29	0.73	B	12	0.73
2028 Background		D	39	0.82	B	18	0.81
2029 Background		D	46	0.84	B	19	0.84
2029 Background w/ access to SW 345th		C	35	0.81	B	15	0.80
2028 Buildout - Ph 1&2		D	48	0.86	C	21	0.83
2029 Buildout - Ph 1,2,&3 w/o access to SW 345th		D	53	0.90	C	26	0.86
2029 Buildout - Ph 1,2,&3 w/ access to SW 345th		D	38	0.82	B	18	0.81
3. S Dogwood Street & S 26th Avenue							
2025 Existing	LOS D	A	8	0.27	A	8	0.26
2028 Background		A	9	0.34	A	9	0.33
2029 Background		A	9	0.35	A	9	0.34
2029 Background w/ access to SW 345th		A	8	0.18	A	8	0.19
2028 Buildout - Ph 1&2		A	9	0.36	A	10	0.37
2029 Buildout - Ph 1,2,&3 w/o access to SW 345th		A	10	0.37	A	10	0.39
2029 Buildout - Ph 1,2,&3 w/ access to SW 345th		A	8	0.19	A	8	0.21

Table 6: Capacity Analysis Summary (Continued)

Intersection & Scenario	Performance Standard	AM Peak Hour			PM Peak Hour		
		LOS	Delay (s)	V/C	LOS	Delay (s)	V/C
4. SW Tualatin Valley Highway & SW 345th Avenue							
2025 Existing	1.1/0.99 (ODOT)	C	23	0.07	D	27	0.06
2028 Background		D	27	0.09	D	33	0.08
2029 Background		D	27	0.07	D	32	0.07
2029 Background w/ access to SW 345th		D	29	0.45	D	26	0.28
2028 Buildout - Ph 1&2		D	28	0.09	D	34	0.08
2029 Buildout - Ph 1,2,&3 w/o access to SW 345th		D	30	0.10	D	34	0.09
2029 Buildout - Ph 1,2,&3 w/ access to SW 345th		D	35	0.61	D	27	0.40

Notes: Locations that do not meet standards are BOLDED.

Based on the results of the operational analysis, all study intersections are currently operating acceptably per agency standards and are projected to continue operating acceptably through the 2029 buildout year of the site. Accordingly, no operational mitigation is necessary or recommended at the study intersections.

A street connection to SW 345th Avenue will result in a significant redistribution of existing and background trips, which will trigger the need for separate northbound left and right-turn lanes on SW 345th Avenue at SW Tualatin Valley Highway. These improvements will be needed at the time of the eventual street connection, even without trips from the proposed Laurel Crown subdivision.

Queuing Analysis

An analysis of projected queuing was conducted for the study intersections. The 95th percentile queue lengths were estimated based on the SimTraffic simulations. The 95th percentile queue is a statistical measurement which indicates there is a 5 percent chance that the queue may exceed this length during the analysis period; however, given this is a probability, the 95th percentile queue length may theoretically never be met or observed in the field.

All queues more than 5 feet longer than a multiple of 25 were rounded up. Those that were 5 feet or less were rounded down since 5 feet is equivalent to the space between queued vehicles.

The 95th percentile queue lengths reported in the simulation are presented in Table 7 for the morning and evening peak hours. Detailed queuing analysis reports are included in Appendix E.

Table 7: 95th Percentile Queueing Analysis Summary

Intersection Movement	Available Storage (ft)	Background (ft) (AM/PM)			Buildout (ft) (AM/PM)		
		2028	2029 (w/o 345th Access)	2029 (w/ 345th Access)	2028 – Ph1&2	2029 – Full (w/o 345th Access)	2029 – Full (w/ 345th Access)
1. SW Tualatin Valley Highway & S 20th Avenue							
EB Approach	>1,000	400/475	425/500	400/475	375/500	425/475	375/475
WB Approach	780	225/650	225/650	250/750	225/650	250/675	250/675
NB Approach	130*	275/175	275/200	275/225	275/225	300/225	250/200
SB Approach	>1,000	100/275	100/275	100/300	100/300	100/300	100/275
2. SW Tualatin Valley Highway & S 26th Avenue							
EB Approach	850	425/425	400/425	500/425	475/475	500/500	400/425
WB Approach	920	175/400	175/400	175/400	175/425	200/425	200/400
NB Approach	70*	225/125	300/150	175/125	325/150	450/225	175/150
SB Approach	>1,000	175/100	175/125	175/125	200/125	200/125	175/125
3. S Dogwood Street & S 26th Avenue							
EB Approach	450	50/75	50/50	50/50	50/75	50/75	50/75
WB Approach	300	25/50	25/50	25/50	50/50	75/50	50/50
NB Approach	220	75/75	75/75	75/50	75/75	100/75	75/50
SB Approach	660	75/100	75/100	75/75	75/100	75/100	75/75
4. SW Tualatin Valley Highway & SW 345th Avenue							
EB Approach	120	25/0	25/0	25/0	25/0	0/0	25/0
WB Approach	720	50/25	50/25	75/125	25/50	50/25	125/175
NB Approach	170*	50/75	50/75	150/100	75/100	50/125	175/225

*Notes: **BOLDED** text indicates queue length exceeding storage capacity.*
**The available storage is from the intersection to railroad crossing.*

In general, changes in 95th percentile queuing between the year 2029 background and 2029 buildout conditions are anticipated to be small. Most queues can be accommodated within the available storage with four exceptions:

SW Tualatin Valley Highway at S 20th Avenue

The queue for northbound approach at the intersection is expected to spill over the available storage length. There is a railroad crossing located approximately 130 feet south of the intersection with appropriate traffic controls including railroad crossing bar and a regulatory sign.

SW Tualatin Valley Highway at S 26th Avenue

The queue for the northbound at the intersection is expected to spill over the available storage length with the project completion. There is a railroad crossing located approximately 70 feet south of the intersection with appropriate traffic controls including railroad crossing bar and a regulatory sign. Under the full buildout scenario with the site access to SW 345th Avenue, the queue for the northbound traffic is anticipated to be reduced.

SW Tualatin Valley Highway at SW 345th Avenue

The queue for the northbound approach at the intersection is expected to spill over the available storage length. There is a railroad crossing located approximately 170 feet south of the intersection. It is recommended that the City install appropriate traffic control on the railroad crossing at the completion time of SW 345th Avenue improvements.

Summary

Although several of the 95th percentile queues are estimated to extend beyond available storage, most of the queues would be present under both background and buildout conditions. The proposed Laurel Crown Subdivision will not measurably change any of these queues.

Traffic Volume Summary

To compare traffic volumes along nearby streets where traffic volumes will increase, an analysis over the average daily traffic volume (ADT) for each of the scenarios was examined. The streets included in the comparison are S Dogwood Street, S 26th Avenue and SW 345th Avenue. The volumes are measured and estimated in the following locations:

S Dogwood Street: Immediately east of S 26th Avenue

S 26th Avenue: Immediately south of SW Tualatin Valley Highway

SW 345th Avenue: Immediately south of SW Tualatin Valley Highway

Table 8 below shows a summary of the findings. City of Cornelius engineering standards and the Transportation System Plan do not identify or regulate traffic volumes on streets by functional classification, but the acceptable volume ranges shown are typical guidelines used in the Portland Metro area and throughout Oregon.

Table 8: Traffic Volume Summary (ADT) along Project Collectors

Street	Functional Classification	Acceptable Volume (ADT)	Daily Traffic Volumes		
			Existing	2029 Buildout w/o 345th	2029 Buildout w/ 345th
S Dogwood Street	Collector	1,500 – 10,000	230	1,450	1,250
S 26th Avenue	Collector	1,500 – 10,000	4,450	6,700	4,100
SW 345th Avenue	Collector	1,500 – 10,000	200	250	2,850

Conclusions

The following key findings relate to transportation:

- Based on the most recent five years of available crash data, no significant trends or crash patterns were identified at any of the study intersections that were indicative of safety concerns. Accordingly, no safety mitigation is recommended.
- Traffic signal warrants are not projected to be met at the intersection of SW Tualatin Valley Highway (OR 8) & SW 345th Avenue under year 2029 conditions, regardless of whether or not the proposed development is constructed. Therefore, no new traffic signals are necessary or recommended as part of the proposed development application.
- All study intersections are currently operating acceptably per the agency standards and are projected to continue operating acceptably through the 2029 buildout year of the site. Accordingly, no operational mitigation is necessary or recommended at the study intersections.
- A street connection to SW 345th Avenue will result in a significant redistribution of existing and background trips, which will trigger the need for separate northbound left and right-turn lanes on SW 345th Avenue at SW Tualatin Valley Highway. These improvements will be needed at the time of the eventual street connection, even without trips from the proposed Laurel Crown Subdivision.
- In general, changes in 95th percentile queuing between the year 2029 background and buildout conditions are anticipated to be small. Although several of the 95th percentile queues are estimated to extend beyond available storage, most of the queues would be present under both background and buildout conditions. The proposed Laurel Crown Subdivision will not measurably change any of these queues.

Appendix A

Site Plan



N

SCALE: 1" = 100 FEET

100 0 20 50 100

ORIGINAL PAGE SIZE: 22" x 34"

COLOR	MIN. LOT DIMENSIONS	HOUSE TYPE	LOADING	PHASE 1	PHASE 2	PHASE 3	TOTAL	PERCENTAGE
	(20' x 95')	TOWNHOUSES	FRONT	17	8	4	29	13%
	(25' x 95')	DUPLEX UNITS	FRONT	12	6	8	26	11%
	(34' x 95')	SF DETACHED	FRONT	10	16	13	39	17%
	(34' x 92')	SF DETACHED	ALLEY	17	0	0	17	7%
	(40' x 92')	SF DETACHED	ALLEY	29	0	0	29	13%
	(40' x 95')	SF DETACHED	FRONT	12	24	12	48	21%
	(50' x 95')	SF DETACHED	FRONT	8	15	4	27	12%
	(60' x 95')	SF DETACHED	FRONT	6	6	3	15	7%
				111	75	44	230	

DENSITY CALCULATIONS

DISTRICT	HOUSING TYPE	GROSS AREA (SF)	GROSS AREA (ACRES)	NET AREA (ACRES)	MAX. DENSITY (DU/ACRE)	MIN. DENSITY (DU/ACRE)	CALCULATED MAX DENSITY (UNITS)	CALCULATED MIN DENSITY (UNITS)
R-7	Detached	464,529	10.66	5.73	5	4	29	23
	Attached			0.00	20	4	0	0
A-2	Detached	896,297	20.58	10.81	14	8	151	87
	Attached			3.07	25	8	77	25
TOTAL		1,360,826	31.24	19.6			257	134

PROPOSED # OF UNITS: 230 UNITS

PROPOSED DENSITY: 11.7 DU/ACRE

OPEN SPACE REQUIRED (300 sf/unit): 69,000 sf

OPEN SPACE PROVIDED: 70,075 sf

AKS DRAWING FILE: 4636-05 LAYOUT6.DWG | LAYOUT: LAYOUT6

DATE: 8/14/2025 AKS JOB: 4636-05

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CONCEPT LAYOUT 6

LAUREL WOODS NORTH

HOLT HOMES
CORNELIUS, OREGON

Appendix B

Trip Generation Calculations

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:	147

AM PEAK HOUR

Trip Rate: 0.7

	Enter	Exit	Total
Directional Split	25%	75%	
Trip Ends	26	77	103

PM PEAK HOUR

Trip Rate: 0.94

	Enter	Exit	Total
Directional Split	63%	37%	
Trip Ends	87	51	138

WEEKDAY

Trip Rate: 9.43

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	693	693	1,386

SATURDAY

Trip Rate: 9.48

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	697	697	1,394

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:	46

AM PEAK HOUR

Trip Rate: 0.48

	Enter	Exit	Total
Directional Split	25%	75%	
Trip Ends	6	16	22

PM PEAK HOUR

Trip Rate: 0.57

	Enter	Exit	Total
Directional Split	59%	41%	
Trip Ends	15	11	26

WEEKDAY

Trip Rate: 7.2

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

SATURDAY

Trip Rate: 8.76

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	201	201	402

Source: Trip Generation Manual, 11th Edition

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:	181

AM PEAK HOUR

Trip Rate: 0.7

	Enter	Exit	Total
Directional Split	25%	75%	
Trip Ends	32	95	127

PM PEAK HOUR

Trip Rate: 0.94

	Enter	Exit	Total
Directional Split	63%	37%	
Trip Ends	107	63	170

WEEKDAY

Trip Rate: 9.43

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	853	853	1,706

SATURDAY

Trip Rate: 9.48

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	858	858	1,716

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:	59

AM PEAK HOUR

Trip Rate: 0.48

	Enter	Exit	Total
Directional Split	25%	75%	
Trip Ends	7	21	28

PM PEAK HOUR

Trip Rate: 0.57

	Enter	Exit	Total
Directional Split	59%	41%	
Trip Ends	20	14	34

WEEKDAY

Trip Rate: 7.2

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	212	212	424

SATURDAY

Trip Rate: 8.76

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	258	258	516

Source: Trip Generation Manual, 11th Edition

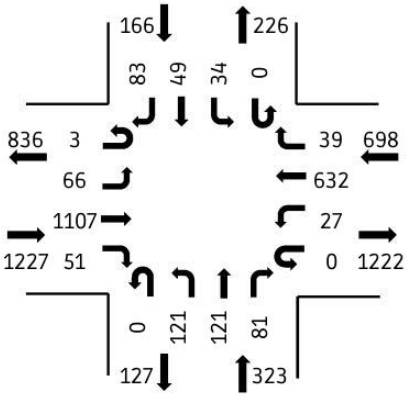
Appendix C

Traffic Counts

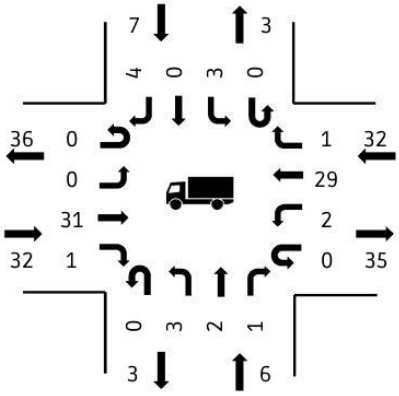
RallyTraffic

Location: S 20th Avenue & TV Hwy
Date: 2024-09-10
Peak Hour Start: 07:15 AM
Peak 15 Minute Start: 07:30 AM
Peak Hour Factor: 0.92

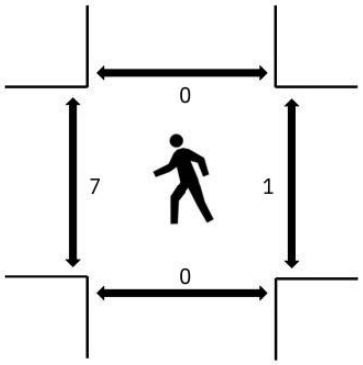
Motorized Vehicles



Heavy Vehicles



Pedestrians



(peak hour)

All Vehicle Volumes

Time	NB (S 20th Avenue)					SB (S 20th Avenue)					EB (TV Hwy)					WB (TV Hwy)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
07:00:00 AM	5	11	13	0	0	3	3	3	0	0	6	70	0	0	0	1	25	6	0	0		
07:05:00 AM	6	15	2	0	0	2	2	3	0	0	6	93	3	0	0	0	52	1	0	0		
07:10:00 AM	6	12	3	0	0	2	1	3	0	0	4	81	6	0	0	1	45	3	0	0	498	
07:15:00 AM	9	6	6	0	0	1	6	7	0	0	8	97	5	0	0	2	56	6	0	0	561	
07:20:00 AM	8	13	8	0	0	2	0	6	0	0	10	94	3	0	0	4	33	3	0	0	560	
07:25:00 AM	5	6	6	0	0	0	9	9	0	0	3	105	6	0	0	2	40	2	0	0	586	
07:30:00 AM	4	6	6	0	0	1	4	9	0	0	2	141	6	0	0	2	41	3	0	0	602	
07:35:00 AM	11	19	5	0	0	2	6	5	0	0	4	101	3	0	0	1	66	2	0	0	643	
07:40:00 AM	12	11	5	0	0	1	5	10	0	0	5	102	5	0	0	2	44	1	0	0	653	
07:45:00 AM	19	14	8	0	0	3	4	4	0	0	7	91	4	0	0	0	53	3	0	0	638	
07:50:00 AM	18	13	13	0	0	4	3	7	0	0	5	106	7	0	0	2	54	6	0	0	651	
07:55:00 AM	13	7	10	0	0	8	5	7	0	0	4	61	3	0	0	4	65	3	0	0	638	2375
08:00:00 AM	6	13	5	0	0	2	1	5	0	0	2	70	4	0	0	2	59	3	0	0	600	2401
08:05:00 AM	12	5	2	0	0	1	2	4	0	0	5	67	3	2	0	2	65	2	0	0	534	2388
08:10:00 AM	4	8	7	0	0	9	4	10	0	0	11	72	2	1	0	4	56	5	0	0	537	2414
08:15:00 AM	3	8	6	0	0	5	6	9	0	0	5	72	10	0	0	0	54	2	0	0	545	2385
08:20:00 AM	8	2	3	0	0	3	4	4	0	0	5	83	5	0	0	2	61	4	0	0	557	2385
08:25:00 AM	2	6	4	0	0	5	1	4	0	0	7	65	4	0	0	2	53	2	0	0	519	2347
08:30:00 AM	3	2	4	0	0	3	3	8	0	0	4	62	4	1	0	5	36	3	0	0	477	2260
08:35:00 AM	5	2	2	0	0	3	1	6	0	0	8	99	8	0	0	1	71	4	0	0	503	2245
08:40:00 AM	8	4	2	0	0	7	0	7	0	0	5	60	2	0	0	1	40	1	0	0	485	2179
08:45:00 AM	4	3	3	0	0	2	1	8	0	0	7	104	3	0	0	3	75	2	0	0	562	2184
08:50:00 AM	5	4	4	0	0	3	1	4	0	0	6	118	1	0	0	0	63	3	0	0	564	2158
08:55:00 AM	5	4	3	0	0	1	0	6	0	0	11	84	4	0	0	2	36	3	0	0	586	2127

Car Volumes

Time	NB (S 20th Avenue)					SB (S 20th Avenue)					EB (TV Hwy)					WB (TV Hwy)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
07:00:00 AM	5	10	13	0	0	3	3	2	0	0	6	66	0	0	0	1	23	6	0	0		
07:05:00 AM	6	15	2	0	0	2	2	3	0	0	6	87	3	0	0	0	44	1	0	0		
07:10:00 AM	5	12	3	0	0	2	1	3	0	0	4	79	4	0	0	1	39	3	0	0	465	
07:15:00 AM	8	6	6	0	0	1	6	7	0	0	8	94	5	0	0	2	53	6	0	0	529	
07:20:00 AM	7	13	8	0	0	2	0	5	0	0	10	92	3	0	0	3	30	3	0	0	534	
07:25:00 AM	5	6	6	0	0	0	9	9	0	0	3	101	6	0	0	2	38	2	0	0	565	
07:30:00 AM	4	6	6	0	0	1	4	9	0	0	2	139	5	0	0	2	41	3	0	0	585	
07:35:00 AM	11	19	5	0	0	2	6	5	0	0	4	98	3	0	0	1	62	2	0	0	627	
07:40:00 AM	11	11	4	0	0	1	5	8	0	0	5	98	5	0	0	2	44	1	0	0	635	
07:45:00 AM	19	12	8	0	0	2	4	4	0	0	7	88	4	0	0	0	50	3	0	0	614	
07:50:00 AM	18	13	13	0	0	4	3	6	0	0	5	104	7	0	0	2	52	6	0	0	629	
07:55:00 AM	13	7	10	0	0	6	5	7	0	0	4	59	3	0	0	4	63	3	0	0	618	2283
08:00:00 AM	6	13	5	0	0	2	1	5	0	0	2	70	4	0	0	1	53	3	0	0	582	2310
08:05:00 AM	12	5	2	0	0	1	2	4	0	0	5	64	3	2	0	2	64	2	0	0	517	2307
08:10:00 AM	4	8	7	0	0	9	4	10	0	0	11	69	2	1	0	4	53	4	0	0	519	2337
08:15:00 AM	3	8	6	0	0	4	6	8	0	0	5	70	10	0	0	0	49	2	0	0	525	2306
08:20:00 AM	8	1	3	0	0	3	4	4	0	0	5	80	4	0	0	2	59	4	0	0	534	2307
08:25:00 AM	2	5	4	0	0	3	1	4	0	0	7	63	3	0	0	2	49	2	0	0	493	2265
08:30:00 AM	3	2	4	0	0	3	3	8	0	0	4	60	4	1	0	5	35	3	0	0	457	2178
08:35:00 AM	5	2	2	0	0	2	1	6	0	0	7	96	7	0	0	1	67	4	0	0	480	2160
08:40:00 AM	7	3	2	0	0	7	0	6	0	0	5	60	1	0	0	1	36	1	0	0	464	2094
08:45:00 AM	4	3	3	0	0	2	1	7	0	0	7	100	2	0	0	3	74	2	0	0	537	2101
08:50:00 AM	5	4	4	0	0	3	1	4	0	0	6	114	1	0	0	0	62	3	0	0	544	2075
08:55:00 AM	5	4	3	0	0	1	0	6	0	0	11	83	3	0	0	2	35	3	0	0	571	2047

Truck Volumes

Time	NB (S 20th Avenue)					SB (S 20th Avenue)					EB (TV Hwy)					WB (TV Hwy)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
07:00:00 AM	0	1	0	0	0	0	0	1	0	0	0	4	0	0	0	0	2	0	0	0		
07:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	8	0	0	0		
07:10:00 AM	1	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	6	0	0	0	33	
07:15:00 AM	1	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	32	
07:20:00 AM	1	0	0	0	0	0	0	1	0	0	0	2	0	0	0	1	3	0	0	0	26	
07:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	2	0	0	0	21	
07:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	17	
07:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	4	0	0	0	16	
07:40:00 AM	1	0	1	0	0	0	0	2	0	0	0	4	0	0	0	0	0	0	0	0	18	
07:45:00 AM	0	2	0	0	0	1	0	0	0	0	0	3	0	0	0	0	3	0	0	0	24	
07:50:00 AM	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	2	0	0	0	22	
07:55:00 AM	0	0	0	0	0	2	0	0	0	0	0	2	0	0	0	0	2	0	0	0	20	92
08:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	0	0	0	18	91
08:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	0	0	0	17	81
08:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	1	0	0	18	77
08:15:00 AM	0	0	0	0	0	1	0	1	0	0	0	2	0	0	0	0	5	0	0	0	20	79
08:20:00 AM	0	1	0	0	0	0	0	0	0	0	0	3	1	0	0	0	2	0	0	0	23	78
08:25:00 AM	0	1	0	0	0	2	0	0	0	0	0	2	1	0	0	0	4	0	0	0	26	82
08:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	20	82
08:35:00 AM	0	0	0	0	0	1	0	0	0	0	1	3	1	0	0	0	4	0	0	0	23	85
08:40:00 AM	1	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	4	0	0	0	21	85
08:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	4	1	0	0	0	1	0	0	0	25	83
08:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	0	20	83
08:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	15	80

Bike Volumes

Time	NB (S 20th Avenue)					SB (S 20th Avenue)					EB (TV Hwy)					WB (TV Hwy)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
07:00:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:20:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:35:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

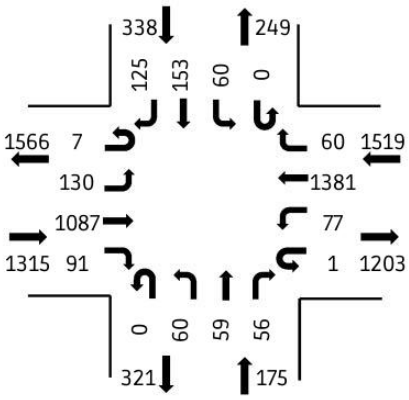
Pedestrian Volumes

Time	Pedestrians				Totals	
Time	NB	SB	EB	WB	15min	1hr
07:00:00 AM	0	0	1	0		
07:05:00 AM	0	0	0	0		
07:10:00 AM	0	0	0	0	1	
07:15:00 AM	0	0	0	0	0	
07:20:00 AM	0	0	0	0	0	
07:25:00 AM	0	0	4	0	4	
07:30:00 AM	0	0	0	0	4	
07:35:00 AM	0	0	0	0	4	
07:40:00 AM	0	0	0	0	0	
07:45:00 AM	0	0	0	0	0	
07:50:00 AM	0	0	0	0	0	
07:55:00 AM	0	0	0	0	0	5
08:00:00 AM	0	0	0	0	0	4
08:05:00 AM	0	0	2	1	3	7
08:10:00 AM	0	0	1	0	4	8
08:15:00 AM	0	0	0	0	4	8
08:20:00 AM	0	1	0	1	3	10
08:25:00 AM	0	0	1	1	4	8
08:30:00 AM	0	0	0	0	4	8
08:35:00 AM	0	0	0	0	2	8
08:40:00 AM	0	0	2	0	2	10
08:45:00 AM	1	0	0	1	4	12
08:50:00 AM	0	0	0	0	4	12
08:55:00 AM	0	0	0	0	2	12

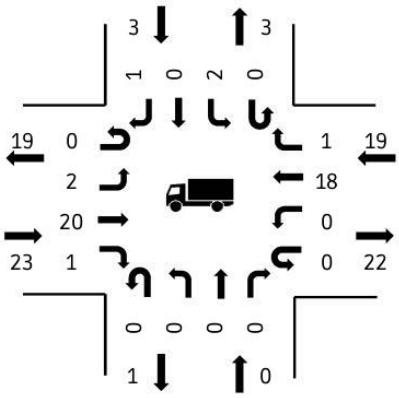
RallyTraffic

Location: S 20th Avenue & TV Hwy
Date: 2024-09-10
Peak Hour Start: 04:15 PM
Peak 15 Minute Start: 04:35 PM
Peak Hour Factor: 0.95

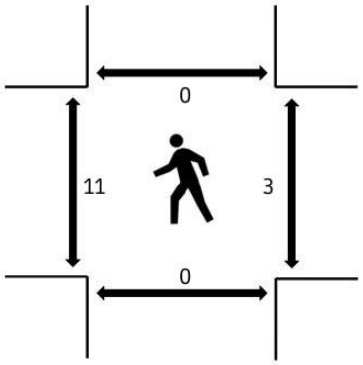
Motorized Vehicles



Heavy Vehicles



Pedestrians



(peak hour)

All Vehicle Volumes

Time	NB (S 20th Avenue)					SB (S 20th Avenue)					EB (TV Hwy)					WB (TV Hwy)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
04:00:00 PM	7	2	4	0	0	8	10	10	0	0	5	70	10	0	0	7	75	4	1	0		
04:05:00 PM	6	8	3	0	0	8	6	10	0	0	3	93	17	0	0	6	83	10	1	0		
04:10:00 PM	6	3	1	0	0	3	8	5	0	0	9	101	17	0	0	3	116	6	0	0	745	
04:15:00 PM	5	6	2	0	0	5	10	16	0	0	13	73	7	2	0	4	120	6	0	0	801	
04:20:00 PM	6	2	3	0	0	7	9	9	0	0	20	94	5	1	0	9	97	3	0	0	812	
04:25:00 PM	4	2	5	0	0	5	13	13	0	0	10	80	7	0	0	4	131	4	1	0	813	
04:30:00 PM	4	3	4	0	0	2	26	8	0	0	11	85	7	0	0	6	104	3	0	0	807	
04:35:00 PM	4	5	4	0	0	8	17	10	0	0	8	110	9	1	0	5	109	9	0	0	841	
04:40:00 PM	7	9	1	0	0	7	14	9	0	0	14	123	8	0	0	6	107	2	0	0	869	
04:45:00 PM	7	6	9	0	0	4	10	3	0	0	10	87	10	0	0	3	122	6	0	0	883	
04:50:00 PM	5	9	7	0	0	1	9	14	0	0	8	79	8	0	0	5	112	9	0	0	850	
04:55:00 PM	4	3	4	0	0	8	16	10	0	0	12	95	8	0	0	10	124	4	0	0	841	3268
05:00:00 PM	5	8	4	0	0	6	5	12	0	0	7	80	7	0	0	9	109	2	0	0	818	3309
05:05:00 PM	6	4	5	0	0	4	12	12	0	0	9	78	8	2	0	10	109	4	0	0	815	3318
05:10:00 PM	3	2	8	0	0	3	12	9	0	0	8	103	7	1	0	6	137	8	0	0	824	3347
05:15:00 PM	4	4	7	0	0	5	13	8	0	0	3	69	10	0	0	4	132	9	0	0	838	3346
05:20:00 PM	7	3	5	0	0	6	12	10	0	0	13	82	11	1	0	6	93	2	0	0	826	3332
05:25:00 PM	4	6	5	0	0	3	7	7	0	0	15	91	4	0	0	8	117	5	0	0	791	3325
05:30:00 PM	4	5	4	0	0	9	7	9	0	0	4	100	6	0	0	10	120	4	0	0	805	3344
05:35:00 PM	3	9	10	0	0	1	9	8	0	0	10	76	5	0	0	5	114	3	0	0	807	3298
05:40:00 PM	9	6	5	0	0	1	9	16	0	0	3	99	12	0	0	8	86	6	0	0	795	3251
05:45:00 PM	11	5	3	0	0	2	14	9	0	0	8	86	4	0	0	5	122	2	0	0	784	3245
05:50:00 PM	5	8	4	0	0	9	11	9	0	0	10	66	9	0	0	7	82	3	0	0	754	3202
05:55:00 PM	4	3	4	0	0	3	5	10	0	0	4	90	11	0	0	6	99	6	0	0	739	3149

Car Volumes

Time	NB (S 20th Avenue)					SB (S 20th Avenue)					EB (TV Hwy)					WB (TV Hwy)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
04:00:00 PM	7	2	4	0	0	8	9	10	0	0	5	68	10	0	0	7	74	4	1	0		
04:05:00 PM	5	8	3	0	0	8	6	10	0	0	3	91	16	0	0	6	82	10	1	0		
04:10:00 PM	6	3	1	0	0	3	8	5	0	0	9	99	17	0	0	3	112	6	0	0	730	
04:15:00 PM	5	6	2	0	0	5	10	16	0	0	13	71	7	2	0	4	117	5	0	0	784	
04:20:00 PM	6	2	3	0	0	7	9	9	0	0	20	91	5	1	0	9	97	3	0	0	797	
04:25:00 PM	4	2	5	0	0	4	13	12	0	0	9	79	7	0	0	4	131	4	1	0	800	
04:30:00 PM	4	3	4	0	0	1	26	8	0	0	11	83	7	0	0	6	103	3	0	0	796	
04:35:00 PM	4	5	4	0	0	8	17	10	0	0	8	109	9	1	0	5	106	9	0	0	829	
04:40:00 PM	7	9	1	0	0	7	14	9	0	0	13	122	8	0	0	6	103	2	0	0	855	
04:45:00 PM	7	6	9	0	0	4	10	3	0	0	10	85	10	0	0	3	121	6	0	0	870	
04:50:00 PM	5	9	7	0	0	1	9	14	0	0	8	79	8	0	0	5	111	9	0	0	840	
04:55:00 PM	4	3	4	0	0	8	16	10	0	0	12	91	8	0	0	10	124	4	0	0	833	3218
05:00:00 PM	5	8	4	0	0	6	5	12	0	0	7	79	7	0	0	9	107	2	0	0	810	3260
05:05:00 PM	6	4	5	0	0	4	12	12	0	0	9	76	7	2	0	10	108	4	0	0	804	3270
05:10:00 PM	3	2	8	0	0	3	12	9	0	0	8	102	7	1	0	6	135	8	0	0	814	3302
05:15:00 PM	4	4	7	0	0	5	13	8	0	0	3	68	10	0	0	4	132	9	0	0	830	3306
05:20:00 PM	7	3	5	0	0	6	12	10	0	0	13	81	11	1	0	6	93	2	0	0	821	3294
05:25:00 PM	4	6	5	0	0	3	7	7	0	0	15	91	4	0	0	8	115	5	0	0	787	3289
05:30:00 PM	3	5	4	0	0	9	7	9	0	0	4	99	6	0	0	10	119	4	0	0	799	3309
05:35:00 PM	3	9	10	0	0	1	9	8	0	0	10	75	5	0	0	5	112	3	0	0	799	3264
05:40:00 PM	9	6	5	0	0	1	9	16	0	0	3	98	12	0	0	8	85	6	0	0	787	3221
05:45:00 PM	11	5	3	0	0	2	14	9	0	0	8	85	4	0	0	5	121	2	0	0	777	3216
05:50:00 PM	5	8	4	0	0	9	11	9	0	0	10	66	9	0	0	7	80	3	0	0	748	3172
05:55:00 PM	4	3	4	0	0	3	5	10	0	0	4	90	11	0	0	6	98	6	0	0	734	3122

Truck Volumes

Time	NB (S 20th Avenue)					SB (S 20th Avenue)					EB (TV Hwy)					WB (TV Hwy)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
04:00:00 PM	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	1	0	0	0		
04:05:00 PM	1	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	0	0	0		
04:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	4	0	0	0	15	
04:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	3	1	0	0	17	
04:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	15	
04:25:00 PM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	13	
04:30:00 PM	0	0	0	0	0	1	0	0	0	0	0	2	0	0	0	0	1	0	0	0	11	
04:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3	0	0	0	12	
04:40:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	4	0	0	0	14	
04:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	13	
04:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	10	
04:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	8	50
05:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	8	49
05:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	1	0	0	0	11	48
05:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	10	45
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	8	40
05:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	5	38
05:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	4	36
05:30:00 PM	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	6	35
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	8	34
05:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	8	30
05:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	7	29
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	6	30
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	27

Bike Volumes

Time	NB (S 20th Avenue)					SB (S 20th Avenue)					EB (TV Hwy)					WB (TV Hwy)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
04:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:05:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
04:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
04:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:25:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
04:30:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
04:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
04:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
04:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:50:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
04:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
05:00:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5
05:05:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5
05:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
05:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
05:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:45:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4

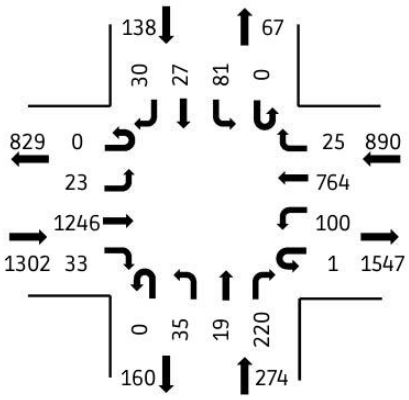
Pedestrian Volumes

Time	Pedestrians				Totals	
Time	NB	SB	EB	WB	15min	1hr
04:00:00 PM	0	0	0	0		
04:05:00 PM	0	0	0	0		
04:10:00 PM	0	0	0	1	1	
04:15:00 PM	0	0	0	1	2	
04:20:00 PM	0	0	2	1	5	
04:25:00 PM	0	0	0	0	4	
04:30:00 PM	0	0	2	0	5	
04:35:00 PM	0	0	3	0	5	
04:40:00 PM	0	0	0	0	5	
04:45:00 PM	0	0	0	0	3	
04:50:00 PM	0	0	1	1	2	
04:55:00 PM	0	0	0	0	2	12
05:00:00 PM	0	0	2	0	4	14
05:05:00 PM	0	0	1	0	3	15
05:10:00 PM	0	0	0	0	3	14
05:15:00 PM	0	0	0	0	1	13
05:20:00 PM	0	0	4	0	4	14
05:25:00 PM	0	0	0	0	4	14
05:30:00 PM	0	0	0	0	4	12
05:35:00 PM	0	0	0	0	0	9
05:40:00 PM	0	0	0	2	2	11
05:45:00 PM	1	1	0	0	4	13
05:50:00 PM	0	0	2	0	6	13
05:55:00 PM	1	0	0	0	5	14

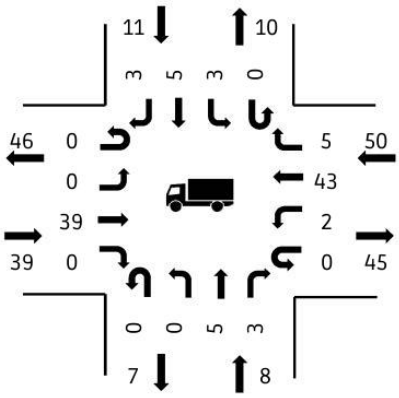
RallyTraffic

Location: S 26th Ave & TV Hwy
Date: 2024-09-10
Peak Hour Start: 07:05 AM
Peak 15 Minute Start: 07:35 AM
Peak Hour Factor: 0.86

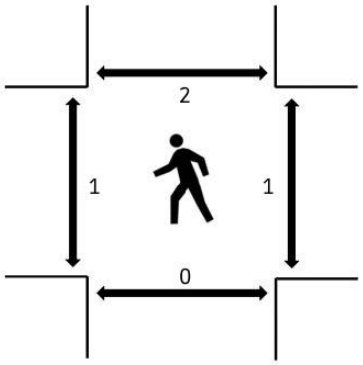
Motorized Vehicles



Heavy Vehicles



Pedestrians



(peak hour)

All Vehicle Volumes

Time	NB (S 26th Ave)					SB (S 26th Ave)					EB (TV Hwy)					WB (TV Hwy)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
07:00:00 AM	3	1	12	0	0	5	0	2	0	0	1	88	0	0	0	6	43	3	0	0		
07:05:00 AM	2	0	14	0	0	3	2	0	0	0	1	93	3	0	0	2	60	2	0	0		
07:10:00 AM	0	0	9	0	0	6	1	3	0	0	3	93	1	0	0	7	62	5	0	0	536	
07:15:00 AM	3	0	11	0	0	14	0	2	0	0	0	71	3	0	0	7	67	2	0	0	552	
07:20:00 AM	1	0	20	0	0	5	2	5	0	0	2	121	3	0	0	8	54	1	0	0	592	
07:25:00 AM	4	1	25	0	0	4	0	2	0	0	2	123	4	0	0	7	46	0	0	0	620	
07:30:00 AM	4	2	17	0	0	4	4	2	0	0	3	119	3	0	0	13	57	1	0	0	669	
07:35:00 AM	6	0	27	0	0	11	2	2	0	0	2	125	3	0	0	10	78	2	1	0	716	
07:40:00 AM	3	2	25	0	0	7	2	2	0	0	2	109	2	0	0	13	63	1	0	0	729	
07:45:00 AM	3	3	16	0	0	12	5	2	0	0	2	114	5	0	0	12	78	1	0	0	753	
07:50:00 AM	6	5	23	0	0	6	5	1	0	0	3	106	3	0	0	8	52	3	0	0	705	
07:55:00 AM	1	4	21	0	0	6	2	4	0	0	2	102	1	0	0	9	74	4	0	0	704	2589
08:00:00 AM	2	2	12	0	0	3	2	5	0	0	1	70	2	0	0	4	73	3	0	0	630	2604
08:05:00 AM	4	3	11	0	0	4	0	2	0	0	4	62	0	0	0	9	72	0	0	0	580	2593
08:10:00 AM	3	1	15	0	0	8	1	1	0	0	2	86	3	0	0	2	65	3	0	0	540	2593
08:15:00 AM	1	0	10	0	0	6	0	0	0	0	2	86	4	0	0	8	69	4	0	0	551	2603
08:20:00 AM	1	0	11	0	0	5	1	1	0	0	2	86	1	0	0	9	71	1	0	0	569	2570
08:25:00 AM	5	0	10	0	0	2	1	0	0	0	1	71	0	0	0	8	63	3	0	0	543	2516
08:30:00 AM	2	0	14	0	0	6	0	2	0	0	2	95	3	0	0	6	62	3	0	0	548	2482
08:35:00 AM	4	0	6	0	0	2	0	2	0	0	3	95	1	0	0	6	73	2	0	0	553	2407
08:40:00 AM	5	0	12	0	0	4	1	2	0	0	5	77	0	0	0	5	57	2	0	0	559	2346
08:45:00 AM	1	0	9	0	0	4	1	2	0	0	4	92	2	0	0	2	65	1	0	0	547	2276
08:50:00 AM	3	1	4	0	0	2	0	1	0	0	2	92	1	0	0	6	71	2	0	0	538	2240
08:55:00 AM	2	0	6	0	0	1	0	3	0	0	6	94	2	0	0	12	46	2	0	0	542	2184

Car Volumes

Time	NB (S 26th Ave)					SB (S 26th Ave)					EB (TV Hwy)					WB (TV Hwy)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
07:00:00 AM	3	1	12	0	0	4	0	1	0	0	1	86	0	0	0	6	42	3	0	0		
07:05:00 AM	2	0	14	0	0	3	2	0	0	0	1	87	3	0	0	2	52	2	0	0		
07:10:00 AM	0	0	9	0	0	6	1	3	0	0	3	92	1	0	0	7	55	5	0	0	509	
07:15:00 AM	3	0	11	0	0	13	0	2	0	0	0	68	3	0	0	7	63	1	0	0	521	
07:20:00 AM	1	0	20	0	0	5	1	3	0	0	2	118	3	0	0	8	53	1	0	0	568	
07:25:00 AM	4	0	25	0	0	4	0	2	0	0	2	119	4	0	0	7	44	0	0	0	597	
07:30:00 AM	4	1	17	0	0	4	2	2	0	0	3	117	3	0	0	12	55	0	0	0	646	
07:35:00 AM	6	0	26	0	0	11	2	1	0	0	2	123	3	0	0	9	73	2	1	0	690	
07:40:00 AM	3	2	24	0	0	7	1	2	0	0	2	105	2	0	0	13	61	1	0	0	702	
07:45:00 AM	3	3	16	0	0	11	5	2	0	0	2	110	5	0	0	12	77	1	0	0	729	
07:50:00 AM	6	3	23	0	0	6	4	1	0	0	3	101	3	0	0	8	50	2	0	0	680	
07:55:00 AM	1	4	20	0	0	5	2	4	0	0	2	100	1	0	0	9	70	3	0	0	678	2486
08:00:00 AM	2	1	12	0	0	3	2	5	0	0	1	67	2	0	0	4	68	2	0	0	600	2496
08:05:00 AM	4	2	11	0	0	4	0	2	0	0	4	60	0	0	0	9	69	0	0	0	555	2493
08:10:00 AM	3	0	14	0	0	6	1	1	0	0	2	81	3	0	0	2	60	3	0	0	510	2487
08:15:00 AM	1	0	10	0	0	6	0	0	0	0	2	82	4	0	0	6	63	3	0	0	518	2493
08:20:00 AM	1	0	10	0	0	4	1	1	0	0	2	84	1	0	0	9	68	1	0	0	535	2460
08:25:00 AM	5	0	10	0	0	2	1	0	0	0	1	67	0	0	0	8	59	3	0	0	515	2405
08:30:00 AM	2	0	14	0	0	6	0	2	0	0	2	91	3	0	0	6	59	3	0	0	526	2373
08:35:00 AM	4	0	6	0	0	2	0	2	0	0	3	92	1	0	0	6	68	2	0	0	530	2300
08:40:00 AM	5	0	12	0	0	4	1	2	0	0	5	74	0	0	0	5	53	2	0	0	537	2240
08:45:00 AM	1	0	9	0	0	4	1	1	0	0	4	90	2	0	0	2	65	1	0	0	529	2173
08:50:00 AM	3	0	4	0	0	2	0	1	0	0	2	87	1	0	0	5	70	2	0	0	520	2140
08:55:00 AM	2	0	6	0	0	1	0	3	0	0	6	93	2	0	0	11	44	1	0	0	526	2088

Truck Volumes

Time	NB (S 26th Ave)					SB (S 26th Ave)					EB (TV Hwy)					WB (TV Hwy)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
07:00:00 AM	0	0	0	0	0	1	0	1	0	0	0	2	0	0	0	0	1	0	0	0		
07:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	8	0	0	0		
07:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	7	0	0	0	27	
07:15:00 AM	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0	4	1	0	0	31	
07:20:00 AM	0	0	0	0	0	0	1	2	0	0	0	3	0	0	0	0	1	0	0	0	24	
07:25:00 AM	0	1	0	0	0	0	0	0	0	0	0	4	0	0	0	0	2	0	0	0	23	
07:30:00 AM	0	1	0	0	0	0	2	0	0	0	0	2	0	0	0	1	2	1	0	0	23	
07:35:00 AM	0	0	1	0	0	0	0	1	0	0	0	2	0	0	0	1	5	0	0	0	26	
07:40:00 AM	0	0	1	0	0	0	1	0	0	0	0	4	0	0	0	0	2	0	0	0	27	
07:45:00 AM	0	0	0	0	0	1	0	0	0	0	0	4	0	0	0	0	1	0	0	0	24	
07:50:00 AM	0	2	0	0	0	0	1	0	0	0	0	5	0	0	0	0	2	1	0	0	25	
07:55:00 AM	0	0	1	0	0	1	0	0	0	0	0	2	0	0	0	0	4	1	0	0	26	103
08:00:00 AM	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	5	1	0	0	30	108
08:05:00 AM	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	3	0	0	0	25	100
08:10:00 AM	0	1	1	0	0	2	0	0	0	0	0	5	0	0	0	0	5	0	0	0	30	106
08:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	2	6	1	0	0	33	110
08:20:00 AM	0	0	1	0	0	1	0	0	0	0	0	2	0	0	0	0	3	0	0	0	34	110
08:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	28	111
08:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	3	0	0	0	22	109
08:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	5	0	0	0	23	107
08:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	4	0	0	0	22	106
08:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	18	103
08:50:00 AM	0	1	0	0	0	0	0	0	0	0	0	5	0	0	0	1	1	0	0	0	18	100
08:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2	1	0	0	16	96

Bike Volumes

Time	NB (S 26th Ave)					SB (S 26th Ave)					EB (TV Hwy)					WB (TV Hwy)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
07:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		
07:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
07:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
07:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	4
08:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
08:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
08:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	3
08:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
08:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	3
08:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
08:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
08:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2

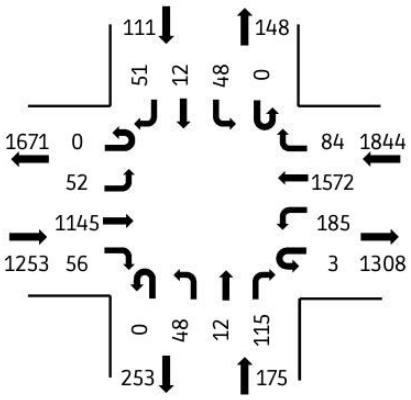
Pedestrian Volumes

Time	Pedestrians				Totals	
Time	NB	SB	EB	WB	15min	1hr
07:00:00 AM	0	0	0	0		
07:05:00 AM	0	0	0	0		
07:10:00 AM	0	0	0	0	0	
07:15:00 AM	0	0	0	0	0	
07:20:00 AM	0	0	0	1	1	
07:25:00 AM	0	0	0	0	1	
07:30:00 AM	0	0	0	0	1	
07:35:00 AM	0	2	0	0	2	
07:40:00 AM	0	0	0	0	2	
07:45:00 AM	0	0	0	0	2	
07:50:00 AM	0	0	0	0	0	
07:55:00 AM	0	0	0	0	0	3
08:00:00 AM	0	0	1	0	1	4
08:05:00 AM	0	0	0	0	1	4
08:10:00 AM	0	2	0	0	3	6
08:15:00 AM	0	0	0	1	3	7
08:20:00 AM	1	0	0	1	5	8
08:25:00 AM	0	0	0	1	4	9
08:30:00 AM	0	0	0	0	3	9
08:35:00 AM	0	0	0	0	1	7
08:40:00 AM	0	0	0	0	0	7
08:45:00 AM	0	0	0	0	0	7
08:50:00 AM	0	0	0	0	0	7
08:55:00 AM	0	0	0	0	0	7

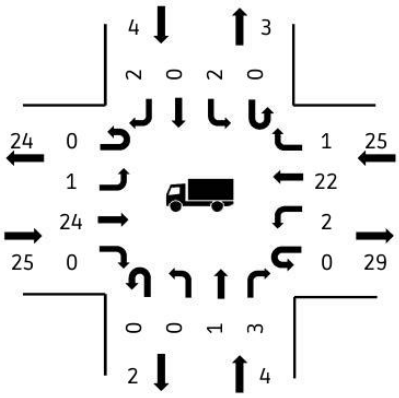
RallyTraffic

Location: S 26th Ave & TV Hwy
Date: 2024-09-10
Peak Hour Start: 04:15 PM
Peak 15 Minute Start: 04:35 PM
Peak Hour Factor: 0.95

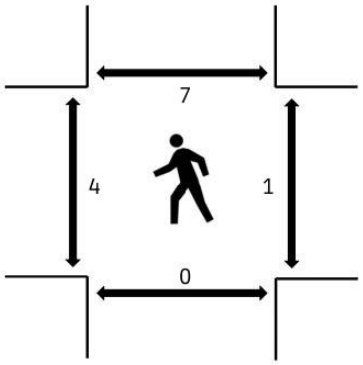
Motorized Vehicles



Heavy Vehicles



Pedestrians



(peak hour)

All Vehicle Volumes

Time	NB (S 26th Ave)					SB (S 26th Ave)					EB (TV Hwy)					WB (TV Hwy)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
04:00:00 PM	2	1	4	0	0	1	1	4	0	0	6	101	6	0	0	14	110	4	0	0		
04:05:00 PM	3	0	14	0	0	4	1	7	0	0	7	93	2	0	0	15	85	9	0	0		
04:10:00 PM	1	1	11	0	0	3	0	0	0	0	3	83	3	0	0	13	122	1	0	0	735	
04:15:00 PM	6	2	11	0	0	3	1	3	0	0	4	89	3	0	0	11	134	16	0	0	764	
04:20:00 PM	1	2	5	0	0	2	0	4	0	0	4	97	1	0	0	20	137	3	0	0	800	
04:25:00 PM	3	0	10	0	0	3	0	4	0	0	3	81	3	0	0	10	133	3	0	0	812	
04:30:00 PM	4	0	10	0	0	2	0	6	0	0	1	104	6	0	0	14	122	4	1	0	803	
04:35:00 PM	1	1	12	0	0	5	3	3	0	0	6	115	4	0	0	20	128	13	0	0	838	
04:40:00 PM	5	0	18	0	0	6	1	5	0	0	4	97	2	0	0	20	102	8	0	0	853	
04:45:00 PM	3	0	11	0	0	1	0	3	0	0	6	111	6	0	0	16	145	5	0	0	886	
04:50:00 PM	5	1	15	0	0	4	3	4	0	0	3	94	7	0	0	14	149	9	0	0	883	
04:55:00 PM	8	1	4	0	0	5	2	4	0	0	5	91	7	0	0	13	118	4	1	0	878	3278
05:00:00 PM	1	1	5	0	0	5	0	6	0	0	5	89	3	0	0	10	112	4	0	0	812	3265
05:05:00 PM	5	0	7	0	0	5	1	5	0	0	6	79	7	0	0	25	142	8	0	0	794	3315
05:10:00 PM	6	4	7	0	0	7	1	4	0	0	5	98	7	0	0	12	150	7	1	0	840	3383
05:15:00 PM	3	1	7	0	0	8	1	6	0	0	4	87	6	0	0	19	117	6	0	0	864	3365
05:20:00 PM	6	0	7	0	0	5	2	1	0	0	2	81	6	0	0	17	148	1	0	0	850	3365
05:25:00 PM	5	0	12	0	0	5	0	4	0	0	5	75	6	0	0	11	109	7	0	0	780	3351
05:30:00 PM	1	1	7	0	0	1	1	3	0	0	3	100	15	0	0	12	129	8	0	0	796	3358
05:35:00 PM	5	1	10	0	0	4	1	4	0	0	8	106	4	0	0	14	108	7	0	0	792	3319
05:40:00 PM	7	2	13	0	0	7	2	0	0	0	2	85	6	0	0	15	125	12	0	0	829	3327
05:45:00 PM	6	1	9	0	0	5	1	4	0	0	2	90	1	0	0	12	103	12	0	0	794	3266
05:50:00 PM	3	1	8	0	0	6	0	5	0	0	4	82	10	0	0	10	108	9	0	0	768	3204
05:55:00 PM	3	1	10	0	0	8	1	12	0	0	0	86	6	0	0	17	81	6	0	0	723	3172

Car Volumes

Time	NB (S 26th Ave)					SB (S 26th Ave)					EB (TV Hwy)					WB (TV Hwy)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
04:00:00 PM	2	1	3	0	0	1	0	4	0	0	6	99	6	0	0	14	109	4	0	0		
04:05:00 PM	2	0	11	0	0	4	0	7	0	0	7	92	2	0	0	15	82	9	0	0		
04:10:00 PM	1	1	11	0	0	3	0	0	0	0	2	82	3	0	0	13	121	1	0	0	718	
04:15:00 PM	6	2	10	0	0	3	1	3	0	0	4	87	3	0	0	11	133	16	0	0	748	
04:20:00 PM	1	2	4	0	0	1	0	4	0	0	4	95	1	0	0	20	133	3	0	0	785	
04:25:00 PM	3	0	10	0	0	3	0	4	0	0	3	78	3	0	0	10	132	3	0	0	796	
04:30:00 PM	4	0	10	0	0	2	0	6	0	0	1	101	6	0	0	13	119	4	1	0	784	
04:35:00 PM	1	0	12	0	0	5	3	3	0	0	6	114	4	0	0	20	125	12	0	0	821	
04:40:00 PM	5	0	18	0	0	6	1	4	0	0	4	96	2	0	0	20	101	8	0	0	837	
04:45:00 PM	3	0	11	0	0	1	0	3	0	0	6	108	6	0	0	16	144	5	0	0	873	
04:50:00 PM	5	1	15	0	0	3	3	4	0	0	3	93	7	0	0	14	148	9	0	0	873	
04:55:00 PM	8	1	4	0	0	5	2	4	0	0	5	87	7	0	0	13	117	4	1	0	866	3217
05:00:00 PM	1	1	5	0	0	5	0	6	0	0	5	88	3	0	0	10	108	4	0	0	799	3204
05:05:00 PM	5	0	7	0	0	5	1	5	0	0	5	78	7	0	0	24	142	8	0	0	781	3260
05:10:00 PM	6	4	6	0	0	7	1	3	0	0	5	96	7	0	0	12	148	7	1	0	826	3325
05:15:00 PM	3	1	7	0	0	8	1	6	0	0	4	86	6	0	0	19	117	6	0	0	854	3310
05:20:00 PM	6	0	7	0	0	5	2	1	0	0	2	81	6	0	0	17	146	1	0	0	841	3316
05:25:00 PM	5	0	12	0	0	5	0	4	0	0	5	74	6	0	0	11	109	7	0	0	776	3305
05:30:00 PM	1	1	7	0	0	1	1	3	0	0	3	100	15	0	0	12	128	8	0	0	792	3318
05:35:00 PM	5	0	10	0	0	4	1	4	0	0	8	103	4	0	0	14	105	6	0	0	782	3277
05:40:00 PM	7	2	13	0	0	7	2	0	0	0	2	83	6	0	0	15	124	12	0	0	817	3285
05:45:00 PM	6	1	9	0	0	5	1	4	0	0	2	90	1	0	0	12	103	11	0	0	782	3227
05:50:00 PM	3	1	8	0	0	6	0	5	0	0	4	81	10	0	0	10	106	8	0	0	760	3164
05:55:00 PM	3	1	10	0	0	8	1	12	0	0	0	86	6	0	0	17	80	6	0	0	717	3136

Truck Volumes

Time	NB (S 26th Ave)					SB (S 26th Ave)					EB (TV Hwy)					WB (TV Hwy)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
04:00:00 PM	0	0	1	0	0	0	1	0	0	0	0	2	0	0	0	0	1	0	0	0		
04:05:00 PM	1	0	3	0	0	0	1	0	0	0	0	1	0	0	0	0	3	0	0	0		
04:10:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	0	0	0	17	
04:15:00 PM	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	16	
04:20:00 PM	0	0	1	0	0	1	0	0	0	0	0	2	0	0	0	0	4	0	0	0	15	
04:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	0	0	0	16	
04:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	3	0	0	0	19	
04:35:00 PM	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3	1	0	0	17	
04:40:00 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	0	16	
04:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	1	0	0	0	13	
04:50:00 PM	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	10	
04:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	0	12	61
05:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	4	0	0	0	13	61
05:05:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	13	55
05:10:00 PM	0	0	1	0	0	0	0	1	0	0	0	2	0	0	0	0	2	0	0	0	14	58
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	10	55
05:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	9	49
05:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	4	46
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	40
05:35:00 PM	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	1	0	0	10	42
05:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	12	42
05:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	12	39
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	1	0	0	8	40
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	6	36

Bike Volumes

Time	NB (S 26th Ave)					SB (S 26th Ave)					EB (TV Hwy)					WB (TV Hwy)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
04:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0		
04:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
04:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
04:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
04:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	
04:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	
04:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
04:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	3	
04:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	3	
04:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	7
05:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	3	9
05:05:00 PM	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	1	0	0	6	12
05:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	7	13
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	13
05:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	13
05:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	4	16
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	5	16
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	15
05:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15
05:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	14
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	3	15
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	15

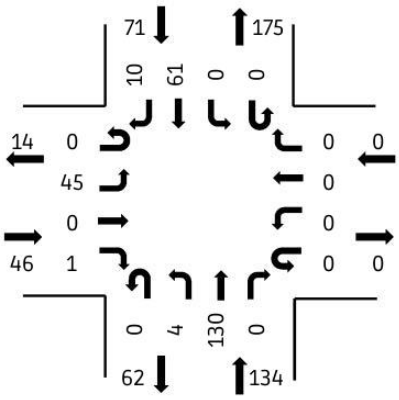
Pedestrian Volumes

Time	Pedestrians				Totals	
Time	NB	SB	EB	WB	15min	1hr
04:00:00 PM	0	0	0	0		
04:05:00 PM	0	0	0	1		
04:10:00 PM	0	0	0	0	1	
04:15:00 PM	0	0	0	0	1	
04:20:00 PM	0	1	0	0	1	
04:25:00 PM	0	1	0	0	2	
04:30:00 PM	0	0	0	0	2	
04:35:00 PM	0	0	0	0	1	
04:40:00 PM	0	1	2	0	3	
04:45:00 PM	0	0	0	0	3	
04:50:00 PM	0	1	0	0	4	
04:55:00 PM	0	0	0	0	1	7
05:00:00 PM	0	2	2	1	6	12
05:05:00 PM	0	0	0	0	5	11
05:10:00 PM	0	1	0	0	6	12
05:15:00 PM	0	1	0	2	4	15
05:20:00 PM	0	1	0	0	5	15
05:25:00 PM	0	0	1	0	5	15
05:30:00 PM	0	0	0	0	2	15
05:35:00 PM	0	0	0	0	1	15
05:40:00 PM	0	0	2	0	2	14
05:45:00 PM	0	0	0	0	2	14
05:50:00 PM	0	0	1	1	4	15
05:55:00 PM	0	0	0	0	2	15

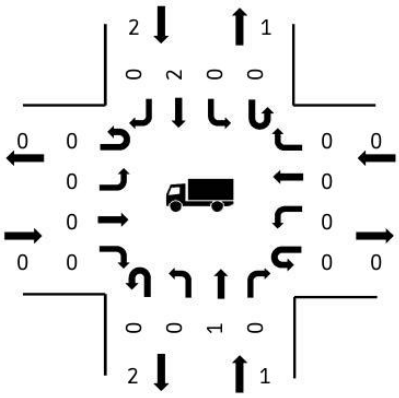
RallyTraffic

Location: S 26th Ave & S Heather St
Date: 2024-09-10
Peak Hour Start: 07:10 AM
Peak 15 Minute Start: 07:30 AM
Peak Hour Factor: 0.74

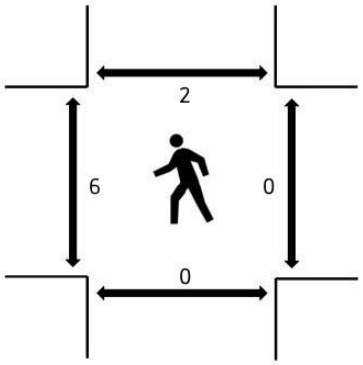
Motorized Vehicles



Heavy Vehicles



Pedestrians



(peak hour)

All Vehicle Volumes

Time	NB (S 26th Ave)					SB (S 26th Ave)					EB (S Heather St)					WB (S Heather St)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
07:00:00 AM	1	5	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0		
07:05:00 AM	0	7	0	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0		
07:10:00 AM	0	4	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	27	
07:15:00 AM	0	4	0	0	0	0	4	0	0	0	6	0	0	0	0	0	0	0	0	0	34	
07:20:00 AM	0	14	0	0	0	0	1	0	0	0	11	0	0	0	0	0	0	0	0	0	48	
07:25:00 AM	0	12	0	0	0	0	2	2	0	0	3	0	0	0	0	0	0	0	0	0	59	
07:30:00 AM	0	13	0	0	0	0	9	0	0	0	5	0	0	0	0	0	0	0	0	0	72	
07:35:00 AM	2	19	0	0	0	0	7	0	0	0	4	0	0	0	0	0	0	0	0	0	78	
07:40:00 AM	0	15	0	0	0	0	8	1	0	0	2	0	0	0	0	0	0	0	0	0	85	
07:45:00 AM	0	14	0	0	0	0	4	1	0	0	2	0	0	0	0	0	0	0	0	0	79	
07:50:00 AM	1	14	0	0	0	0	9	1	0	0	4	0	0	0	0	0	0	0	0	0	76	
07:55:00 AM	1	10	0	0	0	0	9	0	0	0	1	0	0	0	0	0	0	0	0	0	71	242
08:00:00 AM	0	2	0	0	0	0	5	1	0	0	3	0	1	0	0	0	0	0	0	0	62	247
08:05:00 AM	0	9	0	0	0	0	0	3	0	0	4	0	0	0	0	0	0	0	0	0	49	251
08:10:00 AM	0	4	0	0	0	0	2	1	0	0	1	0	0	0	0	0	0	0	0	0	36	251
08:15:00 AM	0	4	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	32	245
08:20:00 AM	0	5	0	0	0	0	5	5	0	0	2	0	0	0	0	0	0	0	0	0	33	236
08:25:00 AM	0	5	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	0	0	38	230
08:30:00 AM	0	4	0	0	0	0	4	2	0	0	3	0	0	0	0	0	0	0	0	0	43	216
08:35:00 AM	0	8	0	0	0	0	2	3	0	0	4	0	0	0	0	0	0	0	0	0	43	201
08:40:00 AM	0	4	0	0	0	0	2	2	0	0	3	0	0	0	0	0	0	0	0	0	41	186
08:45:00 AM	0	4	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	35	172
08:50:00 AM	0	2	0	0	0	0	2	3	0	0	1	0	1	0	0	0	0	0	0	0	27	152
08:55:00 AM	0	3	0	0	0	0	4	2	0	0	1	0	0	0	0	0	0	0	0	0	26	141

Car Volumes

Time	NB (S 26th Ave)					SB (S 26th Ave)					EB (S Heather St)					WB (S Heather St)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
07:00:00 AM	1	5	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0		
07:05:00 AM	0	7	0	0	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0		
07:10:00 AM	0	4	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	27	
07:15:00 AM	0	4	0	0	0	0	3	0	0	0	6	0	0	0	0	0	0	0	0	0	33	
07:20:00 AM	0	14	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	46	
07:25:00 AM	0	12	0	0	0	0	2	2	0	0	3	0	0	0	0	0	0	0	0	0	57	
07:30:00 AM	0	12	0	0	0	0	9	0	0	0	5	0	0	0	0	0	0	0	0	0	70	
07:35:00 AM	2	19	0	0	0	0	7	0	0	0	4	0	0	0	0	0	0	0	0	0	77	
07:40:00 AM	0	15	0	0	0	0	8	1	0	0	2	0	0	0	0	0	0	0	0	0	84	
07:45:00 AM	0	14	0	0	0	0	4	1	0	0	2	0	0	0	0	0	0	0	0	0	79	
07:50:00 AM	1	14	0	0	0	0	9	1	0	0	4	0	0	0	0	0	0	0	0	0	76	
07:55:00 AM	1	10	0	0	0	0	9	0	0	0	1	0	0	0	0	0	0	0	0	0	71	239
08:00:00 AM	0	2	0	0	0	0	5	1	0	0	3	0	1	0	0	0	0	0	0	0	62	244
08:05:00 AM	0	9	0	0	0	0	0	3	0	0	4	0	0	0	0	0	0	0	0	0	49	248
08:10:00 AM	0	4	0	0	0	0	2	1	0	0	1	0	0	0	0	0	0	0	0	0	36	248
08:15:00 AM	0	4	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	32	243
08:20:00 AM	0	5	0	0	0	0	4	5	0	0	2	0	0	0	0	0	0	0	0	0	32	234
08:25:00 AM	0	5	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	0	0	0	37	228
08:30:00 AM	0	4	0	0	0	0	4	2	0	0	3	0	0	0	0	0	0	0	0	0	42	215
08:35:00 AM	0	8	0	0	0	0	2	3	0	0	4	0	0	0	0	0	0	0	0	0	43	200
08:40:00 AM	0	4	0	0	0	0	2	2	0	0	3	0	0	0	0	0	0	0	0	0	41	185
08:45:00 AM	0	3	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	34	170
08:50:00 AM	0	2	0	0	0	0	1	3	0	0	1	0	1	0	0	0	0	0	0	0	25	149
08:55:00 AM	0	3	0	0	0	0	3	2	0	0	1	0	0	0	0	0	0	0	0	0	23	137

Truck Volumes

Time	NB (S 26th Ave)					SB (S 26th Ave)					EB (S Heather St)					WB (S Heather St)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
07:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:20:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
07:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
07:30:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
07:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
07:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:20:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
08:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
08:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
08:50:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3
08:55:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	4

Bike Volumes

Time	NB (S 26th Ave)					SB (S 26th Ave)					EB (S Heather St)					WB (S Heather St)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
07:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
07:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
08:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1

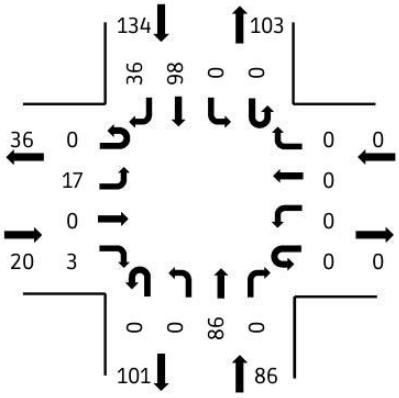
Pedestrian Volumes

Time	Pedestrians				Totals	
Time	NB	SB	EB	WB	15min	1hr
07:00:00 AM	0	0	0	0		
07:05:00 AM	0	0	1	0		
07:10:00 AM	0	0	0	0	1	
07:15:00 AM	0	0	0	0	1	
07:20:00 AM	0	0	2	0	2	
07:25:00 AM	0	0	0	0	2	
07:30:00 AM	0	0	0	0	2	
07:35:00 AM	0	2	3	0	5	
07:40:00 AM	0	0	0	0	5	
07:45:00 AM	0	0	1	0	6	
07:50:00 AM	0	0	0	0	1	
07:55:00 AM	0	0	0	0	1	9
08:00:00 AM	0	0	0	0	0	9
08:05:00 AM	0	0	0	0	0	8
08:10:00 AM	0	0	0	0	0	8
08:15:00 AM	0	0	0	0	0	8
08:20:00 AM	0	0	0	0	0	6
08:25:00 AM	0	0	0	0	0	6
08:30:00 AM	0	0	0	0	0	6
08:35:00 AM	0	0	0	0	0	1
08:40:00 AM	0	0	0	0	0	1
08:45:00 AM	4	0	0	0	4	4
08:50:00 AM	0	0	0	0	4	4
08:55:00 AM	0	0	1	0	5	5

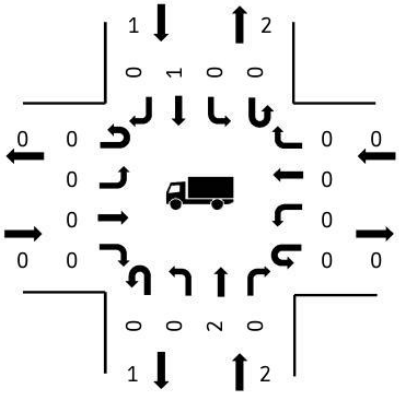
RallyTraffic

Location: S 26th Ave & S Heather St
Date: 2024-09-10
Peak Hour Start: 04:30 PM
Peak 15 Minute Start: 04:40 PM
Peak Hour Factor: 0.86

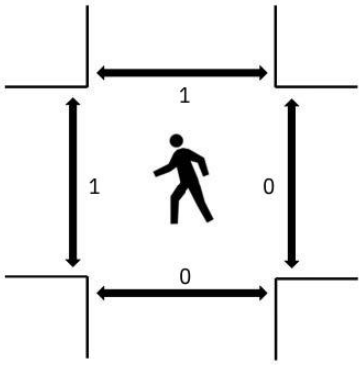
Motorized Vehicles



Heavy Vehicles



Pedestrians



(peak hour)

All Vehicle Volumes

Time	NB (S 26th Ave)					SB (S 26th Ave)					EB (S Heather St)					WB (S Heather St)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
04:00:00 PM	0	3	0	0	0	0	7	4	0	0	2	0	0	0	0	0	0	0	0	0		
04:05:00 PM	0	4	0	0	0	0	1	4	0	0	2	0	0	0	0	0	0	0	0	0		
04:10:00 PM	0	6	0	0	0	0	6	1	0	0	3	0	0	0	0	0	0	0	0	0	43	
04:15:00 PM	1	4	0	0	0	0	4	3	0	0	3	0	0	0	0	0	0	0	0	0	42	
04:20:00 PM	0	1	0	0	0	0	13	4	0	0	2	0	1	0	0	0	0	0	0	0	52	
04:25:00 PM	0	3	0	0	0	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	43	
04:30:00 PM	0	6	0	0	0	0	8	3	0	0	4	0	0	0	0	0	0	0	0	0	49	
04:35:00 PM	0	9	0	0	0	0	6	5	0	0	2	0	0	0	0	0	0	0	0	0	50	
04:40:00 PM	0	8	0	0	0	0	7	4	0	0	2	0	0	0	0	0	0	0	0	0	64	
04:45:00 PM	0	7	0	0	0	0	11	6	0	0	0	0	0	0	0	0	0	0	0	0	67	
04:50:00 PM	0	11	0	0	0	0	9	3	0	0	1	0	1	0	0	0	0	0	0	0	70	
04:55:00 PM	0	5	0	0	0	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	64	214
05:00:00 PM	0	7	0	0	0	0	8	4	0	0	0	0	0	0	0	0	0	0	0	0	59	217
05:05:00 PM	0	5	0	0	0	0	7	0	0	0	2	0	0	0	0	0	0	0	0	0	48	220
05:10:00 PM	0	6	0	0	0	0	7	4	0	0	1	0	0	0	0	0	0	0	0	0	51	222
05:15:00 PM	0	7	0	0	0	0	12	2	0	0	1	0	2	0	0	0	0	0	0	0	56	231
05:20:00 PM	0	7	0	0	0	0	12	1	0	0	3	0	0	0	0	0	0	0	0	0	65	233
05:25:00 PM	0	8	0	0	0	0	4	1	0	0	1	0	0	0	0	0	0	0	0	0	61	240
05:30:00 PM	1	5	0	1	0	0	8	4	0	0	0	0	1	0	0	0	0	0	0	0	57	239
05:35:00 PM	0	6	0	0	0	0	8	3	0	0	2	0	0	0	0	0	0	0	0	0	53	236
05:40:00 PM	0	2	0	0	0	0	8	2	0	0	2	0	0	0	0	0	0	0	0	0	53	229
05:45:00 PM	0	9	0	0	0	0	12	2	0	0	0	0	0	0	0	0	0	0	0	0	56	228
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	203
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	188

Car Volumes

Time	NB (S 26th Ave)					SB (S 26th Ave)					EB (S Heather St)					WB (S Heather St)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
04:00:00 PM	0	3	0	0	0	0	7	4	0	0	2	0	0	0	0	0	0	0	0	0		
04:05:00 PM	0	4	0	0	0	0	1	4	0	0	2	0	0	0	0	0	0	0	0	0		
04:10:00 PM	0	6	0	0	0	0	6	1	0	0	3	0	0	0	0	0	0	0	0	0	43	
04:15:00 PM	1	4	0	0	0	0	4	3	0	0	3	0	0	0	0	0	0	0	0	0	42	
04:20:00 PM	0	1	0	0	0	0	13	4	0	0	2	0	1	0	0	0	0	0	0	0	52	
04:25:00 PM	0	3	0	0	0	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	43	
04:30:00 PM	0	6	0	0	0	0	8	3	0	0	4	0	0	0	0	0	0	0	0	0	49	
04:35:00 PM	0	9	0	0	0	0	6	5	0	0	2	0	0	0	0	0	0	0	0	0	50	
04:40:00 PM	0	8	0	0	0	0	7	4	0	0	2	0	0	0	0	0	0	0	0	0	64	
04:45:00 PM	0	6	0	0	0	0	10	6	0	0	0	0	0	0	0	0	0	0	0	0	65	
04:50:00 PM	0	11	0	0	0	0	9	3	0	0	1	0	1	0	0	0	0	0	0	0	68	
04:55:00 PM	0	5	0	0	0	0	7	3	0	0	0	0	0	0	0	0	0	0	0	0	62	212
05:00:00 PM	0	7	0	0	0	0	8	4	0	0	0	0	0	0	0	0	0	0	0	0	59	215
05:05:00 PM	0	4	0	0	0	0	7	0	0	0	2	0	0	0	0	0	0	0	0	0	47	217
05:10:00 PM	0	6	0	0	0	0	7	4	0	0	1	0	0	0	0	0	0	0	0	0	50	219
05:15:00 PM	0	7	0	0	0	0	12	2	0	0	1	0	2	0	0	0	0	0	0	0	55	228
05:20:00 PM	0	7	0	0	0	0	12	1	0	0	3	0	0	0	0	0	0	0	0	0	65	230
05:25:00 PM	0	8	0	0	0	0	4	1	0	0	1	0	0	0	0	0	0	0	0	0	61	237
05:30:00 PM	1	5	0	1	0	0	8	4	0	0	0	0	1	0	0	0	0	0	0	0	57	236
05:35:00 PM	0	6	0	0	0	0	8	3	0	0	2	0	0	0	0	0	0	0	0	0	53	233
05:40:00 PM	0	2	0	0	0	0	8	2	0	0	2	0	0	0	0	0	0	0	0	0	53	226
05:45:00 PM	0	9	0	0	0	0	12	2	0	0	0	0	0	0	0	0	0	0	0	0	56	227
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	202
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	187

Truck Volumes

Time	NB (S 26th Ave)					SB (S 26th Ave)					EB (S Heather St)					WB (S Heather St)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
04:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:45:00 PM	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
04:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
04:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
05:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:05:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
05:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
05:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
05:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

Bike Volumes

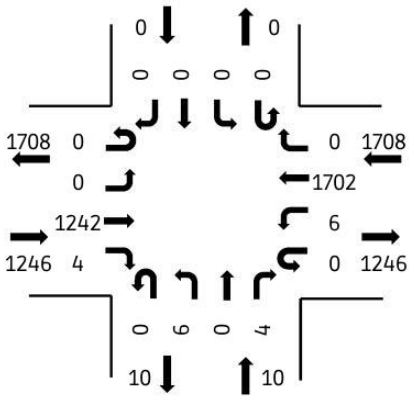
Time	NB (S 26th Ave)					SB (S 26th Ave)					EB (S Heather St)					WB (S Heather St)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
04:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
04:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Volumes

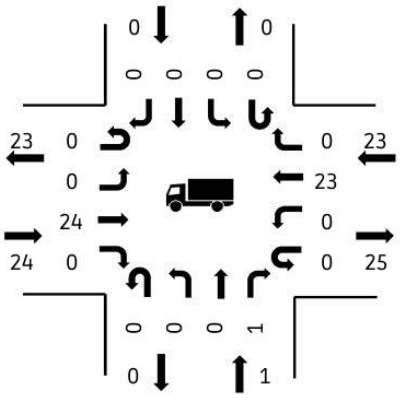
Time	Pedestrians				Totals	
Time	NB	SB	EB	WB	15min	1hr
04:00:00 PM	0	0	0	0		
04:05:00 PM	0	0	1	0		
04:10:00 PM	0	0	0	0	1	
04:15:00 PM	0	0	0	0	1	
04:20:00 PM	0	0	0	0	0	
04:25:00 PM	0	0	0	0	0	
04:30:00 PM	0	0	0	0	0	
04:35:00 PM	0	0	0	0	0	
04:40:00 PM	0	0	0	0	0	
04:45:00 PM	0	0	0	0	0	
04:50:00 PM	0	0	0	0	0	
04:55:00 PM	0	1	1	0	2	3
05:00:00 PM	0	0	0	0	2	3
05:05:00 PM	0	0	0	0	2	2
05:10:00 PM	0	0	0	0	0	2
05:15:00 PM	0	0	0	0	0	2
05:20:00 PM	0	0	0	0	0	2
05:25:00 PM	0	0	0	0	0	2
05:30:00 PM	0	0	0	0	0	2
05:35:00 PM	0	0	0	0	0	2
05:40:00 PM	0	0	0	0	0	2
05:45:00 PM	0	0	0	0	0	2
05:50:00 PM	0	0	0	0	0	2
05:55:00 PM	0	0	0	0	0	0

Location: SW 345th Ave & E Baseline St
Date: 2025-07-15
Peak Hour Start: 04:30 PM
Peak 15 Minute Start: 05:05 PM
Peak Hour Factor: 0.95

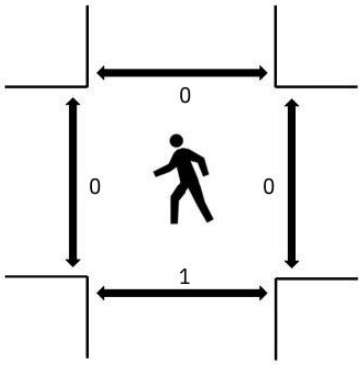
Motorized Vehicles



Heavy Vehicles



Pedestrians



(peak hour)

All Vehicle Volumes

Time	NB (SW 345th Ave)					SB (SW 345th Ave)					EB (E Baseline St)					WB (E Baseline St)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
03:00:00 PM	1	0	2	0	0	0	0	0	0	0	0	96	2	0	0	0	117	0	0	0		
03:05:00 PM	0	0	1	0	0	0	0	0	0	0	0	104	1	0	0	0	96	0	0	0		
03:10:00 PM	0	0	2	0	0	0	0	0	0	0	0	95	1	0	0	2	93	0	0	0	613	
03:15:00 PM	1	0	1	0	0	0	0	0	0	0	0	85	0	0	0	1	117	0	0	0	600	
03:20:00 PM	1	0	1	0	0	0	0	0	0	0	0	108	0	0	0	2	132	0	0	0	642	
03:25:00 PM	0	0	1	0	0	0	0	0	0	0	0	119	1	0	0	0	133	0	0	0	703	
03:30:00 PM	1	0	0	0	0	0	0	0	0	0	0	121	0	0	0	1	143	0	0	0	764	
03:35:00 PM	1	0	1	0	0	0	0	0	0	0	0	131	0	0	0	1	128	0	0	0	782	
03:40:00 PM	0	0	1	0	0	0	0	0	0	0	0	85	0	0	0	1	115	0	0	0	730	
03:45:00 PM	1	0	0	0	0	0	0	0	0	0	0	99	0	0	0	0	142	0	0	0	706	
03:50:00 PM	1	0	0	0	0	0	0	0	0	0	0	98	0	0	0	0	129	0	0	0	672	
03:55:00 PM	1	0	0	0	0	0	0	0	0	0	0	94	1	0	0	0	135	0	0	0	701	2747
04:00:00 PM	2	0	0	0	0	0	0	0	0	0	0	80	1	0	0	0	113	0	0	0	655	2725
04:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	97	0	0	0	0	148	0	0	0	672	2768
04:10:00 PM	1	0	1	0	0	0	0	0	0	0	0	101	0	0	0	1	133	0	0	0	678	2812
04:15:00 PM	0	0	1	0	0	0	0	0	0	0	0	100	0	0	0	1	117	0	0	0	701	2826
04:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	91	0	0	0	1	130	0	0	0	678	2804
04:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	91	0	0	0	1	143	0	0	0	676	2785
04:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	119	0	0	0	1	117	0	0	0	694	2756
04:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	116	0	0	0	0	130	0	0	0	718	2740
04:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	98	0	0	0	0	132	0	0	0	713	2768
04:45:00 PM	0	0	1	0	0	0	0	0	0	0	0	99	1	0	0	0	124	0	0	0	701	2751
04:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	114	3	0	0	1	148	0	0	0	721	2789
04:55:00 PM	1	0	1	0	0	0	0	0	0	0	0	96	0	0	0	0	138	0	0	0	727	2794
05:00:00 PM	1	0	0	0	0	0	0	0	0	0	0	92	0	0	0	0	154	0	0	0	749	2845
05:05:00 PM	0	0	1	0	0	0	0	0	0	0	0	102	0	0	0	0	143	0	0	0	729	2846
05:10:00 PM	2	0	0	0	0	0	0	0	0	0	0	96	0	0	0	2	173	0	0	0	766	2882
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	99	0	0	0	0	164	0	0	0	782	2926
05:20:00 PM	1	0	1	0	0	0	0	0	0	0	0	99	0	0	0	2	142	0	0	0	781	2949
05:25:00 PM	1	0	0	0	0	0	0	0	0	0	0	112	0	0	0	0	137	0	0	0	758	2964
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	72	0	0	0	0	133	0	0	0	700	2932
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	119	0	0	0	0	110	0	0	0	684	2915
05:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	120	0	0	0	654	2905
05:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	105	1	0	0	0	128	0	0	0	683	2914
05:50:00 PM	0	0	2	0	0	0	0	0	0	0	0	93	0	0	0	1	110	0	0	0	660	2854
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	103	1	0	0	0	123	0	0	0	667	2845

Car Volumes

Time	NB (SW 345th Ave)					SB (SW 345th Ave)					EB (E Baseline St)					WB (E Baseline St)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
03:00:00 PM	1	0	2	0	0	0	0	0	0	0	0	95	1	0	0	0	117	0	0	0		
03:05:00 PM	0	0	1	0	0	0	0	0	0	0	0	99	0	0	0	0	96	0	0	0		
03:10:00 PM	0	0	1	0	0	0	0	0	0	0	0	90	1	0	0	2	93	0	0	0	599	
03:15:00 PM	1	0	1	0	0	0	0	0	0	0	0	80	0	0	0	1	113	0	0	0	579	
03:20:00 PM	1	0	1	0	0	0	0	0	0	0	0	105	0	0	0	1	128	0	0	0	619	
03:25:00 PM	0	0	1	0	0	0	0	0	0	0	0	115	1	0	0	0	126	0	0	0	675	
03:30:00 PM	1	0	0	0	0	0	0	0	0	0	0	119	0	0	0	1	142	0	0	0	742	
03:35:00 PM	1	0	1	0	0	0	0	0	0	0	0	126	0	0	0	1	126	0	0	0	761	
03:40:00 PM	0	0	1	0	0	0	0	0	0	0	0	81	0	0	0	1	110	0	0	0	711	
03:45:00 PM	1	0	0	0	0	0	0	0	0	0	0	99	0	0	0	0	141	0	0	0	689	
03:50:00 PM	1	0	0	0	0	0	0	0	0	0	0	96	0	0	0	0	128	0	0	0	659	
03:55:00 PM	1	0	0	0	0	0	0	0	0	0	0	93	1	0	0	0	132	0	0	0	693	2678
04:00:00 PM	2	0	0	0	0	0	0	0	0	0	0	80	0	0	0	0	110	0	0	0	644	2654
04:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	89	0	0	0	0	145	0	0	0	653	2692
04:10:00 PM	1	0	1	0	0	0	0	0	0	0	0	97	0	0	0	1	132	0	0	0	658	2737
04:15:00 PM	0	0	1	0	0	0	0	0	0	0	0	99	0	0	0	1	116	0	0	0	683	2758
04:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	88	0	0	0	1	127	0	0	0	665	2738
04:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	91	0	0	0	1	138	0	0	0	663	2725
04:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	114	0	0	0	1	116	0	0	0	677	2693
04:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	115	0	0	0	0	129	0	0	0	705	2682
04:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	96	0	0	0	0	130	0	0	0	701	2715
04:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	99	1	0	0	0	121	0	0	0	691	2695
04:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	112	3	0	0	1	144	0	0	0	707	2730
04:55:00 PM	1	0	1	0	0	0	0	0	0	0	0	95	0	0	0	0	136	0	0	0	714	2736
05:00:00 PM	1	0	0	0	0	0	0	0	0	0	0	90	0	0	0	0	154	0	0	0	738	2789
05:05:00 PM	0	0	1	0	0	0	0	0	0	0	0	98	0	0	0	0	142	0	0	0	719	2796
05:10:00 PM	2	0	0	0	0	0	0	0	0	0	0	96	0	0	0	2	169	0	0	0	755	2833
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	97	0	0	0	0	162	0	0	0	769	2875
05:20:00 PM	1	0	1	0	0	0	0	0	0	0	0	95	0	0	0	2	140	0	0	0	767	2898
05:25:00 PM	1	0	0	0	0	0	0	0	0	0	0	111	0	0	0	0	136	0	0	0	746	2916
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	70	0	0	0	0	129	0	0	0	686	2884
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	119	0	0	0	0	110	0	0	0	676	2869
05:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	98	0	0	0	0	119	0	0	0	645	2860
05:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	101	1	0	0	0	125	0	0	0	673	2866
05:50:00 PM	0	0	2	0	0	0	0	0	0	0	0	92	0	0	0	1	109	0	0	0	648	2810
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	103	1	0	0	0	122	0	0	0	657	2803

Truck Volumes

Time	NB (SW 345th Ave)					SB (SW 345th Ave)					EB (E Baseline St)					WB (E Baseline St)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
03:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0		
03:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0	0		
03:10:00 PM	0	0	1	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	14	
03:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	4	0	0	0	21	
03:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	4	0	0	0	23	
03:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	7	0	0	0	28	
03:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	22	
03:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	2	0	0	0	21	
03:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	5	0	0	0	19	
03:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	17	
03:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	13	
03:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3	0	0	0	8	69
04:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	11	71
04:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	3	0	0	0	19	76
04:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	0	20	75
04:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	18	68
04:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	13	66
04:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	13	60
04:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	1	0	0	0	17	63
04:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	13	58
04:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	12	53
04:45:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	10	56
04:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	4	0	0	0	14	59
04:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	13	58
05:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	11	56
05:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	0	0	10	50
05:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	11	49
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0	13	51
05:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	2	0	0	0	14	51
05:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	12	48
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	4	0	0	0	14	48
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	46
05:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	9	45
05:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	3	0	0	0	10	48
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	12	44
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	10	42

Bike Volumes

Time	NB (SW 345th Ave)					SB (SW 345th Ave)					EB (E Baseline St)					WB (E Baseline St)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
03:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0		
03:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
03:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
03:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
03:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
03:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
03:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
03:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:20:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
04:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	2
05:00:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
05:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
05:10:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	3
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
05:20:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
05:25:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:40:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:45:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:50:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2

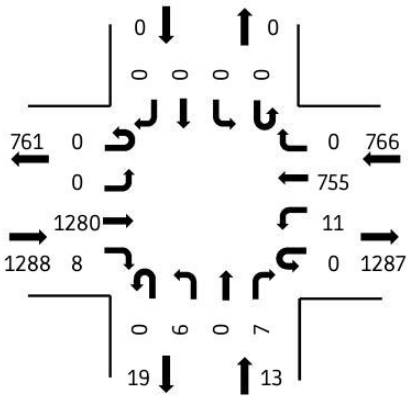
Pedestrian Volumes

Time	Pedestrians				Totals	
Time	North	South	East	West	15min	1hr
03:00:00 PM	0	0	0	0		
03:05:00 PM	0	0	0	0		
03:10:00 PM	0	0	0	0	0	
03:15:00 PM	0	0	0	0	0	
03:20:00 PM	0	0	0	0	0	
03:25:00 PM	0	0	0	0	0	
03:30:00 PM	0	0	0	0	0	
03:35:00 PM	0	0	0	0	0	
03:40:00 PM	0	0	0	0	0	
03:45:00 PM	0	0	0	0	0	
03:50:00 PM	0	0	0	0	0	
03:55:00 PM	0	1	0	0	1	1
04:00:00 PM	0	0	0	0	1	1
04:05:00 PM	0	0	0	0	1	1
04:10:00 PM	0	0	0	0	0	1
04:15:00 PM	0	0	0	0	0	1
04:20:00 PM	0	1	0	0	1	2
04:25:00 PM	0	0	0	0	1	2
04:30:00 PM	0	0	0	0	1	2
04:35:00 PM	0	1	0	0	1	3
04:40:00 PM	0	0	0	0	1	3
04:45:00 PM	0	0	0	0	1	3
04:50:00 PM	0	0	0	0	0	3
04:55:00 PM	0	0	0	0	0	2
05:00:00 PM	0	0	0	0	0	2
05:05:00 PM	0	0	0	0	0	2
05:10:00 PM	0	0	0	0	0	2
05:15:00 PM	0	0	0	0	0	2
05:20:00 PM	0	0	0	0	0	1
05:25:00 PM	0	0	0	0	0	1
05:30:00 PM	0	0	0	0	0	1
05:35:00 PM	0	0	0	0	0	0
05:40:00 PM	0	0	0	0	0	0
05:45:00 PM	0	0	0	0	0	0
05:50:00 PM	0	0	0	0	0	0
05:55:00 PM	0	0	0	0	0	0

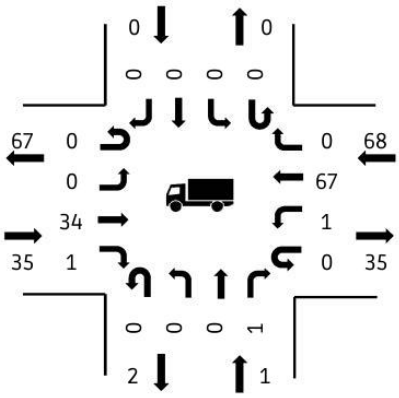
RallyTraffic

Location: SW 345th Ave & E Baseline St
Date: 2025-07-15
Peak Hour Start: 07:30 AM
Peak 15 Minute Start: 07:45 AM
Peak Hour Factor: 0.92

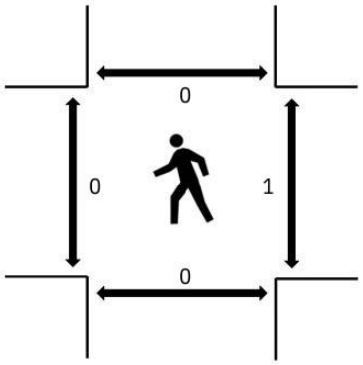
Motorized Vehicles



Heavy Vehicles



Pedestrians



(peak hour)

All Vehicle Volumes

Time	NB (SW 345th Ave)					SB (SW 345th Ave)					EB (E Baseline St)					WB (E Baseline St)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
06:00:00 AM	1	0	0	0	0	0	0	0	0	0	0	79	1	0	0	0	26	0	0	0		
06:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	69	0	0	0	0	51	0	0	0		
06:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	72	1	0	0	0	43	0	0	0	343	
06:15:00 AM	1	0	0	0	0	0	0	0	0	0	0	78	0	0	0	0	49	0	0	0	364	
06:20:00 AM	2	0	1	0	0	0	0	0	0	0	0	94	1	0	0	0	56	0	0	0	398	
06:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	102	1	0	0	0	30	0	0	0	415	
06:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	82	0	0	0	1	54	0	0	0	424	
06:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	94	0	0	0	0	50	0	0	0	414	
06:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	113	1	0	0	1	59	0	0	0	455	
06:45:00 AM	0	0	1	0	0	0	0	0	0	0	0	124	1	0	0	0	68	0	0	0	512	
06:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	92	0	0	0	2	53	0	0	0	515	
06:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	84	0	0	0	0	56	0	0	0	481	1694
07:00:00 AM	0	0	1	0	0	0	0	0	0	0	0	79	0	0	0	1	55	0	0	0	423	1723
07:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	97	1	0	0	0	38	0	0	0	412	1739
07:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	95	1	0	0	0	55	0	0	0	423	1774
07:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	96	1	0	0	0	54	0	0	0	438	1797
07:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	104	0	0	0	0	52	0	0	0	458	1799
07:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	90	0	0	0	1	50	0	0	0	448	1807
07:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	124	0	0	0	0	41	0	0	0	462	1835
07:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	117	0	0	0	0	66	0	0	0	489	1874
07:40:00 AM	1	0	0	0	0	0	0	0	0	0	0	106	0	0	0	1	56	0	0	0	512	1864
07:45:00 AM	0	0	1	0	0	0	0	0	0	0	0	119	1	0	0	0	58	0	0	0	526	1849
07:50:00 AM	1	0	0	0	0	0	0	0	0	0	0	119	1	0	0	1	63	0	0	0	528	1887
07:55:00 AM	1	0	0	0	0	0	0	0	0	0	0	122	0	0	0	1	72	0	0	0	560	1943
08:00:00 AM	1	0	0	0	0	0	0	0	0	0	0	103	2	0	0	2	49	0	0	0	538	1964
08:05:00 AM	1	0	1	0	0	0	0	0	0	0	0	90	3	0	0	3	85	0	0	0	536	2011
08:10:00 AM	1	0	1	0	0	0	0	0	0	0	0	91	0	0	0	0	65	0	0	0	498	2018
08:15:00 AM	0	0	3	0	0	0	0	0	0	0	0	80	1	0	0	1	67	0	0	0	493	2019
08:20:00 AM	0	0	1	0	0	0	0	0	0	0	0	99	0	0	0	0	72	0	0	0	482	2035
08:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	110	0	0	0	2	61	0	0	0	497	2067
08:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	98	0	0	0	1	47	0	0	0	491	2048
08:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	107	1	0	0	0	73	0	0	0	500	2046
08:40:00 AM	3	0	1	0	0	0	0	0	0	0	0	95	0	0	0	1	56	0	0	0	483	2038
08:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	93	1	0	0	0	71	0	0	0	502	2024
08:50:00 AM	1	0	2	0	0	0	0	0	0	0	0	105	2	0	0	0	70	0	0	0	501	2019
08:55:00 AM	1	0	1	0	0	0	0	0	0	0	0	65	0	0	0	1	62	0	0	0	475	1953

Car Volumes

Time	NB (SW 345th Ave)					SB (SW 345th Ave)					EB (E Baseline St)					WB (E Baseline St)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
06:00:00 AM	1	0	0	0	0	0	0	0	0	0	0	70	1	0	0	0	26	0	0	0		
06:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	64	0	0	0	0	50	0	0	0		
06:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	67	1	0	0	0	43	0	0	0	323	
06:15:00 AM	1	0	0	0	0	0	0	0	0	0	0	78	0	0	0	0	48	0	0	0	352	
06:20:00 AM	2	0	1	0	0	0	0	0	0	0	0	90	1	0	0	0	51	0	0	0	383	
06:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	98	1	0	0	0	30	0	0	0	401	
06:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	77	0	0	0	0	53	0	0	0	404	
06:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	93	0	0	0	0	45	0	0	0	397	
06:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	110	1	0	0	1	56	0	0	0	436	
06:45:00 AM	0	0	1	0	0	0	0	0	0	0	0	122	1	0	0	0	64	0	0	0	494	
06:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	89	0	0	0	2	50	0	0	0	497	
06:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	81	0	0	0	0	52	0	0	0	462	1622
07:00:00 AM	0	0	1	0	0	0	0	0	0	0	0	77	0	0	0	1	51	0	0	0	404	1654
07:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	94	1	0	0	0	35	0	0	0	393	1670
07:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	91	1	0	0	0	50	0	0	0	402	1701
07:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	93	0	0	0	0	52	0	0	0	417	1719
07:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	98	0	0	0	0	42	0	0	0	427	1714
07:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	87	0	0	0	1	46	0	0	0	419	1719
07:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	122	0	0	0	0	37	0	0	0	433	1748
07:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	115	0	0	0	0	57	0	0	0	465	1782
07:40:00 AM	1	0	0	0	0	0	0	0	0	0	0	103	0	0	0	1	46	0	0	0	482	1765
07:45:00 AM	0	0	1	0	0	0	0	0	0	0	0	117	1	0	0	0	53	0	0	0	495	1749
07:50:00 AM	1	0	0	0	0	0	0	0	0	0	0	118	1	0	0	1	59	0	0	0	503	1788
07:55:00 AM	1	0	0	0	0	0	0	0	0	0	0	120	0	0	0	1	66	0	0	0	540	1843
08:00:00 AM	1	0	0	0	0	0	0	0	0	0	0	98	2	0	0	1	46	0	0	0	516	1861
08:05:00 AM	1	0	1	0	0	0	0	0	0	0	0	88	2	0	0	3	79	0	0	0	510	1905
08:10:00 AM	1	0	1	0	0	0	0	0	0	0	0	90	0	0	0	0	58	0	0	0	472	1913
08:15:00 AM	0	0	2	0	0	0	0	0	0	0	0	75	1	0	0	1	63	0	0	0	466	1910
08:20:00 AM	0	0	1	0	0	0	0	0	0	0	0	95	0	0	0	0	69	0	0	0	457	1935
08:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	105	0	0	0	2	55	0	0	0	469	1963
08:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	93	0	0	0	1	46	0	0	0	467	1944
08:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	103	1	0	0	0	69	0	0	0	475	1945
08:40:00 AM	3	0	1	0	0	0	0	0	0	0	0	95	0	0	0	1	53	0	0	0	466	1947
08:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	90	1	0	0	0	66	0	0	0	483	1932
08:50:00 AM	1	0	2	0	0	0	0	0	0	0	0	99	2	0	0	0	67	0	0	0	481	1923
08:55:00 AM	1	0	1	0	0	0	0	0	0	0	0	65	0	0	0	1	59	0	0	0	455	1862

Truck Volumes

Time	NB (SW 345th Ave)					SB (SW 345th Ave)					EB (E Baseline St)					WB (E Baseline St)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
06:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0		
06:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	1	0	0	0		
06:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	20	
06:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	12	
06:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	5	0	0	0	15	
06:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	14	
06:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	1	1	0	0	0	20	
06:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	5	0	0	0	17	
06:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	19	
06:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	4	0	0	0	18	
06:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	18	
06:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	4	0	0	0	19	72
07:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	4	0	0	0	19	69
07:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	19	69
07:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	5	0	0	0	21	73
07:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	1	0	0	0	2	0	0	0	21	78
07:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	10	0	0	0	31	85
07:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	4	0	0	0	29	88
07:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	4	0	0	0	29	87
07:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	9	0	0	0	24	92
07:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	10	0	0	0	30	99
07:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	5	0	0	0	31	100
07:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	4	0	0	0	25	99
07:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	6	0	0	0	20	100
08:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	1	3	0	0	0	22	103
08:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	6	0	0	0	26	106
08:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	7	0	0	0	26	105
08:15:00 AM	0	0	1	0	0	0	0	0	0	0	0	5	0	0	0	0	4	0	0	0	27	109
08:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	3	0	0	0	25	100
08:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	6	0	0	0	28	104
08:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	1	0	0	0	24	104
08:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	4	0	0	0	25	101
08:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	17	91
08:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	5	0	0	0	19	92
08:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	3	0	0	0	20	96
08:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	20	91

Bike Volumes

Time	NB (SW 345th Ave)					SB (SW 345th Ave)					EB (E Baseline St)					WB (E Baseline St)					Totals	
Time	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	Left	Thru	Right	U-turn	RTOR	15min	1hr
06:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
06:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
06:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	3	
06:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
06:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	
06:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
06:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
07:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
07:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
07:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
07:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	5
07:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5
07:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	6
07:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6
07:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	4
07:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
07:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3
07:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	4
07:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
08:00:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4
08:05:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
08:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
08:15:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:25:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:30:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:35:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:40:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:50:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1
08:55:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1

Pedestrian Volumes

Time	Pedestrians				Totals	
Time	North	South	East	West	15min	1hr
06:00:00 AM	0	0	0	0		
06:05:00 AM	0	0	0	0		
06:10:00 AM	0	0	0	0	0	
06:15:00 AM	0	0	0	0	0	
06:20:00 AM	0	0	0	0	0	
06:25:00 AM	0	1	0	0	1	
06:30:00 AM	0	0	0	0	1	
06:35:00 AM	0	0	0	0	1	
06:40:00 AM	0	0	0	0	0	
06:45:00 AM	0	0	0	0	0	
06:50:00 AM	0	0	0	0	0	
06:55:00 AM	0	0	0	0	0	1
07:00:00 AM	0	0	0	0	0	1
07:05:00 AM	0	0	0	0	0	1
07:10:00 AM	0	0	0	0	0	1
07:15:00 AM	0	0	0	0	0	1
07:20:00 AM	0	0	0	0	0	1
07:25:00 AM	0	0	0	0	0	0
07:30:00 AM	0	0	0	0	0	0
07:35:00 AM	0	0	0	0	0	0
07:40:00 AM	0	0	0	0	0	0
07:45:00 AM	0	0	0	0	0	0
07:50:00 AM	0	0	0	0	0	0
07:55:00 AM	0	0	0	0	0	0
08:00:00 AM	0	0	0	0	0	0
08:05:00 AM	0	0	0	0	0	0
08:10:00 AM	0	0	1	0	1	1
08:15:00 AM	0	0	0	0	1	1
08:20:00 AM	0	0	0	0	1	1
08:25:00 AM	0	0	0	0	0	1
08:30:00 AM	0	0	0	0	0	1
08:35:00 AM	0	0	0	0	0	1
08:40:00 AM	0	0	0	0	0	1
08:45:00 AM	0	0	0	0	0	1
08:50:00 AM	0	0	0	0	0	1
08:55:00 AM	0	0	0	0	0	1

Appendix D

Crash History Data

Preliminary Traffic Signal Warrants

CITY OF CORNELIUS, WASHINGTON COUNTY

TUALATIN VALLEY HY and N 20TH AVE, City of Cornelius, Washington County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023

1 - 4 of 11 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G	J N S	S H V	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
05431	N	N	N	N			12/08/2021	14	TUALATIN VALLEY HY	INTER	6-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE							WE		N 20TH AVE	E		TRF SIGNAL	N	DRY	REAR		PRVTE	E -W									000	00
N							1P			06	1		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	23	M	OR-Y		026	000	29
N							45 31 13.34	-123 2 49.1	002900100S00															OR<25				
																02	NONE 0	STOP										
																	PRVTE	E -W									011	00
																	PSNGR CAR		01	DRVR	INJC	40	F	OR-Y		000	000	00
																								OR<25				
06216	N	N	N	N			12/27/2022	14	TUALATIN VALLEY HY	INTER	6-LEG	N	N	RAIN	ANGL-OTH	01	NONE 9	STRGHT										02
CITY							TU		N 20TH AVE	CN		TRF SIGNAL	N	WET	ANGL		N/A	E -W									000	00
N							6P			02	3		N	DARK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N							45 31 13.34	-123 2 49.1	002900100S00															UNK				
																02	NONE 9	STRGHT										
																	N/A	S -N									000	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				
01453	N	N	N	N			03/22/2019	14	TUALATIN VALLEY HY	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE							FR		N 20TH AVE	E	(NONE)	ONE-WAY	N	DRY	REAR		PRVTE	E -W									000	00
N							3P			03			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	29	M	OR-Y		026	000	29
N							45 31 12.69	-123 2 41.32	002900100S00		(02)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	E -W									011	00
																	PSNGR CAR		01	DRVR	INJC	37	M	OTH-Y		000	000	00
																								OR<25				
																02	NONE 0	STOP										
																	PRVTE	E -W									011	00
																	PSNGR CAR		02	PSNG	INJC	39	F			000	000	00
01723	N	N	N	N	N	N	04/06/2019	14	TUALATIN VALLEY HY	STRGHT		N	N	CLD	S-1STOP	01	NONE 0	STRGHT										013	07
CITY							SA		N 20TH AVE	E	(NONE)	ONE-WAY	N	WET	REAR		PRVTE	E -W									000	00
N							2P			03			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	45	M	OR-Y		043	000	07
N							45 31 13.16	-123 2 47.56	002900100S00		(02)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	E -W									011	013 00
																	PSNGR CAR		01	DRVR	NONE	51	M	OR-Y		000	000	00
																								OR<25				
																03	NONE 0	STOP										
																	PRVTE	E -W									022	00
																	PSNGR CAR		01	DRVR	NONE	57	M	OR-Y		000	000	00
																								OR<25				

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CITY OF CORNELIUS, WASHINGTON COUNTY **TUALATIN VALLEY HY and N 20TH AVE, City of Cornelius, Washington County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023**

5 - 6 of 11 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	I H L	C O R K	W	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
02339	Y	N	N N N	N	N	N		05/10/2019	14	TUALATIN VALLEY HY	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	07,01
CITY			FR							N 20TH AVE	E	(NONE)	ONE-WAY	N	DRY	REAR		PRVTE	E -W									000		00
N			3P								04			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	24	M	OR-Y		043,047	000		07,01
N			45 31 12.83		-123 2 43.66					002900100S00		(02)							OR<25										
																	02	NONE 0	STOP										
																		PRVTE	E -W									011	013	00
																		PSNGR CAR		01	DRVR	INJC	21	F	OR-Y		000	000		00
																									OR<25					
																	02	NONE 0	STOP										
																		PRVTE	E -W									011	013	00
																		PSNGR CAR		02	PSNG	INJC	14	F			000	000		00
																	03	NONE 0	STOP										
																		PRVTE	E -W									022	013	00
																		PSNGR CAR		01	DRVR	INJC	38	F	OR-Y		000	000		00
																									OR<25					
																	03	NONE 0	STOP										
																		PRVTE	E -W									022	013	00
																		PSNGR CAR		02	PSNG	INJC	38	M			000	000		00
																	03	NONE 0	STOP										
																		PRVTE	E -W									022	013	00
																		PSNGR CAR		03	PSNG	INJC	11	F			000	000		00
																	03	NONE 0	STOP										
																		PRVTE	E -W									022	013	00
																		PSNGR CAR		04	PSNG	INJC	21	F			000	000		00
																	04	NONE 0	STOP										
																		PRVTE	E -W									022		00
																		PSNGR CAR		01	DRVR	INJC	28	M	OR-Y		000	000		00
																									OR<25					
																	04	NONE 0	STOP										
																		PRVTE	E -W									022		00
																		PSNGR CAR		02	PSNG	INJC	31	F			000	000		00
																	04	NONE 0	STOP										
																		PRVTE	E -W									022		00
																		PSNGR CAR		03	PSNG	INJC	02	F			000	000		00
04294	N	N	N N N	N	N	N		08/24/2019	14	TUALATIN VALLEY HY	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT											27,07
CITY			SA							N 20TH AVE	E	(NONE)	ONE-WAY	N	DRY	REAR		N/A	E -W									000		00
N			4P								03			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 31 12.6		-123 2 39.75					002900100S00		(02)							UNK											
																	02	NONE 9	STOP										
																		N/A	E -W									011		00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																									UNK					

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CITY OF CORNELIUS, WASHINGTON COUNTY **TUALATIN VALLEY HY and N 20TH AVE, City of Cornelius, Washington County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023**

7 - 11 of 11 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G	J N V	S H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES / LICNS LOC	PED ERROR	ACT	EVENT	CAUSE
04450	N	N	N	N	N	N	08/31/2019	14	TUALATIN VALLEY HY	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT										07
CITY			SA						N 20TH AVE	E	(NONE)	ONE-WAY	N	DRY	REAR		N/A	E -W								000		00
N			2P							03			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000		00
N			45 31 12.7					-123 2 41.34	002900100S00		(02)													UNK				
																02	NONE 9	STOP										
																	N/A	E -W								011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000		00
																								UNK				
02568	N	N	N	N	N	N	07/18/2020	14	TUALATIN VALLEY HY	STRGHT		N	N	CLR	S-STRGHT	01	NONE 9	STRGHT										05
CITY			SA						N 20TH AVE	E	(NONE)	ONE-WAY	N	DRY	SS-O		N/A	E -W								000		00
N			4P							04			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000		00
N			45 31 12.7					-123 2 41.32	002900100S00		(02)													UNK				
																02	NONE 9	STRGHT										
																	N/A	E -W								000		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK	000	000		00
																								UNK				
02956	N	N	N	N	N	N	07/03/2022	14	TUALATIN VALLEY HY	STRGHT		Y	N	CLR	S-STRGHT	01	NONE	STRGHT									116	07,27,29
CITY			SU						N 20TH AVE	E	(NONE)	TRF SIGNAL	N	DRY	REAR		PRVTE	E -W								000		00
N			10P							03			N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	45	F	OR-Y	038,043,042	000	116	07,27,29
N			45 31 13.03					-123 2 46	002900100S00		(02)													OR<25				
																02	NONE	STRGHT										
																	PRVTE	E -W								006		00
																	PSNGR CAR		01	DRVR	NONE	30	M	OR-Y	000	000		00
																								OR<25				
03184	N	N	N	N			06/27/2023	14	TUALATIN VALLEY HY	STRGHT		Y	N	CLR	S-1STOP	01	NONE 9	STRGHT										29
NONE			TU						N 20TH AVE	E	(NONE)	TRF SIGNAL	N	DRY	REAR		UNKN	E -W								000		00
N			4P							03			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	M	UNK	026	000		29
N			45 31 13.27					-123 2 48.32	002900100S00		(02)													UNK				
																02	NONE 0	STOP										
																	PRVTE	E -W								011		00
																	PSNGR CAR		01	DRVR	INJB	44	M	OR-Y	000	000		00
																								OR<25				
05884	N	N	N	N			11/15/2023	14	TUALATIN VALLEY HY	STRGHT		Y	N	CLR	S-1STOP	01	NONE 0	STRGHT										27,29
NONE			WE						N 20TH AVE	E	(NONE)	TRF SIGNAL	N	DRY	REAR		PRVTE	E -W								000		00
N			5P							03			N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	40	F	OR-Y	026	038		27,29
N			45 31 13.19					-123 2 47.55	002900100S00		(02)													OR<25				
																02	NONE 0	STOP										
																	PRVTE	E -W								011		00
																	PSNGR CAR		01	DRVR	INJB	41	M	OR-Y	000	000		00
																								OR<25				

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CITY OF CORNELIUS, WASHINGTON COUNTY **TUALATIN VALLEY HY and N 26TH AVE, City of Cornelius, Washington County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023**

1 - 3 of 28 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	S I H L	W C O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES / OR-Y / OR<25	PED LOC	ERROR	ACT EVENT	CAUSE
01070	N	N	N N	N			03/26/2021	17	SW TUALATIN VALLEY HY	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE	STRGHT										29
NONE							FR	0	N 26TH AVE	N		L-GRN-SIG	N	DRY	REAR		PRVTE	N -S									000	00
N							10A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	73	M	OR-Y		026	000	29
N							45 31 12.25 -123 2 23.32																		OR<25				
																02	NONE	STOP										
																	PRVTE	N -S									012	00
																	PSNGR CAR		01	DRVR	INJC	18	F	OR-Y		000	000	00
																								OR<25				
																02	NONE	STOP										
																	PRVTE	N -S									012	00
																	PSNGR CAR		02	PSNG	INJC	18	F			000	000	00
01126	N	N	N N	N	N	N	03/05/2019	14	SW TUALATIN VALLEY HY	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE	0 STRGHT										29
COUNTY							TU		N 26TH AVE	E		TRF SIGNAL	N	DRY	REAR		PRVTE	E -W									000	00
N							12P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	39	M	OR-Y		026	000	29
N							45 31 12.24 -123 2 23.32		002900100S00																OR<25				
																02	NONE	0 STOP										
																	PRVTE	E -W									011	00
																	PSNGR CAR		01	DRVR	INJC	41	F	OR-Y		000	000	00
																								OR<25				
																02	NONE	0 STOP										
																	PRVTE	E -W									011	00
																	PSNGR CAR		02	PSNG	INJC	14	M			000	000	00
																02	NONE	0 STOP										
																	PRVTE	E -W									011	00
																	PSNGR CAR		03	PSNG	INJC	09	F			000	000	00
05443	N	N	N N				11/17/2022	14	SW TUALATIN VALLEY HY	INTER	CROSS	N	N	CLR	BIKE	01	NONE	0 TURN-L										02,04
CITY							TH		N 26TH AVE	E		TRF SIGNAL	N	DRY	TURN		PRVTE	N -E									000	00
N							6P			05	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	NONE	71	M	OR-Y		027,020	000	02,04
N							45 31 12.24 -123 2 23.32		002900100S00																OR<25				
																		- STRGHT		01	BIKE	INJB	13	M		I XWLK	000	035	00
																		N S										
00658	N	N	N N	N	N	N	02/07/2023	14	SW TUALATIN VALLEY HY	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE	0 STRGHT										07,29,27
CITY							TU		N 26TH AVE	E		TRF SIGNAL	N	WET	REAR		PRVTE	E -W									000	00
N							5P			06	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	NONE	33	F	OR-Y		043,026,016	000	07,29,27
N							45 31 12.24 -123 2 23.32		002900100S00																OR<25				

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SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N S	S H V	W O R L	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 0 PRVTE PSNGR CAR	STOP E -W									011 000		00 00
06650	Y	N	N	N	N	N	12/19/2023	14	SW TUALATIN VALLEY HY	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 0	STRGHT											01,29
CITY			TU						N 26TH AVE	E		TRF SIGNAL	N	WET	REAR		PRVTE	E -W								000		00
N N			8P 45 31 12.24					-123 2 23.32	002900100S00	06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJB	23	M	OR-Y OR<25		047,026	000		01,29
																02	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	INJB	34	M	OR-Y OR<25		000	011 000		00 00
05751	N	N	N	N	N	N	12/20/2021	14	SW TUALATIN VALLEY HY	INTER	CROSS	N	N	RAIN	S-1STOP	01	UNKN 0	STRGHT										013	29
CITY			MO						N 26TH AVE	W		TRF SIGNAL	N	WET	REAR		UNKN	E -W								000		00
N N			5P 45 31 12.24					-123 2 23.32	002900100S00	05	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		026	000		29
																02	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	INJC	26	F	OR-Y OR<25		000	011 013 000		00 00
																03	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	INJC	35	F	OR-Y OR>25		000	022 000		00 00
01709	Y	N	N	N			01/01/2021	14	SW TUALATIN VALLEY HY	INTER	CROSS	N	N	UNK	S-1STOP	01	NONE 9	STRGHT											29,01,07
CITY			FR						N 26TH AVE	W		TRF SIGNAL	N	UNK	REAR		N/A	W -E								000		00
N N			9P 45 31 12.27					-123 2 23.33	002900200S00	04	0		N	UNK	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK UNK		000	000		00
																02	NONE 9 N/A PSNGR CAR	STOP W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	012 000		00 00
01048	N	N	N	N			03/05/2022	14	SW TUALATIN VALLEY HY	INTER	CROSS	N	N	CLR	PED	01	NONE	TURN-R											02,12
CITY			SA						N 26TH AVE	W		TRF SIGNAL	N	DRY	PED		PRVTE	N -W								016		00
N N			2P 45 31 12.26					-123 2 23.32	002900200S00	05	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	64	F	OR-Y OR<25		029	000		02
																		-	01	PED	INJB	21	M		I XWLK	000	000		12
																		STRGHT N S											

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CITY OF CORNELIUS, WASHINGTON COUNTY

TUALATIN VALLEY HY and N 26TH AVE, City of Cornelius, Washington County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023

9 - 11 of 28 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	S H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
03403	N	N	N N	N	N	N	07/30/2022	14	SW TUALATIN VALLEY HY	INTER	CROSS	N	Y	CLR	FIX OBJ	01	NONE	STRGHT										034,055,059	12
CITY			SA						N 26TH AVE	W		TRF SIGNAL	N	DRY	FIX		PRVTE	E -W									007	034,055,059	00
N			9P							05	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJB	18	F	OR-Y		081	088		12
N			45 31 12.24	-123 2 23.32					002900200S00									OR<25											
																01	NONE	STRGHT											
																	PRVTE	E -W									007	034,055,059	00
																	PSNGR CAR		02	PSNG	INJA	64	M			000	000		00
02855	N	N	N N	N	N	N	06/27/2022	14	SW TUALATIN VALLEY HY	INTER	CROSS	N	N	CLR	PED	01	NONE	TURN-L										093	40,02,27
CITY			MO						N 26TH AVE	W		L-GRN-SIG	N	DRY	PED		PRVTE	S -W									000		00
N			4P							05	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	44	M	OR-Y		029	026		40,02
N			45 31 12.24	-123 2 23.32					002900200S00									OR<25											
																		- STRGHT N S	01	PED	INJB	15	M		I XWLK	000	038	093	27
00476	N	Y	N N	N	N	N	01/29/2019	14	SW TUALATIN VALLEY HY	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE	0 STRGHT												04
CITY			TU						N 26TH AVE	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	E -W									000		00
N			7P							02	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	39	M	NONE		020	000		04
N			45 31 12.24	-123 2 23.32					002900100S00									OR<25											
																02	NONE	0 TURN-L											
																	PRVTE	S -W									000		00
																	PSNGR CAR		01	DRVR	INJC	56	F	OR-Y		000	000		00
																								OR<25					
02761	N	N	N N	N	N	N	06/01/2019	14	SW TUALATIN VALLEY HY	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE	0 STRGHT												04
CITY			SA						N 26TH AVE	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	E -W									000		00
N			10A							02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	46	M	OTH-Y		000	000		00
N			45 31 12.24	-123 2 23.32					002900100S00									OR<25											
																01	NONE	0 STRGHT											
																	PRVTE	E -W									000		00
																	PSNGR CAR		02	PSNG	INJC	09	M			000	000		00
																01	NONE	0 STRGHT											
																	PRVTE	E -W									000		00
																	PSNGR CAR		03	PSNG	INJC	70	F			000	000		00
																01	NONE	0 STRGHT											
																	PRVTE	E -W									000		00
																	PSNGR CAR		04	PSNG	INJC	47	F			000	000		00

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CITY OF CORNELIUS, WASHINGTON COUNTY **TUALATIN VALLEY HY and N 26TH AVE, City of Cornelius, Washington County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023**

12 - 16 of 28 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	S I H L	C O R K	W DAY / TIME / LAT / LONG	CLASS / DIST / FROM / LRS	CITY STREET / FIRST STREET / SECOND STREET / LOCTN	RD CHAR / DIRECT / (#LANES)	INT-TYPE (MEDIAN) / LEGS / INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
															02	NONE 0 PRVTE PSNGR CAR	TURN-L W -N	01	DRVR	NONE	71	M	OR-Y OR<25		020	000 000		00 04
06706	N	N	N	N	N	N	12/17/2019 7P 45 31 12.24 -123 2 23.32	14 002900100S00	SW TUALATIN VALLEY HY N 26TH AVE	INTER CN 02	CROSS 0	N TRF SIGNAL	N N N	FOG WET DLIT	O-1 L-TURN TURN PDO	01	NONE 9 N/A PSNGR CAR	STRGHT E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	000		02 00 00
															02	NONE 9 N/A PSNGR CAR	TURN-L W -N	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		00 00
05820	N	N	N	N	N	N	12/23/2021 6P 45 31 12.24 -123 2 23.32	14 002900100S00	SW TUALATIN VALLEY HY N 26TH AVE	INTER CN 03	CROSS 0	N TRF SIGNAL	N N N	CLR DRY DARK	ANGL-OTH TURN INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	54	M	OR-Y OR<25		000	000		04 00 00
															02	NONE 0 PRVTE PSNGR CAR	TURN-L N -E	01	DRVR	INJB	59	F	OR-Y OR<25		020	000 000		00 04
04539	N	N	N	N			09/11/2023 5A 45 31 12.24 -123 2 23.32	14 002900100S00	SW TUALATIN VALLEY HY N 26TH AVE	INTER CN 02	CROSS 0	N TRF SIGNAL	N N N	UNK UNK UNK	O-OTHER TURN PDO	01	NONE 9 N/A PSNGR CAR	TURN-L W -N	01	DRVR	NONE	00	Unk	UNK UNK		000	000		02 00 00
															02	NONE 9 N/A PSNGR CAR	TURN-R E -N	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000		00 00
00507	N	N	N	N	N	N	01/30/2019 6P 45 31 12.21 -123 2 35.94	14 002900100S00	SW TUALATIN VALLEY HY N 26TH AVE	ALLEY W 03 (04)	(NONE)	N TRF SIGNAL	N N N	CLR DRY DLIT	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT E -W	01	DRVR	NONE	35	M	OR-Y OR<25		016,026	038		27,29 00 27,29
															02	NONE 0 PRVTE PSNGR CAR	STOP E -W	01	DRVR	INJC	18	M	OR-Y OR<25		000	011 000		00 00
															02	NONE 0 PRVTE PSNGR CAR	STOP E -W	02	PSNG	INJC	17	F			000	011 000		00 00

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CITY OF CORNELIUS, WASHINGTON COUNTY

TUALATIN VALLEY HY and N 26TH AVE, City of Cornelius, Washington County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023

17 - 20 of 28 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	S H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00479	N	N	N	N			01/24/2020	14	SW TUALATIN VALLEY HY	ALLEY		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											29
NONE			FR						N 26TH AVE	W	(NONE)	TRF SIGNAL	N	WET	REAR		PRVTE	E -W									000		00
N			3P							03			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	48	F	OR-Y		026	000		29
N			45 31 12.21		-123 2 35.95				002900100S00		(04)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	E -W									011		00
																	PSNGR CAR		01	DRVR	INJC	41	F	OR-Y		000	000		00
																								OR<25					
01163	N	N	Y	N	N	N	04/01/2021	18	N 26TH AVE	STRGHT		Y	N	CLR	S-1STOP	01	NONE	STRGHT											29
CITY			TH	50					SW TUALATIN VALLEY HY	N	(NONE)	UNKNOWN	N	DRY	REAR		STOLN	N -S									000		00
N			8A							06			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	56	M	SUSP		000	000		29
N			45 31 13.26		-123 2 23.31						(02)													UNK					
																02	NONE	STOP											
																	PRVTE	N -S									011		00
																	PSNGR CAR		01	DRVR	INJB	31	M	OR-Y		000	000		00
																								OR<25					
																02	NONE	STOP											
																	PRVTE	N -S									011		00
																	PSNGR CAR		02	PSNG	INJB	11	M			000	000		00
																02	NONE	STOP											
																	PRVTE	N -S									011		00
																	PSNGR CAR		03	PSNG	INJB	09	F			000	000		00
03862	Y	Y	N	N	N	N	09/18/2021	14	SW TUALATIN VALLEY HY	STRGHT		N	Y	RAIN	FIX OBJ	01	NONE 9	STRGHT											044,062,124	01
CITY			SA						N 26TH AVE	E	(RSDMD)	UNKNOWN	N	WET	FIX		N/A	E -W									001		00
Y			12A							06			N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 31 12.25		-123 2 15.8				002900100S00		(02)													UNK					
02237	Y	N	N	N			05/20/2022	14	SW TUALATIN VALLEY HY	STRGHT		Y	N	CLR	S-1STOP	01	NONE 9	STRGHT										013		01,29
NONE			FR						N 26TH AVE	E	(RSDMD)	TRF SIGNAL	N	DRY	REAR		N/A	E -W									000		00
N			UNK							03			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 31 12.26		-123 2 21.06				002900100S00		(02)													UNK					
																02	NONE 9	STOP											
																	N/A	E -W									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
04334	N	N	N	N	N	N	09/01/2023	14	SW TUALATIN VALLEY HY	STRGHT		Y	N	CLR	S-1STOP	01	NONE 9	STRGHT											07,29
CITY			FR						N 26TH AVE	E	(RSDMD)	TRF SIGNAL	N	DRY	REAR		N/A	E -W									000		00
N			2P							06			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 31 12.26		-123 2 21.81				002900100S00		(02)													UNK					

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																02	NONE 9	STOP											
																	N/A	E -W									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
02403	N	N	N	N	N	N	05/13/2019	14	SW TUALATIN VALLEY HY	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT										001	29
CITY			MO						N 26TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	E -W									000		00
N			5P							03			N	DAY	INJ		MTRCYCLE		01	DRVR	INJB	51	M	OR-Y		026	000	001	29
N			45 31 12.21		-123 2 24.8				002900100S00		(04)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	E -W									011		00
																	PSNGR CAR		01	DRVR	NONE	37	M	OR-Y		000	000		00
																								OR<25					
03824	N	N	N	N	N	N	07/29/2019	14	SW TUALATIN VALLEY HY	STRGHT		Y	N	CLR	S-1STOP	01	NONE 0	STRGHT											29
CITY			MO						N 26TH AVE	W	(RSDMD)	NONE	N	DRY	REAR		PRVTE	E -W									000		00
N			3P							04			N	DAY	INJ		MTRCYCLE		01	DRVR	INJB	48	M	OR-Y		026	000		29
N			45 31 12.15		-123 2 33.71				002900100S00		(04)													OR<25					
																02	NONE 0	STOP											
																	PRVTE	E -W									011		00
																	PSNGR CAR		01	DRVR	NONE	21	M	OR-Y		000	000		00
																								OR<25					
01097	N	N	N	N	N	N	03/28/2021	14	SW TUALATIN VALLEY HY	STRGHT		N	N	RAIN	S-1STOP	01	NONE 9	STRGHT											07
CITY			SU						N 26TH AVE	W	(NONE)	CURVE	N	WET	REAR		N/A	E -W									000		00
N			3P							02			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 31 12.2		-123 2 25.55				002900100S00		(04)													UNK					
																02	NONE 9	STOP											
																	N/A	E -W									012		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
01227	Y	N	N	N	N	N	04/06/2021	14	SW TUALATIN VALLEY HY	STRGHT		Y	N	CLR	S-STRGHT	01	NONE 9	STRGHT											07,01
CITY			TU						N 26TH AVE	W	(NONE)	TRF SIGNAL	N	DRY	REAR		N/A	E -W									000		00
N			9P							03			N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 31 12.15		-123 2 30.75				002900100S00		(04)													UNK					
																02	NONE 9	STRGHT											
																	N/A	E -W									006		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
04433	N	N	N	N			10/18/2021	14	SW TUALATIN VALLEY HY	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT											29
NO RPT			MO						N 26TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		N/A	E -W									000		00
N			5P							03			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 31 12.2		-123 2 24.79				002900100S00		(04)													UNK					

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SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																02	NONE 9	STOP										
																	N/A	E -W									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
03371	N	N	N	N	N	N	07/31/2022	14	SW TUALATIN VALLEY HY	STRGHT		Y	N	CLR	S-1STOP	01	NONE	STRGHT											32,27,40
CITY			SU						N 26TH AVE	W	(NONE)	TRF SIGNAL	N	DRY	REAR		PRVTE	E -W									000		00
N			7P							03			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	22	M	SUSP		052,026	026		32,27,40
N			45 31 12.14		-123 2 27.03				002900100S00		(04)													OR<25					
																02	NONE	STOP										
																	PRVTE	E -W									011		00
																	PSNGR CAR		01	DRVR	INJB	22	F	OR-Y		000	000		00
																								OR<25					
																02	NONE	STOP										
																	PRVTE	E -W									011		00
																	PSNGR CAR		02	PSNG	INJC	20	M			000	000		00
01240	N	N	N	N	N	N	03/07/2023	14	SW TUALATIN VALLEY HY	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT											17,29
CITY			TU						N 26TH AVE	W	(NONE)	UNKNOWN	N	DRY	REAR		N/A	E -W									000		00
N			2P							04			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N			45 31 12.19		-123 2 35.19				002900100S00		(04)													UNK					
																02	NONE 9	STOP										
																	N/A	E -W									011		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					

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OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF CORNELIUS, WASHINGTON COUNTY

S 26TH AVE and DOGWOOD ST, City of Cornelius, Washington County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023

1 - 1 of 1 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
03743	N	N	N	N	N	N	09/13/2021	17	S DOGWOOD ST	STRGHT		N	Y	CLR	PRKD MV	01	NONE 9	STRGHT										40
CITY			MO					69	S 26TH AVE	W	(NONE)	CURVE	N	UNK	SS-O		N/A	W -E									000	00
Y			8A							08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N			45 30 56					-123 2 24.7			(02)													UNK				

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CITY OF CORNELIUS, WASHINGTON COUNTY

TUALATIN VALLEY HY and 345TH AVE, City of Cornelius, Washington County, ALL Crashes Severity, ALL Crashes Circumstance, 01/01/2019 to 12/31/2023

1 - 4 of 4 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G	J N V	S H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL TRLR OWNER TYPE	USE QTY / MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
02940	N	N	N	N			06/10/2019	19	SW 345TH AVE	ALLEY		N	N	CLR	S-1TURN	01	NONE	9											06
NONE							MO	85	SW TUALATIN VALLEY HY	S	(NONE)	UNKNOWN	N	DRY	TURN		N/A	N -S									000		00
N							12P			07			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 31 10.82 -123 1 57.08				(02)														UNK					
																02	NONE	9											
																	N/A	N -E									019		00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
																								UNK					
Not Related																													
02345	N	N	N	N	N	N	05/10/2019	14	SW TUALATIN VALLEY HY	STRGHT		N	N	CLR	S-STRGHT	01	NONE	0											07
CITY							FR		SW 345TH AVE	E	(NONE)	NONE	N	UNK	REAR		PRVTE	W -E									000		00
N							6A			06			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	35	M	OR-Y		043	000		07
N							45 31 11.92 -123 1 56.29		002900200S00		(04)														OR<25					
																02	NONE	0											
																	PRVTE	W -E									006		00
																	PSNGR CAR		01	DRVR	NONE	39	F	OR-Y		000	000		00
																								OR<25					
Not Related																03	NONE	0											
																	PRVTE	W -E									022		00
																	PSNGR CAR		01	DRVR	INJC	27	F	OR-Y		000	000		00
																								OR<25					
04176	N	N	N	N	N	N	11/12/2020	14	SW TUALATIN VALLEY HY	STRGHT		N	Y	CLD	FIX OBJ	01	NONE	0										044		26
CITY							TH		SW 345TH AVE	E	(RSDMD)	MEDIAN BAR	N	DRY	FIX		PRVTE	W -E									007	044	26
Y							12P			05			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	65	M	OR-Y		000	000		00
N							45 31 11.86 -123 1 54.78		002900200S00		(04)														OR<25					
																01	NONE	0											
																	PRVTE	W -E									007	044	26
Not Related																	PSNGR CAR		02	PSNG	INJC	11	F			000	000		00
02473	N	N	N	N			06/25/2021	14	SW TUALATIN VALLEY HY	STRGHT		N	Y	CLR	FIX OBJ	01	NONE	9										040		11,21
CITY							FR		SW 345TH AVE	E	(RSDMD)	UNKNOWN	N	UNK	FIX		N/A	E -W									000		00
Y							2P			01			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000		00
N							45 31 12.22 -123 1 50.95		002900100S00		(02)														UNK					
Not Related																													

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Oregon Department of Transportation

Transportation Development Branch

Transportation Planning Analysis Unit

Preliminary Traffic Signal Warrant Analysis[1]

Major Street:	SW TV HWY (OR 8)	**Minor Street:**	SW 345th Avenue
Project:	25113 - Laurel Woods North	**City/County:**	Cornelius
Year:	2029	**Alternative:**	AM

Preliminary Signal Warrant Volumes

Number of Approach lanes		ADT on major street approaching from both directions		ADT on minor street, highest approaching volume	
Major Street	Minor Street	Percent of standard warrants 100	70	Percent of standard warrants 100	70
Case A: Minimum Vehicular Traffic					
1	1	8850	6200	2650	1850
2 or more	1	10600	7400	2650	1850
2 or more	2 or more	10600	7400	3550	2500
1	2 or more	8850	6200	3550	2500
Case B: Interruption of Continuous Traffic					
1	1	13300	9300	1350	950
2 or more	1	15900	11100	1350	950
2 or more	2 or more	15900	11100	1750	1250
1	2 or more	13300	9300	1750	1250
	100 percent of standard warrants				
X	70 percent of standard warrants[2]				

Preliminary Signal Warrant Calculation

	Street	Number of Lanes	Warrant Volumes	Approach Volumes	Warrant Met
Case A	Major	2	7400	24170	N
	Minor	1	1850	200	
Case B	Major	2	11100	24170	N
	Minor	1	950	200	

Analyst and Date:	Reviewer and Date:

[1] Meeting preliminary signal warrants does **not** guarantee that a signal will be installed. When preliminary signal warrants are met, project analysts need to coordinate with Region Traffic to initiate the traffic signal engineering investigation as outlined in the Traffic Manual. Before a signal can be installed, the engineering investigation must be conducted or reviewed by the Region Traffic Manager who will forward signal recommendations to headquarters. Traffic signal warrants must be met and the State Traffic Engineer's approval obtained before a traffic signal can be installed on a state highway.

[2] Used due to 85th percentile speed in excess of 40 mph or isolated community with population of less than 10,000.

Oregon Department of Transportation

Transportation Development Branch

Transportation Planning Analysis Unit

Preliminary Traffic Signal Warrant Analysis[1]

Major Street:	SW TV Hwy (OR 8)	**Minor Street:**	SW 345th Avenue
Project:	25113 - Laurel Woods North	**City/County:**	Cornelius
Year:	2029	**Alternative:**	PM

Preliminary Signal Warrant Volumes

Number of Approach lanes		ADT on major street approaching from both directions		ADT on minor street, highest approaching volume	
Major Street	Minor Street	Percent of standard warrants 100	70	100	70
Case A: Minimum Vehicular Traffic					
1	1	8850	6200	2650	1850
2 or more	1	10600	7400	2650	1850
2 or more	2 or more	10600	7400	3550	2500
1	2 or more	8850	6200	3550	2500
Case B: Interruption of Continuous Traffic					
1	1	13300	9300	1350	950
2 or more	1	15900	11100	1350	950
2 or more	2 or more	15900	11100	1750	1250
1	2 or more	13300	9300	1750	1250
	100 percent of standard warrants				
X	70 percent of standard warrants[2]				

Preliminary Signal Warrant Calculation

	Street	Number of Lanes	Warrant Volumes	Approach Volumes	Warrant Met
Case A	Major	2	7400	35490	N
	Minor	1	1850	120	
Case B	Major	2	11100	35490	N
	Minor	1	950	120	

Analyst and Date:	Reviewer and Date:

[1] Meeting preliminary signal warrants does **not** guarantee that a signal will be installed. When preliminary signal warrants are met, project analysts need to coordinate with Region Traffic to initiate the traffic signal engineering investigation as outlined in the Traffic Manual. Before a signal can be installed, the engineering investigation must be conducted or reviewed by the Region Traffic Manager who will forward signal recommendations to headquarters. Traffic signal warrants must be met and the State Traffic Engineer's approval obtained before a traffic signal can be installed on a state highway.

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Appendix E

Definitions

Synchro Reports

Queuing Reports

LEVEL OF SERVICE

Level of service is used to describe the quality of traffic flow. Levels of service A to C are considered good, and rural roads are usually designed for level of service C. Urban streets and signalized intersections are typically designed for level of service D. Level of service E is considered to be the limit of acceptable delay. For unsignalized intersections, level of service E is generally considered acceptable. Here is a more complete description of levels of service:

Level of service A: Very low delay at intersections, with all traffic signal cycles clearing and no vehicles waiting through more than one signal cycle. On highways, low volume and high speeds, with speeds not restricted by other vehicles.

Level of service B: Operating speeds beginning to be affected by other traffic; short traffic delays at intersections. Higher average intersection delay than for level of service A resulting from more vehicles stopping.

Level of service C: Operating speeds and maneuverability closely controlled by other traffic; higher delays at intersections than for level of service B due to a significant number of vehicles stopping. Not all signal cycles clear the waiting vehicles. This is the recommended design standard for rural highways.

Level of service D: Tolerable operating speeds; long traffic delays occur at intersections. The influence of congestion is noticeable. At traffic signals many vehicles stop, and the proportion of vehicles not stopping declines. The number of signal cycle failures, for which vehicles must wait through more than one signal cycle, are noticeable. This is typically the design level for urban signalized intersections.

Level of service E: Restricted speeds, very long traffic delays at traffic signals, and traffic volumes near capacity. Flow is unstable so that any interruption, no matter how minor, will cause queues to form and service to deteriorate to level of service F. Traffic signal cycle failures are frequent occurrences. For unsignalized intersections, level of service E or better is generally considered acceptable.

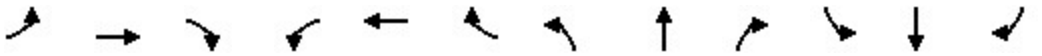
Level of service F: Extreme delays, resulting in long queues which may interfere with other traffic movements. There may be stoppages of long duration, and speeds may drop to zero. There may be frequent signal cycle failures. Level of service F will typically result when vehicle arrival rates are greater than capacity. It is considered unacceptable by most drivers.

LEVEL OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-20
C	20-35
D	35-55
E	55-80
F	>80

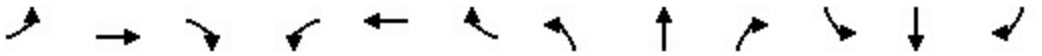
LEVEL OF SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-15
C	15-25
D	25-35
E	35-50
F	>50



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	71	1140	53	28	651	40	125	125	83	35	50	85
Future Volume (vph)	71	1140	53	28	651	40	125	125	83	35	50	85
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1614	3207		1583	3167	1417	1629	1602		1593	1683	1403
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.72	1.00		0.36	1.00	1.00
Satd. Flow (perm)	1614	3207		1583	3167	1417	1238	1602		607	1683	1403
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	1239	58	30	708	43	136	136	90	38	54	92
RTOR Reduction (vph)	0	3	0	0	0	17	0	28	0	0	0	76
Lane Group Flow (vph)	77	1294	0	30	708	26	136	198	0	38	54	16
Confl. Peds. (#/hr)							1		7	7		7
Confl. Bikes (#/hr)												2
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	2%	2%	2%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	7.4	55.2		4.8	52.6	52.6	15.0	15.0		15.0	15.0	15.0
Effective Green, g (s)	8.4	56.2		5.8	53.6	53.6	16.0	16.0		16.0	16.0	16.0
Actuated g/C Ratio	0.09	0.62		0.06	0.60	0.60	0.18	0.18		0.18	0.18	0.18
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	150	2002		102	1886	843	220	284		107	299	249
v/s Ratio Prot	c0.05	c0.40		0.02	0.22			c0.12			0.03	
v/s Ratio Perm						0.02	0.11			0.06		0.01
v/c Ratio	0.51	0.64		0.29	0.37	0.03	0.61	0.69		0.35	0.18	0.06
Uniform Delay, d1	38.8	10.6		40.1	9.4	7.4	34.1	34.7		32.4	31.4	30.7
Progression Factor	1.00	1.00		0.82	1.20	5.56	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.2	1.6		1.0	0.5	0.0	4.3	6.7		1.4	0.2	0.0
Delay (s)	41.0	12.2		34.1	11.9	41.7	38.5	41.4		33.9	31.6	30.8
Level of Service	D	B		C	B	D	D	D		C	C	C
Approach Delay (s/veh)		13.8			14.4			40.3			31.7	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



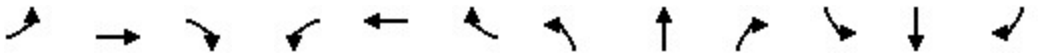
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	1140	53	28	651	40	125	125	83	35	50	85
Future Volume (veh/h)	71	1140	53	28	651	40	125	125	83	35	50	85
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1682	1682	1682	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	77	1239	58	30	708	0	136	136	90	38	54	92
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	5	5	5	2	2	2	4	4	4
Cap, veh/h	142	1913	89	93	1843		298	195	129	161	344	285
Arrive On Green	0.09	0.61	0.59	0.12	1.00	0.00	0.20	0.20	0.19	0.20	0.20	0.20
Sat Flow, veh/h	1628	3158	148	1602	3195	1425	1232	963	637	1131	1695	1402
Grp Volume(v), veh/h	77	636	661	30	708	0	136	0	226	38	54	92
Grp Sat Flow(s),veh/h/ln	1628	1624	1682	1602	1598	1425	1232	0	1600	1131	1695	1402
Q Serve(g_s), s	4.1	22.9	23.0	1.5	0.0	0.0	9.2	0.0	11.8	2.9	2.4	5.0
Cycle Q Clear(g_c), s	4.1	22.9	23.0	1.5	0.0	0.0	11.6	0.0	11.8	14.7	2.4	5.0
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	142	983	1019	93	1843		298	0	325	161	344	285
V/C Ratio(X)	0.54	0.65	0.65	0.32	0.38		0.46	0.00	0.70	0.24	0.16	0.32
Avail Cap(c_a), veh/h	181	983	1019	160	1843		321	0	355	183	377	312
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.92	0.92	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	11.5	11.6	38.2	0.0	0.0	34.3	0.0	33.5	40.1	29.5	30.6
Incr Delay (d2), s/veh	2.4	3.3	3.2	1.4	0.6	0.0	0.8	0.0	4.8	0.6	0.2	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	7.7	8.0	0.6	0.1	0.0	2.8	0.0	5.0	0.8	1.0	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.8	14.8	14.7	39.5	0.6	0.0	35.1	0.0	38.3	40.7	29.7	31.1
LnGrp LOS	D	B	B	D	A		D		D	D	C	C
Approach Vol, veh/h		1374			738			362			184	
Approach Delay, s/veh		16.3			2.1			37.1			32.7	
Approach LOS		B			A			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	58.5		22.3	11.8	55.9		22.3				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	48.0		19.0	9.0	47.0		19.0				
Max Q Clear Time (g_c+I1), s	3.5	25.0		16.7	6.1	2.0		13.8				
Green Ext Time (p_c), s	0.0	14.3		0.2	0.0	9.5		0.8				

Intersection Summary		
HCM 7th Control Delay, s/veh	16.3	
HCM 7th LOS	B	

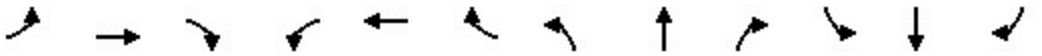
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	1283	34	104	787	26	36	20	227	83	28	31
Future Volume (vph)	24	1283	34	104	787	26	36	20	227	83	28	31
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97		1.00	0.98		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99	1.00		0.99	1.00
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1614	3213		1568	3137	1374		1645	1426		1561	1360
Flt Permitted	0.30	1.00		0.08	1.00	1.00		0.70	1.00		0.73	1.00
Satd. Flow (perm)	512	3213		146	3137	1374		1195	1426		1196	1360
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	28	1492	40	121	915	30	42	23	264	97	33	36
RTOR Reduction (vph)	0	2	0	0	0	10	0	0	150	0	0	31
Lane Group Flow (vph)	28	1530	0	121	915	20	0	65	114	0	130	5
Confl. Peds. (#/hr)			2	2			1		1	1		1
Confl. Bikes (#/hr)			2			1						
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	3%	3%	3%	8%	8%	8%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	57.6	54.4		67.6	59.4	59.4		12.4	12.4		12.4	12.4
Effective Green, g (s)	59.6	55.4		68.6	60.4	60.4		13.4	13.4		13.4	13.4
Actuated g/C Ratio	0.66	0.62		0.76	0.67	0.67		0.15	0.15		0.15	0.15
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	390	1977		256	2105	922		177	212		178	202
v/s Ratio Prot	0.00	c0.48		c0.05	0.29							
v/s Ratio Perm	0.04			0.31		0.01		0.05	0.08		c0.11	0.00
v/c Ratio	0.07	0.77		0.47	0.43	0.02		0.36	0.53		0.73	0.02
Uniform Delay, d1	5.2	12.7		10.5	6.8	4.9		34.4	35.4		36.5	32.7
Progression Factor	1.32	0.77		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	2.5		1.0	0.6	0.0		0.9	2.0		13.5	0.0
Delay (s)	6.9	12.4		11.5	7.5	4.9		35.4	37.4		50.0	32.7
Level of Service	A	B		B	A	A		D	D		D	C
Approach Delay (s/veh)		12.3			7.9			37.0			46.3	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	1283	34	104	787	26	36	20	227	83	28	31
Future Volume (veh/h)	24	1283	34	104	787	26	36	20	227	83	28	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1668	1668	1668	1709	1709	1709	1641	1641	1641
Adj Flow Rate, veh/h	28	1492	40	121	915	30	42	23	264	97	33	36
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	3	3	6	6	6	3	3	3	8	8	8
Cap, veh/h	447	1879	50	423	1971	860	66	22	273	70	13	262
Arrive On Green	0.11	1.00	1.00	0.10	0.62	0.62	0.18	0.19	0.19	0.18	0.19	0.19
Sat Flow, veh/h	1628	3228	86	1589	3169	1382	0	117	1446	0	70	1388
Grp Volume(v), veh/h	28	749	783	121	915	30	65	0	264	130	0	36
Grp Sat Flow(s),veh/h/ln	1628	1624	1691	1589	1585	1382	117	0	1446	70	0	1388
Q Serve(g_s), s	0.5	0.0	0.0	2.3	13.8	0.8	0.0	0.0	16.3	0.0	0.0	1.9
Cycle Q Clear(g_c), s	0.5	0.0	0.0	2.3	13.8	0.8	16.0	0.0	16.3	16.0	0.0	1.9
Prop In Lane	1.00		0.05	1.00		1.00	0.65		1.00	0.75		1.00
Lane Grp Cap(c), veh/h	447	945	984	423	1971	860	87	0	273	82	0	262
V/C Ratio(X)	0.06	0.79	0.80	0.29	0.46	0.03	0.75	0.00	0.97	1.58	0.00	0.14
Avail Cap(c_a), veh/h	518	945	984	430	1971	860	87	0	273	82	0	262
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.2	0.0	0.0	4.5	9.0	6.6	39.5	0.0	36.2	42.1	0.0	30.4
Incr Delay (d2), s/veh	0.0	5.2	5.1	0.3	0.8	0.1	28.8	0.0	45.0	311.2	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.4	1.4	0.6	4.2	0.2	2.2	0.0	9.1	9.0	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.2	5.2	5.1	4.8	9.8	6.7	68.3	0.0	81.2	353.3	0.0	30.6
LnGrp LOS	A	A	A	A	A	A	E		F	F		C
Approach Vol, veh/h		1560			1066			329			166	
Approach Delay, s/veh		5.1			9.2			78.7			283.3	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.6	56.4		21.0	9.0	60.0		21.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	51.0		16.0	8.0	51.0		16.0				
Max Q Clear Time (g_c+I1), s	4.3	2.0		18.0	2.5	15.8		18.3				
Green Ext Time (p_c), s	0.1	28.3		0.0	0.0	12.8		0.0				

Intersection Summary			
HCM 7th Control Delay, s/veh		29.1	
HCM 7th LOS		C	

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	2	8	1	1	3	31	161	2	11	80	41
Future Vol, veh/h	24	2	8	1	1	3	31	161	2	11	80	41
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	28	2	9	1	1	3	36	187	2	13	93	48
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8	7.5	8.7	8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	16%	71%	20%	8%
Vol Thru, %	83%	6%	20%	61%
Vol Right, %	1%	24%	60%	31%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	194	34	5	132
LT Vol	31	24	1	11
Through Vol	161	2	1	80
RT Vol	2	8	3	41
Lane Flow Rate	226	40	6	153
Geometry Grp	1	1	1	1
Degree of Util (X)	0.261	0.052	0.007	0.172
Departure Headway (Hd)	4.171	4.776	4.5	4.03
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	853	754	800	876
Service Time	2.24	2.776	2.502	2.12
HCM Lane V/C Ratio	0.265	0.053	0.008	0.175
HCM Control Delay, s/veh	8.7	8	7.5	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.2	0	0.6

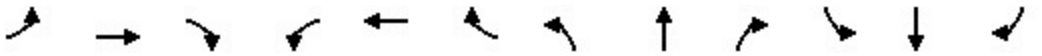
Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1280	8	11	755	6	7
Future Vol, veh/h	1280	8	11	755	6	7
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	9	8	8
Mvmt Flow	1391	9	12	821	7	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1400	0	1830	701
Stage 1	-	-	-	-	1396	-
Stage 2	-	-	-	-	434	-
Critical Hdwy	-	-	4.28	-	6.96	7.06
Critical Hdwy Stg 1	-	-	-	-	5.96	-
Critical Hdwy Stg 2	-	-	-	-	5.96	-
Follow-up Hdwy	-	-	2.29	-	3.58	3.38
Pot Cap-1 Maneuver	-	-	450	-	64	368
Stage 1	-	-	-	-	185	-
Stage 2	-	-	-	-	603	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	450	-	62	367
Mov Cap-2 Maneuver	-	-	-	-	147	-
Stage 1	-	-	-	-	185	-
Stage 2	-	-	-	-	587	-

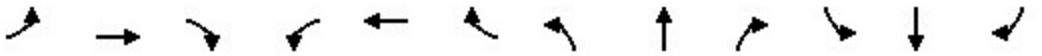
Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.19	22.71
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	217	-	-	450	-
HCM Lane V/C Ratio	0.065	-	-	0.027	-
HCM Control Delay (s/veh)	22.7	-	-	13.2	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	141	1120	94	80	1422	62	62	61	58	62	158	129
Future Volume (vph)	141	1120	94	80	1422	62	62	61	58	62	158	129
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.98		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1630	3222		1646	3292	1473	1660	1600		1635	1733	1445
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.44	1.00		0.57	1.00	1.00
Satd. Flow (perm)	1630	3222		1646	3292	1473	771	1600		990	1733	1445
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	148	1179	99	84	1497	65	65	64	61	65	166	136
RTOR Reduction (vph)	0	6	0	0	0	26	0	39	0	0	0	118
Lane Group Flow (vph)	148	1272	0	84	1497	39	65	86	0	65	166	18
Confl. Peds. (#/hr)							3		11	11		11
Confl. Bikes (#/hr)									5			
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	11.2	56.8		7.1	52.7	52.7	11.1	11.1		11.1	11.1	11.1
Effective Green, g (s)	12.2	57.8		8.1	53.7	53.7	12.1	12.1		12.1	12.1	12.1
Actuated g/C Ratio	0.14	0.64		0.09	0.60	0.60	0.13	0.13		0.13	0.13	0.13
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	220	2069		148	1964	878	103	215		133	232	194
v/s Ratio Prot	c0.09	0.39		0.05	c0.45			0.05			c0.10	
v/s Ratio Perm						0.03	0.08			0.07		0.01
v/c Ratio	0.67	0.61		0.56	0.76	0.04	0.63	0.40		0.48	0.71	0.09
Uniform Delay, d1	37.0	9.5		39.2	13.4	7.5	36.8	35.6		36.0	37.3	34.1
Progression Factor	1.00	1.00		0.75	0.93	2.78	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.1	1.3		2.7	1.9	0.0	10.5	0.8		2.0	9.3	0.1
Delay (s)	44.1	10.8		32.5	14.4	20.9	47.3	36.5		38.1	46.6	34.3
Level of Service	D	B		C	B	C	D	D		D	D	C
Approach Delay (s/veh)		14.3			15.6			40.2			40.5	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



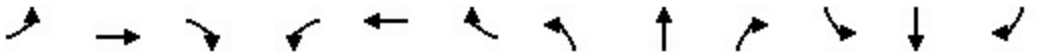
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	1120	94	80	1422	62	62	61	58	62	158	129
Future Volume (veh/h)	141	1120	94	80	1422	62	62	61	58	62	158	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.96	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1723	1736	1736	1736	1750	1750	1750	1736	1736	1736
Adj Flow Rate, veh/h	148	1179	99	84	1497	0	65	64	61	65	166	136
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	1	1	1
Cap, veh/h	195	1901	159	147	1954		152	125	119	184	270	224
Arrive On Green	0.12	0.62	0.61	0.18	1.00	0.00	0.16	0.16	0.14	0.16	0.16	0.16
Sat Flow, veh/h	1641	3057	256	1654	3299	1471	1085	805	767	1260	1736	1440
Grp Volume(v), veh/h	148	630	648	84	1497	0	65	0	125	65	166	136
Grp Sat Flow(s),veh/h/ln	1641	1637	1677	1654	1650	1471	1085	0	1572	1260	1736	1440
Q Serve(g_s), s	7.9	21.3	21.5	4.2	0.0	0.0	5.4	0.0	6.6	4.5	8.0	7.9
Cycle Q Clear(g_c), s	7.9	21.3	21.5	4.2	0.0	0.0	13.4	0.0	6.6	11.1	8.0	7.9
Prop In Lane	1.00		0.15	1.00		1.00	1.00		0.49	1.00		1.00
Lane Grp Cap(c), veh/h	195	1018	1043	147	1954		152	0	245	184	270	224
V/C Ratio(X)	0.76	0.62	0.62	0.57	0.77		0.43	0.00	0.51	0.35	0.61	0.61
Avail Cap(c_a), veh/h	237	1018	1043	184	1954		152	0	245	184	270	224
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.60	0.60	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	10.5	10.5	35.4	0.0	0.0	41.7	0.0	35.1	40.0	35.5	35.4
Incr Delay (d2), s/veh	9.8	2.8	2.8	1.5	1.8	0.0	1.4	0.0	1.4	0.9	3.7	4.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	7.1	7.3	1.6	0.5	0.0	1.5	0.0	2.6	1.4	3.6	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	48.2	13.3	13.3	36.9	1.8	0.0	43.1	0.0	36.5	40.8	39.2	39.6
LnGrp LOS	D	B	B	D	A		D		D	D	D	D
Approach Vol, veh/h		1426			1581			190			367	
Approach Delay, s/veh		16.9			3.7			38.7			39.6	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	60.0		18.0	14.7	57.3		18.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	9.0	53.0		13.0	12.0	50.0		13.0				
Max Q Clear Time (g_c+I1), s	6.2	23.5		13.1	9.9	2.0		15.4				
Green Ext Time (p_c), s	0.0	16.5		0.0	0.1	27.7		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	14.5	
HCM 7th LOS	B	

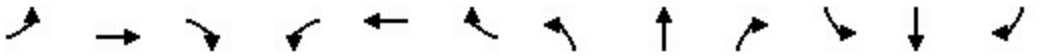
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	1179	58	194	1619	87	49	12	118	49	12	53
Future Volume (vph)	54	1179	58	194	1619	87	49	12	118	49	12	53
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97		1.00	0.98		1.00	0.98
Flpb, ped/bikes	1.00	1.00		0.99	1.00	1.00		0.99	1.00		0.99	1.00
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1630	3231		1646	3292	1440		1649	1436		1614	1405
Flt Permitted	0.08	1.00		0.14	1.00	1.00		0.72	1.00		0.72	1.00
Satd. Flow (perm)	152	3231		254	3292	1440		1243	1436		1217	1405
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	57	1241	61	204	1704	92	52	13	124	52	13	56
RTOR Reduction (vph)	0	4	0	0	0	30	0	0	111	0	0	50
Lane Group Flow (vph)	57	1298	0	204	1704	62	0	65	13	0	65	6
Confl. Peds. (#/hr)			7	7			1		4	4		4
Confl. Bikes (#/hr)			8			4						1
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	4%	4%	4%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	63.4	57.0		69.6	60.1	60.1		8.5	8.5		8.5	8.5
Effective Green, g (s)	65.4	58.0		71.6	61.1	61.1		9.5	9.5		9.5	9.5
Actuated g/C Ratio	0.73	0.64		0.80	0.68	0.68		0.11	0.11		0.11	0.11
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	231	2082		364	2234	977		131	151		128	148
v/s Ratio Prot	0.02	0.40		c0.07	c0.52							
v/s Ratio Perm	0.16			0.38		0.04		0.05	0.01		c0.05	0.00
v/c Ratio	0.24	0.62		0.56	0.76	0.06		0.49	0.08		0.50	0.03
Uniform Delay, d1	6.8	9.5		6.5	9.6	4.8		37.9	36.3		38.0	36.1
Progression Factor	2.14	0.91		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.3	1.1		1.6	2.5	0.1		2.1	0.1		2.2	0.0
Delay (s)	15.0	9.8		8.1	12.1	4.9		40.1	36.5		40.3	36.2
Level of Service	B	A		A	B	A		D	D		D	D
Approach Delay (s/veh)		10.1			11.4			37.7			38.4	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	1179	58	194	1619	87	49	12	118	49	12	53
Future Volume (veh/h)	54	1179	58	194	1619	87	49	12	118	49	12	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1723	1736	1736	1736	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	57	1241	61	204	1704	92	52	13	124	52	13	56
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	2	2	2	4	4	4
Cap, veh/h	296	2080	102	524	2233	969	72	11	160	72	10	156
Arrive On Green	0.16	1.00	1.00	0.10	0.68	0.68	0.10	0.11	0.11	0.10	0.11	0.11
Sat Flow, veh/h	1641	3170	156	1654	3299	1431	0	96	1444	0	94	1402
Grp Volume(v), veh/h	57	640	662	204	1704	92	65	0	124	65	0	56
Grp Sat Flow(s),veh/h/ln	1641	1637	1689	1654	1650	1431	96	0	1444	94	0	1402
Q Serve(g_s), s	0.8	0.0	0.0	3.1	31.1	2.0	0.0	0.0	7.5	0.0	0.0	3.3
Cycle Q Clear(g_c), s	0.8	0.0	0.0	3.1	31.1	2.0	9.0	0.0	7.5	9.0	0.0	3.3
Prop In Lane	1.00		0.09	1.00		1.00	0.80		1.00	0.80		1.00
Lane Grp Cap(c), veh/h	296	1074	1108	524	2233	969	82	0	160	81	0	156
V/C Ratio(X)	0.19	0.60	0.60	0.39	0.76	0.09	0.80	0.00	0.77	0.80	0.00	0.36
Avail Cap(c_a), veh/h	331	1074	1108	580	2233	969	82	0	160	81	0	156
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.77	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.4	0.0	0.0	3.1	9.7	5.0	43.2	0.0	38.9	43.2	0.0	37.0
Incr Delay (d2), s/veh	0.2	1.9	1.8	0.4	2.5	0.2	39.8	0.0	19.8	40.1	0.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.6	0.6	0.7	9.1	0.5	2.4	0.0	3.5	2.4	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	8.6	1.9	1.8	3.4	12.2	5.2	82.9	0.0	58.7	83.3	0.0	38.1
LnGrp LOS	A	A	A	A	B	A	F		E	F		D
Approach Vol, veh/h		1359			2000			189			121	
Approach Delay, s/veh		2.1			11.0			67.0			62.4	
Approach LOS		A			B			E			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	63.0		14.0	11.1	64.9		14.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	11.0	55.0		9.0	8.0	58.0		9.0				
Max Q Clear Time (g_c+I1), s	5.1	2.0		11.0	2.8	33.1		11.0				
Green Ext Time (p_c), s	0.3	22.6		0.0	0.0	20.3		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	12.3	
HCM 7th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	31	1	33	1	2	11	16	98	1	7	174	29
Future Vol, veh/h	31	1	33	1	2	11	16	98	1	7	174	29
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	1	35	1	2	12	17	103	1	7	183	31
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	7.9	7.4	8.1	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	48%	7%	3%
Vol Thru, %	85%	2%	14%	83%
Vol Right, %	1%	51%	79%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	115	65	14	210
LT Vol	16	31	1	7
Through Vol	98	1	2	174
RT Vol	1	33	11	29
Lane Flow Rate	121	68	15	221
Geometry Grp	1	1	1	1
Degree of Util (X)	0.147	0.085	0.018	0.252
Departure Headway (Hd)	4.371	4.492	4.31	4.096
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	824	801	834	862
Service Time	2.379	2.499	2.319	2.188
HCM Lane V/C Ratio	0.147	0.085	0.018	0.256
HCM Control Delay, s/veh	8.1	7.9	7.4	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.3	0.1	1

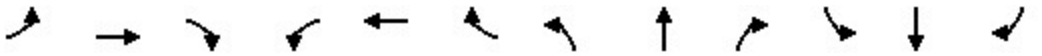
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1242	4	6	1702	6	4
Future Vol, veh/h	1242	4	6	1702	6	4
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	1	1	10	10
Mvmt Flow	1307	4	6	1792	6	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1313	0	2219	657
Stage 1	-	-	-	-	1310	-
Stage 2	-	-	-	-	908	-
Critical Hdwy	-	-	4.12	-	7	7.1
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	2.21	-	3.6	3.4
Pot Cap-1 Maneuver	-	-	528	-	33	389
Stage 1	-	-	-	-	202	-
Stage 2	-	-	-	-	335	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	528	-	33	389
Mov Cap-2 Maneuver	-	-	-	-	128	-
Stage 1	-	-	-	-	202	-
Stage 2	-	-	-	-	331	-

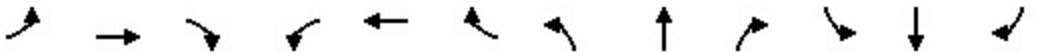
Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.04	26.83
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	175	-	-	528	-
HCM Lane V/C Ratio	0.06	-	-	0.012	-
HCM Control Delay (s/veh)	26.8	-	-	11.9	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	1246	60	33	714	47	143	145	98	40	57	93
Future Volume (vph)	78	1246	60	33	714	47	143	145	98	40	57	93
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1614	3206		1583	3167	1417	1629	1601		1594	1683	1403
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.71	1.00		0.31	1.00	1.00
Satd. Flow (perm)	1614	3206		1583	3167	1417	1229	1601		520	1683	1403
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	1354	65	36	776	51	155	158	107	43	62	101
RTOR Reduction (vph)	0	3	0	0	0	21	0	28	0	0	0	81
Lane Group Flow (vph)	85	1416	0	36	776	30	155	237	0	43	62	20
Confl. Peds. (#/hr)							1		7	7		7
Confl. Bikes (#/hr)												2
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	2%	2%	2%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	7.1	53.5		4.8	51.2	51.2	16.7	16.7		16.7	16.7	16.7
Effective Green, g (s)	8.1	54.5		5.8	52.2	52.2	17.7	17.7		17.7	17.7	17.7
Actuated g/C Ratio	0.09	0.61		0.06	0.58	0.58	0.20	0.20		0.20	0.20	0.20
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	145	1941		102	1836	821	241	314		102	330	275
v/s Ratio Prot	c0.05	c0.44		0.02	0.25			c0.15			0.04	
v/s Ratio Perm						0.02	0.13			0.08		0.01
v/c Ratio	0.58	0.72		0.35	0.42	0.03	0.64	0.75		0.42	0.18	0.07
Uniform Delay, d1	39.3	12.5		40.3	10.5	8.1	33.2	34.0		31.6	30.1	29.4
Progression Factor	1.00	1.00		0.81	1.22	3.89	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.9	2.4		1.3	0.6	0.0	5.1	9.4		2.0	0.2	0.0
Delay (s)	44.2	14.9		34.2	13.5	31.6	38.3	43.5		33.7	30.3	29.5
Level of Service	D	B		C	B	C	D	D		C	C	C
Approach Delay (s/veh)		16.6			15.4			41.6			30.6	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	1246	60	33	714	47	143	145	98	40	57	93
Future Volume (veh/h)	78	1246	60	33	714	47	143	145	98	40	57	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1682	1682	1682	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	85	1354	65	36	776	0	155	158	107	43	62	101
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	5	5	5	2	2	2	4	4	4
Cap, veh/h	145	1816	87	102	1758		320	217	147	160	385	319
Arrive On Green	0.09	0.58	0.56	0.13	1.00	0.00	0.23	0.23	0.22	0.23	0.23	0.23
Sat Flow, veh/h	1628	3154	151	1602	3195	1425	1215	953	646	1092	1695	1404
Grp Volume(v), veh/h	85	696	723	36	776	0	155	0	265	43	62	101
Grp Sat Flow(s),veh/h/ln	1628	1624	1682	1602	1598	1425	1215	0	1599	1092	1695	1404
Q Serve(g_s), s	4.5	28.6	28.8	1.8	0.0	0.0	10.6	0.0	13.8	3.4	2.6	5.4
Cycle Q Clear(g_c), s	4.5	28.6	28.8	1.8	0.0	0.0	13.2	0.0	13.8	17.3	2.6	5.4
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	145	935	968	102	1758		320	0	363	160	385	319
V/C Ratio(X)	0.58	0.74	0.75	0.35	0.44		0.48	0.00	0.73	0.27	0.16	0.32
Avail Cap(c_a), veh/h	181	935	968	160	1758		328	0	373	167	396	328
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	14.2	14.3	37.6	0.0	0.0	33.2	0.0	32.4	40.2	27.9	29.0
Incr Delay (d2), s/veh	2.7	5.4	5.2	1.3	0.7	0.0	0.8	0.0	6.5	0.7	0.1	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	10.2	10.7	0.7	0.2	0.0	3.2	0.0	6.0	0.9	1.1	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.1	19.5	19.5	38.9	0.7	0.0	34.0	0.0	38.9	40.9	28.0	29.4
LnGrp LOS	D	B	B	D	A		C		D	D	C	C
Approach Vol, veh/h		1504			812			420			206	
Approach Delay, s/veh		20.8			2.4			37.1			31.4	
Approach LOS		C			A			D			C	

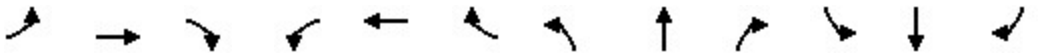
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	55.8		24.4	12.0	53.5		24.4				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	47.0		20.0	9.0	46.0		20.0				
Max Q Clear Time (g_c+I1), s	3.8	30.8		19.3	6.5	2.0		15.8				
Green Ext Time (p_c), s	0.0	12.0		0.1	0.0	10.7		0.8				

Intersection Summary		
HCM 7th Control Delay, s/veh	18.8	
HCM 7th LOS	B	

Notes

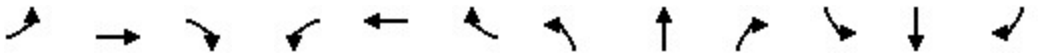
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	1408	39	122	862	28	45	25	272	91	32	34
Future Volume (vph)	27	1408	39	122	862	28	45	25	272	91	32	34
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97		1.00	0.98		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99	1.00		0.99	1.00
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1614	3213		1568	3137	1374		1645	1426		1562	1360
Flt Permitted	0.25	1.00		0.06	1.00	1.00		0.65	1.00		0.72	1.00
Satd. Flow (perm)	433	3213		114	3137	1374		1112	1426		1182	1360
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	31	1637	45	142	1002	33	52	29	316	106	37	40
RTOR Reduction (vph)	0	2	0	0	0	12	0	0	142	0	0	34
Lane Group Flow (vph)	31	1680	0	142	1002	21	0	81	174	0	143	6
Confl. Peds. (#/hr)			2	2			1		1	1		1
Confl. Bikes (#/hr)			2			1						
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	3%	3%	3%	8%	8%	8%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	58.2	53.4		65.0	56.8	56.8		13.4	13.4		13.4	13.4
Effective Green, g (s)	60.2	54.4		67.0	57.8	57.8		14.4	14.4		14.4	14.4
Actuated g/C Ratio	0.67	0.60		0.74	0.64	0.64		0.16	0.16		0.16	0.16
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	365	1942		233	2014	882		177	228		189	217
v/s Ratio Prot	0.01	c0.52		c0.06	0.32							
v/s Ratio Perm	0.05			0.39		0.02		0.07	c0.12		0.12	0.00
v/c Ratio	0.08	0.86		0.60	0.49	0.02		0.45	0.76		0.75	0.02
Uniform Delay, d1	5.2	14.7		18.8	8.4	5.8		34.2	36.1		36.1	31.9
Progression Factor	1.51	0.90		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	4.4		3.7	0.8	0.0		1.3	13.4		15.0	0.0
Delay (s)	8.0	17.8		22.6	9.3	5.9		35.6	49.6		51.2	31.9
Level of Service	A	B		C	A	A		D	D		D	C
Approach Delay (s/veh)		17.6			10.8			46.7			47.0	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	1408	39	122	862	28	45	25	272	91	32	34
Future Volume (veh/h)	27	1408	39	122	862	28	45	25	272	91	32	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1668	1668	1668	1709	1709	1709	1641	1641	1641
Adj Flow Rate, veh/h	31	1637	45	142	1002	33	52	29	316	106	37	40
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	3	3	6	6	6	3	3	3	8	8	8
Cap, veh/h	407	1836	50	397	1926	840	66	22	289	70	13	278
Arrive On Green	0.12	1.00	1.00	0.10	0.61	0.61	0.19	0.20	0.20	0.19	0.20	0.20
Sat Flow, veh/h	1628	3226	88	1589	3169	1382	0	112	1446	0	67	1388
Grp Volume(v), veh/h	31	822	860	142	1002	33	81	0	316	143	0	40
Grp Sat Flow(s),veh/h/ln	1628	1624	1691	1589	1585	1382	112	0	1446	67	0	1388
Q Serve(g_s), s	0.6	0.0	0.0	2.8	16.3	0.9	0.0	0.0	18.0	0.0	0.0	2.1
Cycle Q Clear(g_c), s	0.6	0.0	0.0	2.8	16.3	0.9	17.0	0.0	18.0	17.0	0.0	2.1
Prop In Lane	1.00		0.05	1.00		1.00	0.64		1.00	0.74		1.00
Lane Grp Cap(c), veh/h	407	924	962	397	1926	840	87	0	289	82	0	278
V/C Ratio(X)	0.08	0.89	0.89	0.36	0.52	0.04	0.93	0.00	1.09	1.74	0.00	0.14
Avail Cap(c_a), veh/h	473	924	962	401	1926	840	87	0	289	82	0	278
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.8	0.0	0.0	5.0	10.1	7.1	40.1	0.0	36.0	41.9	0.0	29.7
Incr Delay (d2), s/veh	0.0	8.8	8.8	0.4	1.0	0.1	73.9	0.0	79.9	376.5	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.2	2.4	0.8	5.0	0.2	3.6	0.0	12.7	10.5	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.9	8.8	8.8	5.4	11.1	7.2	114.1	0.0	115.9	418.4	0.0	29.8
LnGrp LOS	A	A	A	A	B	A	F		F	F		C
Approach Vol, veh/h		1713			1177			397			183	
Approach Delay, s/veh		8.7			10.3			115.5			333.5	
Approach LOS		A			B			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.8	55.2		22.0	9.3	58.7		22.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	50.0		17.0	8.0	50.0		17.0				
Max Q Clear Time (g_c+I1), s	4.8	2.0		19.0	2.6	18.3		20.0				
Green Ext Time (p_c), s	0.1	32.0		0.0	0.0	13.7		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	38.6	
HCM 7th LOS	D	

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	2	11	1	1	3	34	209	2	17	98	45
Future Vol, veh/h	26	2	11	1	1	3	34	209	2	17	98	45
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	30	2	13	1	1	3	40	243	2	20	114	52
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.3	7.8	9.4	8.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	67%	20%	11%
Vol Thru, %	85%	5%	20%	61%
Vol Right, %	1%	28%	60%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	245	39	5	160
LT Vol	34	26	1	17
Through Vol	209	2	1	98
RT Vol	2	11	3	45
Lane Flow Rate	285	45	6	186
Geometry Grp	1	1	1	1
Degree of Util (X)	0.333	0.062	0.008	0.218
Departure Headway (Hd)	4.203	4.943	4.715	4.219
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	840	727	761	854
Service Time	2.299	2.954	2.729	2.227
HCM Lane V/C Ratio	0.339	0.062	0.008	0.218
HCM Control Delay, s/veh	9.4	8.3	7.8	8.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.5	0.2	0	0.8

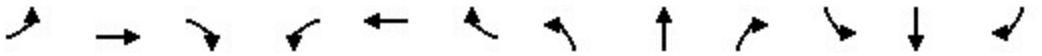
Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1429	9	12	835	7	8
Future Vol, veh/h	1429	9	12	835	7	8
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	9	8	8
Mvmt Flow	1553	10	13	908	8	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1563	0	2038	783
Stage 1	-	-	-	-	1558	-
Stage 2	-	-	-	-	480	-
Critical Hdwy	-	-	4.28	-	6.96	7.06
Critical Hdwy Stg 1	-	-	-	-	5.96	-
Critical Hdwy Stg 2	-	-	-	-	5.96	-
Follow-up Hdwy	-	-	2.29	-	3.58	3.38
Pot Cap-1 Maneuver	-	-	387	-	46	324
Stage 1	-	-	-	-	150	-
Stage 2	-	-	-	-	571	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	387	-	44	324
Mov Cap-2 Maneuver	-	-	-	-	120	-
Stage 1	-	-	-	-	150	-
Stage 2	-	-	-	-	552	-

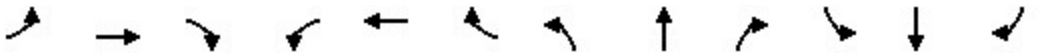
Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.21	26.87
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	181	-	-	387	-
HCM Lane V/C Ratio	0.09	-	-	0.034	-
HCM Control Delay (s/veh)	26.9	-	-	14.6	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	1227	109	95	1556	71	71	71	67	71	182	141
Future Volume (vph)	154	1227	109	95	1556	71	71	71	67	71	182	141
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.98		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1630	3220		1646	3292	1473	1660	1601		1636	1733	1445
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.37	1.00		0.51	1.00	1.00
Satd. Flow (perm)	1630	3220		1646	3292	1473	659	1601		892	1733	1445
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	162	1292	115	100	1638	75	75	75	71	75	192	148
RTOR Reduction (vph)	0	6	0	0	0	31	0	39	0	0	0	127
Lane Group Flow (vph)	162	1401	0	100	1638	45	75	107	0	75	192	21
Confl. Peds. (#/hr)							3		11	11		11
Confl. Bikes (#/hr)									5			
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	10.8	55.0		8.2	52.4	52.4	11.8	11.8		11.8	11.8	11.8
Effective Green, g (s)	11.8	56.0		9.2	53.4	53.4	12.8	12.8		12.8	12.8	12.8
Actuated g/C Ratio	0.13	0.62		0.10	0.59	0.59	0.14	0.14		0.14	0.14	0.14
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	213	2003		168	1953	873	93	227		126	246	205
v/s Ratio Prot	c0.10	c0.43		0.06	c0.50			0.07			0.11	
v/s Ratio Perm						0.03	c0.11			0.08		0.01
v/c Ratio	0.76	0.69		0.59	0.83	0.05	0.80	0.47		0.59	0.78	0.10
Uniform Delay, d1	37.7	11.3		38.6	14.8	7.6	37.3	35.4		36.1	37.2	33.6
Progression Factor	1.00	1.00		0.78	0.89	2.37	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	14.1	2.0		2.7	2.7	0.0	37.2	1.1		6.1	14.2	0.1
Delay (s)	51.8	13.4		33.2	15.9	18.2	74.6	36.6		42.3	51.5	33.7
Level of Service	D	B		C	B	B	E	D		D	D	C
Approach Delay (s/veh)		17.3			16.9			49.5			43.5	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	1227	109	95	1556	71	71	71	67	71	182	141
Future Volume (veh/h)	154	1227	109	95	1556	71	71	71	67	71	182	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.96	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1723	1736	1736	1736	1750	1750	1750	1736	1736	1736
Adj Flow Rate, veh/h	162	1292	115	100	1638	0	75	75	71	75	192	148
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	1	1	1
Cap, veh/h	209	1880	167	153	1927		133	126	119	165	270	224
Arrive On Green	0.13	0.62	0.61	0.19	1.00	0.00	0.16	0.16	0.14	0.16	0.16	0.16
Sat Flow, veh/h	1641	3041	270	1654	3299	1471	1049	808	765	1238	1736	1440
Grp Volume(v), veh/h	162	694	713	100	1638	0	75	0	146	75	192	148
Grp Sat Flow(s),veh/h/ln	1641	1637	1674	1654	1650	1471	1049	0	1573	1238	1736	1440
Q Serve(g_s), s	8.6	25.3	25.6	5.0	0.0	0.0	4.6	0.0	7.8	5.4	9.4	8.7
Cycle Q Clear(g_c), s	8.6	25.3	25.6	5.0	0.0	0.0	14.0	0.0	7.8	13.2	9.4	8.7
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.49	1.00		1.00
Lane Grp Cap(c), veh/h	209	1012	1035	153	1927		133	0	245	165	270	224
V/C Ratio(X)	0.78	0.69	0.69	0.65	0.85		0.56	0.00	0.60	0.45	0.71	0.66
Avail Cap(c_a), veh/h	219	1012	1035	220	1927		133	0	245	165	270	224
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.50	0.50	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.0	11.4	11.5	35.3	0.0	0.0	43.4	0.0	35.6	41.5	36.1	35.8
Incr Delay (d2), s/veh	14.8	3.8	3.8	1.7	2.6	0.0	4.6	0.0	3.4	1.4	7.9	6.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	8.5	8.9	1.9	0.7	0.0	1.8	0.0	3.2	1.7	4.5	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.8	15.1	15.2	37.1	2.6	0.0	48.0	0.0	39.1	43.0	44.0	42.2
LnGrp LOS	D	B	B	D	A		D		D	D	D	D
Approach Vol, veh/h		1569			1738			221			415	
Approach Delay, s/veh		19.1			4.5			42.1			43.2	
Approach LOS		B			A			D			D	

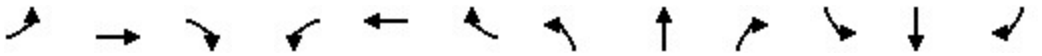
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.3	59.7		18.0	15.4	56.6		18.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	11.0	51.0		13.0	11.0	51.0		13.0				
Max Q Clear Time (g_c+I1), s	7.0	27.6		15.2	10.6	2.0		16.0				
Green Ext Time (p_c), s	0.1	15.8		0.0	0.0	31.6		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	16.5	
HCM 7th LOS	B	

Notes

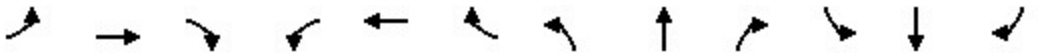
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	1292	69	238	1776	95	58	15	145	54	16	59
Future Volume (vph)	59	1292	69	238	1776	95	58	15	145	54	16	59
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97		1.00	0.98		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99	1.00		0.99	1.00
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1630	3228		1646	3292	1440		1649	1436		1617	1405
Flt Permitted	0.07	1.00		0.10	1.00	1.00		0.72	1.00		0.72	1.00
Satd. Flow (perm)	124	3228		186	3292	1440		1236	1436		1217	1405
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	1360	73	251	1869	100	61	16	153	57	17	62
RTOR Reduction (vph)	0	4	0	0	0	32	0	0	137	0	0	56
Lane Group Flow (vph)	62	1429	0	251	1869	68	0	77	16	0	74	6
Confl. Peds. (#/hr)			7	7			1		4	4		4
Confl. Bikes (#/hr)			8			4						1
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	4%	4%	4%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	60.7	54.3		71.8	60.4	60.4		8.2	8.2		8.2	8.2
Effective Green, g (s)	62.7	55.3		72.8	61.4	61.4		9.2	9.2		9.2	9.2
Actuated g/C Ratio	0.70	0.61		0.81	0.68	0.68		0.10	0.10		0.10	0.10
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	210	1983		369	2245	982		126	146		124	143
v/s Ratio Prot	0.02	0.44		c0.10	c0.57							
v/s Ratio Perm	0.18			0.45		0.05		c0.06	0.01		0.06	0.00
v/c Ratio	0.29	0.72		0.68	0.83	0.06		0.61	0.10		0.59	0.04
Uniform Delay, d1	8.8	12.0		16.8	10.5	4.7		38.6	36.6		38.6	36.4
Progression Factor	1.05	1.13		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	1.7		4.6	3.7	0.1		7.2	0.2		6.3	0.0
Delay (s)	9.7	15.3		21.4	14.3	4.9		45.9	36.9		44.9	36.5
Level of Service	A	B		C	B	A		D	D		D	D
Approach Delay (s/veh)		15.1			14.6			39.9			41.1	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	17.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	1292	69	238	1776	95	58	15	145	54	16	59
Future Volume (veh/h)	59	1292	69	238	1776	95	58	15	145	54	16	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.99	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1723	1736	1736	1736	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	62	1360	73	251	1869	100	61	16	153	57	17	62
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	2	2	2	4	4	4
Cap, veh/h	274	2103	113	496	2262	981	72	9	144	71	12	140
Arrive On Green	0.16	1.00	1.00	0.10	0.69	0.69	0.09	0.10	0.10	0.09	0.10	0.10
Sat Flow, veh/h	1641	3154	169	1654	3299	1432	0	92	1442	0	120	1400
Grp Volume(v), veh/h	62	704	729	251	1869	100	77	0	153	74	0	62
Grp Sat Flow(s),veh/h/ln	1641	1637	1686	1654	1650	1432	92	0	1442	120	0	1400
Q Serve(g_s), s	0.8	0.0	0.0	3.8	37.0	2.1	0.0	0.0	9.0	0.0	0.0	3.8
Cycle Q Clear(g_c), s	0.8	0.0	0.0	3.8	37.0	2.1	8.0	0.0	9.0	8.0	0.0	3.8
Prop In Lane	1.00		0.10	1.00		1.00	0.79		1.00	0.77		1.00
Lane Grp Cap(c), veh/h	274	1091	1124	496	2262	981	80	0	144	81	0	140
V/C Ratio(X)	0.23	0.65	0.65	0.51	0.83	0.10	0.96	0.00	1.06	0.91	0.00	0.44
Avail Cap(c_a), veh/h	305	1091	1124	625	2262	981	80	0	144	81	0	140
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.2	0.0	0.0	2.9	10.3	4.8	43.6	0.0	40.5	43.3	0.0	38.1
Incr Delay (d2), s/veh	0.2	2.0	2.0	0.6	3.6	0.2	88.3	0.0	92.0	69.1	0.0	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	0.6	0.8	10.9	0.5	3.7	0.0	6.9	3.2	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	11.4	2.0	2.0	3.5	13.9	5.0	131.9	0.0	132.5	112.5	0.0	39.8
LnGrp LOS	B	A	A	A	B	A	F		F	F		D
Approach Vol, veh/h		1495			2220			230			136	
Approach Delay, s/veh		2.4			12.3			132.3			79.3	
Approach LOS		A			B			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	64.0		13.0	11.3	65.7		13.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	52.0		8.0	8.0	59.0		8.0				
Max Q Clear Time (g_c+I1), s	5.8	2.0		10.0	2.8	39.0		11.0				
Green Ext Time (p_c), s	0.6	25.8		0.0	0.1	17.7		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	17.7	
HCM 7th LOS	B	

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	1	41	1	2	12	20	129	1	8	226	32
Future Vol, veh/h	34	1	41	1	2	12	20	129	1	8	226	32
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	1	43	1	2	13	21	136	1	8	238	34
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.3	7.7	8.6	9.4
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	45%	7%	3%
Vol Thru, %	86%	1%	13%	85%
Vol Right, %	1%	54%	80%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	76	15	266
LT Vol	20	34	1	8
Through Vol	129	1	2	226
RT Vol	1	41	12	32
Lane Flow Rate	158	80	16	280
Geometry Grp	1	1	1	1
Degree of Util (X)	0.196	0.104	0.02	0.332
Departure Headway (Hd)	4.473	4.682	4.537	4.266
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	804	766	788	846
Service Time	2.494	2.71	2.57	2.283
HCM Lane V/C Ratio	0.197	0.104	0.02	0.331
HCM Control Delay, s/veh	8.6	8.3	7.7	9.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.3	0.1	1.5

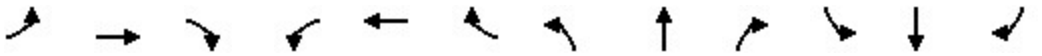
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1377	4	7	1893	7	4
Future Vol, veh/h	1377	4	7	1893	7	4
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	1	1	10	10
Mvmt Flow	1449	4	7	1993	7	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1455	0	2464	728
Stage 1	-	-	-	-	1453	-
Stage 2	-	-	-	-	1011	-
Critical Hdwy	-	-	4.12	-	7	7.1
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	2.21	-	3.6	3.4
Pot Cap-1 Maneuver	-	-	466	-	22	348
Stage 1	-	-	-	-	168	-
Stage 2	-	-	-	-	295	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	466	-	22	348
Mov Cap-2 Maneuver	-	-	-	-	106	-
Stage 1	-	-	-	-	168	-
Stage 2	-	-	-	-	290	-

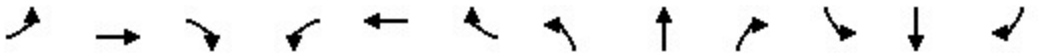
Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.05	32.5
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	142	-	-	466	-
HCM Lane V/C Ratio	0.081	-	-	0.016	-
HCM Control Delay (s/veh)	32.5	-	-	12.9	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	1283	59	34	736	48	134	149	100	41	58	96
Future Volume (vph)	80	1283	59	34	736	48	134	149	100	41	58	96
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1614	3207		1583	3167	1417	1629	1601		1594	1683	1403
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.71	1.00		0.29	1.00	1.00
Satd. Flow (perm)	1614	3207		1583	3167	1417	1228	1601		495	1683	1403
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	1395	64	37	800	52	146	162	109	45	63	104
RTOR Reduction (vph)	0	3	0	0	0	22	0	28	0	0	0	84
Lane Group Flow (vph)	87	1456	0	37	800	30	146	243	0	45	63	20
Confl. Peds. (#/hr)							1		7	7		7
Confl. Bikes (#/hr)												2
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	2%	2%	2%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	7.5	53.6		4.8	50.9	50.9	16.6	16.6		16.6	16.6	16.6
Effective Green, g (s)	8.5	54.6		5.8	51.9	51.9	17.6	17.6		17.6	17.6	17.6
Actuated g/C Ratio	0.09	0.61		0.06	0.58	0.58	0.20	0.20		0.20	0.20	0.20
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	152	1945		102	1826	817	240	313		96	329	274
v/s Ratio Prot	c0.05	c0.45		0.02	0.25			c0.15			0.04	
v/s Ratio Perm						0.02	0.12			0.09		0.01
v/c Ratio	0.57	0.74		0.36	0.43	0.03	0.60	0.77		0.46	0.19	0.07
Uniform Delay, d1	39.0	12.7		40.3	10.7	8.2	33.0	34.3		32.0	30.2	29.5
Progression Factor	1.00	1.00		0.78	1.23	3.54	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.2	2.6		1.4	0.6	0.0	3.6	10.9		2.6	0.2	0.0
Delay (s)	43.2	15.4		33.2	13.9	29.3	36.7	45.3		34.6	30.4	29.6
Level of Service	D	B		C	B	C	D	D		C	C	C
Approach Delay (s/veh)		17.0			15.6			42.3			30.9	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



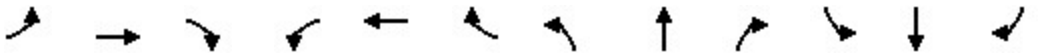
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	1283	59	34	736	48	134	149	100	41	58	96
Future Volume (veh/h)	80	1283	59	34	736	48	134	149	100	41	58	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1682	1682	1682	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	87	1395	64	37	800	0	146	162	109	45	63	104
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	5	5	5	2	2	2	4	4	4
Cap, veh/h	146	1833	84	104	1772		313	212	143	149	377	312
Arrive On Green	0.09	0.58	0.57	0.13	1.00	0.00	0.22	0.22	0.21	0.22	0.22	0.22
Sat Flow, veh/h	1628	3162	145	1602	3195	1425	1210	956	643	1087	1695	1403
Grp Volume(v), veh/h	87	715	744	37	800	0	146	0	271	45	63	104
Grp Sat Flow(s),veh/h/ln	1628	1624	1683	1602	1598	1425	1210	0	1599	1087	1695	1403
Q Serve(g_s), s	4.6	29.8	30.0	1.9	0.0	0.0	10.0	0.0	14.3	3.6	2.7	5.6
Cycle Q Clear(g_c), s	4.6	29.8	30.0	1.9	0.0	0.0	12.7	0.0	14.3	17.9	2.7	5.6
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	146	941	976	104	1772		313	0	355	149	377	312
V/C Ratio(X)	0.59	0.76	0.76	0.36	0.45		0.47	0.00	0.76	0.30	0.17	0.33
Avail Cap(c_a), veh/h	199	941	976	160	1772		313	0	355	149	377	312
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	14.2	14.3	37.5	0.0	0.0	33.4	0.0	33.0	41.2	28.3	29.4
Incr Delay (d2), s/veh	2.8	5.7	5.6	1.4	0.7	0.0	0.8	0.0	9.0	0.8	0.2	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	10.7	11.1	0.7	0.2	0.0	3.0	0.0	6.4	1.0	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.2	19.9	19.9	38.8	0.7	0.0	34.2	0.0	42.0	42.0	28.4	29.9
LnGrp LOS	D	B	B	D	A		C		D	D	C	C
Approach Vol, veh/h		1546			837			417			212	
Approach Delay, s/veh		21.2			2.4			39.3			32.0	
Approach LOS		C			A			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	56.2		24.0	12.1	53.9		24.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	48.0		19.0	10.0	46.0		19.0				
Max Q Clear Time (g_c+I1), s	3.9	32.0		19.9	6.6	2.0		16.3				
Green Ext Time (p_c), s	0.0	12.1		0.0	0.1	11.2		0.5				

Intersection Summary	
HCM 7th Control Delay, s/veh	19.2
HCM 7th LOS	B

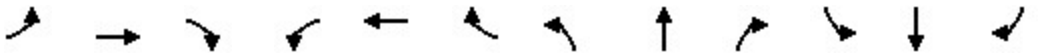
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1450	34	84	888	29	47	26	158	93	33	35
Future Volume (vph)	28	1450	34	84	888	29	47	26	158	93	33	35
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97		1.00	0.98		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99	1.00		0.99	1.00
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1614	3215		1568	3137	1374		1645	1426		1562	1360
Flt Permitted	0.23	1.00		0.06	1.00	1.00		0.59	1.00		0.72	1.00
Satd. Flow (perm)	406	3215		112	3137	1374		1011	1426		1179	1360
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	33	1686	40	98	1033	34	55	30	184	108	38	41
RTOR Reduction (vph)	0	2	0	0	0	12	0	0	140	0	0	35
Lane Group Flow (vph)	33	1724	0	98	1033	22	0	85	44	0	146	6
Confl. Peds. (#/hr)			2	2			1		1	1		1
Confl. Bikes (#/hr)			2			1						
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	3%	3%	3%	8%	8%	8%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	61.0	56.2		64.2	57.8	57.8		12.4	12.4		12.4	12.4
Effective Green, g (s)	63.0	57.2		66.2	58.8	58.8		13.4	13.4		13.4	13.4
Actuated g/C Ratio	0.70	0.64		0.74	0.65	0.65		0.15	0.15		0.15	0.15
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	362	2043		202	2049	897		150	212		175	202
v/s Ratio Prot	0.01	c0.54		c0.04	0.33							
v/s Ratio Perm	0.06			0.32		0.02		0.08	0.03		c0.12	0.00
v/c Ratio	0.09	0.84		0.48	0.50	0.02		0.56	0.20		0.83	0.03
Uniform Delay, d1	4.5	12.8		12.4	8.0	5.4		35.6	33.6		37.2	32.7
Progression Factor	1.45	0.86		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	3.5		1.3	0.8	0.0		3.9	0.3		27.1	0.0
Delay (s)	6.6	14.6		13.7	8.9	5.5		39.5	34.0		64.3	32.7
Level of Service	A	B		B	A	A		D	C		E	C
Approach Delay (s/veh)		14.4			9.2			35.7			57.4	
Approach LOS		B			A			D			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1450	34	84	888	29	47	26	158	93	33	35
Future Volume (veh/h)	28	1450	34	84	888	29	47	26	158	93	33	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1668	1668	1668	1709	1709	1709	1641	1641	1641
Adj Flow Rate, veh/h	33	1686	40	98	1033	34	55	30	184	108	38	41
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	3	3	6	6	6	3	3	3	8	8	8
Cap, veh/h	423	1969	47	392	2025	883	66	22	241	70	6	231
Arrive On Green	0.12	1.00	1.00	0.09	0.64	0.64	0.16	0.17	0.17	0.16	0.17	0.17
Sat Flow, veh/h	1628	3240	77	1589	3169	1382	0	133	1446	0	37	1388
Grp Volume(v), veh/h	33	842	884	98	1033	34	85	0	184	146	0	41
Grp Sat Flow(s),veh/h/ln	1628	1624	1693	1589	1585	1382	133	0	1446	37	0	1388
Q Serve(g_s), s	0.6	0.0	0.0	1.7	15.7	0.8	0.0	0.0	10.9	0.0	0.0	2.3
Cycle Q Clear(g_c), s	0.6	0.0	0.0	1.7	15.7	0.8	14.0	0.0	10.9	14.0	0.0	2.3
Prop In Lane	1.00		0.05	1.00		1.00	0.65		1.00	0.74		1.00
Lane Grp Cap(c), veh/h	423	987	1029	392	2025	883	87	0	241	75	0	231
V/C Ratio(X)	0.08	0.85	0.86	0.25	0.51	0.04	0.98	0.00	0.76	1.94	0.00	0.18
Avail Cap(c_a), veh/h	486	987	1029	404	2025	883	87	0	241	75	0	231
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.6	0.0	0.0	4.1	8.7	6.0	41.1	0.0	35.8	43.4	0.0	32.2
Incr Delay (d2), s/veh	0.0	6.1	6.1	0.2	0.9	0.1	90.3	0.0	13.0	465.9	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.7	1.7	0.4	4.6	0.2	4.1	0.0	4.7	11.5	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	5.7	6.1	6.1	4.3	9.6	6.1	131.4	0.0	48.8	509.3	0.0	32.5
LnGrp LOS	A	A	A	A	A	A	F		D	F		C
Approach Vol, veh/h		1759			1165			269			187	
Approach Delay, s/veh		6.1			9.1			74.9			404.7	
Approach LOS		A			A			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.3	58.7		19.0	9.5	61.5		19.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	53.0		14.0	8.0	53.0		14.0				
Max Q Clear Time (g_c+I1), s	3.7	2.0		16.0	2.6	17.7		16.0				
Green Ext Time (p_c), s	0.1	34.5		0.0	0.0	14.9		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	34.7
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	2	11	1	1	3	35	93	2	17	54	46
Future Vol, veh/h	27	2	11	1	1	3	35	93	2	17	54	46
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	31	2	13	1	1	3	41	108	2	20	63	53
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	7.8	7.3	8.2	7.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	68%	20%	15%
Vol Thru, %	72%	5%	20%	46%
Vol Right, %	2%	28%	60%	39%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	40	5	117
LT Vol	35	27	1	17
Through Vol	93	2	1	54
RT Vol	2	11	3	46
Lane Flow Rate	151	47	6	136
Geometry Grp	1	1	1	1
Degree of Util (X)	0.176	0.059	0.007	0.149
Departure Headway (Hd)	4.189	4.547	4.305	3.948
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	848	793	836	897
Service Time	2.253	2.547	2.307	2.024
HCM Lane V/C Ratio	0.178	0.059	0.007	0.152
HCM Control Delay, s/veh	8.2	7.8	7.3	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.2	0	0.5

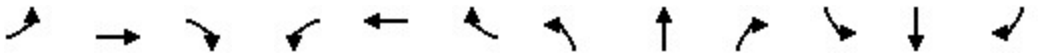
Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1471	18	53	860	20	129
Future Vol, veh/h	1471	18	53	860	20	129
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	100
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	9	8	8
Mvmt Flow	1599	20	58	935	22	140

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1618	0	2191	810
Stage 1	-	-	-	-	1609	-
Stage 2	-	-	-	-	583	-
Critical Hdwy	-	-	4.28	-	6.96	7.06
Critical Hdwy Stg 1	-	-	-	-	5.96	-
Critical Hdwy Stg 2	-	-	-	-	5.96	-
Follow-up Hdwy	-	-	2.29	-	3.58	3.38
Pot Cap-1 Maneuver	-	-	368	-	36	311
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	505	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	368	-	30	310
Mov Cap-2 Maneuver	-	-	-	-	106	-
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	426	-

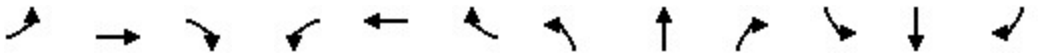
Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.96	28.72
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	106	310	-	-	368	-
HCM Lane V/C Ratio	0.205	0.452	-	-	0.157	-
HCM Control Delay (s/veh)	47.4	25.8	-	-	16.6	-
HCM Lane LOS	E	D	-	-	C	-
HCM 95th %tile Q(veh)	0.7	2.2	-	-	0.5	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	1264	109	98	1602	73	71	73	69	73	187	145
Future Volume (vph)	159	1264	109	98	1602	73	71	73	69	73	187	145
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.98		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1630	3221		1646	3292	1473	1660	1601		1636	1733	1445
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.36	1.00		0.50	1.00	1.00
Satd. Flow (perm)	1630	3221		1646	3292	1473	638	1601		873	1733	1445
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	167	1331	115	103	1686	77	75	77	73	77	197	153
RTOR Reduction (vph)	0	7	0	0	0	31	0	39	0	0	0	131
Lane Group Flow (vph)	167	1440	0	103	1686	46	75	111	0	77	197	22
Confl. Peds. (#/hr)							3		11	11		11
Confl. Bikes (#/hr)									5			
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	10.9	56.5		6.6	52.2	52.2	11.9	11.9		11.9	11.9	11.9
Effective Green, g (s)	11.9	57.5		7.6	53.2	53.2	12.9	12.9		12.9	12.9	12.9
Actuated g/C Ratio	0.13	0.64		0.08	0.59	0.59	0.14	0.14		0.14	0.14	0.14
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	215	2057		138	1945	870	91	229		125	248	207
v/s Ratio Prot	c0.10	0.45		0.06	c0.51			0.07			0.11	
v/s Ratio Perm						0.03	c0.12			0.09		0.02
v/c Ratio	0.77	0.69		0.74	0.86	0.05	0.82	0.48		0.61	0.79	0.10
Uniform Delay, d1	37.7	10.6		40.2	15.4	7.7	37.4	35.5		36.2	37.2	33.5
Progression Factor	1.00	1.00		0.75	1.14	2.84	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.4	2.0		10.8	3.1	0.0	42.1	1.1		7.4	15.4	0.1
Delay (s)	53.2	12.6		41.1	20.7	22.1	79.5	36.6		43.7	52.7	33.6
Level of Service	D	B		D	C	C	E	D		D	D	C
Approach Delay (s/veh)		16.8			21.9			50.9			44.2	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1264	109	98	1602	73	71	73	69	73	187	145
Future Volume (veh/h)	159	1264	109	98	1602	73	71	73	69	73	187	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.96	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1723	1736	1736	1736	1750	1750	1750	1736	1736	1736
Adj Flow Rate, veh/h	167	1331	115	103	1686	0	75	77	73	77	197	153
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	1	1	1
Cap, veh/h	213	1884	162	154	1917		129	126	119	162	270	224
Arrive On Green	0.13	0.62	0.61	0.12	0.77	0.00	0.16	0.16	0.14	0.16	0.16	0.16
Sat Flow, veh/h	1641	3049	263	1654	3299	1471	1040	807	765	1234	1736	1440
Grp Volume(v), veh/h	167	712	734	103	1686	0	75	0	150	77	197	153
Grp Sat Flow(s),veh/h/ln	1641	1637	1675	1654	1650	1471	1040	0	1573	1234	1736	1440
Q Serve(g_s), s	8.9	26.5	26.9	5.4	32.6	0.0	4.3	0.0	8.0	5.6	9.7	9.0
Cycle Q Clear(g_c), s	8.9	26.5	26.9	5.4	32.6	0.0	14.0	0.0	8.0	13.6	9.7	9.0
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.49	1.00		1.00
Lane Grp Cap(c), veh/h	213	1011	1035	154	1917		129	0	245	162	270	224
V/C Ratio(X)	0.78	0.70	0.71	0.67	0.88		0.58	0.00	0.61	0.48	0.73	0.68
Avail Cap(c_a), veh/h	219	1011	1035	165	1917		129	0	245	162	270	224
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.46	0.46	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	11.6	11.8	38.1	8.0	0.0	43.6	0.0	35.7	41.8	36.2	35.9
Incr Delay (d2), s/veh	15.7	4.1	4.1	3.9	3.0	0.0	5.5	0.0	4.0	1.6	9.1	7.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	9.0	9.3	2.2	5.3	0.0	1.9	0.0	3.3	1.8	4.7	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.6	15.7	15.9	42.0	11.0	0.0	49.1	0.0	39.7	43.5	45.3	43.6
LnGrp LOS	D	B	B	D	B		D		D	D	D	D
Approach Vol, veh/h		1613			1789			225			427	
Approach Delay, s/veh		19.7			12.8			42.8			44.4	
Approach LOS		B			B			D			D	

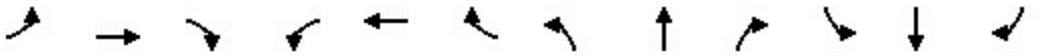
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	59.6		18.0	15.7	56.3		18.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	54.0		13.0	11.0	51.0		13.0				
Max Q Clear Time (g_c+I1), s	7.4	28.9		15.6	10.9	34.6		16.0				
Green Ext Time (p_c), s	0.0	17.1		0.0	0.0	13.8		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	20.5	
HCM 7th LOS	C	

Notes

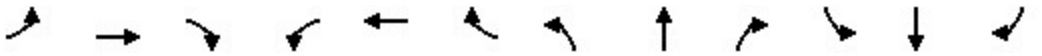
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	1331	67	133	1829	98	56	16	94	55	17	61
Future Volume (vph)	61	1331	67	133	1829	98	56	16	94	55	17	61
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97		1.00	0.98		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99	1.00		0.99	1.00
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1630	3230		1646	3292	1440		1651	1436		1617	1405
Flt Permitted	0.06	1.00		0.11	1.00	1.00		0.72	1.00		0.72	1.00
Satd. Flow (perm)	115	3230		207	3292	1440		1241	1436		1221	1405
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	64	1401	71	140	1925	103	59	17	99	58	18	64
RTOR Reduction (vph)	0	4	0	0	0	33	0	0	89	0	0	58
Lane Group Flow (vph)	64	1468	0	140	1925	70	0	76	10	0	76	6
Confl. Peds. (#/hr)			7	7			1		4	4		4
Confl. Bikes (#/hr)			8			4						1
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	4%	4%	4%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	65.3	58.9		68.5	60.5	60.5		8.1	8.1		8.1	8.1
Effective Green, g (s)	67.3	59.9		70.5	61.5	61.5		9.1	9.1		9.1	9.1
Actuated g/C Ratio	0.75	0.67		0.78	0.68	0.68		0.10	0.10		0.10	0.10
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	210	2149		306	2249	984		125	145		123	142
v/s Ratio Prot	0.02	0.45		c0.05	c0.58							
v/s Ratio Perm	0.20			0.31		0.05		0.06	0.01		c0.06	0.00
v/c Ratio	0.30	0.68		0.45	0.85	0.07		0.60	0.06		0.61	0.04
Uniform Delay, d1	10.3	9.2		6.5	10.8	4.7		38.7	36.6		38.7	36.5
Progression Factor	1.74	0.79		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	1.3		0.7	4.4	0.1		6.8	0.1		7.6	0.0
Delay (s)	18.4	8.7		7.3	15.3	4.8		45.6	36.7		46.4	36.6
Level of Service	B	A		A	B	A		D	D		D	D
Approach Delay (s/veh)		9.1			14.3			40.6			41.9	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	1331	67	133	1829	98	56	16	94	55	17	61
Future Volume (veh/h)	61	1331	67	133	1829	98	56	16	94	55	17	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.99	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1723	1736	1736	1736	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	64	1401	71	140	1925	103	59	17	99	58	18	64
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	2	2	2	4	4	4
Cap, veh/h	265	2118	107	483	2259	980	71	11	144	71	11	140
Arrive On Green	0.16	1.00	1.00	0.10	0.68	0.68	0.09	0.10	0.10	0.09	0.10	0.10
Sat Flow, veh/h	1641	3165	160	1654	3299	1432	0	106	1442	0	112	1400
Grp Volume(v), veh/h	64	723	749	140	1925	103	76	0	99	76	0	64
Grp Sat Flow(s),veh/h/ln	1641	1637	1688	1654	1650	1432	106	0	1442	112	0	1400
Q Serve(g_s), s	0.9	0.0	0.0	1.9	39.8	2.2	0.0	0.0	6.0	0.0	0.0	3.9
Cycle Q Clear(g_c), s	0.9	0.0	0.0	1.9	39.8	2.2	8.0	0.0	6.0	8.0	0.0	3.9
Prop In Lane	1.00		0.09	1.00		1.00	0.78		1.00	0.76		1.00
Lane Grp Cap(c), veh/h	265	1095	1130	483	2259	980	81	0	144	81	0	140
V/C Ratio(X)	0.24	0.66	0.66	0.29	0.85	0.11	0.94	0.00	0.69	0.94	0.00	0.46
Avail Cap(c_a), veh/h	295	1095	1130	488	2259	980	81	0	144	81	0	140
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.0	0.0	0.0	2.7	10.7	4.8	43.5	0.0	39.1	43.4	0.0	38.2
Incr Delay (d2), s/veh	0.2	2.1	2.1	0.2	4.3	0.2	81.0	0.0	11.9	81.0	0.0	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.6	0.7	0.4	11.8	0.6	3.5	0.0	2.6	3.5	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.2	2.1	2.1	2.9	15.1	5.0	124.5	0.0	51.1	124.4	0.0	39.9
LnGrp LOS	B	A	A	A	B	A	F		D	F		D
Approach Vol, veh/h		1536			2168			175			140	
Approach Delay, s/veh		2.6			13.8			82.9			85.8	
Approach LOS		A			B			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.8	64.2		13.0	11.4	65.6		13.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	59.0		8.0	8.0	59.0		8.0				
Max Q Clear Time (g_c+I1), s	3.9	2.0		10.0	2.9	41.8		10.0				
Green Ext Time (p_c), s	0.1	28.8		0.0	0.1	15.6		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	15.0
HCM 7th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	1	42	1	2	12	21	74	1	8	117	33
Future Vol, veh/h	35	1	42	1	2	12	21	74	1	8	117	33
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	1	44	1	2	13	22	78	1	8	123	35
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	7.8	7.2	8	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	45%	7%	5%
Vol Thru, %	77%	1%	13%	74%
Vol Right, %	1%	54%	80%	21%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	78	15	158
LT Vol	21	35	1	8
Through Vol	74	1	2	117
RT Vol	1	42	12	33
Lane Flow Rate	101	82	16	166
Geometry Grp	1	1	1	1
Degree of Util (X)	0.12	0.098	0.018	0.188
Departure Headway (Hd)	4.27	4.305	4.147	4.067
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	827	837	868	870
Service Time	2.364	2.305	2.15	2.151
HCM Lane V/C Ratio	0.122	0.098	0.018	0.191
HCM Control Delay, s/veh	8	7.8	7.2	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.3	0.1	0.7

Intersection	
Int Delay, s/veh	1.1

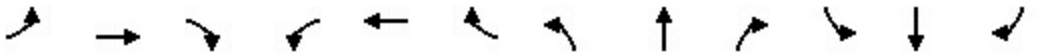
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1418	12	118	1949	12	60
Future Vol, veh/h	1418	12	118	1949	12	60
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	100
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	1	1	10	10
Mvmt Flow	1493	13	124	2052	13	63

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1506	0	2774	754
Stage 1	-	-	-	-	1500	-
Stage 2	-	-	-	-	1274	-
Critical Hdwy	-	-	4.12	-	7	7.1
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	2.21	-	3.6	3.4
Pot Cap-1 Maneuver	-	-	445	-	13	335
Stage 1	-	-	-	-	159	-
Stage 2	-	-	-	-	212	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	445	-	~ 10	334
Mov Cap-2 Maneuver	-	-	-	-	75	-
Stage 1	-	-	-	-	158	-
Stage 2	-	-	-	-	152	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.92	25.58
HCM LOS			D

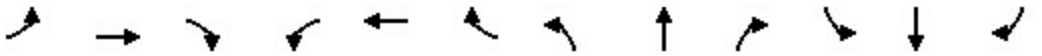
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	75	334	-	-	445	-
HCM Lane V/C Ratio	0.168	0.189	-	-	0.279	-
HCM Control Delay (s/veh)	62.2	18.3	-	-	16.2	-
HCM Lane LOS	F	C	-	-	C	-
HCM 95th %tile Q(veh)	0.6	0.7	-	-	1.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	1283	62	34	736	48	147	149	100	41	58	96
Future Volume (vph)	80	1283	62	34	736	48	147	149	100	41	58	96
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1614	3206		1583	3167	1417	1629	1601		1594	1683	1403
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.71	1.00		0.29	1.00	1.00
Satd. Flow (perm)	1614	3206		1583	3167	1417	1228	1601		495	1683	1403
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	1395	67	37	800	52	160	162	109	45	63	104
RTOR Reduction (vph)	0	3	0	0	0	22	0	28	0	0	0	84
Lane Group Flow (vph)	87	1459	0	37	800	30	160	243	0	45	63	20
Confl. Peds. (#/hr)							1		7	7		7
Confl. Bikes (#/hr)												2
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	2%	2%	2%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	7.5	53.6		4.8	50.9	50.9	16.6	16.6		16.6	16.6	16.6
Effective Green, g (s)	8.5	54.6		5.8	51.9	51.9	17.6	17.6		17.6	17.6	17.6
Actuated g/C Ratio	0.09	0.61		0.06	0.58	0.58	0.20	0.20		0.20	0.20	0.20
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	152	1944		102	1826	817	240	313		96	329	274
v/s Ratio Prot	c0.05	c0.46		0.02	0.25			c0.15			0.04	
v/s Ratio Perm						0.02	0.13			0.09		0.01
v/c Ratio	0.57	0.75		0.36	0.43	0.03	0.66	0.77		0.46	0.19	0.07
Uniform Delay, d1	39.0	12.7		40.3	10.7	8.2	33.4	34.3		32.0	30.2	29.5
Progression Factor	1.00	1.00		0.77	1.25	3.79	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.2	2.7		1.4	0.6	0.0	6.1	10.9		2.6	0.2	0.0
Delay (s)	43.2	15.4		32.7	14.1	31.3	39.6	45.3		34.6	30.4	29.6
Level of Service	D	B		C	B	C	D	D		C	C	C
Approach Delay (s/veh)		17.0			15.9			43.2			30.9	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



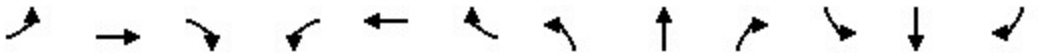
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	1283	62	34	736	48	147	149	100	41	58	96
Future Volume (veh/h)	80	1283	62	34	736	48	147	149	100	41	58	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1682	1682	1682	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	87	1395	67	37	800	0	160	162	109	45	63	104
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	5	5	5	2	2	2	4	4	4
Cap, veh/h	146	1828	88	104	1772		313	212	143	149	377	312
Arrive On Green	0.09	0.58	0.57	0.13	1.00	0.00	0.22	0.22	0.21	0.22	0.22	0.22
Sat Flow, veh/h	1628	3154	151	1602	3195	1425	1210	956	643	1087	1695	1403
Grp Volume(v), veh/h	87	717	745	37	800	0	160	0	271	45	63	104
Grp Sat Flow(s),veh/h/ln	1628	1624	1682	1602	1598	1425	1210	0	1599	1087	1695	1403
Q Serve(g_s), s	4.6	29.9	30.1	1.9	0.0	0.0	11.1	0.0	14.3	3.6	2.7	5.6
Cycle Q Clear(g_c), s	4.6	29.9	30.1	1.9	0.0	0.0	13.8	0.0	14.3	17.9	2.7	5.6
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.40	1.00		1.00
Lane Grp Cap(c), veh/h	146	941	975	104	1772		313	0	355	149	377	312
V/C Ratio(X)	0.59	0.76	0.76	0.36	0.45		0.51	0.00	0.76	0.30	0.17	0.33
Avail Cap(c_a), veh/h	199	941	975	160	1772		313	0	355	149	377	312
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	14.2	14.3	37.5	0.0	0.0	33.8	0.0	33.0	41.2	28.3	29.4
Incr Delay (d2), s/veh	2.8	5.8	5.7	1.3	0.7	0.0	1.1	0.0	9.0	0.8	0.2	0.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	10.7	11.2	0.7	0.2	0.0	3.3	0.0	6.4	1.0	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.2	20.0	20.0	38.8	0.7	0.0	34.9	0.0	42.0	42.0	28.4	29.9
LnGrp LOS	D	C	C	D	A		C		D	D	C	C
Approach Vol, veh/h		1549			837			431			212	
Approach Delay, s/veh		21.3			2.4			39.4			32.0	
Approach LOS		C			A			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	56.2		24.0	12.1	53.9		24.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	48.0		19.0	10.0	46.0		19.0				
Max Q Clear Time (g_c+I1), s	3.9	32.1		19.9	6.6	2.0		16.3				
Green Ext Time (p_c), s	0.0	12.1		0.0	0.1	11.2		0.6				

Intersection Summary		
HCM 7th Control Delay, s/veh	19.4	
HCM 7th LOS	B	

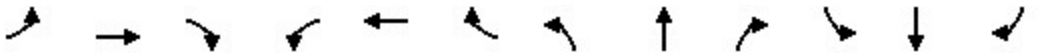
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1450	40	125	888	29	47	26	279	93	33	35
Future Volume (vph)	28	1450	40	125	888	29	47	26	279	93	33	35
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97		1.00	0.98		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99	1.00		0.99	1.00
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1614	3213		1568	3137	1374		1645	1426		1562	1360
Flt Permitted	0.24	1.00		0.06	1.00	1.00		0.61	1.00		0.72	1.00
Satd. Flow (perm)	415	3213		113	3137	1374		1044	1426		1179	1360
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	33	1686	47	145	1033	34	55	30	324	108	38	41
RTOR Reduction (vph)	0	2	0	0	0	12	0	0	140	0	0	35
Lane Group Flow (vph)	33	1731	0	145	1033	22	0	85	184	0	146	6
Confl. Peds. (#/hr)			2	2			1		1	1		1
Confl. Bikes (#/hr)			2			1						
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	3%	3%	3%	8%	8%	8%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	58.9	54.1		65.3	57.3	57.3		12.9	12.9		12.9	12.9
Effective Green, g (s)	60.9	55.1		67.3	58.3	58.3		13.9	13.9		13.9	13.9
Actuated g/C Ratio	0.68	0.61		0.75	0.65	0.65		0.15	0.15		0.15	0.15
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	358	1967		229	2032	890		161	220		182	210
v/s Ratio Prot	0.01	c0.54		c0.06	0.33							
v/s Ratio Perm	0.06			0.41		0.02		0.08	c0.13		0.12	0.00
v/c Ratio	0.09	0.88		0.63	0.50	0.02		0.52	0.83		0.80	0.03
Uniform Delay, d1	5.0	14.6		19.7	8.3	5.6		35.0	36.9		36.7	32.3
Progression Factor	1.47	0.87		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	4.8		4.9	0.9	0.0		2.3	23.0		21.3	0.0
Delay (s)	7.5	17.6		24.7	9.2	5.7		37.4	59.9		58.0	32.3
Level of Service	A	B		C	A	A		D	E		E	C
Approach Delay (s/veh)		17.4			10.9			55.3			52.4	
Approach LOS		B			B			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1450	40	125	888	29	47	26	279	93	33	35
Future Volume (veh/h)	28	1450	40	125	888	29	47	26	279	93	33	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1668	1668	1668	1709	1709	1709	1641	1641	1641
Adj Flow Rate, veh/h	33	1686	47	145	1033	34	55	30	324	108	38	41
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	3	3	6	6	6	3	3	3	8	8	8
Cap, veh/h	414	1906	53	395	1990	868	66	22	257	70	9	247
Arrive On Green	0.12	1.00	1.00	0.10	0.63	0.63	0.17	0.18	0.18	0.17	0.18	0.18
Sat Flow, veh/h	1628	3224	90	1589	3169	1382	0	124	1446	0	53	1388
Grp Volume(v), veh/h	33	846	887	145	1033	34	85	0	324	146	0	41
Grp Sat Flow(s),veh/h/ln	1628	1624	1690	1589	1585	1382	124	0	1446	53	0	1388
Q Serve(g_s), s	0.6	0.0	0.0	2.7	16.2	0.8	0.0	0.0	16.0	0.0	0.0	2.3
Cycle Q Clear(g_c), s	0.6	0.0	0.0	2.7	16.2	0.8	15.0	0.0	16.0	15.0	0.0	2.3
Prop In Lane	1.00		0.05	1.00		1.00	0.65		1.00	0.74		1.00
Lane Grp Cap(c), veh/h	414	960	999	395	1990	868	87	0	257	78	0	247
V/C Ratio(X)	0.08	0.88	0.89	0.37	0.52	0.04	0.98	0.00	1.26	1.86	0.00	0.17
Avail Cap(c_a), veh/h	478	960	999	399	1990	868	87	0	257	78	0	247
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.1	0.0	0.0	4.4	9.2	6.4	40.9	0.0	37.0	42.8	0.0	31.3
Incr Delay (d2), s/veh	0.0	7.7	7.7	0.4	1.0	0.1	90.3	0.0	144.7	432.2	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.0	2.2	0.7	4.8	0.2	4.1	0.0	15.9	11.2	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.1	7.7	7.7	4.8	10.2	6.5	131.2	0.0	181.7	475.0	0.0	31.6
LnGrp LOS	A	A	A	A	B	A	F		F	F		C
Approach Vol, veh/h		1766			1212			409			187	
Approach Delay, s/veh		7.7			9.5			171.2			377.8	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.8	57.2		20.0	9.5	60.5		20.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	52.0		15.0	8.0	52.0		15.0				
Max Q Clear Time (g_c+I1), s	4.7	2.0		17.0	2.6	18.2		18.0				
Green Ext Time (p_c), s	0.1	34.3		0.0	0.0	14.6		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	46.4
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	2	11	1	1	3	35	214	2	17	101	46
Future Vol, veh/h	27	2	11	1	1	3	35	214	2	17	101	46
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	31	2	13	1	1	3	41	249	2	20	117	53
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.3	7.8	9.6	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	68%	20%	10%
Vol Thru, %	85%	5%	20%	62%
Vol Right, %	1%	28%	60%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	251	40	5	164
LT Vol	35	27	1	17
Through Vol	214	2	1	101
RT Vol	2	11	3	46
Lane Flow Rate	292	47	6	191
Geometry Grp	1	1	1	1
Degree of Util (X)	0.349	0.064	0.008	0.224
Departure Headway (Hd)	4.309	4.974	4.743	4.23
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	841	720	755	851
Service Time	2.309	3	2.771	2.245
HCM Lane V/C Ratio	0.347	0.065	0.008	0.224
HCM Control Delay, s/veh	9.6	8.3	7.8	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.6	0.2	0	0.9

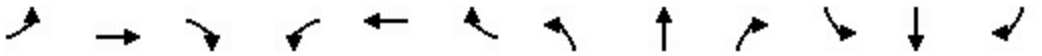
Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1471	9	12	860	7	8
Future Vol, veh/h	1471	9	12	860	7	8
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	100
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	9	8	8
Mvmt Flow	1599	10	13	935	8	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1609	0	2097	805
Stage 1	-	-	-	-	1604	-
Stage 2	-	-	-	-	493	-
Critical Hdwy	-	-	4.28	-	6.96	7.06
Critical Hdwy Stg 1	-	-	-	-	5.96	-
Critical Hdwy Stg 2	-	-	-	-	5.96	-
Follow-up Hdwy	-	-	2.29	-	3.58	3.38
Pot Cap-1 Maneuver	-	-	371	-	42	313
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	562	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	371	-	40	313
Mov Cap-2 Maneuver	-	-	-	-	114	-
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	542	-

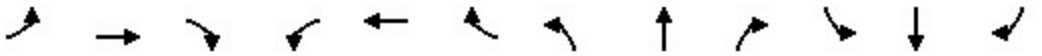
Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.21	27.17
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	114	313	-	-	371	-
HCM Lane V/C Ratio	0.067	0.028	-	-	0.035	-
HCM Control Delay (s/veh)	39	16.8	-	-	15.1	-
HCM Lane LOS	E	C	-	-	C	-
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	1264	112	98	1602	73	73	73	69	73	187	145
Future Volume (vph)	159	1264	112	98	1602	73	73	73	69	73	187	145
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.98		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1630	3220		1646	3292	1473	1660	1601		1636	1733	1445
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.36	1.00		0.50	1.00	1.00
Satd. Flow (perm)	1630	3220		1646	3292	1473	642	1601		876	1733	1445
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	167	1331	118	103	1686	77	77	77	73	77	197	153
RTOR Reduction (vph)	0	7	0	0	0	32	0	39	0	0	0	131
Lane Group Flow (vph)	167	1442	0	103	1686	45	77	112	0	77	197	22
Confl. Peds. (#/hr)							3		11	11		11
Confl. Bikes (#/hr)									5			
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	10.9	56.4		6.6	52.1	52.1	12.0	12.0		12.0	12.0	12.0
Effective Green, g (s)	11.9	57.4		7.6	53.1	53.1	13.0	13.0		13.0	13.0	13.0
Actuated g/C Ratio	0.13	0.64		0.08	0.59	0.59	0.14	0.14		0.14	0.14	0.14
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	215	2053		138	1942	869	92	231		126	250	208
v/s Ratio Prot	c0.10	0.45		0.06	c0.51			0.07			0.11	
v/s Ratio Perm						0.03	c0.12			0.09		0.02
v/c Ratio	0.77	0.70		0.74	0.86	0.05	0.83	0.48		0.61	0.78	0.10
Uniform Delay, d1	37.7	10.6		40.2	15.5	7.8	37.4	35.4		36.1	37.1	33.4
Progression Factor	1.00	1.00		0.74	1.02	2.65	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.4	2.0		10.8	3.1	0.0	44.5	1.1		7.2	14.5	0.1
Delay (s)	53.2	12.7		41.0	18.9	20.7	82.0	36.5		43.4	51.7	33.6
Level of Service	D	B		D	B	C	F	D		D	D	C
Approach Delay (s/veh)		16.9			20.2			52.0			43.7	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1264	112	98	1602	73	73	73	69	73	187	145
Future Volume (veh/h)	159	1264	112	98	1602	73	73	73	69	73	187	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.96	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1723	1736	1736	1736	1750	1750	1750	1736	1736	1736
Adj Flow Rate, veh/h	167	1331	118	103	1686	0	77	77	73	77	197	153
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	1	1	1
Cap, veh/h	213	1880	166	154	1917		129	126	119	162	270	224
Arrive On Green	0.13	0.62	0.61	0.12	0.77	0.00	0.16	0.16	0.14	0.16	0.16	0.16
Sat Flow, veh/h	1641	3042	269	1654	3299	1471	1040	807	765	1234	1736	1440
Grp Volume(v), veh/h	167	714	735	103	1686	0	77	0	150	77	197	153
Grp Sat Flow(s),veh/h/ln	1641	1637	1674	1654	1650	1471	1040	0	1573	1234	1736	1440
Q Serve(g_s), s	8.9	26.6	27.0	5.4	32.6	0.0	4.3	0.0	8.0	5.6	9.7	9.0
Cycle Q Clear(g_c), s	8.9	26.6	27.0	5.4	32.6	0.0	14.0	0.0	8.0	13.6	9.7	9.0
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.49	1.00		1.00
Lane Grp Cap(c), veh/h	213	1011	1035	154	1917		129	0	245	162	270	224
V/C Ratio(X)	0.78	0.71	0.71	0.67	0.88		0.60	0.00	0.61	0.48	0.73	0.68
Avail Cap(c_a), veh/h	219	1011	1035	165	1917		129	0	245	162	270	224
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.46	0.46	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	11.7	11.8	38.1	8.0	0.0	43.6	0.0	35.7	41.8	36.2	35.9
Incr Delay (d2), s/veh	15.7	4.1	4.1	3.9	3.0	0.0	6.3	0.0	4.0	1.6	9.1	7.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	9.0	9.4	2.2	5.3	0.0	1.9	0.0	3.3	1.8	4.7	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.6	15.8	15.9	42.0	11.0	0.0	50.0	0.0	39.7	43.5	45.3	43.6
LnGrp LOS	D	B	B	D	B		D		D	D	D	D
Approach Vol, veh/h		1616			1789			227			427	
Approach Delay, s/veh		19.8			12.8			43.2			44.4	
Approach LOS		B			B			D			D	

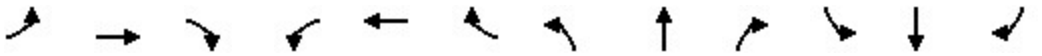
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	59.6		18.0	15.7	56.3		18.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	54.0		13.0	11.0	51.0		13.0				
Max Q Clear Time (g_c+I1), s	7.4	29.0		15.6	10.9	34.6		16.0				
Green Ext Time (p_c), s	0.0	17.1		0.0	0.0	13.8		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	20.6
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	1331	71	244	1829	98	59	16	149	55	17	61
Future Volume (vph)	61	1331	71	244	1829	98	59	16	149	55	17	61
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97		1.00	0.98		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99	1.00		0.99	1.00
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1630	3228		1646	3292	1440		1650	1436		1617	1405
Flt Permitted	0.07	1.00		0.10	1.00	1.00		0.72	1.00		0.72	1.00
Satd. Flow (perm)	121	3228		179	3292	1440		1237	1436		1218	1405
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	64	1401	75	257	1925	103	62	17	157	58	18	64
RTOR Reduction (vph)	0	4	0	0	0	33	0	0	141	0	0	58
Lane Group Flow (vph)	64	1472	0	257	1925	70	0	79	16	0	76	6
Confl. Peds. (#/hr)			7	7			1		4	4		4
Confl. Bikes (#/hr)			8			4						1
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	4%	4%	4%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	62.0	55.6		71.8	60.5	60.5		8.1	8.1		8.1	8.1
Effective Green, g (s)	64.0	56.6		72.9	61.5	61.5		9.1	9.1		9.1	9.1
Actuated g/C Ratio	0.71	0.63		0.81	0.68	0.68		0.10	0.10		0.10	0.10
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	210	2030		345	2249	984		125	145		123	142
v/s Ratio Prot	0.03	0.46		c0.10	c0.58							
v/s Ratio Perm	0.19			0.50		0.05		c0.06	0.01		0.06	0.00
v/c Ratio	0.30	0.72		0.74	0.85	0.07		0.63	0.10		0.61	0.04
Uniform Delay, d1	9.7	11.3		18.5	10.8	4.7		38.8	36.7		38.7	36.5
Progression Factor	1.23	0.88		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	1.7		8.0	4.4	0.1		8.7	0.2		7.6	0.0
Delay (s)	12.5	11.8		26.5	15.3	4.8		47.6	37.0		46.4	36.6
Level of Service	B	B		C	B	A		D	D		D	D
Approach Delay (s/veh)		11.8			16.1			40.5			41.9	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	1331	71	244	1829	98	59	16	149	55	17	61
Future Volume (veh/h)	61	1331	71	244	1829	98	59	16	149	55	17	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.99	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1723	1736	1736	1736	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	64	1401	75	257	1925	103	62	17	157	58	18	64
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	2	2	2	4	4	4
Cap, veh/h	265	2103	112	486	2259	980	71	8	144	71	11	140
Arrive On Green	0.16	1.00	1.00	0.10	0.68	0.68	0.09	0.10	0.10	0.09	0.10	0.10
Sat Flow, veh/h	1641	3154	168	1654	3299	1432	0	84	1442	0	112	1400
Grp Volume(v), veh/h	64	725	751	257	1925	103	79	0	157	76	0	64
Grp Sat Flow(s),veh/h/ln	1641	1637	1686	1654	1650	1432	84	0	1442	112	0	1400
Q Serve(g_s), s	0.9	0.0	0.0	3.9	39.8	2.2	0.0	0.0	9.0	0.0	0.0	3.9
Cycle Q Clear(g_c), s	0.9	0.0	0.0	3.9	39.8	2.2	8.0	0.0	9.0	8.0	0.0	3.9
Prop In Lane	1.00		0.10	1.00		1.00	0.78		1.00	0.76		1.00
Lane Grp Cap(c), veh/h	265	1091	1124	486	2259	980	79	0	144	81	0	140
V/C Ratio(X)	0.24	0.66	0.67	0.53	0.85	0.11	1.00	0.00	1.09	0.94	0.00	0.46
Avail Cap(c_a), veh/h	295	1091	1124	559	2259	980	79	0	144	81	0	140
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	0.0	0.0	2.9	10.7	4.8	43.7	0.0	40.5	43.4	0.0	38.2
Incr Delay (d2), s/veh	0.2	2.2	2.1	0.7	4.3	0.2	101.8	0.0	100.6	81.0	0.0	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.7	0.7	0.8	11.8	0.6	4.0	0.0	7.2	3.5	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.1	2.2	2.1	3.6	15.1	5.0	145.4	0.0	141.1	124.4	0.0	39.9
LnGrp LOS	B	A	A	A	B	A	F		F	F		D
Approach Vol, veh/h		1540			2285			236			140	
Approach Delay, s/veh		2.6			13.3			142.5			85.8	
Approach LOS		A			B			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	64.0		13.0	11.4	65.6		13.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	12.0	55.0		8.0	8.0	59.0		8.0				
Max Q Clear Time (g_c+I1), s	5.9	2.0		10.0	2.9	41.8		11.0				
Green Ext Time (p_c), s	0.5	27.9		0.0	0.1	15.6		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	19.1	
HCM 7th LOS	B	

Notes
User approved pedestrian interval to be less than phase max green.

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	1	42	1	2	12	21	132	1	8	232	33
Future Vol, veh/h	35	1	42	1	2	12	21	132	1	8	232	33
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	1	44	1	2	13	22	139	1	8	244	35
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.3	7.7	8.6	9.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	45%	7%	3%
Vol Thru, %	86%	1%	13%	85%
Vol Right, %	1%	54%	80%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	154	78	15	273
LT Vol	21	35	1	8
Through Vol	132	1	2	232
RT Vol	1	42	12	33
Lane Flow Rate	162	82	16	287
Geometry Grp	1	1	1	1
Degree of Util (X)	0.202	0.107	0.02	0.341
Departure Headway (Hd)	4.488	4.71	4.568	4.277
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	801	761	783	842
Service Time	2.509	2.738	2.601	2.294
HCM Lane V/C Ratio	0.202	0.108	0.02	0.341
HCM Control Delay, s/veh	8.6	8.3	7.7	9.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	0.4	0.1	1.5

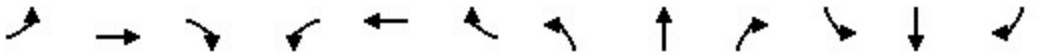
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1418	5	7	1949	7	5
Future Vol, veh/h	1418	5	7	1949	7	5
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	100
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	1	1	10	10
Mvmt Flow	1493	5	7	2052	7	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1499	0	2537	750
Stage 1	-	-	-	-	1496	-
Stage 2	-	-	-	-	1041	-
Critical Hdwy	-	-	4.12	-	7	7.1
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	2.21	-	3.6	3.4
Pot Cap-1 Maneuver	-	-	448	-	20	337
Stage 1	-	-	-	-	159	-
Stage 2	-	-	-	-	284	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	448	-	20	336
Mov Cap-2 Maneuver	-	-	-	-	101	-
Stage 1	-	-	-	-	159	-
Stage 2	-	-	-	-	279	-

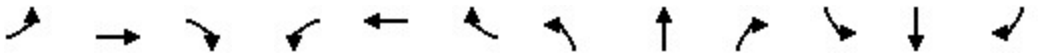
Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.05	32.02
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	101	336	-	-	448	-
HCM Lane V/C Ratio	0.073	0.016	-	-	0.016	-
HCM Control Delay (s/veh)	43.6	15.9	-	-	13.2	-
HCM Lane LOS	E	C	-	-	B	-
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	1248	61	33	719	51	148	154	98	41	60	93
Future Volume (vph)	78	1248	61	33	719	51	148	154	98	41	60	93
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1614	3206		1583	3167	1417	1629	1604		1594	1683	1404
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.71	1.00		0.29	1.00	1.00
Satd. Flow (perm)	1614	3206		1583	3167	1417	1225	1604		500	1683	1404
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	1357	66	36	782	55	161	167	107	45	65	101
RTOR Reduction (vph)	0	3	0	0	0	23	0	26	0	0	0	81
Lane Group Flow (vph)	85	1420	0	36	782	32	161	248	0	45	65	20
Confl. Peds. (#/hr)							1		7	7		7
Confl. Bikes (#/hr)												2
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	2%	2%	2%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	7.1	53.2		4.8	50.9	50.9	17.0	17.0		17.0	17.0	17.0
Effective Green, g (s)	8.1	54.2		5.8	51.9	51.9	18.0	18.0		18.0	18.0	18.0
Actuated g/C Ratio	0.09	0.60		0.06	0.58	0.58	0.20	0.20		0.20	0.20	0.20
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	145	1930		102	1826	817	245	320		100	336	280
v/s Ratio Prot	c0.05	c0.44		0.02	0.25			c0.15			0.04	
v/s Ratio Perm						0.02	0.13			0.09		0.01
v/c Ratio	0.58	0.73		0.35	0.42	0.03	0.65	0.77		0.45	0.19	0.07
Uniform Delay, d1	39.3	12.7		40.3	10.7	8.2	33.1	34.0		31.6	29.9	29.2
Progression Factor	1.00	1.00		0.80	1.27	3.74	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.9	2.5		1.3	0.6	0.0	5.5	10.6		2.3	0.2	0.0
Delay (s)	44.2	15.3		33.9	14.2	30.9	38.7	44.7		33.9	30.1	29.3
Level of Service	D	B		C	B	C	D	D		C	C	C
Approach Delay (s/veh)		16.9			16.1			42.5			30.5	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



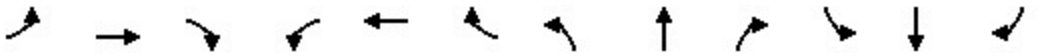
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	1248	61	33	719	51	148	154	98	41	60	93
Future Volume (veh/h)	78	1248	61	33	719	51	148	154	98	41	60	93
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1682	1682	1682	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	85	1357	66	36	782	0	161	167	107	45	65	101
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	5	5	5	2	2	2	4	4	4
Cap, veh/h	145	1798	87	102	1741		324	227	145	160	394	326
Arrive On Green	0.09	0.57	0.56	0.13	1.00	0.00	0.23	0.23	0.22	0.23	0.23	0.23
Sat Flow, veh/h	1628	3152	153	1602	3195	1425	1211	977	626	1084	1695	1404
Grp Volume(v), veh/h	85	698	725	36	782	0	161	0	274	45	65	101
Grp Sat Flow(s),veh/h/ln	1628	1624	1682	1602	1598	1425	1211	0	1603	1084	1695	1404
Q Serve(g_s), s	4.5	29.1	29.3	1.8	0.0	0.0	11.0	0.0	14.3	3.6	2.8	5.4
Cycle Q Clear(g_c), s	4.5	29.1	29.3	1.8	0.0	0.0	13.8	0.0	14.3	17.9	2.8	5.4
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.39	1.00		1.00
Lane Grp Cap(c), veh/h	145	926	959	102	1741		324	0	372	160	394	326
V/C Ratio(X)	0.58	0.75	0.76	0.35	0.45		0.50	0.00	0.74	0.28	0.17	0.31
Avail Cap(c_a), veh/h	181	926	959	160	1741		326	0	374	161	396	328
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	14.6	14.6	37.6	0.0	0.0	33.1	0.0	32.2	40.3	27.6	28.6
Incr Delay (d2), s/veh	2.7	5.7	5.5	1.3	0.7	0.0	0.9	0.0	7.0	0.7	0.1	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	10.5	10.9	0.7	0.2	0.0	3.3	0.0	6.2	1.0	1.1	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.1	20.2	20.2	38.9	0.7	0.0	33.9	0.0	39.2	41.0	27.7	29.0
LnGrp LOS	D	C	C	D	A		C		D	D	C	C
Approach Vol, veh/h		1508			818			435			211	
Approach Delay, s/veh		21.4			2.4			37.2			31.1	
Approach LOS		C			A			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.7	55.3		24.9	12.0	53.0		24.9				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	47.0		20.0	9.0	46.0		20.0				
Max Q Clear Time (g_c+I1), s	3.8	31.3		19.9	6.5	2.0		16.3				
Green Ext Time (p_c), s	0.0	11.7		0.0	0.0	10.8		0.8				

Intersection Summary		
HCM 7th Control Delay, s/veh	19.2	
HCM 7th LOS	B	

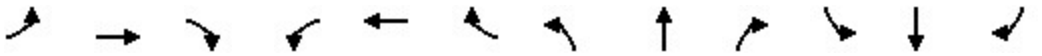
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	1408	42	135	862	28	54	30	309	91	34	34
Future Volume (vph)	27	1408	42	135	862	28	54	30	309	91	34	34
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97		1.00	0.98		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99	1.00		0.99	1.00
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1614	3212		1568	3137	1374		1645	1426		1563	1360
Flt Permitted	0.25	1.00		0.07	1.00	1.00		0.64	1.00		0.71	1.00
Satd. Flow (perm)	426	3212		117	3137	1374		1092	1426		1150	1360
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	31	1637	49	157	1002	33	63	35	359	106	40	40
RTOR Reduction (vph)	0	2	0	0	0	12	0	0	140	0	0	33
Lane Group Flow (vph)	31	1684	0	157	1002	21	0	98	219	0	146	7
Confl. Peds. (#/hr)			2	2			1		1	1		1
Confl. Bikes (#/hr)			2			1						
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	3%	3%	3%	8%	8%	8%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	57.2	52.4		63.6	55.6	55.6		14.6	14.6		14.6	14.6
Effective Green, g (s)	59.2	53.4		65.6	56.6	56.6		15.6	15.6		15.6	15.6
Actuated g/C Ratio	0.66	0.59		0.73	0.63	0.63		0.17	0.17		0.17	0.17
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	356	1905		230	1972	864		189	247		199	235
v/s Ratio Prot	0.01	c0.52		c0.07	0.32							
v/s Ratio Perm	0.05			0.43		0.02		0.09	c0.15		0.13	0.01
v/c Ratio	0.08	0.88		0.68	0.50	0.02		0.51	0.88		0.73	0.02
Uniform Delay, d1	5.6	15.6		20.8	9.1	6.2		33.7	36.3		35.2	30.9
Progression Factor	1.50	0.91		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	5.1		7.4	0.9	0.0		1.7	29.3		12.3	0.0
Delay (s)	8.5	19.4		28.3	10.0	6.3		35.5	65.6		47.6	30.9
Level of Service	A	B		C	B	A		D	E		D	C
Approach Delay (s/veh)		19.2			12.3			59.2			44.0	
Approach LOS		B			B			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	1408	42	135	862	28	54	30	309	91	34	34
Future Volume (veh/h)	27	1408	42	135	862	28	54	30	309	91	34	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1668	1668	1668	1709	1709	1709	1641	1641	1641
Adj Flow Rate, veh/h	31	1637	49	157	1002	33	63	35	359	106	40	40
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	3	3	6	6	6	3	3	3	8	8	8
Cap, veh/h	407	1828	55	397	1926	840	66	22	289	69	15	278
Arrive On Green	0.12	1.00	1.00	0.10	0.61	0.61	0.19	0.20	0.20	0.19	0.20	0.20
Sat Flow, veh/h	1628	3217	96	1589	3169	1382	0	112	1446	0	73	1388
Grp Volume(v), veh/h	31	824	862	157	1002	33	98	0	359	146	0	40
Grp Sat Flow(s),veh/h/ln	1628	1624	1689	1589	1585	1382	112	0	1446	73	0	1388
Q Serve(g_s), s	0.6	0.0	0.0	3.1	16.3	0.9	0.0	0.0	18.0	0.0	0.0	2.1
Cycle Q Clear(g_c), s	0.6	0.0	0.0	3.1	16.3	0.9	17.0	0.0	18.0	17.0	0.0	2.1
Prop In Lane	1.00		0.06	1.00		1.00	0.64		1.00	0.73		1.00
Lane Grp Cap(c), veh/h	407	923	960	397	1926	840	87	0	289	83	0	278
V/C Ratio(X)	0.08	0.89	0.90	0.40	0.52	0.04	1.13	0.00	1.24	1.76	0.00	0.14
Avail Cap(c_a), veh/h	473	923	960	400	1926	840	87	0	289	83	0	278
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.9	0.0	0.0	5.0	10.1	7.1	40.4	0.0	36.0	41.7	0.0	29.7
Incr Delay (d2), s/veh	0.0	8.9	9.0	0.5	1.0	0.1	135.7	0.0	134.4	387.9	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.3	2.4	0.8	5.0	0.2	5.2	0.0	17.1	10.8	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.9	8.9	9.0	5.5	11.1	7.2	176.1	0.0	170.4	429.6	0.0	29.8
LnGrp LOS	A	A	A	A	B	A	F		F	F		C
Approach Vol, veh/h		1717			1192			457			186	
Approach Delay, s/veh		8.9			10.3			171.6			343.7	
Approach LOS		A			B			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.8	55.2		22.0	9.3	58.7		22.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	50.0		17.0	8.0	50.0		17.0				
Max Q Clear Time (g_c+I1), s	5.1	2.0		19.0	2.6	18.3		20.0				
Green Ext Time (p_c), s	0.1	32.1		0.0	0.0	13.7		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	47.8
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	16	11	1	43	17	34	209	2	22	98	45
Future Vol, veh/h	26	16	11	1	43	17	34	209	2	22	98	45
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	30	19	13	1	50	20	40	243	2	26	114	52
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.6	8.5	10.1	8.9
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	49%	2%	13%
Vol Thru, %	85%	30%	70%	59%
Vol Right, %	1%	21%	28%	27%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	245	53	61	165
LT Vol	34	26	1	22
Through Vol	209	16	43	98
RT Vol	2	11	17	45
Lane Flow Rate	285	62	71	192
Geometry Grp	1	1	1	1
Degree of Util (X)	0.358	0.087	0.097	0.238
Departure Headway (Hd)	4.518	5.098	4.948	4.465
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	795	700	721	804
Service Time	2.548	3.148	2.997	2.498
HCM Lane V/C Ratio	0.358	0.089	0.098	0.239
HCM Control Delay, s/veh	10.1	8.6	8.5	8.9
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.6	0.3	0.3	0.9

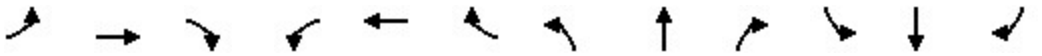
Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1466	9	12	848	7	8
Future Vol, veh/h	1466	9	12	848	7	8
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	9	8	8
Mvmt Flow	1593	10	13	922	8	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1603	0	2085	803
Stage 1	-	-	-	-	1598	-
Stage 2	-	-	-	-	487	-
Critical Hdwy	-	-	4.28	-	6.96	7.06
Critical Hdwy Stg 1	-	-	-	-	5.96	-
Critical Hdwy Stg 2	-	-	-	-	5.96	-
Follow-up Hdwy	-	-	2.29	-	3.58	3.38
Pot Cap-1 Maneuver	-	-	373	-	42	314
Stage 1	-	-	-	-	142	-
Stage 2	-	-	-	-	567	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	373	-	41	314
Mov Cap-2 Maneuver	-	-	-	-	114	-
Stage 1	-	-	-	-	142	-
Stage 2	-	-	-	-	547	-

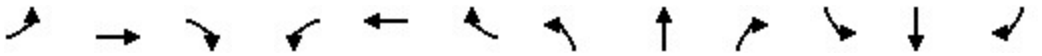
Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.21	27.94
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	173	-	-	373	-
HCM Lane V/C Ratio	0.094	-	-	0.035	-
HCM Control Delay (s/veh)	27.9	-	-	15	-
HCM Lane LOS	D	-	-	C	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	1232	114	95	1559	74	74	77	67	76	192	141
Future Volume (vph)	154	1232	114	95	1559	74	74	77	67	76	192	141
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.98		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.92		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1630	3218		1646	3292	1473	1660	1607		1636	1733	1445
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.36	1.00		0.50	1.00	1.00
Satd. Flow (perm)	1630	3218		1646	3292	1473	635	1607		877	1733	1445
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	162	1297	120	100	1641	78	78	81	71	80	202	148
RTOR Reduction (vph)	0	7	0	0	0	32	0	36	0	0	0	126
Lane Group Flow (vph)	162	1410	0	100	1641	46	78	116	0	80	202	22
Confl. Peds. (#/hr)							3		11	11		11
Confl. Bikes (#/hr)									5			
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	10.8	55.5		7.1	51.8	51.8	12.4	12.4		12.4	12.4	12.4
Effective Green, g (s)	11.8	56.5		8.1	52.8	52.8	13.4	13.4		13.4	13.4	13.4
Actuated g/C Ratio	0.13	0.63		0.09	0.59	0.59	0.15	0.15		0.15	0.15	0.15
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	213	2020		148	1931	864	94	239		130	258	215
v/s Ratio Prot	c0.10	c0.44		0.06	c0.50			0.07			0.12	
v/s Ratio Perm						0.03	c0.12			0.09		0.02
v/c Ratio	0.76	0.69		0.67	0.84	0.05	0.82	0.48		0.61	0.78	0.10
Uniform Delay, d1	37.7	11.0		39.6	15.3	7.9	37.1	35.1		35.8	36.8	33.1
Progression Factor	1.00	1.00		0.78	0.89	2.33	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	14.1	2.0		6.2	2.9	0.0	41.9	1.1		7.1	13.8	0.1
Delay (s)	51.8	13.1		37.2	16.6	18.5	79.1	36.2		43.0	50.7	33.2
Level of Service	D	B		D	B	B	E	D		D	D	C
Approach Delay (s/veh)		17.1			17.8			50.8			43.2	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



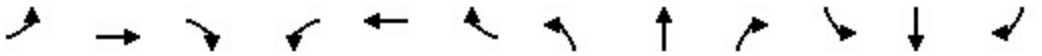
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	1232	114	95	1559	74	74	77	67	76	192	141
Future Volume (veh/h)	154	1232	114	95	1559	74	74	77	67	76	192	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.96	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1723	1736	1736	1736	1750	1750	1750	1736	1736	1736
Adj Flow Rate, veh/h	162	1297	120	100	1641	0	78	81	71	80	202	148
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	1	1	1
Cap, veh/h	209	1840	170	153	1890		139	140	123	176	289	240
Arrive On Green	0.13	0.61	0.60	0.12	0.76	0.00	0.17	0.17	0.16	0.17	0.17	0.17
Sat Flow, veh/h	1641	3030	279	1654	3299	1471	1040	843	739	1232	1736	1442
Grp Volume(v), veh/h	162	699	718	100	1641	0	78	0	152	80	202	148
Grp Sat Flow(s),veh/h/ln	1641	1637	1672	1654	1650	1471	1040	0	1581	1232	1736	1442
Q Serve(g_s), s	8.6	26.3	26.7	5.2	31.5	0.0	5.1	0.0	8.0	5.8	9.9	8.6
Cycle Q Clear(g_c), s	8.6	26.3	26.7	5.2	31.5	0.0	15.0	0.0	8.0	13.8	9.9	8.6
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	209	994	1016	153	1890		139	0	264	176	289	240
V/C Ratio(X)	0.78	0.70	0.71	0.65	0.87		0.56	0.00	0.58	0.46	0.70	0.62
Avail Cap(c_a), veh/h	219	994	1016	184	1890		139	0	264	176	289	240
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.49	0.49	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.0	12.1	12.2	38.1	8.3	0.0	43.1	0.0	34.8	40.9	35.4	34.8
Incr Delay (d2), s/veh	14.8	4.2	4.2	2.5	2.9	0.0	4.2	0.0	2.7	1.4	6.8	4.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	9.0	9.4	2.1	5.4	0.0	1.9	0.0	3.3	1.8	4.6	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.8	16.3	16.4	40.6	11.3	0.0	47.3	0.0	37.5	42.3	42.1	39.0
LnGrp LOS	D	B	B	D	B		D		D	D	D	D
Approach Vol, veh/h		1579			1741			230			430	
Approach Delay, s/veh		20.1			12.9			40.8			41.1	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.3	58.7		19.0	15.4	55.6		19.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	9.0	52.0		14.0	11.0	50.0		14.0				
Max Q Clear Time (g_c+I1), s	7.2	28.7		15.8	10.6	33.5		17.0				
Green Ext Time (p_c), s	0.0	15.9		0.0	0.0	13.7		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	20.4	
HCM 7th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	1292	79	279	1776	95	64	18	170	54	21	59
Future Volume (vph)	59	1292	79	279	1776	95	64	18	170	54	21	59
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97		1.00	0.98		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99	1.00		0.99	1.00
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1630	3224		1646	3292	1440		1650	1436		1621	1405
Flt Permitted	0.07	1.00		0.09	1.00	1.00		0.72	1.00		0.72	1.00
Satd. Flow (perm)	130	3224		166	3292	1440		1237	1436		1226	1405
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	62	1360	83	294	1869	100	67	19	179	57	22	62
RTOR Reduction (vph)	0	5	0	0	0	32	0	0	160	0	0	55
Lane Group Flow (vph)	62	1438	0	294	1869	68	0	86	19	0	79	7
Confl. Peds. (#/hr)			7	7			1		4	4		4
Confl. Bikes (#/hr)			8			4						1
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	4%	4%	4%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	58.2	51.8		71.3	59.9	59.9		8.7	8.7		8.7	8.7
Effective Green, g (s)	60.2	52.8		72.3	60.9	60.9		9.7	9.7		9.7	9.7
Actuated g/C Ratio	0.67	0.59		0.80	0.68	0.68		0.11	0.11		0.11	0.11
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	210	1891		388	2227	974		133	154		132	151
v/s Ratio Prot	0.02	0.45		c0.13	c0.57							
v/s Ratio Perm	0.17			0.48		0.05		c0.07	0.01		0.06	0.00
v/c Ratio	0.29	0.76		0.75	0.83	0.06		0.64	0.12		0.59	0.04
Uniform Delay, d1	9.1	13.8		21.4	10.8	4.9		38.5	36.3		38.2	35.9
Progression Factor	1.03	1.07		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	2.2		7.8	3.9	0.1		9.1	0.2		5.9	0.0
Delay (s)	9.9	17.1		29.2	14.8	5.0		47.6	36.5		44.2	36.0
Level of Service	A	B		C	B	A		D	D		D	D
Approach Delay (s/veh)		16.8			16.3			40.1			40.6	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	1292	79	279	1776	95	64	18	170	54	21	59
Future Volume (veh/h)	59	1292	79	279	1776	95	64	18	170	54	21	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1723	1736	1736	1736	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	62	1360	83	294	1869	100	67	19	179	57	22	62
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	2	2	2	4	4	4
Cap, veh/h	268	2051	125	489	2225	965	71	11	160	69	16	156
Arrive On Green	0.16	1.00	1.00	0.10	0.67	0.67	0.10	0.11	0.11	0.10	0.11	0.11
Sat Flow, veh/h	1641	3128	190	1654	3299	1431	0	98	1444	0	145	1402
Grp Volume(v), veh/h	62	710	733	294	1869	100	86	0	179	79	0	62
Grp Sat Flow(s),veh/h/ln	1641	1637	1682	1654	1650	1431	98	0	1444	145	0	1402
Q Serve(g_s), s	0.9	0.0	0.0	4.8	38.3	2.2	0.0	0.0	10.0	0.0	0.0	3.7
Cycle Q Clear(g_c), s	0.9	0.0	0.0	4.8	38.3	2.2	9.0	0.0	10.0	9.0	0.0	3.7
Prop In Lane	1.00		0.11	1.00		1.00	0.78		1.00	0.72		1.00
Lane Grp Cap(c), veh/h	268	1073	1102	489	2225	965	81	0	160	83	0	156
V/C Ratio(X)	0.23	0.66	0.67	0.60	0.84	0.10	1.06	0.00	1.12	0.95	0.00	0.40
Avail Cap(c_a), veh/h	299	1073	1102	636	2225	965	81	0	160	83	0	156
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.1	0.0	0.0	3.3	11.0	5.1	43.4	0.0	40.0	42.8	0.0	37.2
Incr Delay (d2), s/veh	0.2	2.2	2.1	0.9	4.0	0.2	118.2	0.0	105.4	80.7	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.6	0.7	1.1	11.7	0.6	4.5	0.0	8.2	3.6	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	12.3	2.2	2.1	4.2	15.0	5.3	161.5	0.0	145.4	123.5	0.0	38.4
LnGrp LOS	B	A	A	A	B	A	F		F	F		D
Approach Vol, veh/h		1505			2263			265			141	
Approach Delay, s/veh		2.6			13.2			150.6			86.1	
Approach LOS		A			B			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	63.0		14.0	11.3	64.7		14.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	16.0	50.0		9.0	8.0	58.0		9.0				
Max Q Clear Time (g_c+I1), s	6.8	2.0		11.0	2.9	40.3		12.0				
Green Ext Time (p_c), s	0.7	25.6		0.0	0.1	15.8		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	20.5
HCM 7th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	47	41	1	30	21	20	129	1	23	226	32
Future Vol, veh/h	34	47	41	1	30	21	20	129	1	23	226	32
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	49	43	1	32	22	21	136	1	24	238	34
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	9	8.4	9	10.2
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	28%	2%	8%
Vol Thru, %	86%	39%	58%	80%
Vol Right, %	1%	34%	40%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	150	122	52	281
LT Vol	20	34	1	23
Through Vol	129	47	30	226
RT Vol	1	41	21	32
Lane Flow Rate	158	128	55	296
Geometry Grp	1	1	1	1
Degree of Util (X)	0.208	0.175	0.075	0.371
Departure Headway (Hd)	4.744	4.902	4.916	4.52
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	753	728	724	793
Service Time	2.792	2.955	2.978	2.561
HCM Lane V/C Ratio	0.21	0.176	0.076	0.373
HCM Control Delay, s/veh	9	9	8.4	10.2
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.8	0.6	0.2	1.7

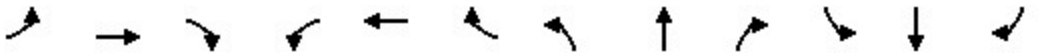
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1402	4	7	1934	7	4
Future Vol, veh/h	1402	4	7	1934	7	4
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	1	1	10	10
Mvmt Flow	1476	4	7	2036	7	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1481	0	2512	741
Stage 1	-	-	-	-	1479	-
Stage 2	-	-	-	-	1033	-
Critical Hdwy	-	-	4.12	-	7	7.1
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	2.21	-	3.6	3.4
Pot Cap-1 Maneuver	-	-	455	-	21	341
Stage 1	-	-	-	-	163	-
Stage 2	-	-	-	-	287	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	455	-	20	341
Mov Cap-2 Maneuver	-	-	-	-	103	-
Stage 1	-	-	-	-	163	-
Stage 2	-	-	-	-	282	-

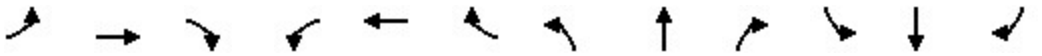
Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.05	33.52
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	138	-	-	455	-
HCM Lane V/C Ratio	0.084	-	-	0.016	-
HCM Control Delay (s/veh)	33.5	-	-	13	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	1285	64	34	742	54	153	160	100	43	62	96
Future Volume (vph)	80	1285	64	34	742	54	153	160	100	43	62	96
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1614	3205		1583	3167	1417	1629	1606		1594	1683	1404
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.71	1.00		0.28	1.00	1.00
Satd. Flow (perm)	1614	3205		1583	3167	1417	1223	1606		483	1683	1404
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	1397	70	37	807	59	166	174	109	47	67	104
RTOR Reduction (vph)	0	4	0	0	0	26	0	26	0	0	0	83
Lane Group Flow (vph)	87	1463	0	37	807	33	166	257	0	47	67	21
Confl. Peds. (#/hr)							1		7	7		7
Confl. Bikes (#/hr)												2
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	2%	2%	2%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	7.5	52.8		4.8	50.1	50.1	17.4	17.4		17.4	17.4	17.4
Effective Green, g (s)	8.5	53.8		5.8	51.1	51.1	18.4	18.4		18.4	18.4	18.4
Actuated g/C Ratio	0.09	0.60		0.06	0.57	0.57	0.20	0.20		0.20	0.20	0.20
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	152	1915		102	1798	804	250	328		98	344	287
v/s Ratio Prot	c0.05	c0.46		0.02	0.25			c0.16			0.04	
v/s Ratio Perm						0.02	0.14			0.10		0.02
v/c Ratio	0.57	0.76		0.36	0.44	0.04	0.66	0.78		0.47	0.19	0.07
Uniform Delay, d1	39.0	13.4		40.3	11.2	8.6	32.9	33.9		31.5	29.6	28.9
Progression Factor	1.00	1.00		0.78	1.34	3.91	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.2	2.9		1.4	0.7	0.0	5.8	11.1		2.6	0.2	0.0
Delay (s)	43.2	16.3		33.0	15.9	33.8	38.8	45.0		34.2	29.8	28.9
Level of Service	D	B		C	B	C	D	D		C	C	C
Approach Delay (s/veh)		17.8			17.7			42.7			30.3	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



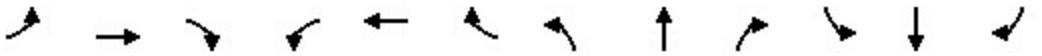
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	1285	64	34	742	54	153	160	100	43	62	96
Future Volume (veh/h)	80	1285	64	34	742	54	153	160	100	43	62	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1682	1682	1682	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	87	1397	70	37	807	0	166	174	109	47	67	104
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	5	5	5	2	2	2	4	4	4
Cap, veh/h	146	1789	89	104	1736		323	230	144	154	396	328
Arrive On Green	0.09	0.57	0.56	0.13	1.00	0.00	0.23	0.23	0.22	0.23	0.23	0.23
Sat Flow, veh/h	1628	3147	157	1602	3195	1425	1206	987	618	1075	1695	1404
Grp Volume(v), veh/h	87	719	748	37	807	0	166	0	283	47	67	104
Grp Sat Flow(s),veh/h/ln	1628	1624	1681	1602	1598	1425	1206	0	1605	1075	1695	1404
Q Serve(g_s), s	4.6	30.9	31.1	1.9	0.0	0.0	11.5	0.0	14.8	3.8	2.8	5.5
Cycle Q Clear(g_c), s	4.6	30.9	31.1	1.9	0.0	0.0	14.3	0.0	14.8	18.6	2.8	5.5
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.39	1.00		1.00
Lane Grp Cap(c), veh/h	146	923	956	104	1736		323	0	374	154	396	328
V/C Ratio(X)	0.59	0.78	0.78	0.36	0.46		0.51	0.00	0.76	0.31	0.17	0.32
Avail Cap(c_a), veh/h	199	923	956	160	1736		323	0	374	154	396	328
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.86	0.86	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	15.0	15.1	37.5	0.0	0.0	33.2	0.0	32.3	40.8	27.5	28.6
Incr Delay (d2), s/veh	2.8	6.5	6.4	1.3	0.8	0.0	1.1	0.0	8.2	0.8	0.1	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	11.3	11.8	0.7	0.2	0.0	3.4	0.0	6.5	1.0	1.2	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.2	21.5	21.5	38.8	0.8	0.0	34.3	0.0	40.5	41.6	27.7	29.0
LnGrp LOS	D	C	C	D	A		C		D	D	C	C
Approach Vol, veh/h		1554			844			449			218	
Approach Delay, s/veh		22.7			2.4			38.2			31.3	
Approach LOS		C			A			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	55.2		25.0	12.1	52.9		25.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	47.0		20.0	10.0	45.0		20.0				
Max Q Clear Time (g_c+I1), s	3.9	33.1		20.6	6.6	2.0		16.8				
Green Ext Time (p_c), s	0.0	10.8		0.0	0.1	11.2		0.7				

Intersection Summary	
HCM 7th Control Delay, s/veh	20.0
HCM 7th LOS	B

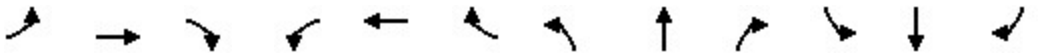
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1450	44	140	888	29	59	32	325	93	35	35
Future Volume (vph)	28	1450	44	140	888	29	59	32	325	93	35	35
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97		1.00	0.98		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99	1.00		0.99	1.00
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1614	3212		1568	3137	1374		1645	1426		1563	1360
Flt Permitted	0.23	1.00		0.07	1.00	1.00		0.64	1.00		0.69	1.00
Satd. Flow (perm)	402	3212		119	3137	1374		1089	1426		1123	1360
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	33	1686	51	163	1033	34	69	37	378	108	41	41
RTOR Reduction (vph)	0	2	0	0	0	13	0	0	136	0	0	33
Lane Group Flow (vph)	33	1735	0	163	1033	21	0	106	242	0	149	8
Confl. Peds. (#/hr)			2	2			1		1	1		1
Confl. Bikes (#/hr)			2			1						
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	3%	3%	3%	8%	8%	8%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	56.2	51.4		62.6	54.6	54.6		15.6	15.6		15.6	15.6
Effective Green, g (s)	58.2	52.4		64.6	55.6	55.6		16.6	16.6		16.6	16.6
Actuated g/C Ratio	0.65	0.58		0.72	0.62	0.62		0.18	0.18		0.18	0.18
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	338	1870		230	1937	848		200	263		207	250
v/s Ratio Prot	0.01	c0.54		c0.07	0.33							
v/s Ratio Perm	0.06			0.44		0.02		0.10	c0.17		0.13	0.01
v/c Ratio	0.09	0.92		0.70	0.53	0.02		0.53	0.91		0.71	0.03
Uniform Delay, d1	6.0	17.0		22.1	9.8	6.6		33.1	36.0		34.5	30.0
Progression Factor	1.53	0.94		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	7.6		8.9	1.0	0.0		2.0	34.3		10.6	0.0
Delay (s)	9.3	23.7		31.0	10.8	6.7		35.2	70.3		45.1	30.1
Level of Service	A	C		C	B	A		D	E		D	C
Approach Delay (s/veh)		23.5			13.4			62.6			41.9	
Approach LOS		C			B			E			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1450	44	140	888	29	59	32	325	93	35	35
Future Volume (veh/h)	28	1450	44	140	888	29	59	32	325	93	35	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1668	1668	1668	1709	1709	1709	1641	1641	1641
Adj Flow Rate, veh/h	33	1686	51	163	1033	34	69	37	378	108	41	41
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	3	3	6	6	6	3	3	3	8	8	8
Cap, veh/h	397	1827	55	390	1919	837	66	22	289	69	15	278
Arrive On Green	0.12	1.00	1.00	0.10	0.61	0.61	0.19	0.20	0.20	0.19	0.20	0.20
Sat Flow, veh/h	1628	3216	97	1589	3169	1382	0	108	1446	0	73	1388
Grp Volume(v), veh/h	33	848	889	163	1033	34	106	0	378	149	0	41
Grp Sat Flow(s),veh/h/ln	1628	1624	1689	1589	1585	1382	108	0	1446	73	0	1388
Q Serve(g_s), s	0.7	0.0	0.0	3.3	17.2	0.9	0.0	0.0	18.0	0.0	0.0	2.2
Cycle Q Clear(g_c), s	0.7	0.0	0.0	3.3	17.2	0.9	17.0	0.0	18.0	17.0	0.0	2.2
Prop In Lane	1.00		0.06	1.00		1.00	0.65		1.00	0.72		1.00
Lane Grp Cap(c), veh/h	397	922	960	390	1919	837	86	0	289	83	0	278
V/C Ratio(X)	0.08	0.92	0.93	0.42	0.54	0.04	1.23	0.00	1.31	1.80	0.00	0.15
Avail Cap(c_a), veh/h	460	922	960	392	1919	837	86	0	289	83	0	278
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.61	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.9	0.0	0.0	5.1	10.4	7.2	40.5	0.0	36.0	41.7	0.0	29.7
Incr Delay (d2), s/veh	0.0	10.5	10.8	0.5	1.1	0.1	169.8	0.0	160.9	403.1	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	2.7	2.9	0.9	5.3	0.2	6.0	0.0	19.2	11.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.0	10.5	10.8	5.6	11.5	7.3	210.4	0.0	196.9	444.8	0.0	29.9
LnGrp LOS	A	B	B	A	B	A	F		F	F		C
Approach Vol, veh/h		1770			1230			484			190	
Approach Delay, s/veh		10.6			10.6			199.8			355.2	
Approach LOS		B			B			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.9	55.1		22.0	9.5	58.5		22.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	50.0		17.0	8.0	50.0		17.0				
Max Q Clear Time (g_c+I1), s	5.3	2.0		19.0	2.7	19.2		20.0				
Green Ext Time (p_c), s	0.1	33.4		0.0	0.0	14.0		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	53.3
HCM 7th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	20	11	1	53	20	35	214	2	23	101	46
Future Vol, veh/h	27	20	11	1	53	20	35	214	2	23	101	46
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	31	23	13	1	62	23	41	249	2	27	117	53
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.8	8.7	10.3	9.1
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	47%	1%	14%
Vol Thru, %	85%	34%	72%	59%
Vol Right, %	1%	19%	27%	27%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	251	58	74	170
LT Vol	35	27	1	23
Through Vol	214	20	53	101
RT Vol	2	11	20	46
Lane Flow Rate	292	67	86	198
Geometry Grp	1	1	1	1
Degree of Util (X)	0.372	0.097	0.12	0.249
Departure Headway (Hd)	4.586	5.166	5.001	4.537
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	782	690	712	789
Service Time	2.625	3.227	3.059	2.581
HCM Lane V/C Ratio	0.373	0.097	0.121	0.251
HCM Control Delay, s/veh	10.3	8.8	8.7	9.1
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.7	0.3	0.4	1

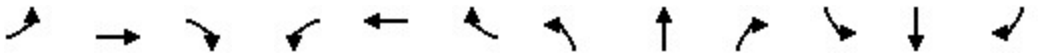
Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1517	9	12	875	7	8
Future Vol, veh/h	1517	9	12	875	7	8
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	9	8	8
Mvmt Flow	1649	10	13	951	8	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1659	0	2155	830
Stage 1	-	-	-	-	1654	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	-	-	4.28	-	6.96	7.06
Critical Hdwy Stg 1	-	-	-	-	5.96	-
Critical Hdwy Stg 2	-	-	-	-	5.96	-
Follow-up Hdwy	-	-	2.29	-	3.58	3.38
Pot Cap-1 Maneuver	-	-	354	-	38	301
Stage 1	-	-	-	-	133	-
Stage 2	-	-	-	-	557	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	354	-	36	301
Mov Cap-2 Maneuver	-	-	-	-	107	-
Stage 1	-	-	-	-	133	-
Stage 2	-	-	-	-	536	-

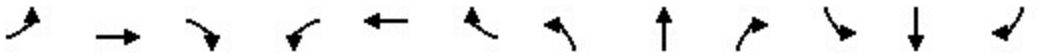
Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.21	29.55
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	163	-	-	354	-
HCM Lane V/C Ratio	0.1	-	-	0.037	-
HCM Control Delay (s/veh)	29.5	-	-	15.6	-
HCM Lane LOS	D	-	-	C	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	1270	118	98	1606	77	77	80	69	80	200	145
Future Volume (vph)	159	1270	118	98	1606	77	77	80	69	80	200	145
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.98		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1630	3218		1646	3292	1473	1660	1608		1636	1733	1445
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.35	1.00		0.50	1.00	1.00
Satd. Flow (perm)	1630	3218		1646	3292	1473	613	1608		866	1733	1445
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	167	1337	124	103	1691	81	81	84	73	84	211	153
RTOR Reduction (vph)	0	7	0	0	0	34	0	36	0	0	0	129
Lane Group Flow (vph)	167	1454	0	103	1691	47	81	121	0	84	211	24
Confl. Peds. (#/hr)							3		11	11		11
Confl. Bikes (#/hr)									5			
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	10.9	54.4		7.7	51.2	51.2	12.9	12.9		12.9	12.9	12.9
Effective Green, g (s)	11.9	55.4		8.7	52.2	52.2	13.9	13.9		13.9	13.9	13.9
Actuated g/C Ratio	0.13	0.62		0.10	0.58	0.58	0.15	0.15		0.15	0.15	0.15
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	215	1980		159	1909	854	94	248		133	267	223
v/s Ratio Prot	c0.10	c0.45		0.06	c0.51			0.08			0.12	
v/s Ratio Perm						0.03	c0.13			0.10		0.02
v/c Ratio	0.77	0.73		0.64	0.88	0.05	0.86	0.48		0.63	0.79	0.10
Uniform Delay, d1	37.7	12.1		39.1	16.3	8.1	37.1	34.8		35.6	36.6	32.7
Progression Factor	1.00	1.00		0.75	0.93	2.40	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.4	2.4		4.3	3.7	0.0	50.5	1.1		8.2	14.2	0.1
Delay (s)	53.2	14.6		34.1	18.9	19.7	87.6	35.9		43.9	50.8	32.8
Level of Service	D	B		C	B	B	F	D		D	D	C
Approach Delay (s/veh)		18.5			19.8			53.5			43.4	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	23.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



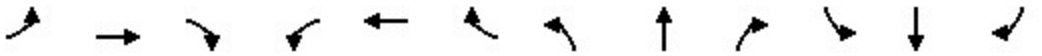
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1270	118	98	1606	77	77	80	69	80	200	145
Future Volume (veh/h)	159	1270	118	98	1606	77	77	80	69	80	200	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.96	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1723	1736	1736	1736	1750	1750	1750	1736	1736	1736
Adj Flow Rate, veh/h	167	1337	124	103	1691	0	81	84	73	84	211	153
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	1	1	1
Cap, veh/h	213	1838	170	154	1880		133	141	123	171	289	240
Arrive On Green	0.13	0.61	0.60	0.12	0.76	0.00	0.17	0.17	0.16	0.17	0.17	0.17
Sat Flow, veh/h	1641	3029	280	1654	3299	1471	1027	846	735	1227	1736	1442
Grp Volume(v), veh/h	167	720	741	103	1691	0	81	0	157	84	211	153
Grp Sat Flow(s),veh/h/ln	1641	1637	1672	1654	1650	1471	1027	0	1582	1227	1736	1442
Q Serve(g_s), s	8.9	27.8	28.2	5.4	35.1	0.0	4.6	0.0	8.3	6.1	10.4	8.9
Cycle Q Clear(g_c), s	8.9	27.8	28.2	5.4	35.1	0.0	15.0	0.0	8.3	14.4	10.4	8.9
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	213	993	1015	154	1880		133	0	264	171	289	240
V/C Ratio(X)	0.78	0.72	0.73	0.67	0.90		0.61	0.00	0.60	0.49	0.73	0.64
Avail Cap(c_a), veh/h	219	993	1015	202	1880		133	0	264	171	289	240
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.46	0.46	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	12.4	12.6	38.1	8.9	0.0	43.5	0.0	34.9	41.4	35.6	35.0
Incr Delay (d2), s/veh	15.7	4.6	4.6	1.9	3.6	0.0	7.0	0.0	3.2	1.6	8.5	5.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	9.6	10.0	2.1	5.9	0.0	2.1	0.0	3.4	1.9	5.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.6	17.0	17.2	40.0	12.6	0.0	50.5	0.0	38.1	43.0	44.1	39.9
LnGrp LOS	D	B	B	D	B		D		D	D	D	D
Approach Vol, veh/h		1628			1794			238			448	
Approach Delay, s/veh		20.9			14.2			42.3			42.5	
Approach LOS		C			B			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	58.6		19.0	15.7	55.3		19.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	51.0		14.0	11.0	50.0		14.0				
Max Q Clear Time (g_c+I1), s	7.4	30.2		16.4	10.9	37.1		17.0				
Green Ext Time (p_c), s	0.1	15.0		0.0	0.0	11.2		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	21.5
HCM 7th LOS	C

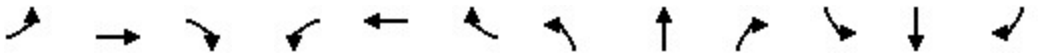
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	1331	84	295	1829	98	67	20	180	55	23	61
Future Volume (vph)	61	1331	84	295	1829	98	67	20	180	55	23	61
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97		1.00	0.98		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99	1.00		0.99	1.00
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1630	3223		1646	3292	1440		1651	1436		1622	1405
Flt Permitted	0.07	1.00		0.08	1.00	1.00		0.72	1.00		0.70	1.00
Satd. Flow (perm)	128	3223		155	3292	1440		1237	1436		1181	1405
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	64	1401	88	311	1925	103	71	21	189	58	24	64
RTOR Reduction (vph)	0	5	0	0	0	33	0	0	170	0	0	58
Lane Group Flow (vph)	64	1484	0	311	1925	70	0	92	19	0	82	6
Confl. Peds. (#/hr)			7	7			1		4	4		4
Confl. Bikes (#/hr)			8			4						1
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	4%	4%	4%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	58.9	52.5		71.9	60.5	60.5		8.1	8.1		8.1	8.1
Effective Green, g (s)	60.9	53.5		72.9	61.5	61.5		9.1	9.1		9.1	9.1
Actuated g/C Ratio	0.68	0.59		0.81	0.68	0.68		0.10	0.10		0.10	0.10
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	210	1915		380	2249	984		125	145		119	142
v/s Ratio Prot	0.03	0.46		c0.14	c0.58							
v/s Ratio Perm	0.18			0.52		0.05		c0.07	0.01		0.07	0.00
v/c Ratio	0.30	0.77		0.81	0.85	0.07		0.73	0.13		0.68	0.04
Uniform Delay, d1	9.5	13.7		23.5	10.8	4.7		39.2	36.8		39.0	36.5
Progression Factor	1.00	1.09		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	2.2		12.5	4.4	0.1		18.9	0.3		14.1	0.0
Delay (s)	10.0	17.3		36.0	15.3	4.8		58.2	37.1		53.2	36.6
Level of Service	B	B		D	B	A		E	D		D	D
Approach Delay (s/veh)		17.0			17.6			44.0			45.9	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	1331	84	295	1829	98	67	20	180	55	23	61
Future Volume (veh/h)	61	1331	84	295	1829	98	67	20	180	55	23	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.99	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1723	1736	1736	1736	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	64	1401	88	311	1925	103	71	21	189	58	24	64
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	2	2	2	4	4	4
Cap, veh/h	265	2081	130	483	2259	980	71	2	144	68	11	140
Arrive On Green	0.16	1.00	1.00	0.10	0.68	0.68	0.09	0.10	0.10	0.09	0.10	0.10
Sat Flow, veh/h	1641	3122	195	1654	3299	1432	0	25	1442	0	112	1400
Grp Volume(v), veh/h	64	732	757	311	1925	103	92	0	189	82	0	64
Grp Sat Flow(s),veh/h/ln	1641	1637	1680	1654	1650	1432	25	0	1442	112	0	1400
Q Serve(g_s), s	0.9	0.0	0.0	4.9	39.8	2.2	0.0	0.0	9.0	0.0	0.0	3.9
Cycle Q Clear(g_c), s	0.9	0.0	0.0	4.9	39.8	2.2	8.0	0.0	9.0	8.0	0.0	3.9
Prop In Lane	1.00		0.12	1.00		1.00	0.77		1.00	0.71		1.00
Lane Grp Cap(c), veh/h	265	1091	1120	483	2259	980	73	0	144	78	0	140
V/C Ratio(X)	0.24	0.67	0.68	0.64	0.85	0.11	1.26	0.00	1.31	1.05	0.00	0.46
Avail Cap(c_a), veh/h	295	1091	1120	611	2259	980	73	0	144	78	0	140
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	0.0	0.0	3.0	10.7	4.8	44.2	0.0	40.5	43.4	0.0	38.2
Incr Delay (d2), s/veh	0.2	2.1	2.1	1.2	4.3	0.2	190.2	0.0	180.4	115.4	0.0	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.6	0.6	1.1	11.8	0.6	5.5	0.0	10.4	4.3	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.1	2.1	2.1	4.2	15.1	5.0	234.4	0.0	220.9	158.8	0.0	39.9
LnGrp LOS	B	A	A	A	B	A	F		F	F		D
Approach Vol, veh/h		1553			2339			281			146	
Approach Delay, s/veh		2.5			13.2			225.3			106.7	
Approach LOS		A			B			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	64.0		13.0	11.4	65.6		13.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	15.0	52.0		8.0	8.0	59.0		8.0				
Max Q Clear Time (g_c+I1), s	6.9	2.0		10.0	2.9	41.8		11.0				
Green Ext Time (p_c), s	0.7	27.5		0.0	0.1	15.6		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	26.3	
HCM 7th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	58	42	1	36	24	21	132	1	27	232	33
Future Vol, veh/h	35	58	42	1	36	24	21	132	1	27	232	33
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	61	44	1	38	25	22	139	1	28	244	35
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	9.3	8.6	9.2	10.6
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	26%	2%	9%
Vol Thru, %	86%	43%	59%	79%
Vol Right, %	1%	31%	39%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	154	135	61	292
LT Vol	21	35	1	27
Through Vol	132	58	36	232
RT Vol	1	42	24	33
Lane Flow Rate	162	142	64	307
Geometry Grp	1	1	1	1
Degree of Util (X)	0.217	0.196	0.089	0.392
Departure Headway (Hd)	4.828	4.973	4.992	4.593
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	739	716	711	781
Service Time	2.886	3.038	3.065	2.642
HCM Lane V/C Ratio	0.219	0.198	0.09	0.393
HCM Control Delay, s/veh	9.2	9.3	8.6	10.6
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.8	0.7	0.3	1.9

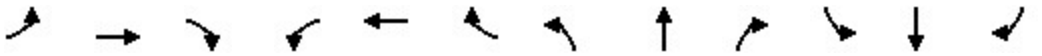
Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1449	5	7	2000	7	5
Future Vol, veh/h	1449	5	7	2000	7	5
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	1	1	10	10
Mvmt Flow	1525	5	7	2105	7	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1532	0	2596	766
Stage 1	-	-	-	-	1529	-
Stage 2	-	-	-	-	1067	-
Critical Hdwy	-	-	4.12	-	7	7.1
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	2.21	-	3.6	3.4
Pot Cap-1 Maneuver	-	-	435	-	18	328
Stage 1	-	-	-	-	153	-
Stage 2	-	-	-	-	275	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	435	-	18	328
Mov Cap-2 Maneuver	-	-	-	-	96	-
Stage 1	-	-	-	-	153	-
Stage 2	-	-	-	-	270	-

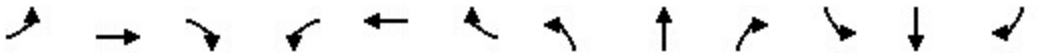
Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.05	34.04
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	137	-	-	435	-
HCM Lane V/C Ratio	0.093	-	-	0.017	-
HCM Control Delay (s/veh)	34	-	-	13.4	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	1285	61	34	741	54	140	161	100	43	62	96
Future Volume (vph)	80	1285	61	34	741	54	140	161	100	43	62	96
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.99		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1614	3206		1583	3167	1417	1629	1606		1594	1683	1404
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.71	1.00		0.28	1.00	1.00
Satd. Flow (perm)	1614	3206		1583	3167	1417	1223	1606		480	1683	1404
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	1397	66	37	805	59	152	175	109	47	67	104
RTOR Reduction (vph)	0	3	0	0	0	26	0	25	0	0	0	83
Lane Group Flow (vph)	87	1460	0	37	805	33	152	259	0	47	67	21
Confl. Peds. (#/hr)							1		7	7		7
Confl. Bikes (#/hr)												2
Heavy Vehicles (%)	3%	3%	3%	5%	5%	5%	2%	2%	2%	4%	4%	4%
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	7.5	52.8		4.8	50.1	50.1	17.4	17.4		17.4	17.4	17.4
Effective Green, g (s)	8.5	53.8		5.8	51.1	51.1	18.4	18.4		18.4	18.4	18.4
Actuated g/C Ratio	0.09	0.60		0.06	0.57	0.57	0.20	0.20		0.20	0.20	0.20
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	152	1916		102	1798	804	250	328		98	344	287
v/s Ratio Prot	c0.05	c0.46		0.02	0.25			c0.16			0.04	
v/s Ratio Perm						0.02	0.12			0.10		0.02
v/c Ratio	0.57	0.76		0.36	0.44	0.04	0.60	0.78		0.47	0.19	0.07
Uniform Delay, d1	39.0	13.3		40.3	11.2	8.6	32.5	33.9		31.5	29.6	28.9
Progression Factor	1.00	1.00		0.78	1.23	3.56	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.2	2.9		1.4	0.7	0.0	3.5	11.4		2.6	0.2	0.0
Delay (s)	43.2	16.2		32.9	14.6	30.7	36.0	45.4		34.2	29.8	28.9
Level of Service	D	B		C	B	C	D	D		C	C	C
Approach Delay (s/veh)		17.8			16.4			42.1			30.3	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



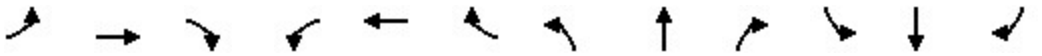
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	1285	61	34	741	54	140	161	100	43	62	96
Future Volume (veh/h)	80	1285	61	34	741	54	140	161	100	43	62	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1682	1682	1682	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	87	1397	66	37	805	0	152	175	109	47	67	104
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	5	5	5	2	2	2	4	4	4
Cap, veh/h	146	1795	85	104	1736		323	231	144	153	396	328
Arrive On Green	0.09	0.57	0.56	0.13	1.00	0.00	0.23	0.23	0.22	0.23	0.23	0.23
Sat Flow, veh/h	1628	3157	149	1602	3195	1425	1206	989	616	1074	1695	1404
Grp Volume(v), veh/h	87	717	746	37	805	0	152	0	284	47	67	104
Grp Sat Flow(s),veh/h/ln	1628	1624	1682	1602	1598	1425	1206	0	1605	1074	1695	1404
Q Serve(g_s), s	4.6	30.7	31.0	1.9	0.0	0.0	10.4	0.0	14.9	3.8	2.8	5.5
Cycle Q Clear(g_c), s	4.6	30.7	31.0	1.9	0.0	0.0	13.2	0.0	14.9	18.7	2.8	5.5
Prop In Lane	1.00		0.09	1.00		1.00	1.00		0.38	1.00		1.00
Lane Grp Cap(c), veh/h	146	923	956	104	1736		323	0	374	153	396	328
V/C Ratio(X)	0.59	0.78	0.78	0.36	0.46		0.47	0.00	0.76	0.31	0.17	0.32
Avail Cap(c_a), veh/h	199	923	956	160	1736		323	0	374	153	396	328
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.4	15.0	15.1	37.5	0.0	0.0	32.8	0.0	32.3	40.9	27.5	28.6
Incr Delay (d2), s/veh	2.8	6.4	6.3	1.3	0.8	0.0	0.8	0.0	8.3	0.8	0.1	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	11.2	11.7	0.7	0.2	0.0	3.1	0.0	6.6	1.0	1.2	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.2	21.4	21.4	38.8	0.8	0.0	33.6	0.0	40.7	41.7	27.7	29.0
LnGrp LOS	D	C	C	D	A		C		D	D	C	C
Approach Vol, veh/h		1550			842			436			218	
Approach Delay, s/veh		22.5			2.4			38.2			31.3	
Approach LOS		C			A			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.8	55.2		25.0	12.1	52.9		25.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	47.0		20.0	10.0	45.0		20.0				
Max Q Clear Time (g_c+I1), s	3.9	33.0		20.7	6.6	2.0		16.9				
Green Ext Time (p_c), s	0.0	10.9		0.0	0.1	11.2		0.7				

Intersection Summary	
HCM 7th Control Delay, s/veh	19.9
HCM 7th LOS	B

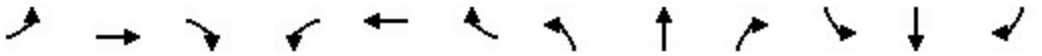
Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	1450	38	84	888	29	58	32	158	93	35	35
Future Volume (vph)	28	1450	38	84	888	29	58	32	158	93	35	35
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97		1.00	0.98		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99	1.00		0.99	1.00
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1614	3214		1568	3137	1374		1645	1426		1563	1360
Flt Permitted	0.23	1.00		0.06	1.00	1.00		0.57	1.00		0.68	1.00
Satd. Flow (perm)	403	3214		114	3137	1374		973	1426		1112	1360
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	33	1686	44	98	1033	34	67	37	184	108	41	41
RTOR Reduction (vph)	0	2	0	0	0	12	0	0	139	0	0	35
Lane Group Flow (vph)	33	1728	0	98	1033	22	0	104	45	0	149	6
Confl. Peds. (#/hr)			2	2			1		1	1		1
Confl. Bikes (#/hr)			2			1						
Heavy Vehicles (%)	3%	3%	3%	6%	6%	6%	3%	3%	3%	8%	8%	8%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	60.3	55.5		63.5	57.1	57.1		13.1	13.1		13.1	13.1
Effective Green, g (s)	62.3	56.5		65.5	58.1	58.1		14.1	14.1		14.1	14.1
Actuated g/C Ratio	0.69	0.63		0.73	0.65	0.65		0.16	0.16		0.16	0.16
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	357	2017		202	2025	886		152	223		174	213
v/s Ratio Prot	0.01	c0.54		c0.04	0.33							
v/s Ratio Perm	0.06			0.31		0.02		0.11	0.03		c0.13	0.00
v/c Ratio	0.09	0.85		0.48	0.51	0.02		0.68	0.20		0.85	0.03
Uniform Delay, d1	4.7	13.4		12.8	8.4	5.7		35.8	33.0		36.9	32.1
Progression Factor	1.52	0.90		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	3.8		1.3	0.9	0.0		11.0	0.3		31.1	0.0
Delay (s)	7.3	16.0		14.1	9.3	5.7		46.8	33.3		68.1	32.1
Level of Service	A	B		B	A	A		D	C		E	C
Approach Delay (s/veh)		15.9			9.6			38.2			60.3	
Approach LOS		B			A			D			E	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	1450	38	84	888	29	58	32	158	93	35	35
Future Volume (veh/h)	28	1450	38	84	888	29	58	32	158	93	35	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1668	1668	1668	1709	1709	1709	1641	1641	1641
Adj Flow Rate, veh/h	33	1686	44	98	1033	34	67	37	184	108	41	41
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	3	3	3	6	6	6	3	3	3	8	8	8
Cap, veh/h	414	1928	50	389	1990	868	66	22	257	69	9	247
Arrive On Green	0.12	1.00	1.00	0.09	0.63	0.63	0.17	0.18	0.18	0.17	0.18	0.18
Sat Flow, veh/h	1628	3231	84	1589	3169	1382	0	126	1446	0	53	1388
Grp Volume(v), veh/h	33	845	885	98	1033	34	104	0	184	149	0	41
Grp Sat Flow(s),veh/h/ln	1628	1624	1692	1589	1585	1382	126	0	1446	53	0	1388
Q Serve(g_s), s	0.6	0.0	0.0	1.8	16.2	0.8	0.0	0.0	10.8	0.0	0.0	2.3
Cycle Q Clear(g_c), s	0.6	0.0	0.0	1.8	16.2	0.8	15.0	0.0	10.8	15.0	0.0	2.3
Prop In Lane	1.00		0.05	1.00		1.00	0.64		1.00	0.72		1.00
Lane Grp Cap(c), veh/h	414	969	1009	389	1990	868	87	0	257	78	0	247
V/C Ratio(X)	0.08	0.87	0.88	0.25	0.52	0.04	1.20	0.00	0.72	1.91	0.00	0.17
Avail Cap(c_a), veh/h	478	969	1009	401	1990	868	87	0	257	78	0	247
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.61	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.0	0.0	0.0	4.4	9.2	6.4	40.9	0.0	34.9	42.8	0.0	31.3
Incr Delay (d2), s/veh	0.0	6.9	6.9	0.3	1.0	0.1	159.7	0.0	8.6	455.2	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.9	1.9	0.5	4.8	0.2	5.8	0.0	4.4	11.6	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	6.1	6.9	6.9	4.6	10.2	6.5	200.6	0.0	43.5	498.0	0.0	31.6
LnGrp LOS	A	A	A	A	B	A	F		D	F		C
Approach Vol, veh/h		1763			1165			288			190	
Approach Delay, s/veh		6.9			9.6			100.2			397.4	
Approach LOS		A			A			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.3	57.7		20.0	9.5	60.5		20.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	52.0		15.0	8.0	52.0		15.0				
Max Q Clear Time (g_c+I1), s	3.8	2.0		17.0	2.6	18.2		17.0				
Green Ext Time (p_c), s	0.1	34.2		0.0	0.0	14.6		0.0				

Intersection Summary		
HCM 7th Control Delay, s/veh	37.5	
HCM 7th LOS	D	

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	20	11	1	54	9	35	93	2	19	54	46
Future Vol, veh/h	27	20	11	1	54	9	35	93	2	19	54	46
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	31	23	13	1	63	10	41	108	2	22	63	53
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.1	8.1	8.5	8.1
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	27%	47%	2%	16%
Vol Thru, %	72%	34%	84%	45%
Vol Right, %	2%	19%	14%	39%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	58	64	119
LT Vol	35	27	1	19
Through Vol	93	20	54	54
RT Vol	2	11	9	46
Lane Flow Rate	151	67	74	138
Geometry Grp	1	1	1	1
Degree of Util (X)	0.188	0.088	0.095	0.164
Departure Headway (Hd)	4.479	4.671	4.603	4.256
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	803	767	779	844
Service Time	2.5	2.696	2.628	2.276
HCM Lane V/C Ratio	0.188	0.087	0.095	0.164
HCM Control Delay, s/veh	8.5	8.1	8.1	8.1
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.3	0.3	0.6

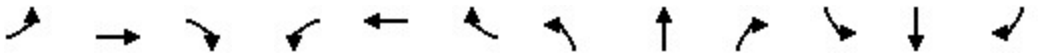
Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1471	18	68	860	20	175
Future Vol, veh/h	1471	18	68	860	20	175
Conflicting Peds, #/hr	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	100
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	9	9	8	8
Mvmt Flow	1599	20	74	935	22	190

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1618	0	2224	810
Stage 1	-	-	-	-	1609	-
Stage 2	-	-	-	-	615	-
Critical Hdwy	-	-	4.28	-	6.96	7.06
Critical Hdwy Stg 1	-	-	-	-	5.96	-
Critical Hdwy Stg 2	-	-	-	-	5.96	-
Follow-up Hdwy	-	-	2.29	-	3.58	3.38
Pot Cap-1 Maneuver	-	-	368	-	34	311
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	485	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	368	-	27	310
Mov Cap-2 Maneuver	-	-	-	-	104	-
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	388	-

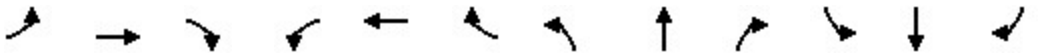
Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.26	34.96
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	104	310	-	-	368	-
HCM Lane V/C Ratio	0.21	0.613	-	-	0.201	-
HCM Control Delay (s/veh)	48.8	33.4	-	-	17.2	-
HCM Lane LOS	E	D	-	-	C	-
HCM 95th %tile Q(veh)	0.7	3.8	-	-	0.7	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	159	1270	115	98	1605	77	75	81	69	79	200	145
Future Volume (vph)	159	1270	115	98	1605	77	75	81	69	79	200	145
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	1.00	0.98		1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00	0.99	1.00		0.99	1.00	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1630	3219		1646	3292	1473	1660	1608		1636	1733	1445
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.34	1.00		0.49	1.00	1.00
Satd. Flow (perm)	1630	3219		1646	3292	1473	609	1608		858	1733	1445
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	167	1337	121	103	1689	81	79	85	73	83	211	153
RTOR Reduction (vph)	0	7	0	0	0	34	0	35	0	0	0	130
Lane Group Flow (vph)	167	1451	0	103	1689	47	79	123	0	83	211	23
Confl. Peds. (#/hr)							3		11	11		11
Confl. Bikes (#/hr)									5			
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	10.9	54.5		7.7	51.3	51.3	12.8	12.8		12.8	12.8	12.8
Effective Green, g (s)	11.9	55.5		8.7	52.3	52.3	13.8	13.8		13.8	13.8	13.8
Actuated g/C Ratio	0.13	0.62		0.10	0.58	0.58	0.15	0.15		0.15	0.15	0.15
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5	2.5	2.5		2.5	2.5	2.5
Lane Grp Cap (vph)	215	1985		159	1913	855	93	246		131	265	221
v/s Ratio Prot	c0.10	c0.45		0.06	c0.51			0.08			0.12	
v/s Ratio Perm						0.03	c0.13			0.10		0.02
v/c Ratio	0.77	0.73		0.64	0.88	0.05	0.84	0.50		0.63	0.79	0.10
Uniform Delay, d1	37.7	12.0		39.1	16.2	8.1	37.0	34.9		35.7	36.7	32.7
Progression Factor	1.00	1.00		0.74	1.13	2.72	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.4	2.4		4.3	3.6	0.0	47.1	1.1		8.4	14.7	0.1
Delay (s)	53.2	14.4		33.3	21.9	22.3	84.2	36.1		44.1	51.4	32.9
Level of Service	D	B		C	C	C	F	D		D	D	C
Approach Delay (s/veh)		18.4			22.6			52.1			43.7	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	1270	115	98	1605	77	75	81	69	79	200	145
Future Volume (veh/h)	159	1270	115	98	1605	77	75	81	69	79	200	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.96	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1723	1736	1736	1736	1750	1750	1750	1736	1736	1736
Adj Flow Rate, veh/h	167	1337	121	103	1689	0	79	85	73	83	211	153
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	0	0	0	1	1	1
Cap, veh/h	213	1842	166	154	1880		133	142	122	171	289	240
Arrive On Green	0.13	0.61	0.60	0.12	0.76	0.00	0.17	0.17	0.16	0.17	0.17	0.17
Sat Flow, veh/h	1641	3036	274	1654	3299	1471	1027	851	731	1226	1736	1442
Grp Volume(v), veh/h	167	718	740	103	1689	0	79	0	158	83	211	153
Grp Sat Flow(s),veh/h/ln	1641	1637	1673	1654	1650	1471	1027	0	1583	1226	1736	1442
Q Serve(g_s), s	8.9	27.7	28.1	5.4	35.0	0.0	4.6	0.0	8.3	6.1	10.4	8.9
Cycle Q Clear(g_c), s	8.9	27.7	28.1	5.4	35.0	0.0	15.0	0.0	8.3	14.4	10.4	8.9
Prop In Lane	1.00		0.16	1.00		1.00	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	213	993	1015	154	1880		133	0	264	171	289	240
V/C Ratio(X)	0.78	0.72	0.73	0.67	0.90		0.59	0.00	0.60	0.49	0.73	0.64
Avail Cap(c_a), veh/h	219	993	1015	202	1880		133	0	264	171	289	240
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.46	0.46	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	12.4	12.5	38.1	8.9	0.0	43.5	0.0	34.9	41.4	35.6	35.0
Incr Delay (d2), s/veh	15.7	4.6	4.6	1.9	3.6	0.0	6.2	0.0	3.3	1.6	8.5	5.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	9.6	9.9	2.1	5.9	0.0	2.0	0.0	3.4	1.9	5.0	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	53.6	17.0	17.1	40.0	12.5	0.0	49.6	0.0	38.2	43.0	44.1	39.9
LnGrp LOS	D	B	B	D	B		D		D	D	D	D
Approach Vol, veh/h		1625			1792			237			447	
Approach Delay, s/veh		20.8			14.1			42.0			42.5	
Approach LOS		C			B			D			D	

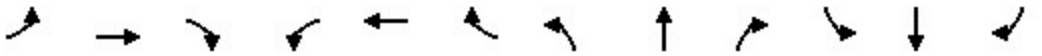
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.4	58.6		19.0	15.7	55.3		19.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	10.0	51.0		14.0	11.0	50.0		14.0				
Max Q Clear Time (g_c+I1), s	7.4	30.1		16.4	10.9	37.0		17.0				
Green Ext Time (p_c), s	0.1	15.0		0.0	0.0	11.3		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	21.5
HCM 7th LOS	C

Notes

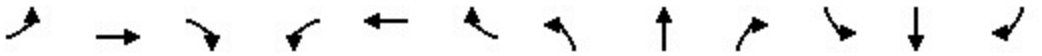
User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	1331	79	133	1829	98	63	20	94	55	23	61
Future Volume (vph)	61	1331	79	133	1829	98	63	20	94	55	23	61
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00		1.00	1.00		1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	1.00	0.97		1.00	0.98		1.00	0.98
Flpb, ped/bikes	1.00	1.00		1.00	1.00	1.00		0.99	1.00		0.99	1.00
Frt	1.00	0.99		1.00	1.00	0.85		1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.96	1.00		0.96	1.00
Satd. Flow (prot)	1630	3225		1646	3292	1440		1652	1436		1622	1405
Flt Permitted	0.06	1.00		0.11	1.00	1.00		0.72	1.00		0.72	1.00
Satd. Flow (perm)	114	3225		203	3292	1440		1242	1436		1219	1405
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	64	1401	83	140	1925	103	66	21	99	58	24	64
RTOR Reduction (vph)	0	5	0	0	0	33	0	0	89	0	0	58
Lane Group Flow (vph)	64	1479	0	140	1925	70	0	87	10	0	82	6
Confl. Peds. (#/hr)			7	7			1		4	4		4
Confl. Bikes (#/hr)			8			4						1
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	2%	2%	2%	4%	4%	4%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	65.4	59.0		68.6	60.6	60.6		8.0	8.0		8.0	8.0
Effective Green, g (s)	67.4	60.0		70.6	61.6	61.6		9.0	9.0		9.0	9.0
Actuated g/C Ratio	0.75	0.67		0.78	0.68	0.68		0.10	0.10		0.10	0.10
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0		5.0	5.0		5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5	2.5		2.5	2.5		2.5	2.5
Lane Grp Cap (vph)	210	2150		303	2253	985		124	143		121	140
v/s Ratio Prot	0.03	0.46		c0.05	c0.58							
v/s Ratio Perm	0.20			0.32		0.05		c0.07	0.01		0.07	0.00
v/c Ratio	0.30	0.68		0.46	0.85	0.07		0.70	0.06		0.67	0.04
Uniform Delay, d1	10.2	9.2		6.6	10.7	4.7		39.2	36.7		39.0	36.6
Progression Factor	1.72	0.89		1.00	1.00	1.00		1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	1.3		0.8	4.3	0.1		15.3	0.1		12.8	0.0
Delay (s)	18.1	9.5		7.4	15.1	4.8		54.5	36.8		51.9	36.7
Level of Service	B	A		A	B	A		D	D		D	D
Approach Delay (s/veh)		9.9			14.1			45.1			45.2	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay (s/veh)	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	1331	79	133	1829	98	63	20	94	55	23	61
Future Volume (veh/h)	61	1331	79	133	1829	98	63	20	94	55	23	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	0.99		0.99	0.99		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1723	1723	1723	1736	1736	1736	1723	1723	1723	1695	1695	1695
Adj Flow Rate, veh/h	64	1401	83	140	1925	103	66	21	99	58	24	64
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	1	1	1	2	2	2	4	4	4
Cap, veh/h	265	2098	124	481	2259	980	70	6	144	68	11	140
Arrive On Green	0.16	1.00	1.00	0.10	0.68	0.68	0.09	0.10	0.10	0.09	0.10	0.10
Sat Flow, veh/h	1641	3134	185	1654	3299	1432	0	57	1442	0	112	1400
Grp Volume(v), veh/h	64	729	755	140	1925	103	87	0	99	82	0	64
Grp Sat Flow(s),veh/h/ln	1641	1637	1683	1654	1650	1432	57	0	1442	112	0	1400
Q Serve(g_s), s	0.9	0.0	0.0	1.9	39.8	2.2	0.0	0.0	6.0	0.0	0.0	3.9
Cycle Q Clear(g_c), s	0.9	0.0	0.0	1.9	39.8	2.2	8.0	0.0	6.0	8.0	0.0	3.9
Prop In Lane	1.00		0.11	1.00		1.00	0.76		1.00	0.71		1.00
Lane Grp Cap(c), veh/h	265	1095	1126	481	2259	980	75	0	144	78	0	140
V/C Ratio(X)	0.24	0.67	0.67	0.29	0.85	0.11	1.15	0.00	0.69	1.05	0.00	0.46
Avail Cap(c_a), veh/h	295	1095	1126	485	2259	980	75	0	144	78	0	140
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.0	0.0	0.0	2.7	10.7	4.8	43.9	0.0	39.1	43.4	0.0	38.2
Incr Delay (d2), s/veh	0.2	2.0	2.0	0.2	4.3	0.2	151.4	0.0	11.9	115.4	0.0	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.6	0.6	0.4	11.8	0.6	4.9	0.0	2.6	4.3	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	13.2	2.0	2.0	2.9	15.1	5.0	195.3	0.0	51.1	158.8	0.0	39.9
LnGrp LOS	B	A	A	A	B	A	F		D	F		D
Approach Vol, veh/h		1548			2168			186			146	
Approach Delay, s/veh		2.5			13.8			118.5			106.7	
Approach LOS		A			B			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.8	64.2		13.0	11.4	65.6		13.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	8.0	59.0		8.0	8.0	59.0		8.0				
Max Q Clear Time (g_c+I1), s	3.9	2.0		10.0	2.9	41.8		10.0				
Green Ext Time (p_c), s	0.1	29.2		0.0	0.1	15.6		0.0				

Intersection Summary	
HCM 7th Control Delay, s/veh	17.6
HCM 7th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	58	42	1	37	16	21	74	1	14	117	33
Future Vol, veh/h	35	58	42	1	37	16	21	74	1	14	117	33
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	61	44	1	39	17	22	78	1	15	123	35
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	8.5	7.9	8.3	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	26%	2%	9%
Vol Thru, %	77%	43%	69%	71%
Vol Right, %	1%	31%	30%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	135	54	164
LT Vol	21	35	1	14
Through Vol	74	58	37	117
RT Vol	1	42	16	33
Lane Flow Rate	101	142	57	173
Geometry Grp	1	1	1	1
Degree of Util (X)	0.13	0.177	0.072	0.211
Departure Headway (Hd)	4.626	4.495	4.556	4.409
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	775	799	786	815
Service Time	2.652	2.52	2.587	2.433
HCM Lane V/C Ratio	0.13	0.178	0.073	0.212
HCM Control Delay, s/veh	8.3	8.5	7.9	8.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	0.6	0.2	0.8

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1418	12	170	1949	12	91
Future Vol, veh/h	1418	12	170	1949	12	91
Conflicting Peds, #/hr	0	1	1	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	250	-	-	100
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	1	1	10	10
Mvmt Flow	1493	13	179	2052	13	96

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1506	0	2884	754
Stage 1	-	-	-	-	1500	-
Stage 2	-	-	-	-	1384	-
Critical Hdwy	-	-	4.12	-	7	7.1
Critical Hdwy Stg 1	-	-	-	-	6	-
Critical Hdwy Stg 2	-	-	-	-	6	-
Follow-up Hdwy	-	-	2.21	-	3.6	3.4
Pot Cap-1 Maneuver	-	-	445	-	~ 11	335
Stage 1	-	-	-	-	159	-
Stage 2	-	-	-	-	184	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	445	-	~ 7	334
Mov Cap-2 Maneuver	-	-	-	-	62	-
Stage 1	-	-	-	-	158	-
Stage 2	-	-	-	-	110	-

Approach	EB	WB	NB
HCM Control Delay, s/v	0	1.48	26.67
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	62	334	-	-	445	-
HCM Lane V/C Ratio	0.203	0.286	-	-	0.402	-
HCM Control Delay (s/veh)	77.1	20	-	-	18.4	-
HCM Lane LOS	F	C	-	-	C	-
HCM 95th %tile Q(veh)	0.7	1.2	-	-	1.9	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection: 1: S 20th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	T	L	TR	L	T	R
Maximum Queue (ft)	252	463	432	94	263	272	212	335	93	101	78
Average Queue (ft)	73	226	194	34	119	129	101	147	28	34	38
95th Queue (ft)	178	400	360	73	217	229	191	274	69	81	66
Link Distance (ft)		612	612		1744	1744		940		800	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	225			300			130		200		160
Storage Blk Time (%)	2	8			0	1	5	13			
Queuing Penalty (veh)	10	7			0	1	13	19			

Intersection: 2: S 26th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R
Maximum Queue (ft)	129	458	472	132	182	194	32	301	150	209	142
Average Queue (ft)	22	194	208	57	76	83	4	101	111	84	23
95th Queue (ft)	110	399	420	110	154	168	19	226	167	157	73
Link Distance (ft)		1744	1744		1805	1805		1550		707	
Upstream Blk Time (%)											
Queuing Penalty (veh)											
Storage Bay Dist (ft)	360			300			250		50		100
Storage Blk Time (%)		2						14	42	8	
Queuing Penalty (veh)		1						39	30	3	

Intersection: 3: S 26th Avenue & S Dogwood Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	57	31	85	85
Average Queue (ft)	26	6	50	48
95th Queue (ft)	49	25	74	72
Link Distance (ft)	698	790	493	1550
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: SW 345th Avenue & Tualatin Valley Hwy/Baseline Street

Movement	EB	EB	WB	WB	NB
Directions Served	T	TR	L	T	LR
Maximum Queue (ft)	14	27	47	13	71
Average Queue (ft)	1	2	7	0	19
95th Queue (ft)	14	17	32	4	53
Link Distance (ft)	1805	1805		1017	1507
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			250		
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 122

Intersection: 1: S 20th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	TR	L	T	R
Maximum Queue (ft)	325	515	526	399	693	687	350	147	213	194	316	254
Average Queue (ft)	165	277	262	118	352	365	55	65	91	67	145	88
95th Queue (ft)	310	471	448	274	632	638	266	125	177	147	259	174
Link Distance (ft)		612	612		1744	1744			940		800	
Upstream Blk Time (%)		0	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	225			300			250	130		200		160
Storage Blk Time (%)	4	13		0	12	18		1	5	0	10	1
Queuing Penalty (veh)	26	19		0	12	13		2	4	0	22	1

Intersection: 2: S 26th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R	
Maximum Queue (ft)	90	496	498	240	499	519	350	166	141	130	83	
Average Queue (ft)	33	203	214	96	175	192	29	63	66	51	30	
95th Queue (ft)	75	395	408	169	387	400	159	127	118	101	65	
Link Distance (ft)		1744	1744		1805	1805		1550		707		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			300			250		50		100	
Storage Blk Time (%)		1			2	5		25	18	2	0	
Queuing Penalty (veh)		1			6	5		36	13	1	0	

Intersection: 3: S 26th Avenue & S Dogwood Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	75	31	75	105
Average Queue (ft)	33	10	43	57
95th Queue (ft)	56	33	65	86
Link Distance (ft)	698	790	493	1550
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: SW 345th Avenue & Tualatin Valley Hwy/Baseline Street

Movement	WB	WB	WB	NB
Directions Served	L	T	T	LR
Maximum Queue (ft)	27	32	36	97
Average Queue (ft)	2	1	1	23
95th Queue (ft)	12	23	26	72
Link Distance (ft)		1017	1017	1507
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	250			
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 161

Intersection: 1: S 20th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	TR	L	T	R
Maximum Queue (ft)	195	429	402	82	271	296	22	228	321	107	101	105
Average Queue (ft)	69	237	205	34	127	135	1	95	153	38	38	41
95th Queue (ft)	156	382	362	70	230	242	11	185	267	85	82	77
Link Distance (ft)		612	612		1744	1744			940		800	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	225			300			250	130		200		160
Storage Blk Time (%)		9			0	1		5	17			0
Queuing Penalty (veh)		7			0	0		13	23			0

Intersection: 2: S 26th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R	
Maximum Queue (ft)	213	596	623	119	199	218	35	199	148	204	117	
Average Queue (ft)	20	208	222	41	75	84	4	73	72	84	22	
95th Queue (ft)	109	472	487	87	156	168	19	155	129	165	77	
Link Distance (ft)		1744	1744		1805	1805		1550		707		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			300			250		50		100	
Storage Blk Time (%)		3				0		21	24	8		
Queuing Penalty (veh)		1				0		34	18	3		

Intersection: 3: S 26th Avenue & S Dogwood Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	57	30	70	80
Average Queue (ft)	25	2	38	42
95th Queue (ft)	49	16	59	66
Link Distance (ft)	698	790	493	1550
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: SW 345th Avenue & Tualatin Valley Hwy/Baseline Street

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (ft)	15	25	86	12	156	159
Average Queue (ft)	1	1	35	0	38	76
95th Queue (ft)	11	18	76	6	118	143
Link Distance (ft)	1805	1805		1005	1507	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			100
Storage Blk Time (%)					4	8
Queuing Penalty (veh)					5	2

Network Summary

Network wide Queuing Penalty: 106

Intersection: 1: S 20th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	TR	L	T	R
Maximum Queue (ft)	324	518	496	399	863	888	350	214	299	211	376	242
Average Queue (ft)	174	280	250	140	399	416	73	75	107	61	152	90
95th Queue (ft)	306	457	428	332	735	749	306	153	212	138	281	187
Link Distance (ft)		612	612		1744	1744			940		800	
Upstream Blk Time (%)		0	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	225			300			250	130		200		160
Storage Blk Time (%)	7	13		0	16	22		3	9	0	12	2
Queuing Penalty (veh)	42	20		0	16	16		4	6	0	26	5

Intersection: 2: S 26th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R	
Maximum Queue (ft)	161	553	571	257	424	457	284	161	134	134	108	
Average Queue (ft)	36	176	187	72	174	191	34	64	50	50	36	
95th Queue (ft)	103	402	420	180	363	386	176	123	99	109	83	
Link Distance (ft)		1744	1744		1805	1805		1550		707		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			300			250		50		100	
Storage Blk Time (%)		1			2	4		26	10	2	0	
Queuing Penalty (veh)		1			3	4		25	7	1	0	

Intersection: 3: S 26th Avenue & S Dogwood Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	65	36	56	84
Average Queue (ft)	32	14	34	47
95th Queue (ft)	53	39	53	72
Link Distance (ft)	698	790	493	1550
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: SW 345th Avenue & Tualatin Valley Hwy/Baseline Street

Movement	WB	WB	WB	NB	NB
Directions Served	L	T	T	L	R
Maximum Queue (ft)	135	11	43	90	83
Average Queue (ft)	57	1	3	32	39
95th Queue (ft)	108	11	42	88	77
Link Distance (ft)		1005	1005	1507	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	250				100
Storage Blk Time (%)				5	0
Queuing Penalty (veh)				3	0

Network Summary

Network wide Queuing Penalty: 180

Intersection: 1: S 20th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	TR	L	T	R
Maximum Queue (ft)	324	453	444	106	252	264	40	229	340	86	101	106
Average Queue (ft)	72	250	214	35	118	130	1	109	147	38	39	38
95th Queue (ft)	181	405	385	80	210	226	18	203	264	76	84	74
Link Distance (ft)		612	612		1744	1744			940		800	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	225			300			250	130		200		160
Storage Blk Time (%)		10			0	1		7	13			
Queuing Penalty (veh)		8			0	0		18	19			

Intersection: 2: S 26th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R	
Maximum Queue (ft)	125	480	506	149	212	206	28	373	150	212	82	
Average Queue (ft)	16	184	191	58	80	83	4	129	116	88	17	
95th Queue (ft)	81	378	386	115	164	168	19	292	175	163	51	
Link Distance (ft)		1744	1744		1805	1805		1550		707		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			300			250		50		100	
Storage Blk Time (%)		2				0		18	47	9		
Queuing Penalty (veh)		1				0		51	34	3		

Intersection: 3: S 26th Avenue & S Dogwood Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	51	31	83	83
Average Queue (ft)	23	5	52	44
95th Queue (ft)	48	23	78	72
Link Distance (ft)	698	790	493	1550
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: SW 345th Avenue & Tualatin Valley Hwy/Baseline Street

Movement	EB	EB	WB	NB	NB
Directions Served	T	TR	L	L	R
Maximum Queue (ft)	43	72	44	50	64
Average Queue (ft)	2	3	7	11	11
95th Queue (ft)	20	26	30	38	42
Link Distance (ft)	1805	1805		1507	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			250		100
Storage Blk Time (%)					
Queuing Penalty (veh)					

Network Summary

Network wide Queuing Penalty: 135

Intersection: 1: S 20th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	TR	L	T	R
Maximum Queue (ft)	324	597	552	400	748	766	350	151	211	200	344	235
Average Queue (ft)	155	297	276	127	359	374	65	65	96	65	152	90
95th Queue (ft)	297	501	473	298	630	643	290	127	182	136	265	174
Link Distance (ft)		612	612		1744	1744			940		800	
Upstream Blk Time (%)		1	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	225			300			250	130		200		160
Storage Blk Time (%)	2	14		0	13	21		2	7		13	1
Queuing Penalty (veh)	12	23		0	13	15		3	5		28	2

Intersection: 2: S 26th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R	
Maximum Queue (ft)	315	600	609	322	505	503	230	181	146	144	90	
Average Queue (ft)	50	200	217	118	187	201	30	73	70	58	33	
95th Queue (ft)	158	414	429	234	386	400	159	145	130	116	71	
Link Distance (ft)		1744	1744		1805	1805		1550		707		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			300			250		50		100	
Storage Blk Time (%)		2			2	5		28	19	4	0	
Queuing Penalty (veh)		1			6	5		42	14	2	0	

Intersection: 3: S 26th Avenue & S Dogwood Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	60	35	68	114
Average Queue (ft)	32	11	41	60
95th Queue (ft)	54	35	62	93
Link Distance (ft)	698	790	493	1550
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: SW 345th Avenue & Tualatin Valley Hwy/Baseline Street

Movement	WB	WB	WB	NB	NB
Directions Served	L	T	T	L	R
Maximum Queue (ft)	33	30	34	72	57
Average Queue (ft)	4	1	1	21	7
95th Queue (ft)	21	22	25	68	33
Link Distance (ft)		1005	1005	1507	
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)	250				100
Storage Blk Time (%)				3	
Queuing Penalty (veh)				0	

Network Summary

Network wide Queuing Penalty: 172

Intersection: 1: S 20th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	TR	L	T	R
Maximum Queue (ft)	204	422	400	106	240	257	22	212	303	76	97	85
Average Queue (ft)	61	223	194	32	118	130	0	103	146	32	39	38
95th Queue (ft)	159	367	336	75	212	221	8	174	256	66	85	70
Link Distance (ft)		612	612		1744	1744			940		800	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	225			300			250	130		200		160
Storage Blk Time (%)		8				0		4	14			
Queuing Penalty (veh)		6				0		12	20			

Intersection: 2: S 26th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R	
Maximum Queue (ft)	125	612	590	188	203	220	34	416	150	209	75	
Average Queue (ft)	16	223	235	73	75	83	6	152	121	94	18	
95th Queue (ft)	81	461	472	150	155	173	23	321	179	187	53	
Link Distance (ft)		1744	1744		1805	1805		1550		707		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			300			250		50		100	
Storage Blk Time (%)		3				0		27	49	12		
Queuing Penalty (veh)		1				0		85	42	4		

Intersection: 3: S 26th Avenue & S Dogwood Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	59	57	92	72
Average Queue (ft)	29	29	50	47
95th Queue (ft)	49	54	79	71
Link Distance (ft)	698	790	493	1550
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: SW 345th Avenue & Tualatin Valley Hwy/Baseline Street

Movement	EB	EB	WB	NB
Directions Served	T	TR	L	LR
Maximum Queue (ft)	6	25	48	74
Average Queue (ft)	0	1	5	21
95th Queue (ft)	4	12	25	63
Link Distance (ft)	1805	1805		1507
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			250	
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 170

Intersection: 1: S 20th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	TR	L	T	R
Maximum Queue (ft)	325	560	553	399	819	809	350	185	250	177	337	219
Average Queue (ft)	153	270	253	124	338	351	58	79	109	66	160	85
95th Queue (ft)	288	484	461	292	636	638	272	152	206	135	281	185
Link Distance (ft)		612	612		1744	1744			940		800	
Upstream Blk Time (%)		1	1									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	225			300			250	130		200		160
Storage Blk Time (%)	4	13			12	18		6	8	0	15	0
Queuing Penalty (veh)	22	20			11	14		8	6	0	32	1

Intersection: 2: S 26th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R	
Maximum Queue (ft)	233	559	558	317	545	533	226	194	146	138	92	
Average Queue (ft)	47	225	241	130	187	202	24	72	71	55	30	
95th Queue (ft)	156	445	464	244	402	413	128	149	129	110	69	
Link Distance (ft)		1744	1744		1805	1805		1550		707		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			300			250		50		100	
Storage Blk Time (%)		2		0	3	5		26	20	3	0	
Queuing Penalty (veh)		1		1	7	5		44	16	2	0	

Intersection: 3: S 26th Avenue & S Dogwood Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	78	49	65	125
Average Queue (ft)	40	27	39	61
95th Queue (ft)	63	48	60	95
Link Distance (ft)	698	790	493	1550
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: SW 345th Avenue & Tualatin Valley Hwy/Baseline Street

Movement	WB	WB	WB	NB
Directions Served	L	T	T	LR
Maximum Queue (ft)	28	52	48	98
Average Queue (ft)	3	2	2	30
95th Queue (ft)	17	37	34	93
Link Distance (ft)		1017	1017	1507
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)	250			
Storage Blk Time (%)		0		
Queuing Penalty (veh)		0		

Network Summary

Network wide Queuing Penalty: 192

Intersection: 1: S 20th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	TR	L	T	R
Maximum Queue (ft)	294	466	427	108	267	287	19	230	426	97	122	100
Average Queue (ft)	86	256	225	34	123	137	1	112	162	35	44	40
95th Queue (ft)	224	419	382	79	225	240	13	205	304	79	97	74
Link Distance (ft)		612	612		1744	1744			940		800	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	225			300			250	130		200		160
Storage Blk Time (%)		12			0	1		8	16		0	
Queuing Penalty (veh)		9			0	0		20	25		0	

Intersection: 2: S 26th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R	
Maximum Queue (ft)	120	614	598	170	198	211	38	595	150	260	126	
Average Queue (ft)	15	238	253	72	81	91	4	190	123	99	22	
95th Queue (ft)	80	479	491	137	163	181	21	442	177	196	74	
Link Distance (ft)		1744	1744		1805	1805		1550		707		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			300			250		50		100	
Storage Blk Time (%)		4				0		28	53	13	0	
Queuing Penalty (veh)		1				0		91	48	5	0	

Intersection: 3: S 26th Avenue & S Dogwood Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	59	62	92	95
Average Queue (ft)	29	32	51	49
95th Queue (ft)	52	55	80	77
Link Distance (ft)	698	790	493	1550
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: SW 345th Avenue & Tualatin Valley Hwy/Baseline Street

Movement	EB	WB	WB	NB
Directions Served	T	L	T	LR
Maximum Queue (ft)	6	38	6	61
Average Queue (ft)	0	9	0	15
95th Queue (ft)	4	31	4	45
Link Distance (ft)	1805		1017	1507
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		250		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 200

Intersection: 1: S 20th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	TR	L	T	R
Maximum Queue (ft)	324	530	521	400	713	702	350	224	280	271	378	260
Average Queue (ft)	163	285	258	139	372	386	77	90	106	74	161	93
95th Queue (ft)	302	473	449	331	639	656	316	173	207	171	291	198
Link Distance (ft)		612	612		1744	1744			940		800	
Upstream Blk Time (%)		0	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	225			300			250	130		200		160
Storage Blk Time (%)	4	12			15	22		11	7	0	14	2
Queuing Penalty (veh)	26	20			14	17		16	6	0	32	5

Intersection: 2: S 26th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R	
Maximum Queue (ft)	180	573	574	379	444	457	292	251	150	165	113	
Average Queue (ft)	42	266	282	152	196	211	32	98	87	61	34	
95th Queue (ft)	115	487	504	281	397	416	161	208	149	129	79	
Link Distance (ft)		1744	1744		1805	1805		1550		707		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			300			250		50		100	
Storage Blk Time (%)		4		0	3	5		33	27	4	1	
Queuing Penalty (veh)		2		1	8	5		60	23	3	1	

Intersection: 3: S 26th Avenue & S Dogwood Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	78	52	92	124
Average Queue (ft)	41	28	45	66
95th Queue (ft)	64	50	71	102
Link Distance (ft)	698	790	493	1550
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: SW 345th Avenue & Tualatin Valley Hwy/Baseline Street

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	37	120
Average Queue (ft)	4	36
95th Queue (ft)	22	121
Link Distance (ft)		1507
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	250	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 238

Intersection: 1: S 20th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	TR	L	T	R
Maximum Queue (ft)	216	412	381	79	250	266	22	210	323	90	99	96
Average Queue (ft)	61	226	196	30	123	135	1	91	135	33	34	38
95th Queue (ft)	148	376	338	69	223	237	11	178	250	76	80	78
Link Distance (ft)		612	612		1744	1744			940		800	
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	225			300			250	130		200		160
Storage Blk Time (%)	0	8			0	1		3	12			0
Queuing Penalty (veh)	0	6			0	0		7	17			0

Intersection: 2: S 26th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R	
Maximum Queue (ft)	136	469	479	105	208	230	44	238	148	193	78	
Average Queue (ft)	18	181	198	43	82	95	7	82	77	86	16	
95th Queue (ft)	83	372	389	89	174	194	27	174	142	164	50	
Link Distance (ft)		1744	1744		1805	1805		1550		707		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			300			250		50		100	
Storage Blk Time (%)		1				0		27	26	8		
Queuing Penalty (veh)		0				0		43	24	3		

Intersection: 3: S 26th Avenue & S Dogwood Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	58	58	66	80
Average Queue (ft)	28	31	38	41
95th Queue (ft)	52	52	58	69
Link Distance (ft)	698	790	493	1550
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: SW 345th Avenue & Tualatin Valley Hwy/Baseline Street

Movement	EB	EB	WB	WB	NB	NB
Directions Served	T	TR	L	T	L	R
Maximum Queue (ft)	30	48	148	18	219	187
Average Queue (ft)	2	2	49	1	55	101
95th Queue (ft)	20	18	111	9	171	176
Link Distance (ft)	1805	1805		1005	1507	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			250			100
Storage Blk Time (%)					3	17
Queuing Penalty (veh)					4	3

Network Summary

Network wide Queuing Penalty: 108

Intersection: 1: S 20th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	T	R	L	TR	L	T	R
Maximum Queue (ft)	324	543	550	400	673	681	350	174	220	248	314	255
Average Queue (ft)	159	290	273	117	357	374	53	73	108	72	155	83
95th Queue (ft)	293	479	464	278	645	673	260	138	193	162	264	171
Link Distance (ft)		612	612		1744	1744			940		800	
Upstream Blk Time (%)		0	0									
Queuing Penalty (veh)		0	0									
Storage Bay Dist (ft)	225			300			250	130		200		160
Storage Blk Time (%)	4	14			14	22		3	9	0	14	1
Queuing Penalty (veh)	28	22			14	17		5	7	0	32	3

Intersection: 2: S 26th Avenue & Tualatin Valley Hwy

Movement	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB	
Directions Served	L	T	TR	L	T	T	R	LT	R	LT	R	
Maximum Queue (ft)	304	505	509	341	449	503	227	191	142	127	97	
Average Queue (ft)	44	190	208	74	185	201	25	72	55	56	31	
95th Queue (ft)	150	406	429	181	362	386	137	141	118	111	72	
Link Distance (ft)		1744	1744		1805	1805		1550		707		
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	360			300			250		50		100	
Storage Blk Time (%)		2			2	5		31	10	3	0	
Queuing Penalty (veh)		1			3	5		29	8	2	0	

Intersection: 3: S 26th Avenue & S Dogwood Street

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	76	56	60	71
Average Queue (ft)	39	28	35	44
95th Queue (ft)	60	51	51	66
Link Distance (ft)	698	790	493	1550
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 4: SW 345th Avenue & Tualatin Valley Hwy/Baseline Street

Movement	EB	WB	WB	WB	NB	NB
Directions Served	TR	L	T	T	L	R
Maximum Queue (ft)	8	199	11	29	196	146
Average Queue (ft)	0	86	0	1	69	68
95th Queue (ft)	4	158	8	21	210	152
Link Distance (ft)	1805		1005	1005	1507	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)		250				100
Storage Blk Time (%)					29	4
Queuing Penalty (veh)					26	0

Network Summary

Network wide Queuing Penalty: 201

Exhibit G: Preliminary Stormwater Report

Laurel Crown Subdivision
Cornelius, Oregon

Preliminary Stormwater Report

Date:	December, 2025
Client:	The Holt Group, Inc 1301 SE Tech Center Drive, Suite 150 Vancouver, WA, 98683
Engineering Contact:	Paul Sellke, PE, GE (503) 563-6151 | pauls@aks-eng.com
Prepared By:	Tanner Bernhardt, EI
Engineering Firm:	AKS Engineering & Forestry, LLC 12965 SW Herman Road, Suite 100 Tualatin, OR 97062
AKS Job Number:	4636-05

AKS ENGINEERING & FORESTRY

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Appendix B: HydroCAD Reports for Post-Developed Conditions Storm Events
Appendix C: Stormwater Quality Calculations
Appendix D: NRCS Soil Resource Report
Appendix E: Runoff Curve Numbers from TR-55

Preliminary Stormwater Report
LAUREL CROWN SUBDIVISION
CORNELIUS, OREGON

1.0 Purpose of Report

The purpose of this report is to analyze the effects the proposed development will have on the existing and proposed stormwater conveyance system; document the criteria, methodology, and informational sources used to design the proposed stormwater system; and present the results of the preliminary hydraulic analysis.

2.0 Project Location/Description

The subject site is located south of E Baseline St and west of SW 345th Ave in the City of Cornelius and consists of a 30.53-acre parcel, Parcel 2 of the approved land partition (LP-01-25) of Tax Lot 100 (Washington County Assessor's Map 1S 303A). This report addresses Parcel 2's development as the Laurel Crown Subdivision.

The Laurel Crown Subdivision will include the creation of a 230-lot residential subdivision for single-family attached and detached homes. Site improvements will include development of internal streets, underground utilities, and residential homes. A stormwater facility will be constructed within Tract C to manage on-site stormwater runoff and meet quality and quantity requirements.

3.0 Regulatory Design Criteria

3.1. Stormwater Quantity

Per the 2019 Clean Water Services (CWS) *Design & Construction Standards* (R&O 19-5, as Amended by R&O 19-22) Section 4.02, Water Quantity Control Requirements for Conveyance Capacity, on-site detention for conveyance capacity of the 25-year storm event is required when any of the following conditions exist:

1. *There is an identified downstream deficiency, and the District or City determines that detention rather than conveyance system enlargement is the more effective solution.*
2. *There is an identified regional detention site within the boundary of the development.*
3. *Water quantity facilities are required by District-adopted watershed management plans or adopted subbasin master plans.*

The proposed project does not meet any of the conditions listed above; therefore, the project is not required to meet stormwater quantity requirements for conveyance capacity. However, the stormwater facility has been designed to meet CWS hydromodification requirements and results in the detention of flows from the post-developed site's 25-year storm event to the level of flows from the pre-developed site's 25-year storm event.

3.2. Stormwater Hydromodification

Per CWS *Design & Construction Standards* Section 4.03, Hydromodification Approach Requirements, stormwater hydromodification is required unless the project meets any of the following criteria:

1. *The project results in the addition and/or modification of less than 12,000 sf of impervious surface.*
2. *The project is located in an area with a District approved subbasin strategy with an identified regional stormwater management approach for hydromodification.*

Per listed criteria in CWS *Design & Construction Standards* Table 4-2, Hydromodification Approach Project Category Table, the project is identified as Category 3. Therefore, the project will meet CWS hydromodification requirements by providing peak-flow matching detention within a low impact development approaches (LIDA) facility, using the criteria established within Section 4.08.6 of the CWS *Design & Construction Standards*.

3.3. Stormwater Quality

Stormwater quality management for this project will be provided by an extended dry basin, located within Tract C. The stormwater facility has been designed per Section 4.04 of the CWS *Design & Construction Standards*.

4.0 Design Methodology

The Santa Barbara Urban Hydrograph (SBUH) method was used to analyze stormwater runoff from the site. This method uses the Soil Conservation Service (SCS) Type 1A 24-hour design storm. HydroCAD 10.0 computer software aided in the analysis. Representative runoff curve numbers (CN) were obtained from the 1986 Natural Resources Conservation Service (NCRS) Technical Release 55 (TR-55), *Urban Hydrology for Small Watersheds,* and are included in Appendix E.

5.0 Design Parameters

5.1. Design Storms

Per CWS *Design & Construction Standards* Section 4.08.2, Storm Events Used in Design, the following rainfall intensities and durations were used in analyzing the proposed stormwater facility:

Table 5-1: Rainfall Intensities

Recurrence Interval (Years)	Storm Period (hours)	Total Precipitation Depth (Inches)
WQ*	4	0.36
2	24	2.50
5	24	3.10
10	24	3.45
25	24	3.90

** WQ recurrence interval refers to the water quality storm*

5.2. Pre-Developed Site Conditions

5.2.1. Site Topography

Existing on-site grades generally vary from ±0 to ±2 percent, with a high point of elevation ±185 feet located near the NW property corner and a low point of elevation ±177 feet located near the SW property corner. The site slopes from the north towards S 29th Blvd.

5.2.2. Land Use

The existing site consists of an agricultural field with short straight row crops.

5.3. Soil Type

The soil beneath the project site and associated drainage basins is classified as Aloha Silt Loam and Quatama Loam, according to the NRCS Soil Survey for Washington County. The following table outlines the Hydrologic Soil Group rating for each soil type:

Table 5-2: Hydrologic Soil Groupings

NRCS Map Unit Identification	NRCS Soil Classification	Hydrologic Soil Group Rating
45A/B	Aloha Silt Loam	C/D
37A	Quatama Loam	C

Further information on this soil type is included in the NRCS Soil Resource Report located in Appendix D of this report.

5.4. Post-Developed Site Conditions

5.4.1. Site Topography

The on-site slopes will be modified with minor cuts and fills to accommodate the construction of streets, residential lots, and a stormwater facility. The majority of the proposed site grading will not change the existing site topography and maintain the existing drainage routing towards South 29th Blvd.

5.4.2. Land Use

The site's land use will consist of single-family residential with the construction of a new 230-lot subdivision, new streets, and underground utilities.

5.4.3. Post-Developed Site Parameters

Appendices A and B provide the HydroCAD reports and input parameters that were generated for the analyzed storm events with respect to the drainage basins contributing to the subdivision. These reports include all parameters used to model site hydrology (e.g. impervious and pervious areas, time of concentration, etc.).

5.4.4. Description of Off-Site Contributing Basins

Future public road improvements to SW 345th Avenue are expected to contribute flow to the proposed stormwater facility. This offsite basin will be the entire width of the right-of-way along Parcel 2's frontage with SW 345th Avenue. Existing Tax lot 101, comprised of a single residential home, will be routed through the Laurel Crown Stormwater system.

6.0 Stormwater Analyses

6.1. Proposed Stormwater Conduit Sizing and Inlet Spacing

To properly convey stormwater runoff, the proposed on-site curb inlets will be spaced per City and CWS requirements and standard details to properly convey stormwater runoff. The proposed storm pipes will be sized using Manning's equation to convey the peak flows of the 25-year storm event, meeting Section 5.06.1 of the CWS *Design & Construction Standards*.

6.2. Proposed Stormwater Quality Control Facility

An extended dry basin has been designed per Section 4.09.5 of the CWS *Design & Construction Standards* to provide water quality treatment for runoff from impervious areas created by the proposed project and a portion of the future improvements planned along SW 345th Avenue.

The water quality volume (WQV) will be routed through the proposed extended dry basin, which will provide water quality treatment per Section 4.09.5 of the CWS *Design & Construction Standards*. Detailed calculations and checks against CWS criteria are included in Appendix C of this report.

Stormwater runoff from some portions of the proposed streets (±3,115 sf) will not be captured by the new stormwater system and will instead be captured by existing storm systems and routed to the Laurel Woods Phase 5 Stormwater facility for treatment. Per the Laurel Woods Phase 5 Stormwater Report, the facility has capacity to treat ±1,323,118 sf of impervious area; the Laurel Woods No. 11 PUD Stormwater Report Memo provided an update to the impervious area to be treated in the Phase 5 facility. It indicates that Phase 11 would contribute ±4,984 sf less impervious area to the Phase 5 stormwater facility than initially accounted for. Therefore, there is sufficient capacity to treat the added impervious area and there will be no adverse impacts to the existing stormwater facility or downstream water quality.

6.3. Stormwater Hydromodification Management

The proposed project will create approximately 900,988 sf of impervious area and is therefore classified as a large project. Per CWS online Hydromodification Planning Tool, the subject site is located within an expansion area, and the site's runoff discharges into an existing stormwater system. The final system discharge is into a stream with a low hydromodification risk level. Based on these parameters and Table 4-2 of the CWS *Design & Construction Standards*, the project is classified as a Category 3 Hydromodification Approach.

Per the Category 3 requirements of CWS *Design & Construction Standards* Section, 4.03.5, the subject site will provide peak flow matching detention, using design criteria listed in Section 4.08.6 with the development of an approved LIDA stormwater facility. Specifically, flows from the subject site's post-developed 2-year storm events will not exceed the site's flows from the pre-developed 50 percent of 2-year storm events. Flows from the subject site's post-developed 2-, 5-, and 10-year storm events will not exceed the site's flows from the pre-developed of 2-, 5-, and 10-year storm events.

6.4. Stormwater Quantity Control Facility Design

The proposed project provides stormwater quantity management for the residential development by using an extended dry basin (LIDA facility) designed per CWS standards. The following table outlines how the extended dry basin's outflow will limit the residential development's post-developed peak flows to less than the allowable pre-developed peak flows for each storm event and meet CWS requirements, as outlined in the stormwater quantity and stormwater hydromodification management sections of this report.

Table 6-1: Pre- and Post-Developed Flows

Recurrence Interval (Years)	Peak Pre-Developed Flows (cubic feet per second)	Peak Post-Developed Flows (cubic feet per second)[3]	Peak Flow Increase or (Decrease) (cubic feet per second)
2	3.29[1]	3.13	(0.16)
5	8.93[2]	4.46	(4.47)
10	10.52[2]	6.95	(3.57)
25	12.60[2]	10.91	(1.69)

1 *Peak pre-developed flow for 2-year storm event is equal to 50 percent of 2-year peak pre-developed flow from the existing property (basin 1S) plus the total flow from 345th and Dogwood offsite basins (2X & 4X).*

2 *Peak pre-developed flow for 5-, 10- & 25-year storm events is equal to the total combined peak flow (link 1T) minus the offsite peak flow from Tax Lot 101 (basin 3X).*

3 *Flow from Tax Lot 101 (basin 3X) is assumed to pass through the new stormwater facility under post-developed conditions. Peak post-developed flows were calculated from total peak flow (link 1T) minus the peak flow from Tax Lot 101 (basin 3X).*

The extended dry basin has been designed per CWS *Design & Construction Standards* Section 4.09.5 to have a minimum freeboard of 1 foot during the 25-year storm event and a permanent pool storage depth of 0.2 feet.

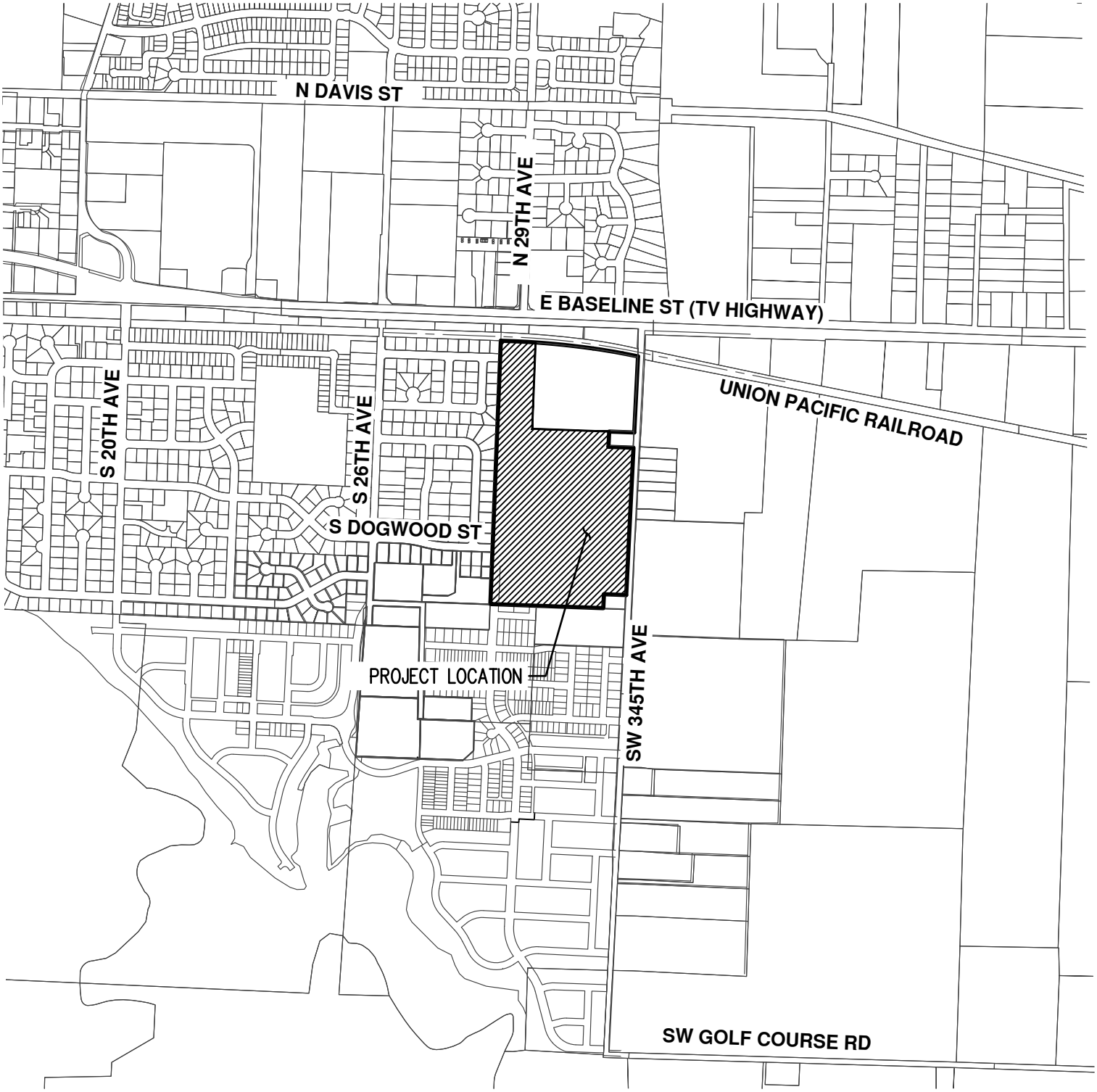
The proposed extended dry basin has sufficient capacity to detain the residential development's post-developed flows to the level of pre-developed flows, meeting the requirements established by the CWS *Design & Construction Standards*.

6.5. Downstream Analysis

Since the proposed development will provide stormwater detention up to the 25-year storm event, only a visual investigation of the downstream system is required.

Stormwater runoff from the subject site discharges in the southwest corner, into an existing stormwater main that flows through the neighboring subdivision to the south. A stormwater report for the neighboring subdivision titled Laurel Woods Phase 5 Stormwater Report, dated February 2019 accounts for a 25-year flow of 11.14 CFS from the subject site. Since our site discharges a 25-year post-developed total peak flow of 11.10 CFS, less than the previously assumed flow, there will be no adverse impacts to the existing downstream stormwater system.

A visual investigation has been performed of the downstream system to a distance of 1/4 mile from the site. The investigation determined that there are no observable downstream obstructions or impacts to structures.



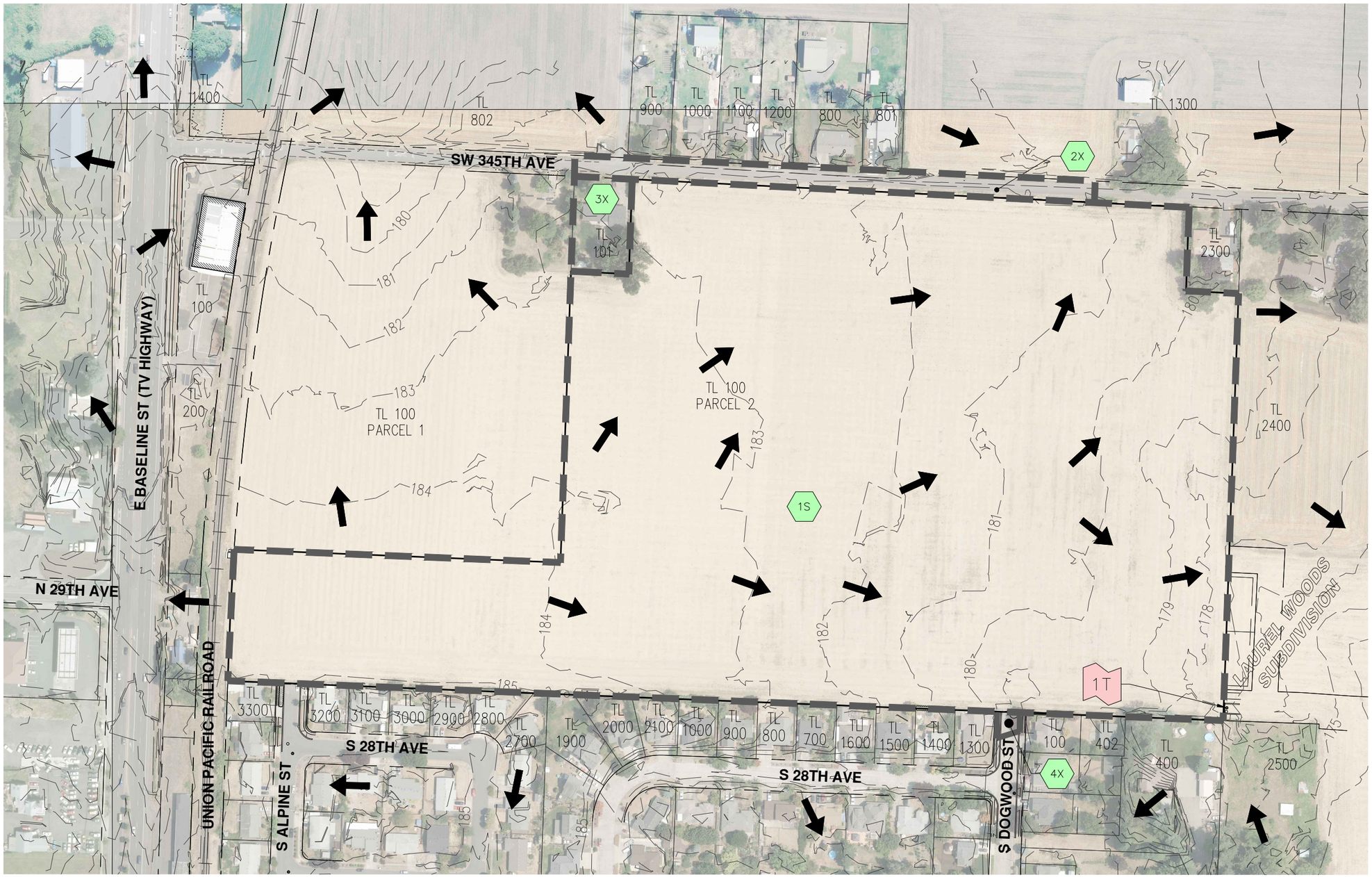
N

SCALE: 1"=1000 FEET

1000 0 200 500 1000

AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	**LAUREL CROWN SUBDIVISION** **VICINITY MAP**	DATE: 12/09/2025 DRWN: TJB CHKD: PAS AKS JOB: 4636-05 FIGURE 1

DWG: 4636-05 VICINITY MAP | 8.5X11



N

SCALE: 1"= 200 FEET

200 0 80 120 160 200

LEGEND

- 1X — OFFSITE BASIN SUBCATCHMENT
- 1S — ONSITE BASIN SUBCATCHMENT
- DRAINAGE BASIN BOUNDARY
- SURFACE WATER FLOW DIRECTION
- 1T — TOTAL FLOW

DATE: 12/09/2025

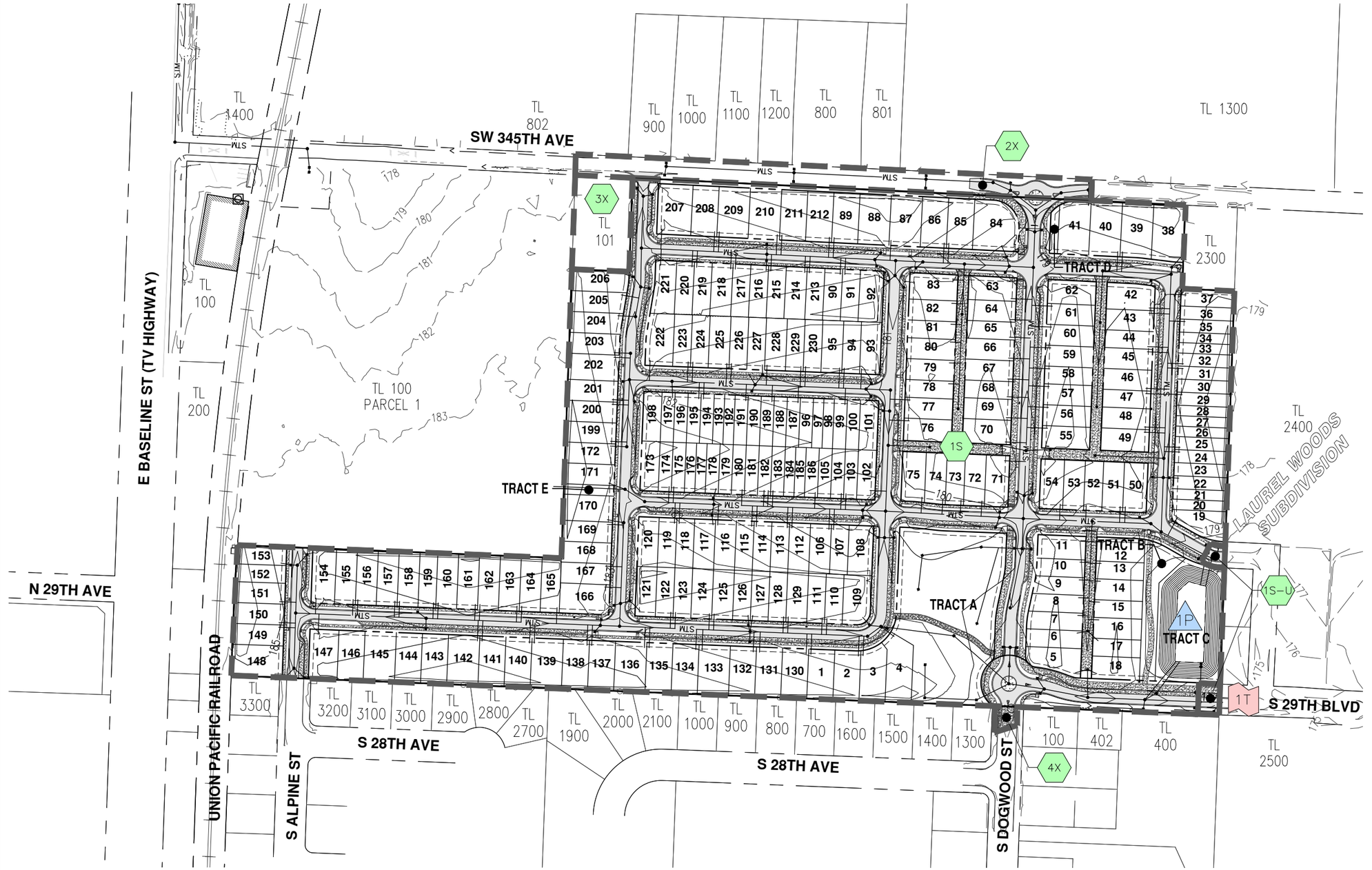
PRE-DEVELOPED BASIN DELINEATION

FIGURE 2

LAUREL CROWN

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD, STE 100
TUALATIN, OR 97062
P: 503.563.6151 F: 503.563.6152 aks-eng.com

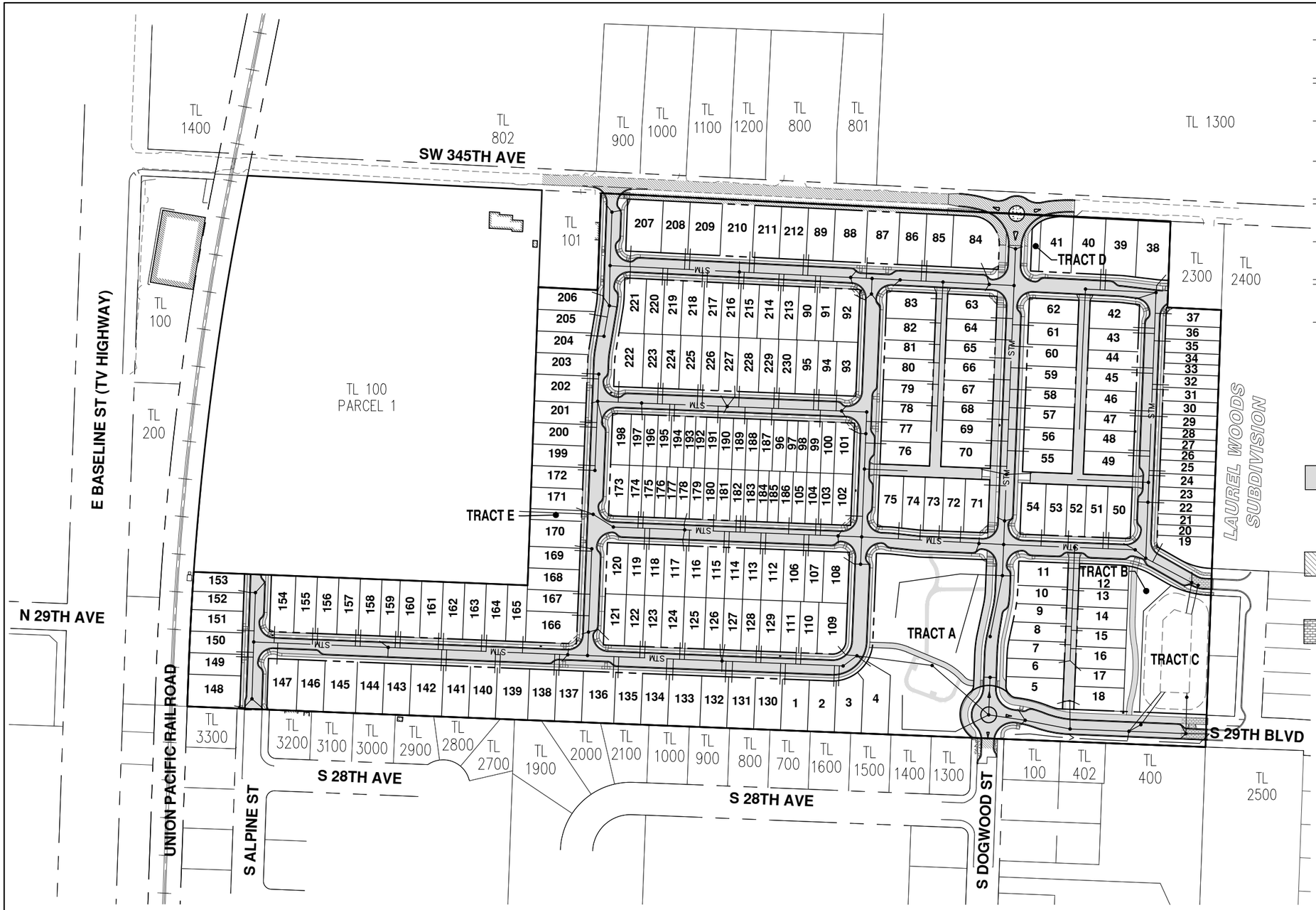
DRWN: TJB
CHKD: PAS
AKS JOB: 4636-05



DATE: 12/09/2025

POST-DEVELOPED BASIN DELINEATION	FIGURE 3
LAUREL CROWN	
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 P: 503.563.6151 F: 503.563.6152 aks-eng.com	DRWN: TJB CHKD: PAS AKS JOB: 4636-05

DWG: 4636-05 LAUREL WOODS NORTH POST-DEV BASIN DELINEATION | FIGURE 3



POST-DEVELOPED IMPERVIOUS AREA TABLE

ONSITE IMPERVIOUS AREA TO BE TREATED OFFSITE	3,115 SF
ONSITE IMPERVIOUS AREA TO BE TREATED ONSITE	897,873 SF
OFFSITE IMPERVIOUS AREA TO BE TREATED ONSITE	35,029 SF
TOTAL AREA TO BE TREATED	936,017 SF
REQUIRED IMPERVIOUS AREA TO BE TREATED	900,988 SF
NET TOTAL	35,029 SF

INDICATES PROPOSED IMPERVIOUS AREA RECEIVING TREATMENT

LOT IMPERVIOUS AREA:
SINGLE FAMILY ATTACHED: 90% LOT AREA
SINGLE FAMILY DETACHED: 2640 SF/LOT

INDICATES OFFSITE IMPERVIOUS AREA TO BE TREATED WITH THE PROPOSED FACILITY

INDICATES PROPOSED IMPERVIOUS AREA TO BE TREATED WITH EXISTING OFFSITE FACILITY

N

SCALE: 1"= 200 FEET

200 0 80 120 160 200

DATE: 12/10/2025

POST-DEVELOPED IMPERVIOUS AREA MAP

FIGURE 4

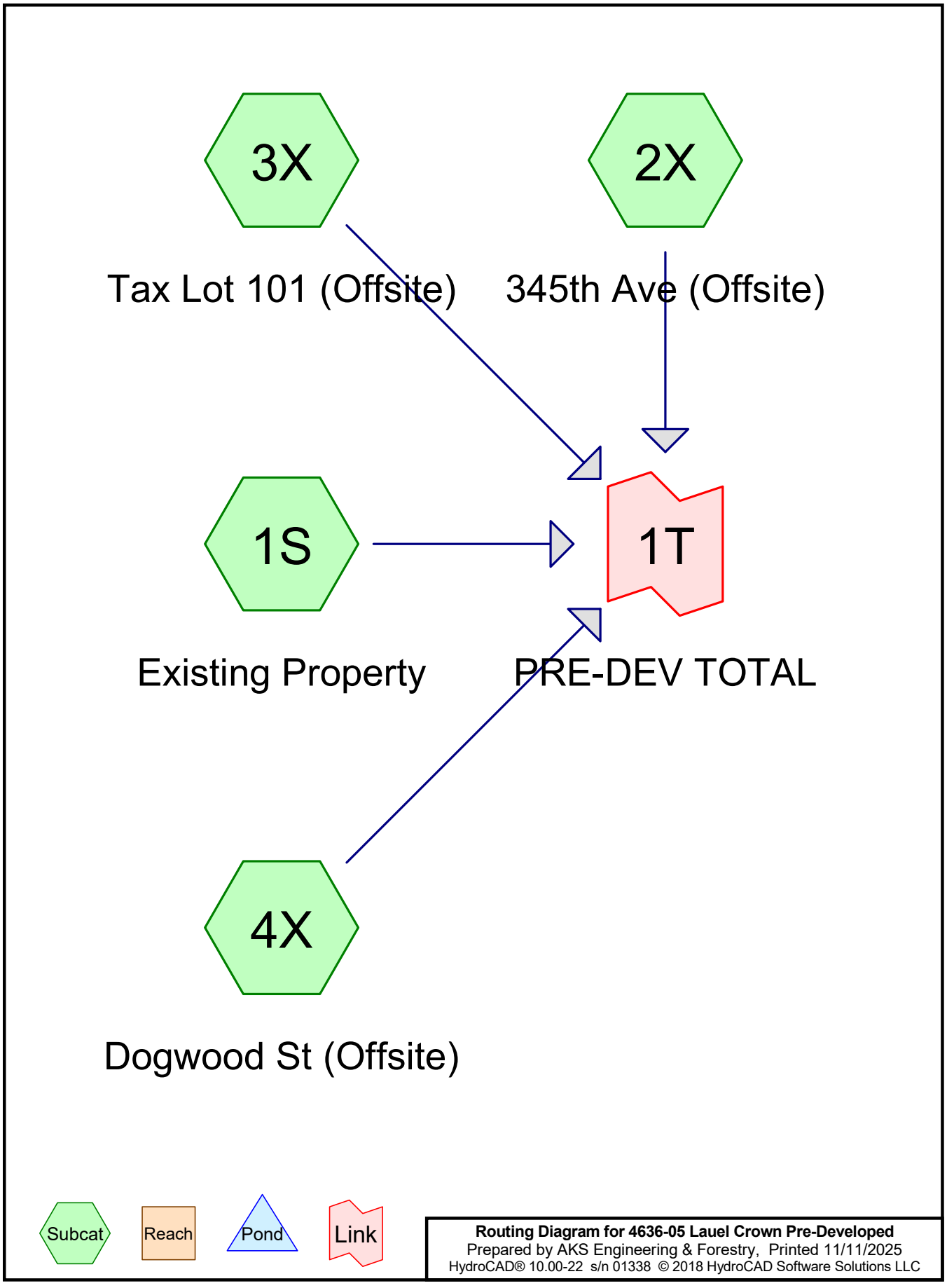
LAUREL CROWN

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD, STE 100
TUALATIN, OR 97062
P: 503.563.6151 F: 503.563.6152 aks-eng.com

DRWN: TJB
CHKD: PAS
AKS JOB: 4636-05

DWG: 4636-05 STORMWATER QUALITY TREATMENT MAP | FIGURE 4

Appendix A:
HydroCAD Reports for
Pre-Developed Conditions Storm Events
(2-Year to 10-year Storm Event Summary)
(25-year Storm Event Analysis)



Routing Diagram for 4636-05 Lauel Crown Pre-Developed
Prepared by AKS Engineering & Forestry, Printed 11/11/2025
HydroCAD® 10.00-22 s/n 01338 © 2018 HydroCAD Software Solutions LLC

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
19,836	85	1/2 acre lot, 25% imp, HSG D (3X)
17,816	84	50-75% Grass cover, Fair, HSG D (2X)
21,776	98	Existing Road (22' Wide) (2X)
457	98	RoW Impervious Area incl. Paved Road & Sidewalks (4X)
39,517	85	Row crops, straight row, Good, HSG C (1S)
1,321,363	89	Row crops, straight row, Good, HSG D (1S)
1,420,765	**89**	**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 3
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing Property Runoff Area=1,360,880 sf 0.00% Impervious Runoff Depth>1.42"
Flow Length=1,800' Tc=54.1 min CN=89/0 Runoff=6.01 cfs 160,484 cf

Subcatchment 2X: 345th Ave (Offsite) Runoff Area=39,592 sf 55.00% Impervious Runoff Depth>1.73"
Flow Length=1,180' Tc=29.4 min CN=84/98 Runoff=0.28 cfs 5,707 cf

Subcatchment 3X: Tax Lot 101 (Offsite) Runoff Area=19,836 sf 25.00% Impervious Runoff Depth>1.26"
Flow Length=1,220' Tc=30.5 min CN=81/98 Runoff=0.09 cfs 2,075 cf

Subcatchment 4X: Dogwood St (Offsite) Runoff Area=457 sf 100.00% Impervious Runoff Depth>2.25"
Flow Length=450' Tc=21.9 min CN=0/98 Runoff=0.00 cfs 86 cf

Link 1T: PRE-DEV TOTAL Inflow=6.37 cfs 168,351 cf
Primary=6.37 cfs 168,351 cf

Total Runoff Area = 1,420,765 sf Runoff Volume = 168,351 cf Average Runoff Depth = 1.42"
98.09% Pervious = 1,393,573 sf 1.91% Impervious = 27,192 sf

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 3
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing Property Runoff Area=1,360,880 sf 0.00% Impervious Runoff Depth>1.94"
Flow Length=1,800' Tc=54.1 min CN=89/0 Runoff=8.57 cfs 219,940 cf

Subcatchment 2X: 345th Ave (Offsite) Runoff Area=39,592 sf 55.00% Impervious Runoff Depth>2.27"
Flow Length=1,180' Tc=29.4 min CN=84/98 Runoff=0.37 cfs 7,488 cf

Subcatchment 3X: Tax Lot 101 (Offsite) Runoff Area=19,836 sf 25.00% Impervious Runoff Depth>1.73"
Flow Length=1,220' Tc=30.5 min CN=81/98 Runoff=0.13 cfs 2,867 cf

Subcatchment 4X: Dogwood St (Offsite) Runoff Area=457 sf 100.00% Impervious Runoff Depth>2.85"
Flow Length=450' Tc=21.9 min CN=0/98 Runoff=0.01 cfs 108 cf

Link 1T: PRE-DEV TOTAL Inflow=9.06 cfs 230,403 cf
Primary=9.06 cfs 230,403 cf

Total Runoff Area = 1,420,765 sf Runoff Volume = 230,403 cf Average Runoff Depth = 1.95"
98.09% Pervious = 1,393,573 sf 1.91% Impervious = 27,192 sf

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 3
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing Property Runoff Area=1,360,880 sf 0.00% Impervious Runoff Depth>2.25"
Flow Length=1,800' Tc=54.1 min CN=89/0 Runoff=10.11 cfs 255,536 cf

Subcatchment 2X: 345th Ave (Offsite) Runoff Area=39,592 sf 55.00% Impervious Runoff Depth>2.59"
Flow Length=1,180' Tc=29.4 min CN=84/98 Runoff=0.43 cfs 8,547 cf

Subcatchment 3X: Tax Lot 101 (Offsite) Runoff Area=19,836 sf 25.00% Impervious Runoff Depth>2.03"
Flow Length=1,220' Tc=30.5 min CN=81/98 Runoff=0.16 cfs 3,349 cf

Subcatchment 4X: Dogwood St (Offsite) Runoff Area=457 sf 100.00% Impervious Runoff Depth>3.19"
Flow Length=450' Tc=21.9 min CN=0/98 Runoff=0.01 cfs 122 cf

Link 1T: PRE-DEV TOTAL Inflow=10.68 cfs 267,554 cf
Primary=10.68 cfs 267,554 cf

Total Runoff Area = 1,420,765 sf Runoff Volume = 267,554 cf Average Runoff Depth = 2.26"
98.09% Pervious = 1,393,573 sf 1.91% Impervious = 27,192 sf

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points x 3
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing Property Runoff Area=1,360,880 sf 0.00% Impervious Runoff Depth>2.66"
Flow Length=1,800' Tc=54.1 min CN=89/0 Runoff=12.12 cfs 302,010 cf

Subcatchment 2X: 345th Ave (Offsite) Runoff Area=39,592 sf 55.00% Impervious Runoff Depth>3.01"
Flow Length=1,180' Tc=29.4 min CN=84/98 Runoff=0.50 cfs 9,925 cf

Subcatchment 3X: Tax Lot 101 (Offsite) Runoff Area=19,836 sf 25.00% Impervious Runoff Depth>2.41"
Flow Length=1,220' Tc=30.5 min CN=81/98 Runoff=0.19 cfs 3,985 cf

Subcatchment 4X: Dogwood St (Offsite) Runoff Area=457 sf 100.00% Impervious Runoff Depth>3.64"
Flow Length=450' Tc=21.9 min CN=0/98 Runoff=0.01 cfs 139 cf

Link 1T: PRE-DEV TOTAL Inflow=12.79 cfs 316,059 cf
Primary=12.79 cfs 316,059 cf

Total Runoff Area = 1,420,765 sf Runoff Volume = 316,059 cf Average Runoff Depth = 2.67"
98.09% Pervious = 1,393,573 sf 1.91% Impervious = 27,192 sf

Summary for Subcatchment 1S: Existing Property

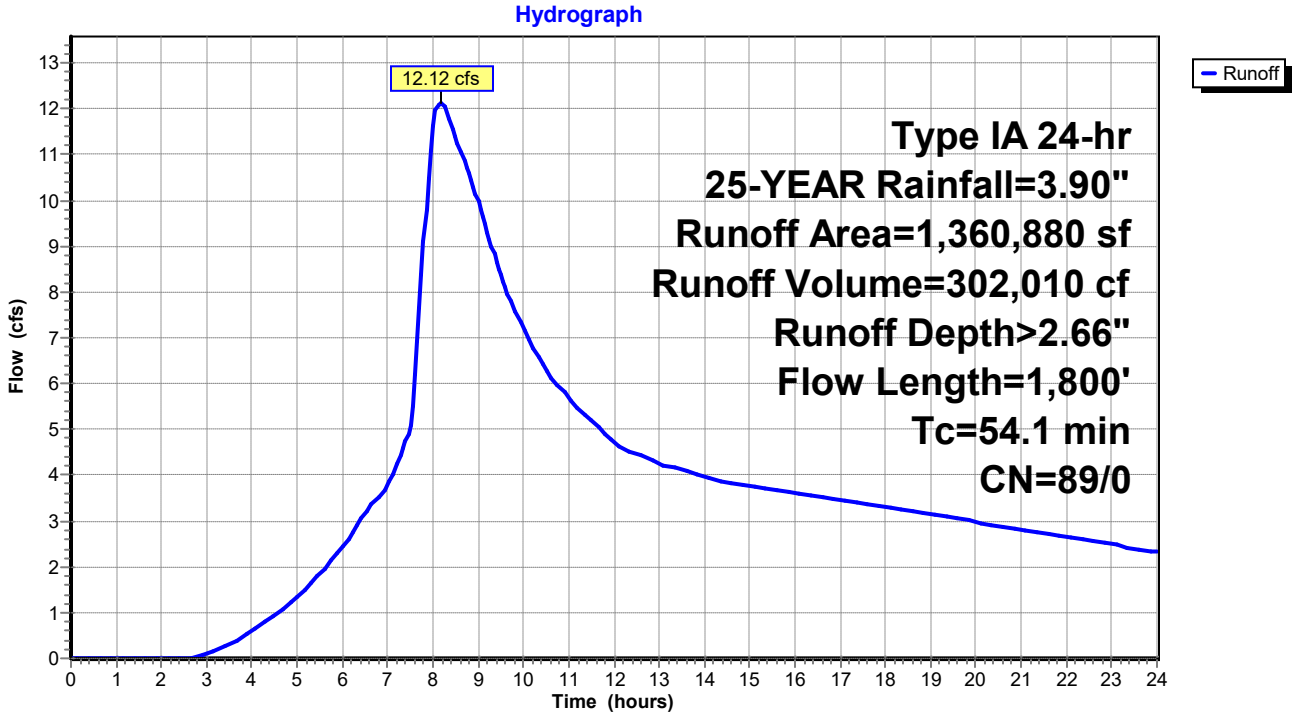
Runoff = 12.12 cfs @ 8.17 hrs, Volume= 302,010 cf, Depth> 2.66"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 25-YEAR Rainfall=3.90"

Area (sf)	CN	Description
1,321,363	89	Row crops, straight row, Good, HSG D
39,517	85	Row crops, straight row, Good, HSG C
1,360,880	89	Weighted Average
1,360,880	89	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	50	0.0050	0.07		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.50"
41.8	1,750	0.0060	0.70		**Shallow Concentrated Flow, SCF** Cultivated Straight Rows Kv= 9.0 fps
54.1	1,800	Total			

Subcatchment 1S: Existing Property



Summary for Subcatchment 2X: 345th Ave (Offsite)

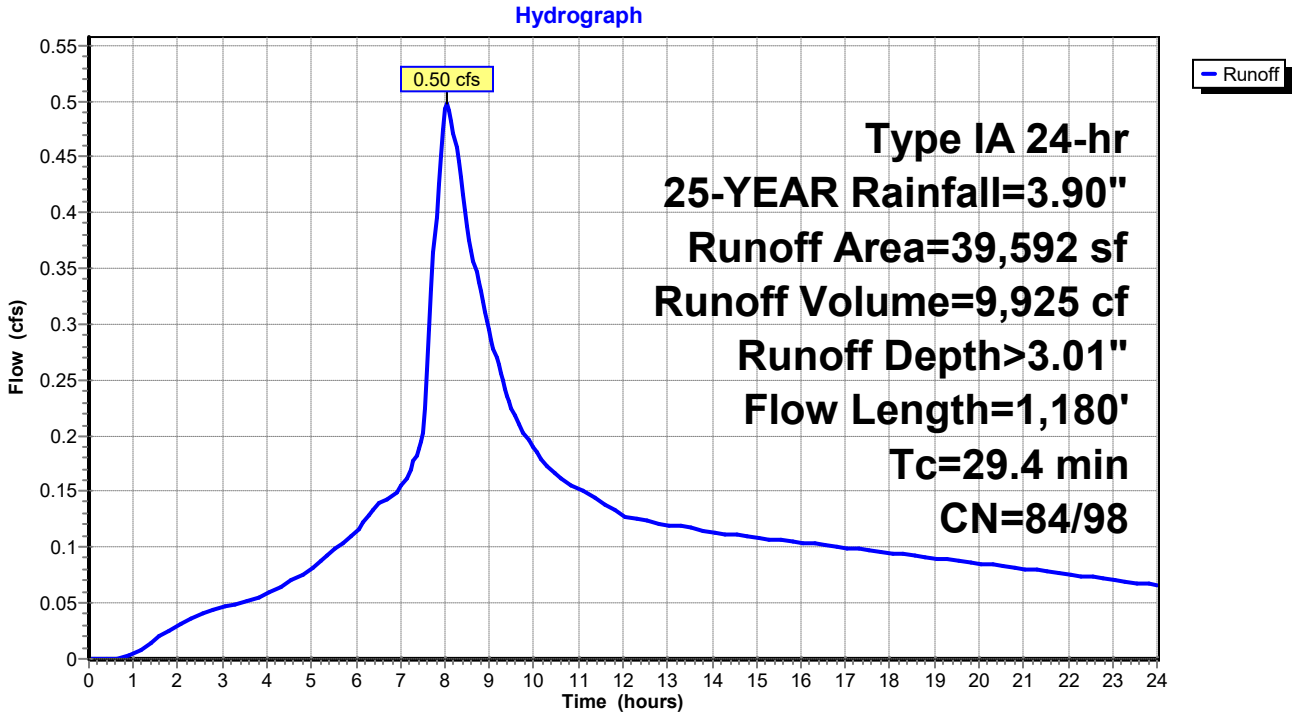
Runoff = 0.50 cfs @ 8.05 hrs, Volume= 9,925 cf, Depth> 3.01"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 25-YEAR Rainfall=3.90"

	Area (sf)	CN	Description
	17,816	84	50-75% Grass cover, Fair, HSG D
*	21,776	98	Existing Road (22' Wide)
	39,592	92	Weighted Average
	17,816	84	45.00% Pervious Area
	21,776	98	55.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.3	10	0.0100	0.58		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.50"
29.1	1,170	0.0020	0.67		**Shallow Concentrated Flow, Roadside Ditch** Grassed Waterway Kv= 15.0 fps
29.4	1,180	Total			

Subcatchment 2X: 345th Ave (Offsite)



Summary for Subcatchment 3X: Tax Lot 101 (Offsite)

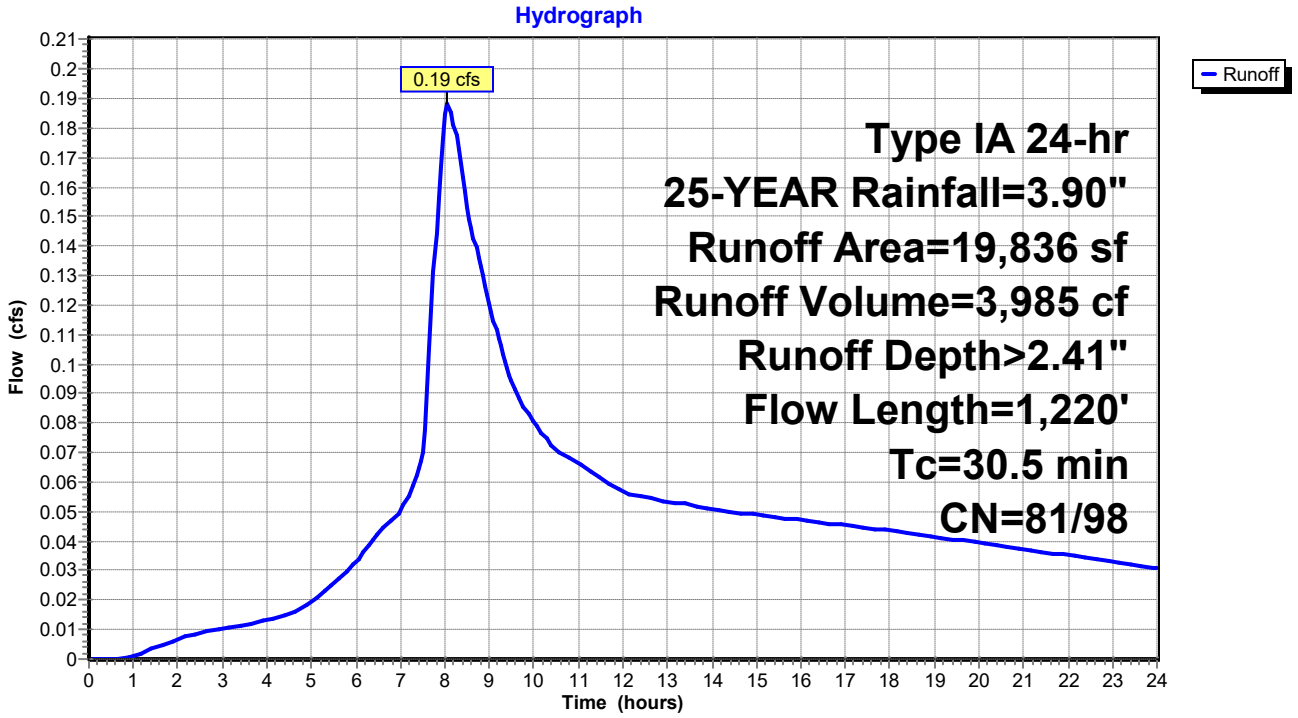
Runoff = 0.19 cfs @ 8.06 hrs, Volume= 3,985 cf, Depth> 2.41"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 25-YEAR Rainfall=3.90"

	Area (sf)	CN	Description
*	19,836	85	1/2 acre lot, 25% imp, HSG D
	14,877	81	75.00% Pervious Area
	4,959	98	25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	50	0.0050	0.61		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.50"
29.1	1,170	0.0020	0.67		**Shallow Concentrated Flow, SCF** Grassed Waterway Kv= 15.0 fps
30.5	1,220	Total			

Subcatchment 3X: Tax Lot 101 (Offsite)



Summary for Subcatchment 4X: Dogwood St (Offsite)

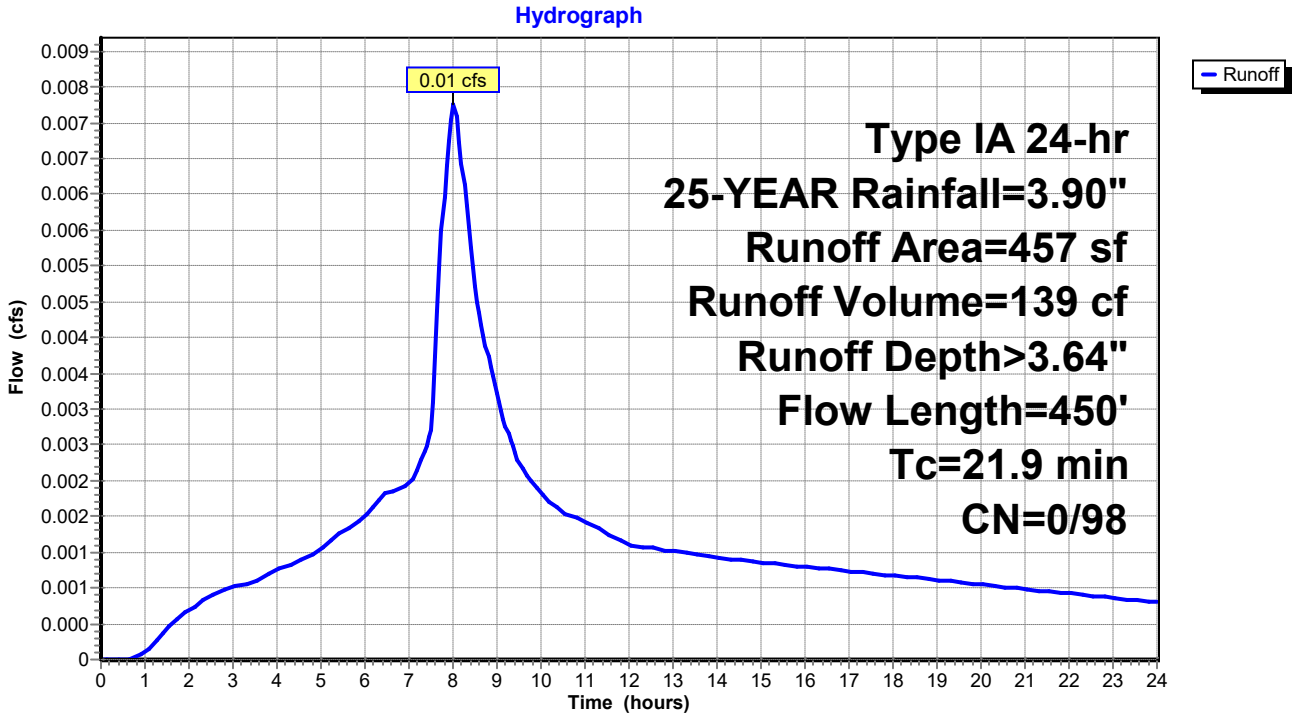
Runoff = 0.01 cfs @ 8.02 hrs, Volume= 139 cf, Depth> 3.64"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type IA 24-hr 25-YEAR Rainfall=3.90"

	Area (sf)	CN	Description
*	457	98	RoW Impervious Area incl. Paved Road & Sidewalks
	457	98	100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.3	50	0.0050	0.07		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 2.50"
9.6	400	0.0060	0.70		**Shallow Concentrated Flow, SCF** Cultivated Straight Rows Kv= 9.0 fps
21.9	450	Total			

Subcatchment 4X: Dogwood St (Offsite)

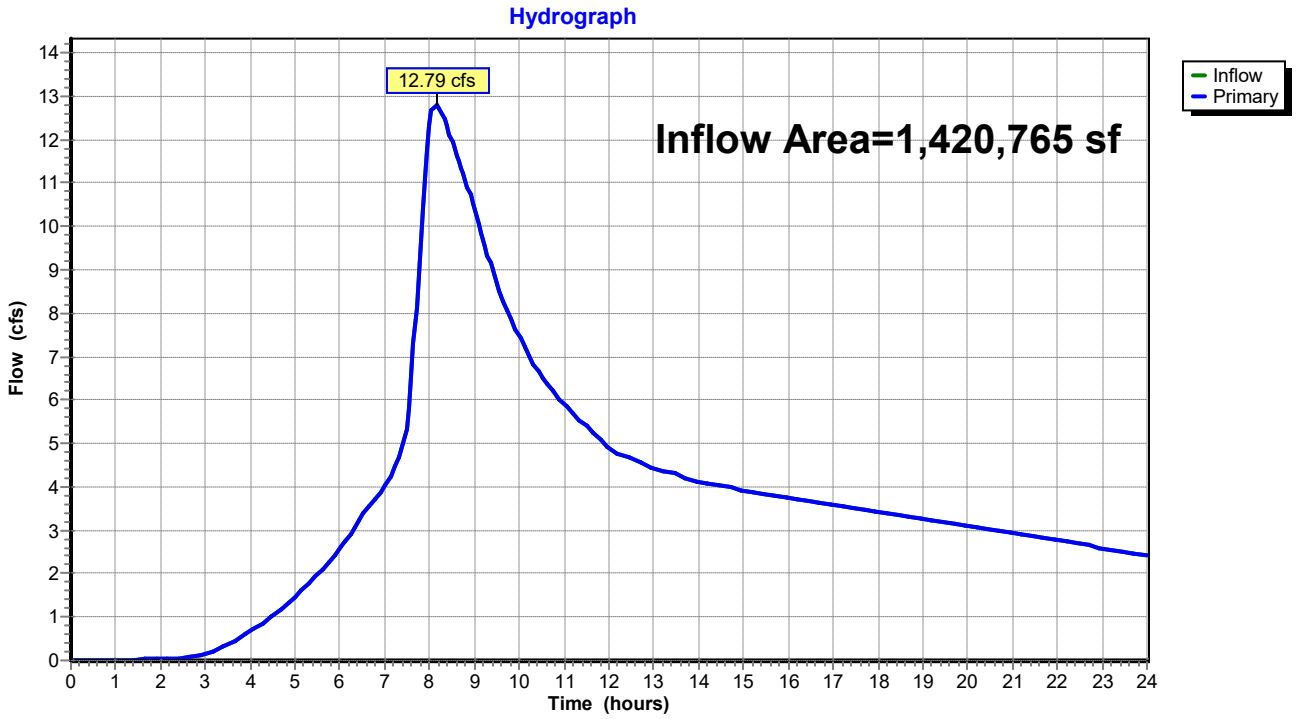


Summary for Link 1T: PRE-DEV TOTAL

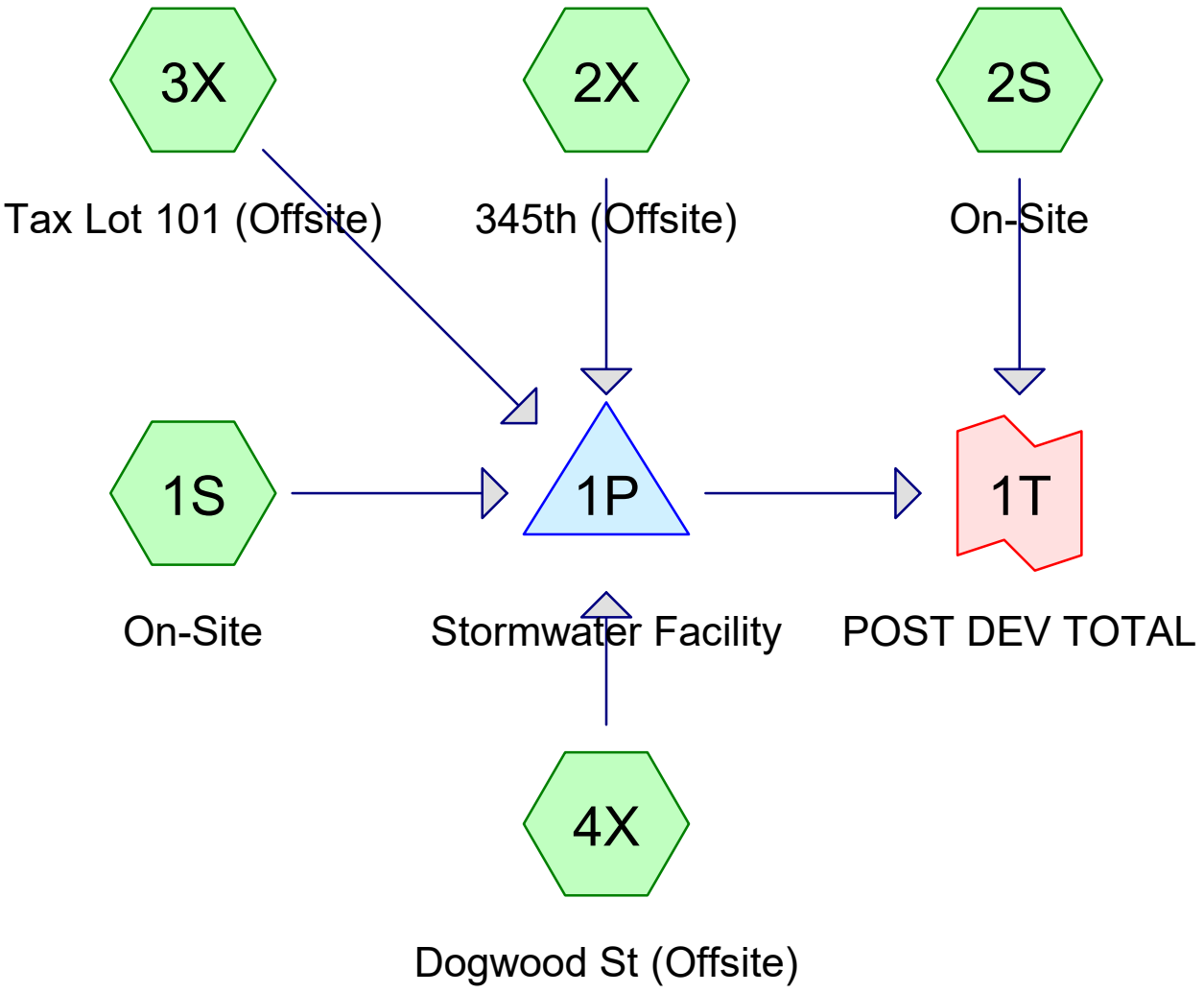
Inflow Area = 1,420,765 sf, 1.91% Impervious, Inflow Depth > 2.67" for 25-YEAR event
Inflow = 12.79 cfs @ 8.16 hrs, Volume= 316,059 cf
Primary = 12.79 cfs @ 8.16 hrs, Volume= 316,059 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1T: PRE-DEV TOTAL



Appendix B:
HydroCAD Reports for
Post-Developed Conditions Storm Events
(2-Year to 10-year Storm Event Summary)
(25-year Storm Event Analysis)



Subcat Reach Pond Link

Routing Diagram for 4636-05 Laurel Crown Post-Developed
Prepared by AKS Engineering & Forestry, Printed 12/9/2025
HydroCAD® 10.00-22 s/n 01338 © 2018 HydroCAD Software Solutions LLC

Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
19,836	85	1/2 acre lot, 25% imp, HSG D (3X)
7,863	98	Open Space Impervious Area Sidewalks (1S)
66,642	80	Open Space Pervious Area >75% Grass cover, Good, HSG D (1S)
34,571	98	RoW Impervious Area (345th Ave) incl. Paved Road & Sidewalks (1S, 2X)
319,385	98	RoW Impervious Area incl. Paved Road & Sidewalks (1S, 2S, 4X)
15,957	80	RoW Pervious Area (345th Ave) >75% Grass cover, Good, HSG D (1S, 2X)
74,934	80	RoW Pervious Area >75% Grass cover, Good, HSG D (1S, 2S)
115,313	98	SFA Lots Impervious Area (90% Lot Area) (1S)
462,000	98	SFD Lots Impervious Area (2,640 SF/Lot) (1S)
276,761	80	SFD/SFA Lot Pervious Area >75% Grass cover, Good, HSG D (1S)
27,503	84	Stormwater Facility 50-75% Grass cover, Fair, HSG D (1S)
1,420,765	**92**	**TOTAL AREA**

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: On-Site Runoff Area=1,357,074 sf 67.11% Impervious Runoff Depth=1.82"
Tc=5.0 min CN=80/98 Runoff=13.77 cfs 205,405 cf

Subcatchment 2S: On-Site Runoff Area=3,806 sf 81.84% Impervious Runoff Depth=2.02"
Tc=5.0 min CN=80/98 Runoff=0.04 cfs 641 cf

Subcatchment 2X: 345th (Offsite) Runoff Area=39,592 sf 62.57% Impervious Runoff Depth=1.75"
Tc=5.0 min CN=80/98 Runoff=0.39 cfs 5,786 cf

Subcatchment 3X: Tax Lot 101 (Offsite) Runoff Area=19,836 sf 25.00% Impervious Runoff Depth=1.27"
Flow Length=1,220' Tc=30.5 min CN=81/98 Runoff=0.09 cfs 2,107 cf

Subcatchment 4X: Dogwood St (Offsite) Runoff Area=457 sf 100.00% Impervious Runoff Depth=2.27"
Tc=5.0 min CN=0/98 Runoff=0.01 cfs 86 cf

Pond 1P: Stormwater Facility Peak Elev=173.90' Storage=74,895 cf Inflow=14.24 cfs 213,384 cf
Outflow=3.21 cfs 195,483 cf

Link 1T: POST DEV TOTAL Inflow=3.22 cfs 196,123 cf
Primary=3.22 cfs 196,123 cf

Total Runoff Area = 1,420,765 sf Runoff Volume = 214,024 cf Average Runoff Depth = 1.81"
33.55% Pervious = 476,674 sf 66.45% Impervious = 944,091 sf

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: On-Site Runoff Area=1,357,074 sf 67.11% Impervious Runoff Depth=2.36"
Tc=5.0 min CN=80/98 Runoff=17.99 cfs 266,963 cf

Subcatchment 2S: On-Site Runoff Area=3,806 sf 81.84% Impervious Runoff Depth=2.59"
Tc=5.0 min CN=80/98 Runoff=0.06 cfs 821 cf

Subcatchment 2X: 345th (Offsite) Runoff Area=39,592 sf 62.57% Impervious Runoff Depth=2.29"
Tc=5.0 min CN=80/98 Runoff=0.51 cfs 7,557 cf

Subcatchment 3X: Tax Lot 101 (Offsite) Runoff Area=19,836 sf 25.00% Impervious Runoff Depth=1.76"
Flow Length=1,220' Tc=30.5 min CN=81/98 Runoff=0.13 cfs 2,909 cf

Subcatchment 4X: Dogwood St (Offsite) Runoff Area=457 sf 100.00% Impervious Runoff Depth=2.87"
Tc=5.0 min CN=0/98 Runoff=0.01 cfs 109 cf

Pond 1P: Stormwater Facility Peak Elev=175.04' Storage=95,459 cf Inflow=18.62 cfs 277,540 cf
Outflow=4.58 cfs 258,608 cf

Link 1T: POST DEV TOTAL Inflow=4.59 cfs 259,429 cf
Primary=4.59 cfs 259,429 cf

Total Runoff Area = 1,420,765 sf Runoff Volume = 278,360 cf Average Runoff Depth = 2.35"
33.55% Pervious = 476,674 sf 66.45% Impervious = 944,091 sf

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: On-Site Runoff Area=1,357,074 sf 67.11% Impervious Runoff Depth=2.68"
Tc=5.0 min CN=80/98 Runoff=20.50 cfs 303,524 cf

Subcatchment 2S: On-Site Runoff Area=3,806 sf 81.84% Impervious Runoff Depth=2.92"
Tc=5.0 min CN=80/98 Runoff=0.06 cfs 927 cf

Subcatchment 2X: 345th (Offsite) Runoff Area=39,592 sf 62.57% Impervious Runoff Depth=2.61"
Tc=5.0 min CN=80/98 Runoff=0.58 cfs 8,612 cf

Subcatchment 3X: Tax Lot 101 (Offsite) Runoff Area=19,836 sf 25.00% Impervious Runoff Depth=2.06"
Flow Length=1,220' Tc=30.5 min CN=81/98 Runoff=0.16 cfs 3,397 cf

Subcatchment 4X: Dogwood St (Offsite) Runoff Area=457 sf 100.00% Impervious Runoff Depth=3.22"
Tc=5.0 min CN=0/98 Runoff=0.01 cfs 122 cf

Pond 1P: Stormwater Facility Peak Elev=175.28' Storage=100,234 cf Inflow=21.23 cfs 315,656 cf
Outflow=7.09 cfs 296,288 cf

Link 1T: POST DEV TOTAL Inflow=7.11 cfs 297,215 cf
Primary=7.11 cfs 297,215 cf

Total Runoff Area = 1,420,765 sf Runoff Volume = 316,583 cf Average Runoff Depth = 2.67"
33.55% Pervious = 476,674 sf 66.45% Impervious = 944,091 sf

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SBUH method, Split Pervious/Imperv.
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: On-Site Runoff Area=1,357,074 sf 67.11% Impervious Runoff Depth=3.10"
Tc=5.0 min CN=80/98 Runoff=23.76 cfs 351,064 cf

Subcatchment 2S: On-Site Runoff Area=3,806 sf 81.84% Impervious Runoff Depth=3.36"
Tc=5.0 min CN=80/98 Runoff=0.07 cfs 1,064 cf

Subcatchment 2X: 345th (Offsite) Runoff Area=39,592 sf 62.57% Impervious Runoff Depth=3.03"
Tc=5.0 min CN=80/98 Runoff=0.67 cfs 9,987 cf

Subcatchment 3X: Tax Lot 101 (Offsite) Runoff Area=19,836 sf 25.00% Impervious Runoff Depth=2.44"
Flow Length=1,220' Tc=30.5 min CN=81/98 Runoff=0.19 cfs 4,041 cf

Subcatchment 4X: Dogwood St (Offsite) Runoff Area=457 sf 100.00% Impervious Runoff Depth=3.67"
Tc=5.0 min CN=0/98 Runoff=0.01 cfs 140 cf

Pond 1P: Stormwater Facility Peak Elev=175.53' Storage=105,131 cf Inflow=24.62 cfs 365,232 cf
Outflow=11.07 cfs 345,394 cf

Link 1T: POST DEV TOTAL Inflow=11.10 cfs 346,459 cf
Primary=11.10 cfs 346,459 cf

Total Runoff Area = 1,420,765 sf Runoff Volume = 366,296 cf Average Runoff Depth = 3.09"
33.55% Pervious = 476,674 sf 66.45% Impervious = 944,091 sf

Summary for Subcatchment 1S: On-Site

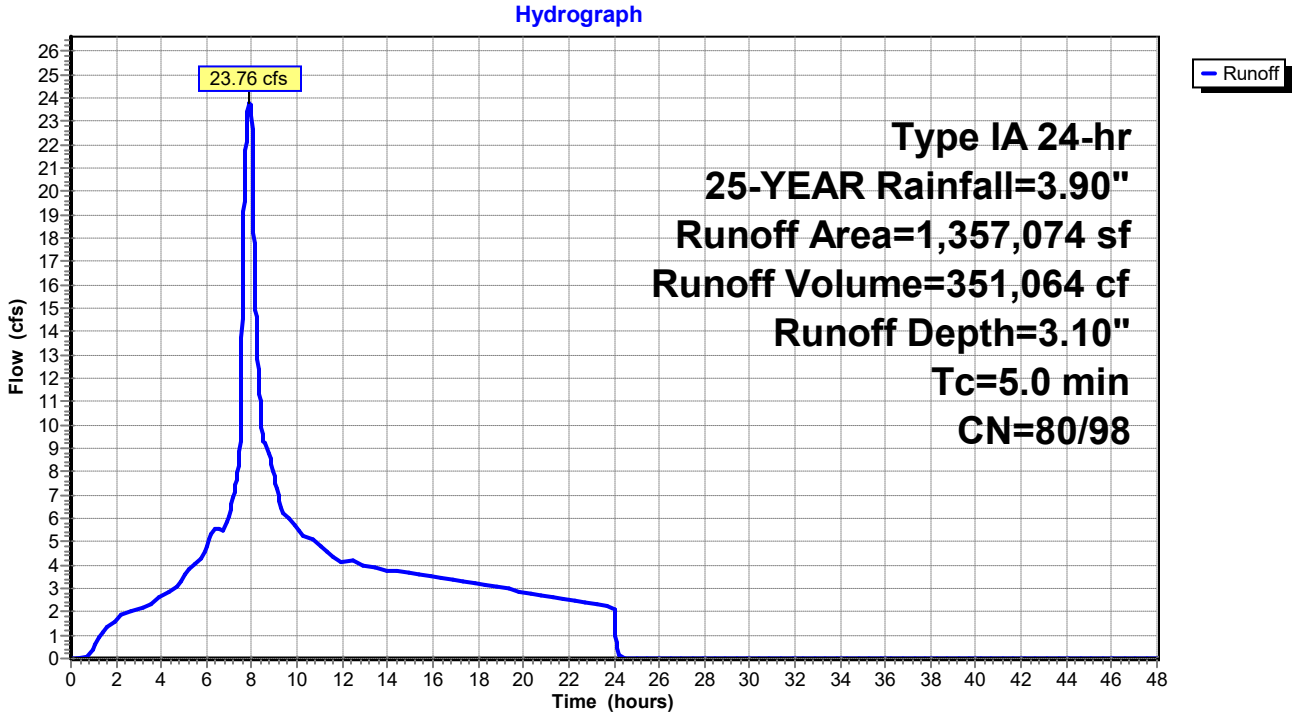
Runoff = 23.76 cfs @ 7.90 hrs, Volume= 351,064 cf, Depth= 3.10"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25-YEAR Rainfall=3.90"

	Area (sf)	CN	Description
*	315,813	98	RoW Impervious Area incl. Paved Road & Sidewalks
*	74,243	80	RoW Pervious Area >75% Grass cover, Good, HSG D
*	7,863	98	Open Space Impervious Area Sidewalks
*	66,642	80	Open Space Pervious Area >75% Grass cover, Good, HSG D
*	115,313	98	SFA Lots Impervious Area (90% Lot Area)
*	462,000	98	SFD Lots Impervious Area (2,640 SF/Lot)
*	276,761	80	SFD/SFA Lot Pervious Area >75% Grass cover, Good, HSG D
*	27,503	84	Stormwater Facility 50-75% Grass cover, Fair, HSG D
*	9,797	98	RoW Impervious Area (345th Ave) incl. Paved Road & Sidewalks
*	1,139	80	RoW Pervious Area (345th Ave) >75% Grass cover, Good, HSG D
	1,357,074	92	Weighted Average
	446,288	80	32.89% Pervious Area
	910,786	98	67.11% Impervious Area

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

Subcatchment 1S: On-Site



Summary for Subcatchment 2S: On-Site

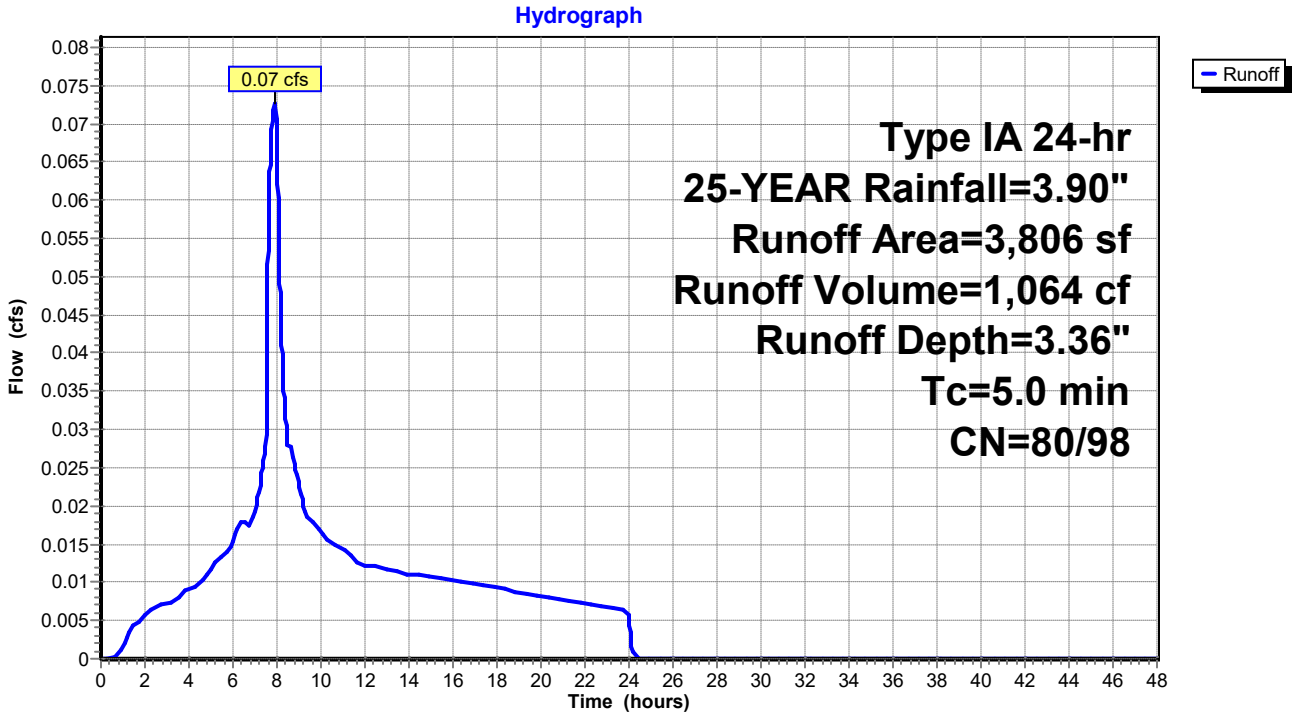
Runoff = 0.07 cfs @ 7.89 hrs, Volume= 1,064 cf, Depth= 3.36"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25-YEAR Rainfall=3.90"

	Area (sf)	CN	Description
*	3,115	98	RoW Impervious Area incl. Paved Road & Sidewalks
*	691	80	RoW Pervious Area >75% Grass cover, Good, HSG D
	3,806	95	Weighted Average
	691	80	18.16% Pervious Area
	3,115	98	81.84% Impervious Area

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

Subcatchment 2S: On-Site



Summary for Subcatchment 2X: 345th (Offsite)

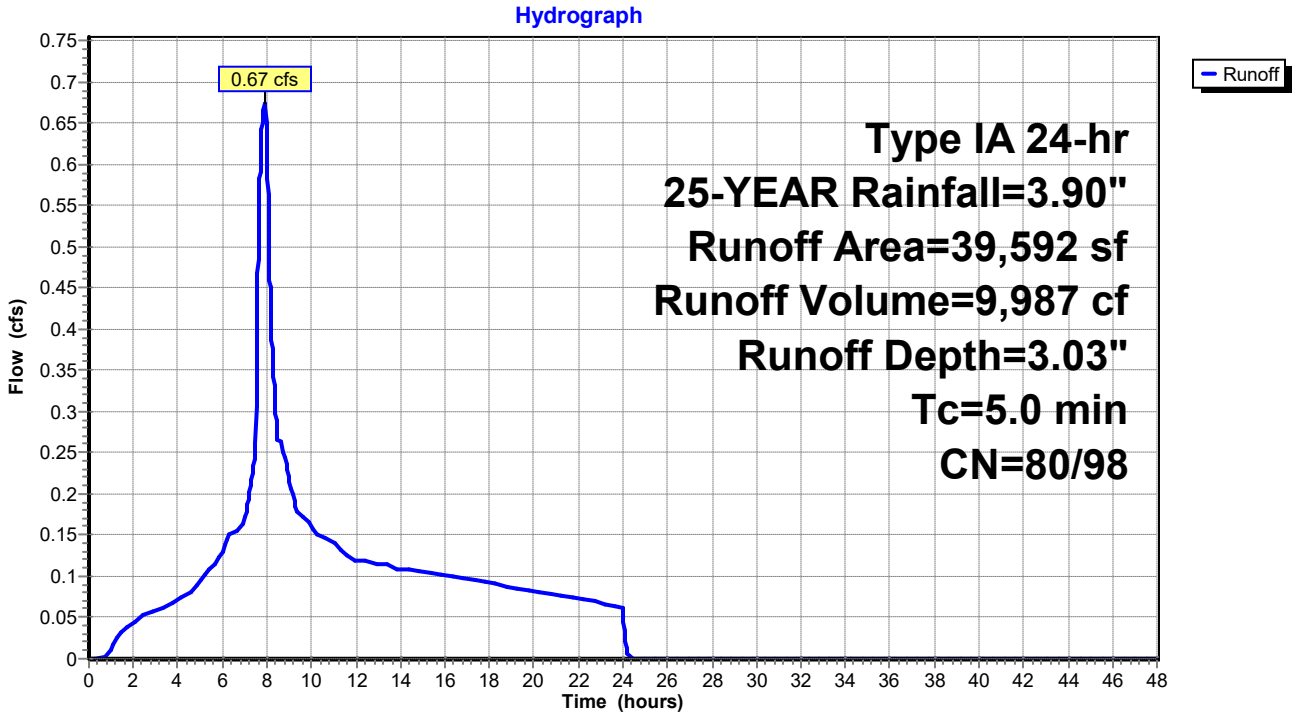
Runoff = 0.67 cfs @ 7.90 hrs, Volume= 9,987 cf, Depth= 3.03"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25-YEAR Rainfall=3.90"

	Area (sf)	CN	Description
*	24,774	98	RoW Impervious Area (345th Ave) incl. Paved Road & Sidewalks
*	14,818	80	RoW Pervious Area (345th Ave) >75% Grass cover, Good, HSG D
	39,592	91	Weighted Average
	14,818	80	37.43% Pervious Area
	24,774	98	62.57% Impervious Area

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

Subcatchment 2X: 345th (Offsite)



Summary for Subcatchment 3X: Tax Lot 101 (Offsite)

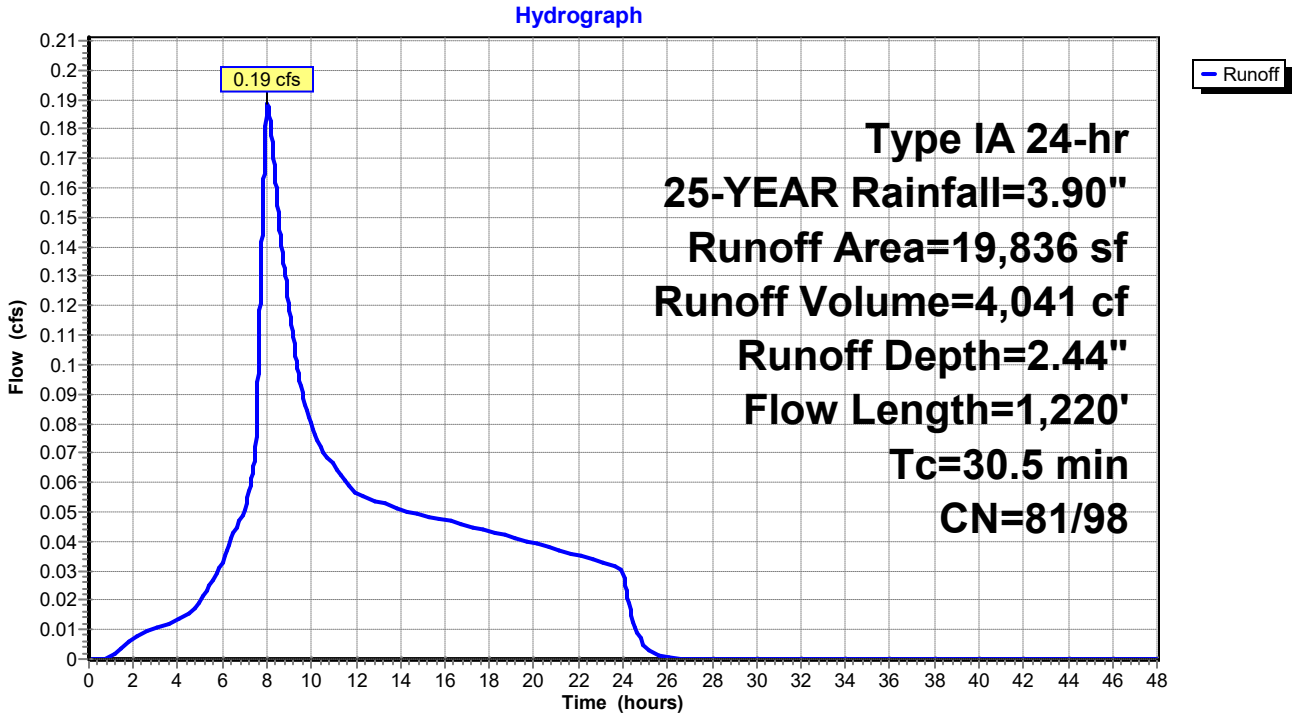
Runoff = 0.19 cfs @ 8.01 hrs, Volume= 4,041 cf, Depth= 2.44"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25-YEAR Rainfall=3.90"

	Area (sf)	CN	Description
*	19,836	85	1/2 acre lot, 25% imp, HSG D
	14,877	81	75.00% Pervious Area
	4,959	98	25.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	50	0.0050	0.61		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 2.50"
29.1	1,170	0.0020	0.67		**Shallow Concentrated Flow, SCF** Grassed Waterway Kv= 15.0 fps
30.5	1,220	Total			

Subcatchment 3X: Tax Lot 101 (Offsite)



Summary for Subcatchment 4X: Dogwood St (Offsite)

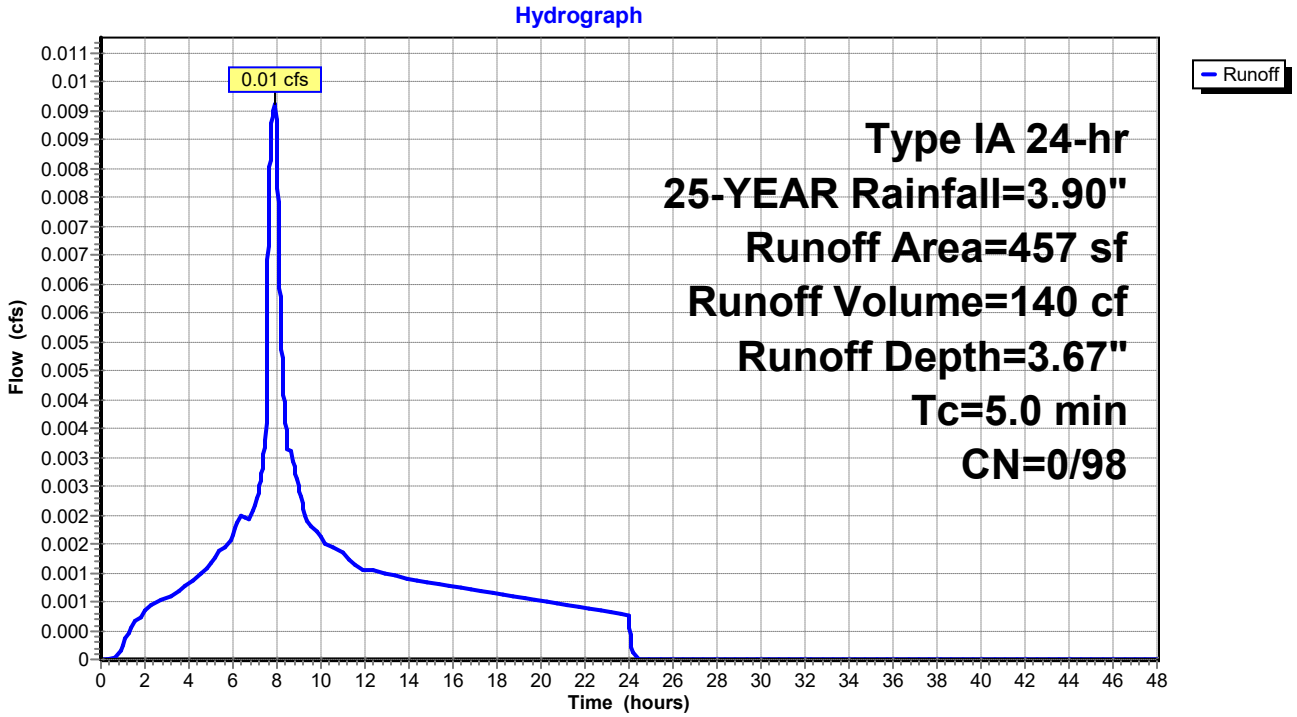
Runoff = 0.01 cfs @ 7.88 hrs, Volume= 140 cf, Depth= 3.67"

Runoff by SBUH method, Split Pervious/Imperv., Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type IA 24-hr 25-YEAR Rainfall=3.90"

	Area (sf)	CN	Description
*	457	98	RoW Impervious Area incl. Paved Road & Sidewalks
	457	98	100.00% Impervious Area

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

Subcatchment 4X: Dogwood St (Offsite)



Summary for Pond 1P: Stormwater Facility

Inflow Area = 1,416,959 sf, 66.41% Impervious, Inflow Depth = 3.09" for 25-YEAR event
Inflow = 24.62 cfs @ 7.90 hrs, Volume= 365,232 cf
Outflow = 11.07 cfs @ 8.38 hrs, Volume= 345,394 cf, Atten= 55%, Lag= 29.0 min
Primary = 11.07 cfs @ 8.38 hrs, Volume= 345,394 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Peak Elev= 175.53' @ 8.38 hrs Surf.Area= 20,080 sf Storage= 105,131 cf
Flood Elev= 176.00' Surf.Area= 21,012 sf Storage= 114,780 cf

Plug-Flow detention time= 337.4 min calculated for 345,322 cf (95% of inflow)
Center-of-Mass det. time= 298.2 min (988.4 - 690.2)

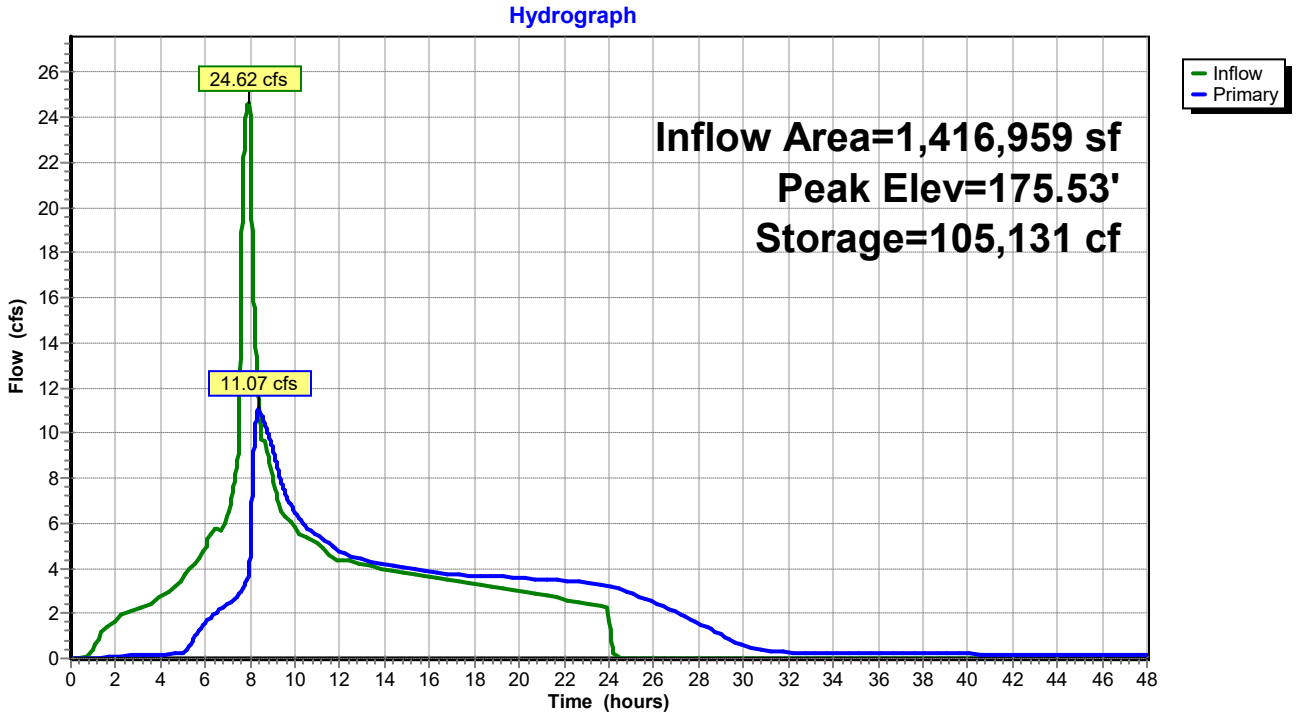
Volume	Invert	Avail.Storage	Storage Description
#1	167.70'	136,813 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
167.70	7,903	393.7	0	0	7,903
168.00	8,260	399.4	2,424	2,424	8,282
170.60	11,566	448.4	25,654	28,078	11,767
177.00	23,069	587.9	108,735	136,813	23,739

Device	Routing	Invert	Outlet Devices
#1	Primary	167.27'	**24.0" Round 24" Culvert** L= 72.6' Ke= 0.500 Inlet / Outlet Invert= 167.27' / 166.54' S= 0.0101 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Device 1	167.70'	**2.1" Horiz. WQ Orifice** C= 0.620 Limited to weir flow at low heads
#3	Device 1	170.75'	**8.0" Vert. Detention Orifice** C= 0.620
#4	Device 1	174.78'	**Grated Manhole, Cv= 3.19 (C= 3.99)** Head (feet) 0.00 0.10 0.20 0.30 0.40 0.50 0.60 0.70 0.80 0.90 1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70 2.80 2.89 Width (feet) 0.00 1.83 2.54 3.05 3.45 3.79 4.06 4.29 4.48 4.63 4.76 4.86 4.93 4.98 5.00 5.00 4.97 4.92 4.84 4.74 4.61 4.45 4.26 4.02 3.74 3.40 2.98 2.45 1.69 0.00

Primary OutFlow Max=11.07 cfs @ 8.38 hrs HW=175.53' TW=0.00' (Dynamic Tailwater)
- **1=24" Culvert** (Passes 11.07 cfs of 40.76 cfs potential flow)
  - **2=WQ Orifice** (Orifice Controls 0.33 cfs @ 13.92 fps)
  - **3=Detention Orifice** (Orifice Controls 3.66 cfs @ 10.49 fps)
  - **4=Grated Manhole** (Weir Controls 7.08 cfs @ 3.07 fps)

Pond 1P: Stormwater Facility

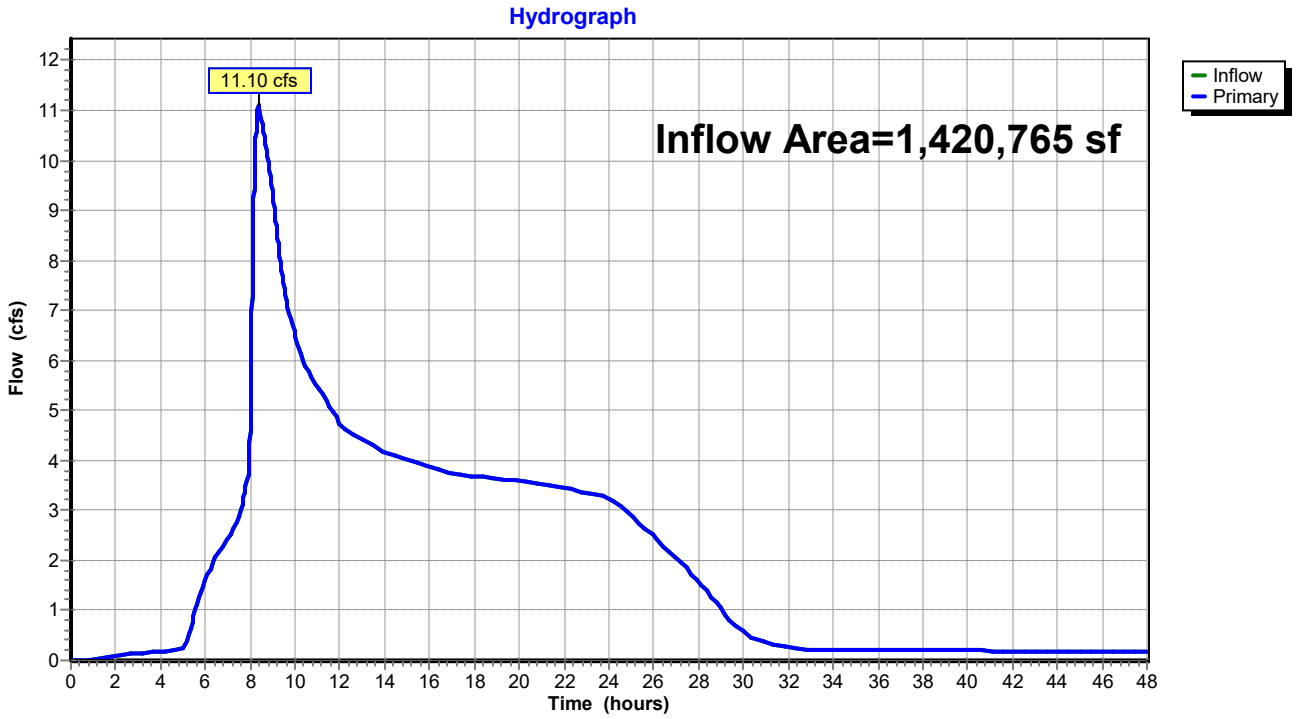


Summary for Link 1T: POST DEV TOTAL

Inflow Area = 1,420,765 sf, 66.45% Impervious, Inflow Depth > 2.93" for 25-YEAR event
Inflow = 11.10 cfs @ 8.38 hrs, Volume= 346,459 cf
Primary = 11.10 cfs @ 8.38 hrs, Volume= 346,459 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link 1T: POST DEV TOTAL



Appendix C:
Stormwater Quality Calculations

STORMWATER QUALITY

Client: The Holt Group, Inc
Project: Laurel Wood North
AKS Job No.: 4636-05
Date: December, 2025
Done By: TJB
Checked By: PAS

IMPERVIOUS AREA

Total Site Area:	31.24	acres
Total Site Area:	1,360,880	square feet
Total Number of Lots:	230	
SFA Impervious Lot Area (90% lot area):	115,312	sf
SFD Impervious Lot Area (2,640 SF/Lot):	462,000	sf
Offsite Street Impervious Area (345th & Dogwood):	35,029	sf
Alley Impervious Area:	27,495	sf
Open Space Impervious Area:	7,863	sf
Street Impervious Area:	285,203	sf
Total Impervious Area:	932,902	sf

WATER DESIGN QUALITY VOLUME (WQV)

(Per CWS 4.08.5a2 - R&O 19-22)

$$WQV = \frac{0.36" \text{ X Area (ft)}}{12" \text{ per ft}} = \mathbf{27,987} \ \mathbf{\text{cubic feet}}$$

WATER QUALITY FLOW (WQF)

(Per CWS 4.08.5a3 - R&O 19-22)

$$WQF = \frac{WQV \text{ (sf)}}{4*60*60} = \mathbf{1.94} \ \mathbf{\text{cfs}}$$

EXTENDED DRY BASIN DESIGN & CALCULATIONS

Hydraulic Design Criteria (Per CWS 4.09.5a/b/c - R&O 19-22)

Permanent Pool Depth: 0.2 ft
Permanent Pool covers bottom of basin
Design Detention Volume: 1.0 x Water Quality Volume (WQV)
Water Quality Drawdown Time: 48 hours
Maximum Depth of WQ Pool: 5 ft
Avoid direct flow across WQ pond to avoid short circuiting

Extended Dry Basin Sizing Design:

Bottom Slope (ft/ft)	Minimum Bottom Width (ft)	Side Slopes H:V	Top of Pond Elev. (ft)	Perm. Pool Depth (ft)	Pool Bottom Area (sf)	Bottom of Pool Elev. (ft)
0.0	34	3.0	177.00	0.2	7,903	167.7

Water Quality Flow Hydraulic Calculations:

Q (cfs)	Pool Elev. at WQV (ft)	Orifice CL Height (ft)	Calculated Orifice Diameter (in)	Max. Pool Elev., 25-yr (ft)	Calculated Pond WQV (cubic feet)	WQV Pool Depth (ft)
0.16	170.60	167.70	2.1	175.50	28,078	2.9

Check Against Design Criteria:

	Calculated		Meet CWS Criteria?		
Minimum Freeboard:	1.5	feet	**Yes**	more than	1 foot
Minimum Bottom Width:	34	feet	**Yes**	greater than	4 feet
Maximum Pool Depth at WQV:	2.9	feet	**Yes**	less than	5 feet
Detained Water Quality Volume:	28,078	cubic feet	**Yes**	greater than	27,987 cf

Appendix D:
NRCS Soil Resource Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Washington County, Oregon



October 10, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

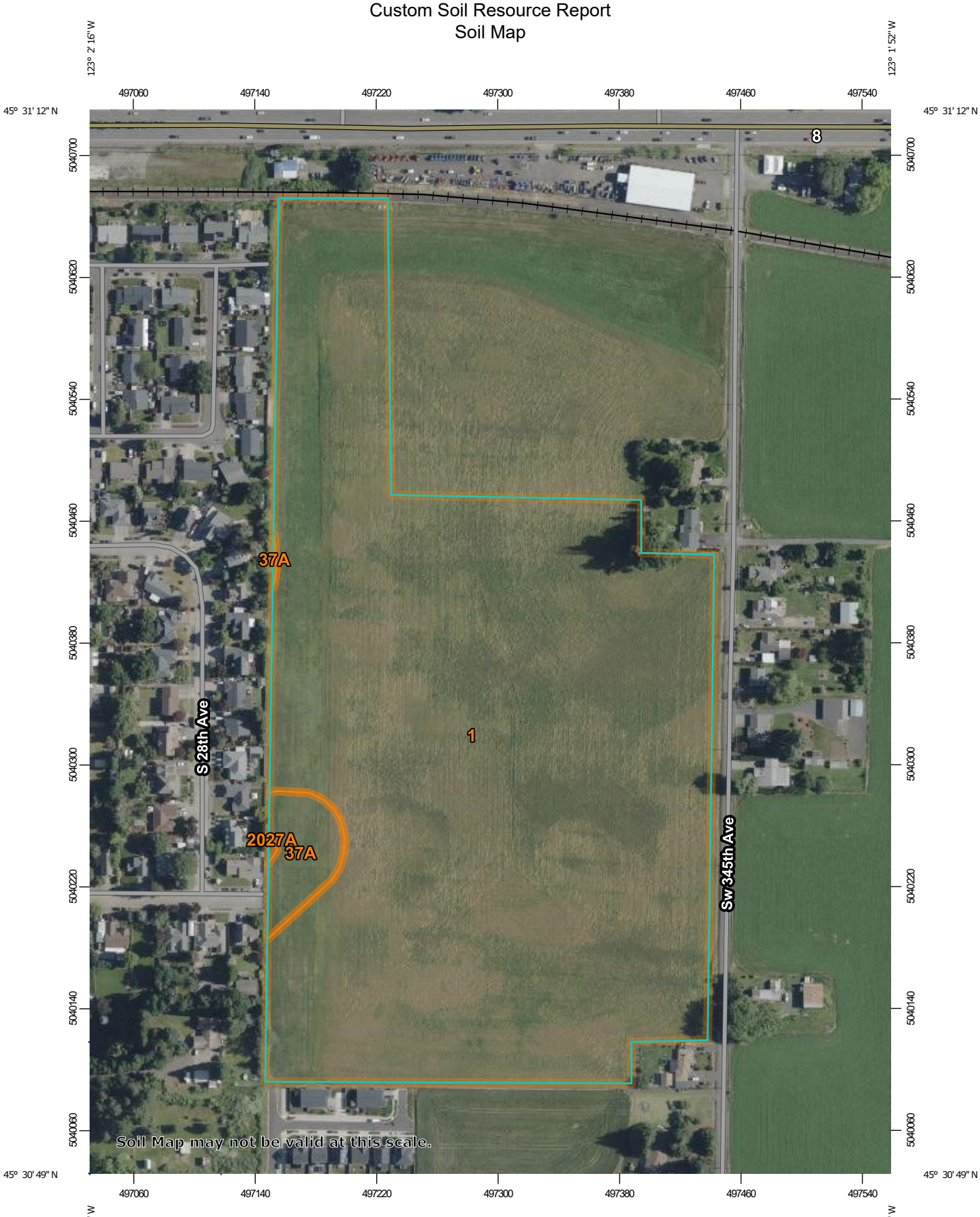
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:3,400 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Washington County, Oregon
Survey Area Data: Version 25, Sep 9, 2025

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

Date(s) aerial images were photographed: Mar 1, 2024—Jul 1, 2024

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Aloha silt loam	29.7	97.2%
37A	Quatama loam, 0 to 3 percent slopes	0.8	2.8%
2027A	Verboort silty clay loam, 0 to 3 percent slopes	0.0	0.1%
Totals for Area of Interest		**30.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Washington County, Oregon

1—Aloha silt loam

Map Unit Setting

National map unit symbol: 21x8
Elevation: 150 to 250 feet
Mean annual precipitation: 40 to 60 inches
Mean annual air temperature: 52 to 54 degrees F
Frost-free period: 160 to 210 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Aloha and similar soils: 90 percent
Minor components: 1 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Aloha

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Old loamy alluvium

Typical profile

H1 - 0 to 8 inches: silt loam
H2 - 8 to 46 inches: silt loam
H3 - 46 to 65 inches: silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 18 to 24 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.8 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C/D
Ecological site: R002XC007OR - Valley Swale Group
Forage suitability group: Somewhat Poorly Drained (G002XY005OR)
Other vegetative classification: Somewhat Poorly Drained (G002XY005OR)
Hydric soil rating: No

Minor Components

Huberly

Percent of map unit: 1 percent
Landform: Terraces

Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Poorly Drained (G002XY006OR)
Hydric soil rating: Yes

37A—Quatama loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 21zl
Elevation: 140 to 250 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 52 to 54 degrees F
Frost-free period: 165 to 210 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Quatama and similar soils: 85 percent
Minor components: 4 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Quatama

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium

Typical profile

H1 - 0 to 15 inches: loam
H2 - 15 to 30 inches: clay loam
H3 - 30 to 62 inches: loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 24 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.8 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Ecological site: R002XC008OR - Valley Terrace Group

Forage suitability group: Moderately Well Drained < 15% Slopes (G002XY004OR)
Other vegetative classification: Moderately Well Drained < 15% Slopes (G002XY004OR)
Hydric soil rating: No

Minor Components

Huberly
Percent of map unit: 4 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Other vegetative classification: Poorly Drained (G002XY006OR)
Hydric soil rating: Yes

2027A—Verboort silty clay loam, 0 to 3 percent slopes

Map Unit Setting
National map unit symbol: 2mj15
Elevation: 150 to 300 feet
Mean annual precipitation: 40 to 50 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 165 to 210 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Verboort and similar soils: 94 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Verboort

Setting
Landform: Flood plains on terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Loamy alluvium over silty and clayey glaciolacustrine deposits

Typical profile
Ap - 0 to 8 inches: silty clay loam
A - 8 to 12 inches: silty clay loam
E - 12 to 19 inches: silty clay loam
2Btg - 19 to 28 inches: clay
2BCtg - 28 to 33 inches: silty clay
2Cg - 33 to 60 inches: silty clay loam

Properties and qualities
Slope: 0 to 3 percent
Depth to restrictive feature: 16 to 26 inches to abrupt textural change

Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 8 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Ecological site: R002XC007OR - Valley Swale Group
Forage suitability group: Poorly Drained (G002XY006OR)
Other vegetative classification: Poorly Drained (G002XY006OR)
Hydric soil rating: Yes

Minor Components

Waldo

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Concave
Other vegetative classification: Poorly Drained (G002XY006OR)
Hydric soil rating: Yes

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Appendix E:
Runoff Curve Numbers from TR-55

Table 2-2a Runoff curve numbers for urban areas [1/]

Cover description: Cover type and hydrologic condition	Average percent impervious area [2/]	Curve numbers for hydrologic soil group: A	B	C	D
Fully developed urban areas (vegetation established)					
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	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	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
Developing urban areas					
Newly graded areas (pervious areas only, no vegetation) [5/]		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

1 Average runoff condition, and $I_a = 0.2S$.

2 The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

3 CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

4 Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

5 Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

Table 2-2b Runoff curve numbers for cultivated agricultural lands [1/]

Cover description			Curve numbers for hydrologic soil group			
Cover type	Treatment [2/]	Hydrologic condition [3/]	A	B	C	D
Fallow	Bare soil	—	77	86	91	94
	Crop residue cover (CR)	Poor	76	85	90	93
		Good	74	83	88	90
Row crops	Straight row (SR)	Poor	72	81	88	91
		Good	67	78	85	89
	SR + CR	Poor	71	80	87	90
		Good	64	75	82	85
	Contoured (C)	Poor	70	79	84	88
		Good	65	75	82	86
	C + CR	Poor	69	78	83	87
		Good	64	74	81	85
	Contoured & terraced (C&T)	Poor	66	74	80	82
		Good	62	71	78	81
	C&T+ CR	Poor	65	73	79	81
		Good	61	70	77	80
Small grain	SR	Poor	65	76	84	88
		Good	63	75	83	87
	SR + CR	Poor	64	75	83	86
		Good	60	72	80	84
	C	Poor	63	74	82	85
		Good	61	73	81	84
	C + CR	Poor	62	73	81	84
		Good	60	72	80	83
	C&T	Poor	61	72	79	82
		Good	59	70	78	81
	C&T+ CR	Poor	60	71	78	81
		Good	58	69	77	80
Close-seeded or broadcast legumes or rotation meadow	SR	Poor	66	77	85	89
		Good	58	72	81	85
	C	Poor	64	75	83	85
		Good	55	69	78	83
	C&T	Poor	63	73	80	83
		Good	51	67	76	80

[1] Average runoff condition, and I_a=0.2S

[2] Crop residue cover applies only if residue is on at least 5% of the surface throughout the year.

[3] Hydraulic condition is based on combination factors that affect infiltration and runoff, including (a) density and canopy of vegetative areas, (b) amount of year-round cover, (c) amount of grass or close-seeded legumes, (d) percent of residue cover on the land surface (good ≥ 20%), and (e) degree of surface roughness.

Poor: Factors impair infiltration and tend to increase runoff.

Good: Factors encourage average and better than average infiltration and tend to decrease runoff.

Table 2-2c Runoff curve numbers for other agricultural lands [1/]

Cover description		Curve numbers for hydrologic soil group			
Cover type	Hydrologic condition	A	B	C	D
Pasture, grassland, or range—continuous forage for grazing. [2/]	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadow—continuous grass, protected from grazing and generally mowed for hay.	—	30	58	71	78
Brush—brush-weed-grass mixture with brush the major element. [3/]	Poor	48	67	77	83
	Fair	35	56	70	77
	Good	30 [4/]	48	65	73
Woods—grass combination (orchard or tree farm). [5/]	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods. [6/]	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	30 [4/]	55	70	77
Farmsteads—buildings, lanes, driveways, and surrounding lots.	—	59	74	82	86

1 Average runoff condition, and $I_a = 0.2S$.

2 *Poor:* <50%) ground cover or heavily grazed with no mulch.
Fair: 50 to 75% ground cover and not heavily grazed.
Good: > 75% ground cover and lightly or only occasionally grazed.

3 *Poor*: <50% ground cover.
Fair: 50 to 75% ground cover.
Good: >75% ground cover.

4 Actual curve number is less than 30; use CN = 30 for runoff computations.

5 CN's shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CN's for woods and pasture.

6 *Poor:* Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.
Fair: Woods are grazed but not burned, and some forest litter covers the soil.
Good: Woods are protected from grazing, and litter and brush adequately cover the soil.

Table 2-2d Runoff curve numbers for arid and semiarid rangelands [1/]

Cover description		Curve numbers for hydrologic soil group			
Cover type	Hydrologic condition [2/]	A [3/]	B	C	D
Herbaceous—mixture of grass, weeds, and low-growing brush, with brush the minor element.	Poor		80	87	93
	Fair		71	81	89
	Good		62	74	85
Oak-aspen—mountain brush mixture of oak brush, aspen, mountain mahogany, bitter brush, maple, and other brush.	Poor		66	74	79
	Fair		48	57	63
	Good		30	41	48
Pinyon-juniper—pinyon, juniper, or both; grass understory.	Poor		75	85	89
	Fair		58	73	80
	Good		41	61	71
Sagebrush with grass understory.	Poor		67	80	85
	Fair		51	63	70
	Good		35	47	55
Desert shrub—major plants include saltbush, greasewood, creosotebush, blackbrush, bursage, palo verde, mesquite, and cactus.	Poor	63	77	85	88
	Fair	55	72	81	86
	Good	49	68	79	84

1 Average runoff condition, and I_a, = 0.2S. For range in humid regions, use table 2-2c.
2 Poor: <30% ground cover (litter, grass, and brush overstory).
Fair: 30 to 70% ground cover.
Good: > 70% ground cover.
3 Curve numbers for group A have been developed only for desert shrub.

Exhibit H: Neighborhood Meeting Materials [Updated]

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AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN ROAD, SUITE 100
TUALATIN, OR 97062
(503) 563-6151

September 23, 2025

Re: Neighborhood Meeting - Laurel Crown Subdivision, Planned Unit Development/Conditional Use and Comprehensive Plan Map Amendment

Dear Neighbor/Property Owner:

AKS Engineering & Forestry, LLC, is holding a neighborhood meeting regarding a ±41-acre property located at 305 SW 345th Ave on the eastern side of the City of Cornelius, immediately west of SW 345th Avenue and south of E Baseline Street and the railroad tracks and right-of-way. The property is described as Washington County Assessor's Map 1S302A, Tax Lot 100, and has Low-Density Residential (R-7) and Multi-Unit Residential (A-2) zoning designations per the City Comprehensive Plan and Zone Map. The project involves a subdivision to create ±230 lots for single-family detached and attached homes, and associated improvements including open space, pedestrian paths, public streets, and utilities, among other infrastructure improvements. The project also includes a Planned Unit Development (PUD)/ Conditional Use to provide flexibility to the lot standards and a Comprehensive Plan Map Amendment to update the street classifications on the Transportation System Plan (TSP). Please see the map and conceptual site plan included for details.

Prior to applying to the City of Cornelius, we would like to take the opportunity to discuss the project in more detail with you. The purpose of this meeting is to provide a forum for surrounding property owners/residents to review and discuss the project before the application is submitted to the City. We will attempt to answer questions relevant to meeting development standards consistent with the City of Cornelius' Municipal code.

Pursuant to Cornelius Municipal Code Chapter 18.10.030, you are invited to attend a meeting on:

October 15, 2025, at 6:00 pm
Free Orchards Elementary School, Gymnasium
2499 S Beech Street
Cornelius, OR 97113

Please note this meeting will be an informational meeting based on preliminary plans. These plans may be altered prior to submittal of the application to the City. Depending upon the type of land use action required, you may receive official notice from the City of Cornelius inviting you to participate with written comments and/or providing you an opportunity to attend a public hearing.

I look forward to discussing this project with you. If you have questions, but will be unable to attend, please feel free to call me at 503-563-6151 or email me at southerlandg@aks-eng.com.

Sincerely,

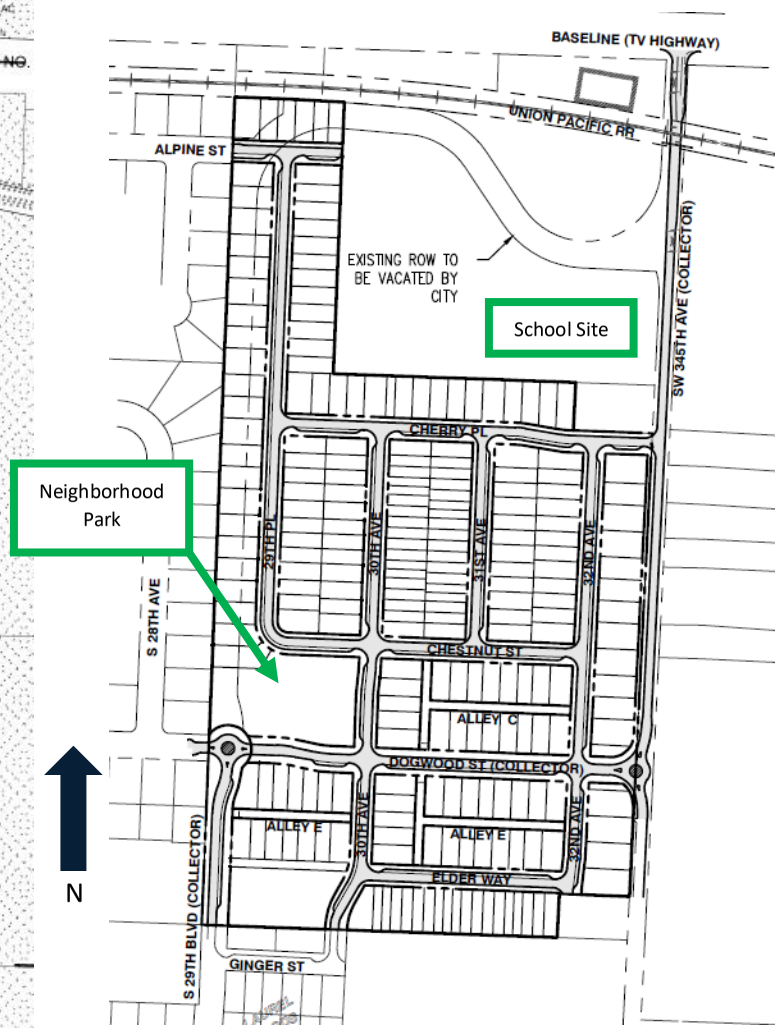
AKS ENGINEERING & FORESTRY, LLC

Glen Southerland, AICP

Vicinity Map/Tax Map



Conceptual Layout



NEIGHBORHOOD MEETING
AFFIDAVIT OF MAILING

STATE OF OREGON)
SS
County of Washington)

I, Margaret Gordon, being duly sworn, say that on the 23rd day of September, 20 25 I caused to have mailed, to each of the persons on the attached list, a notice of a meeting to discuss a proposed development at 305 SW 345th Avenue Cornelius, OR 97113, a copy of which notice so mailed is attached hereto and made a part thereof.

I further state that said notices were enclosed in envelopes plainly addressed to said persons and were deposited on the date indicated above in the United States Post Office with postage prepaid thereon.

Margaret Gordon
Signature

Subscribed and sworn to, or affirmed, before me this 23rd day of September, 20 25.

Stacey Morrill
Notary Public for the State of Oregon

County of Washington

My Commission expires: April 08, 2028

OFFICIAL STAMP
STACEY MORRILL
NOTARY PUBLIC - OREGON
COMMISSION NO. 1047068
MY COMMISSION EXPIRES APRIL 08, 2026

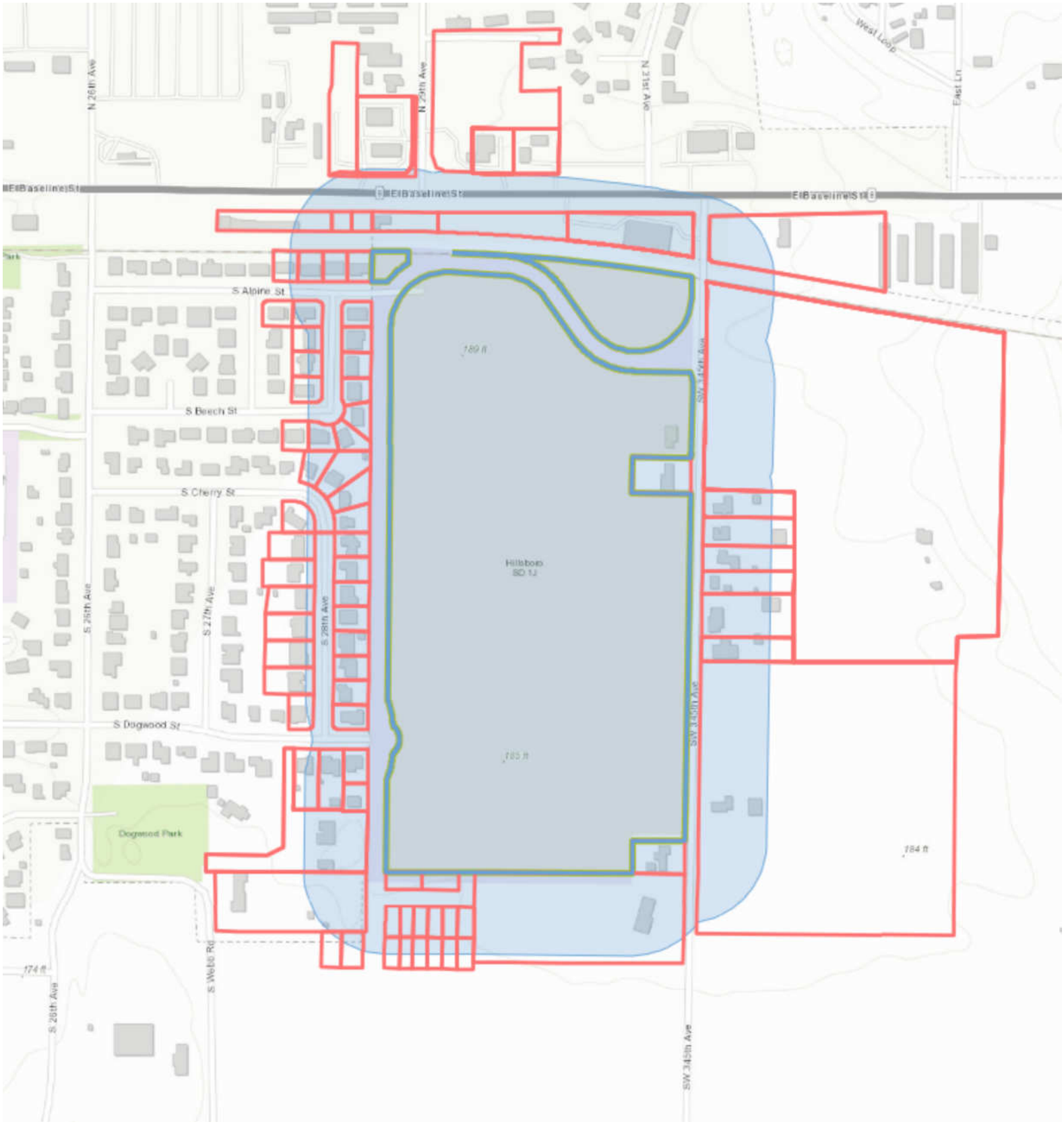
First American Title™

Mailing Notifications

Subject: 305 SW 345th Ave Hillsboro, OR 97123

503.219.8746(TRIO) | cs.oregon@firstam.com

Report Created: 9/17/2025



Buffer Distance: 250 feet

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Parcel Number	Reference Parcel Number	Owner Name	Site Address	Site City	Site State	Site Zip	Mailing Address	Mail City	Mail State	Mail Zip	Improvement Type	Land Use
R756006	1N334DC-01300	Cornelius Oil Llc	2888 Baseline St	Cornelius	OR	97113	30085 SW Parkway Ave	Wilsonville	OR	97070	Commercial Building	COMMERCIAL
P2114854	1N334DC-01300	CORNELIUS OIL LLC	2888 BASELINE ST	Cornelius	OR	97113	30085 SW PARKWAY AVE	Wilsonville		97070		
R2180545	1N334DC-01300	Cornelius Oil Llc	No Site Address	Cornelius	OR		30085 SW Parkway Ave	Wilsonville	OR	97070	Commercial Building	COMMERCIAL
R756006	1N334DC-01300	Cornelius Oil Llc	2888 Baseline St	Cornelius	OR	97113	30085 SW Parkway Ave	Wilsonville	OR	97070	Commercial Building	COMMERCIAL
P2114854	1N334DC-01300	CORNELIUS OIL LLC	2888 BASELINE ST	Cornelius	OR	97113	30085 SW PARKWAY AVE	Wilsonville		97070		
R2180545	1N334DC-01300	Cornelius Oil Llc	No Site Address	Cornelius	OR		30085 SW Parkway Ave	Wilsonville	OR	97070	Commercial Building	COMMERCIAL
R2100678	1N334DC-01301	Cornelius City Of	Ns # Ns # NS	Cornelius	OR		1355 N Barlow St	Cornelius	OR	97113	City-Municipal-Town-Village Owned	EXEMPT
R756015	1N334DC-01400	Bilal Melli	2818 Baseline St	Cornelius	OR	97113	7435 SW 87th Ave	Portland	OR	97223	Commercial-Vacant Land	VACANT
R2100679	1N334DC-01401	Cornelius City Of	Ns # Ns # NS	Cornelius	OR		1355 N Barlow St	Cornelius	OR	97113	City-Municipal-Town-Village Owned	EXEMPT
R755837	1N334DD-07700	Amerco Real Estate Co	Ns # Ns # NS	Cornelius	OR		2727 N Central Ave	Phoenix	AZ	85004	Commercial Building	COMMERCIAL
R755846	1N334DD-07900	Amerco Real Estate Company	2962 Baseline St	Cornelius	OR	97113	2727 N Central Ave	Phoenix	AZ	85004	Commercial Building	COMMERCIAL
P878946	1N334DD-07900	AMERCO REAL ESTATE CO	2962 BASELINE ST	Cornelius	OR	97113	2727 N CENTRAL AVE	Phoenix		85004		
R2032354	1N334DD-07900	Outfront Media	No Site Address	Cornelius	OR		715 NE Everett St	Portland	OR	97232	Commercial Building	COMMERCIAL
R755846	1N334DD-07900	Amerco Real Estate Company	2962 Baseline St	Cornelius	OR	97113	2727 N Central Ave	Phoenix	AZ	85004	Commercial Building	COMMERCIAL
P878946	1N334DD-07900	OUTFRONT MEDIA	2962 BASELINE ST	Cornelius	OR	97113	715 NE EVERETT ST	Portland		97232		
R2032354	1N334DD-07900	Outfront Media	No Site Address	Cornelius	OR		715 NE Everett St	Portland	OR	97232	Commercial Building	COMMERCIAL
R755775	1N334DD-08000	Loranger Properties Llc	2990 Baseline St	Cornelius	OR	97113	Po Box 326	Hillsboro	OR	97123	Commercial Building	COMMERCIAL
P2070993	1N334DD-08000	LORANGER PROPERTIES LLC	2990 BASELINE ST	Cornelius	OR	97113	PO BOX 326	Hillsboro		97123		
P2023189	1N334DD-08000	LORANGER PROPERTIES LLC	2990 BASELINE ST	Cornelius	OR	97113	PO BOX 326	Hillsboro		97123		
R2209549	1S13100-02200	Beaverton School District 48J	No Site Address	Beaverton	OR		16550 SW Merlo Rd	Beaverton	OR	97003	Public School	EXEMPT
R402086	1S302B0-00800	Rodney Dean & Tina Lou Sahnow	500 SW 345th Ave	Hillsboro	OR	97123	500 SW 345th Ave	Hillsboro	OR	97123	Farm land	AGRICULTIRAL
R402095	1S302B0-00801	Colleen Hampton & Ashish Khanna	540 SW 345th Ave	Hillsboro	OR	97123	540 SW 345th Ave	Hillsboro	OR	97123	Farm land	AGRICULTIRAL
P2218506	1S302B0-00801	KHANNA ASHISH & HAMPTON COLLEEN D	540 SW 345TH AVE	Hillsboro	OR	97123	540 SW 345TH AVE	Hillsboro		97123		
R402102	1S302B0-00802	Brigetta Martell	350 SW 345th Ave	Hillsboro	OR	97123	350 SW 345th Ave	Hillsboro	OR	97123	Farm land	AGRICULTIRAL
R402111	1S302B0-00802	Brigetta Martell	350 SW 345th Ave	Hillsboro	OR	97123	350 SW 345th Ave	Hillsboro	OR	97123	Farm land	AGRICULTIRAL
R402102	1S302B0-00802	Brigetta Martell	350 SW 345th Ave	Hillsboro	OR	97123	350 SW 345th Ave	Hillsboro	OR	97123	Farm land	AGRICULTIRAL
R402111	1S302B0-00802	Brigetta Martell	350 SW 345th Ave	Hillsboro	OR	97123	350 SW 345th Ave	Hillsboro	OR	97123	Farm land	AGRICULTIRAL
R402120	1S302B0-00900	Brigetta Martell	370 SW 345th Ave	Hillsboro	OR	97123	350 SW 345th Ave	Hillsboro	OR	97123	Farm land	AGRICULTIRAL
R402139	1S302B0-01000	Glenda & Harold Haines	400 SW 345th Ave	Hillsboro	OR	97123	400 SW 345th Ave	Hillsboro	OR	97123	Farm land	AGRICULTIRAL
R402148	1S302B0-01100	Neal Ewing	430 SW 345th Ave	Hillsboro	OR	97123	430 SW 345th Ave	Hillsboro	OR	97123	Farm land	AGRICULTIRAL
R402157	1S302B0-01200	Anthony & Monique Martell	460 SW 345th Ave	Hillsboro	OR	97123	460 SW 345th Ave	Hillsboro	OR	97123	Farm land	AGRICULTIRAL
R402166	1S302B0-01300	Gcab Llc	680 SW 345th Ave	Hillsboro	OR	97123	4200 NW Visitation Rd	Forest Grove	OR	97116	Farm land	AGRICULTIRAL
R2095502	1S302B0-01400	Martell Highway Llc	34420 SW Tualatin Valley Hwy	Cornelius	OR	97113	350 SW 345th Ave	Hillsboro	OR	97123	Farm land	AGRICULTIRAL
P2055034	1S302B0-01400	MARTELL HIGHWAY LLC	34420 SW TUALATIN VALLEY HWY	Hillsboro	OR	97123	350 SW 345TH AVE	Hillsboro		97123		
R402503	1S303A0-00101	Losey Gary M & Joy K Joint Tru	345 SW 345th Ave	Hillsboro	OR	97123	345 SW 345th Ave	Hillsboro	OR	97123	Single Family Residential	RESIDENTIAL
R402549	1S303AA-00100	JTR Property, LLC	55 SW 345th Ave	Cornelius	OR	97113	1308 E Mead Ave	Union Gap	WA	98903	Commercial Building	COMMERCIAL
P2199484	1S303AA-00100	JTR PROPERTY LLC	55 SW 345TH AVE	Cornelius	OR	97113	1308 E MEAD AVE	Yakima		98902		
P2077081	1S303AA-00100	JTR PROPERTY LLC	55 SW 345TH AVE	Cornelius	OR	97113	1308 E MEAD AVE	Yakima		98902		
P2212951	1S303AA-00100	JTR PROPERTY LLC	55 SW 345TH AVE	Cornelius	OR	97113	1308 E MEAD AVE	Yakima		98902		
R402512	1S303AA-00200	JTR Property, LLC	Ns # Ns # NS	Cornelius	OR		1308 E Mead Ave	Union Gap	WA	98903	Commercial-Vacant Land	VACANT
R402521	1S303AA-00300	Rady Chin	2899 Baseline St	Cornelius	OR	97113	2899 Baseline St	Cornelius	OR	97113	Commercial Building	COMMERCIAL
R402567	1S303AA-00400	Hans & Eugene Llc	Ns # Ns # NS	Cornelius	OR		14425 SW Allen Blvd	Beaverton	OR	97005	Commercial-Vacant Land	VACANT
R402576	1S303AA-00550	Hans & Eugene Llc	2761 Baseline St	Cornelius	OR	97113	14425 SW Allen Blvd	Beaverton	OR	97005	Commercial Building	COMMERCIAL
R2218867	1S303AA-00551	Hans & Eugene Llc	No Site Address	Cornelius	OR		14425 SW Allen Blvd	Beaverton	OR	97005	Commercial Building	COMMERCIAL
R2009604	1S303AA-00700	David & Mary Hill	446 S 28th Ave	Cornelius	OR	97113	446 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2009605	1S303AA-00800	Miguel Sepulveda	400 S 28th Ave	Cornelius	OR	97113	400 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2009606	1S303AA-00900	Bunny Girt	392 S 28th Ave	Cornelius	OR	97113	Po Box 543	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2009607	1S303AA-01000	Atwood	390 S 28th Ave	Cornelius	OR	97113	390 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2009608	1S303AA-01100	Trevor Holser & Brittany Oconnor	387 S 28th Ave	Cornelius	OR	97113	387 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2009609	1S303AA-01200	Richard O & Judity E Waggoner	389 S 28th Ave	Cornelius	OR	97113	389 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2009610	1S303AA-01300	Peters	391 S 28th Ave	Cornelius	OR	97113	391 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2009611	1S303AA-01400	Kevin & Tabetha Stage	451 S 28th Ave	Cornelius	OR	97113	451 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2035732	1S303AA-01800	Jaime Aguilar	2788 S Cherry St	Cornelius	OR	97113	2788 S Cherry St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2035733	1S303AA-01900	Ashley & Joel Schneider	2800 S Cherry St	Cornelius	OR	97113	2800 S Cherry St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2035734	1S303AA-02000	Mirna Davila	318 S 28th Ave	Cornelius	OR	97113	318 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2035735	1S303AA-02100	Joana Jones	352 S 28th Ave	Cornelius	OR	97113	352 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2035736	1S303AA-02200	Lily & Oscar Nowell	2777 S Cherry St	Cornelius	OR	97113	2777 S Cherry St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2060683	1S303AA-02500	Shannon & Thomas Tsui	2753 S Beech St	Cornelius	OR	97113	2753 S Beech St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2060684	1S303AA-02600	Victor Garcia & Maria Delochoa	2799 S Beech St	Cornelius	OR	97113	517 SW Walnut St	Hillsboro	OR	97123	Single Family Residential	RESIDENTIAL
R2060685	1S303AA-02700	Rosa Antunez & Leoncio Vasquez	198 S 28th Ave	Cornelius	OR	97113	198 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2060686	1S303AA-02800	Abraham & Veronica Trejo	194 S 28th Ave	Cornelius	OR	97113	194 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2060687	1S303AA-02900	Carmen Castaneda	182 S 28th Ave	Cornelius	OR	97113	182 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2060688	1S303AA-03000	Guadalupe Guevara & Rafael Mandujano	168 S 28th Ave	Cornelius	OR	97113	168 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2060689	1S303AA-03100	Barbara & Paul Bolte	132 S 28th Ave	Cornelius	OR	97113	132 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2060690	1S303AA-03200	Maria Villalobos	2807 S Alpine St	Cornelius	OR	97113	2807 S Alpine St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2060691	1S303AA-03300	Gabriela Alipio & Andres Garcia	2810 S Alpine St	Cornelius	OR	97113	2810 S Alpine St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2060692	1S303AA-03400	Mary & Richard Stiles	2800 S Alpine St	Cornelius	OR	97113	2800 S Alpine St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2060693	1S303AA-03500	Sophia Messmer & Monica Valdez	2794 S Alpine St	Cornelius	OR	97113	2794 S Alpine St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL

R2060694	1S303AA-03600	Maria & Reyes Pantoja	2789 S Alpine St	Cornelius	OR	97113	2789 S Alpine St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2060695	1S303AA-03700	Mayra Castaneda & Hector Villanueva	135 S 28th Ave	Cornelius	OR	97113	135 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2060696	1S303AA-03800	Javaise & Titus Misa	169 S 28th Ave	Cornelius	OR	97113	169 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2060697	1S303AA-03900	Kiara & Michael Higby	2788 S Beech St	Cornelius	OR	97113	2788 S Beech St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2050436	1S303AB-05000	Joshua Wharton	2730 S Alpine St	Cornelius	OR	97113	2730 S Alpine St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2050437	1S303AB-05100	Ricardo & Roberto Calixto	2711 S Alpine St	Cornelius	OR	97113	2711 S Alpine St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2000441	1S303AD-00100	D Anderson	2803 S Dogwood St	Cornelius	OR	97113	2803 S Dogwood St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2000442	1S303AD-00200	Wright	2801 S Dogwood St	Cornelius	OR	97113	6658 SE Frances St	Hillsboro	OR	97123	Single Family Residential	RESIDENTIAL
R2000443	1S303AD-00300	Tonya & Vaughn Brandaw	2711 S Dogwood St	Cornelius	OR	97113	2711 S Dogwood St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
P2030159	1S303AD-00400	PETSHOW FAMILY LP	760 SW WEBB RD	Cornelius	OR	97113	2725 NW GALES CREEK RD	Forest Grove		97116		
R2000444	1S303AD-00400	Petshow Family Lp	760 S Webb Rd	Cornelius	OR	97113	2725 NW Gales Creek Rd	Forest Grove	OR	97116	Single Family Residential	RESIDENTIAL
R2008839	1S303AD-00402	D Anderson	Ns # Ns # NS	Cornelius	OR		2803 S Dogwood St	Cornelius	OR	97113	Residential-Vacant Land	VACANT
R2000460	1S303AD-01200	Desiree A & Timothy B Pomeroy	2706 S Dogwood St	Cornelius	OR	97113	2706 S Dogwood St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2000461	1S303AD-01300	Maria Mireles & Henry Solano	2800 S Dogwood St	Cornelius	OR	97113	2800 S Dogwood St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2009601	1S303AD-01400	Stewart Kelsey	452 S 28th Ave	Cornelius	OR	97113	452 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2009602	1S303AD-01500	Jessicca Bieker & Jeffrey Morford	450 S 28th Ave	Cornelius	OR	97113	450 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2009603	1S303AD-01600	Kathy & Samuel Dalrymple	448 S 28th Ave	Cornelius	OR	97113	448 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2009613	1S303AD-01700	James & Joy Hamel	453 S 28th Ave	Cornelius	OR	97113	453 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2009614	1S303AD-01800	Kimberly & Shaun Wickham	455 S 28th Ave	Cornelius	OR	97113	455 S 28th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R402530	1S303AD-02300	Maribel Gutierrez & Alfredo Mercado	775 SW 345th Ave	Hillsboro	OR	97123	775 SW 345th Ave	Hillsboro	OR	97123	Single Family Residential	RESIDENTIAL
R405886	1S303AD-02400	Reiling	865 SW 345th Ave	Hillsboro	OR	97123	865 SW 345th Ave	Hillsboro	OR	97123	Single Family Residential	RESIDENTIAL
R2069142	1S303AD-02500	Myriam Alvarado & Jose Loeza	780 S Webb Rd	Cornelius	OR	97113	780 S Webb Rd	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2217615	1S303AD-04800	Joanne & Matthew White	2952 S Heather St	Cornelius	OR	97113	2952 S Heather St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2217616	1S303AD-04900	Theresa Allegro & Cody Pierce	2940 S Heather St	Cornelius	OR	97113	2940 S Heather St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2217617	1S303AD-05000	Jaena & Jeany Cabanilla	2936 S Heather St	Cornelius	OR	97113	2936 S Heather St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2217618	1S303AD-05100	Laura Calixtro & Mario Corona	2922 S Heather St	Cornelius	OR	97113	2922 S Heather St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2217619	1S303AD-05200	Rosalinda & Saralyn Stalford	2912 S Heather St	Cornelius	OR	97113	2912 S Heather St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2217620	1S303AD-05300	Ashok Naiku	2904 S Heather St	Cornelius	OR	97113	2904 S Heather St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2217621	1S303AD-05400	James Ellefson & Kristin Thompson	2903 S Ginger St	Cornelius	OR	97113	2903 S Ginger St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2217622	1S303AD-05500	Aura Denavarijo & Rogelio Gonzalez	2913 S Ginger St	Cornelius	OR	97113	2913 S Ginger St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2217623	1S303AD-05600	Davis & Kandace Achong	2923 S Ginger St	Cornelius	OR	97113	2923 S Ginger St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2217624	1S303AD-05700	Jonathan Banks & Reagan Legare	2935 S Ginger St	Cornelius	OR	97113	2935 S Ginger St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2217625	1S303AD-05800	Benjamin Kate & Kate Ten	2941 S Ginger St	Cornelius	OR	97113	2941 S Ginger St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2217626	1S303AD-05900	Dallas & Kayla Radke	2951 S Ginger St	Cornelius	OR	97113	2951 S Ginger St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2217627	1S303AD-06000	Gisele Dasilva & Virgil Ortigas	689 S 30th Ave	Cornelius	OR	97113	689 S 30th Ave	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2217628	1S303AD-06100	Ivylou Rosado	2926 S Ginger St	Cornelius	OR	97113	2926 S Ginger St	Cornelius	OR	97113	Single Family Residential	RESIDENTIAL
R2234315	1S303AD-13900	Holt Homes & Laurelwood Development Llc	2800 S Heather St	Cornelius	OR	97113	1301 SE Tech Center Dr STE 150	Vancouver	WA	98683	Residential-Vacant Land	VACANT
R2234316	1S303AD-14000	Holt Homes & Laurelwood Development Llc	2890 S Heather St	Cornelius	OR	97113	1301 SE Tech Center Dr STE 150	Vancouver	WA	98683	Residential-Vacant Land	VACANT

DUPLICATE TAX LOTS

1S303AA-02800
Abraham & Veronica Trejo
194 S 28th Ave
Cornelius, OR 97113

1N334DD-07700, 07900
Amerco Real Estate Co
2727 N Central Ave
Phoenix, AZ 85004

1S302B0-01200
Anthony & Monique Martell
460 SW 345th Ave
Hillsboro, OR 97123

1S303AA-01900
Ashley & Joel Schneider
2800 S Cherry St
Cornelius, OR 97113

1S303AD-05300
Ashok Naiku
2904 S Heather St
Cornelius, OR 97113

1S303AA-01000
Atwood
390 S 28th Ave
Cornelius, OR 97113

1S303AD-05500
Aura Denavarijo & Rogelio Gonzalez
2913 S Ginger St
Cornelius, OR 97113

1S303AA-03100
Barbara & Paul Bolte
132 S 28th Ave
Cornelius, OR 97113

1S13100-02200
Beaverton School District 48J
16550 SW Merlo Rd
Beaverton, OR 97003

1S303AD-05800
Benjamin Kate & Kate Ten
2941 S Ginger St
Cornelius, OR 97113

1N334DC-01400
Bilal Melli
7435 SW 87th Ave
Portland, OR 97223

1S303AA-00900
Bunny Girt
Po Box 543
Cornelius, OR 97113

1S303AA-02900
Carmen Castaneda
182 S 28th Ave
Cornelius, OR 97113

1S302B0-00801
Colleen Hampton & Ashish Khanna
540 SW 345th Ave
Hillsboro, OR 97123

1N334DC-01301, 01401
Cornelius City Of
1355 N Barlow St
Cornelius, OR 97113

1N334DC-01300
Cornelius Oil Llc
30085 SW Parkway Ave
Wilsonville, OR 97070

1S303AD-00100, 00402
D Anderson
2803 S Dogwood St
Cornelius, OR 97113

1S303AD-05900
Dallas & Kayla Radke
2951 S Ginger St
Cornelius, OR 97113

1S303AA-00700
David & Mary Hill
446 S 28th Ave
Cornelius, OR 97113

1S303AD-05600
Davis & Kandace Achong
2923 S Ginger St
Cornelius, OR 97113

1S303AD-01200
Desiree A & Timothy B Pomeroy
2706 S Dogwood St
Cornelius, OR 97113

1S303AA-03300
Gabriela Alipio & Andres Garcia
2810 S Alpine St
Cornelius, OR 97113

1S302B0-01300
Gcab Llc
4200 NW Visitation Rd
Forest Grove, OR 97116

1S303AD-06000
Gisele Dasilva & Virgil Ortigas
689 S 30th Ave
Cornelius, OR 97113

1S302B0-01000
Glenda & Harold Haines
400 SW 345th Ave
Hillsboro, OR 97123

1S303AA-03000
Guadalupe Guevara & Rafael Mandujano
168 S 28th Ave
Cornelius, OR 97113

1S303AA-00400, 00550, 00551
Hans & Eugene Llc
14425 SW Allen Blvd
Beaverton, OR 97005

1S303AD-13900, 14000
Holt Homes & Laurelwood Dev Llc
1301 SE Tech Center Dr STE 150
Vancouver, WA 98683

1S303AD-06100
Ivylou Rosado
2926 S Ginger St
Cornelius, OR 97113

1S303AD-05000
Jaena & Jeany Cabanilla
2936 S Heather St
Cornelius, OR 97113

1S303AA-01800
Jaime Aguilar
2788 S Cherry St
Cornelius, OR 97113

1S303AA-03800
Javaise & Titus Misa
169 S 28th Ave
Cornelius, OR 97113

1S303AD-04800
Joanne & Matthew White
2952 S Heather St
Cornelius, OR 97113

1S303AD-01600
Kathy & Samuel Dalrymple
448 S 28th Ave
Cornelius, OR 97113

1S303AD-01800
Kimberly & Shaun Wickham
455 S 28th Ave
Cornelius, OR 97113

1N334DD-08000
Loranger Properties Llc
Po Box 326
Hillsboro, OR 97123

1S303AD-01300
Maria Mireles & Henry Solano
2800 S Dogwood St
Cornelius, OR 97113

1S302B0-00802, 00900
Brigetta Martell
350 SW 345th Ave
Hillsboro, OR 97123

1S303AA-03700
Mayra Castaneda & Hector Villanueva
135 S 28th Ave
Cornelius, OR 97113

1S303AD-02500
Myriam Alvarado & Jose Loeza
780 S Webb Rd
Cornelius, OR 97113

1S303AD-01700
James & Joy Hamel
453 S 28th Ave
Cornelius, OR 97113

1S303AD-01500
Jessicca Bieker & Jeffrey Morford
450 S 28th Ave
Cornelius, OR 97113

1S303AD-05700
Jonathan Banks & Reagan Legare
2935 S Ginger St
Cornelius, OR 97113

1S303AA-01400
Kevin & Tabetha Stage
451 S 28th Ave
Cornelius, OR 97113

1S303AD-05100
Laura Calixtro & Mario Corona
2922 S Heather St
Cornelius, OR 97113

1S303A0-00101
Losey Gary M & Joy K Joint Tru
345 SW 345th Ave
Hillsboro, OR 97123

1S303AA-03200
Maria Villalobos
2807 S Alpine St
Cornelius, OR 97113

1S302B0-01400
Martell Highway Llc
350 SW 345th Ave
Hillsboro, OR 97123

1S303AA-00800
Miguel Sepulveda
400 S 28th Ave
Cornelius, OR 97113

1S302B0-01100
Neal Ewing
430 SW 345th Ave
Hillsboro, OR 97123

1S303AD-05400
James Ellefson & Kristin Thompson
2903 S Ginger St
Cornelius, OR 97113

1S303AA-02100
Joana Jones
352 S 28th Ave
Cornelius, OR 97113

1S303AB-05000
Joshua Wharton
2730 S Alpine St
Cornelius, OR 97113

1S303AA-03900
Kiara & Michael Higby
2788 S Beech St
Cornelius, OR 97113

1S303AA-02200
Lily & Oscar Nowell
2777 S Cherry St
Cornelius, OR 97113

1S303AA-03600
Maria & Reyes Pantoja
2789 S Alpine St
Cornelius, OR 97113

1S303AD-02300
Maribel Gutierrez & Alfredo Mercado
775 SW 345th Ave
Hillsboro, OR 97123

1S303AA-03400
Mary & Richard Stiles
2800 S Alpine St
Cornelius, OR 97113

1S303AA-02000
Mirna Davila
318 S 28th Ave
Cornelius, OR 97113

1S303AA-01300
Peters
391 S 28th Ave
Cornelius, OR 97113

1S303AD-00400
PETSHOW FAMILY LP
2725 NW GALES CREEK RD
Forest Grove, OR 97116

1S303AB-05100
Ricardo & Roberto Calixto
2711 S Alpine St
Cornelius, OR 97113

1S303AA-02700
Rosa Antunez & Leoncio Vasquez
198 S 28th Ave
Cornelius, OR 97113

1S303AA-03500
Sophia Messmer & Monica Valdez
2794 S Alpine St
Cornelius, OR 97113

1S303AD-04900
Theresa Allegro & Cody Pierce
2940 S Heather St
Cornelius, OR 97113

1S303AA-02600
Victor Garcia & Maria Delochoa
517 SW Walnut St
Hillsboro, OR 97123

1S303AA-00300
Rady Chin
2899 Baseline St
Cornelius, OR 97113

1S303AA-01200
Richard O & Judity E Waggoner
389 S 28th Ave
Cornelius, OR 97113

1S303AD-05200
Rosalinda & Saralyn Stalford
2912 S Heather St
Cornelius, OR 97113

1S303AD-01400
Stewart Kelsey
452 S 28th Ave
Cornelius, OR 97113

1S303AD-00300
Tonya & Vaughn Brandaw
2711 S Dogwood St
Cornelius, OR 97113

1S303AD-00200
Wright
6658 SE Frances St
Hillsboro, OR 97123

1S303AD-02400
Reiling
865 SW 345th Ave
Hillsboro, OR 97123

1S302B0-00800
Rodney Dean & Tina Lou Sahnow
500 SW 345th Ave
Hillsboro, OR 97123

1S303AA-02500
Shannon & Thomas Tsui
2753 S Beech St
Cornelius, OR 97113

1S303AA-00100, 00200
JTR Property, LLC
1308 E Mead Ave
Union Gap, WA 98903

1S303AA-01100
Trevor Holser & Brittany Oconnor
387 S 28th Ave
Cornelius, OR 97113

Glen Southerland

From: mcrubio@centrocultural.org
Sent: Thursday, October 9, 2025 3:06 PM
To: Glen Southerland
Cc: agarcia@centrocultural.org; Melissa Slotemaker; Maggie Gordon
Subject: Re: City of Cornelius Development

Categories: Filed by Newforma

Proceed with caution: This email hails from an external source. Unverified emails may lead to phishing attacks or malware infiltration. Always exercise due diligence.

Thanks for reaching out, Glen. I will share with our communications director to get the word out to folks we work with and others. I live at the Trails at Laurel Woods and am familiar with the area and plan.
Thanks again,

Maria Caballero Rubio
Executive Director

On Thu, Oct 9, 2025 at 2:55 PM Glen Southerland <southerlandg@aks-eng.com> wrote:

> Hello Maria and Andrea!
>
> I am a Land Use Planner with AKS Engineering, and we are working on a ±230-lot subdivision and plan amendment project in the southeastern area of the City of Cornelius.
>
> We are having a neighborhood meeting regarding our project next week (October 15th) at Free Orchards Elementary School. The City suggested that we reach out to try to let any parties know who might be interested but aren't typically able to provide questions/comments or be involved in the land use process.
>
> I've attached a copy of the notice that shows the location and gives a brief summary of the project. Please feel free to share the information as you wish and please let me know if you have any questions.
>
> I'd be happy to discuss if you'd like to have a call or virtual meeting, just let me know!
>
> Thank you,

Glen Southerland, AICP

AKS ENGINEERING & FORESTRY, LLC

12965 SW Herman Road, Suite 100 | Tualatin, OR 97062

P: 503.563.6151 Ext. 166 | www.aks-eng.com | southerlandg@aks-eng.com
Oregon: Bend, Keizer, The Dalles, Tualatin

Washington: Kirkland, Richland, Vancouver, Wenatchee, White Salmon

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Glen Southerland

From: Glen Southerland
Sent: Thursday, October 9, 2025 2:56 PM
To: mcrubio@centrocultural.org; agarcia@centrocultural.org
Cc: Melissa Slotemaker; Maggie Gordon
Subject: City of Cornelius Development
Attachments: 4636-05 20250917 Neighborhood Meeting Letter .pdf

Categories: Filed by Newforma

Hello Maria and Andrea!

I am a Land Use Planner with AKS Engineering, and we are working on a ±230-lot subdivision and plan amendment project in the southeastern area of the City of Cornelius.

We are having a neighborhood meeting regarding our project next week (October 15th) at Free Orchards Elementary School. The City suggested that we reach out to try to let any parties know who might be interested but aren't typically able to provide questions/comments or be involved in the land use process.

I've attached a copy of the notice that shows the location and gives a brief summary of the project. Please feel free to share the information as you wish and please let me know if you have any questions.

I'd be happy to discuss if you'd like to have a call or virtual meeting, just let me know!

Thank you,

Glen Southerland, AICP

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Oregon: Bend, Keizer, The Dalles, Tualatin
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WWW.AKS-ENG.COM

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN ROAD, SUITE 100
TUALATIN, OR 97062
(503) 563-6151

September 23, 2025

Re: Neighborhood Meeting - Laurel Crown Subdivision, Planned Unit Development/Conditional Use and Comprehensive Plan Map Amendment

Dear Neighbor/Property Owner:

AKS Engineering & Forestry, LLC, is holding a neighborhood meeting regarding a ±41-acre property located at 305 SW 345th Ave on the eastern side of the City of Cornelius, immediately west of SW 345th Avenue and south of E Baseline Street and the railroad tracks and right-of-way. The property is described as Washington County Assessor's Map 1S302A, Tax Lot 100, and has Low-Density Residential (R-7) and Multi-Unit Residential (A-2) zoning designations per the City Comprehensive Plan and Zone Map. The project involves a subdivision to create ±230 lots for single-family detached and attached homes, and associated improvements including open space, pedestrian paths, public streets, and utilities, among other infrastructure improvements. The project also includes a Planned Unit Development (PUD)/ Conditional Use to provide flexibility to the lot standards and a Comprehensive Plan Map Amendment to update the street classifications on the Transportation System Plan (TSP). Please see the map and conceptual site plan included for details.

Prior to applying to the City of Cornelius, we would like to take the opportunity to discuss the project in more detail with you. The purpose of this meeting is to provide a forum for surrounding property owners/residents to review and discuss the project before the application is submitted to the City. We will attempt to answer questions relevant to meeting development standards consistent with the City of Cornelius' Municipal code.

Pursuant to Cornelius Municipal Code Chapter 18.10.030, you are invited to attend a meeting on:

October 15, 2025, at 6:00 pm
Free Orchards Elementary School, Gymnasium
2499 S Beech Street
Cornelius, OR 97113

Please note this meeting will be an informational meeting based on preliminary plans. These plans may be altered prior to submittal of the application to the City. Depending upon the type of land use action required, you may receive official notice from the City of Cornelius inviting you to participate with written comments and/or providing you an opportunity to attend a public hearing.

I look forward to discussing this project with you. If you have questions, but will be unable to attend, please feel free to call me at 503-563-6151 or email me at southerlandg@aks-eng.com.

Sincerely,

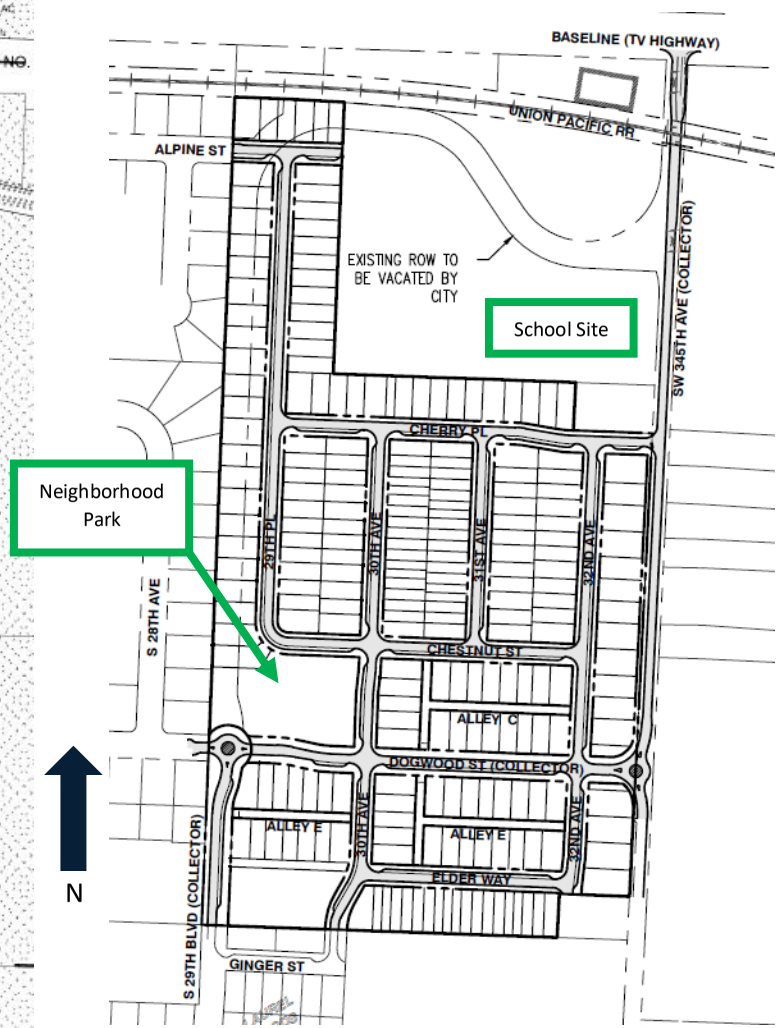
AKS ENGINEERING & FORESTRY, LLC

Glen Southerland, AICP

Vicinity Map/Tax Map



Conceptual Layout



WWW.AKS-ENG.COM

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN ROAD, SUITE 100
TUALATIN, OR 97062
(503) 563-6151

November 4, 2025

Neighborhood Meeting Summary: Laurel Crown Subdivision, Planned Unit Development/Conditional Use and Comprehensive Plan Map Amendment
Meeting Date: October 15, 2025
Time: 6:00 PM
Location: Free Orchards Elementary School, Gymnasium

The following serves as a summary of the Neighborhood Meeting process. On September 23, 2025, property owners within 250 feet of the proposed development site were sent notification of the proposed Subdivision, Planned Unit Development/Conditional Use and Comprehensive Plan Map Amendment applications. This notification included the project location, project details, and the neighborhood meeting date, time, and location.

On October 15, 2025, meeting presenters included Glen Southerland of AKS Engineering & Forestry and Joe Schiewe of Holt Homes. Other representatives from Holt Homes and AKS Engineering were also in attendance. The meeting began with an introduction by Glen Southerland summarizing the project and the applications. Information about the City's review process and opportunities for public input were provided. Following the introduction, attendees were then given the opportunity to ask questions. The following topics were discussed:

- Traffic volumes, speeding, and truck traffic. Safety for kids: increased traffic on formerly dead-end streets where children play.
- Phasing/timing: objection to delaying the SW 345th Ave connection until Phase 3 — residents want the connection sooner.
- Other transportation related concerns: Mini-roundabout/large vehicle access, parking adequacy, road wear and maintenance funding, and emergency access/fire code.
- Drainage/stormwater and irrigation: agricultural drainage ditch routing and impacts to neighbor fields/wells.
- Communication and city coordination: poor notification/clarity about city plans.
- Property impacts and fencing: where fences will be placed, new privacy fences along property lines, and effect on specific parcels.
- School impacts: worry new homes will increase students/traffic and that school capacity/enrollment assumptions are uncertain.
- Sidewalks/paths and buffering: requests for clear sidewalk/multi-use path locations, planter strips, and pedestrian protection.

The meeting concluded at approximately 7:30 pm.

Sincerely,

AKS ENGINEERING & FORESTRY, LLC



Melissa Slotemaker

Laurel Crown

Subdivision, Planned Unit Development/Conditional Use Permit, Plan Map Amendment

Neighborhood Meeting – October 15, 2025

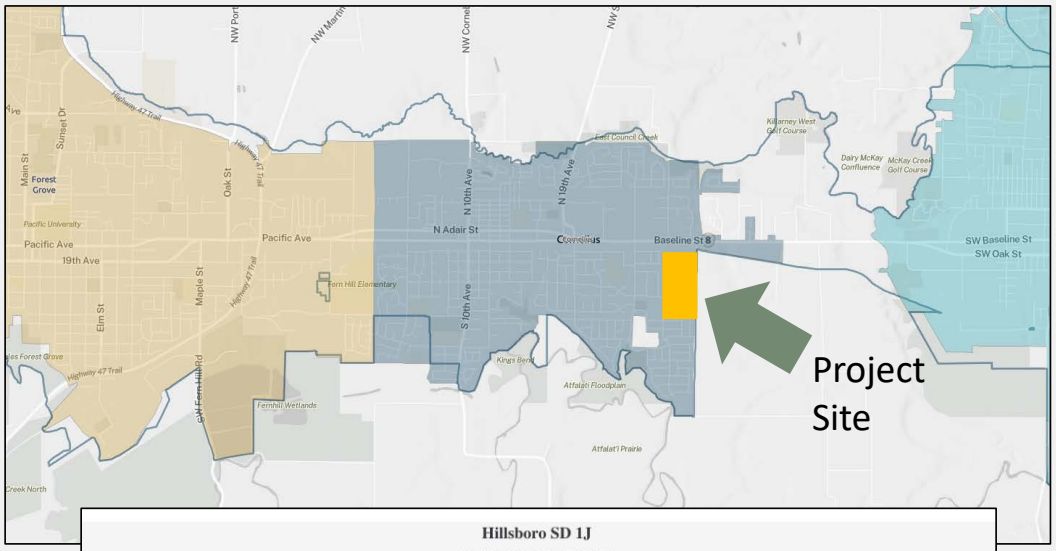
HOLT HOMES
Built for the Pacific Northwest

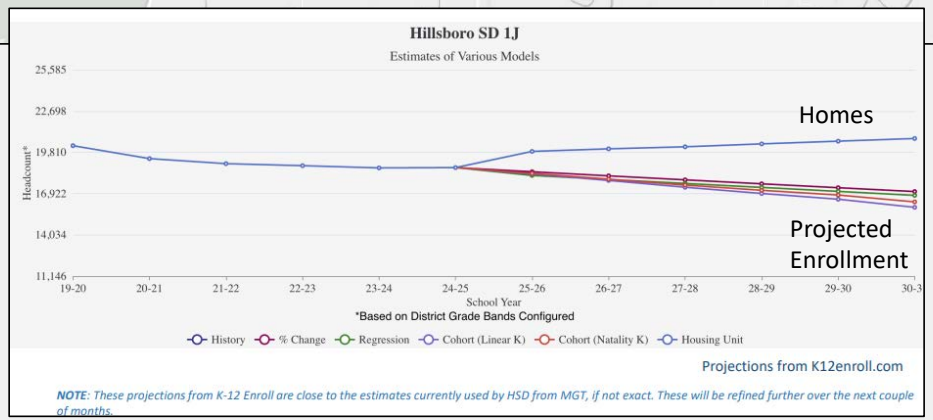
AKS ENGINEERING & FORESTRY

Introductions

Applicant
Holt Homes Inc.
Joe Schiewe, Senior Project Manager

Land Use Planning and Civil Engineering Consultant
AKS Engineering & Forestry, LLC
Glen Southerland, AICP
Melissa Slotemaker, AICP
Paul Sellke, PE





LAUREL CROWN

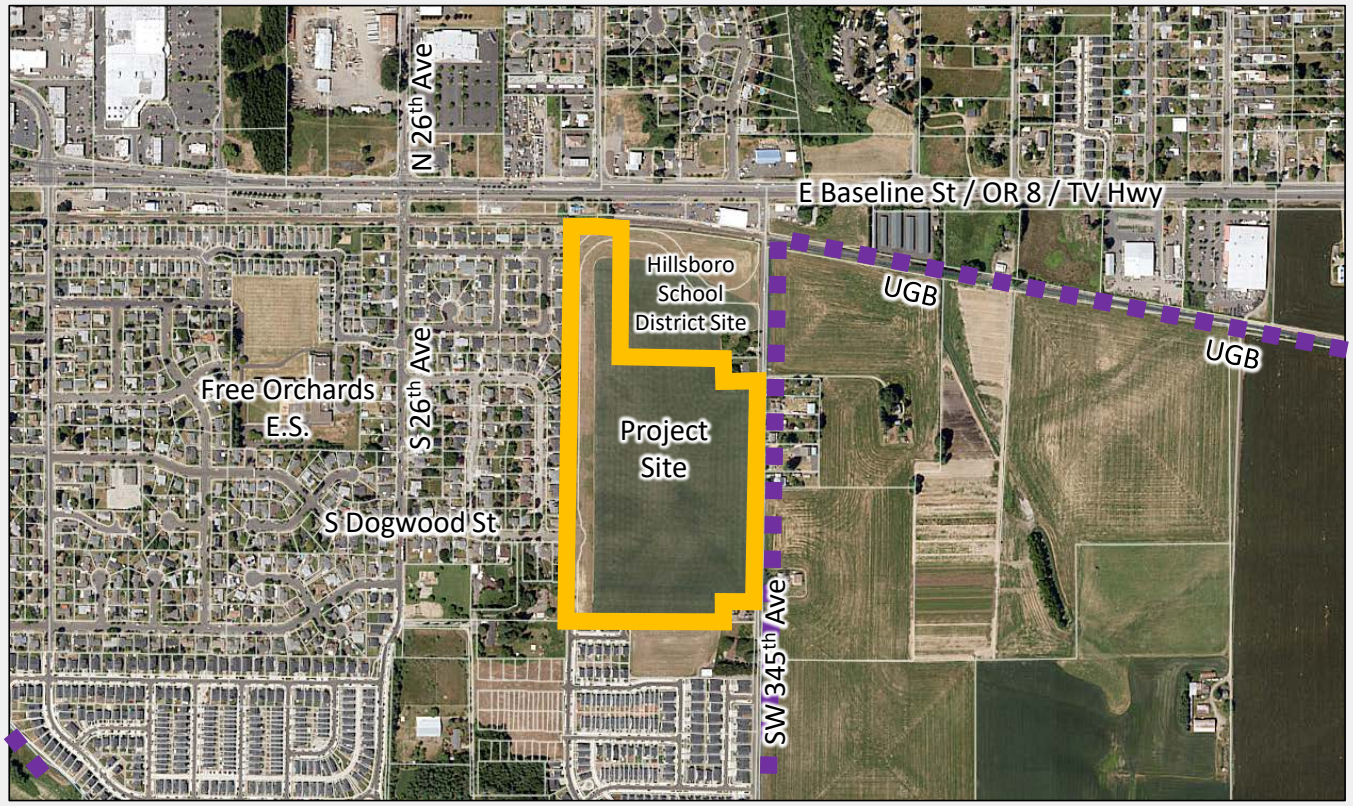
Background

- Site previously owned by Hillsboro School District
- District expects lower future enrollment and no need for another high school (Glencoe HS is ±2.5 mi away)
- Partition of property
- Portion of site preserved for possible future school
- Existing conditions: one residence & field

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LAUREL CROWN

Location



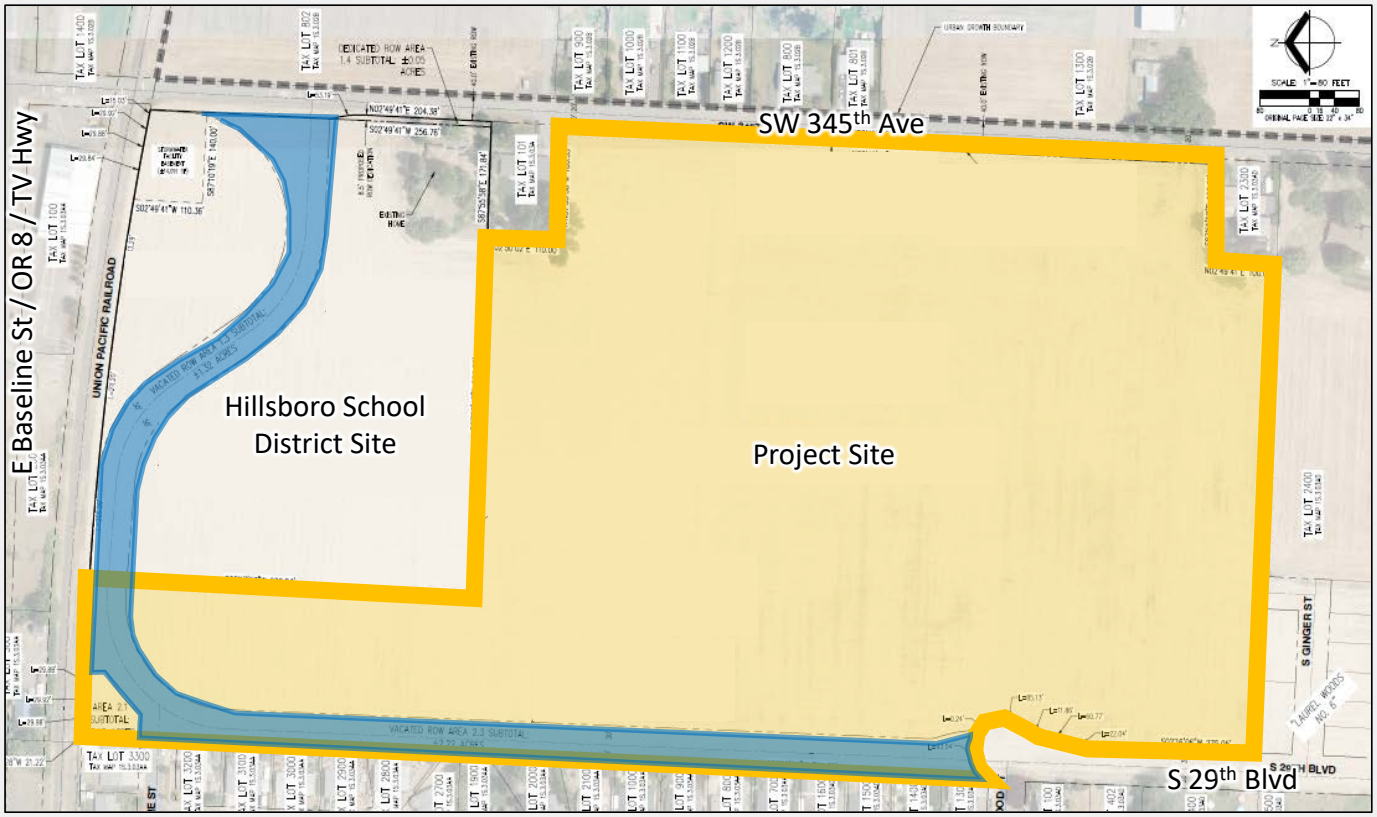
- Southeast UGB area (2015)
- South of OR 8 / E Baseline Street
- West of SW 345th Avenue
- North of Laurel Woods subdivision
- East of subdivisions along S 28th Avenue

AKS ENGINEERING & FORESTRY

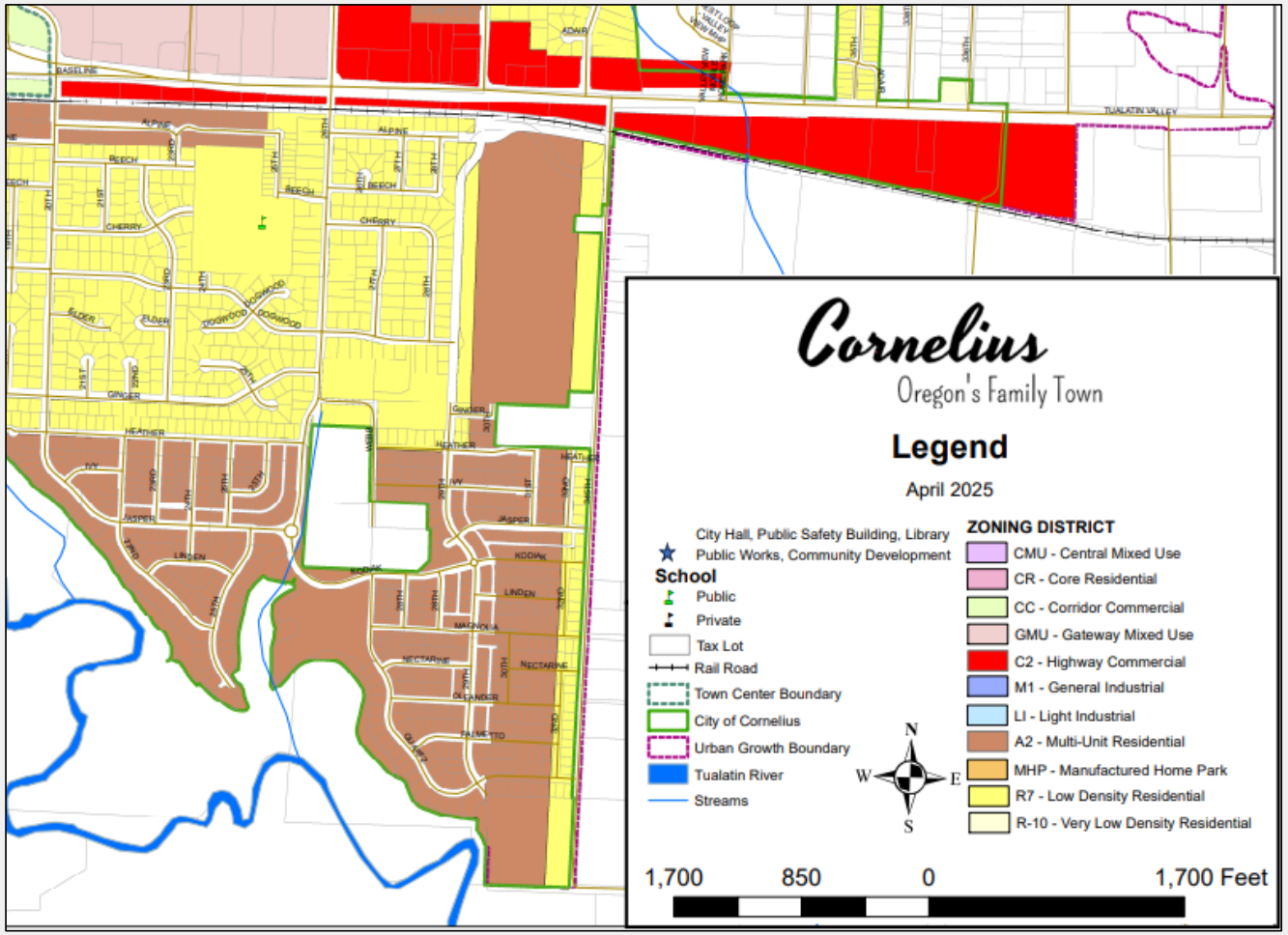
LAUREL CROWN

Location

- The subject property has frontage along SW 345th Ave
- Approved partition pictured at right
- Previously platted streets will be vacated



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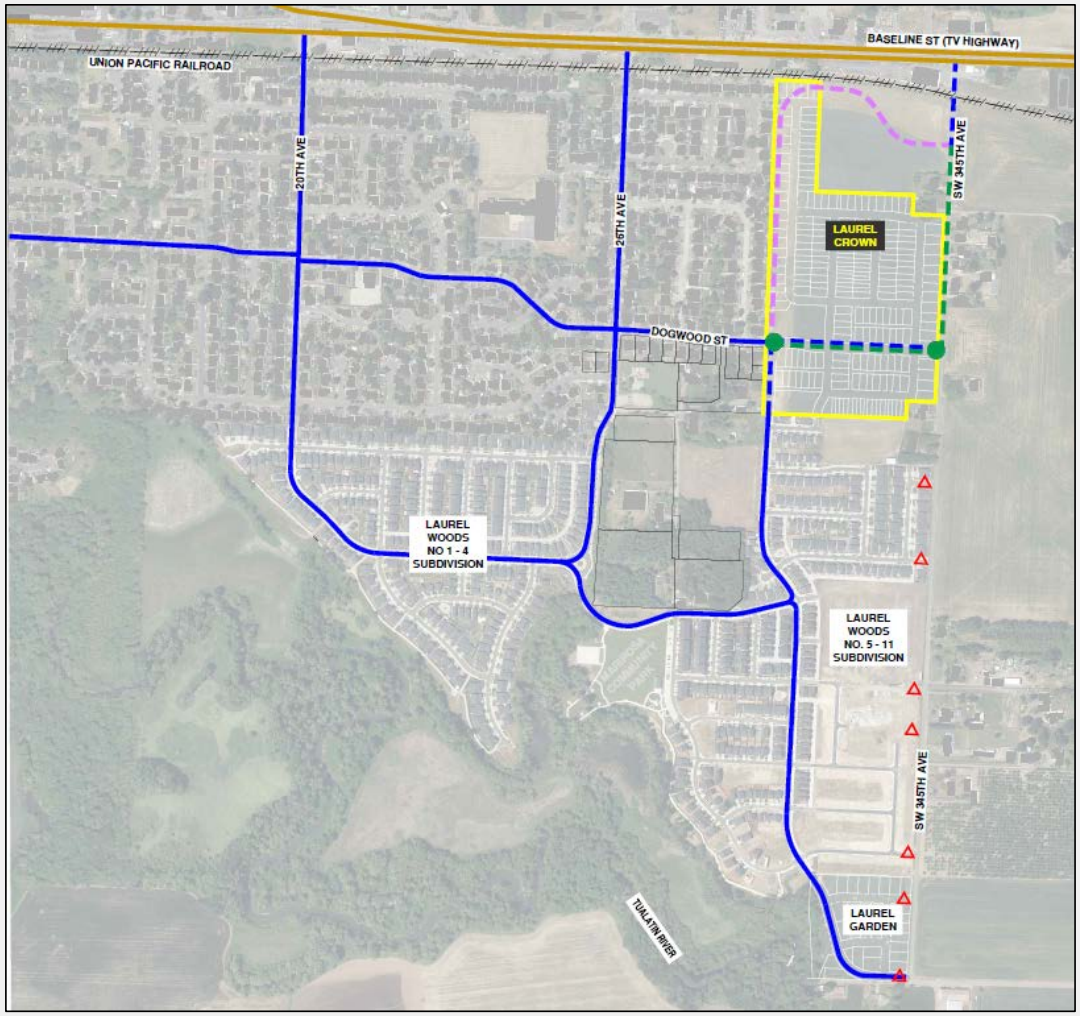


LAUREL CROWN

Zoning

- R7 – Low Density Residential along S 29th Street and SW 345th Avenue
- A2 – Multi-Unit Residential in interior of site

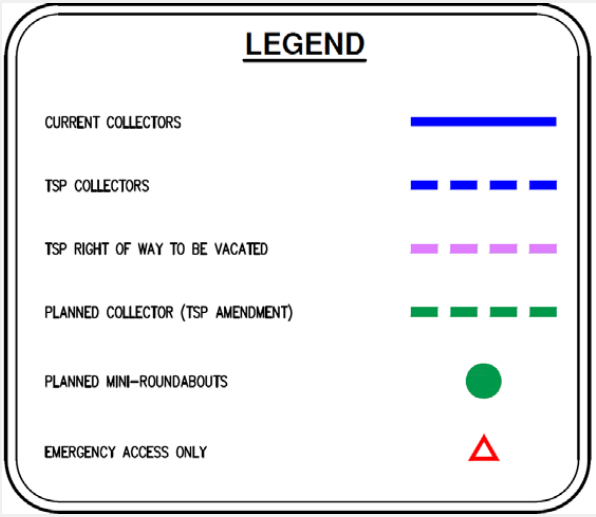
AKS ENGINEERING & FORESTRY



LAUREL CROWN

Plan Map Amendment

- Transportation System Plan



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LAUREL CROWN

Subdivision Site Plan



- ±230 single-family detached and attached homes
- 3 phases
  - SW 345th Ave not accessed until construction of last phase
  - Interim traffic directed towards S 26th Ave
- Open space park, playground, and dog park planned

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LAUREL CROWN

Home Type Site Plan



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Park Site Plan

- Neighborhood park
  - Open field area for play
  - Dog park
  - Playground
  - Covered and open seating
  - Extensive landscaping
  - Sidewalks and walking pathways



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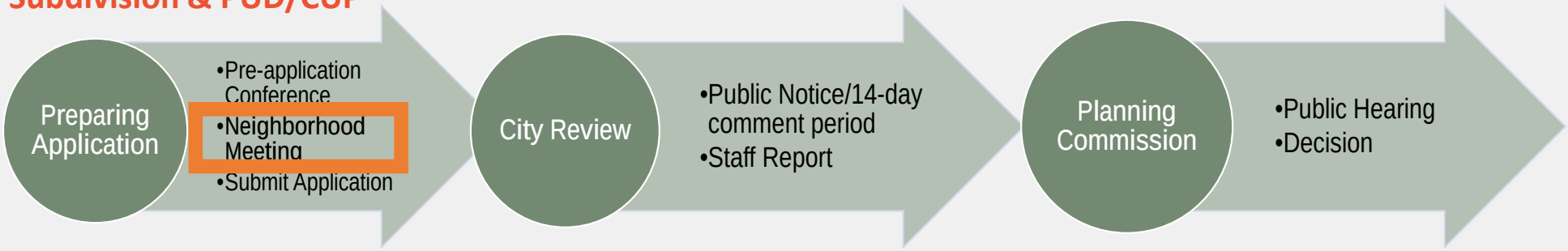
LAUREL CROWN

Land Use Process

Comprehensive Plan Map Amendment



Subdivision & PUD/CUP



AKS ENGINEERING & FORESTRY

Thank you!

We appreciate your time.
Questions?

Glen Southerland, AICP
Melissa Slotemaker, AICP
Paul Sellke, PE

southerlandg@aks-eng.com

AKS Engineering & Forestry, LLC
12965 SW Herman Road, Suite 100
Tualatin, OR 97062
(503) 563-6151

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HOLT HOMES
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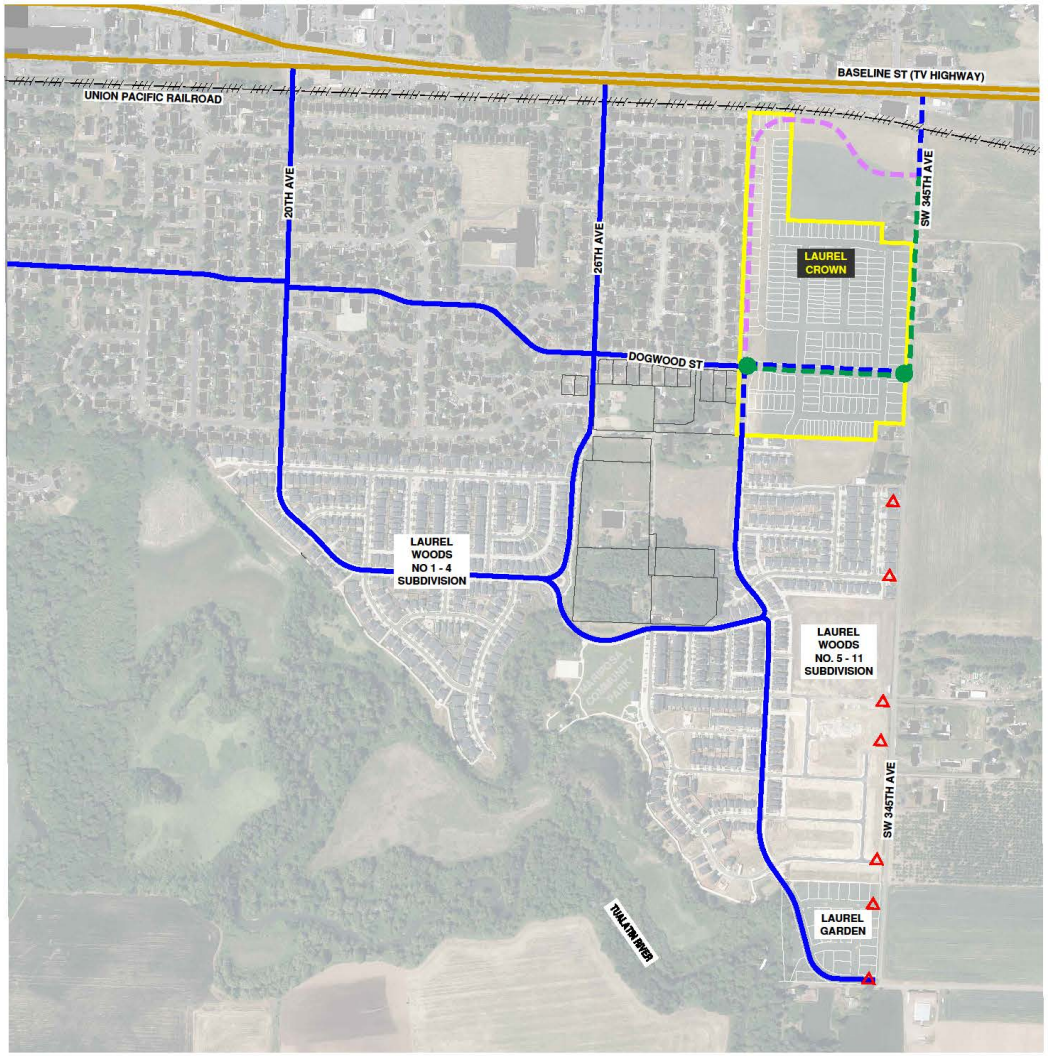
AKS

ENGINEERING · SURVEYING · NATURAL RESOURCES
FORESTRY · PLANNING · LANDSCAPE ARCHITECTURE

COLOR MASTER PLAN
LAUREL CROWN
HOLT HOMES
CORNELIUS, OREGON

PRELIMINARY
NOT FOR
CONSTRUCTION

JOB NUMBER:	4536-05
DATE:	
DESIGNED BY:	NKP
DRAWN BY:	NKP
CHECKED BY:	PAS



N

SCALE: 1" = 300 FEET

300 0 60 150 300

LEGEND

- CURRENT COLLECTORS
- TSP COLLECTORS
- TSP RIGHT OF WAY TO BE VACATED
- PLANNED COLLECTOR (TSP AMENDMENT)
- PLANNED MINI-ROUNDABOUTS
- EMERGENCY ACCESS ONLY

AKS ENGINEERING & FORESTRY, LLC
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TUALATIN, OR 97062
503.563.3131
WWW.AKS-ENG.COM

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FORESTRY · PLANNING · LANDSCAPE ARCHITECTURE

AERIAL VICINITY MAP
LAUREL CROWN
HOLT HOMES
CORNELIUS, OREGON

JOB NUMBER:	4536-05
DATE:	10/8/2025
DESIGNED BY:	
DRAWN BY:	MEM
CHECKED BY:	PAS

AERIAL

AKS DRAWING FILE: 4536-05 AERIAL VICINITY | LAYOUT: AERIAL



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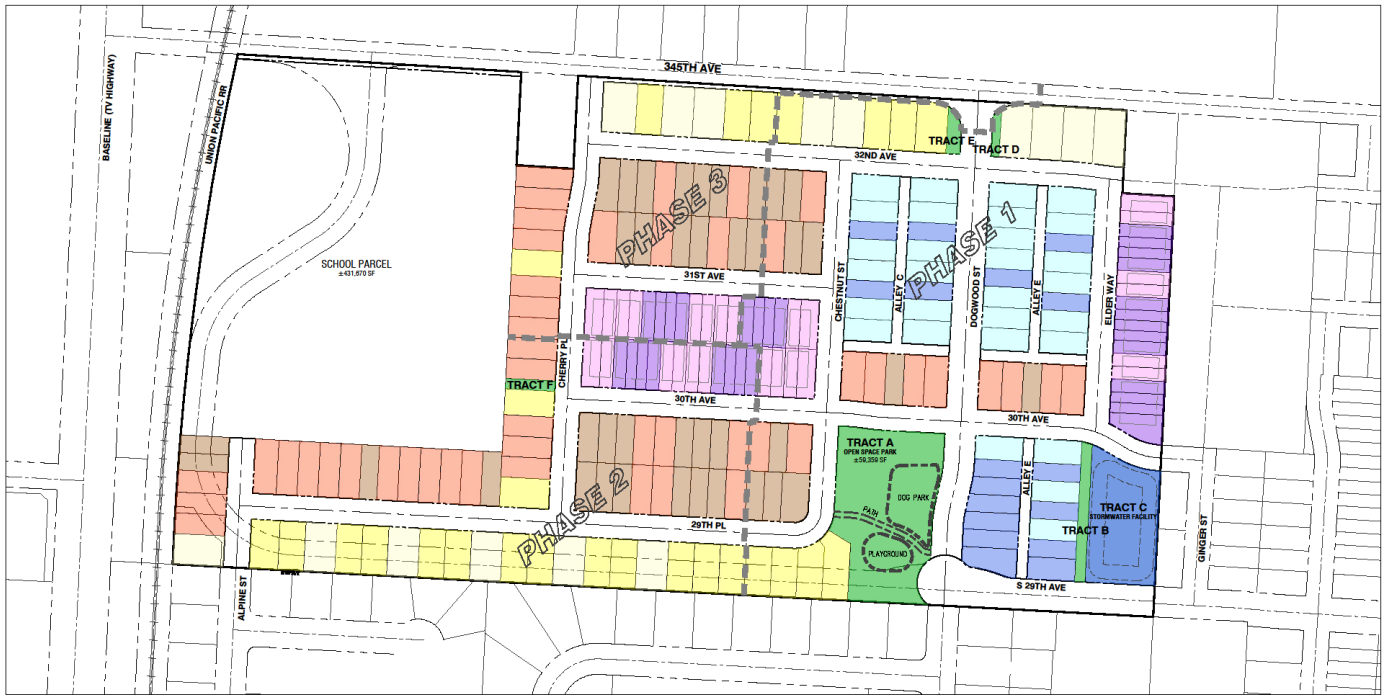
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PARK CONCEPTUAL EXHIBIT
LAUREL CROWN
HOLT HOMES
CORNELIUS, OREGON

PRELIMINARY
NOT FOR
CONSTRUCTION

JOB NUMBER:	4636-05
DATE:	
DESIGNED BY:	NKP
DRAWN BY:	NKP
CHECKED BY:	PAS



SCALE: 1"=100 FEET
100 0 50 100
ORIGINAL PAGE SIZE: 22" x 34"

COLOR	MIN. LOT DIMENSIONS	HOUSE TYPE	LOADING	PHASE 1	PHASE 2	PHASE 3	TOTAL	PERCENTAGE
	20' x 98'	TOWNHOUSES	FRONT	17	8	4	29	13%
	25' x 115'	DUPLEX UNITS	FRONT	12	6	8	26	11%
	34' x 98'	SF DETACHED	FRONT	10	16	13	39	17%
	34' x 92'	SF DETACHED	ALLEY	17	0	0	17	7%
	40' x 92'	SF DETACHED	ALLEY	29	0	0	29	13%
	40' x 115'	SF DETACHED	FRONT	12	24	12	48	21%
	50' x 65'	SF DETACHED	FRONT	8	15	4	27	12%
	60' x 115'	SF DETACHED	FRONT	6	6	3	15	7%
				131	75	44	230	

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2. THIS LAYOUT IS FOR FEASIBILITY PURPOSES ONLY AND IS CONSIDERED APPROXIMATE.
3. THIS IS A CONCEPTUAL LAYOUT AND IS SUBJECT TO CHANGE BASED ON CITY REQUIREMENTS, UTILITY SERVICES, TRANSPORTATION REQUIREMENTS, NATURAL RESOURCES, SURVEY DATA, TOPOGRAPHIC CONSTRAINTS, AND OTHER ITEMS. PROPERTY LINES ARE BASED ON AVAILABLE GIS INFORMATION AND ARE APPROXIMATE.
4. THIS LAYOUT IS SUBJECT TO CHANGE PENDING INFORMATION FROM A PRE-APPLICATION CONFERENCE, USACE/DSL CONCURRENCE, APPROVALS, PRELIMINARY ENGINEERING, AND CITY REVIEW AND APPROVAL OF LAND USE APPLICATION.

AKS DRAWING FILE: 4836-06 PRODUCT DISTRIBUTION | LAYOUT: PRODUCT DIST

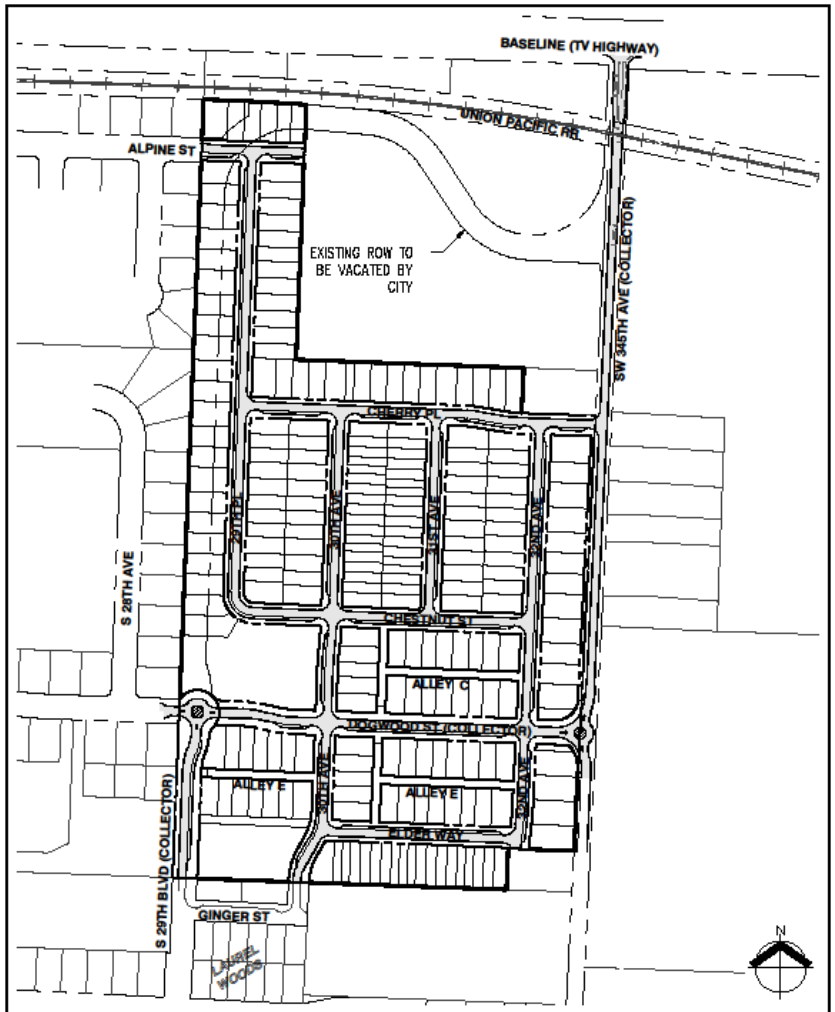
DATE: 10/8/2025 AKS JOB: 4836-06

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD, STE 100
TUALATIN, OR 97062
503.563.6151
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PRELIMINARY PRODUCT DISTRIBUTION PLAN
LAUREL CROWN

HOLT HOMES
CORNELIUS, OREGON


BASELINE (TV HIGHWAY)
UNION PACIFIC RR
ALPINE ST
EXISTING ROW TO BE VACATED BY CITY
SW 345TH AVE (COLLECTOR)
CHERRY PL
29TH PL
30TH AVE
31ST AVE
32ND AVE
S 28TH AVE
CHESTNUT ST
ALLEY C
DOGWOOD ST (COLLECTOR)
ALLEY E
ALLEY E
30TH AVE
32ND AVE
ELDER WAY
S 29TH BLVD (COLLECTOR)
GINGER ST
LAUREL WOODS
N
AKS ENGINEERING & FORESTRY, LLC
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503.563.6151 WWW.AKS-ENG.COM
AKS
CONCEPT SITE PLAN
DATE: 10/8/2025
DRWN: MBM CHKD: PAS
AKS JOB: 4636-05
EXHIBIT A

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN ROAD, SUITE 100
TUALATIN, OR 97062

(503) 563-6151

Holt Homes, Inc. October 15, 2025	Laurel Crown Subdivision Free Orchards Elementary School Gymnasium Cornelius, OR

PLEASE PRINT CLEARLY

Printed Name	Full Mailing Address	Email Address	Phone #
Kayla Radke	2951 S Ginger St.	Kaylamradke@yahoo.com	503-939-4149
Benjamin ten Kate	2941 S Ginger St	benjamin.tenkate@gmail.com	971-269-6405
Anne Reiling	865 SW 345th Hillsboro	—	503-929-1329
Timothy Pomeroy	2706 S Dogwood ST	viper_136@hotmail.com	503-681-3881
Joel & Ashley Schneider	2800 S Cherry St	ashley.schneider10@gmail.com	503-720-8436
Monique Martell	460 SW 345th Ave Hillsboro, OR 97123	monique.martell@icloud.com	617-957-4902
JIM & JOY HAMEL	453 S. 28TH AVE. CORNELIUS 97113	hameljim@gmail.com	503-844-2963

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Holt Homes, Inc. October 15, 2025	Laurel Crown Subdivision Free Orchards Elementary School Gymnasium Cornelius, OR

PLEASE PRINT CLEARLY

Printed Name	Full Mailing Address	Email Address	Phone #
Rodney Sahnow	Cornelius OR 500 SW 345th Ave	TRKSahnow@Comcast.net	503-686-8065
Richard Stiles	2800 S Alpine	rs6357677@gmail	503-839-0266
Mary Stiles	2800 S Alpine St	marg1947stiles@gmail.com	503-709-6862
Maria Bourassa	680 SW 345th Ave Hillsboro OR 97123	Maria.Martell17@gmail.com	503-270-1288
Joseph Auth	325 NW 334th Ave Hillsboro, OR 97124	jauth@vt.edu	503 929 2913
Brigetta Martell	350 S.W. 345th Ave. Hillsboro OR 97123	martells1@gmail.com	503-708-8930

Exhibit I: Pre-Application Conference Notes

Cornelius
Oregon's Family Town

PRE-APPLICATION MEETING

PAC-05-25
Tuesday, August 26, 2025
Community Development Department
1300 S Kodiak Circle
Cornelius, OR 97113

Applicant: Melissa Slotemaker, AICP
AKS Engineering & Forestry, LLC
12965 SW Herman Road, Suite 100
Tualatin, OR 97062

Site of Interest: 305 SW 345th Avenue

Map and Tax Lot: 1S303A000100

Applicants in Attendance: Melissa Slotemaker, Mimi Doukas, Joe Schiewe, Alexis Pam, Glen Southerland, Paul Sellke, Chris Knight, Curtis Gatley, Kyle Hayden;

Staff in Attendance: Tim Franz, Senior Planner; Barbara Fryer, Community Development Director; Kevin Oppenlander, Assistant City Engineer; Terry Keyes, City Engineer; Susan Rush, Public Works Business Manager; Yvette Hamilton, Building Official; Chad Toomey, Deputy Fire Marshal;

Other Agency Staff in Attendance: Avi Tayar, ODOT Development Review Lead Engineer, Melissa Gonzalez, ODOT Development Review Planner; John Russell, ODOT Traffic Analysis Engineer; Tony Mills, Washington County Transportation Planner;

Senior Planner, Tim Franz, opened the meeting by informing the applicant the meeting is being recorded, and they will receive detailed notes and an information packet in about three weeks.

After introductions, Franz invited the applicant to provide an overview of their proposal.

Melissa Slotemaker, of AKS Engineering and Forestry, LLC, summarized the proposal as a future residential project on a site that is presently owned by Hillsboro School District. The applicant explained they already submitted a partition application to divide the site, so the west portion of the land can be considered for development by Holt Homes, while the other portion would be retained by the School District. They also went over key elements of their plan regarding roadways in and around the proposed development, including a right-of-way (ROW) section that the City

would need to agree to vacate, and future connections to 345th Avenue that would not be immediately opened. Curtis Gatley, a member of the applicant's team, shared their screen on Zoom to display an image of the transportation improvement diagram while Slotemaker described each of three phases planned for the development, and identified which portion of the roadway improvements would be completed within each phase. Slotemaker also gave details of the residential layout, which would include a few different lot sizes, and a mix of townhomes and detached homes.

Mimi Doukas, of AKS Engineering and Forestry, LLC, explained they will submit the Conditional Use Permit and Planned Unit Development (CUP/PUD) subdivision application, and the Transportation System Plan (TSP) Map Amendment. Their understanding is that the City would initiate the ROW vacation for the unused 29th Street extension concurrently with the review of this paperwork. Doukas mentioned that Joe Schiewe is also working on a development agreement for the City to review.

Community Development Director, Barbara Fryer, asked the applicant whether they would like to skip the typical description of the application process and move on to their list of questions.

Doukas agreed.

Fryer confirmed the applications the applicant listed for their project were correct. However, there could be another potential pathway to bypass the CUP/PUD subdivision application and do a middle housing land division application instead if the applicant meets the standards for it.

Slotemaker asked about requirements for a middle housing land division.

Doukas noted they already reviewed lot size standards for middle housing, which they don't believe are met.

Fryer responded that the idea was shared only so the applicant is aware of it, in the event they could meet the standards.

Fryer moved on to addressing the applicant's second written question, which had to do with batching everything together for the applications. Fryer confirmed it can be submitted in a single batch, but requests that the Transportation System Plan (TSP) Map Amendment be in a separate file for presentation logistics when going before the Planning Commission.

Doukas asked whether separate neighborhood meetings would be necessary for each application.

Fryer replied no. The applicant can have one neighborhood meeting for everything if each topic is thoroughly covered.

Fryer next addressed the applicant's conceptual layout. They identified the east and west edges as R7 Zoning setbacks and everything else as A2 Zoning setbacks. The differences between them will be provided in the land use notes the applicant will receive.

Doukas asked whether they could adjust those setbacks.

Fryer confirmed yes, there is flexibility allowed in the development standards.

Doukas asked whether they would have staff support in adjusting the setbacks.

Fryer replied yes, and mentioned there is another project going before the Planning Commission with a recommendation for adjusted setbacks.

Fryer discussed the City's expectations regarding the dog park being proposed by the applicant. They anticipate the applicant would be using a bark surface for the dog park, and the area designated for the dog park would be fenced. Vinyl coated chain link fence is preferred over plain galvanized fence. Some type of covered area with a bench or picnic table is recommended.

Schiewe asked whether the latter structure would also be in the dog park area.

Fryer replied yes, and explained the reasoning for it is that residents tend to use the park in all weather.

The applicant's next written question asked the City to address whether any upcoming changes to the Municipal Code or Design Standards could impact their project.

Fryer does not anticipate that any known amendments, such as those in response to Senate Bill 974, will affect this particular development because it's not a multi-family structure. However, Fryer did note that in 2026 any Planned Unit Development (PUD) or Zone Change (ZC) will become a Type II Design Review.

Assistant City Engineer, Kevin Oppenlander, discussed key points from their engineering notes. Oppenlander began by explaining that the northern portion of the property is within Cornelius city limits, while the rest is within Washington County. The northern part of 345th Avenue will need an improved road base to handle the traffic, and at minimum meet the standards of a Collector Street. Some potential drainage complications related to treating stormwater were mentioned, including issues within city limits to the north, and another segment that is under the jurisdiction of, and thus requires approval from, Washington County. Oppenlander explained that City requirements for ROW improvements on 345th Avenue will depend on whether or not it can all be drained to the Water Quality Facility in the applicant's plans, and obtain County approval. Typical improvements would include two ten-foot lanes, curb and gutter on both sides of the street, a six-foot sidewalk on the parkway strip on the west side, and a 12-foot multi-use bike path connecting at Dogwood.

Doukas asked whether the multi-use path would go only to Dogwood, and not to the southern boundary.

Oppenlander confirmed, and added that the vision would be for a six-foot sidewalk beyond Dogwood, with Washington County approval.

Doukas reemphasized that the connection to 345th Avenue is not necessary until the end of their project.

Schiewe added that they anticipate most westward traffic will continue on Dogwood for the time being.

Fryer told the applicant to anticipate 345th Avenue coming up as a talking point at their Public Hearing.

Schiewe stated they will include a report with their application demonstrating that connecting 345th Avenue is not required until after Phase 3 gets completed, but they could be open to the possibility of it being built quicker.

Oppenlander resumed their review of the City Engineer's notes, discussing the ROW dedication on the west side of 345th Avenue to allow eventual construction of the city Collector Street cross section. An Intergovernmental Agreement (IGA) with Washington County is anticipated to be the best route, because the annexation of nearby properties is unlikely to be successful.

Schiewe asked whether the IGA would be between the applicant and the City, and Washington County.

City Engineer, Terry Keyes, replied no, the agreement would only be between Cornelius and Washington County, to obtain the authority to oversee the road design and construction.

Schiewe requested comment from the City about the roundabout in the plans for 345th Avenue.

Oppenlander stated that the City is in support of roundabouts, and the location is acceptable, but the applicant should be cognizant about plumbing in the area and be careful not to destroy it.

Oppenlander moved the topic of discussion to S 29th Blvd., which will be accessed from another roundabout, and require the standard improvements.

Schiewe inquired about the lack of sidewalk to the west of S 29th Blvd.

Keyes replied that the applicant will not be responsible for those improvements to the west. Whoever develops those properties will become responsible.

Doukas asked whether they could have an optional condition of approval that states if they make the improvement, then they would be eligible for credits.

Keyes replied that they believe anything beyond the local street is eligible for credits without a conditional approval.

Doukas replied that their experience with the City of Hillsboro was contrary to this opinion, and there may have been an ordinance that required the condition of approval for TDT credits. Discussion continued about other pathways the applicant may be able to take to obtain the credits.

Schiewe changed the topic of discussion to the City vacating their ROW that runs through the proposed development.

Fryer informed the applicant the street vacation is predicated on them moving the Collector Street, so the City would not agree to it in a Developer Agreement (DA).

Doukas suggested the City can agree to initiate it, but not guarantee its approval.

Schiewe stated that they do want some type of commitment prior to land use approval regarding the City vacating the street, because of the effort that will go into this project. They suggested getting some type of statement from the City noting that they agree with the DA, but cannot sign it yet.

Fryer replied that they are committed to vacating the roadway if the Planning Commission recommends approval, and City Council approves the amendment.

Keyes brought up the possibility of avoiding stormwater rules if the City builds 345th Avenue, because it would not be part of the development.

ODOT Traffic Analysis Engineer, John Russell, asked to verify whether a connection for S 29th Blvd. to TV Highway was being considered.

Keyes explained that this was up for consideration by the City before, but the railroad is too high and they couldn't get the grades. That is why the connection will be on 345th Avenue. The railroad crossing near Baseline Street on 345th Avenue will need to have safety features added. Anticipated traffic volume would not necessitate adding a signal at the intersection.

Schiewe stated that in their design they anticipate traffic turning right onto Baseline Street from 345th Avenue.

Keyes clarified there would be both a right turn and left turn lane onto Baseline Street, making the road a total of three lanes, and it should already be wide enough to accommodate this layout.

Doukas asked Paul Sellke whether 345th Avenue would need to be widened.

Sellke replied that it does, and they demonstrated where a dotted line on their plans pushes the right turn lane within two-feet of the east property line. It was also added that Union Pacific requires 12-foot lanes at the crossing, which is located right before this intersection.

Chris Knight asked whether the lane widening and additional pervious surface being added would make a stormwater facility necessary under Clean Water Services (CWS) code.

Sellke replied that enough impervious surface will be added that, from a liability perspective, it would be in their best interest to do a stormwater facility.

Discussion continued between Sellke and Keyes about strategies the applicant could employ to make the creation of a new stormwater facility feasible.

Schiewe asked Sellke to explain how much of 345th Avenue could be drained back to the internal storm facility.

Sellke used the screen being shared by Gatley on Zoom to answer the question visually.

ODOT Development Review Lead Engineer, Avi Tayar, inquired about whether or not a zone change would occur, as it could affect whether or not a TPR analysis would be required.

Fryer replied that the two applicable zones for the site are Medium-Density Residential (A2) and Low-Density Residential (R7), so no changes are proposed and TPR findings would not be required.

ODOT Development Review Planner, Melissa Gonzalez, reminded City staff that a crossing order will be necessary for the improvements nearing the railroad crossing on 345th Avenue.

Gonzalez informed the applicant that they are still awaiting comments from the ODOT rail unit regarding this project, but the comments will be shared with them once completed.

Schiewe asked whether it would be helpful for the transportation study to demonstrate opening up 345th Avenue at each of the three phases of their project.

Doukas replied that the focus should only need to be on Phase 3.

Keyes added that the reconstruction of 345th Avenue will be fairly simple, although it will require the road to be closed entirely for some duration.

Tayar added that transportation analysis will be most critical once the connection for 345th Avenue is opened up, so it would be ideal to focus on the latest stage and how traffic will be redistributed from the development.

Russell agreed that waiting until a later point in development to work on 345th Avenue will give the applicant additional perspective on what happens with traffic before, and what could potentially happen after, the connection is opened. One of ODOT's priorities will be to see how safety will be managed at the railroad tracks, especially determining if there is enough space between the new intersection and the tracks to avoid a queue of cars over the tracks. They do have some flexibility for widening the road, because there is an extra ten feet of ROW on the southeast corner of the intersection.

Doukas replied that one tricky aspect of planning is that they cannot move the center line.

Tayar added that the City will have to provide information about how traffic queueing will be managed between the intersection and the railroad.

Doukas replied the right turn pocket proposed is designed to avoid queues affecting the railroad.

Schiewe inquired about an existing building that may have access to both 345th Avenue and Baseline Street, and whether any changes to it are anticipated.

Tayar replied access would hypothetically be preferred on 345th Avenue, but due to its proximity to the tracks Baseline Street may need to be considered for the access point. However, they can only speculate until changes to that property are proposed.

Russell added that ODOT would not be forcing any change from that property owner unless development was proposed.

Fryer invited Washington County Transportation Planner, Tony Mills, to add their comments.

Mills stated that the County's primary concern is about transferring the jurisdiction of 345th Avenue, and the timing for getting that accomplished, which would typically be accomplished through annexation. There is an IGA limiting direct access onto the roadway, and that could be reviewed for adjustments. Mills reminded everyone present that no Urban Development is permitted outside the Urban Growth Boundary (UGB), which goes right up to the edge of the intersection south of the railroad crossing.

Keyes stated that the City cannot take over the road, because as cited, it would require annexation and cooperation from any affected property owners. The alternative being suggested is to have the city agree to maintain it in an IGA.

Mills replied that annexation would be preferred by the County, because they want to get rid of ROW in the area being discussed, but they could review adjustments to the IGA instead. Another interest of the County is for a demonstration of anticipated changes to southbound trip distribution from the new development.

The conversation circled back to the remainder of Oppenlander's engineering notes, which will be provided to the applicant with the meeting packet.

Keyes brought up the topic of parking in the existing Laurel Woods subdivision, and requested that concrete parking bays not be extended unnecessarily where the distance between driveways on narrow lots doesn't provide adequate space for vehicles to park.

Fryer asked the applicant to explain the purpose of Tract B.

Doukas replied that it is a sidewalk connection, like a green street, for an alley-loaded home.

Schiewe mentioned their plans for blocking other alleys to some Collector Streets, on Dogwood Street and S 29th Avenue.

Fryer asked whether Tract F is intended for pedestrian access to the school site.

Doukas replied that they don't know whether the school district will want the pedestrian connection, so it would be an unimproved tract kept available depending on a future school's site plan.

Knight added that the tract would likely be used for a sanitary sewer connection to a hypothetical school, so it should be kept in the plans for this development.

Deputy Fire Marshal, Chad Toomey, summarized the requirements of the Fire Department for the site's development. The applicant must provide a drawing of the proposed location for fire hydrants and turning radiuses throughout the development.

Schiewe asked whether the buildings in this development will need more articulation in the front like was required for their previous Laurel Woods project.

Fryer replied that the legislative changes cited earlier in the meeting do not permit the City to have this requirement, effective January 2026.

Public Works Business Manager, Susan Rush, identified themselves as the contact for fee paperwork once the applicant gets to the point of submitting plans.

Franz offered to go over the Land Use criteria applicable to the proposed project. The applicant declined because they are comfortable with the process from previous projects.

Franz commented on the proposed name of the new subdivision, recommending that the applicant remove 'North' from the name because it is located in southern Cornelius.

Keyes asked when the project would become public knowledge.

Doukas replied that a Land Use Application was already submitted, so it is assumed to already be.

Franz closed the meeting by inviting the applicant to stay in contact with any further questions and reminding them that meeting materials would be provided in three weeks. A follow-up meeting would also be permitted at no additional charge, if necessary.

Memo

Subject: Preliminary Engineering Comments for Site at NW Corner of 26th and Baseline (TL# 4600) in Cornelius

Date: August 21, 2025 – REVISED 9-11-25

By: Kevin Oppenlander, P.E., Asst. City Engineer

These comments are based on existing conditions on the site.

The comments are preliminary and designed to help in creating a final design that can be considered as part of the land use process. While the comments should not be interpreted as the final engineering comments on the development, these comments attempt to cover all major public infrastructure, erosion control, and stormwater runoff requirements related to development of this site.

General

The site is approximately 1.2 acres on the northwest (NW) corner of 26th and Baseline.

All plans for public improvements must be designed by a registered professional engineer. Bonding for public improvements is typically required to ensure the improvements are completed in a satisfactory manner. Any work in the Baseline right-of-way (ROW) must be approved by both the City and Oregon Department of Transportation (ODOT). ODOT requires its own permits for work in their right-of-way. The timelines for ODOT review and permitting is typically significantly longer than the city's timelines.

The project relies on a number of improvements proposed to be constructed with the Haney multi-family project to the north. The Haney project is currently in land use review. If the Haney project does not proceed or is not built before or simultaneously with this project, these engineering comments will need to change and additional improvements will be necessary.

The only as-builts available for this project are related to the *East Baseline LID.* That project constructed the improvements along the Baseline frontage. To obtain those as-builts, please contact the city engineer via email.

Street

Baseline (Arterial)

Cornelius
Oregon's Family Town

PRE-APPLICATION CONFERENCE

PAC-05-25
Tuesday, August 26, 2025
Community Development Department
1300 S Kodiak Circle
Cornelius, OR 97113

LAND USE NOTES

Applicant: Melissa Slotemaker, AICP
AKS Engineering & Forestry, LLC
12965 SW Herman Road, Suite 100
Tualatin, OR 97062

Site of Interest: 305 SW 345th Avenue

Map and Tax Lot: 1S303A000100

Applicants in Attendance: Melissa Slotemaker, Mimi Doukas, Joe Schiewe, Alexis Pam, Glen Southerland, Paul Sellke, Chris Knight, Curtis Gatley, Kyle Hayden;

Staff in Attendance: Tim Franz, Senior Planner; Barbara Fryer, Community Development Director; Kevin Oppenlander, Assistant City Engineer; Terry Keyes, City Engineer; Susan Rush, Public Works Business Manager; Yvette Hamilton, Building Official; Chad Toomey, Deputy Fire Marshal;

Other Agency Staff in Attendance: Avi Tayar, ODOT Development Review Lead Engineer, Melissa Gonzalez, ODOT Development Review Planner; John Russell, ODOT Traffic Analysis Engineer; Tony Mills, Washington County Transportation Planner;

Introductions: The meeting began with introductions and a brief explanation of the format and time frame for the meeting.

Proposal: The applicant is proposing a 230-unit subdivision within the Low-Density Residential, R-7 and Multi-Unit Residential, A-2 zones. The subject lot is currently owned by the Hillsboro School District and it is in the process of being partitioned into two lots, via Preliminary Land Partition, LP-01-25.

Land Use: Based upon the preliminary information provided, these may be the applicable applications to achieve the future development goals:

OPTION 1:

1. Type III Conditional Use Permit/Planned Unit Development (current fee $5,348.00), and Type III Subdivision Preliminary Plat with Hearing (current fee $4,681.00 + $91.00 per lot).

2. Type I Subdivision Final Plat (50% of preliminary application fee).

3. Type I Site Design Review for developing each new structure (current fee $425.00).

OPTION 2:

1. Type II Subdivision Preliminary Plat (current fee $4,012.00 + $91.00 per lot).

2. Type I Subdivision Final Plat (50% of preliminary application fee).

3. Type I Site Design Review for developing each new structure (current fee $425.00).

OPTION 3:

1. Expedited/Middle Housing Land Division (current fee $1,124.00 + $89.00).

2. Expedited/Middle Housing Land Division Final Plat Review (current fee $1124.00).

3. Type I Site Design Review for developing each new structure (current fee $425.00)

ALL OPTIONS ALSO REQUIRE THE FOLLOWING:

A Comprehensive Plan Map Amendment to modify the location of the N/S Collector from the current S 29th Avenue alignment east to SW 345th Avenue.

1. Comprehensive Plan Amendment (current fee $4,681.00).
2. Public Right of Way Vacation (current fee $2,680.00)

OPTION 1 Processing:

Conditional Use Permit/Planned Unit Development: A Planned Unit Development (PUD) is necessary when there are proposed deviations from the zoning code or city standards. These deviations can be requested through the Planned Unit Development (PUD) process. You may apply for a Planned Unit Development (PUD) per Chapter 18.110 because the site is over 1 acre in size. When deviating from a development standard, the applicant must explain why the deviation is necessary. In addition, the applicant should propose mitigation for the impacts of the deviations, i.e. a request for a reduced setback may be mitigated by providing additional public open space, pedestrian pathways or other improvements that will benefit the community. The final decision authority for this application is the Planning Commission, unless appealed to the City Council.

Subdivision Preliminarily Plat: When the Planning Commission is reviewing the Type III CUP/PUD for the 'use' of the site they can also review the Subdivision Preliminary Plat during the same public hearing. The review criteria for a subdivision can be found within Chapter 17.05.040 of the Development Code. The final decision authority for this application is the Planning Commission, unless appealed to the City Council.

Application Review: All applications that are reviewed at a public hearing require a neighborhood

meeting to be held by the applicant. Notices for the neighborhood meeting must be sent out no less than 20 days prior to the scheduled neighborhood meeting. Notice to property owners within 250-feet of the subject site is required. A title company can assist you with obtaining a mailing list for your notice to be sent out; a copy of the notice shall also be sent to the Community Development Department staff. Information regarding the noticing requirements is attached. Please note that neighborhood meetings are only valid for a period of 180 days. A meeting must be in an ADA assessable location within Cornelius. We will also require a notarized affidavit of the mailing list and neighborhood meeting announcement, a list of attendees, and minutes from your neighborhood meeting to be submitted in your land use application packet.

Staff will review an application for completeness within thirty (30) days of receipt. The applicant will be notified in writing on the status of completeness. An application must be deemed complete by the 10th of the month in order to be scheduled for the following month's Planning Commission meeting (e.g., May 10th for a June hearing). If the application is deemed complete the City will begin to process the application, including the required public notice. Staff will review the application materials and prepare a staff report with a recommendation to the Planning Commission. The staff report will be complete and available one week prior to the Planning Commission hearing. The Planning Commission meets the fourth Tuesday of each month.

Staff recommends submittal of an application for completeness review a minimum of 15 to 20 days prior to the 10th of the target month. This will allow staff adequate time to review your application and, if needed, it provides you with time to respond to any staff requests for additional application materials.

These applications may be combined and submitted concurrently for review, or separately if you choose.

Subdivision Final Plat Review: Once a Preliminary Plat is approved a Final Plat application must be submitted and reviewed, prior to recordation. This review is to ensure that the Final Mylar to be submitted for signature/recording is consistent with the preliminary approval. Extra time should be allotted for the County Surveyor to approve the proposed final plat, which can take several months. The current application fee for a Subdivision Final Plat Review is ½ the original preliminarily subdivision application fee. The services of a professional registered land surveyor will be required. Fees charged by Washington County for final plat review and recordation are not included in this document and are not collected by the City.

Please note: After Final Plat approval, if construction has not begun within one-year of the Final Plat approval, an extension of time request is required or the CUP/PUD approval will expire. (Per Chapter 18.110.030(D)(2).)

The Final Plat approval will not be signed by the City until the appropriate development and improvement agreements and bonding, as required by the City Development Code and City Engineer, are in place.

If minor/major modifications to the approved subdivision or changes are needed, an application for minor or major modification to the subdivision may be required prior to Final Plat review/approval. A major modification of a subdivision is an administrative review with public notice, while a minor modification is an administrative review with no notice. The level of application review would be determined by the Community Development Director based upon the

changes proposed.

Type I Site Design Review: Once the subdivision is recorded with the County and the necessary public improvements/infrastructure are in place, each individual lot may be developed with a Type I Site Design Review application. This is an administrative review of each lot to ensure Land Use compliance prior to Building Permit submittal. Once an application is deemed complete, it will be reviewed within 10 working days. **Please Note: pursuant to SB 974 (2025 Legislative Session), the City can no longer require residential design standards so the Type I Site Design Review will no longer include residential design standard requirements**.

OPTION 2 Processing:

Type II Subdivision Review: Staff will review the application for completeness within thirty (30) days of receipt. The applicant will be notified in writing on the status of completeness. Once the application is deemed complete, the city will begin to process the application. This application is reviewed administratively with a 20-day public notice. Staff will prepare a staff report and the Notice of Decision within 45 days from the date of application completeness.

Decision/Appeal: Once a decision is made a staff report and Notice of Decision will be sent to the applicant. The Notice of Decision will identify the appeal period and options for appeal. Once the appeal period is over, you may proceed with complying with the conditions of approval.

Subdivision Final Plat Review: Once a Preliminary Plat is approved a Final Plat application must be submitted and reviewed, prior to recordation. This review is to ensure that the Final Mylar to be submitted for signature/recording is consistent with the preliminary approval. Extra time should be allotted for the County Surveyor to approve the proposed final plat, which can take several months. The current application fee for a Subdivision Final Plat Review is ½ the original preliminarily subdivision application fee. The services of a professional registered land surveyor will be required. Fees charged by Washington County for final plat review and recordation are not included in this document and are not collected by the city.

Please note: After Final Plat approval, if construction has not begun within one-year of the Final Plat approval, an extension of time request is required or the approval will expire. (Per Chapter 18.110.030(D)(2).)

The Final Plat approval will not be signed by the City until the appropriate development and improvement agreements and bonding, as required by the City Development Code and City Engineer, are in place.

OPTION 3 Processing:

Expedited Middle Housing Land Division: The proposed project would place 230-units on the property and would divide the land so that each unit is on a separate tax lot. This would require using the Expedited Middle Housing Land Division provision within CMC 17.05.060. With this submittal, the applicant must submit a complete application packet, including a Type I Site Design Review application (see above) for each unique structure.

Once the Preliminary Plat Procedures for an Expedited Middle Housing Land Division has been reviewed and approved, an Expedited Land Division Final Plat Review is necessary.

Please note: If the units are attached, only one Type I Site Design Review application will be necessary for each structure type. If all of the structures are identical, then one Type I Design Review application is necessary.

Application Review: Staff will review the application for completeness within 21 days of receipt. The applicant will be notified in writing of the status of completeness. Once the application is deemed complete, the city will begin to process the application. The combined application is reviewed administratively with a 14-day public notice to property owners within 100 feet of the site. From the date of deeming the application complete, staff must issue a notice of decision within 63 days.

Decision/Appeal: Once a decision is made a staff report will be sent to the applicant and any parties that are part of the record. There is a 14-day appeal period. The process to submit an appeal is identified within CMC 17.05.060(F)(9).

Comprehensive Plan Amendment:
This application will be reviewed by the Planning Commission, with a recommendation to the City Council. This may be submitted concurrently with the proposed development application, however, it should be presented and packaged separately, so the City Council is not reviewing the development plan.

The Comprehensive Plan Amendment does require a neighborhood meeting, as it is a Type III application. Notices for the neighborhood meeting must be sent out no less than 20 days prior to the scheduled neighborhood meeting. Notice to property owners within 250 feet of the subject site is required. A title company can assist you with obtaining a mailing list for your notice to be sent out; a copy of the notice shall also be sent to the Community Development Department staff. Information regarding the noticing requirements is attached. Please note that neighborhood meetings are only valid for a period of 180 days. A meeting must be in an ADA assessable location within Cornelius. We will also require a notarized affidavit of the mailing list and neighborhood meeting announcement, a list of attendees, and minutes from your neighborhood meeting to be submitted in your land use application packet.

Application Review: All applications that are reviewed at a public hearing require a neighborhood meeting to be held by the applicant. Notices for the neighborhood meeting must be sent out no less than 20 days prior to the scheduled neighborhood meeting. Notice to property owners within 250-feet of the subject site is required. A title company can assist you with obtaining a mailing list for your notice to be sent out; a copy of the notice shall also be sent to the Community Development Department staff. Information regarding the noticing requirements is attached. Please note that neighborhood meetings are only valid for a period of 180 days. A meeting must be in an ADA assessable location within Cornelius. We will also require a notarized affidavit of the mailing list and neighborhood meeting announcement, a list of attendees, and minutes from your neighborhood meeting to be submitted in your land use application packet.

Staff will review an application for completeness within thirty (30) days of receipt. The applicant will be notified in writing on the status of completeness. An application must be deemed complete by the 10th of the month in order to be scheduled for the following month's Planning Commission meeting (e.g., May 10th for a June hearing). If the application is deemed complete the City will begin to process the application, including the required public notice. Staff will review the application materials and prepare a staff report with a recommendation to the Planning

Commission. The staff report will be complete and available one week prior to the Planning Commission hearing. The Planning Commission meets the fourth Tuesday of each month.

Staff recommends submittal of an application for completeness review a minimum of 15 to 20 days prior to the 10th of the target month. This will allow staff adequate time to review your application and, if needed, it provides you with time to respond to any staff requests for additional application materials.

These applications may be combined and submitted concurrently for review, or separately if you choose.

Public Right of Way Vacation

This application can be submitted up until the 4 weeks before the City Council consideration of the Comprehensive Plan Amendment. The intent is to ask the Council to act on the Comprehensive Plan Amendment, and if approved, to act on the public right of way vacation following the City Council Ordinance adoption at the same City Council meeting.

Application Review:

Review of the application requires findings with regard to CMC 13.55.030(B) (1 through 8). Submittal documents should include a map of the street vacation area, a legal description of the street vacation area, and a narrative addressing the approval criteria noted in CMC 13.55.030(B) (1 through 8), and the fee.

REQUIREMENTS REGARDLESS OF OPTION CHOSEN

Land Use Project Specific Information: Based on the information provided during the pre-application conference, the comments/concerns that were generally discussed are listed in bullet form below. There may be other unforeseen issues or concerns that cannot be addressed until an application packet is submitted to the city for review and consideration.

- The proposal will need to comply with the City of Cornelius Development Code. This includes, but is not limited to, demonstrating compliance with Chapters 17.05 (Land Division), 18.20 (Low-Density Residential, R-7), 18.35 (Multi-Unit Residential, A-2), 18.100 (Site Design Review), 18.143 (Transportation Facilities) and 18.155 (Solar Access for New Development). If a Conditional Use Permit/Planned Unit Development is proposed, an application will also need to comply with CMC 18.05 (Conditional Use Permit) and 18.110 (Planned Unit Development).

- The amendment to the Comprehensive Plan to move the S. 29th Boulevard collector eastward will need to address CMC 18.130, the adopted TSP, applicable Metro Regional Transportation Functional Plan criteria and applicable Oregon Administrate Rules.

- The on-site storm water system shall comply with current Clean Water Services (CWS) standards.

- An approved Service Provider Letter from Clean Water Services (CWS) is required.

- All new utilities that will serve the units shall be underground.

- Any proposed on-site lighting shall not glare or shine into the abutting ROW or adjacent properties.

- The vision clearance areas at driveways and sidewalks must be maintained.

- A service provider letter from the local trash collection provider is needed.

- Per State rules and regulations relating to Climate-Friendly and Equitable Communities (CFEF), on-site parking no longer can be required by the city.

- The proposal will need to address ODOT's concerns identified within the September 8, 2025 Pre-Application Response (attached). A Traffic impact Analysis (TIA) will be required by ODOT.

Engineering: Kevin Oppenlander, P.E., Assistant City Engineer provided detailed notes dated August 21, 2025 and revised on September 11, 2025, which are attached.

Please contact Mr. Keyes at (503) 357-3011 if you have any questions.

Fire: Chad Toomey, Deputy Fire Marshal, discussed the need to provide fire hydrants and turning radiuses throughout the development.

You may contact Chad Toomey at (503) 992-3196, if you have questions regarding fire related codes and questions.

Building: Yvette Hamilton, Building Official, indicated that construct new buildings, building permits are necessary. Building permit submittals are applied for and reviewed through the City of Forest Grove Building Division, except electrical, which are issued through Washington County.

Please contact Yvette Hamilton at (503) 992-3227, with any questions regarding Building Codes.

Oregon Department of Transportation: Baseline Street and the abutting railway and crossing are ODOT facilities. Attached are ODOT comments regarding the proposal dated September 8, 2025. As part of an application packet to the city, an ODOT Pre-Application Response letter will be necessary. If the proposal significantly varies from what ODOT has reviewed during the August 26th Pre-Application Conference that was held with the city, an updated ODOT Pre-Application Response letter will be necessary.

SDC, CET and TDT fees: Prior to issuance of building permits, System Development Charges (SDC) for parks, water, sewer and storm will be due to the City of Cornelius. Construction Excise Taxes (CET) may be required for the Hillsboro school, Metro, and City of Cornelius. A worksheet is attached, which can assist you with estimated fees that will be due to the city.

You may contact Susan Rush, Public Works Business Manager City of Cornelius at (503) 357-3011 with any questions regarding these fees.

There is a Washington County Transportation Development Tax (TDT), which is a County-wide voter approved tax that the city administers within its limits. When new development or redevelopment occurs within the County, the TDT must be assessed. The TDT rate assessed is based upon the proposed use of the building, as defined within the TDT Rate Schedule.

The Community Development Director will review the TDT Procedures Manual and will determine the final TDT prior to issuance of building permits.

The TDT is due at the time of building permit issuance, but under certain circumstances it is deferrable until occupancy or Bancroft payment options may be available. If deferred until occupancy and the TDT increases, the most current TDT fee will be due.

For more information about the TDT, you may review the Washington County website.

https://www.co.washington.or.us/LUT/Divisions/LongRangePlanning/PlanningPrograms/TransportationPlanning/transportation-development-tax.cfm

Please note: Typically, each year the County increases the TDT rate the 1st of July.

Thank you very much for taking the time to meet with us. As you refine your development plans, you are welcome to schedule a follow-up meeting with our staff. If you have any further questions or if you need additional assistance with your application submittal process, please contact us at (503) 357-3011. We look forward to working with you to make your development within the City of Cornelius a success.

Sincerely,



Tim Franz
Senior Planner

Response to questions by AKS.

1. Comprehensive Plan Map Amendment, PUD/CUP/Subdivision

2. Yes/no. Need the CPA information in a separate file as it is the only item that moves to City Council. All applications would be processed at the same time/same PC hearing.

3. I would like to take the street vacation resolution to the City Council at the same meeting that the CPA is heard.

4. One NRM for all applications.

5. Researching answers to this question

A) setbacks – standard setbacks in the two zoning districts. R-7 setbacks along the 345th the western lots. All others would comply with A-2 setbacks

B) Based on the numbers on the Concept Layout 6 – the density calculation looks fine. The proposed 230 units is within the minimum and maximum total.

C) Any of the numbered deviations can be modified. Need justification based on the PUD/CUP criteria.

6. Minimum useable open space is 65,700 and the park is 69,539, which would meet the requirement of useable open space.

7. Bark surface, fenced, would appreciate a covered area with benches or picnic table. Maybe a fire hydrant or dog play equipment.

8. Climate friendly and equitable communities – no impact

Housing changes – no impact – if you meet the underlying standards you could bypass the PC for the subdivision, effective July 1, 2026.

SB 974 – PUDs no longer a public hearing after July 1, 2026, cannot apply design standards to housing unless the application is for a MF structure or fewer than 20 residential units.

HB 2138 -

SB157 -

9. Geotech, storm drainage report, SPL, … (see TK comments

Complete application

The frontage along Baseline adjacent to the site is improved with curb/gutter, bike lane, bus stop, sidewalk, and underground utilities. The only features lacking on this frontage, and ones the developer will need to address are:

- **Street trees – If ODOT does not allow street trees in the ROW, then the street trees shall be located outside the ROW on the north side of the sidewalk and covered by a landscape easement.**
- **Sidewalk – The sidewalk on Baseline must be 6-feet wide. If it currently doesn't meet this width requirement, it should be widened as part of the project.**
- **Street lights - Cobra-head street lights on their own poles are required. The applicant should hire a lighting engineer to design these street lights and their circuitry. System Development Credits (SDC) are not available for new street lighting.**
- **The ROW must to include all the public improvements along Baseline (except for street trees if they are located north of the sidewalk). Based on drawings provided for the Haney project just to the north, a portion of the sidewalk and bus stop may be outside the ROW. If any of the public improvements are outside the existing ROW, additional ROW must be dedicated so that all the public improvements, other than trees, are in the ROW.**

No driveways from the site are allowed to access Baseline and the applicant is not proposing any.

Since Baseline is State highway, ODOT may have additional requirements for frontage improvements. If the City and ODOT requirements conflict, typically the more stringent requirement prevails. Also, ANY work in the ODOT ROW requires an ODOT permit.

N. 26th Avenue (Collector)

The frontage along N. 26th is partially improved. While the travel lanes are complete, the curb is a mixture of rolled curb, curb/gutter, and a driveway. No sidewalk exists along the frontage. Street lights are on wooden poles with overhead power connecting them.

The frontage improvement required on N. 26th include:

- **Concrete curb and gutter in areas where this is lacking, including replacement of the existing driveway with a curb & gutter.**
- **6-foot parkway strip with street trees meeting the City's Public Works Standards.**

- **6-foot concrete sidewalk, separated from the curb/gutter by the parkway strip.**
- **Streetlights on metal cobra-head poles with underground power. Ideally, these lights should be on the same circuit as the new ones required on Baseline. Lighting shall be designed by a lighting engineer and the lighting plans included in the civil plan set. System Development Credits (SDC) are not available for new street lighting.**
- **Dedication of additional ROW, as needed, to ensure public improvements are within the ROW.**

Private Access from N. 26th Avenue

The site relies on access from N. 26th Avenue from a private driveway to be constructed with the Haney project to the north. Since this access way is private, the only requirement from the City Engineer is that the driveway connecting this private drive to N. 26th shall meet the city's standards for commercial driveways.

Traffic Study

The City will not require a traffic study for this development because the traffic volumes anticipated for this type of development are highly unlikely to cause any needs for mitigation measures. However, ODOT may require a traffic study.

Water

A 10-inch C-900 exists along the N. 26th frontage. A 12-inch ductile iron water main exists on Baseline frontage. These mains both have capacity for the proposed project and no public extensions are required.

A fire hydrant exists on the northwest corner of Baseline and N. 26th Avenue. While engineering will not require additional hydrants, the fire department may.

The city strongly recommends connects to the 10-inch line in N. 26th Avenue to avoid any permitting issues with ODOT.

Sanitary Sewer

8-inch sanitary mains exist along the N. 26th and Baseline frontages. These lines have capacity for the proposed development. The project proposed to the north (Haney) proposes to construct a public sanitary sewer extension heading west along the private drive from a manhole in N. 26th. A new public sanitary manhole is proposed just inside the N. 26th ROW in a public easement. This site should connect its sanitary lateral to this manhole to avoid any permitting issues with ODOT.

Since the proposal is for a restaurant, a great interceptor is likely to be required by the Building Official.

Stormwater

Conveyance

A public storm sewer exists on Baseline and N. 26th Avenue along the site frontages. Additionally, the project to the north is extending the storm sewer along the east-west access way. No extension of the public storm system is required with this project.

The applicant has three points they can connect their storm lateral to the public system.

1) The East Baseline LID Project constructed a catch basin near the west end of the bus pullout on Baseline. According to the as-builts, a lateral goes under the sidewalk to serve this parcel.
2) The East Baseline LID Project also constructed a catch basin on west side N. 26th Avenue, just north of Baseline. While this catch basin lacks an existing lateral serving the parcel, the parcel can easily tap its lateral into the back of the catch basin since no other infrastructure exists behind the catch basin.
3) The property to the north proposes a storm lateral to serve this property from the new east-west storm line they are proposing in the access driveway.

Treatment, Detention, and LIDA

Stormwater runoff from all new development in urban Washington County must be treated and detained in accordance with Clean Water Services (CWS) Standards. The CWS requirements consist of three parts.

1) *Treatment* – All runoff from new impervious surfaces must be treated before release into the public storm system. Treatment for commercial sites like this typically entails use of biofiltration swales, rain gardens, or stormwater filters

2) *Hydromodification or Detention* – This requirement is based on a series of factors. These factors and their ratings for this site are:

   Risk – low
   Development Class – developed area
   Project Size – medium (12,000 to 80,000 sq.ft.)

   These criteria place the project in CWS's *Category 2.* Category 2 projects require significant detention as spelled out in the CWS Design and Construction

Standards. Detention is typically provided by underground pipes or ponds. The soils in Cornelius typically prevent use of infiltration techniques.

3) *Low Impact Development Approach (LIDA)* – Projects must also incorporate some type of LIDA or green approach to stormwater control. Surface stormwater facilities such as swales and detention ponds meet the LIDA requirement. Other approaches that meet LIDA include: pervious pavement and green roofs. If storm filters and underground detention is utilized on the site, a LIDA approach will be required. Some commercial developments have met this requirement with a small rain garden to capture and treat roof runoff.

   The Clean Water Services standards require LIDA on all development projects per 4.05.2 - *LIDA Design Considerations*.

Service Provider Letter

The applicant must obtain a *Service Provide Letter* (SPL). The SPL will determine if wetlands exist on or adjacent to the site and, if they do, will specify the vegetated corridor or buffer requirements for the site. The City or Clean Water Services can provide this SPL.

Erosion Control

An erosion control plan is required for this project. Since the project is greater than 1 acre, the erosion control plan will need to meet the requirements for a 1200-CN permit and will go through City and CWS for review.

Plan Review

The plans that need to be reviewed by the City Engineer are those involving public infrastructure, stormwater treatment, and erosion control. The applicant does not need to interact with Clean Water Services during review or design. For projects in cities, the city acts at the primary contact point. with CWS. If the city cannot answer a question regarding storm or sanitary, the city consults with CWS directly.

Finally, the applicant and their engineer are **strongly** encouraged to communicate with the City Engineer during the design process to minimize the need for redlines and revisions.

Oregon
Tina Kotek, Governor

Department of Transportation
Transportation Region 1
123 NW Flanders St.
Portland, OR 97209-4012
(503) 731-8200
Fax: (503) 731-8259

September 8, 2025 ODOT # 13779

ODOT Pre-Application Response

Project Name: Laurel Woods North	**Applicant:** Melissa Slotemaker, AKS Engineering & Forestry, LLC
Jurisdiction: City of Cornelius	
Site Address: 305 SW 345th Avenue	**State Highway:**

The site of this proposed land use action is in the vicinity of OR 8. ODOT has permitting authority for this facility and an interest in ensuring that this proposed land use is compatible with its safe and efficient operation.

All ODOT permits and approvals must reach 100% plans before the District Contact signs off on a local jurisdiction building permit or other necessary requirement before construction. **The applicant should contact the District Contact indicated below to determine permit requirements and to obtain application information**.

These comments, standards, and requirements are current as of the date of this letter. If the project scope and/or timeline is modified, the applicant should contact the ODOT Region 1 Development Review program (ODOT_R1_DevRev@odot.oregon.gov) for an updated letter as updated comments may be necessary.

LAND USE PROPOSAL

ODOT attended a pre-application meeting for the proposed development of 230-lot subdivision on a 41-acre site adjacent to an active railroad. The project includes a Comprehensive Plan Map amendment (to update the Transportation System Plan map), a proposed partition (currently being reviewed under local file LP-01-25), a Planned Unit Development, and subdivision.

COMMENTS/FINDINGS

Property Location Within Safe Stopping Distance of a Public Railroad Crossing

ODOT understands the improvements to 345th Avenue will not be completed until Phase 3 of this project. Based on the conversations during the pre-application meeting, this will be a city-led project that will make frontage improvements North and South of the existing railroad crossing, and upgrades to the existing crossing. The project may include realigning of 345th Avenue.

The ODOT Rail Crossing Unit has reviewed the materials and provided the following comments:

> "The alterations will require a new rail crossing Order. A rail crossing Order application is required and diagnostic meeting shall be held with all parties required including: road authorities, railroad(s), and ODOT Rail.
>
> Since UPRR is involved the road authority will need to work with them to obtain a PE Agreement as well as work and obtain any right of way agreements.
>
> The road authority shall finalize the rail Order prior to construction commencing."

For questions regarding a Crossing Order, contact the ODOT Rail Crossing Unit at ccdrailcrossing@odot.oregon.gov.

Traffic Impacts

Contact the ODOT Traffic Contact identified below and the local jurisdiction to scope the Traffic Impact Analysis (TIA) and confirm travel modeling assumptions.

ODOT Technical Review Requirements

All alterations within the State highway right of way are subject to ODOT standards. Alterations along the State highway but outside of the ODOT right of way may also be subject to ODOT review pending its potential impact on the safe operation of the State highway.

The following ODOT manuals may apply:

- ODOT Traffic Manual
- ODOT Highway Design Manual
- ODOT Hydraulics Design Manual

The ODOT Traffic Manual (TM) identifies items that require ODOT Region Traffic Engineer (RTE) approval. Items requiring RTE approval must be prepared by an Oregon-registered Professional Engineer (P.E.) and will be reviewed by the ODOT Region 1 Technical Center. See the TM for information on authorities and required approvals. Some approvals require a unique request form (Traffic Approval).

Deviations from ODOT Standards

Proposed alterations that deviate from ODOT standards will require a Design Exception/Deviation prepared by an Oregon-registered Professional Engineer (P.E.) for review by the ODOT Region 1 Technical Center. ODOT can only determine if design elements will require a Design Exception/Deviation or RTE approval once detailed plans have been reviewed.

Note: A Design Exception/Deviation or RTE approval items may take **6 months or longer to process**. The preparation of a Design Exception or RTE approval does not guarantee its ultimate approval.

ODOT RECOMMENDED CONDITIONS OF APPROVAL FOR LOCAL JURISDICTION

Traffic Impacts

☒ The applicant shall submit a Traffic Impact Analysis (TIA) to assess the impacts of the proposed use on the State highway system. The analysis must be conducted and stamped by an Oregon-registered Professional Engineer (P.E.). Contact the ODOT Traffic Contact identified below and the local jurisdiction to scope the TIA and confirm travel modeling assumptions. The recommendation for traffic control devices will require either ODOT Region Traffic Engineer (RTE) or State Traffic-Roadway Engineer (STRE) approval and shall be constructed as necessary to be consistent with the ODOT Traffic Manual.

Note: RTE and STRE approval items may take **6 months or longer** to process.

Property Location Within Safe Stopping Distance of a Public Railroad Crossing

☒ A Crossing Order is required for any alterations within the safe stopping distance (within 500 ft) of the public rail crossing. To alter means any change to the roadway or tracks at a crossing that materially affects the use of the crossing by railroad equipment, vehicles, bicyclists, or pedestrians. Alterations include but are not limited to changing the width of the roadways; installing or removing protective devices; creating an additional travel lane; installing curbs, sidewalks, or bicycle facilities. Contact the ODOT Rail Crossing Unit at ccdrailcrossing@odot.oregon.gov for assistance in determining if a Crossing Order is required and, if required, for guidance through the application process.

ADVISORY INFORMATION

Permits and Agreements to Work in State Highway Right of Way

☒ An ODOT Miscellaneous Permit must be obtained for all work in the State highway right of way. When the total value of improvements within the State highway is estimated to be $100,000 or more, a Cooperative Improvement Agreement (CIA) with ODOT is required. A CIA will address the transfer of the improvements to ODOT and any associated technical and administrative costs for projects that meet this improvement threshold. Agreements shall address the work standards that must be followed, maintenance responsibilities, and compliance with ORS 276.071, which includes State of Oregon prevailing wage requirements.

Note: If a CIA is required, it may take **6 months or longer** to process.

☒ An ODOT Miscellaneous Permit is required for new or modified connections to State highway drainage facilities. Connections will only be considered if the site's drainage naturally enters the State highway drainage facility. The applicant must provide ODOT District with a preliminary drainage plan showing impacts to the State highway drainage facility.

A drainage study prepared by an Oregon-registered Professional Engineer (P.E.) is usually required by ODOT if:

1. Modification to site development or State highway facility trigger the need for treatment, detention and drainage modifications per both local and state standards; or
2. Total peak runoff entering the State highway drainage facility is more significant than 1.77 cubic feet per second; or
3. The improvements increase the impervious surface area to greater than 10,758 square feet.

Note: If a drainage study is required, it shall be prepared to meet the requirements of the ODOT Hydraulics Manual. The applicant is advised that ODOT standards may differ from the local jurisdiction.

Property Location Adjacent to Railroad Tracks

☒ The applicant is advised that the railroad authority may require fencing along the property's rail frontage. The applicant is encouraged to install continuous fencing (no gates) along the property line fronting the railroad tracks to ensure the safe operation of trains by preventing illegal trespassing of pedestrians across the tracks.

☒ The applicant is advised that residential development on the proposed site may be exposed to noise from heavy rail freight trains, passenger trains or transit vehicles. Builders should take appropriate measures to mitigate the noise impacts. The State is not responsible for providing mitigation for receptors that are built after the noise source is in place.

Contact the ODOT Development Review Planner identified below for further coordination or questions regarding ODOT comments and requirements during the land use process.

Please send a copy of the Land Use Notice to: ODOT_R1_DevRev@odot.oregon.gov

Development Review Planner: Melissa Gonzalez	Melissa.GONZALEZ-GABRIEL2@odot.oregon.gov
Traffic Contact: John Russell, P.E.	John.RUSSELL@odot.oregon.gov
District Contact: District 2B	d2bup@odot.oregon.gov

Cornelius
Oregon's Family Town

Land Use Application

Community Development
Located at 1300 S. Kodiak Circle, Cornelius, Oregon 97113
www.ci.cornelius.or.us

OFFICIAL USE ONLY

Date Received:_____ Date Complete:_____ ↓ File Number ↓

Application Fee: _____ Receipt Number:_____ _____

APPLICATION TYPE

Type I – *administrative review without public notice*

☐ **Design Review I** ☐ **Lot Line Adjustment** ☐ **Administrative Relief**
☐ **Land Partition—Final Plat** ☐ **Subdivision—Final Plat**

☐ **Other *please describe:*** _____

Type II – *administrative review with public notice*

☐ **Design Review II** ☐ **Land Partition—Preliminary Plat** ☐ **Subdivision—Preliminary Plat**

☐ **Other *please describe:*** _____

Type III – *public hearing(s) required with public notice*

☐ **Design Review III** ☐ **Conditional Use Permit** ☐ **Planned Unit Development**
☐ **Comprehensive Plan Amendment** ☐ **Zone Map Amendment** ☐ **Zone Text Amendment**
☐ **Annexation** ☐ **ROW/Easement Vacation** ☐ **Subdivision—Preliminary Plat**

☐ **Other *please describe:*** _____

APPLICANT INFORMATION

Name:_____ Signature:_____

Mail Address:_____

Phone:_____ Fax:_____ E-mail:_____

PROPERTY OWNER INFORMATION

Name:_____ Signature:_____

Mail Address:_____

Phone:_____ Fax:_____ E-mail:_____

SUBJECT SITE INFORMATION

Property Address:_____

Map & Tax Lot Number(s):_____

Current Zoning: N/A Total Size of Site:_____

Existing Use:_____

Proposed Use:_____

Cornelius
Oregon's Family Town

Conditional Use Permit – Planned Unit Development Submittal Checklist

Community Development
Located at 1300 S. Kodiak Circle, Cornelius, Oregon 97113
www.ci.cornelius.or.us

Written Narrative Requirements

_____ A. **Checklist:** Please provide one completed and signed copy of this checklist.

_____ B. **Description of proposal**: Please describe the existing conditions on-site and the changes proposed to the site, structure, landscaping, parking, and land use, including the number of parcels created. Provide findings verifying that the intended use is allowed by the City's Development Code.

_____ C. **Approval criteria findings:** Please provide a narrative that evaluates and verifies that the proposal meets the approval criteria identified below:

Conditional Use Permit, Section 18.105.030(B) of the Development Code.

1. *The proposal conforms with the City's Comprehensive Plan;*

2. *The applicable requirements of the zoning district are satisfied; and*

3. *That the location, size, design, and functional characteristics of the proposed use are such that it can be made reasonably compatible with and have a minimum impact on the livability and appropriate development of other properties in the surrounding neighborhood;*

4. *The granting of the proposal will provide for a facility that is consistent with the overall needs of the city.*

Planned Unit Development, Section 18.110.030(B) of the Development Code.

1. *There are special physical or geographic conditions or objectives of development, which warrant a departure from the standard title requirements.*

2. *Resulting development will be consistent with overall planning and zoning objectives of the city.*

3. *The area around the development can be planned to be in substantial harmony with the proposed plan.*

4. *If the applicant is proposing phasing the project, then identify the schedule for phasing. If the applicant is not proposing to phase the project, then identify the time frame for completion.*

5. *Provide findings that economically justify a proposed commercial or industrial development.*

6. *The streets are adequate to support the anticipated traffic and the development will not overload the streets outside the planned area.*

7. *Proposed utility and drainage facilities are adequate for the population densities and type of development proposed.*

_____ D. Please provide the hours of operation, total number of employees, and maximum number of employees per shift.

_____ E. **Site Analysis Information:**

1. Existing building area: _____ sq. ft.
   Proposed building addition or subtraction: _____ sq. ft.

2. Existing building height: _____ ft.
   Proposed building height: _____ ft.

3. Existing parking area: _____ sq. ft.
   Existing number of parking spaces: _____ # sp.
   Proposed parking addition or subtraction: _____ sq. ft.
   Proposed number of parking spaces: _____ # sp.
   Proposed use: _____
   Parking requirement: _____

4. Existing landscaped area: _____ sq. ft.
   Percentage of site: _____ %
   Proposed landscape addition or subtraction: _____ sq. ft.
   Percentage of site: _____ %

_____ F. **Additional Requirements:** Please be advised that special studies, investigations and reports may be required to ensure that the proposal does not adversely affect the surrounding community, and does not create hazardous conditions for persons or improvements on the site. These studies may include investigations and reports on noise attenuation, air quality, traffic control, soil conditions, flooding of waters and storm water run-off, natural resources, tree preservation, and other concerns.

_____ G. **Neighborhood Review Meeting:** information required (*Dev. Code Section 18.10.030*.)

_____ 1. A copy of the notice sent to surrounding property owners.

_____ 2. A copy of the mailing list used to send out meeting notices.

_____ 3. An affidavit of mailing.

_____ 4. Representative copies of written materials and plans presented at the Neighborhood Review Meeting.

_____ 5. Notes of the meeting, including the meeting date, time, and location, the names and addresses of those who attended, and oral and written comments received.

Plan Requirements

All plans, except architectural renderings, elevations or both, shall be presented at a minimum of 1" = 20'. Architectural elevations may be presented at an architectural scale. Each of the following plans and drawings shall be submitted on 24" x 36" (maximum size) separate sheets. Please also include one (1) full set of plans that is 8 ½" x 11" in size. Please include all of the following information for each plan.

_____ A. **Existing Conditions Plan:**

_____ 1. North arrow, scale and date of plan.

_____ 2. Vicinity map.

_____ 3. The entire lot(s), including area and property lines dimensioned.

_____ 4. Points of existing access, interior streets, driveways, and parking areas.

_____ 5. Location of all existing buildings and structures, including refuse storage locations, pedestrian and bike paths, or both, swimming pools, tennis courts, and tax lots.

_____ 6. Existing right-of-way and improvements.

_____ 7. Dimension from centerline to edge of existing right-of-way.

_____ 8. Existing topographical information, showing 2 ft. contours and appropriate spot elevations for features such as walls, retaining walls (top and bottom elevations), catch basins, stairs, sidewalks, and parking areas.

_____ 9. Surrounding development and conditions within 100-ft. of the property; such as zoning, land uses, buildings, driveways, and trees.

_____ 10. Location of existing public and private utilities, easements, and 100-year floodplain.

_____ 11. Sensitive areas, as defined by the Clean Water Services (CWS) standards.

_____ 12. Wetland boundaries, upland wooded area boundaries, riparian area boundaries, rock out-cropping's and streams. *Wetlands must be professionally delineated*.

_____ B. **<u>Dimensioned Site Plan</u>:**

_____ 1. North arrow, scale and date of plan.

_____ 2. The entire lot(s), including area, property lines dimensioned and labeled "front," "side," and "rear."

_____ 3. Points of access, interior streets, driveways, and parking areas.

_____ 4. Proposed land uses including housing densities and the location of buildings and structures.

_____ 5. Proposed right-of-way, dedications and improvements.

_____ 6. Dimension from centerline to edge of proposed right-of-way.

_____ 7. Dimensions of all improvements, including setbacks, parking spaces, driveways, and distance between buildings.

_____ 8. Location of storm water quality and detention facilities, or both.

_____ 9. Boundaries of development phases, if applicable.

_____ 10. Sensitive areas, as defined by the Clean Water Services standards.

_____ 11. Wetland boundaries, upland wooded area boundaries, riparian area boundaries, rock out-cropping's and streams. *Wetlands must be professionally delineated.*

_____ 12. Topographical information (2 ft. contour lines) of existing and proposed grades on-site and for surrounding properties within 100 ft. of the subject property.

_____ 13. Location and schematic massing of proposed buffering, screening, and landscaped areas.

_____ 14. Other pertinent landscape features, including walls, retaining walls, berms, fences, and fountains.

_____ C. **Architectural Renderings, Elevations, or both:** Please provide information that identifies the general character of the buildings and structures, by indicating dimensions, materials, colors, and textures proposed. This includes buildings, retaining walls, refuse storage facilities, play structures, accessory facilities, and fences.

_____ D. **Sensitive Area Pre-Screening or Service Provider Letter**: Please provide a completed and signed Pre-Screening or CWS Service Provider Letter.

I have provided the items required in this submittal checklist. I understand that any missing information, omissions or both may deem my project incomplete, which may lengthen the time to process the request.

Signature	Date
Print Name	Telephone Number

Cornelius
Oregon's Family Town

Subdivision - Preliminary Plat Submittal Checklist

Community Development
Located at 1300 S. Kodiak Circle, Cornelius, Oregon 97113
www.ci.cornelius.or.us

Written Narrative Requirements

_____ A. **Checklist:** Please provide one completed copy of this five-page checklist.

_____ B. **Description of proposal**. Please describe the existing conditions on-site and the changes proposed to the site, structure, landscaping, parking, and land use, including the number of lots created. Provide findings verifying that the intended use is allowed within the particular zoning of the site by the City's Development Code.

_____ C. **Approval criteria findings**: Please provide a detailed narrative that evaluates and verifies the proposal meets the all of the approval criteria identified below.

Section 17.05.040(C) of the Development Code

1. *The proposal conforms with the City's Comprehensive Plan.*
2. *The proposal complies with all applicable statutory and ordinance requirements.*
3. *All proposed lots conform to the size and dimensional requirements of this ordinance; and*
4. *Adequate public facilities are available to serve the proposal*
5. *All proposed improvements meet City standards; and*
6. *That the phasing plan, if requested, can be carried out in a manner, which meets the objectives of the above criteria and provides necessary public improvements for each phase as it develops.*

Section 18.155, of the Development Code

If the subject parcel is located in the R-10 or R-7 zones, or it will be developed with a single-family dwelling, the proposal shall meet the Solar Access Protection design standards identified in *Section 18.155*. The

applicant will state which option is chosen and provide a list of those lots meeting the Basic Solar Standard, and those lots proposed for Exemption from, or Adjustment to the Basic Solar Standard.

_____ D. **Additional Requirements:** Please be advised that special studies, investigations and reports may be required to ensure that the proposal does not adversely affect the surrounding community, and does not create hazardous conditions for persons or improvements on the site. These studies may include investigations and reports on noise attenuation, air quality, traffic control, soil conditions, flooding of waters and storm water run-off, natural resources, tree preservation, and other concerns. A pre-application meeting is highly recommended to identify all of the additional requirements that may be required.

All applicable requirements from Metro, Clean Water Services, Oregon Department of Transportation, Division of State Lands and other applicable agencies will need to be addressed within the application.

_____ E. **Fee Ownership:** If applying for a Fee Ownership Land Division please provide findings specifically addressing each of the approval criteria found in *Section 17.05.050*, of the City's Planning Code, in addition to the approval criteria listed in item "C" above.

1. *As a whole, the development of which the unit is a part meets ordinance criteria for lot area, lot dimensions, setbacks, parking, lot coverage, landscaping, public facilities and street frontage.*

2. *The development as a whole, the unit for which fee ownership is desired and any unit affected by the division shall meet all building, plumbing and fire code standards.*

3. *Ingress and egress is provided to all lots.*

4. *Parking is provided in accordance with ordinance standard for the individual unit either on the new lot or through easements as described in subsection 6, below. If assigned parking is provided, it shall meet ordinance standards.*

5. *Adequate public facilities are provided to the new lot.*

6. *The applicant provides deed covenants required that address: parking, maintenance of buildings and utilities, landscaping and common areas, ingress and egress. The deed covenants must be approved by the City Attorney and Community Development Director.*

_____ F. **Sensitive Area Pre-Screening Site Assessment Letter**: Please provide a copy a completed and signed Sensitive Area Pre-Screening Site Assessment Letter or form from the City of Cornelius City Engineer or Clean Water Services (CWS). Please contact the City if you have questions.

_____ G. **Neighborhood Review Meeting:** information required (*Dev. Code Section 18.10.030.*). (Only required for Type III Reviews)

_____ 1. A copy of the notice sent to surrounding property owners.
_____ 2. A copy of the mailing list used to send out meeting notices.
_____ 3. An affidavit of mailing notice.
_____ 4. Representative copies of written materials and plans presented at the Neighborhood Review Meeting.
_____ 5. Notes of the meeting, including the meeting date, time, and location, the names and addresses of those who attended, and oral and written comments received.

Plan Requirements

All plans shall be presented at a minimum scale of 1" = 20', and on a maximum sheet size of 24" x 36". Please provide staff three (3) full sheets sets for review, one (1) 8 ½" x 11" sheet set and one electronic PDF file, which include all of the following information.

_____ A. **Existing Conditions Plan** includes the following:

_____ 1. North arrow, scale and date of plan.
_____ 2. Vicinity map.
_____ 3. All existing lot sizes, lot lines and dimensions.
_____ 4. Points of existing access, interior streets, driveways, and parking areas.
_____ 5. Location of all existing buildings and structures, including refuse storage locations and pedestrian/bike paths.
_____ 6. Existing right-of-way and improvements, including sidewalk dimensions.
_____ 7. Dimension from right-of-way centerline to edge of existing property line and to required right-of-way dedication.
_____ 8. Dimensions of all improvements, including setbacks.
_____ 9. Location of existing public and private utilities.
_____ 10. Topographical information, (2 ft. contour lines) of existing grades.
_____ 11. Existing trees larger than 6" in dbh (diameter at breast height), including genus, species and size. Dbh is measured at 54" above grade.
_____ 12. Location of existing wetlands, 100-year floodplain, streams or other natural resources.

_____ B. **Proposed Preliminary Plat** includes the following:

_____ 1. The dimension of all new lots with their size (sq. ft.), the location, widths and names of all existing, proposed streets and public ways within or adjacent to the plat. Please include illustrations of all easements for utilities, other encumbrances and railroad right-of-ways. New streets shall be designated with proposed street names.

_____ 2. Dimension from right-of-way centerline to edge of existing property line and to required right-of-way dedication.

_____ 3. Location of existing and proposed easements.

_____ 4. Location of at least one temporary bench mark within the plat boundaries.

_____ 5. Square footage of all proposed lots.

_____ 6. The total gross acreage of the subdivision plat.

_____ 7. Identify and label on the plat all lots in conformance with the Solar Ordinance requirements.

_____ 8. Delineation showing minimum/proposed setback requirements within each lot/parcel.

_____ C. **Preliminary Plat Reduction & Electronic PDF:** Provide one proposed preliminary plat that is reduced to 8.5" x 11" and provide staff an electronic PDF copy of the proposed plans.

_____ D. **Proposed Improvement Plan** includes the following:

_____ 1. North arrow, scale and date of plan.

_____ 2. All proposed lot sizes, lot lines and dimensions.

_____ 3. Dimension from right-of-way centerline to edge of existing and proposed property line and to required right-of-way dedication.

_____ 4. Existing and proposed right-of-way and improvements, including sidewalk dimensions.

_____ 5. Topographical information, (2 ft. contour lines) of existing and proposed grades and fill.

_____ 6. Preliminary location of proposed public water, sewer, stormwater and private utilities such as electric, cable and telephone. Please include any proposed easements, and 100-year floodplain.

_____ 7. Preliminary plans and profiles of proposed sanitary and storm sewers, showing that gravity service is feasible for all lots.

_____ 8. Existing trees, larger than 6" dbh, proposed to be saved and removed. Include genus, species, and size. Proposed location of street trees and their size and species.

_____ 9. Cross-section of all street and bike path improvements.

_____ 10. Preliminary location of proposed stormwater quality/quantity facility and preliminary sizing calculations showing location has sufficient space for a facility meeting current requirements

_____ E. **Landscape Plan**:

_____ 1. Submit proposed detailed landscaping plan of any proposed common space, landscaped areas within the public right-of-way (ROW) and other non-buildable tracts.

I have provided the items required in this submittal checklist. I understand that any missing information, omissions or both may deem my project incomplete, which may lengthen the time to process the request.

Signature	Date
Print Name	Telephone Number

Cornelius
Oregon's Family Town

Middle Housing- Preliminary Plat Submittal Checklist

Community Development
Located at 1300 S. Kodiak Circle, Cornelius, Oregon 97113
www.ci.cornelius.or.us

Written Narrative Requirements

_____ A. **Checklist:** Please provide one completed copy of this five-page checklist.

_____ B. **Description of proposal**. Please describe the existing conditions on-site and the changes proposed to the site, structure, landscaping, parking, and land use, including the number of lots created. Provide findings verifying that the intended use is allowed within the particular zoning of the site by the City's Development Code.

_____ C. **Approval criteria findings**: Please provide a detailed narrative that evaluates and verifies the proposal meets the all of the approval criteria identified below.

Section 17.05.060(D) of the Development Code

1. *The proposal conforms with the City's Comprehensive Plan.*
2. *The proposal complies with all applicable statutory and ordinance requirements.*
3. *All proposed lots conform to the size and dimensional requirements of this ordinance; and*
4. *Adequate public facilities are available to serve the proposal*
5. *All proposed improvements meet City standards; and*
6. *That the phasing plan, if requested, can be carried out in a manner, which meets the objectives of the above criteria and provides necessary public improvements for each phase as it develops.*

Section 18.155, of the Development Code

If the subject parcel is located in the R-10 or R-7 zones, or it will be developed with a single-family dwelling, the proposal shall meet the Solar Access Protection design standards identified in *Section 18.155*. The

applicant will state which option is chosen and provide a list of those lots meeting the Basic Solar Standard, and those lots proposed for Exemption from, or Adjustment to the Basic Solar Standard.

_____ D. **Additional Requirements:** Please be advised that special studies, investigations and reports may be required to ensure that the proposal does not adversely affect the surrounding community, and does not create hazardous conditions for persons or improvements on the site. These studies may include investigations and reports on noise attenuation, air quality, traffic control, soil conditions, flooding of waters and storm water run-off, natural resources, tree preservation, and other concerns. A pre-application meeting is highly recommended to identify all of the additional requirements that may be required.

All applicable requirements from Metro, Clean Water Services, Oregon Department of Transportation, Division of State Lands and other applicable agencies will need to be addressed within the application.

_____ E. **Fee Ownership:** If applying for a Fee Ownership Land Division please provide findings specifically addressing each of the approval criteria found in *Section 17.05.050*, of the City's Planning Code, in addition to the approval criteria listed in item "C" above.

1. *As a whole, the development of which the unit is a part meets ordinance criteria for lot area, lot dimensions, setbacks, parking, lot coverage, landscaping, public facilities and street frontage.*

2. *The development as a whole, the unit for which fee ownership is desired and any unit affected by the division shall meet all building, plumbing and fire code standards.*

3. *Ingress and egress is provided to all lots.*

4. *Parking is provided in accordance with ordinance standard for the individual unit either on the new lot or through easements as described in subsection 6, below. If assigned parking is provided, it shall meet ordinance standards.*

5. *Adequate public facilities are provided to the new lot.*

6. *The applicant provides deed covenants required that address: parking, maintenance of buildings and utilities, landscaping and common areas, ingress and egress. The deed covenants must be approved by the City Attorney and Community Development Director.*

_____ F. **Sensitive Area Pre-Screening Site Assessment Letter**: Please provide a copy a completed and signed Sensitive Area Pre-Screening Site Assessment Letter or form from the City of Cornelius City Engineer or Clean Water Services (CWS). Please contact the City if you have questions.

_____ G. **Neighborhood Review Meeting:** information required (*Dev. Code Section 18.10.030.*). (Only required for Type III Reviews)

_____ 1. A copy of the notice sent to surrounding property owners.
_____ 2. A copy of the mailing list used to send out meeting notices.
_____ 3. An affidavit of mailing notice.
_____ 4. Representative copies of written materials and plans presented at the Neighborhood Review Meeting.
_____ 5. Notes of the meeting, including the meeting date, time, and location, the names and addresses of those who attended, and oral and written comments received.

Plan Requirements

All plans shall be presented at a minimum scale of 1" = 20', and on a maximum sheet size of 24" x 36". Please provide staff three (3) full sheets sets for review, one (1) 8 ½" x 11" sheet set and one electronic PDF file, which include all of the following information.

_____ A. **Existing Conditions Plan** includes the following:

_____ 1. North arrow, scale and date of plan.
_____ 2. Vicinity map.
_____ 3. All existing lot sizes, lot lines and dimensions.
_____ 4. Points of existing access, interior streets, driveways, and parking areas.
_____ 5. Location of all existing buildings and structures, including refuse storage locations and pedestrian/bike paths.
_____ 6. Existing right-of-way and improvements, including sidewalk dimensions.
_____ 7. Dimension from right-of-way centerline to edge of existing property line and to required right-of-way dedication.
_____ 8. Dimensions of all improvements, including setbacks.
_____ 9. Location of existing public and private utilities.
_____ 10. Topographical information, (2 ft. contour lines) of existing grades.
_____ 11. Existing trees larger than 6" in dbh (diameter at breast height), including genus, species and size. Dbh is measured at 54" above grade.
_____ 12. Location of existing wetlands, 100-year floodplain, streams or other natural resources.

_____ B. **Proposed Preliminary Plat** includes the following:

_____ 1. The dimension of all new lots with their size (sq. ft.), the location, widths and names of all existing, proposed streets and public ways within or adjacent to the plat. Please include illustrations of all easements for utilities, other encumbrances and railroad right-of-ways. New streets shall be designated with proposed street names.

_____ 2. Dimension from right-of-way centerline to edge of existing property line and to required right-of-way dedication.

_____ 3. Location of existing and proposed easements.

_____ 4. Location of at least one temporary bench mark within the plat boundaries.

_____ 5. Square footage of all proposed lots.

_____ 6. The total gross acreage of the subdivision plat.

_____ 7. Identify and label on the plat all lots in conformance with the Solar Ordinance requirements.

_____ 8. Delineation showing minimum/proposed setback requirements within each lot/parcel.

_____ C. **Preliminary Plat Reduction & Electronic PDF:** Provide one proposed preliminary plat that is reduced to 8.5" x 11" and provide staff an electronic PDF copy of the proposed plans.

_____ D. **Proposed Improvement Plan** includes the following:

_____ 1. North arrow, scale and date of plan.

_____ 2. All proposed lot sizes, lot lines and dimensions.

_____ 3. Dimension from right-of-way centerline to edge of existing and proposed property line and to required right-of-way dedication.

_____ 4. Existing and proposed right-of-way and improvements, including sidewalk dimensions.

_____ 5. Topographical information, (2 ft. contour lines) of existing and proposed grades and fill.

_____ 6. Preliminary location of proposed public water, sewer, stormwater and private utilities such as electric, cable and telephone. Please include any proposed easements, and 100-year floodplain.

_____ 7. Preliminary plans and profiles of proposed sanitary and storm sewers, showing that gravity service is feasible for all lots.

_____ 8. Existing trees, larger than 6" dbh, proposed to be saved and removed. Include genus, species, and size. Proposed location of street trees and their size and species.

_____ 9. Cross-section of all street and bike path improvements.

_____ 10. Preliminary location of proposed stormwater quality/quantity facility and preliminary sizing calculations showing location has sufficient space for a facility meeting current requirements

_____ E. **Landscape Plan**:

_____ 1. Submit proposed detailed landscaping plan of any proposed common space, landscaped areas within the public right-of-way (ROW) and other non-buildable tracts.

I have provided the items required in this submittal checklist. I understand that any missing information, omissions or both may deem my project incomplete, which may lengthen the time to process the request.

Signature	Date
Print Name	Telephone Number

Cornelius
Oregon's Family Town

Vacation Application

Community Development
Located at 1300 S. Kodiak Circle, Cornelius, Oregon 97113
www.ci.cornelius.or.us

OFFICIAL USE ONLY

Date Received:_____ Date Complete:_____ ↓ File Number ↓

Application Fee: _____ Receipt Number:_____ _____

APPLICATION TYPE

☐ **Street Vacation** ☐ **Utility Easement Vacation**

APPLICANT INFORMATION

Name:_____ Signature:_____

Mail Address:_____

Phone:_____ Fax:_____ E-mail:_____

PROPERTY OWNER INFORMATION

(For vacation of easements on private property)

Name:_____ Signature:_____

Mail Address:_____

Phone:_____ Fax:_____ E-mail:_____

SUBJECT SITE INFORMATION

Property Address(s):_____

Map & Tax Lot Number(s):_____

Existing Use:_____

Proposed Use:_____

Proposed Vacation: _____

Vacation Submittal Checklist

Community Development
Located at 1300 S. Kodiak Circle, Cornelius, Oregon 97113
www.ci.cornelius.or.us

Written Narrative Requirements

_____ A. **Checklist:** Please provide one completed and signed copy of this checklist.

_____ B. **Description of proposal:** Please describe the existing conditions on-site and the changes proposed to the street(s) and/or utilities. Provide findings verifying that the proposal is allowed by the City Code.

_____ C. **Approval criteria findings:** Please provide a narrative that evaluates and verifies the proposal meet the approval criteria below:
Section 13.55.030 of the CMC.

(1) The proposal satisfies the threshold requirements for a street vacation or utility easement vacation application.

(2) All city application fees related to the application under consideration by the decision-making authority have been submitted.

(3) The proposed street vacation or utility easement vacation meets the eligibility provisions of ORS 271.080, as applicable.

(4) The proposed street vacation will not adversely impact street connectivity as identified in the transportation system plan of the comprehensive plan.

(5) The proposed street vacation will not adversely impact police, fire, and emergency services in the area.

(6) That the proposed street vacation will not hinder accessibility to any aboveground or underground public facilities.

(7) That the proposed utility easement vacation will not result in the loss of any service of public utilities to any property that is currently served. This criterion can be satisfied through the replacement of the

utility easement to be vacated with a new utility easement meeting adopted public works standards.

(8) Applications and documents related to the request, which will require further city approval, shall be submitted to the city in the proper sequence.

_____ D. **Petition Consent Requirements:** Please provide documentation of the consent of property owners per ORS 271.080.

Plan Requirements

_____ E. **Existing Conditions Plan:**

_____ 1. North arrow, scale and date of plan.
_____ 2. Vicinity map.
_____ 3. The entire street ROW, lot(s), including area and dimensions.
_____ 4. Provide the nearest intersecting streets per ORS 271.080.
_____ 5. Identify existing legal access points to the area of the proposed vacation.
_____ 6. Location of utilities, easements and structure's that are within and near the proposed vacation area.

_____ F. **Proposed Conditions Plan:**

_____ 1. North arrow, scale and date of plan.
_____ 2. Vicinity map.
_____ 3. The entire street ROW, lot(s), including area and dimensions.
_____ 4. Provide the nearest intersecting streets per ORS 271.080.
_____ 5. Identify existing legal access points to the area of the proposed vacation.
_____ 6. Location of utilities, easements and structure's that are within and near the proposed vacation area.

I have provided the items required in this submittal checklist. I understand that any missing information, omissions or both may deem my project incomplete, which may lengthen the time to process the request.

_____ _____
Signature Date

_____ _____
Print Name Telephone Number

Cornelius
Oregon's Family Town

Neighborhood Review Meeting Procedures

Community Development
Located at 1300 S. Kodiak Circle, Cornelius, Oregon 97113
www.ci.cornelius.or.us

18.10.030 Neighborhood review meeting.

(A) Prior to submittal of a Type III request which requires review by the planning commission, and for the application to be complete, the applicant shall provide an opportunity to meet with neighboring property owners, residents and businesses by conducting a neighborhood meeting.

(B) The purpose of the neighborhood review meeting is to allow the neighbors and residents to become familiar with the proposal and to identify any issues, which may be associated with an application. The intention of the meeting is for submittal of an application that is more responsive to neighborhood concerns, reducing the likelihood for delays and appeals of the application.

(C) The applicant shall send by regular mail a written notice announcing the neighborhood review meeting to the community development director and property owners within 250 feet of the subject property. The notice shall include the date, time and location of the meeting and a brief description of the nature and location of the proposal. The neighborhood review meeting must be held at an accessible location within the Cornelius city limits. The notice shall be deposited in the mail in the city, not less than 20 days prior to the required neighborhood review meeting.

(D) At the neighborhood review meeting, the applicant shall present the proposed application to the neighbors in attendance.

(E) The applicant shall not be required to hold more than one neighborhood review meeting provided such meeting is held within 180 days prior to submitting a land use or design review application for one specific site.

Sample Neighborhood Meeting Notice

Neighborhood Review Meeting

on a

Preliminary Development Proposal affecting

(PROPERTY ADDRESS/LOCATION)

Proposed as

(BRIEF DESCRIPTION OF PROJECT, SUCH AS:
20-UNIT TOWNHOUSE)

A meeting to discuss the preliminary development proposal is scheduled for

(TIME, DATE, AND LOCATION)

All interested persons may attend

For more information, please contact

(CONTACT PERSON, PHONE NUMBER/EMAIL)

DEVELOPER OR AGENT: _____

PROJECT LOCATION: _____

AFFIDAVIT OF MAILING NOTICE

I, _____, being first duly sworn; say that I am (represent) the party intended to submit an application to the City of Cornelius for a proposed _____ affecting land located at _____, and that pursuant to Ordinance 810, Chapter 18.10, and the guidelines set out by the Community Development Director, did on the _____ day of _____, _____, personally mail notice to affected property owners within 250 feet of the proposed development site.

Sign and Date in the presence of a Notary Public. Certain City staff are Notary Publics and are available for witnessing.

Signature: _____

Dated this _____ day of _____, _____.

State of Oregon
*County of*_____

Subscribed and sworn to (or affirmed) before me this ____ day of _____,_____.

Notary Public for the State of Oregon

My Commission expires: _____

City of Cornelius Fees and Connection Charges FY 25-26

Name:	
Building Address:	
Permit #	**Date:**
Receipt #	**Check #**

Valuation submitted with Building Permit		
SF submitted with Building Permit Comm/Ind (heated space only for Residential)		
Number of Residential Dwelling Units		
Number of Commercial Equivalent Dwelling Units		
Number of FT Equivalent Employees		
Unmanaged Impervious Surface (UIS)		

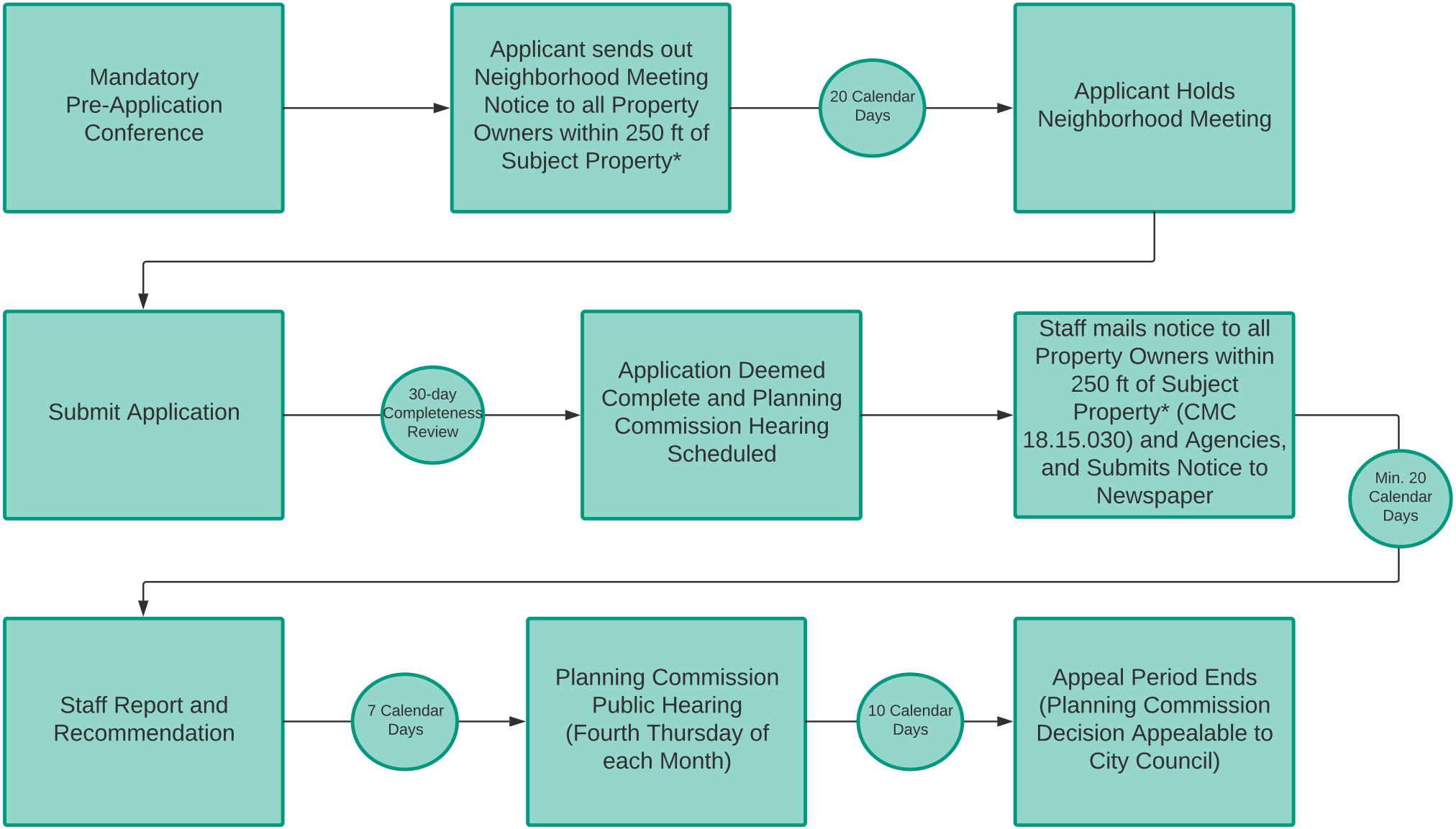
BPER	Bldg Permit	City of Forest Grove
MPER	Mechanical Permit	City of Forest Grove
PLUMB	Plumbing Permit-	City of Forest Grove

CONTAX	Cornelius CET .75% of Valuation	0.75%/Valuation	$ -
MTETAX	Metro CET .12% of Valuation >=$100,000		$ -
FGETAX	Forest Grove School District CET Comm/Ind **(FGC)**	.84/SF	$ -
FGETAX	Forest Grove School District CET Residential **(FGR)**	1.67 /SF of Heated space	$ -
HSETAX	Hillsboro School District CET Comm/Ind **(HSC)**	.84/SF	$ -
HSETAX	Hillsboro School District CET Residental **(HSR)**	1.67 /SF of Heated space	$ -
PWPER	Engineering Review and Inspection		
EROS	Erosion Control		
SDFIL	Cornelius Stormwater Fee In Lieu WQ **(WQ)**	1 per SF UIS	$ -
SDFIL	Cornelius Stormwater Fee In Lieu Hydro **(HY)**	1 per SF UIS	$ -
SDFIL	Cornelius Stormwater Fee In Lieu Hydro + WQ **(HYWQ)**	1.50 per SF UIS	$ -
METER	Cornelius Water Meter 5/8"		$ -
METER	Cornelius Water Meter 3/4"		$ -
METER	Cornelius Water Meter 1"		$ -
METER	Cornelius Water Meter 1 1/2"		$ -
METER	Cornelius Water Meter 2"		$ -
METER	installation charge for 2" meter		$ -
METER	Water Meter > 2" – Developer must purchase and Install		
SDCHIL	Hillsboro Water SDC 5/8"		$ -
SDCHIL	Hillsboro Water SDC 3/4"		$ -
SDCHIL	Hillsboro Water SDC 1"		$ -
SDCHIL	Hillsboro Water SDC 1 1/2"		$ -
SDCHIL	Hillsboro Water SDC 2"		$ -
SDCHIL	Hillsboro Water SDC 3"	Minimum Charge $43,054.00	$ -
SDCHIL	Hillsboro Water SDC 4"	Minimum Charge $71,754.00	$ -
SDCHIL	Hillsboro Water SDC 6"	Minimum Charge $143,504.00	$ -
SDCHIL	Hillsboro Water SDC 8"	Minimum Charge $229,604.00	$ -
SDCHIL	Hillsboro Water SDC 10"	Minimum Charge $330,054.00	$ -
SDCWTR	Cornelius Water SDC 5/8"		$ -
SDCWTR	Cornelius Water SDC 3/4"		$ -
SDCWTR	Cornelius Water SDC 1"		$ -
SDCWTR	Cornelius Water SDC 1 1/2"		$ -
SDCWTR	Cornelius Water SDC 2"		$ -
SDCWTR	Cornelius Water SDC 3"		$ -
SDCWTR	Cornelius Water SDC 4"		$ -
SDCWTR	Cornelius Water SDC 6"		$ -
SDCWTR	Cornelius Water SDC 8"		$ -
SDCWTR	Cornelius Water SDC 10"		$ -
SDCCWS	Sanitary Sewer SDC- CWS	7139.00 /EDU	
SDCSEW	Cornelius Sanitary Sewer System Development	232.00 /EDU	
TDT	Transportation Development Tax	Per Washington County Rate Schedule	
SDCPRK	Parks SDC – Commercial/Industrial	74.00 /FTE	
SDCPRK	Parks SDC - Residential	4471.00 /EDU	$ -
TOTAL			**$ -**

		Multiplier FY 25-26		
Building Permit - City of Forest Grove				
Mechanical Permit - City of Forest Grove				
Plumbing Permit - City of Forest Grove				
Electrical Permit - Washington County				
CONTAX	Cornelius CET	0.75%/Valuation		
MTETAX	Metro CET .12%/Valuation >= 100,000.00	0.12%	Not to exceed 12,000	
HSETAX	Hillsboro School District CET Res	1.67 /SF of Heated space		
HSETAX	Hillsboro School District CET Com/Ind	.84/SF	Not to exceed 36,000 per structure	
FGETAX	Forest Grove School District CET Res	1.67 /SF of Heated space		
FGETAX	Forest Grove School District CET Com/Ind	.84/SF	Not to exceed 25,000 per structure	
PWPER	Public Works Permit	**$25 or % x Lineal ft or 5% of public imp. or $220/sheet**		
EROS	Erosion Control	**$190 or $550 per CWS**		
SDFIL	Cornelius Fee in Lieu Water Quality	$ 1.00	Fee/SF of unmanaged Impervious Surface 1,000-2640 sq ft	
SDFIL	Cornelius Fee in Lieu hydromodificaiton	$ 1.00		
SDFIL	Cornelius Fee in Lieu Combined WQ+Hydro	$ 1.50		
Meter	Cornelius Water Meter 5/8"	$ 500.00		
Meter	Cornelius Water Meter 3/4"	$ 500.00		
Meter	Cornelius Water Meter 1"	$ 650.00		
Meter	Cornelius Water Meter 1 1/2"	$ 750.00		
Meter	Cornelius Water Meter 2"	$ 900.00		
Meter	installation charge	$ 350.00		
SDCHIL	Hillsboro Water SDC 5/8"	$ 2,874.00		
SDCHIL	Hillsboro Water SDC 3/4"	$ 4,309.00		
SDCHIL	Hillsboro Water SDC 1"	$ 7,179.00		
SDCHIL	Hillsboro Water SDC 1 1/2"	$ 14,354.00		
SDCHIL	Hillsboro Water SDC 2"	$ 22,964.00		
SDCHIL	Hillsboro Water SDC 3"	$ 43,054.00	Minimum amount	
SDCHIL	Hillsboro Water SDC 4"	$ 71,754.00		
SDCHIL	Hillsboro Water SDC 6"	$ 143,504.00		
SDCHIL	Hillsboro Water SDC 8"	$ 229,604.00		
SDCHIL	Hillsboro Water SDC 10"	$ 330,054.00		
SDCWTR	Cornelius Water SDC 5/8"	$ 3,884.00		
SDCWTR	Cornelius Water SDC 3/4"	$ 5,825.00		
SDCWTR	Cornelius Water SDC 1"	$ 9,709.00		
SDCWTR	Cornelius Water SDC 1 1/2"	$ 19,418.00		
SDCWTR	Cornelius Water SDC 2"	$ 31,069.00		
SDCWTR	Cornelius Water SDC 3"	$ 62,137.00		
SDCWTR	Cornelius Water SDC 4"	$ 97,090.00		
SDCWTR	Cornelius Water SDC 6"	$ 194,179.00		
SDCWTR	Cornelius Water SDC 8"	$ 310,687.00		
SDCWTR	Cornelius Water SDC 10"	$ 446,613.00		
SDCCWS	Sewer SDC- CWS	7139.00 /EDU		
SDCSEW	Cornelius Sewer SDC	232.00 /EDU		
TDT	County Transportation Development Tax		Per Washington Conty Fee Schedule	
SDCPRK	Park SDC Commercial/Industrial	74.00 /FTE		
SDCPRK	Park SDC Residential	4471.00 /EDU		

Cornelius
Oregon's Family Town

Type III Land Use Process Map



*Unless other requirements apply
**Application must be deemed complete by the 10th of the month prior to the following month's PC hearing date

Fore more information please contact the Community Development Department at 503-357-3011 or tfranz@ci.cornelius.or.us

Exhibit J: Unrecorded Final Partition Plat LP-01-25

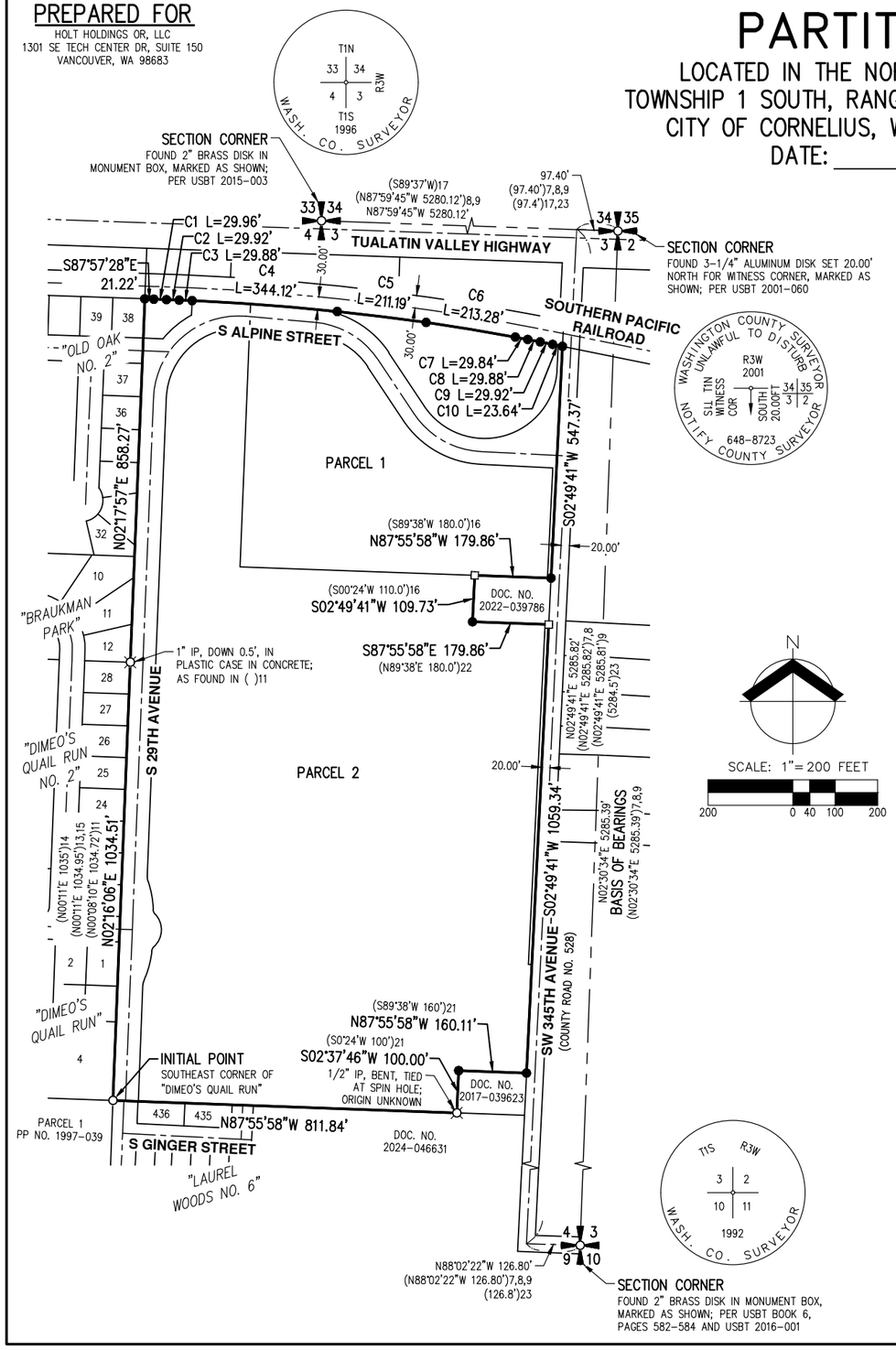
PARTITION PLAT

LOCATED IN THE NORTHEAST 1/4 OF SECTION 3, TOWNSHIP 1 SOUTH, RANGE 3 WEST, WILLAMETTE MERIDIAN, CITY OF CORNELIUS, WASHINGTON COUNTY, OREGON

DATE: _____

RECORDED AS DOCUMENT NO. _____

PREPARED FOR
HOLT HOLDINGS OR, LLC
1301 SE TECH CENTER DR, SUITE 150
VANCOUVER, WA 98683



SHEET INDEX

SHEET 1	PLAT BOUNDARY, PLAT NOTES, SURVEYOR'S CERTIFICATE, LEGEND, CURVE TABLE
SHEET 2	SOUTH PORTION OF PLAT, LEGEND
SHEET 3	CENTRAL PORTION OF PLAT, LEGEND
SHEET 4	NORTH PORTION OF PLAT, LEGEND
SHEET 5	NARRATIVE, CURVE TABLE, REFERENCES
SHEET 6	APPROVALS, DECLARATION, ACKNOWLEDGEMENT

SURVEYOR'S CERTIFICATE

I, ERIC L. NYGREN, 91799PLS, DO HEREBY CERTIFY THAT I HAVE CORRECTLY SURVEYED AND MARKED WITH PROPER MONUMENTS, THE LANDS REPRESENTED ON THE ATTACHED MAP, SITUATED IN THE NORTHEAST ONE-QUARTER OF SECTION 3, TOWNSHIP 1 SOUTH, RANGE 3 WEST, WILLAMETTE MERIDIAN, CITY OF CORNELIUS, WASHINGTON COUNTY, OREGON, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE INITIAL POINT, BEING A FOUND 5/8-INCH IRON ROD WITH A YELLOW PLASTIC CAP INSCRIBED "AKS ENGR." AT THE NORTHWEST CORNER OF "LAUREL WOODS NO. 6", RECORDED AS DOCUMENT NUMBER 2020-105097, WASHINGTON COUNTY RECORDS, ALSO BEING THE SOUTHEAST CORNER OF "DIMEO'S QUAIL RUN", RECORDED AS BOOK 66 PAGE 23, WASHINGTON COUNTY RECORDS; THENCE ALONG THE EAST LINE OF SAID "DIMEO'S QUAIL RUN" AND THE EAST LINE OF "DIMEO'S QUAIL RUN NO. 2", RECORDED AS BOOK 73 PAGE 25, WASHINGTON COUNTY RECORDS, NORTH 02°16'06" EAST 1034.51 FEET TO A 1-INCH IRON PIPE AT THE SOUTHEAST CORNER OF "BRAUKMAN PARK", RECORDED AS DOCUMENT NUMBER 93075375, WASHINGTON COUNTY RECORDS; THENCE ALONG THE EAST LINE OF SAID "BRAUKMAN PARK" AND THE EAST LINE OF "OLD OAK NO. 2", RECORDED AS DOCUMENT NUMBER 96057751, WASHINGTON COUNTY RECORDS, NORTH 02°17'57" EAST 858.27 FEET TO THE SOUTHERLY RIGHT-OF-WAY LINE OF THE SOUTHERN PACIFIC RAILROAD RIGHT-OF-WAY (30.00 FEET FROM CENTERLINE); THENCE ALONG SAID SOUTHERLY RIGHT-OF-WAY LINE ON THE FOLLOWING COURSES: SOUTH 87°57'28" EAST 21.22 FEET; THENCE ALONG A CURVE TO THE RIGHT WITH A RADIUS OF 22888.32 FEET, A CENTRAL ANGLE OF 0°04'30", AN ARC LENGTH OF 29.96 FEET, AND A CHORD OF SOUTH 87°55'13" EAST 29.96 FEET; THENCE ALONG A COMPOUND CURVE TO THE RIGHT WITH A RADIUS OF 11429.17 FEET, A CENTRAL ANGLE OF 0°09'00", AN ARC LENGTH OF 29.92 FEET, AND A CHORD OF SOUTH 87°48'28" EAST 29.92 FEET; THENCE ALONG A COMPOUND CURVE TO THE RIGHT WITH A RADIUS OF 7609.45 FEET, A CENTRAL ANGLE OF 0°13'30", AN ARC LENGTH OF 29.88 FEET, AND A CHORD OF SOUTH 87°37'13" EAST 29.88 FEET; THENCE ALONG A COMPOUND CURVE TO THE RIGHT WITH A RADIUS OF 5514.77 FEET, A CENTRAL ANGLE OF 3°34'31", AN ARC LENGTH OF 344.12 FEET, AND A CHORD OF SOUTH 85°43'13" EAST 344.07 FEET; THENCE ALONG A COMPOUND CURVE TO THE RIGHT WITH A RADIUS OF 6336.21 FEET, A CENTRAL ANGLE OF 1°54'35", AN ARC LENGTH OF 211.19 FEET, AND A CHORD OF SOUTH 82°58'40" EAST 211.18 FEET; THENCE ALONG A COMPOUND CURVE TO THE RIGHT WITH A RADIUS OF 4553.68 FEET, A CENTRAL ANGLE OF 2°41'01", AN ARC LENGTH OF 213.28 FEET, AND A CHORD OF SOUTH 80°40'51" EAST 213.27 FEET; THENCE ALONG A COMPOUND CURVE TO THE RIGHT WITH A RADIUS OF 5699.60 FEET, A CENTRAL ANGLE OF 0°18'00", AN ARC LENGTH OF 29.84 FEET, AND A CHORD OF SOUTH 79°11'21" EAST 29.84 FEET; THENCE ALONG A COMPOUND CURVE TO THE RIGHT WITH A RADIUS OF 7609.45 FEET, A CENTRAL ANGLE OF 0°13'30", AN ARC LENGTH OF 29.88 FEET, AND A CHORD OF SOUTH 78°55'36" EAST 29.88 FEET; THENCE ALONG A COMPOUND CURVE TO THE RIGHT WITH A RADIUS OF 11429.17 FEET, A CENTRAL ANGLE OF 0°09'00", AN ARC LENGTH OF 29.92 FEET, AND A CHORD OF SOUTH 78°44'21" EAST 29.92 FEET; THENCE ALONG A COMPOUND CURVE TO THE RIGHT WITH A RADIUS OF 22888.32 FEET, A CENTRAL ANGLE OF 0°03'33", AN ARC LENGTH OF 23.64 FEET, AND A CHORD OF SOUTH 78°38'04" EAST 23.64 FEET TO THE WESTERLY RIGHT-OF-WAY LINE OF SW 345TH AVENUE (COUNTY ROAD NUMBER 528, 20.00 FEET FROM CENTERLINE); THENCE ALONG SAID WESTERLY RIGHT-OF-WAY LINE, SOUTH 02°49'41" WEST 547.37 FEET TO THE NORTHEAST CORNER OF DOCUMENT NUMBER 2022-039786, WASHINGTON COUNTY RECORDS; THENCE ALONG THE NORTHERLY LINE OF SAID DOCUMENT NUMBER 2022-039786, NORTH 87°55'58" WEST 179.86 FEET TO A 1/2-INCH IRON PIPE AT THE NORTHWEST CORNER THEREOF; THENCE ALONG THE WESTERLY LINE OF SAID DOCUMENT NUMBER 2022-039786, SOUTH 02°49'41" WEST 109.73 FEET TO THE SOUTHWEST CORNER THEREOF; THENCE ALONG THE SOUTHERLY LINE OF SAID DOCUMENT NUMBER 2022-039786, SOUTH 87°55'58" EAST 179.86 FEET TO A 1/2-INCH IRON PIPE ON SAID WESTERLY RIGHT-OF-WAY LINE OF SW 345TH AVENUE (20.00 FEET FROM CENTERLINE); THENCE ALONG SAID WESTERLY RIGHT-OF-WAY LINE, SOUTH 02°49'41" WEST 1059.34 FEET TO THE NORTHEAST CORNER OF DOCUMENT NUMBER 2017-039623, WASHINGTON COUNTY RECORDS; THENCE ALONG THE NORTHERLY LINE OF SAID DOCUMENT NUMBER 2017-039623, NORTH 87°55'58" WEST 160.11 FEET TO THE NORTHWEST CORNER THEREOF; THENCE ALONG THE WESTERLY LINE OF SAID DOCUMENT NUMBER 2017-039623, SOUTH 02°37'46" WEST 100.00 FEET TO A 1/2-INCH IRON PIPE ON THE NORTHERLY LINE OF DOCUMENT NUMBER 2024-046631, WASHINGTON COUNTY RECORDS; THENCE ALONG SAID NORTHERLY LINE AND THE NORTHERLY LINE OF SAID "LAUREL WOODS NO. 6", NORTH 87°55'58" WEST 811.84 FEET TO THE INITIAL POINT. CONTAINS 41.26 ACRES, MORE OR LESS.

PLAT NOTES

1. THIS PLAT IS SUBJECT TO THE CONDITIONS OF APPROVAL SET FORTH IN CITY OF CORNELIUS FILE NO. LP-0-25.
2. PER DEED BOOK 382, PAGE 129, WASHINGTON COUNTY RECORDS, ACCESS FROM THIS PLAT TO TUALATIN VALLEY HIGHWAY IS PROHIBITED.

LEGEND

●	SET 5/8" X 30" IRON ROD W/YPC INSCRIBED "AKS ENGR."
□	FOUND 1/2" IRON PIPE; PER ( )16; HELD UNLESS NOTED OTHERWISE
○	FOUND 5/8" IRON ROD W/YPC INSCRIBED "AKS ENGR."; PER ( )5; HELD UNLESS NOTED OTHERWISE
⊠	DENOTES FOUND MONUMENT AS NOTED; HELD UNLESS NOTED OTHERWISE
W/YPC	WITH A YELLOW PLASTIC CAP
IP	IRON PIPE
DOC. NO.	DOCUMENT NUMBER PER WASHINGTON COUNTY RECORDS
PP NO.	PARTITION PLAT NUMBER PER WASHINGTON COUNTY RECORDS
ROW	RIGHT-OF-WAY
SF	SQUARE FEET
( )X	DATA PER REFERENCE NUMBER X ON SHEET 5
USBT	UNITED STATES BEARING TREE RECORD

SEE SHEET 5 FOR CURVE TABLE AND REFERENCES

REVIEW COPY

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2024
ERIC NYGREN
091799PLS

RENEWS: 12/31/2026

JOB NAME:	305 SW 345TH AVENUE
JOB NUMBER:	4636-05
DRAWN BY:	ELN
CHECKED BY:	MSK
DRAWING NO.:	4636-05Partition

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD, STE 100
TUALATIN, OR 97062
503.563.6151
WWW.AKS-ENG.COM

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FORESTRY · PLANNING · LANDSCAPE ARCHITECTURE

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HOLT HOLDINGS OR, LLC
1301 SE TECH CENTER DR, SUITE 150
VANCOUVER, WA 98683

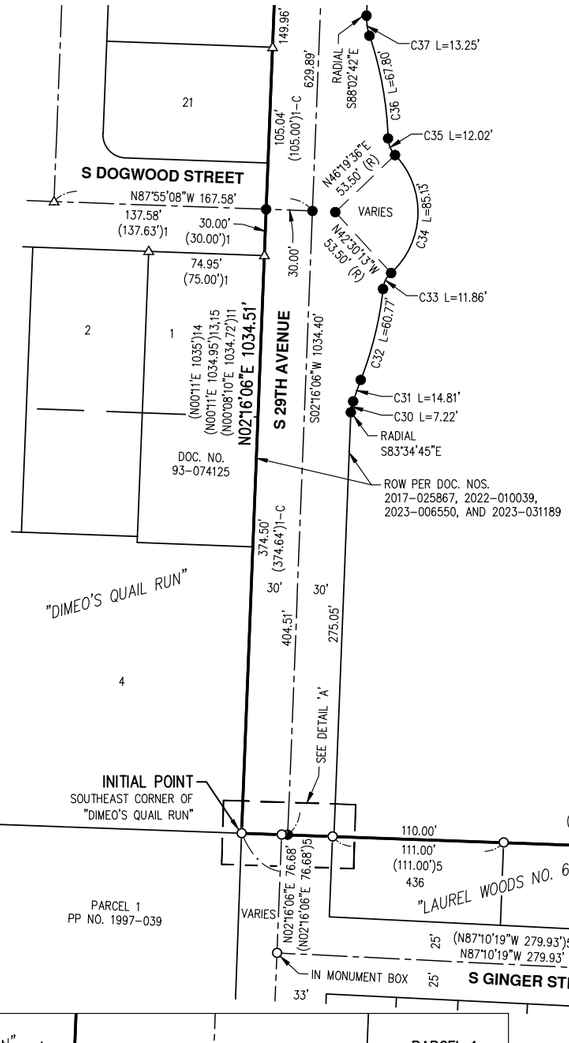
RECORDED AS DOCUMENT NO. _____

PARTITION PLAT

LOCATED IN THE NORTHEAST 1/4 OF SECTION 3, TOWNSHIP 1 SOUTH, RANGE 3 WEST, WILLAMETTE MERIDIAN, CITY OF CORNELIUS, WASHINGTON COUNTY, OREGON

DATE: _____

CONTINUED ON SHEET 3

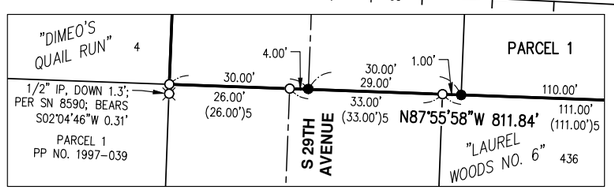


LEGEND

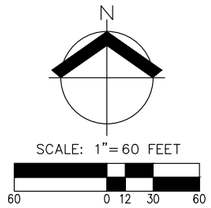
●	SET 5/8" X 30" IRON ROD W/YPC INSCRIBED "AKS ENGR."
○	FOUND 5/8" IRON ROD W/YPC INSCRIBED "AKS ENGR."; PER ( )5; HELD UNLESS NOTED OTHERWISE
△	FOUND 5/8" IRON ROD W/YPC INSCRIBED "OQUIST PLS 2008"; PER ( )1; HELD
⊠	DENOTES FOUND MONUMENT AS NOTED; HELD UNLESS NOTED OTHERWISE
W/YPC	WITH A YELLOW PLASTIC CAP
IR	IRON ROD
IP	IRON PIPE
DOC. NO.	DOCUMENT NUMBER PER WASHINGTON COUNTY RECORDS
PP NO.	PARTITION PLAT NUMBER PER WASHINGTON COUNTY RECORDS
ROW	RIGHT-OF-WAY
SF	SQUARE FEET
( )X	DATA PER REFERENCE NUMBER X ON SHEET 5
-C	CALCULATED VALUE

PARCEL 2
28.15 ACRES

DETAIL 'B'
NOT TO SCALE



DETAIL 'A'
NOT TO SCALE



REVIEW COPY

SEE SHEET 5 FOR CURVE DATA AND REFERENCES

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2024
ERIC NYGREN
091799PLS
RENEWS: 12/31/2026

JOB NAME:	305 SW 345TH AVENUE
JOB NUMBER:	4636-05
DRAWN BY:	ELN
CHECKED BY:	MSK
DRAWING NO.:	4636-05Partition

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD, STE 100
TUALATIN, OR 97062
503.563.6151
WWW.AKS-ENG.COM

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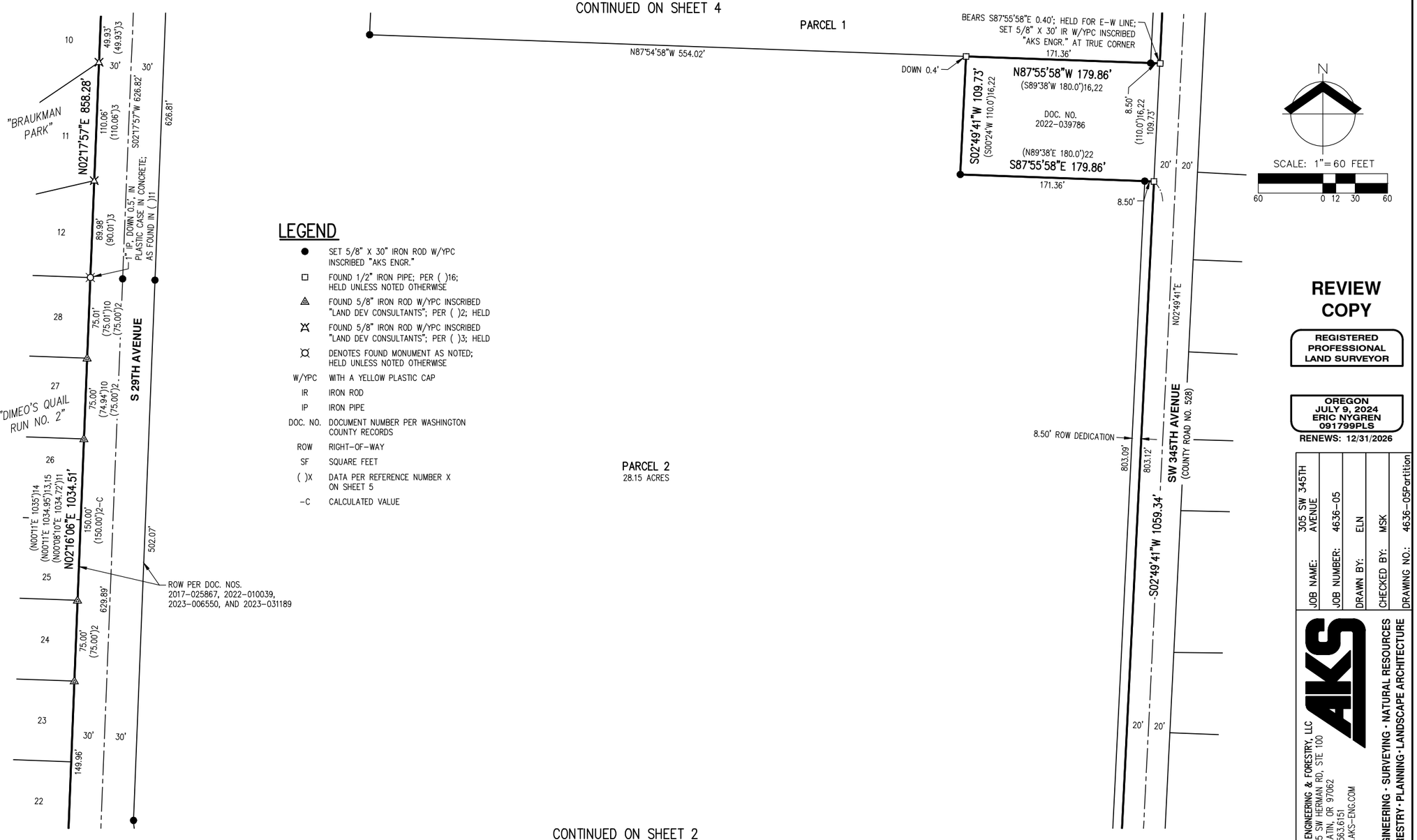
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1301 SE TECH CENTER DR, SUITE 150
VANCOUVER, WA 98683

RECORDED AS DOCUMENT NO. _____

PARTITION PLAT

LOCATED IN THE NORTHEAST 1/4 OF SECTION 3,
TOWNSHIP 1 SOUTH, RANGE 3 WEST, WILLAMETTE MERIDIAN,
CITY OF CORNELIUS, WASHINGTON COUNTY, OREGON
DATE: _____

CONTINUED ON SHEET 4



LEGEND

●	SET 5/8" X 30" IRON ROD W/YPC INSCRIBED "AKS ENGR."
□	FOUND 1/2" IRON PIPE; PER ( )16; HELD UNLESS NOTED OTHERWISE
⧋	FOUND 5/8" IRON ROD W/YPC INSCRIBED "LAND DEV CONSULTANTS"; PER ( )2; HELD
⧓	FOUND 5/8" IRON ROD W/YPC INSCRIBED "LAND DEV CONSULTANTS"; PER ( )3; HELD
⊠	DENOTES FOUND MONUMENT AS NOTED; HELD UNLESS NOTED OTHERWISE
W/YPC	WITH A YELLOW PLASTIC CAP
IR	IRON ROD
IP	IRON PIPE
DOC. NO.	DOCUMENT NUMBER PER WASHINGTON COUNTY RECORDS
ROW	RIGHT-OF-WAY
SF	SQUARE FEET
( )X	DATA PER REFERENCE NUMBER X ON SHEET 5
-C	CALCULATED VALUE

PARCEL 2
28.15 ACRES

CONTINUED ON SHEET 2

SEE SHEET 5 FOR REFERENCES

REVIEW COPY

REGISTERED PROFESSIONAL LAND SURVEYOR

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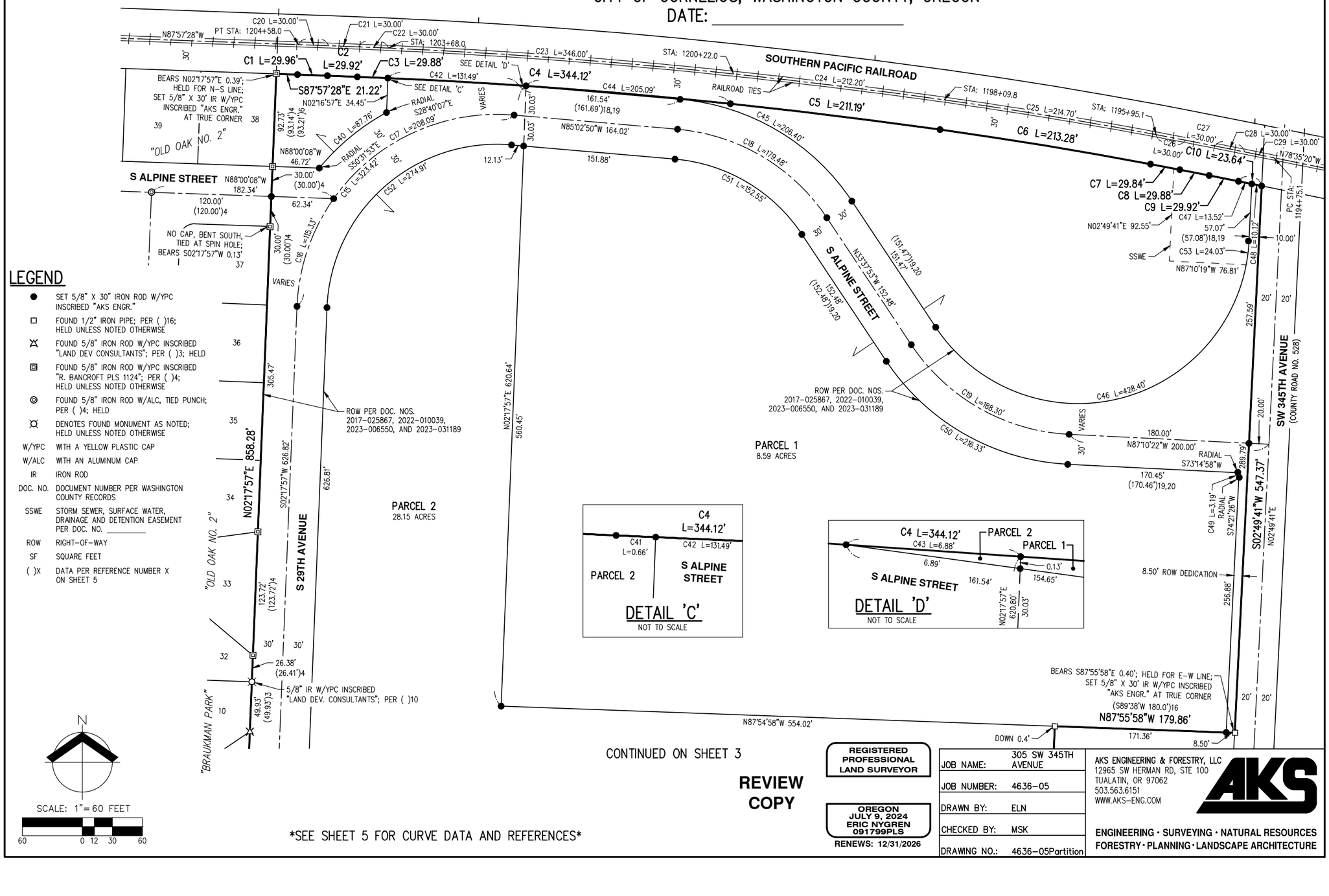
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TOWNSHIP 1 SOUTH, RANGE 3 WEST, WILLAMETTE MERIDIAN,
CITY OF CORNELIUS, WASHINGTON COUNTY, OREGON
DATE: _____

RECORDED AS DOCUMENT NO. _____



LEGEND

●	SET 5/8" X 30" IRON ROD W/YPC INSCRIBED "AKS ENGR."
□	FOUND 1/2" IRON PIPE; PER ( )16; HELD UNLESS NOTED OTHERWISE
⊠	FOUND 5/8" IRON ROD W/YPC INSCRIBED "LAND DEV CONSULTANTS"; PER ( )3; HELD
▣	FOUND 5/8" IRON ROD W/YPC INSCRIBED "R. BANCROFT PLS 1124"; PER ( )4; HELD UNLESS NOTED OTHERWISE
◎	FOUND 5/8" IRON ROD W/ALC, TIED PUNCH; PER ( )4; HELD
⊗	DENOTES FOUND MONUMENT AS NOTED; HELD UNLESS NOTED OTHERWISE
W/YPC	WITH A YELLOW PLASTIC CAP
W/ALC	WITH AN ALUMINUM CAP
IR	IRON ROD
DOC. NO.	DOCUMENT NUMBER PER WASHINGTON COUNTY RECORDS
SSWE	STORM SEWER, SURFACE WATER, DRAINAGE AND DETENTION EASEMENT PER DOC. NO. _____
ROW	RIGHT-OF-WAY
SF	SQUARE FEET
( )X	DATA PER REFERENCE NUMBER X ON SHEET 5

DETAIL 'C'
NOT TO SCALE

DETAIL 'D'
NOT TO SCALE

CONTINUED ON SHEET 3

SEE SHEET 5 FOR CURVE DATA AND REFERENCES

REVIEW COPY

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2024
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CITY OF CORNELIUS, WASHINGTON COUNTY, OREGON
DATE: _____

RECORDED AS DOCUMENT NO. _____

NARRATIVE

THE PURPOSE OF THIS SURVEY IS TO MONUMENT THE RIGHT-OF-WAY DEDICATION PER DOCUMENT NUMBERS 2017-025867, 2022-010039, 2023-006550, AND 2023-031189, WASHINGTON COUNTY DEED RECORDS, AND TO PARTITION INTO TWO PARCELS THAT TRACT OF LAND DESCRIBED ON DOCUMENT NUMBER 2002-001132, WASHINGTON COUNTY RECORDS, AS SHOWN HEREON, PER CITY OF CORNELIUS CASE FILE NUMBER LP-0-25.

THE BASIS OF BEARINGS (N02°30'34"E) IS PER SURVEY NUMBER 33,146 AND WAS ESTABLISHED ALONG THE EAST LINE OF SECTION 3, TOWNSHIP 1 SOUTH, RANGE 3 WEST, WILLAMETTE MERIDIAN, BY HOLDING THE SOUTHEAST AND NORTHEAST CORNERS OF SAID SECTION 3.

THE SOUTHERLY LINE OF THIS PLAT WAS ESTABLISHED BY HOLDING THE FOUND IRON ROD PER "LAUREL WOODS NO. 6" AT THE NORTHWEST CORNER OF SAID PLAT AND BY HOLDING THE FOUND IRON PIPE NEAR THE NORTHEAST CORNER OF DOCUMENT NUMBER 2024-046631.

THE SOUTHERLY WESTERLY LINE OF THIS PLAT WAS ESTABLISHED BY HOLDING THE FOUND IRON ROD PER "LAUREL WOODS NO. 6" AT THE NORTHWEST CORNER OF SAID PLAT AND BY HOLDING THE FOUND IRON PIPE AT THE NORTHEAST CORNER OF "DIMEO'S QUAIL RUN NO. 2".

THE NORTHERLY WESTERLY LINE OF THIS PLAT WAS ESTABLISHED BY HOLDING THE FOUND IRON PIPE AT THE NORTHEAST CORNER OF "DIMEO'S QUAIL RUN NO. 2", AND BY HOLDING THE FOUND IRON ROD PER "OLD OAK NO. 2" NEAR THE NORTHEAST CORNER OF SAID PLAT.

THE CENTERLINE OF THE SOUTHERN PACIFIC RAILROAD RIGHT-OF-WAY WAS ESTABLISHED BY HOLDING RECORD CENTERLINE DATA PER SOUTHERN PACIFIC COMPANY TRACK MAP V-20, SHEET 9, AND BY ROTATING SAID DATA ONTO THE EXISTING RAILROAD RAILS WITHIN SAID RIGHT-OF-WAY.

THE NORTHERLY LINE OF THIS PLAT, BEING THE SOUTHERLY LINE OF THE SOUTHERN PACIFIC RAILROAD RIGHT-OF-WAY, WAS ESTABLISHED BY HOLDING A LINE PARALLEL TO AND 30.00 FEET SOUTHERLY OF THE CENTERLINE OF SAID SOUTHERN PACIFIC RAILROAD RIGHT-OF-WAY.

THE CENTERLINE OF SW 345TH AVENUE WAS ESTABLISHED BY HOLDING A RECORD 97.40 FEET WESTERLY ALONG THE NORTH SECTION LINE FROM THE NORTHEAST CORNER OF SECTION 3, TOWNSHIP 1 SOUTH, RANGE 3 WEST, WILLAMETTE MERIDIAN, AND BY HOLDING A RECORD 126.80 FEET WESTERLY ALONG THE SOUTH SECTION LINE FROM THE SOUTHEAST CORNER OF SAID SECTION 3 PER COUNTY ROAD NUMBER 528.

THE WESTERLY RIGHT-OF-WAY LINE OF SW 345TH AVENUE, PORTIONS OF WHICH THE MOST EASTERLY LINES OF THIS PLAT, WAS ESTABLISHED BY HOLDING A LINE PARALLEL TO AND 20.00 FEET WESTERLY OF THE CENTERLINE OF SAID SW 345TH AVENUE.

THE NORTHERLY LINE OF DOCUMENT NUMBER 2022-039786, WASHINGTON COUNTY RECORDS, WAS ESTABLISHED BY HOLDING THE FOUND IRON PIPE PER SURVEY NUMBER 7,504 NEAR THE NORTHEAST CORNER OF SAID DOCUMENT NUMBER 2022-039786 AND BY HOLDING THE FOUND IRON PIPE PER SURVEY NUMBER 7,504 AT THE NORTHWEST CORNER OF SAID DOCUMENT NUMBER 2022-039786.

THE WESTERLY LINE OF DOCUMENT NUMBER 2022-039786 WAS ESTABLISHED BY HOLDING THE FOUND IRON PIPE PER SURVEY NUMBER 7,504 AT THE NORTHWEST CORNER OF SAID DOCUMENT NUMBER 2022-039786 AND BY HOLDING A LINE PARALLEL TO THE WESTERLY RIGHT-OF-WAY LINE OF SW 345TH AVENUE.

THE SOUTHERLY LINE OF DOCUMENT NUMBER 2022-039786 WAS ESTABLISHED BY HOLDING THE FOUND IRON PIPE PER SURVEY NUMBER 7,504 AT THE SOUTHEAST CORNER OF SAID DOCUMENT NUMBER 2022-039786 AND BY HOLDING A LINE PARALLEL TO THE NORTHERLY LINE OF SAID DOCUMENT NUMBER 2022-039786.

THE NORTHERLY LINE OF DOCUMENT NUMBER 2017-039623, WASHINGTON COUNTY RECORDS, WAS ESTABLISHED BY HOLDING A LINE PARALLEL TO AND A RECORD 180.00 FEET NORTHERLY OF THE SOUTHERLY LINE OF THIS PLAT.

THE WESTERLY LINE OF DOCUMENT NUMBER 2017-039623 WAS ESTABLISHED BY HOLDING THE FOUND IRON PIPE NEAR THE NORTHWEST CORNER OF SAID DOCUMENT NUMBER 2017-039623 AND BY HOLDING THE FOUND IRON PIPE AT THE SOUTHWEST CORNER OF SAID DOCUMENT NUMBER 2017-039623.

REFERENCES

( )1 RECORD INFORMATION PER PLAT OF "DIMEO'S QUAIL RUN"
( )2 RECORD INFORMATION PER PLAT OF "DIMEO'S QUAIL RUN NO. 2"
( )3 RECORD INFORMATION PER PLAT OF "BRAUKMAN PARK"
( )4 RECORD INFORMATION PER PLAT OF "OLD OAK NO. 2"
( )5 RECORD INFORMATION PER PLAT OF "LAUREL WOODS NO. 6"
( )6 RECORD INFORMATION PER SN 33,716
( )7 RECORD INFORMATION PER SN 33,146
( )8 RECORD INFORMATION PER SN 32,922
( )9 RECORD INFORMATION PER SN 32,904
( )10 RECORD INFORMATION PER SN 25,054
( )11 RECORD INFORMATION PER SN 17,473
( )12 RECORD INFORMATION PER SN 16,426
( )13 RECORD INFORMATION PER SN 8,590
( )14 RECORD INFORMATION PER SN 8,061
( )15 RECORD INFORMATION PER SN 7,978
( )16 RECORD INFORMATION PER SN 7,504
( )17 RECORD INFORMATION PER SN 5,155
( )18 RECORD INFORMATION PER DOC. NO. 2022-010039
( )19 RECORD INFORMATION PER DOC. NO. 2023-006550
( )20 RECORD INFORMATION PER DOC. NO. 2023-031189
( )21 RECORD INFORMATION PER DOC. NO. 2017-039623
( )22 RECORD INFORMATION PER DOC. NO. 2022-039786
( )23 RECORD INFORMATION PER COUNTY ROAD NO. 528 NOTES
( )24 RECORD INFORMATION PER USBT BOOK 10, PAGES 125-127

CURVE TABLE

CURVE	RADIUS	DELTA	LENGTH	CHORD
C1	22888.32'	0°04'30"	29.96'	S87°55'13"E 29.96'
C2	11429.17'	0°09'00"	29.92'	S87°48'28"E 29.92'
C3	7609.45'	0°13'30"	29.88'	S87°37'13"E 29.88'
C4	5514.77'	3°34'31"	344.12'	S85°43'13"E 344.07'
C5	6336.21'	1°54'35"	211.19'	S82°58'40"E 211.18'
C6	4553.68'	2°41'01"	213.28'	S80°40'51"E 213.27'
C7	5699.60'	0°18'00"	29.84'	S79°11'21"E 29.84'
C8	7609.45'	0°13'30"	29.88'	S78°55'36"E 29.88'
C9	11429.17'	0°09'00"	29.92'	S78°44'21"E 29.92'
C10	22888.32'	0°03'33"	23.64'	S78°38'04"E 23.64'
C15	200.00'	92°39'13"	323.42'	S48°37'33"W 289.32'
C16	200.00'	33°02'20"	115.33'	S18°49'07"W 113.74'
C17	200.00'	59°36'53"	208.09'	S65°08'43"W 198.83'
C18	200.00'	51°24'57"	179.48'	S59°20'22"E 173.51'
C19	201.50'	53°32'29"	188.30'	S60°24'07"E 181.52'
C20	22918.32'	0°04'30"	30.00'	N87°55'13"W 30.00'
C21	11459.17'	0°09'00"	30.00'	N87°48'28"W 30.00'
C22	7639.45'	0°13'30"	30.00'	N87°37'13"W 30.00'
C23	5544.77'	3°34'31"	346.00'	N85°43'13"W 345.94'
C24	6366.21'	1°54'35"	212.20'	N82°58'39"W 212.19'
C25	4583.68'	2°41'01"	214.70'	N80°40'51"W 214.68'
C26	5729.60'	0°18'00"	30.00'	N79°11'20"W 30.00'
C27	7639.45'	0°13'30"	30.00'	N78°55'35"W 30.00'
C28	11459.17'	0°09'00"	30.00'	N78°44'20"W 30.00'
C29	22918.32'	0°04'30"	30.00'	N78°37'35"W 30.00'
C30	37.00'	11°11'02"	7.22'	N12°00'46"E 7.21'
( )19,20	(37.00')	(11°11'02")	(7.22')	(N07°51'37"E 7.21')
C31	233.50'	3°38'01"	14.81'	N19°25'18"E 14.81'
( )19,20	(233.50')	(3°38'01")	(14.81')	(N16°02'06"E 14.81')

CURVE TABLE

CURVE	RADIUS	DELTA	LENGTH	CHORD
C32	233.50'	14°54'42"	60.77'	N13°46'57"E 60.60'
( )19,20	(233.50')	(14°54'42")	(60.77')	(N14°06'47"E 60.60')
C33	16.50'	41°10'11"	11.86'	N26°54'42"E 11.60'
( )19,20	(16.50')	(41°10'11")	(11.86')	(N27°14'32"E 11.60')
C34	53.50'	91°10'11"	85.13'	N01°54'42"E 76.43'
( )19,20	(53.50')	(91°10'11")	(85.13')	(N02°14'32"E 76.43')
C35	16.50'	41°44'31"	12.02'	N22°48'08"W 11.76'
( )19,20	(16.50')	(41°44'31")	(12.02')	(N22°28'18"W 11.76')
C36	233.50'	16°38'10"	67.80'	N10°14'58"W 67.56'
( )19,20	(233.50')	(16°38'10")	(67.80')	(N09°55'08"W 67.56')
C37	37.00'	20°31'21"	13.25'	N08°18'23"W 13.18'
( )19,20	(37.00')	(20°31'21")	(13.25')	(N07°58'47"W 13.18')
C40	230.00'	21°51'46"	87.76'	N50°24'01"E 87.23'
( )19,20	(230.00')	(21°51'46")	(87.76')	(N50°24'01"E 87.23')
C41	5514.77'	0°00'25"	0.66'	N87°30'16"W 0.66'
C42	5514.77'	1°21'58"	131.49'	N86°49'04"W 131.49'
C43	5514.77'	0°04'17"	6.88'	N86°05'57"W 6.88'
C44	5514.77'	2°07'51"	205.09'	N84°59'52"W 205.08'
C45	230.00'	51°24'57"	206.40'	N59°20'22"W 199.54'
C46	171.00'	143°32'26"	428.40'	N74°35'54"E 324.83'
C47	22888.32'	0°02'02"	13.52'	N78°38'50"W 13.52'
C48	22888.32'	0°01'31"	10.12'	N78°37'04"W 10.11'
C49	165.00'	1°06'28"	3.19'	N16°11'48"W 3.19'
C50	231.50'	53°32'29"	216.33'	N60°24'07"W 208.54'
( )19,20	(231.50')	(53°32'29")	(216.33')	(N60°24'07"W 208.54')
C51	170.00'	51°24'57"	152.55'	N59°20'22"W 147.49'
C52	170.00'	92°39'13"	274.91'	N48°37'33"E 245.92'
C53	171.00'	8°03'01"	24.03'	S06°51'12"W 24.01'

REVIEW COPY

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2024
ERIC NYGREN
091799PLS
RENEWS: 12/31/2026

JOB NAME:	305 SW 345TH AVENUE
JOB NUMBER:	4636-05
DRAWN BY:	ELN
CHECKED BY:	MSK
DRAWING NO.:	4636-05Partition

AKS ENGINEERING & FORESTRY, LLC
12965 SW HERMAN RD, STE 100
TUALATIN, OR 97062
503.563.6151
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PREPARED FOR
HOLT HOLDINGS OR, LLC
1301 SE TECH CENTER DR, SUITE 150
VANCOUVER, WA 98683

PARTITION PLAT

LOCATED IN THE NORTHEAST 1/4 OF SECTION 3,
TOWNSHIP 1 SOUTH, RANGE 3 WEST, WILLAMETTE MERIDIAN,
CITY OF CORNELIUS, WASHINGTON COUNTY, OREGON
DATE: _____

RECORDED AS DOCUMENT NO. _____
SHEET 6 OF 6

APPROVALS

APPROVED THIS _____DAY OF _____, 20__
COMMUNITY DEVELOPMENT DIRECTOR
CITY OF CORNELIUS

BY: _____

****

APPROVED THIS _____DAY OF _____, 20__
WASHINGTON COUNTY SURVEYOR

BY: _____

****

APPROVED THIS _____DAY OF _____, 20__
WASHINGTON COUNTY BOARD OF COMMISSIONERS

BY: _____

****

ALL TAXES, FEES, ASSESSMENTS OR OTHER CHARGES AS PROVIDED BY ORS 92.095 HAVE BEEN PAID AS OF THIS _____ DAY OF _____, 20___.

DIRECTOR OF ASSESSMENT AND TAXATION
(WASHINGTON COUNTY ASSESSOR)

BY: _____
DEPUTY

****

ATTEST THIS _____DAY OF _____, 20__
DIRECTOR OF ASSESSMENT AND TAXATION
EX-OFFICIO COUNTY CLERK

BY: _____
DEPUTY

****

STATE OF OREGON)
) SS
COUNTY OF WASHINGTON)

I DO HEREBY CERTIFY THAT THIS SUBDIVISION PLAT WAS RECEIVED FOR RECORD ON THIS _____DAY OF _____, 20__, AT ___ O'CLOCK __M, AND RECORDED IN THE COUNTY CLERK RECORDS.

_____
DEPUTY COUNTY CLERK

DECLARATION

KNOW ALL PERSONS BY THESE PRESENTS THAT HILLSBORO SCHOOL DISTRICT #1J IS THE OWNER OF THE LAND SHOWN ON THE ANNEXED PARTITION PLAT AND PARTICULARLY DESCRIBED IN THE ACCOMPANYING SURVEYOR'S CERTIFICATE, AND HAS CAUSED THE SAME TO BE SURVEYED AND PARTITIONED IN ACCORDANCE WITH THE PROVISIONS OF THE OREGON REVISED STATUTES CHAPTER 92, AND DOES HEREBY DEDICATE TO THE PUBLIC AS PUBLIC WAYS ALL RIGHTS OF WAY AS SHOWN.

HILLSBORO SCHOOL DISTRICT #1J

BY: _____
SAIDEH HAGHIGHI KHOCHKHOU
DISTRICT OPERATIONS OFFICER

ACKNOWLEDGEMENT

STATE OF OREGON)
) SS
COUNTY OF _____)

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON THIS ___ DAY OF _____, 20___ BY _____ AS _____ OF HILLSBORO SCHOOL DISTRICT #1J.

_____
NOTARY SIGNATURE

_____
NOTARY PUBLIC – OREGON (PRINTED NAME)

COMMISSION NO. _____

MY COMMISSION EXPIRES _____

REVIEW COPY

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 9, 2024
ERIC NYGREN
091799PLS
RENEWS: 12/31/2026

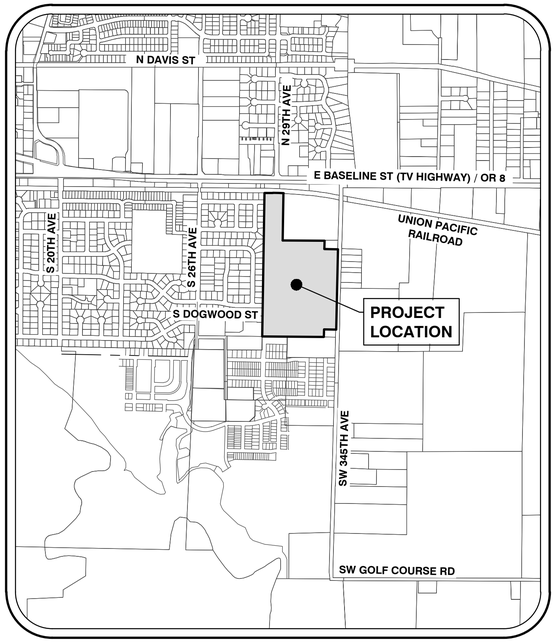
JOB NAME:	305 SW 345TH AVENUE
JOB NUMBER:	4636-05
DRAWN BY:	ELN
CHECKED BY:	MSK
DRAWING NO.:	4636-05Partition

AKS ENGINEERING & FORESTRY, LLC
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LAUREL CROWN

PLANNED UNIT DEVELOPMENT PRELIMINARY PLANS



VICINITY MAP

1"=1000'



SITE MAP

1"=150'

LEGEND

	EXISTING	PROPOSED		EXISTING	PROPOSED
DECIDUOUS TREE			STORM DRAIN CLEAN OUT		
CONIFEROUS TREE			STORM DRAIN CATCH BASIN		
FIRE HYDRANT			STORM DRAIN AREA DRAIN		
WATER BLOWOFF			STORM DRAIN MANHOLE		
WATER METER			GAS METER		
WATER VALVE			GAS VALVE		
DOUBLE CHECK VALVE			GUY WIRE ANCHOR		
AIR RELEASE VALVE			UTILITY POLE		
SANITARY SEWER CLEAN OUT			POWER VAULT	P	P
SANITARY SEWER MANHOLE			POWER JUNCTION BOX		
SIGN			POWER PEDESTAL		
STREET LIGHT			COMMUNICATIONS VAULT	C	C
MAILBOX			COMMUNICATIONS JUNCTION BOX		
			COMMUNICATIONS RISER		

	EXISTING	PROPOSED
RIGHT-OF-WAY LINE		
BOUNDARY LINE		
PROPERTY LINE		
CENTERLINE		
DITCH		
CURB		
EDGE OF PAVEMENT		
GUTTER		
EASEMENT		
FENCE LINE		
GRAVEL EDGE		
POWER LINE	PWR	PWR
OVERHEAD WIRE	OHW	OHW
COMMUNICATIONS LINE	COM	COM
FIBER OPTIC LINE	CFO	CFO
GAS LINE	GAS	GAS
STORM DRAIN LINE	STM	STM
SANITARY SEWER LINE	SAN	SAN
WATER LINE	WAT	WAT
RECLAIMED WATER LINE	NPWAT	NPWAT

APPLICANT/DEVELOPER
THE HOLT GROUP, INC.
CONTACT: JOE SCHIEWE
1301 SE TECH CENTER DRIVE, SUITE 150 VANCOUVER, WA 98683

OWNER
HILLSBORO SCHOOL DISTRICT
3083 NE 49TH PLACE, HILLSBORO OR 97124

PLANNING/CIVIL ENGINEERING/ SURVEYING/NATURAL RESOURCES/LANDSCAPE ARCHITECTURE/ARBORIST FIRM
AKS ENGINEERING & FORESTRY, LLC
CONTACT: MELISSA SLOTEMAKER, AICP, GLEN SOUTHERLAND, AICP
12965 SW HERMAN ROAD, SUITE 100 TUALATIN, OR 97062
PH: 503-563-6151

GEOTECHNICAL ENGINEER
GEOPACIFIC ENGINEERING, INC.
CONTACT: BEN ANDERSON, PE, GE
14835 SW 72ND AVE, PORTLAND, OR 97224

PROJECT LOCATION:
LOCATED WEST OF SW 345 AVE, SOUTH OF TV HIGHWAY, EAST OF S 28TH AVE, NORTH OF S GINGER ST, IN CORNELIUS, OREGON.

VERTICAL DATUM
ELEVATIONS ARE BASED ON WASHINGTON COUNTY BENCHMARK NO. 351, LOCATED 120 FEET SOUTH OF THE INTERSECTION OF SW 345TH AVENUE AND TUALATIN VALLEY HIGHWAY. ELEVATION = 179.803 FEET (NGVD 29).

PROPERTY DESCRIPTION:
TAX LOT 100 LOCATED IN THE NORTHEAST 1/4 OF SECTION 3, TOWNSHIP 1 SOUTH, RANGE 3 WEST, WILLAMETTE MERIDIAN, WASHINGTON COUNTY, OREGON

EXISTING LAND USE:
AGRICULTURE LAND

PROJECT PURPOSE:
230 LOT SUBDIVISION IN THE CITY OF CORNELIUS R7 & A2 ZONING DISTRICTS

SHEET INDEX

P00 COVER SHEET
P01 PRELIMINARY NEIGHBORHOOD CONCEPT PLAN
P02 NEIGHBORHOOD PARK AMENITY PLAN
P03 SITE ZONING MAP
P04 PRELIMINARY PRODUCT DISTRIBUTION PLAN
P05 CIRCULATION PLAN
P06 PROJECT PHASING PLAN
P07 PROJECT KEY MAP
P08A PRELIMINARY SUBDIVISION PLAT (SOUTH)
P08B PRELIMINARY SUBDIVISION PLAT (CENTRAL)
P08C PRELIMINARY SUBDIVISION PLAT (NORTH)
P09 TYPICAL LOT SETBACK DETAILS
P10 STREET CROSS SECTIONS
P11A STREET PLAN (SOUTH)
P11B STREET PLAN (CENTRAL)
P11C STREET PLAN (NORTH)
P12 STREET PROFILES
P13 STREET PROFILES CONT.
P14 STREET PROFILES CONT.
P15A PARKING PLAN (SOUTH)
P15B PARKING PLAN (CENTRAL)
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P16A STREET TREE PLAN (SOUTH)
P16B STREET TREE PLAN (CENTRAL)
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P17 TRACT A OPEN SPACE PLAN
P18A EXISTING CONDITIONS PLAN (SOUTH)
P18B EXISTING CONDITIONS PLAN (CENTRAL)
P18C EXISTING CONDITIONS PLAN (NORTH)
P19A DEMOLITION AND TREE REMOVAL PLAN (SOUTH)
P19B DEMOLITION AND TREE REMOVAL PLAN (CENTRAL)
P19C DEMOLITION AND TREE REMOVAL PLAN (NORTH)
P20A GRADING AND EROSION CONTROL PLAN (SOUTH)
P20B GRADING AND EROSION CONTROL PLAN (CENTRAL)
P20C GRADING AND EROSION CONTROL PLAN (NORTH)
P21A COMPOSITE UTILITY PLAN (SOUTH)
P21B COMPOSITE UTILITY PLAN (CENTRAL)
P21C COMPOSITE UTILITY PLAN (NORTH)

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HOLT HOMES
Built for the Pacific Northwest

COVER SHEET
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER OREGON DEC. 29, 2001 PAUL A. SELLKE
PRELIMINARY NOT FOR CONSTRUCTION
RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
CHECKED BY:	PAS

P00

AKS DRAWING FILE: 4636-05 PRELIM COVER.DWG | LAYOUT: COVER

DISCLAIMER: PLAN ELEMENTS, LOCATIONS, AND DETAILS AS SHOWN ARE INDICATIVE OF DESIGN INTENT AND ARE INTENDED AS A GUIDE ONLY. PLAN ELEMENTS MAY BE REVISED, REFINED, OR OTHERWISE UPDATED PRIOR TO FINAL APPROVAL DEPENDING ON DETAILED DESIGN, CONSTRAINTS, AND OTHER CONSIDERATIONS.

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2777 NW LOLO DR, STE 150
BEND, OR 97703
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HOLT HOMES
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PRELIMINARY NEIGHBORHOOD CONCEPT PLAN

LAUREL CROWN PUD

THE HOLT GROUP, INC.
CORNELIUS, OREGON

PRELIMINARY
NOT FOR
CONSTRUCTION

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	NKP
DRAWN BY:	NKP
CHECKED BY:	PAS

P01

AKS DRAWING FILE: 4636-05 COLOR SHEETS.DWG | LAYOUT: MASTER PLAN

S 30TH AVE

S CHESTNUT ST

S DOGWOOD (COLLECTOR)

ALLEY A

S 29TH PL

S 29TH BLVD (COLLECTOR)

TRACT A
NEIGHBORHOOD PARK

OPEN LAWN AREA

DOG PARK

PLAYGROUND

112 106 107 108

129 111 110 109

130 1

11 10 5

PEDESTRIAN SIDEWALKS



SHADE STRUCTURE



DOG PARK



SEATING



NEIGHBORHOOD PLAYGROUND



N

SCALE: 1"=20 FEET

20 0 4 10 20

ORIGINAL PAGE SIZE: 11" x 17"

DISCLAIMER: PLAN ELEMENTS, LOCATIONS, AND DETAILS AS SHOWN ARE INDICATIVE OF DESIGN INTENT AND ARE INTENDED AS A GUIDE ONLY. PLAN ELEMENTS MAY BE REVISED, REFINED, OR OTHERWISE UPDATED PRIOR TO FINAL APPROVAL DEPENDING ON DETAILED DESIGN, CONSTRAINTS, AND OTHER CONSIDERATIONS.

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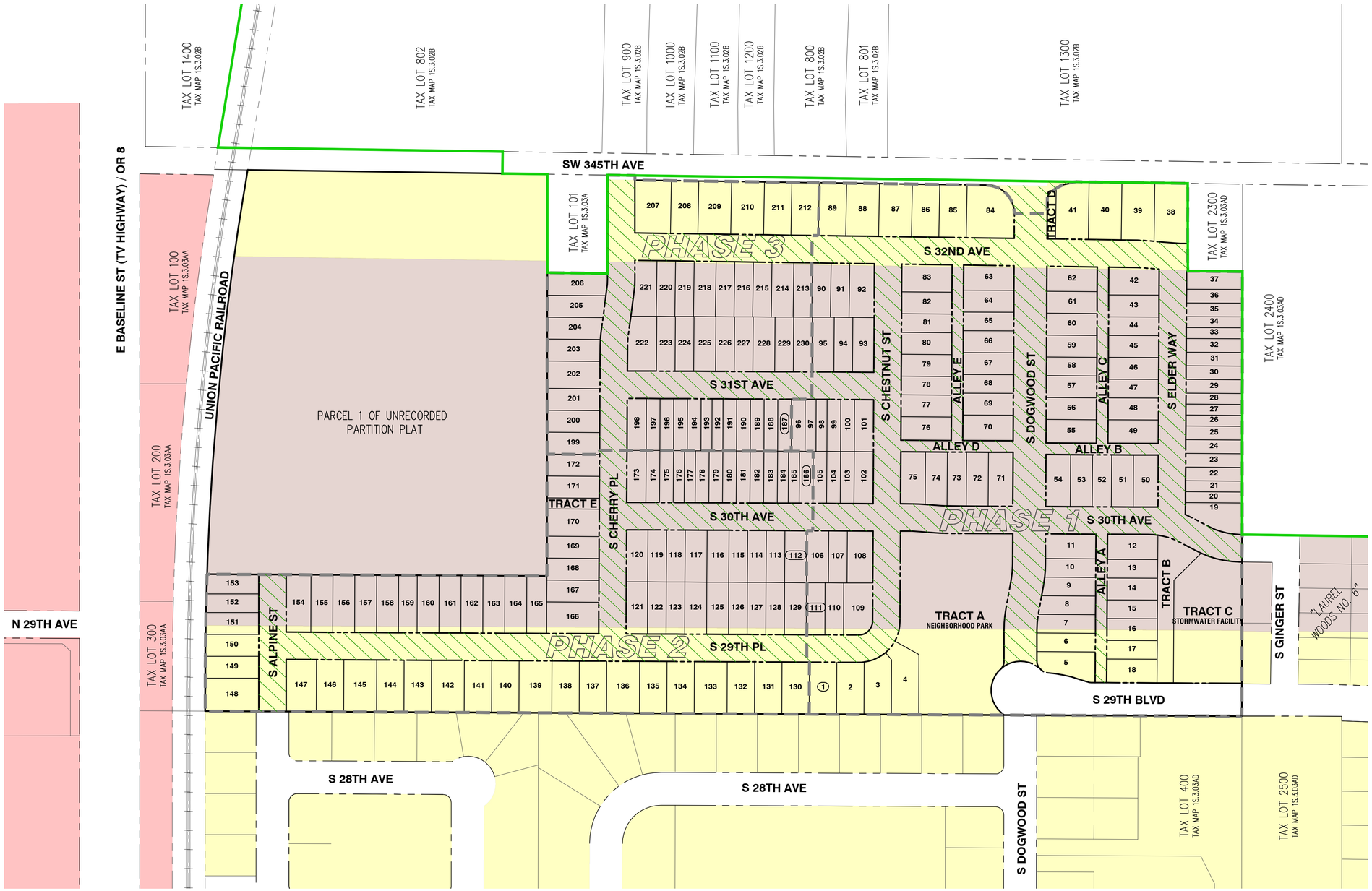
NEIGHBORHOOD PARK AMENITY PLAN
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED LANDSCAPE ARCHITECT
797
PRELIMINARY NOT FOR CONSTRUCTION
OREGON
JONATHAN P. SCHLOSSBERG
07/01/13
RENEWS: 06/30/2026

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	BNF
DRAWN BY:	BNF
CHECKED BY:	PAS

P02

AKS DRAWING FILE: 4636-05 COLOR SHEETS.DWG | LAYOUT: P02



PARCEL AREA

PARCEL 2 AREA (ACRES)	FUTURE VACATED ROW AREA (ACRES)	TOTAL AREA (ACRES)
28.15	2.22	30.38

DENSITY CALCULATIONS

DISTRICT	HOUSING TYPE	GROSS AREA (SF)	GROSS AREA (ACRES)	DEDICATED ROW AREA (ACRES)	STORMWATER FACILITIES - TRACT C (ACRES)	PUBLIC OPEN SPACE - TRACTS A&B (ACRES)	COMMUNITY GREEN SPACE - TRACTS D&E (ACRES)	NET AREA (ACRES)	MAX. DENSITY (DU/ACRE)	MIN. DENSITY (DU/ACRE)	CALCULATED MAX. DENSITY (UNITS)	CALCULATED MIN. DENSITY (UNITS)
R-7	Detached	426,849	9.80	3.10	0.28	0.62	0.03	5.77	5	4	29	23
	Attached							0.00	20	4	0	0
A-2	Detached	896,326	20.58	5.33	0.36	0.96	0.04	10.82	14	8	151	87
	Attached							3.07	25	8	77	25
TOTAL			30.38	8.43	0.63	1.59	0.07	19.65			257	134

PLANNED # OF UNITS: 230 UNITS
PLANNED DENSITY: 11.7 DU/ACRE

LEGEND:

- PHASE BOUNDARY
- CITY LIMITS
- C2 – HIGHWAY COMMERCIAL
- A2 – MULTI-UNIT RESIDENTIAL
- R7 – LOW DENSITY RESIDENTIAL
- DEDICATED ROW

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Built for the Pacific Northwest

SITE ZONING MAP
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 29, 2001
PAUL A. SELLKE
PRELIMINARY
NOT FOR CONSTRUCTION
RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
CHECKED BY:	PAS

P03

AKS DRAWING FILE: 4636-05 PRELIM ZONING MAP.DWG | LAYOUT: P03



PRODUCT DISTRIBUTION

COLOR	MINIMUM LOT DIMENSIONS	HOUSE TYPE	LOADING	PHASE 1	PHASE 2	PHASE 3	TOTAL	% OF TOTAL
	20' x 95'	TOWNHOUSES	FRONT	17	8	4	29	12.6%
	25' x 95'	PAIRED TOWNHOME(S)	FRONT	12	6	8	26	11.3%
	34' x 95'	SINGLE FAMILY DETACHED	FRONT	10	16	13	39	17.0%
	34' x 92'	SINGLE FAMILY DETACHED	ALLEY	17	0	0	17	7.4%
	40' x 92'	SINGLE FAMILY DETACHED	ALLEY	29	0	0	29	12.6%
	40' x 95'	SINGLE FAMILY DETACHED	FRONT	12	24	12	48	20.8%
	50' x 95'	SINGLE FAMILY DETACHED	FRONT	8	15	4	27	11.7%
	60' x 95'	SINGLE FAMILY DETACHED	FRONT	6	6	3	15	6.5%
			TOTAL	111	75	44	230	100%

TOTAL PROJECT AREA:
±1,323,175 SF (±30.38 AC)

TOTAL RIGHT OF WAY AREA:
±373,969 (±8.59 AC)

TOTAL TRACT AREA:

RECREATIONAL OPEN SPACE	±69,211 SF (±1.59 AC)
STORMWATER FACILITY	±27,503 SF (±0.63 AC)
COMMUNITY GREEN SPACE	±3,262 SF (±0.07 AC)
TOTAL AREA	±99,976 SF (±2.29 AC)

TOTAL LOT AREA:
±856,056 SF (±19.65 AC)

RECREATIONAL OPEN SPACE REQUIRED:
230 DU x 300 SF/DU = 69,000 SF = 1.58 AC

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HOLT HOMES
Built for the Pacific Northwest

PRELIMINARY PRODUCT DISTRIBUTION PLAN

LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER OREGON JULY 09, 2001 PAUL A. SELLKE
PRELIMINARY NOT FOR CONSTRUCTION
RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
CHECKED BY:	PAS

P04

AKS DRAWING FILE: 4636-05 PRELIM PRODUCT DIST PLANDWG | LAYOUT: P04

LEGEND

- ARTERIAL ROAD – EXISTING
- COLLECTOR RD – EXISTING
- COLLECTOR RD – PLANNED
- MINI-ROUNDABOUT – PLANNED
- MINI-ROUNDABOUT – FUTURE*
- COLLECTOR RD – FUTURE*
- LOCAL RD – EXISTING
- LOCAL RD – PLANNED
- LOCAL RD – FUTURE (CONCEPTUAL)
- MULTI USE PATH – EXISTING
- MULTI USE PATH – PLANNED
- MULTI USE PATH – FUTURE*

NOTE: ALL INTERNAL LOCAL AND COLLECTOR STREETS HAVE SIDEWALK ON BOTH SIDES. SEE STREET CROSS-SECTIONS ON P10 FOR DETAILS.

*FUTURE PLANNED OFFSITE IMPROVEMENTS

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CIRCULATION PLAN
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

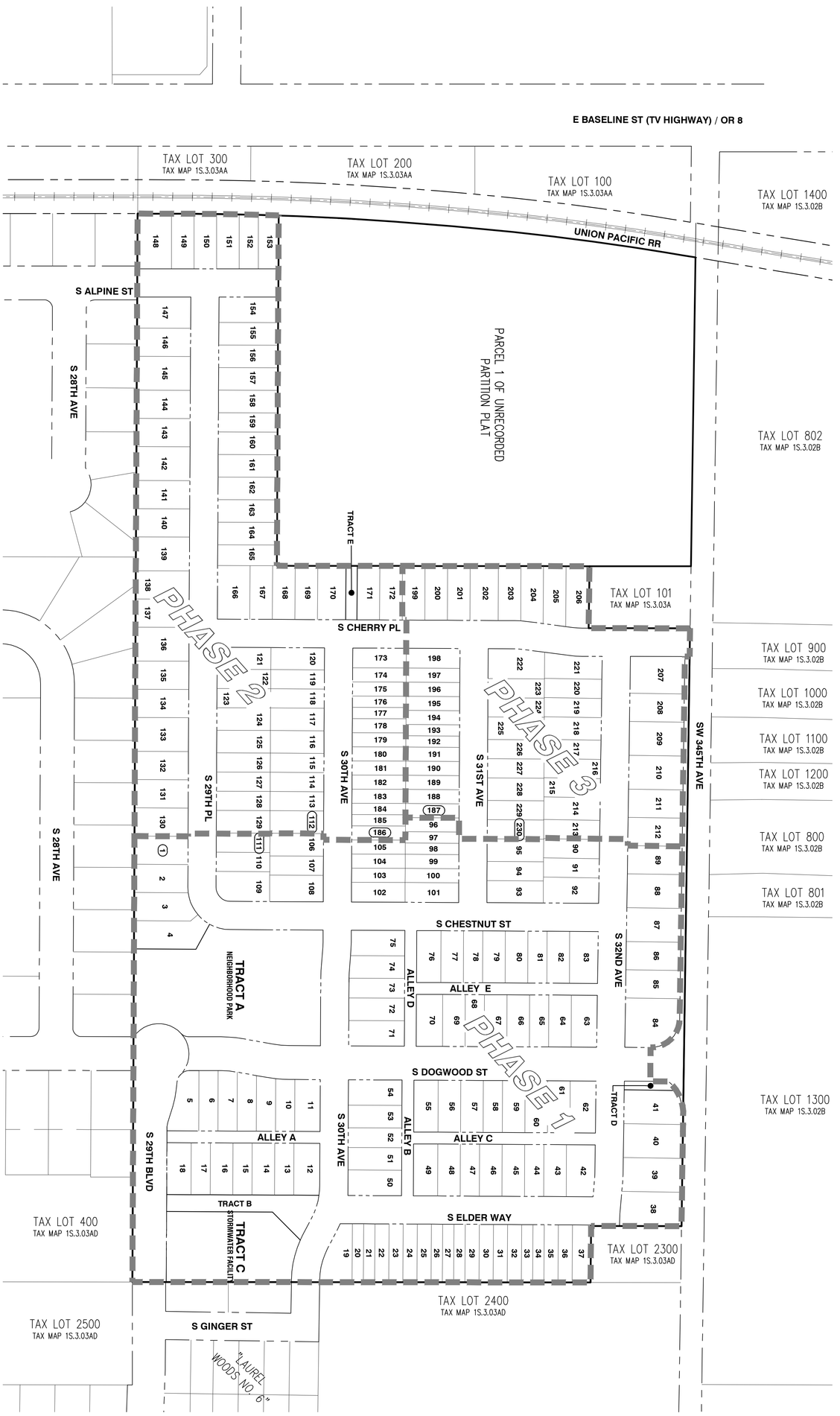
REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 09, 2010
PAUL A. SELLKE
PRELIMINARY
NOT FOR CONSTRUCTION

RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
CHECKED BY:	PAS

P05

AKS DRAWING FILE: 4636-05 CIRCULATION.DWG | LAYOUT: P05



P06

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	NRM
DRAWN BY:	NRM
CHECKED BY:	PAS

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 29, 2007
PAUL A. SELLKE
RENEWAL DATE: 6/30/26
PRELIMINARY
NOT FOR CONSTRUCTION

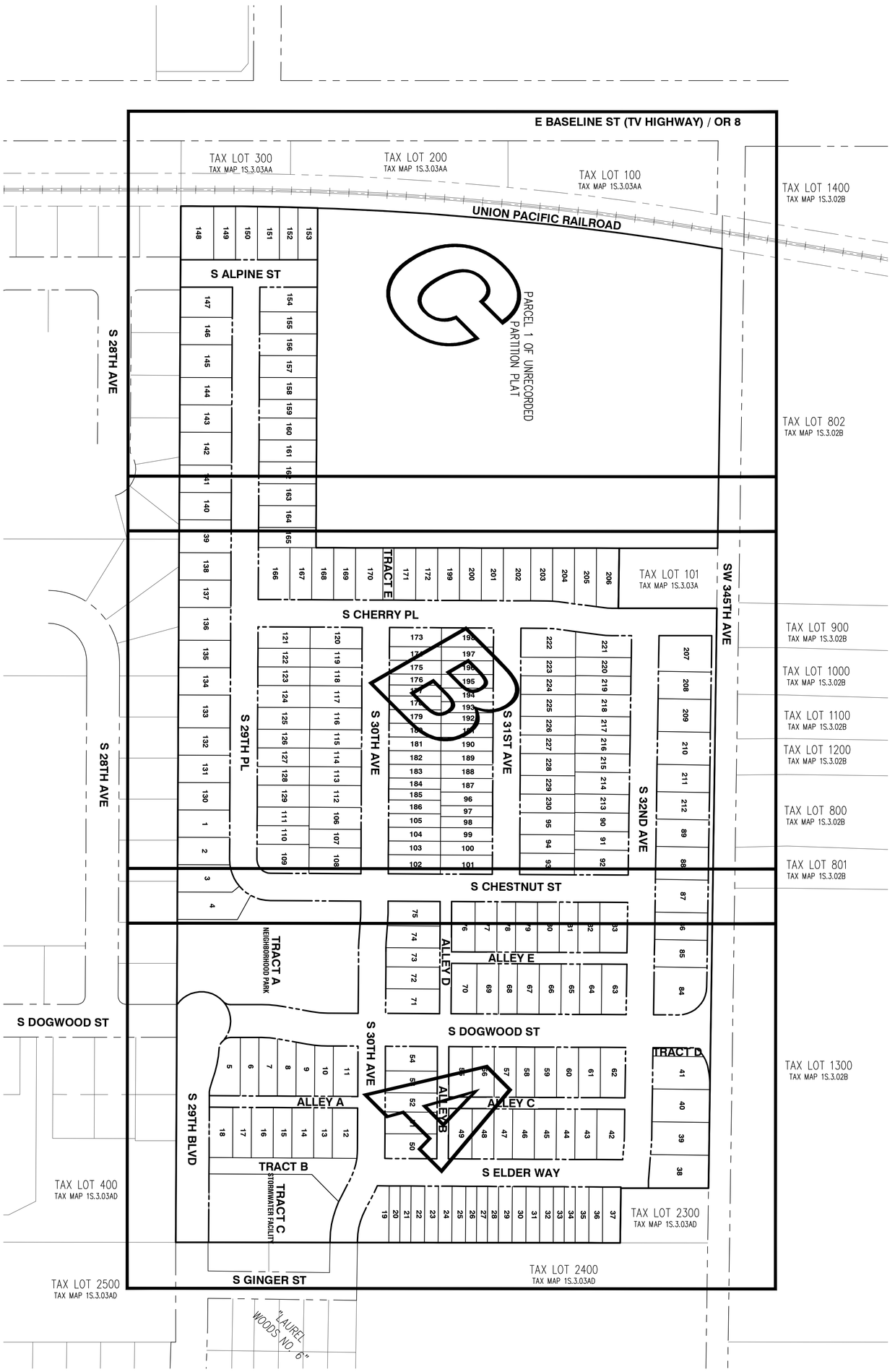
PROJECT PHASING PLAN
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

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SCALE: 1" = 100 FEET
ORIGINAL PAGE SIZE: 22" x 34"

P07

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MRM
DRAWN BY:	MRM
CHECKED BY:	PAS

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 28, 2007
CHRISTOPHER A. SELLKE
RENEWAL DATE: 6/30/26
PRELIMINARY
NOT FOR CONSTRUCTION

PROJECT KEY MAP
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

HOLT HOMES
Built for the Pacific Northwest

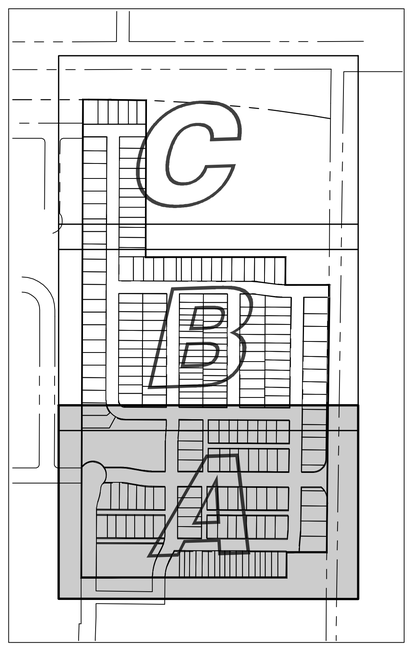
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SCALE: 1"= 50 FEET
ORIGINAL PAGE SIZE: 22" x 34"



SHEET KEY MAP

NOTES:

1. TRACTS "A", "B", AND "C" SHALL BE OWNED AND MAINTAINED BY THE CITY OF CORNELIUS.
2. TRACT "C" SHALL HAVE AN EASEMENT TO CLEAN WATER SERVICES FOR STORM SEWER, SURFACE WATER, DRAINAGE, AND DETENTION OVER ITS ENTIRETY.
3. TRACT "D" SHALL BE A COMMUNITY GREEN SPACE AND SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION (HOA).
4. TRACT "E" SHALL BE A COMMUNITY GREEN SPACE TRACT FOR UTILITY AND POTENTIAL PEDESTRIAN ACCESS TO PARCEL 1 OF APPROVED LAND PARTITION (LP-01-25). TRACT SHALL BE OWNED AND LANDSCAPING MAINTAINED BY THE HOA. TRACT "E" SHALL HAVE A UTILITY AND ACCESS EASEMENT TO PARCEL 1 OVER ITS ENTIRETY.

THE PURPOSE OF THIS PRELIMINARY PLAT IS TO SHOW THE PROPOSED LOT DIMENSIONS AND AREAS FOR PLANNING PURPOSES. THIS IS NOT AN OFFICIAL PLAT AND IS NOT TO BE USED FOR SURVEY PURPOSES.

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PRELIMINARY SUBDIVISION PLAT (SOUTH)

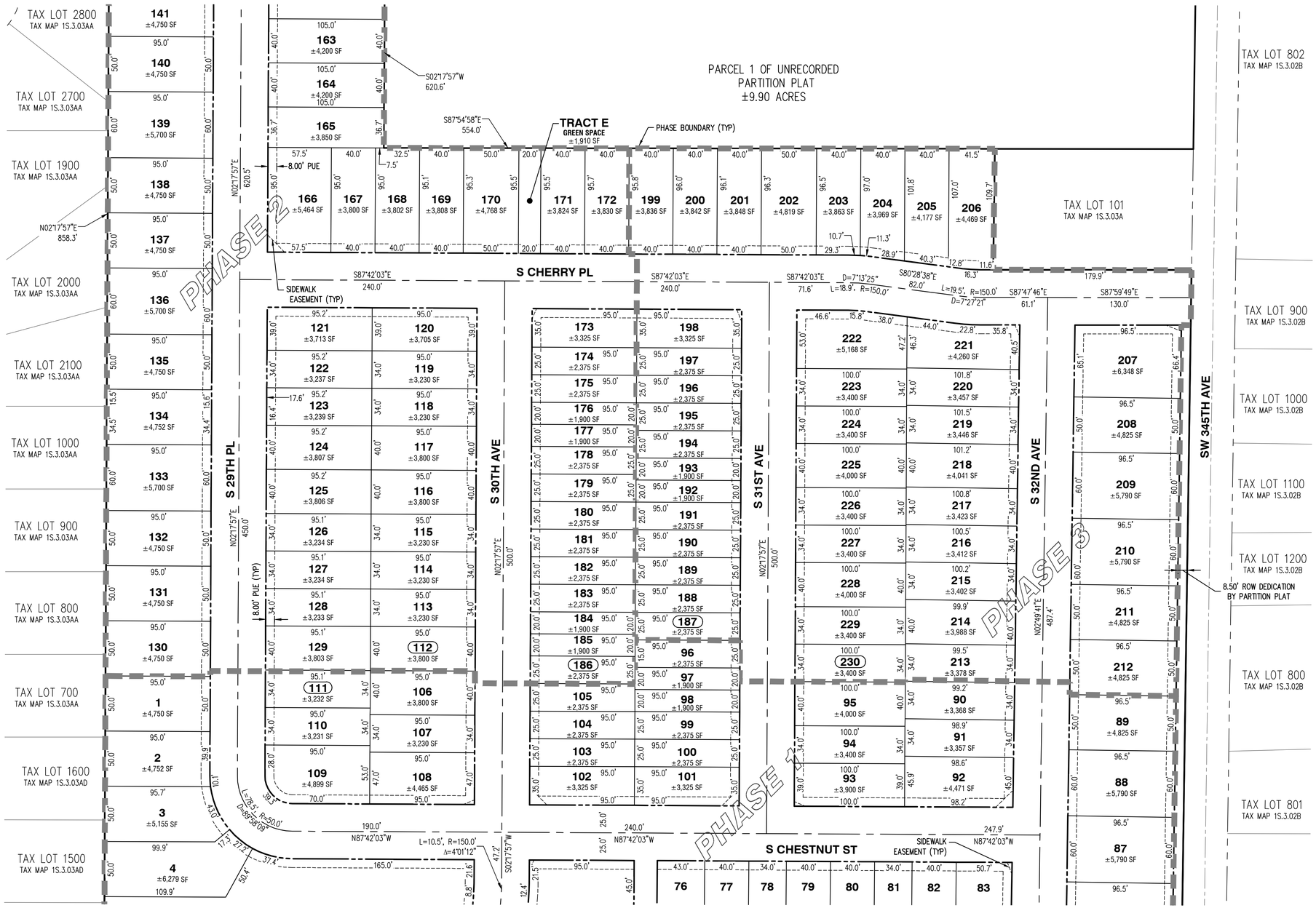
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

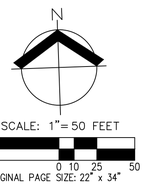
REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 09, 2008
PAUL A. SELLKE
PRELIMINARY NOT FOR CONSTRUCTION
RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
CHECKED BY:	PAS

P08A

AKS DRAWING FILE: 4636-05 PRELIM PLAT.DWG | LAYOUT: P08A

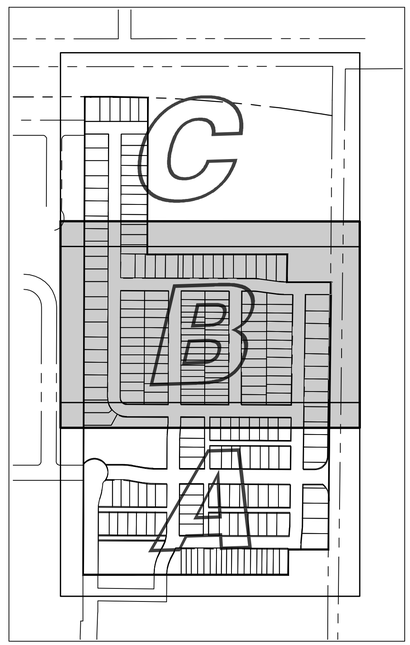




NOTES:

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SHEET KEY MAP

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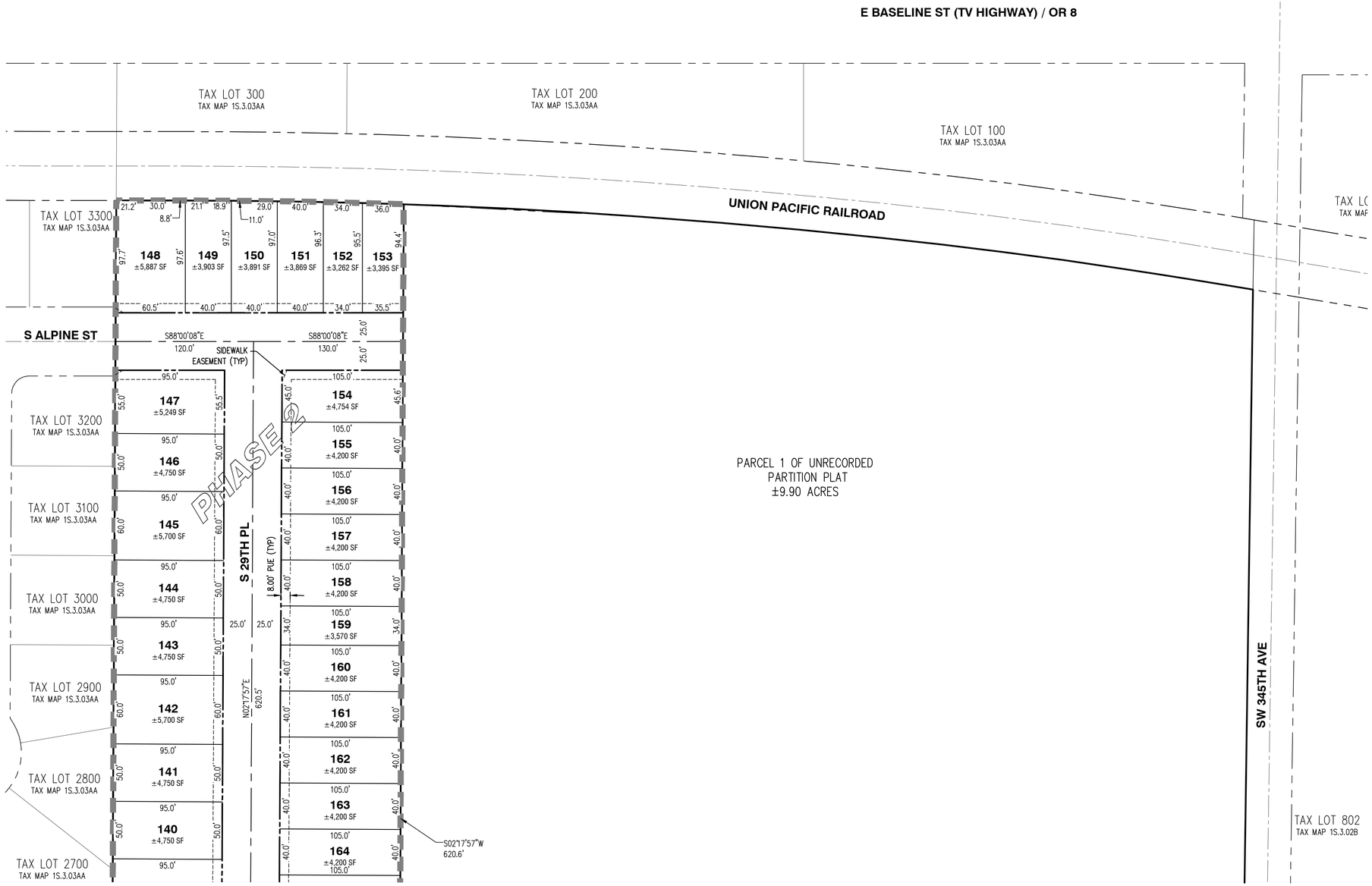
PRELIMINARY SUBDIVISION PLAT (CENTRAL)
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 09, 2001
PAUL A. SELLKE
PRELIMINARY
NOT FOR CONSTRUCTION
RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
DATE:	12/12/2025
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P08B

AKS DRAWING FILE: 4636-05 PRELIM PLAT.DWG | LAYOUT: P08B



N

SCALE: 1"= 50 FEET

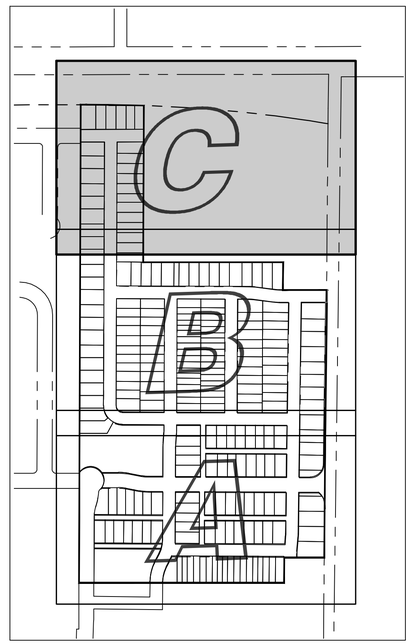
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ORIGINAL PAGE SIZE: 22" x 34"

NOTES:

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SHEET KEY MAP

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PRELIMINARY SUBDIVISION PLAT (NORTH)

LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

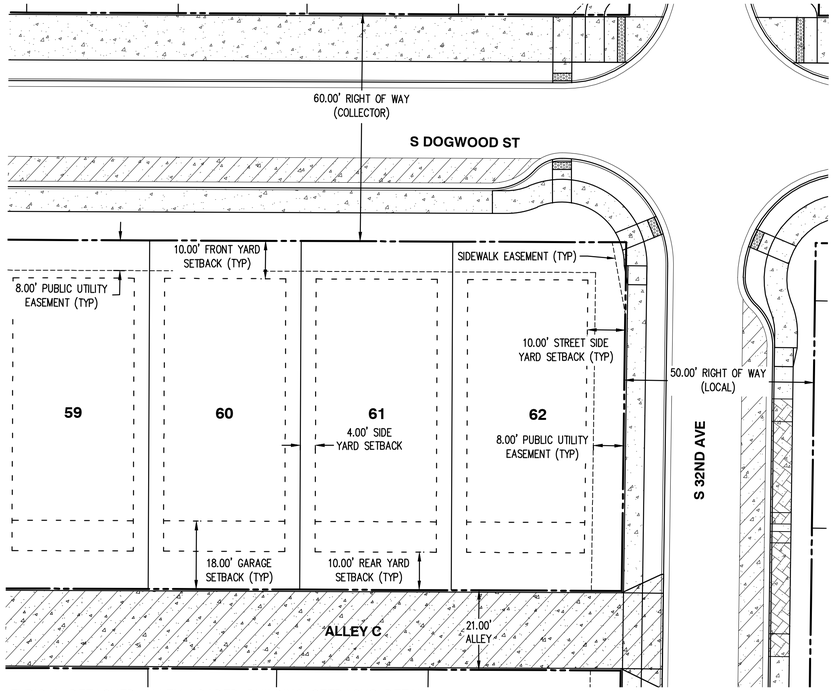
REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 09, 2001
PAUL A. SELLKE
PRELIMINARY
NOT FOR CONSTRUCTION

RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
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P08C

AKS DRAWING FILE: 4636-05 PRELIM PLAT.DWG | LAYOUT: P08C



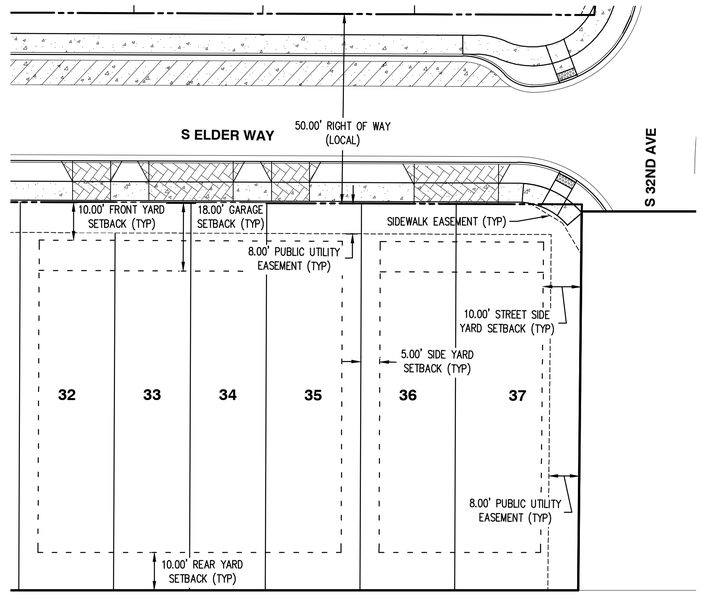
TYPICAL DETACHED ALLEY LOADED BUILDING SETBACKS DETAIL

1" = 20'

PROPOSED SINGLE FAMILY DETACHED ALLEY SETBACKS

FRONT YARD:	10 FT
GARAGE:	18 FT*
SIDE YARD:	4 FT*
STREET SIDE YARD:	10 FT
REAR YARD:	10 FT*

*SETBACK EXCEPTION REQUESTED



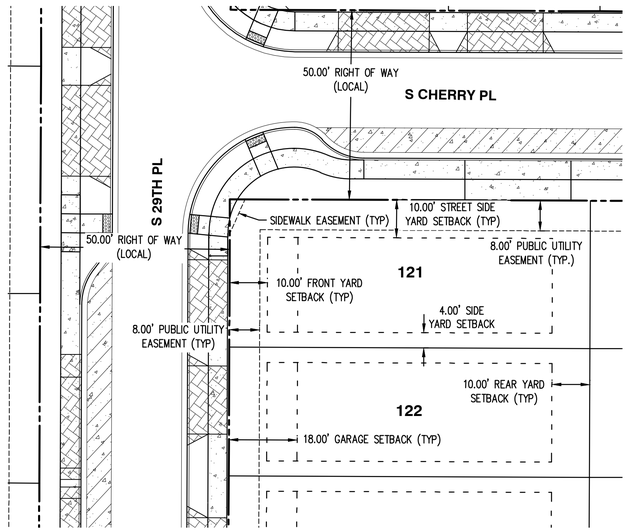
TYPICAL ATTACHED (PAIRED TOWNHOME(S)/TOWNHOUSES) FRONT LOADED BUILDING SETBACKS DETAIL

1" = 20'

PROPOSED SETBACKS

FRONT YARD:	10 FT
GARAGE:	18 FT*
SIDE YARD:	5 FT
STREET SIDE YARD:	10 FT
REAR YARD:	10 FT*

*SETBACK EXCEPTION REQUESTED



TYPICAL DETACHED STREET LOADED BUILDING SETBACKS DETAIL

1" = 20'

PROPOSED SINGLE FAMILY DETACHED SETBACKS

FRONT YARD:	10 FT
GARAGE:	18 FT*
SIDE YARD:	4 FT*
STREET SIDE YARD:	10 FT
REAR YARD:	10 FT*

*SETBACK EXCEPTION REQUESTED

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TYPICAL LOT SETBACK DETAILS

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CORNELIUS, OREGON

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OREGON
JANUARY 09, 2001
PAUL A. SELLKE
RENEWAL DATE: 6/30/26

PRELIMINARY
NOT FOR CONSTRUCTION

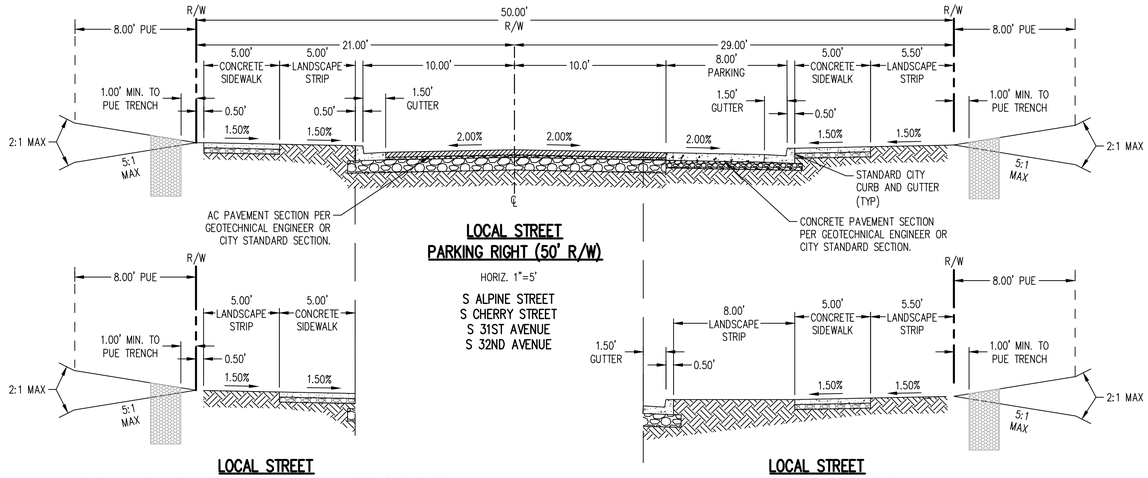
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SCALE: 1" = 20 FEET
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ORIGINAL PAGE SIZE: 22" x 34"

JOB NUMBER:	4636-05
DATE:	12/12/2025
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P09

AKS DRAWING FILE: 4636-05 TYP LOT SETBACK PLAN.DWG | LAYOUT: P09



LOCAL STREET
PARKING RIGHT (50' R/W)

HORIZ. 1"=5'

S ALPINE STREET
S CHERRY STREET
S 31ST AVENUE
S 32ND AVENUE

LOCAL STREET
PARKING RIGHT–CURB TIGHT SIDEWALK LEFT (50' R/W)

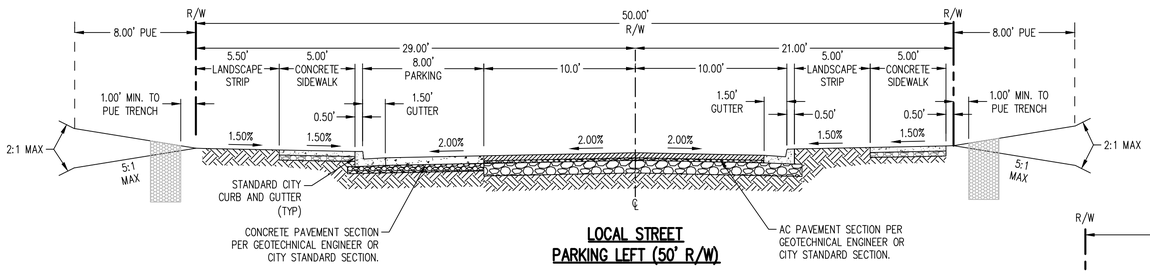
HORIZ. 1"=5'

S CHERRY STREET

LOCAL STREET
NO PARKING (50' R/W)

HORIZ. 1"=5'

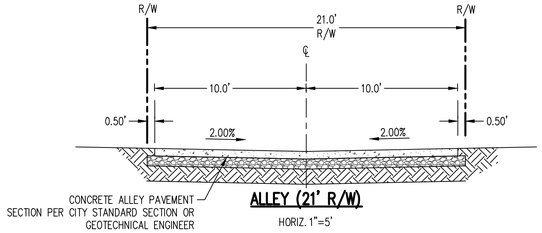
S 32ND AVENUE



LOCAL STREET
PARKING LEFT (50' R/W)

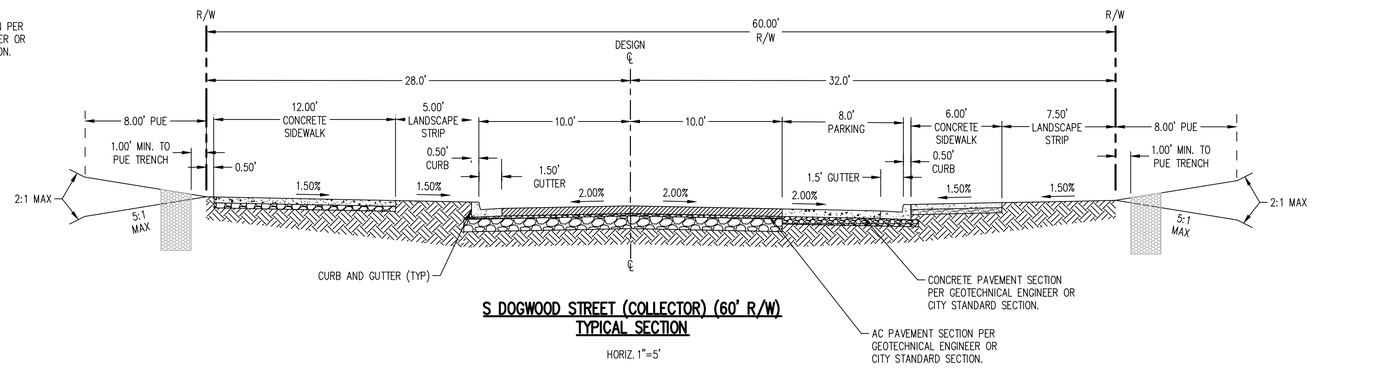
HORIZ. 1"=5'

S 29TH PLACE
S 30TH AVENUE
S CHESTNUT STREET
S ELDER WAY



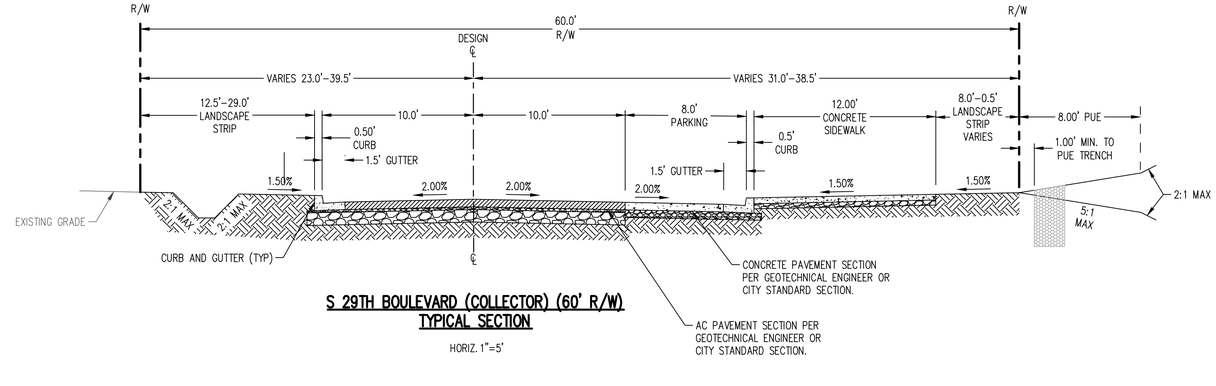
ALLEY (21' R/W)

HORIZ. 1"=5'



S DOGWOOD STREET (COLLECTOR) (60' R/W)
TYPICAL SECTION

HORIZ. 1"=5'



S 29TH BOULEVARD (COLLECTOR) (60' R/W)
TYPICAL SECTION

HORIZ. 1"=5'

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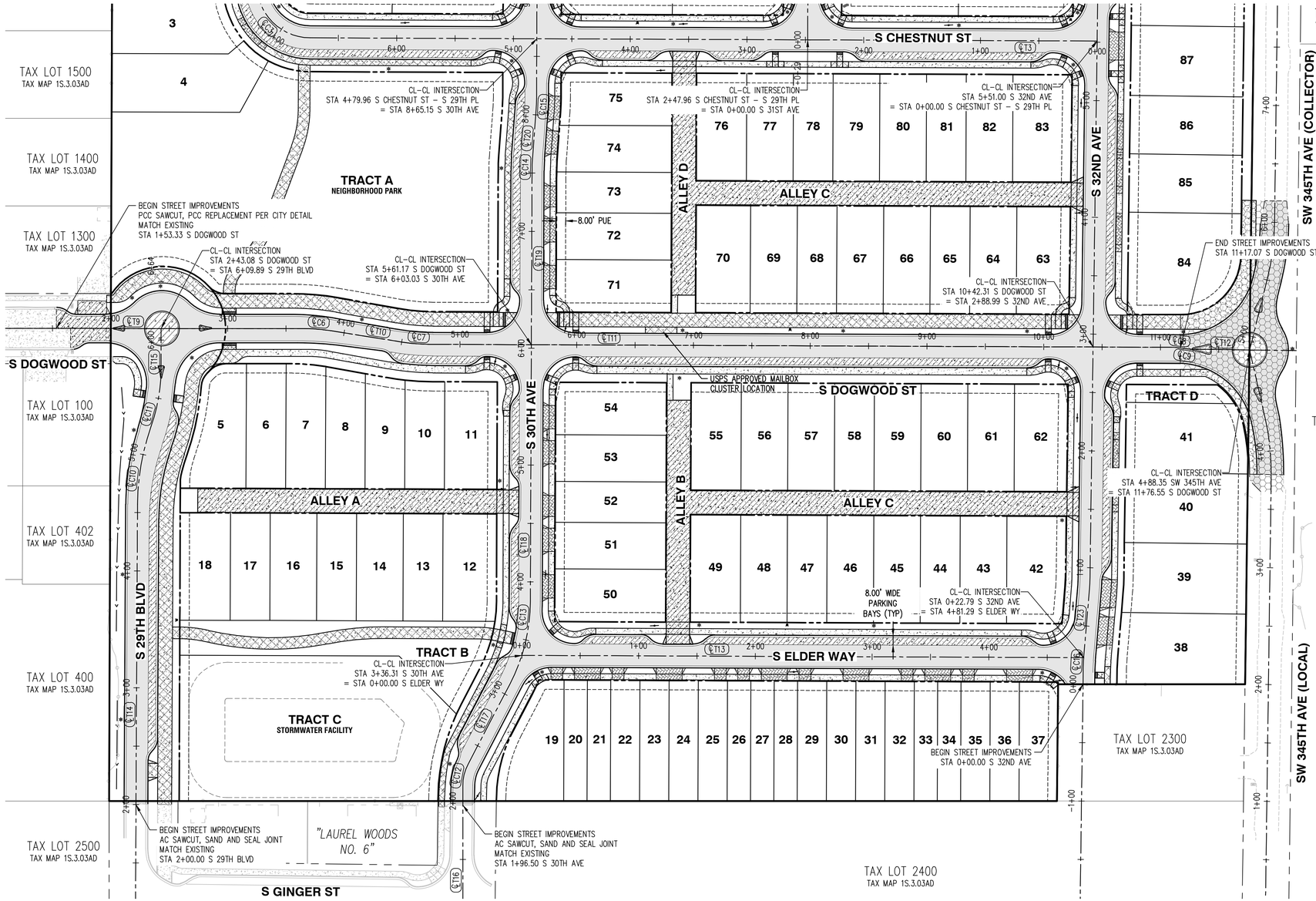
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STREET CROSS SECTIONS
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
DECEMBER 09, 2001
MARK A. SELLKE
PRELIMINARY
NOT FOR CONSTRUCTION
RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
CHECKED BY:	PAS

AKS DRAWING FILE: 4636-05 PRELIM XSECTIONS.DWG | LAYOUT: P10



SCALE: 1"= 50 FEET
50 0 10 25 50
ORIGINAL PAGE SIZE: 22" x 34"

LEGEND

- – CONCRETE SIDEWALK CONSTRUCTED BY DEVELOPER
- – CONCRETE SIDEWALK CONSTRUCTED BY HOME BUILDER
- – AC PAVEMENT SECTION BY DEVELOPER
- – CONCRETE PAVEMENT BY DEVELOPER
- – CONCRETE DRIVEWAY APPROACH BY HOME BUILDER
- – OFFSITE IMPROVEMENTS

S DOGWOOD ST ALIGNMENT TABLE

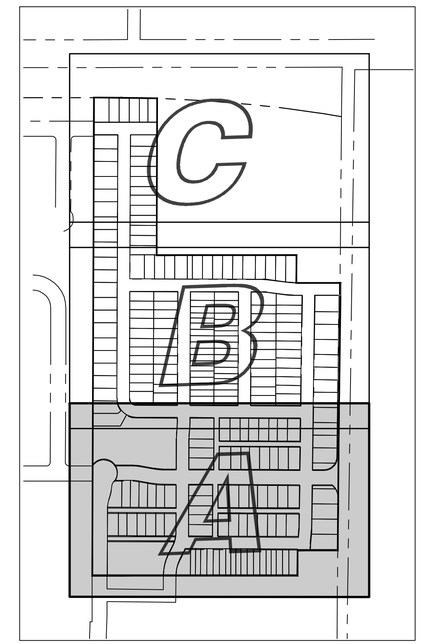
CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄T9	0+00.00		365.29'			S87°53'40"E
℄C6	3+65.29	150.00'	23.54'	8°59'27"	23.51	S83°23'56"E
℄T10	3+88.83		61.98'			S78°54'12"E
℄C7	4+50.81	150.00'	23.03'	8°47'50"	23.01	S83°18'08"E
℄T11	4+73.84		637.55'			S87°42'03"E
℄C8	11+11.39	40.00'	7.78'	11°08'53"	7.77	S82°07'37"E
℄C9	11+19.17	40.00'	7.39'	10°35'01"	7.38	S81°50'41"E
℄T12	11+26.56		89.84'			S87°08'11"E

S 29TH BLVD ALIGNMENT TABLE

CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄T14	2+00.00		257.12'			N02°21'17"E
℄C10	4+57.11	202.00'	67.76'	19°13'07"	67.44	N11°57'50"E
℄C11	5+24.87	150.00'	50.97'	19°28'03"	50.72	N11°50'22"E
℄T15	5+75.84		87.67'			N02°06'20"E

S ELDER WY ALIGNMENT TABLE

CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄T13	0+00.00		510.37'			S87°42'03"E



SHEET KEY MAP

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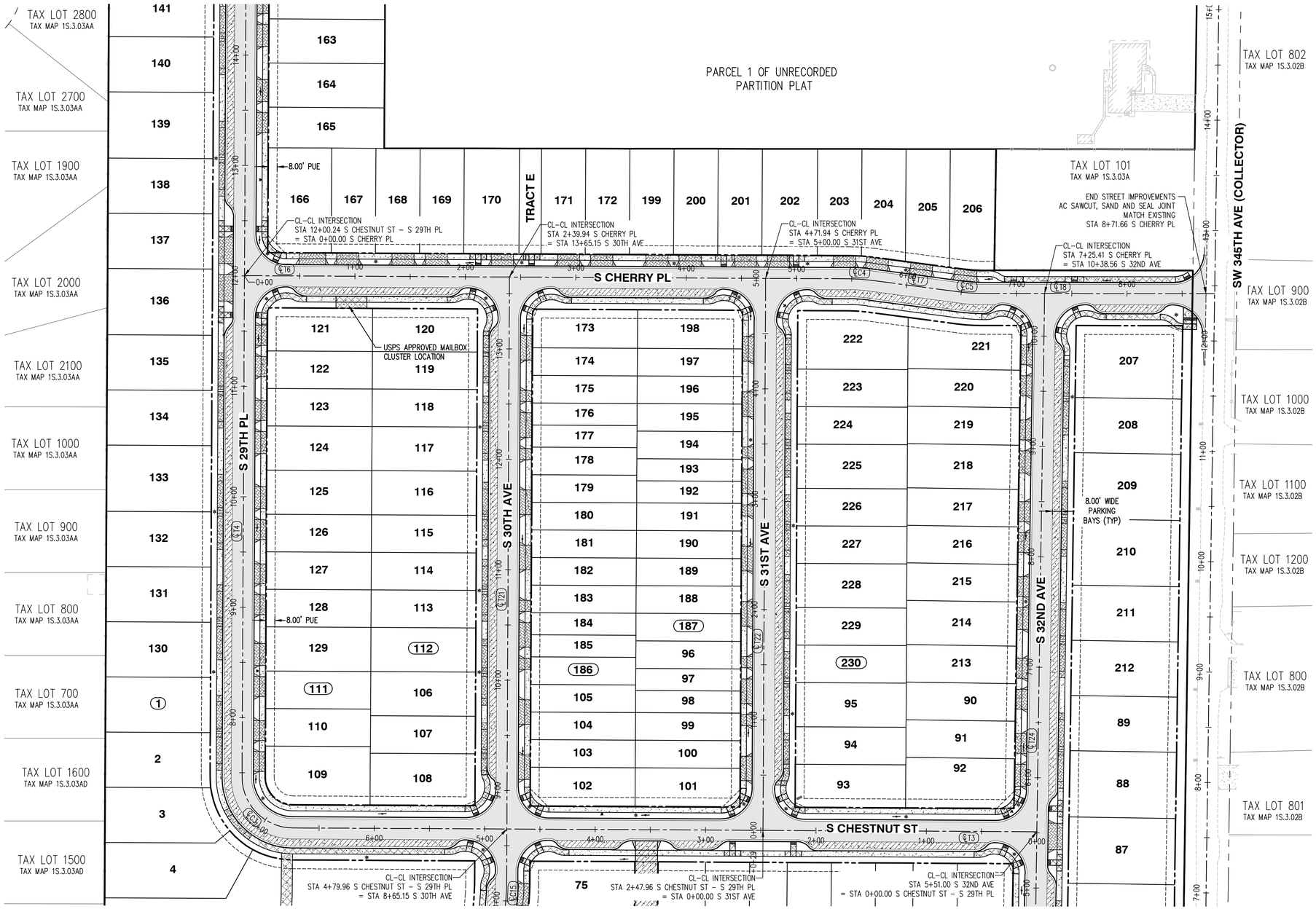
STREET PLAN (SOUTH)
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

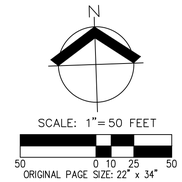
REGISTERED PROFESSIONAL ENGINEER
OREGON
DEC. 29, 2001
PAUL A. SELLKE
PRELIMINARY
NOT FOR CONSTRUCTION
RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
CHECKED BY:	PAS

P11A

AKS DRAWING FILE: 4636-05 PRELIM STREETS.DWG | LAYOUT: P11A





LEGEND

- – CONCRETE SIDEWALK CONSTRUCTED BY DEVELOPER
- – CONCRETE SIDEWALK CONSTRUCTED BY HOME BUILDER
- – AC PAVEMENT SECTION BY DEVELOPER
- – CONCRETE PAVEMENT BY DEVELOPER
- – CONCRETE DRIVEWAY APPROACH BY HOME BUILDER

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S CHERRY PL ALIGNMENT TABLE

CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄T6	0+00.00		547.80'			S87°42'03"E
℄C4	5+47.80	154.00'	19.42'	7°13'25"	19.40	S84°05'20"E
℄T7	5+67.22		82.02'			S80°28'38"E
℄C5	6+49.24	146.00'	19.00'	7°27'21"	18.99	S84°12'18"E
℄T8	6+68.24		211.19'			S87°55'58"E

S 30TH AVE ALIGNMENT TABLE

CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄T16	0+00.00		213.00'			N02°04'02"E
℄C12	2+13.00	40.00'	19.23'	27°33'07"	19.05	N15°50'36"E
℄T17	2+32.23		77.50'			N29°37'09"E
℄C13	3+09.73	154.00'	73.43'	27°19'12"	72.74	N15°57'33"E
℄T19	3+83.17		368.84'			N02°17'57"E
℄T18	3+83.17		368.84'			N02°17'57"E
℄C14	7+52.01	150.00'	10.52'	4°01'12"	10.52	N04°18'33"E
℄T20	7+62.53		41.18'			N06°19'09"E
℄C15	8+03.71	154.00'	10.89'	4°03'02"	10.89	N04°17'38"E
℄T21	8+14.60		550.55'			N02°16'06"E

S 31ST AVE ALIGNMENT TABLE

CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄T22	0+00.00		500.00'			N02°16'06"E

S 32ND AVE ALIGNMENT TABLE

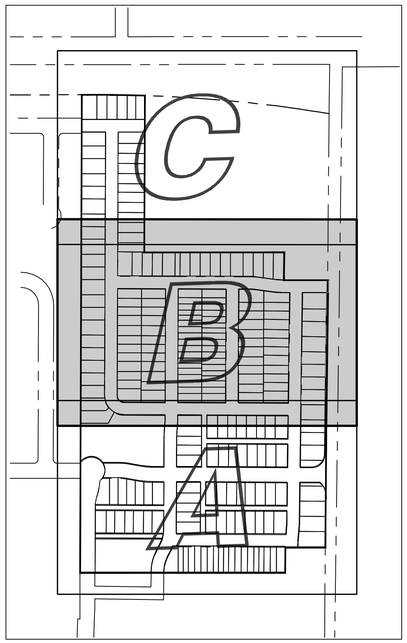
CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄C16	0+13.54	154.00'	10.82'	4°01'27"	10.81	N04°50'25"E
℄T23	0+24.36		57.22'			N06°51'08"E
℄T24	0+91.83		946.73'			N02°49'41"E

S CHESTNUT ST - S 29TH PL ALIGNMENT TABLE

CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄T3	0+00.00		673.98'			N87°42'03"W
℄C3	6+73.98	46.00'	72.23'	89°58'09"	65.04	N42°42'58"W
℄T4	7+46.21		334.39'			N02°16'06"E
℄T5	10+80.60		740.20'			N02°17'57"E

SEE SHEET P11A FOR REMAINING CURVE/TANGENT LOCATIONS FOR S 30TH AVE AND S 32ND AVE

SEE SHEET P11C FOR REMAINING CURVE/TANGENT LOCATIONS FOR S 29TH PL



SHEET KEY MAP

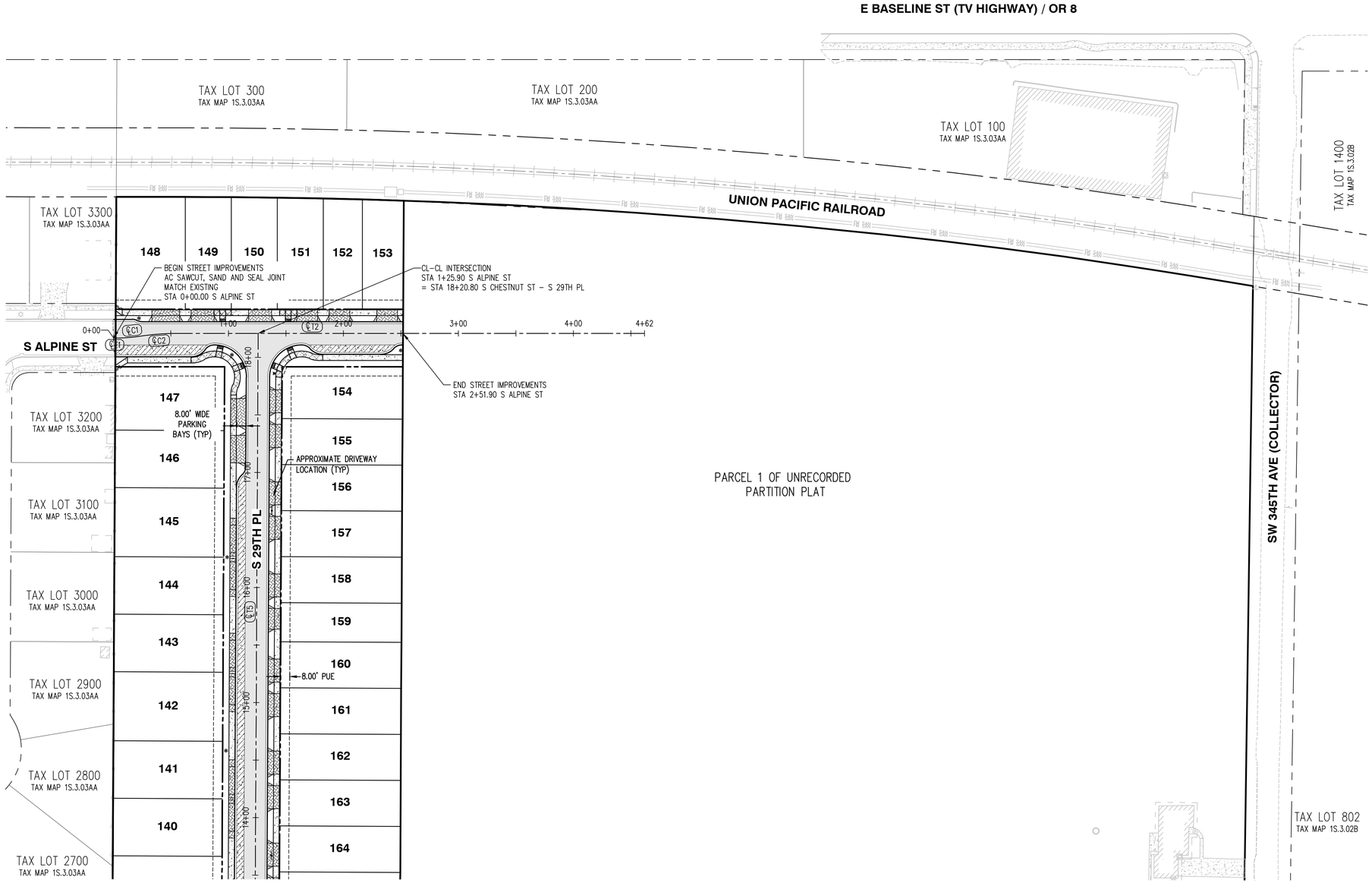
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CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 09, 2001
PAUL A. SELLKE
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RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
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P11B

AKS DRAWING FILE: 4636-05 PRELIM STREETS.DWG | LAYOUT: P11B



S ALPINE ST ALIGNMENT TABLE						
CURVE/ TANGENT	STATION	RADIUS	LENGTH	DELTA	CHORD	TANGENT/CHORD BEARING
℄T1	0+00.00		1.66'			S88°00'08"E
℄C1	0+01.66	150.00'	24.52'	9°22'00"	24.49	N87°18'52"E
℄C2	0+26.18	150.00'	24.52'	9°22'00"	24.49	N87°18'52"E
℄T2	0+50.70		411.18'			S88°00'08"E

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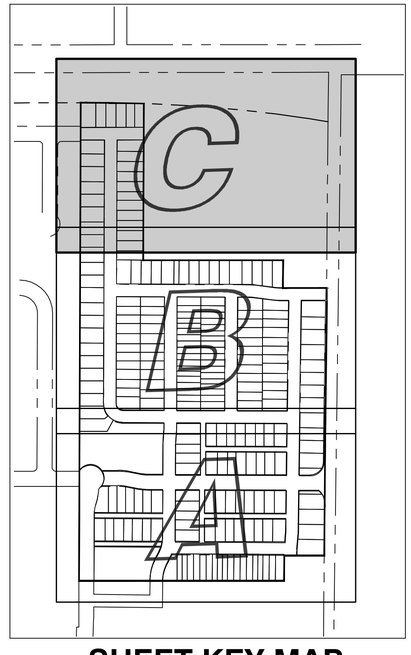
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LEGEND

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- – CONCRETE SIDEWALK CONSTRUCTED BY HOME BUILDER
- – AC PAVEMENT SECTION BY DEVELOPER
- – CONCRETE PAVEMENT BY DEVELOPER
- – CONCRETE DRIVEWAY APPROACH BY HOME BUILDER



SHEET KEY MAP

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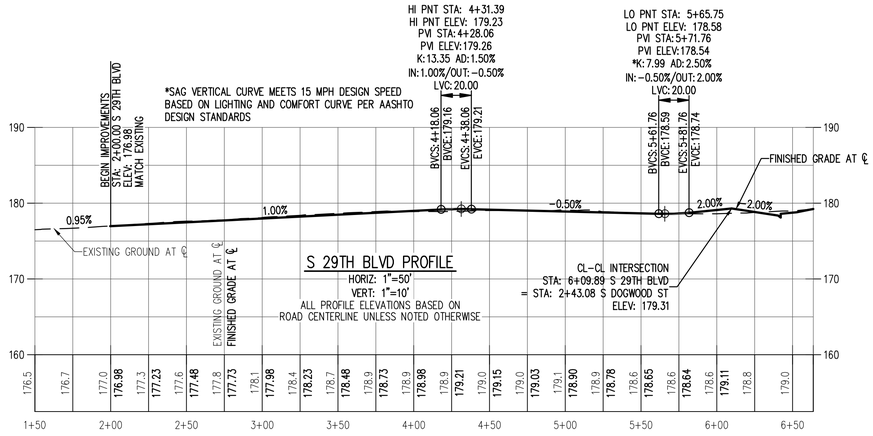
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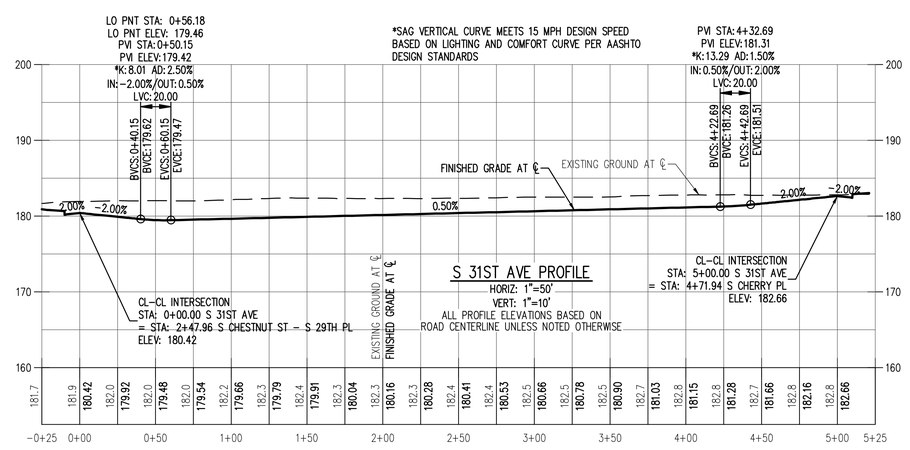
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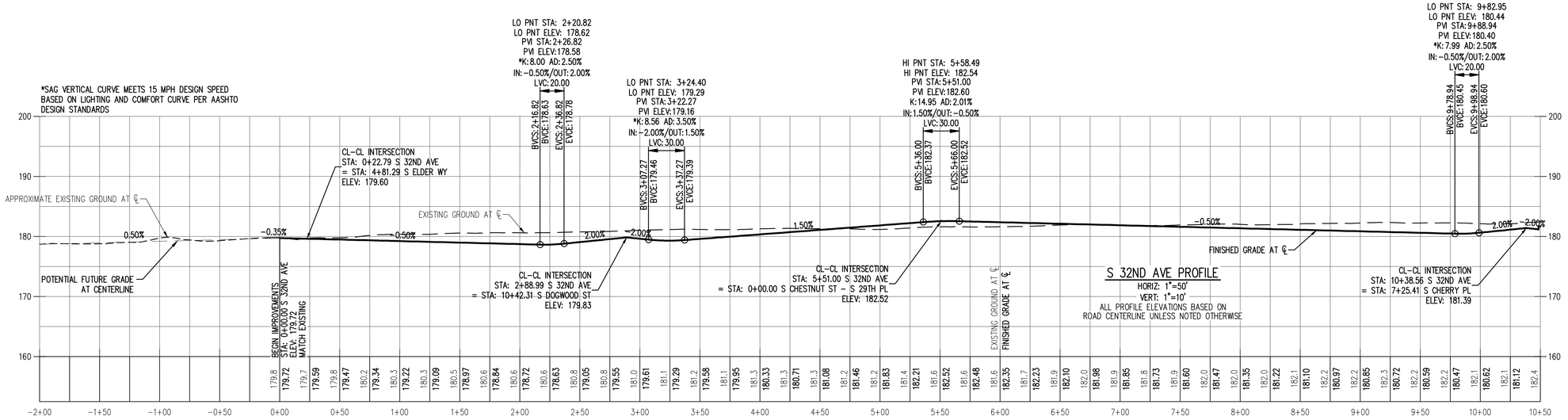
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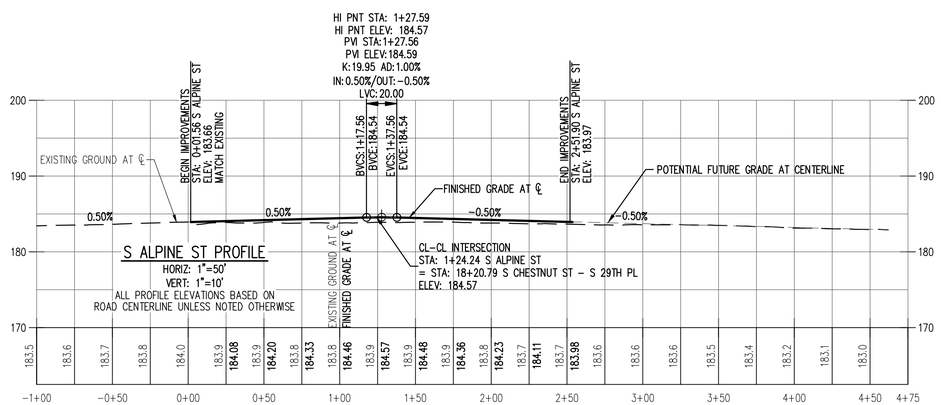
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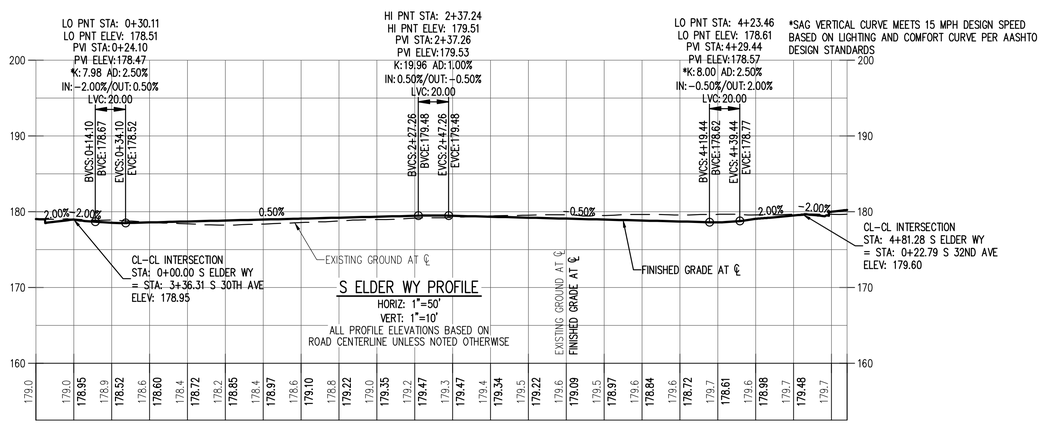
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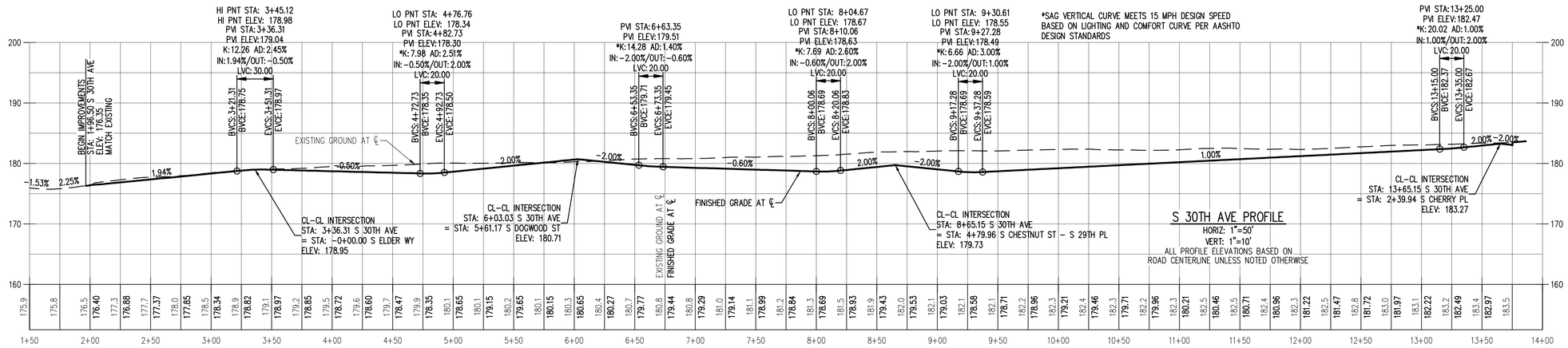
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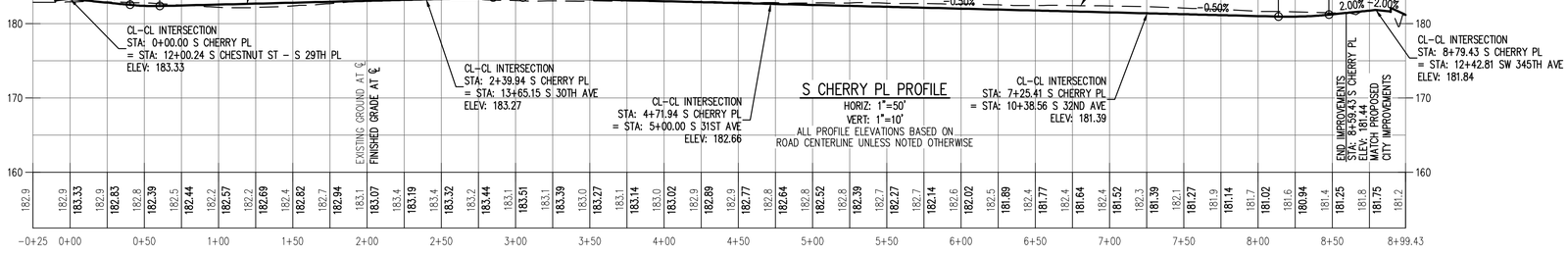
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RENEWAL DATE: 6/30/26

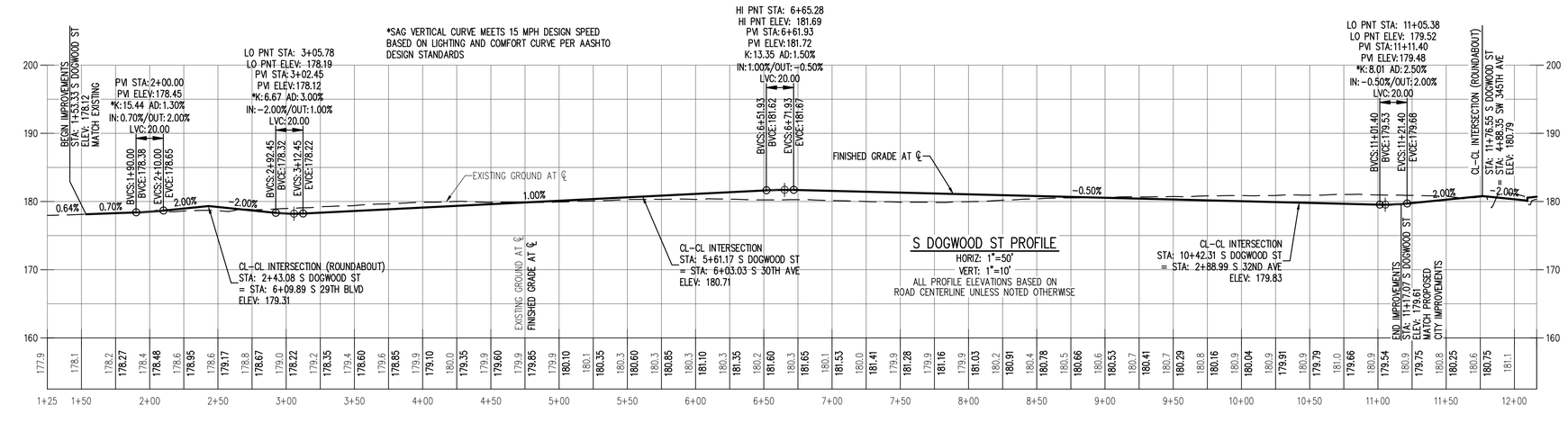
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P12

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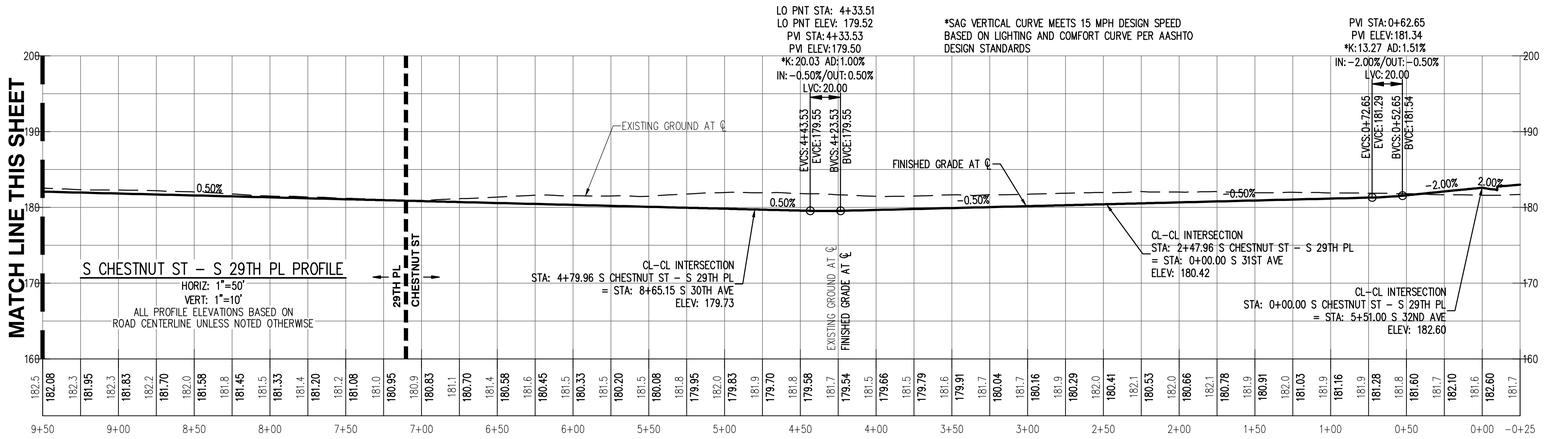
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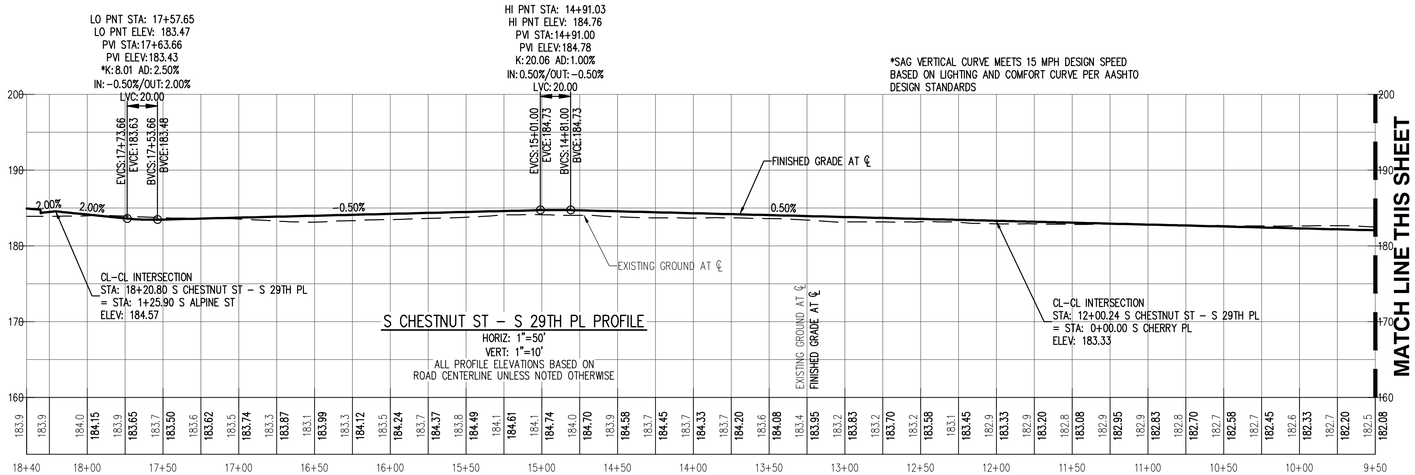
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PAUL A. SELLKE

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P14

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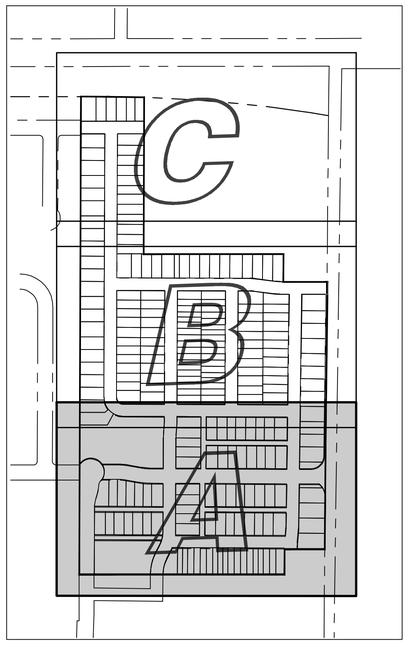
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LEGEND

- ON-STREET PARKING: 158 SPACES
- DRIVEWAY PARKING: 441 SPACES
- GARAGE PARKING: 441 SPACES



SHEET KEY MAP

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P15A

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TAX LOT 2800
TAX MAP 1S.3.03AA

TAX LOT 2700
TAX MAP 1S.3.03AA

TAX LOT 1900
TAX MAP 1S.3.03AA

TAX LOT 2000
TAX MAP 1S.3.03AA

TAX LOT 2100
TAX MAP 1S.3.03AA

TAX LOT 1000
TAX MAP 1S.3.03AA

TAX LOT 900
TAX MAP 1S.3.03AA

TAX LOT 800
TAX MAP 1S.3.03AA

TAX LOT 700
TAX MAP 1S.3.03AA

TAX LOT 1600
TAX MAP 1S.3.03AD

TAX LOT 1500
TAX MAP 1S.3.03AD

PARCEL 1 OF UNRECORDED
PARTITION PLAT

TAX LOT 101
TAX MAP 1S.3.03A

TAX LOT 802
TAX MAP 1S.3.02B

TAX LOT 900
TAX MAP 1S.3.02B

TAX LOT 1000
TAX MAP 1S.3.02B

TAX LOT 1100
TAX MAP 1S.3.02B

TAX LOT 1200
TAX MAP 1S.3.02B

TAX LOT 800
TAX MAP 1S.3.02B

TAX LOT 801
TAX MAP 1S.3.02B

TRACT E

S CHERRY PL

S 29TH PL

S 30TH AVE

S 31ST AVE

S 32ND AVE

SW 345TH AVE

S CHESTNUT ST

APPROXIMATE CURB TIGHT DRIVEWAY (TYP)

APPROXIMATE DRIVEWAY (TYP)

8.0' WIDE PARKING BAYS (TYP)

N

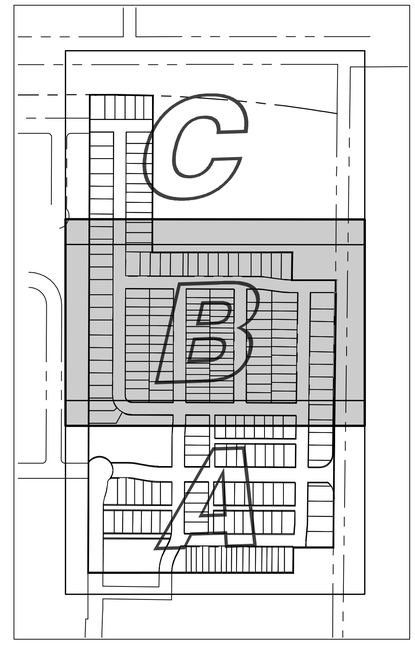
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LEGEND

- – ON-STREET PARKING: 158 SPACES
- – DRIVEWAY PARKING: 441 SPACES
- – GARAGE PARKING: 441 SPACES



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E BASELINE ST (TV HIGHWAY) / OR 8

TAX LOT 300
TAX MAP 1S.3.03AA

TAX LOT 200
TAX MAP 1S.3.03AA

TAX LOT 100
TAX MAP 1S.3.03AA

TAX LOT 1400
TAX MAP 1S.3.02B

UNION PACIFIC RAILROAD

TAX LOT 3300
TAX MAP 1S.3.03AA

S ALPINE ST

TAX LOT 3200
TAX MAP 1S.3.03AA

TAX LOT 3100
TAX MAP 1S.3.03AA

TAX LOT 3000
TAX MAP 1S.3.03AA

TAX LOT 2900
TAX MAP 1S.3.03AA

TAX LOT 2800
TAX MAP 1S.3.03AA

TAX LOT 2700
TAX MAP 1S.3.03AA

S 29TH PL

148 149 150 151 152 153

147 146 145 144 143 142 141 140

154 155 156 157 158 159 160 161 162 163 164

PARCEL 1 OF UNRECORDED
PARTITION PLAT

SW 345TH AVE

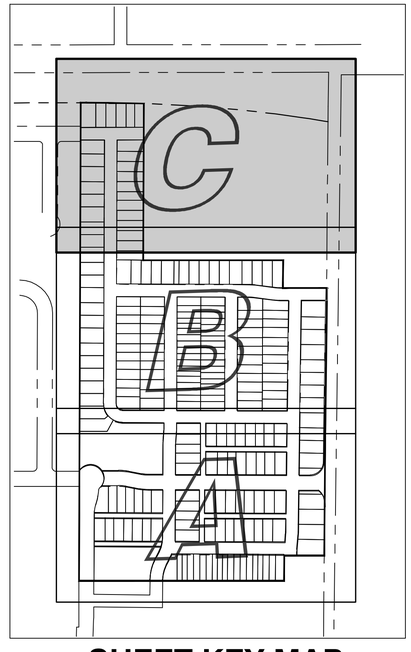
TAX LOT 802
TAX MAP 1S.3.02B

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LEGEND

- E – ON-STREET PARKING: 158 SPACES
- D – DRIVEWAY PARKING: 441 SPACES
- G – GARAGE PARKING: 441 SPACES



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P15C

AKS DRAWING FILE: 4636-05 PRELIM PARKING.DWG | LAYOUT: P15C



PRELIMINARY TRACT B PLANT SCHEDULE

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
SHRUBS					
○	8	CORNUS SERICEA 'VARIEGATA'	VARIEGATED RED TWIG DOGWOOD	2 GAL. CONT.	48" o.c.
○	9	PHYSOCARPUS OPULIFOLIUS 'CENTER GLOW'	CENTER GLOW NINEBARK	5 GAL. CONT.	60" o.c.
○	13	ROSA X 'RADTKO'	DOUBLE KNOCK OUT RED ROSE	3 GAL. CONT.	48" o.c.
⊛	9	VIBURNUM CARLESII	KOREANSPICE VIBURNUM	5 GAL. CONT.	60" o.c.
○	9	VIBURNUM DAVIDII	DAVID VIBURNUM	2 GAL. CONT.	48" o.c.

GROUND COVERS

	5,524 SF ±	LAWN
	27,496 SF ±	STORMWATER FACILITY PLANTED TO CWS STANDARDS

PRELIMINARY STREET TREE KEY

SYMBOL	BOTANICAL / COMMON NAME
STREET TREES	
	CARPINUS BETULUS 'FASTIGIATA' PYRAMIDAL EUROPEAN HORNBEAM
	CERCIDIPHYLLUM JAPONICUM KATSURA TREE
	GINKGO BILOBA 'SARATOGA' SARATOGA GINKGO
	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER' SHADEMASTER HONEY LOCUST
	NYSSA SYLVATICA 'ODOM' AFTERBURNER TUPELO

SYMBOL	BOTANICAL / COMMON NAME
STREET TREES	
	OSTRYA VIRGINIANA AMERICAN HOPHORNBEAM
	PARROTIA PERSICA 'VANESSA' VANESSA PERSIAN PARROTIA
	PHELLODENDRON X 'HIS MAJESTY' HIS MAJESTY CORKTREE
	QUERCUS FRAINETTO 'SCHMIDT' FOREST GREEN OAK
	TILIA TOMENTOSA 'STERLING' STERLING SILVER LINDEN

SYMBOL	BOTANICAL / COMMON NAME
STREET TREES	
	ULMUS PROPINQUA 'JFS-BIEBERICH' EMERALD SUNSHINE ELM
	ZELKOVA SERRATA 'GREEN VASE' GREEN VASE ZELKOVA
GROUND COVERS	
	LAWN

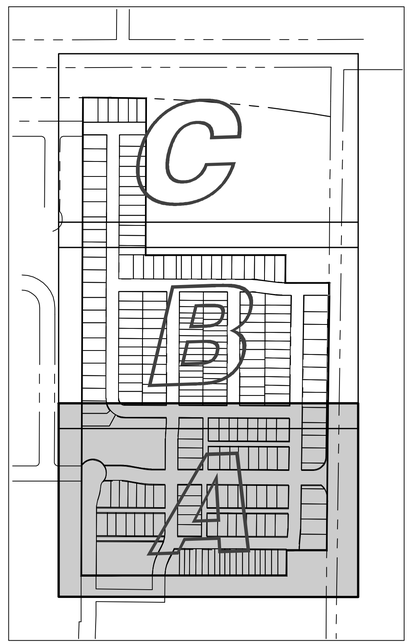
*SEE SHEET P16C FOR QUANTITIES

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REGISTERED 797 LANDSCAPE ARCHITECT OREGON KRISTOPHER A. HOLM 06/30/26

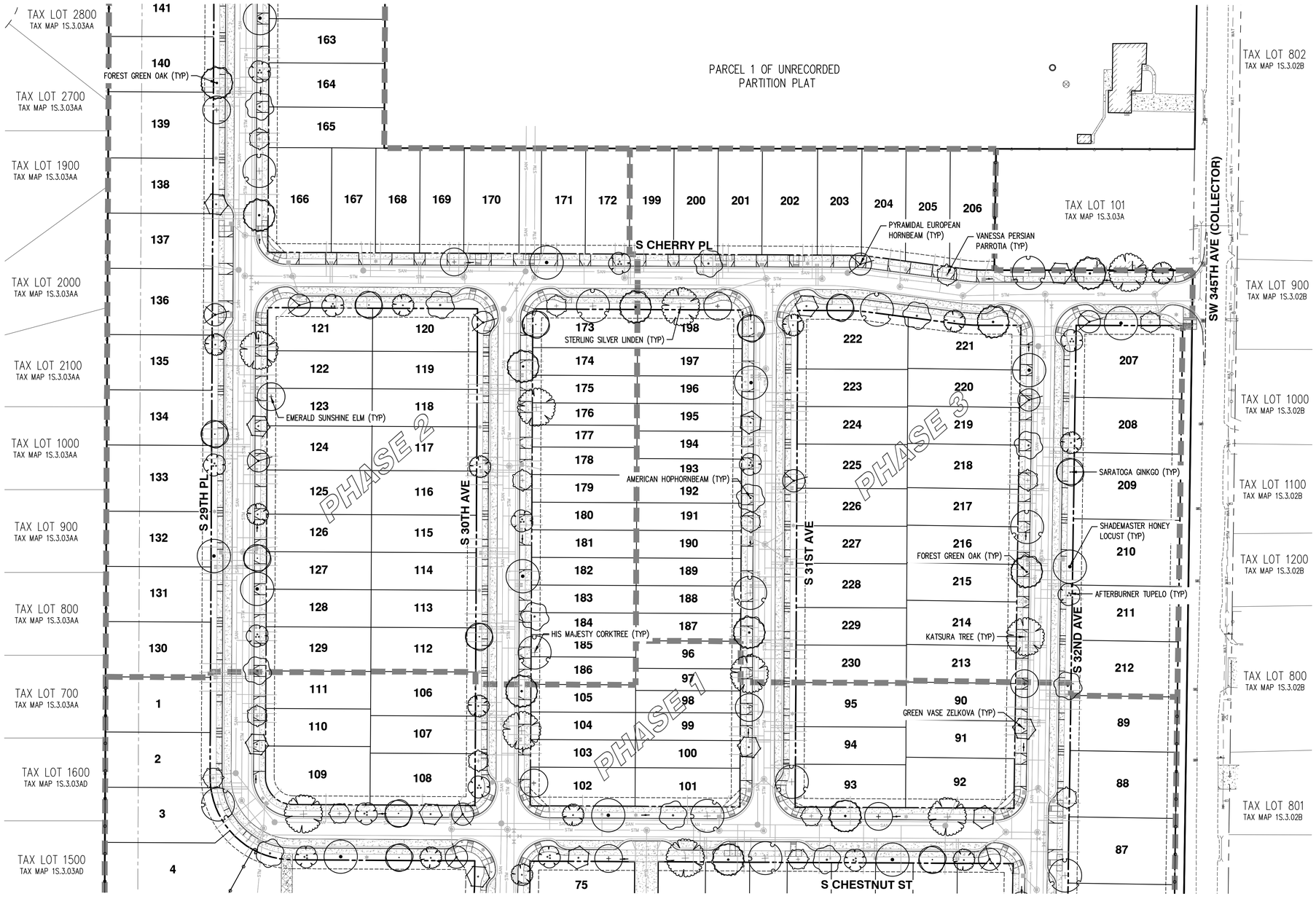
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CHECKED BY:	KAH

P16A

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PRELIMINARY STREET TREE KEY

SYMBOL	BOTANICAL / COMMON NAME
STREET TREES	
	CARPINUS BETULUS 'FASTIGIATA' PYRAMIDAL EUROPEAN HORNBEAM
	CERCIDIPHYLLUM JAPONICUM KATSURA TREE
	GINKGO BILOBA 'SARATOGA' SARATOGA GINKGO
	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER' SHADEMASTER HONEY LOCUST

SYMBOL	BOTANICAL / COMMON NAME
STREET TREES	
	NYSSA SYLVATICA 'ODOM' AFTERBURNER TUPELO
	OSTRYA VIRGINIANA AMERICAN HOPHORNBEAM
	PARROTIA PERSICA 'VANESSA' VANESSA PERSIAN PARROTIA
	PHELLODENDRON X 'HIS MAJESTY' HIS MAJESTY CORKTREE

SYMBOL	BOTANICAL / COMMON NAME
STREET TREES	
	QUERCUS FRAINETTO 'SCHMIDT' FOREST GREEN OAK
	TILIA TOMENTOSA 'STERLING' STERLING SILVER LINDEN
	ULMUS PROPINQUA 'JFS-BIEBERICH' EMERALD SUNSHINE ELM

SYMBOL	BOTANICAL / COMMON NAME
STREET TREES	
	ZELKOVA SERRATA 'GREEN VASE' GREEN VASE ZELKOVA
GROUND COVERS	
	LAWN

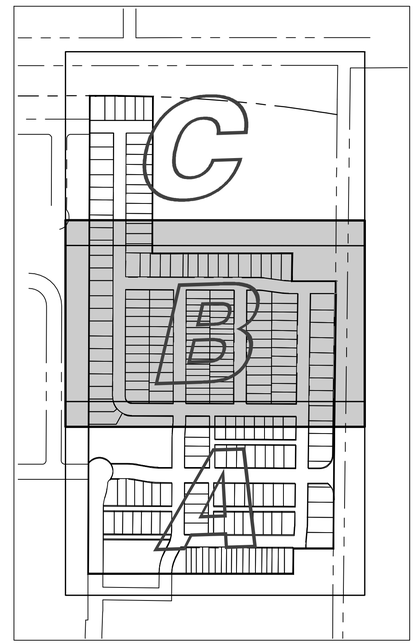
*SEE SHEET P16C FOR QUANTITIES

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SCALE: 1"=50 FEET

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ORIGINAL PAGE SIZE: 22" x 34"



SHEET KEY MAP

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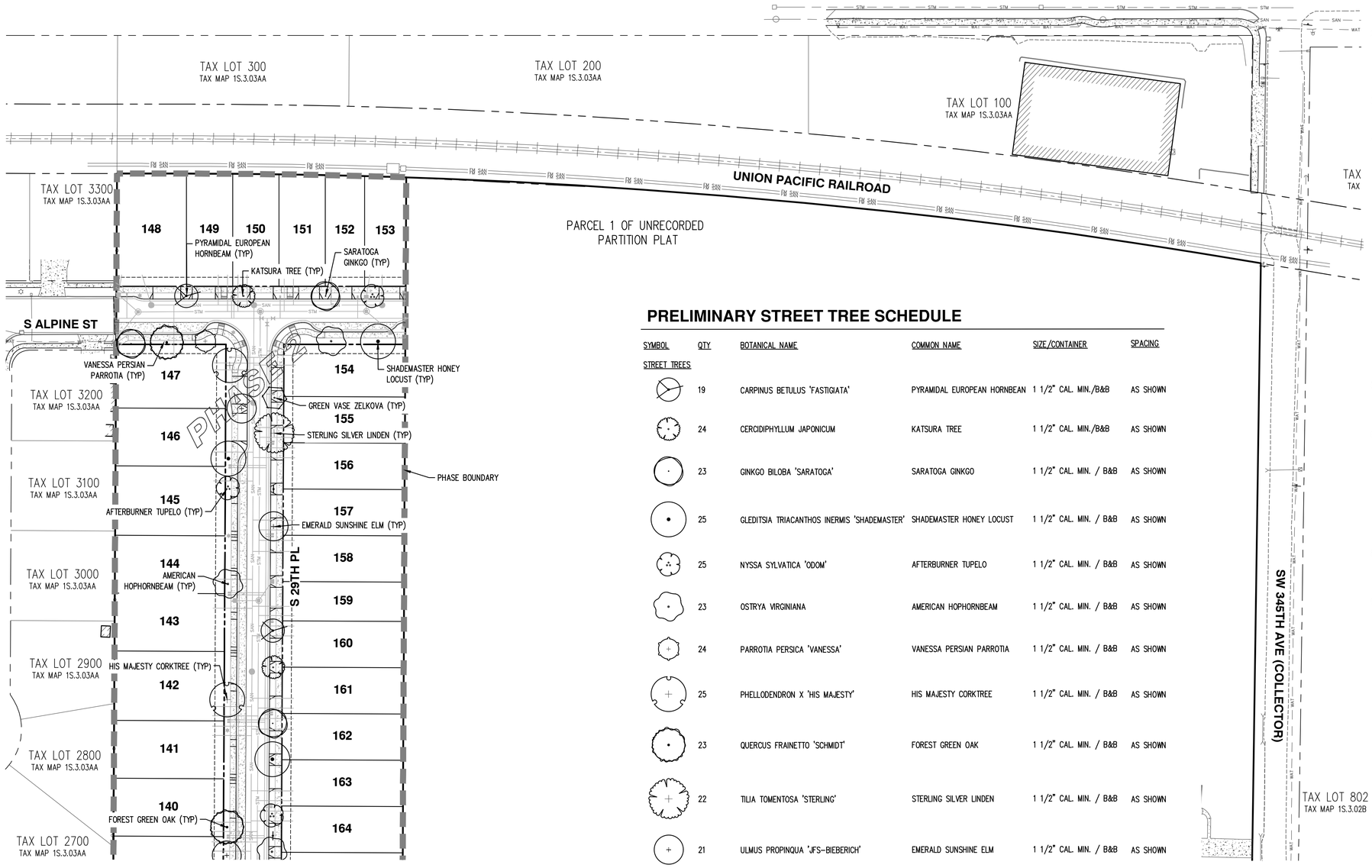
STREET TREE PLAN (CENTRAL)
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED
797
PROFESSIONAL LANDSCAPE ARCHITECT
OREGON
12/05/13
RENEWS: 06/30/2026

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	BNF
DRAWN BY:	BNF
CHECKED BY:	KAH

P16B

AKS DRAWING FILE: 4636-05 PRELIM LANDSCAPE.DWG | LAYOUT: P16B



PRELIMINARY STREET TREE SCHEDULE

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
STREET TREES					
	19	CARPINUS BETULUS 'FASTIGIATA'	PYRAMIDAL EUROPEAN HORNBEAN	1 1/2" CAL. MIN./B&B	AS SHOWN
	24	CERCIDIPHYLLUM JAPONICUM	KATSURA TREE	1 1/2" CAL. MIN./B&B	AS SHOWN
	23	GINKGO BILOBA 'SARATOGA'	SARATOGA GINKGO	1 1/2" CAL. MIN. / B&B	AS SHOWN
	25	GLEDITSIA TRIACANTHOS INERMIS 'SHADEMASTER'	SHADEMASTER HONEY LOCUST	1 1/2" CAL. MIN. / B&B	AS SHOWN
	25	NYSSA SYLVATICA 'ODOM'	AFTERBURNER TUPELO	1 1/2" CAL. MIN. / B&B	AS SHOWN
	23	OSTRYA VIRGINIANA	AMERICAN HOPHORNBEAM	1 1/2" CAL. MIN. / B&B	AS SHOWN
	24	PARROTIA PERSICA 'VANESSA'	VANESSA PERSIAN PARROTIA	1 1/2" CAL. MIN. / B&B	AS SHOWN
	25	PHELLODENDRON X 'HIS MAJESTY'	HIS MAJESTY CORKTREE	1 1/2" CAL. MIN. / B&B	AS SHOWN
	23	QUERCUS FRAINETTO 'SCHMIDT'	FOREST GREEN OAK	1 1/2" CAL. MIN. / B&B	AS SHOWN
	22	TILIA TOMENTOSA 'STERLING'	STERLING SILVER LINDEN	1 1/2" CAL. MIN. / B&B	AS SHOWN
	21	ULMUS PROPINQUA 'JFS-BIEBERICH'	EMERALD SUNSHINE ELM	1 1/2" CAL. MIN. / B&B	AS SHOWN
	22	ZELKOVA SERRATA 'GREEN VASE'	GREEN VASE ZELKOVA	1 1/2" CAL. MIN./B&B	AS SHOWN
SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
GROUND COVERS					
	3,271 SF±	LAWN		SEED OR SOD	

PERCENT BY QUANTITY			PERCENT BY QUANTITY			PERCENT BY QUANTITY		
FAMILY	MAX. %	PROPOSED %	GENUS	MAX %	PROPOSED %	SPECIES	MAX %	PROPOSED %
BETULACEAE	30%	15.8%	CARPINUS	20%	7.5%	BETULUS	10%	7.6%
			OSTRYA	20%	8.2%	VIRGINIANA	10%	8.2%
CERCIDIPHYLLACEAE	30%	8.2%	CERCIDIPYLLUM	20%	8.2%	JAPONICUM	10%	8.2%
GINKGOACEAE	30%	7.9%	GINKGO	20%	7.9%	BILOBA	10%	7.9%
FABACEAE	30%	9.0%	GLEDITSIA	20%	8.9%	TRIACANTHOS	10%	8.9%
CORNALES	30%	8.6%	NYSSA	20%	8.9%	SYLVATICA	10%	8.9%
HAMAMELIDACEAE	30%	8.9%	PARROTIA	20%	8.6%	PERSICA	10%	8.6%
FAGACEAE	30%	8.2%	QUERCUS	20%	8.2%	FRAINETTO	10%	8.2%
MALVACEAE	30%	8.2%	TILIA	20%	8.3%	TOMENTOSA	10%	8.3%
RUTACEAE	30%	8.5%	PHELLODENDRON	20%	8.9%	X	10%	8.5%
ULMACEAE	30%	15.8%	ULMUS	20%	7.9%	PROPINQUA	10%	7.9%
			ZELKOVA	20%	7.9%	SERRATA	10%	7.9%

NOTE: STREET TREE LEGEND INCLUDES ALL TREES FOR THIS PHASE. QUANTITIES SHOWN ARE AN ESTIMATE BASED ON CITY OF CORNELIUS SPACING STANDARDS AND ESTIMATED DRIVEWAY LOCATION. FINAL TREE SPACING AND QUANTITIES TO VARY BASED ON FINAL UTILITY, LIGHTING, AND DRIVEWAY LOCATIONS. TREE VARIETY MAY VARY DEPENDING ON AVAILABILITY AT TIME OF PLANTING. ANY CHANGES TO STREET TREE VARIETY REQUIRES CITY ENGINEER APPROVAL. STREET TREES SHALL BE PLANTED IN A DIVERSE PATTERN AT A REPEAT FREQUENCY OF NOT MORE THAN HALF THE NUMBER OF DIFFERENT TREES IN THE PLANT LIST PER CITY PUBLIC WORKS REQUIREMENTS.

STREET TREES AND VEGETATIVE GROUNDCOVER IN PLANTER STRIPS IN FRONT OF STORMWATER FACILITY AND OPEN SPACE TRACTS SHALL BE PLANTED AT THE TIME OF DEVELOPMENT. ALL OTHER STREET TREES AND VEGETATIVE GROUNDCOVER IN FRONT OF INDIVIDUAL LOTS SHALL BE PLANTED AND MAINTAINED BY THE HOMEOWNER/HOMEBUILDER AT TIME OF LOT CONSTRUCTION.

PRELIMINARY LANDSCAPE NOTES:

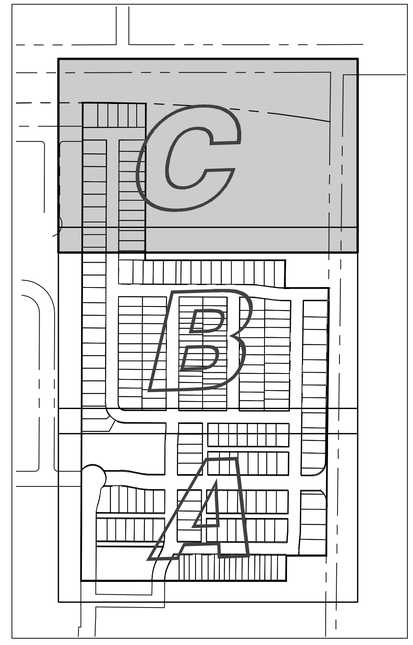
1. ALL PLANTS AND LANDSCAPING SHALL CONFORM TO THE CITY OF CORNELIUS DESIGN STANDARDS AND TO AMERICAN STANDARD FOR NURSERY STOCK ANSI Z60.2. PLANT IN ACCORDANCE WITH ACCEPTED GOOD PRACTICE INDUSTRY STANDARDS, SUCH AS THOSE ADOPTED BY THE OREGON LANDSCAPE CONTRACTORS BOARD.
2. PLAN IS INTENDED TO SHOW DESIGN INTENT. FIELD ADJUSTMENTS, INCLUDING CHANGES TO PLANT LOCATION, QUANTITIES, SPECIES, SPACING, SIZES, AND SUBSTITUTIONS OF EQUAL VALUE TO SITE FURNISHINGS AND EQUIPMENT, ETC. MAY BE ALLOWED WITH APPROVAL BASED ON UNFORESEEN SITE CONDITIONS, PLANT AVAILABILITY, FINAL UTILITY AND HARDSCAPING LAYOUT, ETC. SUBSTITUTIONS OR REVISIONS SHALL COMPLY WITH CITY OF CORNELIUS DESIGN STANDARDS
3. TREES SHALL BY HEALTHY, VIGOROUS, EVENLY BRANCHED, AND FREE FROM DISEASE AND MECHANICAL INJURY. ROOT BALL SIZES SHALL ENCOMPASS ENOUGH OF THE ROOT SYSTEM TO ENSURE HEALTHY ESTABLISHMENT AND FULL RECOVERY OF THE TREE.
4. STREET TREES SHALL CONFORM TO CITY OF CORNELIUS PUBLIC WORKS 5.11 S STANDARDS, INCLUDING BUT NOT LIMITED TO THE FOLLOWING SPACING AND DIVERSITY REQUIREMENTS:
   - STREET TREE SPACING SHALL BE DEPENDANT ON MATURE CANOPY SPREAD, HOWEVER SPACING SHALL NOT EXCEED 30' O.C. ± UNLESS SPACING CONFLICTS WITH HARDSCAPING (DRIVEWAYS, CURB RETURNS, SIDEWALK DROPS), LIGHT POLES, ABOVE AND BELOW GROUND UTILITIES, ETC. CONFLICTS WITH SUCH IMPEDIMENTS SHALL BE RESOLVED BY FIELD ADJUSTING STREET TREES.
   - STREET TREE SELECTION SHALL MAINTAIN A MAXIMUM OF 10% OF ANY ONE SPECIES (OR A MINIMUM OF 10 DIFFERENT SPECIES), A MAXIMUM OF 20% OF ANY GENUS (OR A MINIMUM OF TREES FROM 5 DIFFERENT GENERA), AND A MAXIMUM OF 30% OF ANY FAMILY (OR A MINIMUM OF TREES FROM 4 DIFFERENT FAMILIES).
   - STREET TREES SHALL BE PLANTED IN A RANDOM PATTERN. THE INTERVAL BETWEEN IDENTICAL STREET TREES SHALL BE EQUAL TO HALF THE NUMBER OF DIFFERENT TREES IN THE PLANTING LIST (FOR EXAMPLE, IF THE PLANTING LIST INCLUDES 12 DIFFERENT TREES, TREES OF THE SAME SPECIES CAN BE PLANTED NO CLOSER THAN EVERY 6TH TREE ALONG A STREET).
   - MAINTAIN A MINIMUM OF 5' O.C. FROM FIRE HYDRANTS OR UTILITY PEDESTALS
   - MAINTAIN A MINIMUM OF 10' O.C. FROM DIRECTIONAL TRAFFIC SIGNS AND UTILITY POLES
   - MAINTAIN A MINIMUM OF 15' O.C. (DECIDUOUS TREES) AND 20' O.C. (EVERGREEN/CONIFER TREES) FROM STOP AND YIELD SIGNS
   - MAINTAIN A MINIMUM OF 15' O.C. (COLUMNAR PROFILE TREES ONLY) AND 20' O.C. (ALL OTHER TREES) FROM STREET LIGHTS
5. ALL SHRUBS AND GROUNDCOVER PLANTS SHALL BE HEALTHY, WELL-FORMED, SYMMETRICAL, AND FULLY ROOTED (BUT NOT ROOT BOUND) IN THE CONTAINERS IN WHICH THEY ARE PURCHASED. THEY SHOULD BE TYPICAL FOR THEIR SPECIES AND BE FREE FROM DISEASE, PESTS, AND MECHANICAL INJURY.
6. HATCHED AREAS ARE MEANT TO CONVEY GENERAL PLANT LOCATIONS. PLANT COVERAGE, SPACING, AND LAYOUT SHALL BE CONSISTENT WITH THE SPACING LISTED IN THE PLANT LEGEND FOR FULL COVERAGE. FIELD ADJUST AS REQUIRED AROUND EXISTING PLANTINGS, UTILITIES, ETC.
7. IRRIGATION: WATER-EFFICIENT, BELOW GROUND IRRIGATION SHALL BE PROVIDED FOR ALL HOA / CITY MAINTAINED LANDSCAPING (OPEN SPACE TRACTS AND ASSOCIATED STREET FRONTAGES). IRRIGATION SYSTEM SHALL BE 'DESIGN-BUILD' BY THE LANDSCAPE CONTRACTOR WITH CONSIDERATION TO PLANT PLACEMENT AND MATURE GROWTH, MINIMIZING OVERSPRAY ONTO HARD SURFACES AND NON-IRRIGATED AREAS, AND OVERALL WATER EFFICIENCY. CONTRACTOR SHALL PROVIDE CITY APPROVED DOUBLE CHECK VALVE DEVICES AND NECESSARY PERMITS PRIOR TO INSTALLING IRRIGATION SYSTEM.
8. SOIL PREPARATION: ALL PLANTING BEDS (EXCLUDING STORMWATER FACILITY) SHALL HAVE ADEQUATE TOPSOIL TO PROMOTE HEALTHY PLANT GROWTH. TOPSOIL SHALL BE RICH, DARK BROWN IN COLOR AND FREE OF ROOTS, PLANTS, WEED SEEDS, SOD, STONES, CLAY LUMPS, ALKALI SALTS, DEBRIS, AND OTHER EXTRANEOUS MATERIAL HARMFUL TO PLANT GROWTH.
9. CONTRACTOR SHALL WARRANT ALL PLANT MATERIAL INSTALLED WITHIN THE PROJECT SCOPE FOR A PERIOD OF 1-YEAR (365-DAYS) AFTER FINAL ACCEPTANCE AGAINST DEFECTS AND DEATH, AND SHALL REPLACE AT NO ADDITIONAL COST TO THE OWNER, ANY PLANT THAT FAILS TO THRIVE DURING THAT PERIOD.

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SCALE: 1"= 50 FEET

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ORIGINAL PAGE SIZE: 22" x 34"



SHEET KEY MAP

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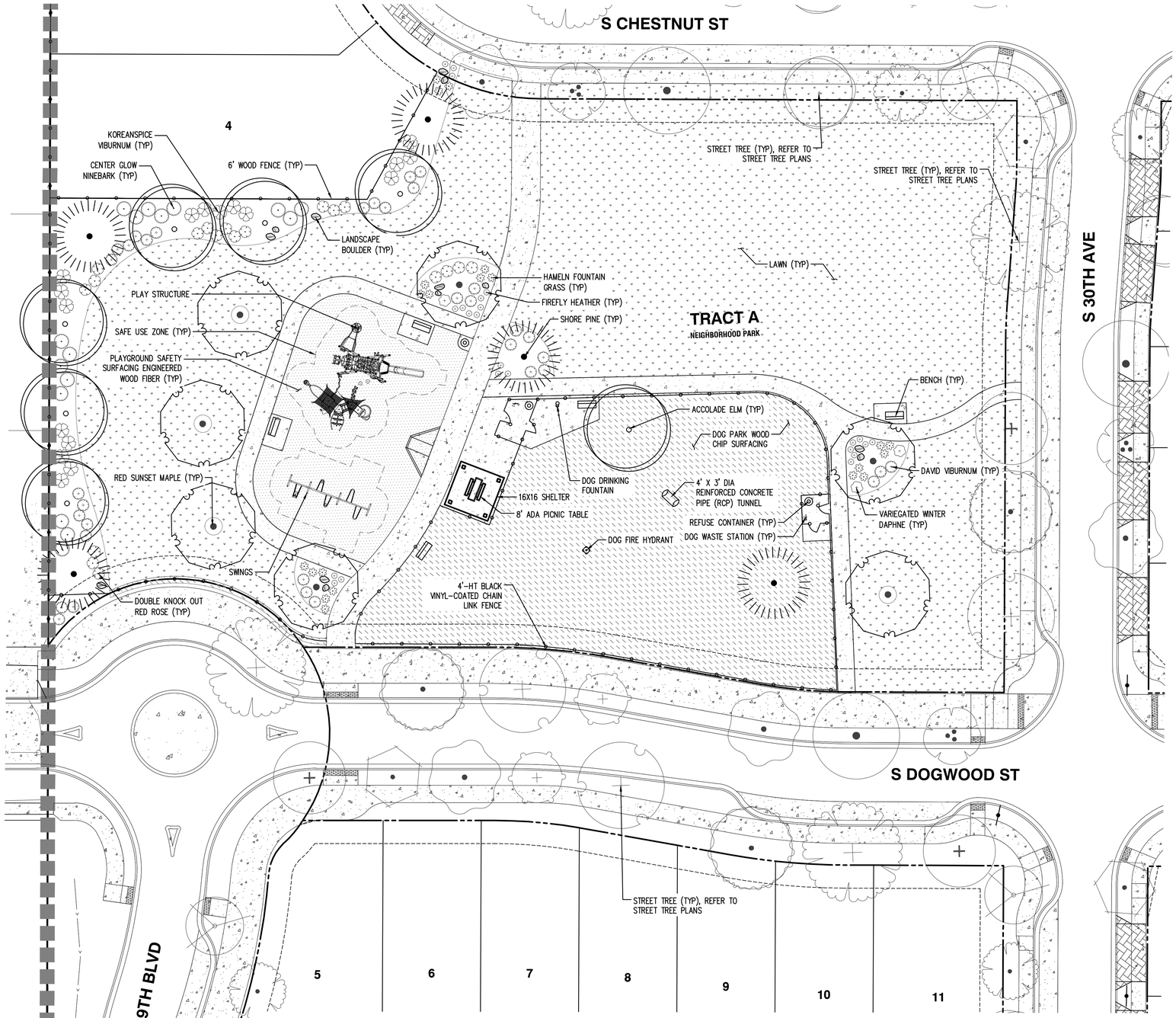
STREET TREE PLAN (NORTH)
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED
797
PRELIMINARY
NOT FOR CONSTRUCTION
BRENDAN N. FOLEY
OREGON
JANUARY 13, 2015
LANDSCAPE ARCHITECT
RENEWS: 06/30/2026

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	BNF
DRAWN BY:	BNF
CHECKED BY:	KAH

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SCALE: 1"=20 FEET

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ORIGINAL PAGE SIZE: 22" x 34"

PRELIMINARY PARK PLANT SCHEDULE

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
TREES					
	7	ACER RUBRUM 'RED SUNSET'	RED SUNSET MAPLE	2" CAL. B&B	AS SHOWN
	5	PINUS CONTORTA	SHORE PINE	7'-8' HT. B&B	AS SHOWN
	7	ULMUS X 'ACCOLADE'	ACCOLADE ELM	2" CAL. B&B	AS SHOWN

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
SHRUBS					
	23	CALLUNA VULGARIS 'FIREFLY'	FIREFLY HEATHER	1 GAL. CONT.	24" o.c.
	3	DAPHNE ODORA 'VARIEGATA'	VARIEGATED WINTER DAPHNE	2 GAL. CONT.	48" o.c.
	21	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN FOUNTAIN GRASS	1 GAL. CONT.	36" o.c.
	16	PHYSOCARPUS OPULIFOLIUS 'CENTER GLOW'	CENTER GLOW NINEBARK	5 GAL. CONT.	60" o.c.
	19	ROSA X 'RADTKO'	DOUBLE KNOCK OUT RED ROSE	3 GAL. CONT.	48" o.c.
	17	VIBURNUM CARLESII	KOREANSPICE VIBURNUM	5 GAL. CONT.	60" o.c.
	35	VIBURNUM DAVIDII	DAVID VIBURNUM	2 GAL. CONT.	48" o.c.

GROUND COVERS		
12,129 SF±	DOG PARK WOOD CHIP SURFACING	
33,237 SF±	LAWN	SEED OR SOD
4,433 SF±	PLAYGROUND SAFETY SURFACING ENGINEERED WOOD FIBER	
AS SHOWN	LANDSCAPE BOULDERS: ANGULAR BASALT, ONSITE OR LOCAL SOURCES PREFERRED, NATURAL GRAYS AND TANS. PLACE SPLIT FACE TOWARDS PRIMARY VIEW FOR A NATURAL APPEARANCE, A MINIMUM OF 1/3 OF THE TOTAL BOULDER HEIGHT SHALL BE BURIED FOR STABILITY; SIZE BOULDERS ACCORDINGLY. APPROXIMATE SIZE VARIANCES SHALL BE: –APPROXIMATELY (1/4) OF THE TOTAL WITH A MINIMUM OF 24" EXPOSED HEIGHT ABOVE GRADE –APPROXIMATELY (1/2) OF TOTAL WITH A MINIMUM OF 36" EXPOSED HEIGHT ABOVE GRADE –APPROXIMATELY (1/4) OF TOTAL WITH A MINIMUM 42" EXPOSED HEIGHT ABOVE GRADE	

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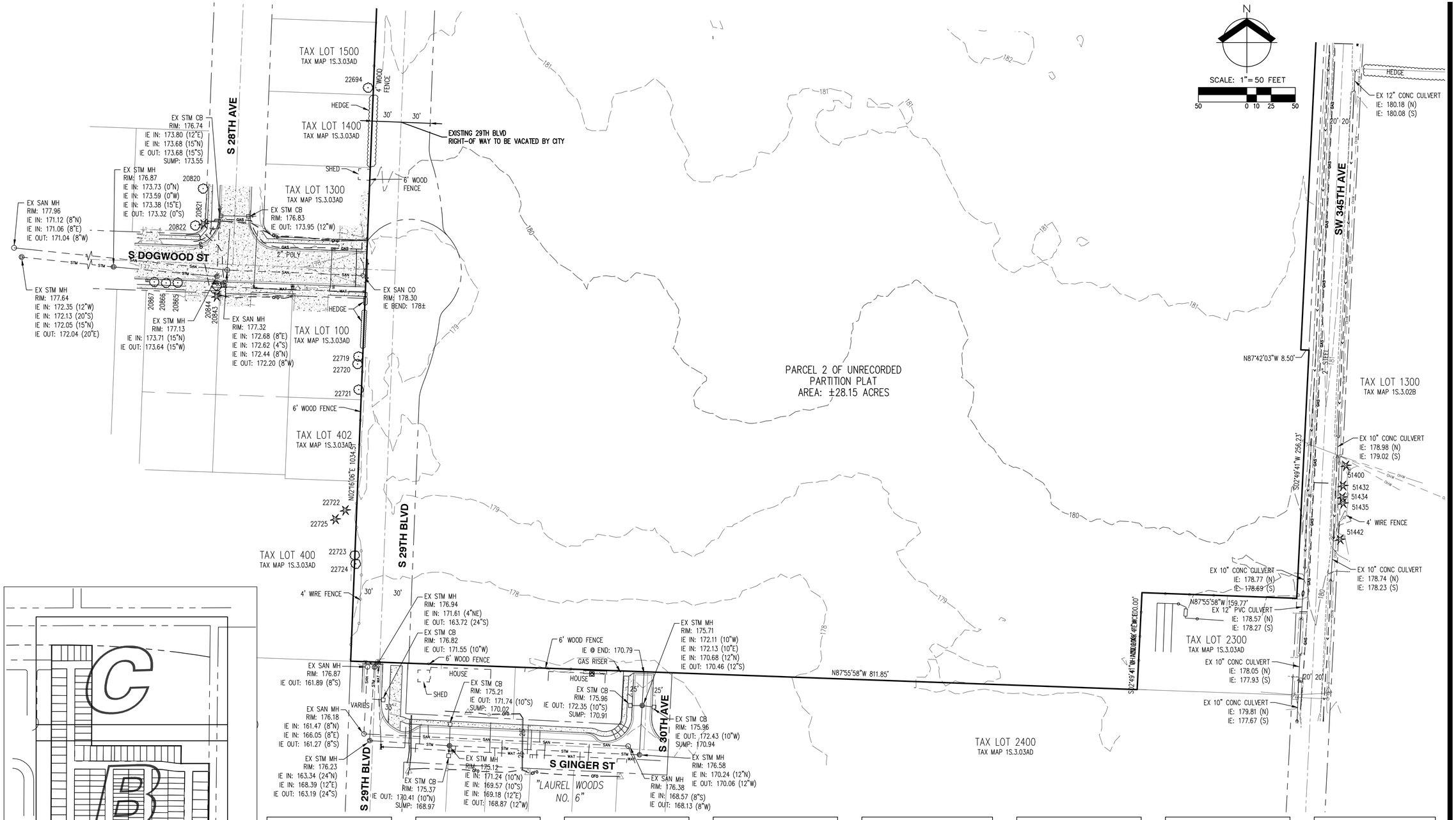
TRACT A OPEN SPACE PLAN
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED LANDSCAPE ARCHITECT
OREGON
JANUARY 7, 2005
KRISTIN A. HOWALD
797
PRELIMINARY NOT FOR CONSTRUCTION
12/16/25
RENEWS: 06/30/2026

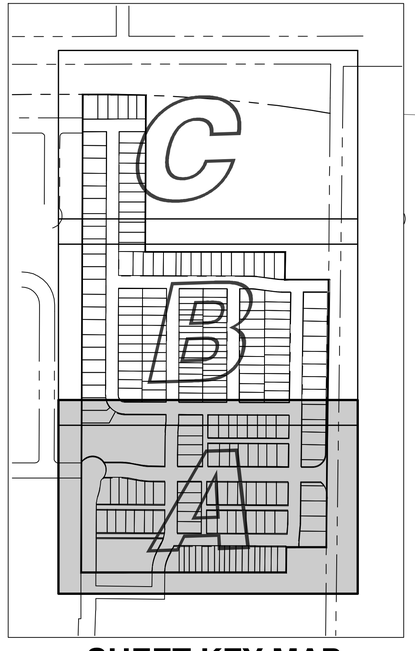
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DATE:	12/12/2025
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P17

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SHEET KEY MAP



TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
10185	CONIFEROUS	9,7,17
10190	DECIDUOUS	6
10215	DECIDUOUS	7
10220	DECIDUOUS	19
10264	DECIDUOUS	14
10265	DECIDUOUS	15
10266	DECIDUOUS	13
10339	DECIDUOUS	6
10372	DECIDUOUS	7,13
10373	DECIDUOUS	15
10377	DECIDUOUS	16

TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
20166	DECIDUOUS	13
20237	DECIDUOUS	6
20246	DECIDUOUS	8
20329	DECIDUOUS	16
20820	DECIDUOUS	26
20821	CONIFEROUS	18
20822	DECIDUOUS	14
20843	CONIFEROUS	12
20844	DECIDUOUS	14
20865	DECIDUOUS	6,7,9
20866	DECIDUOUS	6,8

TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
20867	DECIDUOUS	11
22155	DECIDUOUS	6,7
22519	DECIDUOUS	24
22665	CONIFEROUS	18
22672	DECIDUOUS	12
22673	DECIDUOUS	9
22680	CONIFEROUS	12,20
22682	CONIFEROUS	6,9,18
22683	CONIFEROUS	6
22686	CONIFEROUS	8
22694	DECIDUOUS	11

TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
22719	DECIDUOUS	10
22720	DECIDUOUS	11
22721	DECIDUOUS	6
22722	CONIFEROUS	36
22723	DECIDUOUS	8,10,11
22724	DECIDUOUS	9,10,12
22725	CONIFEROUS	15
50005	DECIDUOUS	9
50006	DECIDUOUS	6
50007	DECIDUOUS	7
50008	DECIDUOUS	12

TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
50009	DECIDUOUS	6
50010	DECIDUOUS	6
50011	DECIDUOUS	6,6
50012	DECIDUOUS	8
50530	DECIDUOUS	8,12,15
50886	DECIDUOUS	7,8,10
50887	DECIDUOUS	8,10
51400	CONIFEROUS	21
51432	CONIFEROUS	18,22,22,22
51434	CONIFEROUS	7,9
51435	CONIFEROUS	13,11

TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
51442	CONIFEROUS	30
51702	DECIDUOUS	8,9,10
51703	CONIFEROUS	20
51704	DECIDUOUS	7,7
51727	DECIDUOUS	8,10,13
51730	CONIFEROUS	8,10,12
51732	CONIFEROUS	27
51733	CONIFEROUS	10
51742	CONIFEROUS	18
51765	DECIDUOUS	8
51812	DECIDUOUS	16,17

TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
51813	DECIDUOUS	24
51814	DECIDUOUS	35
51815	CONIFEROUS	20
51816	DECIDUOUS	9,9,13,15
51817	DECIDUOUS	14
51818	DECIDUOUS	12
51819	DECIDUOUS	17
51820	DECIDUOUS	32
51821	DECIDUOUS	12
51834	DECIDUOUS	15
51846	DECIDUOUS	24,24,24

TREE TABLE		
TREE NUMBER	TYPE	DBH (IN.)
51847	DECIDUOUS	18,27
51848	DECIDUOUS	17
51849	DECIDUOUS	7
51850	DECIDUOUS	6
51854	DECIDUOUS	10
51855	DECIDUOUS	8
51856	DECIDUOUS	15

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EXISTING CONDITIONS PLAN (SOUTH)

LAUREL CROWN PUD
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CORNELIUS, OREGON

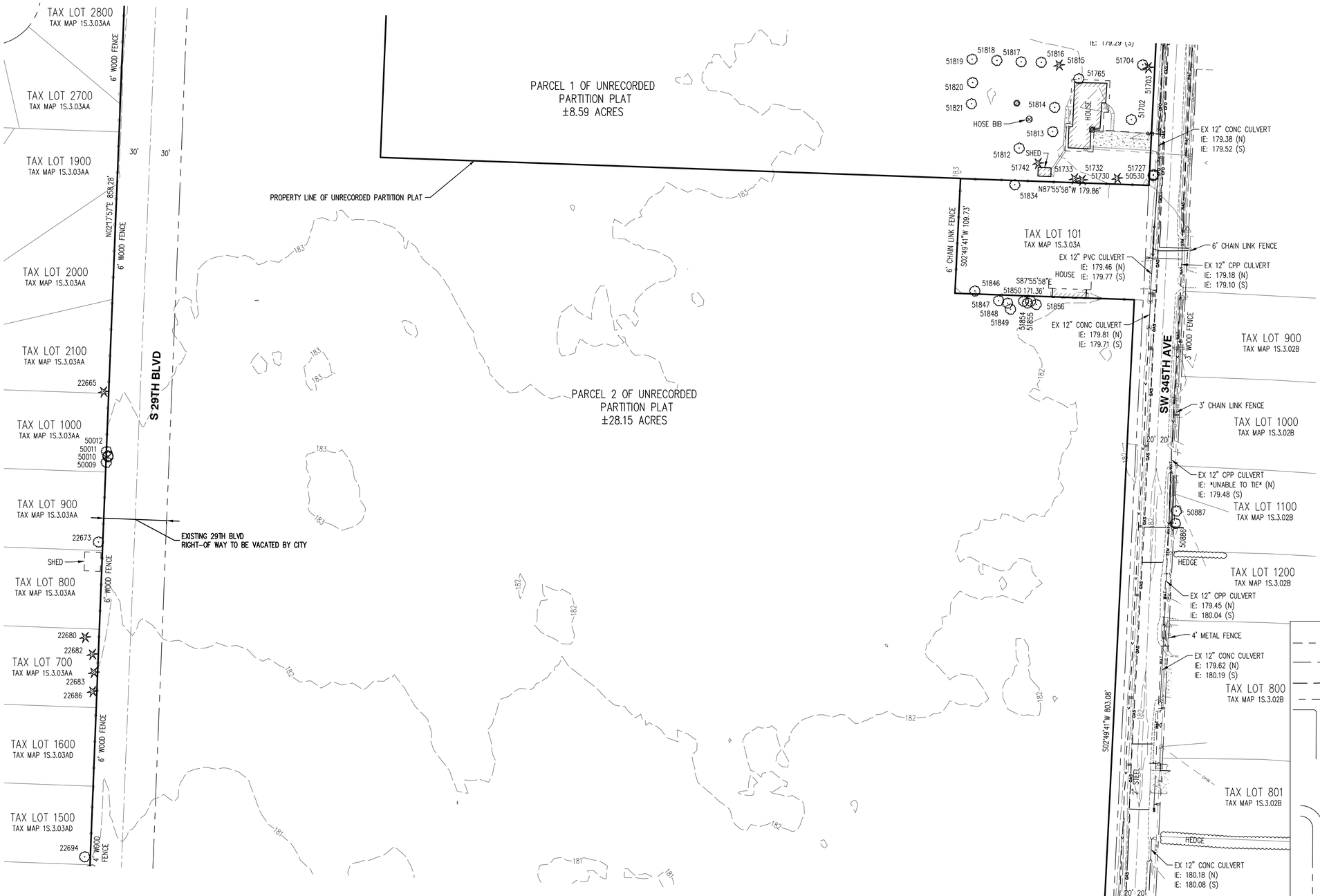
REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
NOV 9, 2024
ERIC NYGREN
091799PLS
RENEWS: 12/31/2026

PRELIMINARY
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JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
CHECKED BY:	PAS

P18A

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SHEET KEY MAP

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EXISTING CONDITIONS PLAN (CENTRAL)

LAUREL CROWN PUD

THE HOLT GROUP, INC.
CORNELIUS, OREGON

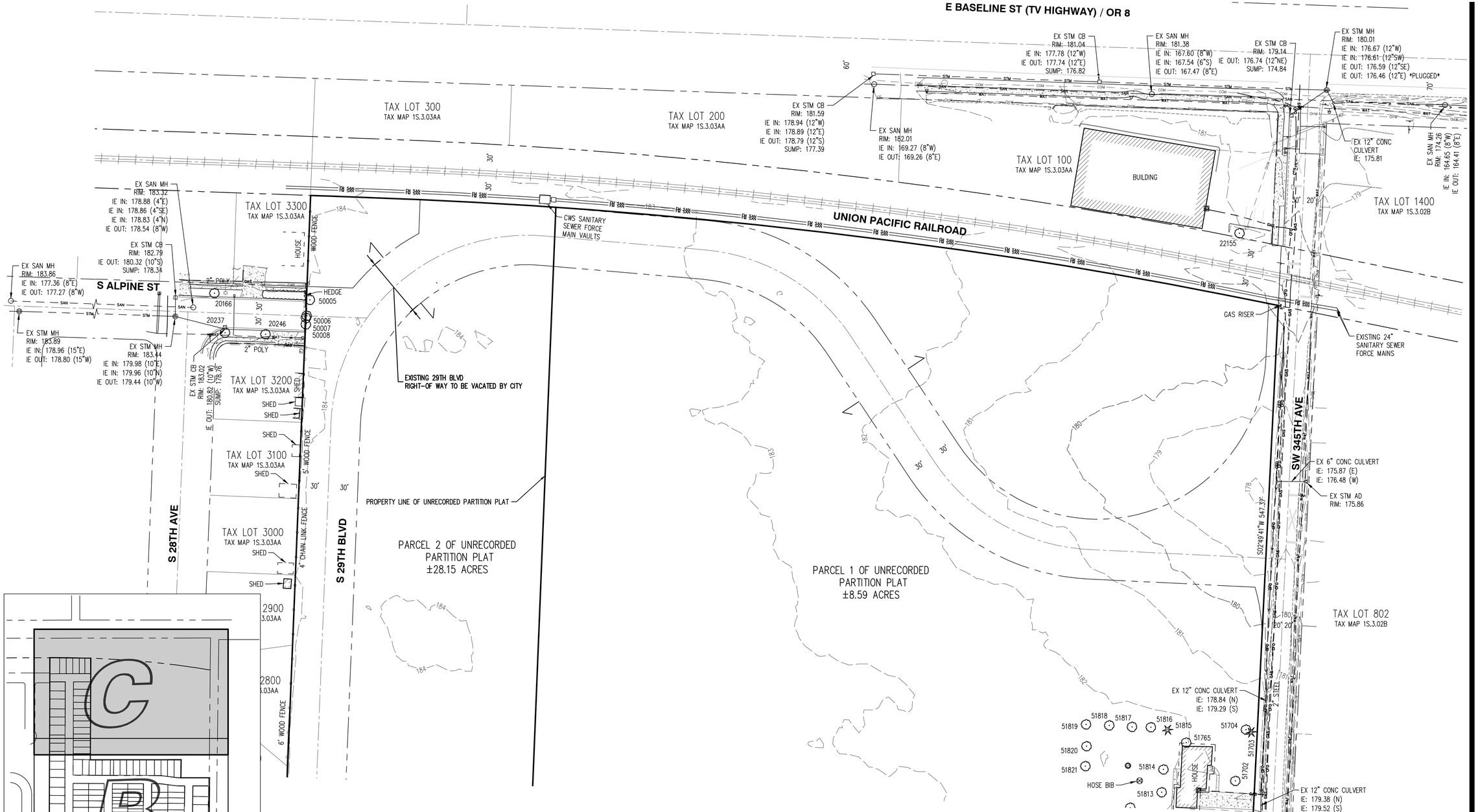
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NOV 9, 2024
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RENEWS: 12/31/2026

PRELIMINARY
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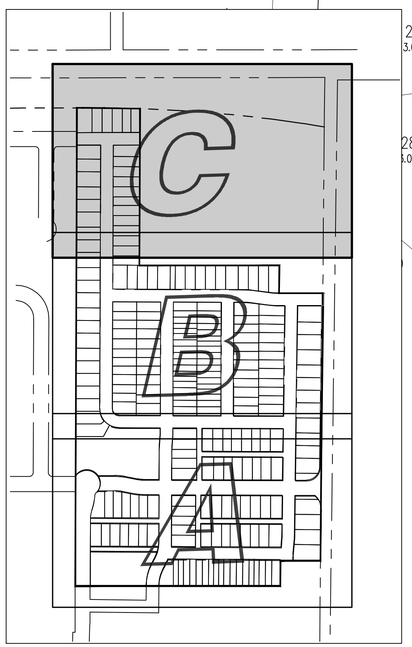
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SHEET KEY MAP



NOTES:

1. UTILITIES SHOWN ARE BASED ON UNDERGROUND UTILITY LOCATE MARKINGS AS PROVIDED BY OTHERS, PROVIDED PER UTILITY LOCATE TICKET NUMBERS 19284978, 19284985, 19285016, 19285150, 19285172, 19285193, 19285201, 19285213, 2528949, AND 25261587–25261591. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND LOCATES REPRESENT THE ONLY UTILITIES IN THE AREA. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
2. FIELD WORK WAS CONDUCTED OCTOBER 21–30, 2019, AND SEPTEMBER 2–19, 2025.
3. VERTICAL DATUM: ELEVATIONS ARE BASED ON WASHINGTON COUNTY BENCHMARK NO. 351, LOCATED AT THE SE CORNER OF TUALATIN VALLEY HIGHWAY AND SW 345TH AVENUE. ELEVATION = 179.803 FEET (NGVD29).
4. THIS MAP DOES NOT CONSTITUTE A PROPERTY BOUNDARY SURVEY.
5. SURVEY IS ONLY VALID WITH SURVEYOR'S STAMP AND SIGNATURE.
6. BUILDING FOOTPRINTS ARE MEASURED TO SIDING UNLESS NOTED OTHERWISE. CONTACT SURVEYOR WITH QUESTIONS REGARDING BUILDING TIES.
7. CONTOUR INTERVAL IS 1 FOOT.
8. TREES WITH DIAMETER OF 6" AND GREATER ARE SHOWN. TREE DIAMETERS WERE DETERMINED BY VISUAL INSPECTION. TREE INFORMATION IS SUBJECT TO CHANGE UPON ARBORIST INSPECTION.

N

SCALE: 1"= 50 FEET

50 0 10 25 50

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EXISTING CONDITIONS PLAN (NORTH)

LAUREL CROWN PUD

THE HOLT GROUP, INC.

CORNELIUS, OREGON

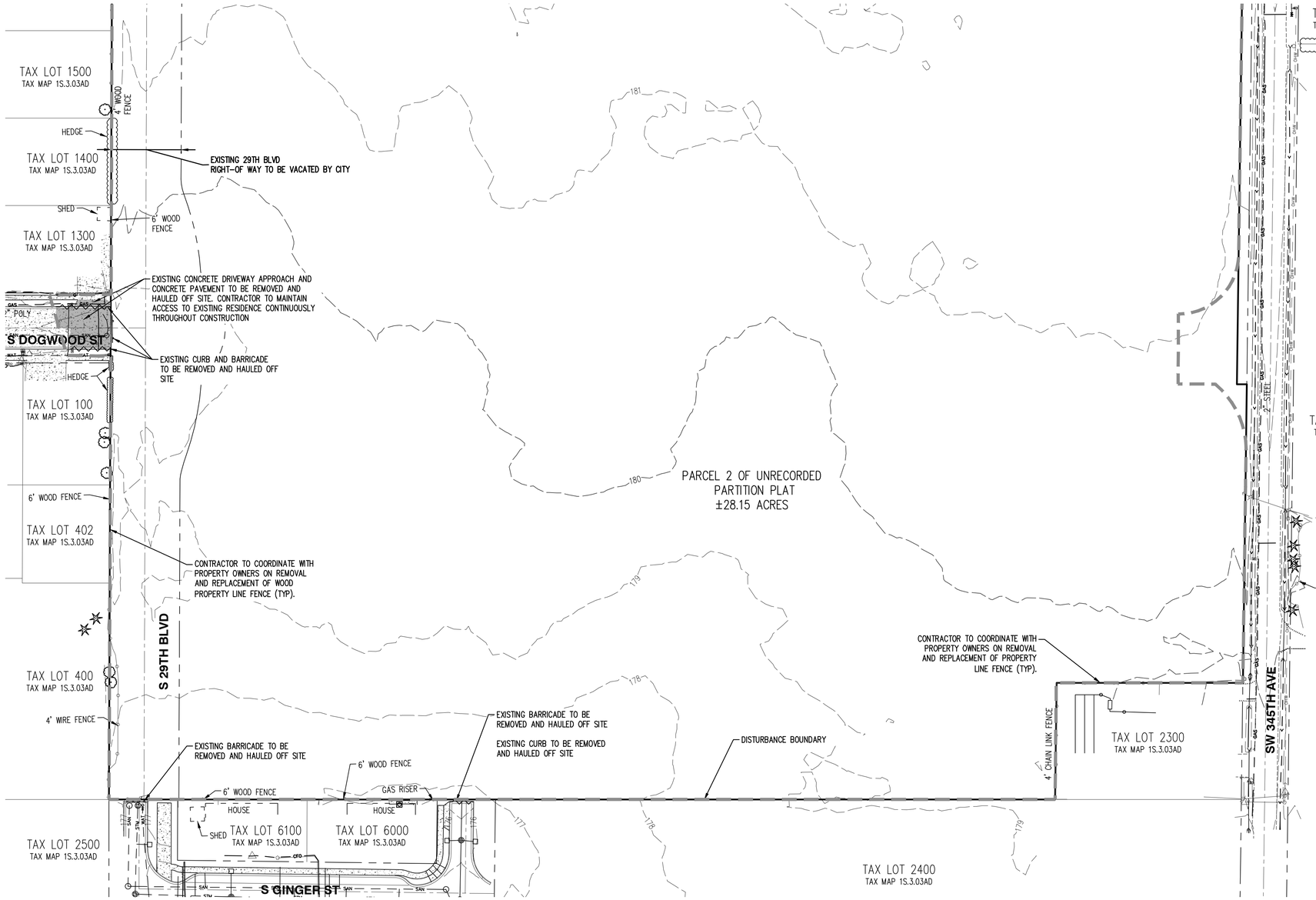
REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
JULY 9, 2024
ERIC NYGREN
091799PLS
RENEWS: 12/31/2026

PRELIMINARY
NOT FOR CONSTRUCTION

JOB NUMBER:	4636-05
DATE:	12/12/2025
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P18C

AKS DRAWING FILE: 4636-05 PRELIM EXCOND.DWG | LAYOUT: P18C



N

SCALE: 1"=50 FEET

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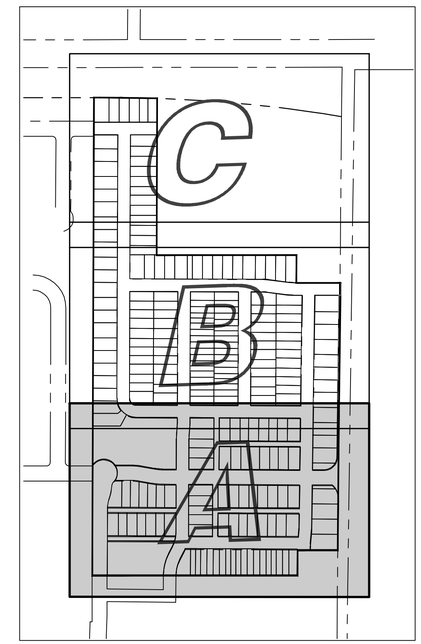
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LEGEND

- EXISTING GROUND CONTOUR (1 FT) — 229 —
- EXISTING GROUND CONTOUR (5 FT) — 230 —
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
- DISTURBANCE BOUNDARY

GENERAL NOTES:

1. CONTRACTOR TO COORDINATE THE REMOVAL OF ALL NECESSARY PRIVATE UTILITIES WITH THE APPROPRIATE UTILITY PROVIDERS.
2. CONTRACTOR TO ABANDON ANY EXISTING WELLS, SEPTIC TANKS, AND DRAIN FIELDS FOUND DURING CONSTRUCTION PER APPLICABLE LOCAL, STATE, AND FEDERAL REQUIREMENTS.
3. CONTRACTOR TO COORDINATE WITH DEVELOPER AND ADJACENT PROPERTY OWNERS FOR PERIMETER FENCE REMOVAL IF NEW FENCES ARE PROPOSED.



SHEET KEY MAP

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DEMOLITION AND TREE REMOVAL PLAN (SOUTH)

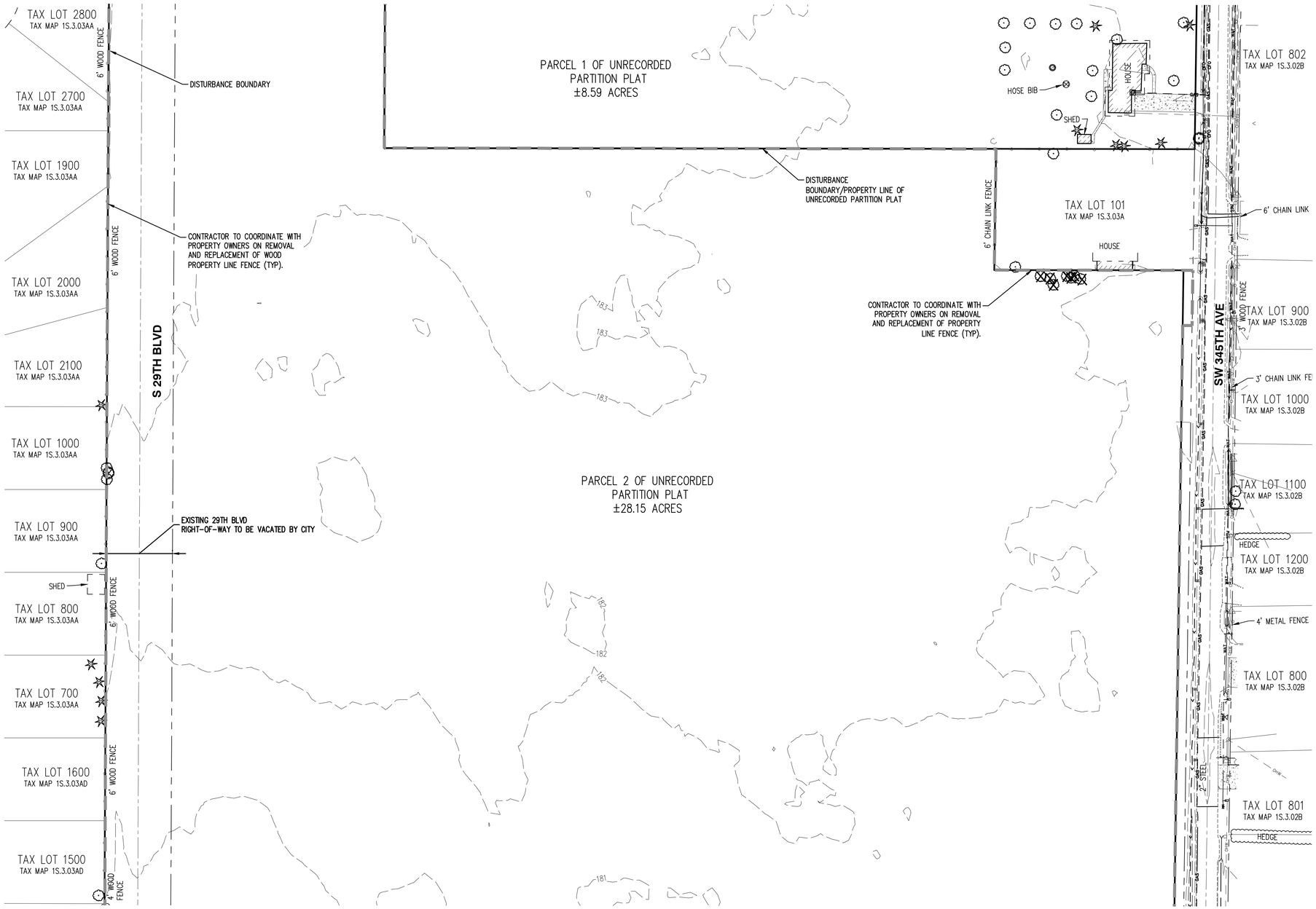
LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 29, 2001
PAUL A. SELLKE
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RENEWAL DATE: 6/30/26

JOB NUMBER:	4636-05
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P19A

AKS DRAWING FILE: 4636-05 PRELIM DEMO AND TREE REMOVAL | LAYOUT: P19A



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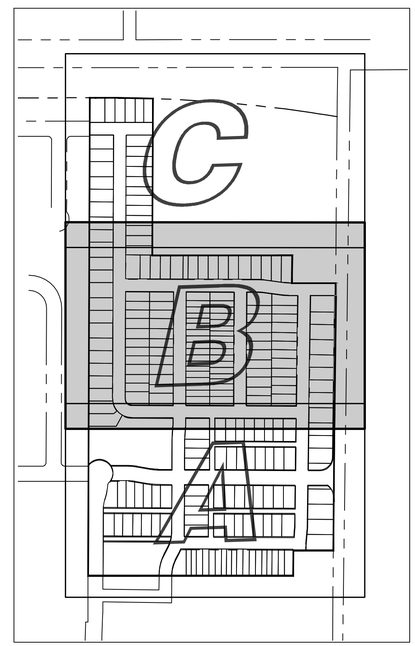
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LEGEND

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- EXISTING GROUND CONTOUR (5 FT) — 230 —
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- EXISTING PAVEMENT TO BE REMOVED
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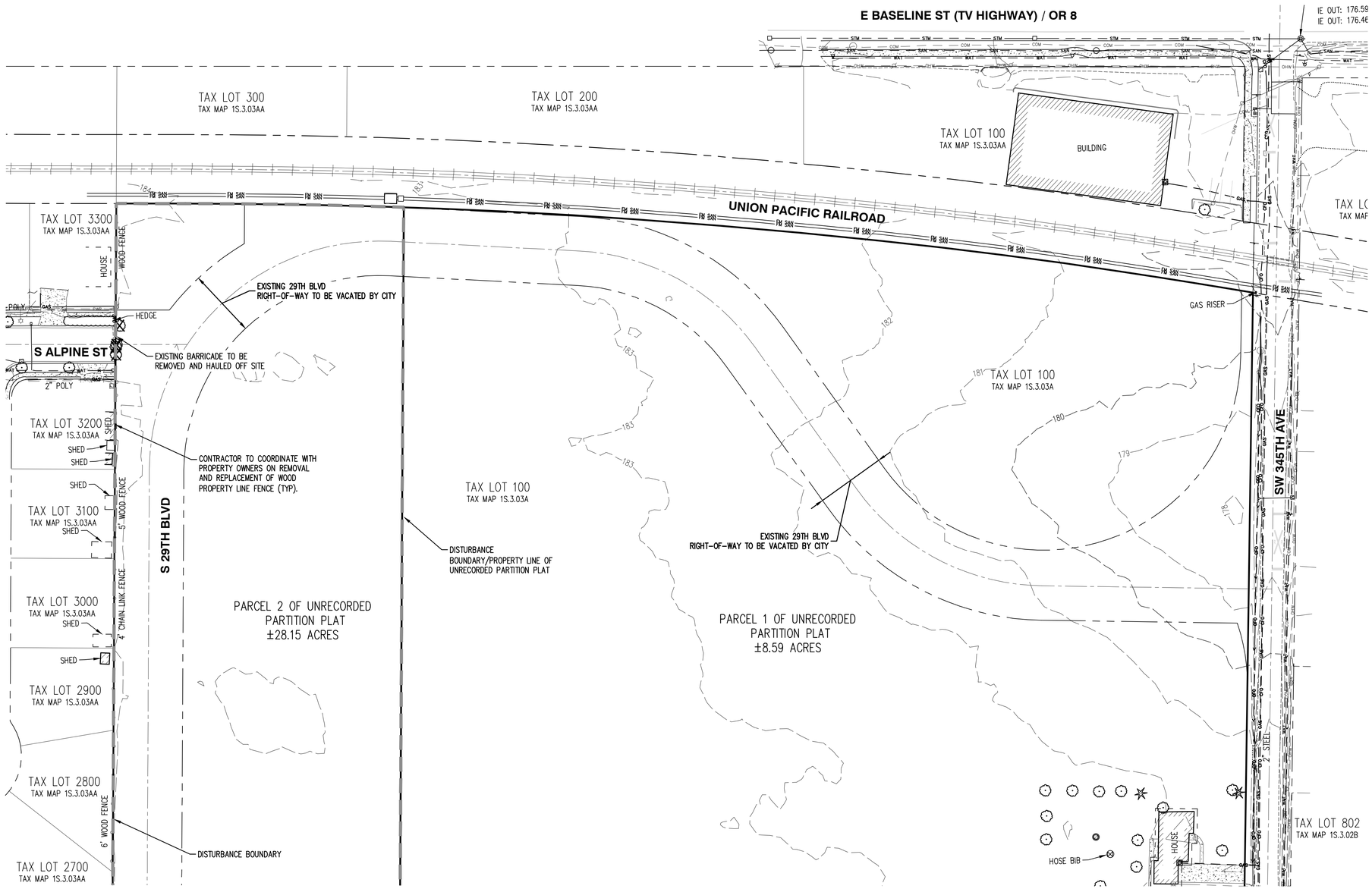
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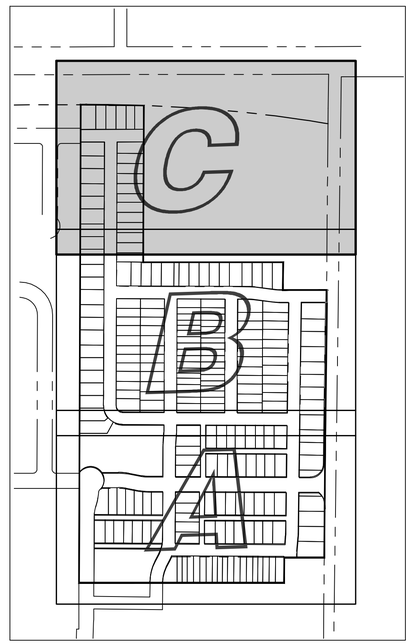
SCALE: 1"=50 FEET

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ORIGINAL PAGE SIZE: 22" x 34"

LEGEND

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- EXISTING GROUND CONTOUR (5 FT) — 230 —
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED
- EXISTING PAVEMENT TO BE REMOVED
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SHEET KEY MAP

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OREGON
JULY 09, 2013
PAUL A. SELLKE

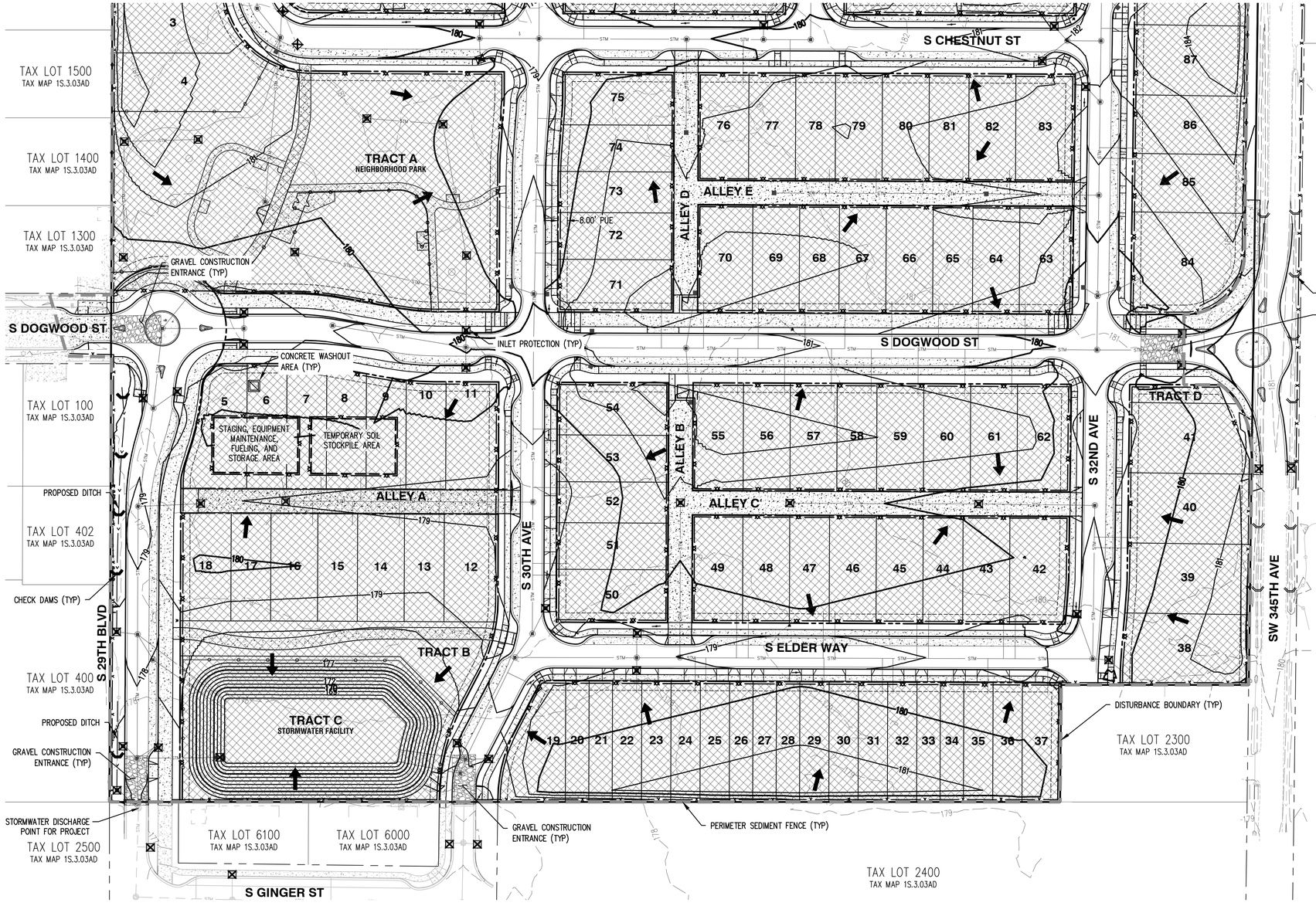
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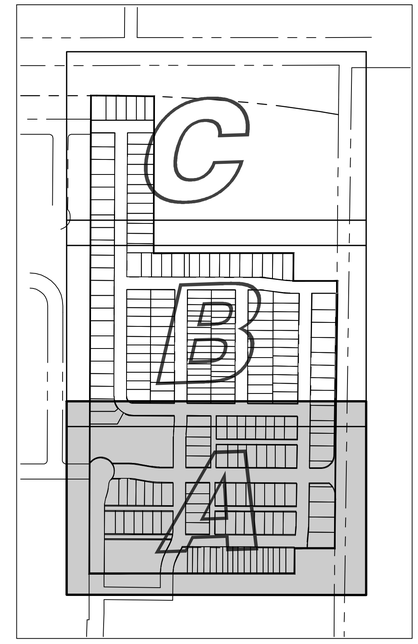
SCALE: 1"= 50 FEET

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ORIGINAL PAGE SIZE: 22" x 34"

LEGEND

- EXISTING GROUND CONTOUR (1 FT)
- EXISTING GROUND CONTOUR (5 FT)
- FINISHED GRADE CONTOUR (1 FT)
- FINISHED GRADE CONTOUR (5 FT)
- PERIMETER SEDIMENT FENCE (TO BE INSTALLED PRIOR TO GRADING)
- SEDIMENT FENCE (TO BE INSTALLED AFTER GRADING)
- INLET PROTECTION (TYP)
- CHECK DAM BIOFILTER BAG
- CONCRETE WASHOUT AREA
- DRAINAGE FLOW DIRECTION
- GRAVEL CONSTRUCTION ENTRANCE
- DISTURBANCE BOUNDARY
- INTERIM STABILIZATION



SHEET KEY MAP

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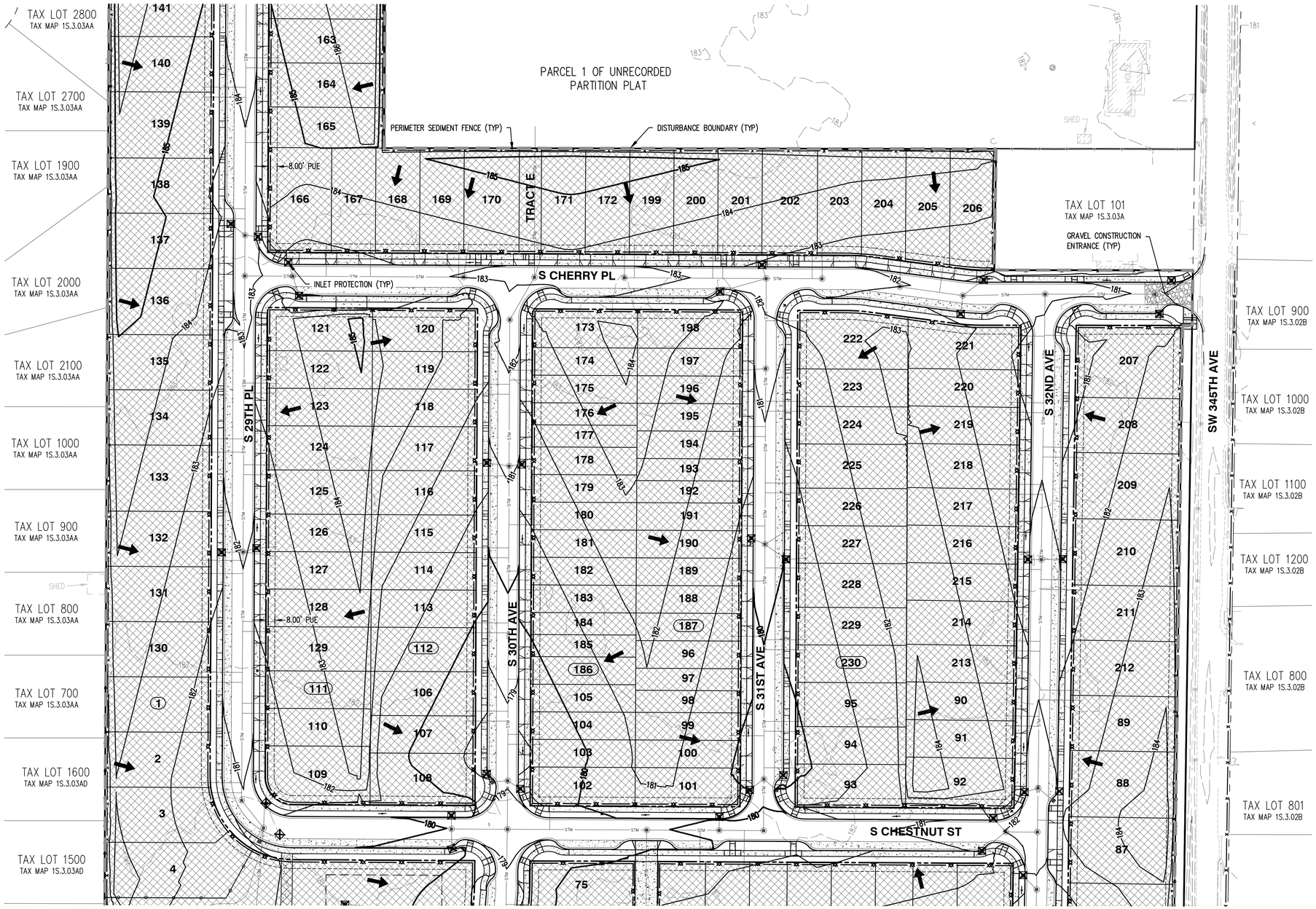
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OREGON
JULY 14, 2001
PAUL A. SELLKE
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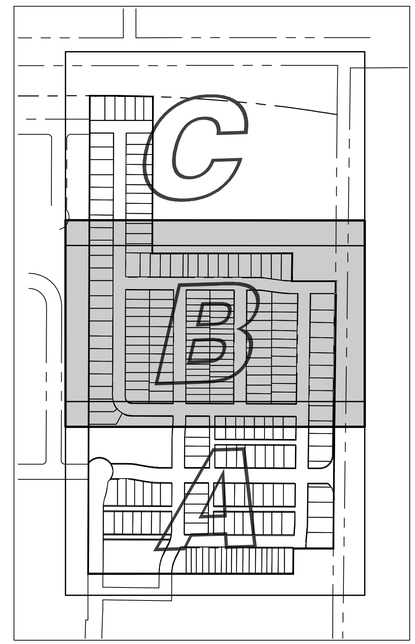
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ORIGINAL PAGE SIZE: 22" x 34"

LEGEND

- EXISTING GROUND CONTOUR (1 FT) — 159 —
- EXISTING GROUND CONTOUR (5 FT) — 160 —
- FINISHED GRADE CONTOUR (1 FT) — 159 —
- FINISHED GRADE CONTOUR (5 FT) — 160 —
- PERIMETER SEDIMENT FENCE (TO BE INSTALLED PRIOR TO GRADING) — x —
- SEDIMENT FENCE (TO BE INSTALLED AFTER GRADING) — xx —
- INLET PROTECTION (TYP)
- CHECK DAM BIOFILTER BAG
- CONCRETE WASHOUT AREA
- DRAINAGE FLOW DIRECTION
- GRAVEL CONSTRUCTION ENTRANCE
- DISTURBANCE BOUNDARY
- INTERIM STABILIZATION



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OREGON
JULY 29, 2001
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E BASELINE ST (TV HIGHWAY) / OR 8

TAX LOT 300
TAX MAP 1S.3.03AA

TAX LOT 200
TAX MAP 1S.3.03AA

TAX LOT 100
TAX MAP 1S.3.03AA

BUILDING

TAX LOT 1400
TAX MAP 1S.3.02B

UNION PACIFIC RAILROAD

TAX LOT 3300
TAX MAP 1S.3.03AA

GRAVEL CONSTRUCTION ENTRANCE (TYP)

S ALPINE ST

INLET PROTECTION (TYP)

TAX LOT 3200
TAX MAP 1S.3.03AA

S 29TH PL

PERIMETER SEDIMENT FENCE (TYP)

TAX LOT 3100
TAX MAP 1S.3.03AA

TAX LOT 3000
TAX MAP 1S.3.03AA

DISTURBANCE BOUNDARY (TYP)

8.00' PUE

TAX LOT 2900
TAX MAP 1S.3.03AA

TAX LOT 2800
TAX MAP 1S.3.03AA

TAX LOT 2700
TAX MAP 1S.3.03AA

PARCEL 1 OF UNRECORDED
PARTITION PLAT

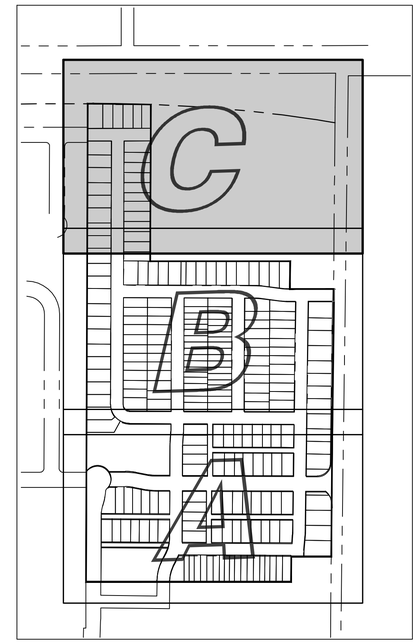
SW 345TH AVE

TAX LOT 802
TAX MAP 1S.3.02B

LEGEND

EXISTING GROUND CONTOUR (1 FT)	159
EXISTING GROUND CONTOUR (5 FT)	160
FINISHED GRADE CONTOUR (1 FT)	159
FINISHED GRADE CONTOUR (5 FT)	160
PERIMETER SEDIMENT FENCE (TO BE INSTALLED PRIOR TO GRADING)	
SEDIMENT FENCE (TO BE INSTALLED AFTER GRADING)	
INLET PROTECTION (TYP)	
CHECK DAM BIOFILTER BAG	
CONCRETE WASHOUT AREA	
DRAINAGE FLOW DIRECTION	
GRAVEL CONSTRUCTION ENTRANCE	
DISTURBANCE BOUNDARY	
INTERIM STABILIZATION	

SCALE: 1" = 50 FEET
50 0 10 25 50
ORIGINAL PAGE SIZE: 22" x 34"



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LAUREL CROWN PUD
THE HOLT GROUP, INC.
CORNELIUS, OREGON

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 09, 2008
PAUL A. SELLKE

PRELIMINARY
NOT FOR CONSTRUCTION

RENEWAL DATE: 6/30/26

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DATE:	12/12/2025
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DRAWN BY:	MBM
CHECKED BY:	PAS

P20C

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TAX LOT 801
TAX MAP 1S.3.02B

TAX LOT 1500
TAX MAP 1S.3.03AD

TAX LOT 1400
TAX MAP 1S.3.03AD

TAX LOT 1300
TAX MAP 1S.3.03AD

TAX LOT 100
TAX MAP 1S.3.03AD

TAX LOT 402
TAX MAP 1S.3.03AD

TAX LOT 400
TAX MAP 1S.3.03AD

TAX LOT 2500
TAX MAP 1S.3.03AD

TAX LOT 6100
TAX MAP 1S.3.03AD

TAX LOT 6000
TAX MAP 1S.3.03AD

TAX LOT 2400
TAX MAP 1S.3.03AD

TAX LOT 2300
TAX MAP 1S.3.03AD

TAX LOT 1300
TAX MAP 1S.3.02B

TRACT A
NEIGHBORHOOD PARK

TRACT B

TRACT C
STORMWATER FACILITY

TRACT D

S CHESTNUT ST

S DOGWOOD ST

S ELDER WAY

S GINGER ST

S 29TH BLVD

S 30TH AVE

S 32ND AVE

SW 345TH AVE

ALLEY A

ALLEY B

ALLEY C

ALLEY D

ALLEY E

PHASE 1

PHASE BOUNDARY (TYP)

8.00' PUE

STORMWATER AREA DRAIN (TYP)

STORMWATER LATERAL (TYP)

SANITARY LATERAL (TYP)

CURB INLET (TYP)

STORMWATER MANHOLE (TYP)

DOMESTIC WATER SERVICE (TYP)

PROPOSED DITCH

PROPOSED STREET LIGHT (TYP)

AREA DRAIN (TYP)

SANITARY MANHOLE (TYP)

FIRE HYDRANT (TYP)

TOP OF FACILITY

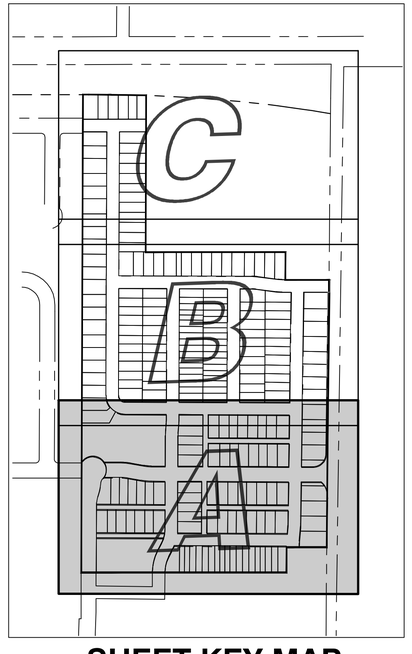
BOTTOM OF FACILITY

GRATED MANHOLE

DITCH INLET (TYP)

STORMWATER FACILITY OUTLET CONTROL STRUCTURES

SCALE: 1"=50 FEET
50 0 10 25 50
ORIGINAL PAGE SIZE: 22" x 34"



SHEET KEY MAP

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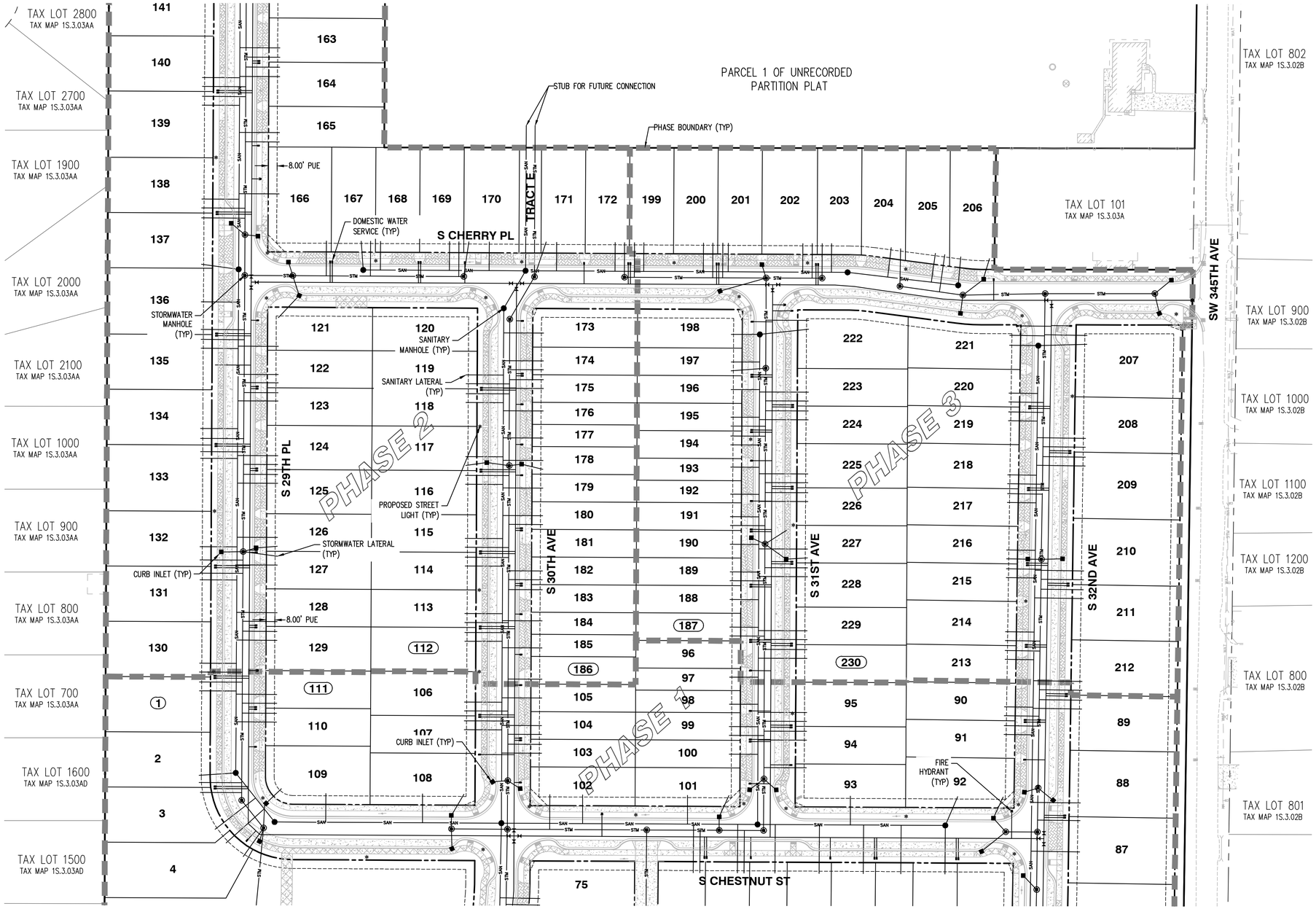
COMPOSITE UTILITY PLAN (SOUTH)
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CORNELIUS, OREGON

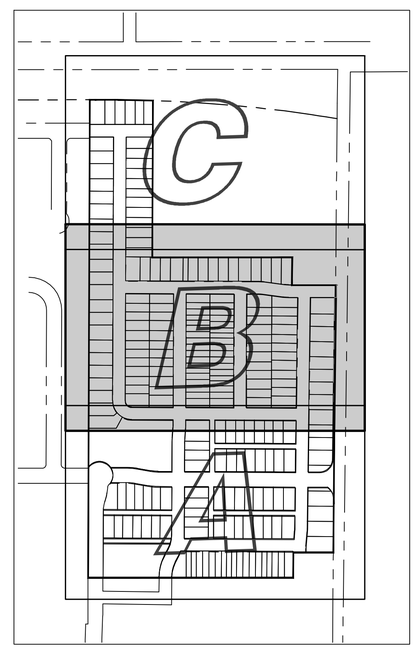
REGISTERED PROFESSIONAL ENGINEER
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P21A

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SHEET KEY MAP

SCALE: 1"= 50 FEET
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ORIGINAL PAGE SIZE: 22" x 34"

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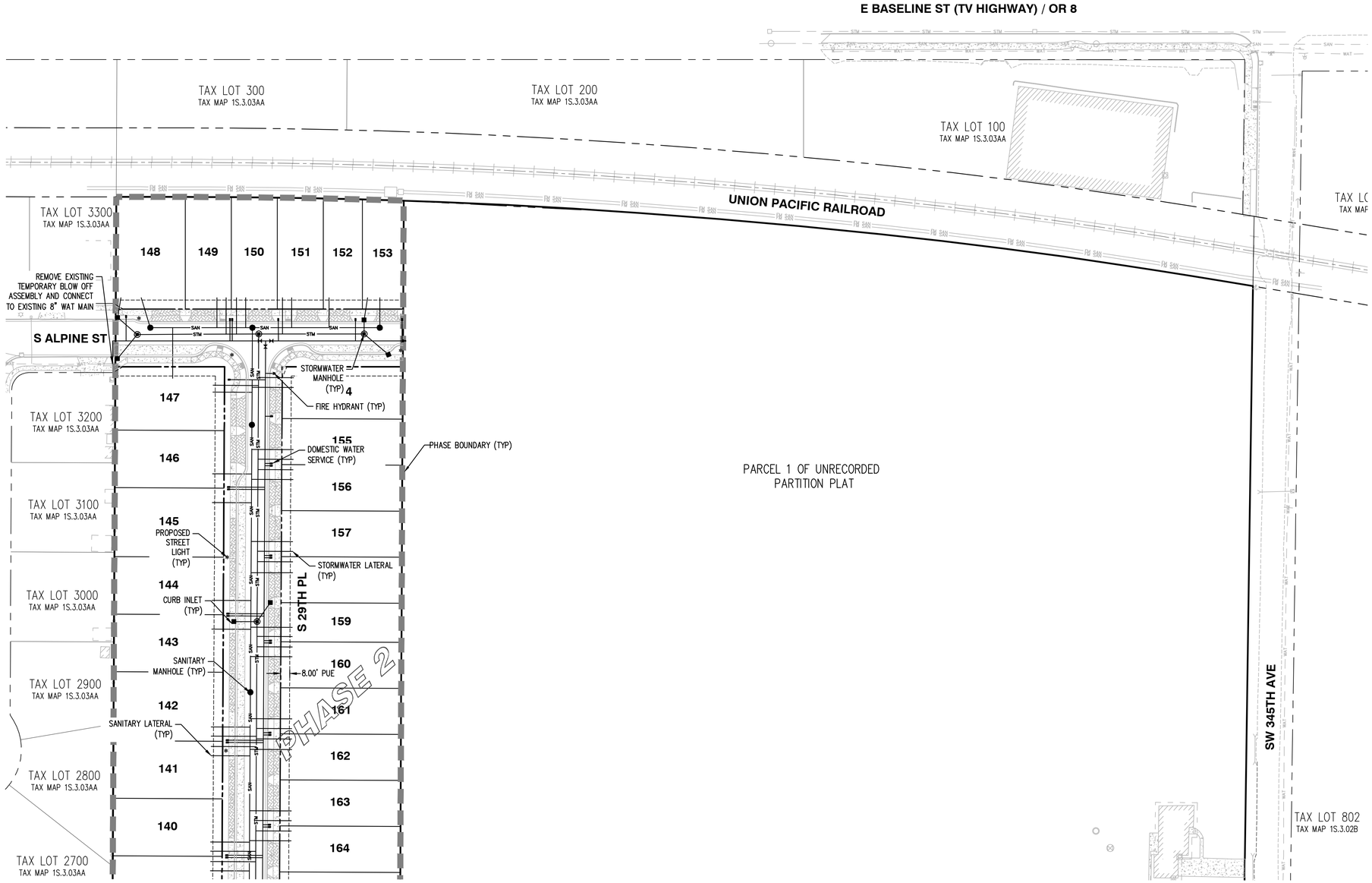
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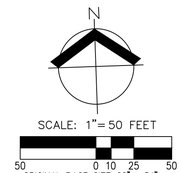
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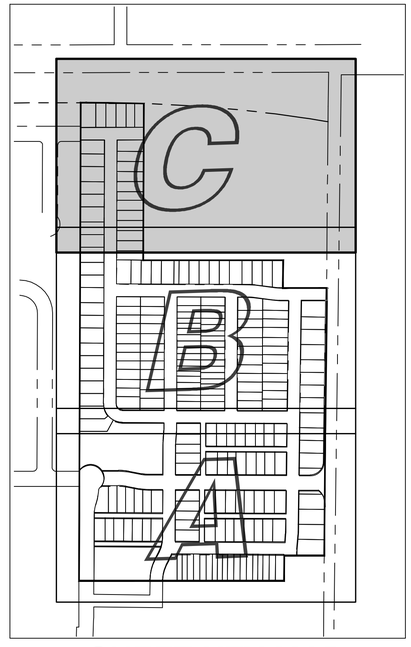
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RENEWAL DATE: 6/30/26

PRELIMINARY
NOT FOR CONSTRUCTION

JOB NUMBER:	4636-05
DATE:	12/12/2025
DESIGNED BY:	MBM
DRAWN BY:	MBM
CHECKED BY:	PAS

P21C

AKS DRAWING FILE: 4636-05PRELIM COMP UTILDWG | LAYOUT: P21C