City of Sebastopol
Planning Commission Staff Report

Meeting Date:	August 27, 2024
Agenda Item:	6A
To:	Planning Commission
From:	John Jay, Associate Planner
Subject:	Tentative Map and Conditional Use Permit for 100% residential in CO
Recommendation:	Hold a public hearing, deliberate and adopt a Resolution
Applicant/Owner:	Kathy Austin/Pacific Realty Development
File Number:	2023-078
Address:	7621 Healdsburg Ave
CEQA Status:	Exempt
General Plan:	High Density Residential/Commercial Office
Zoning:	Multi-Family Residential (R7)/Office Commercial (CO)

Introduction:
The applicant, Kathy Austin, has submitted a Tentative Map and Conditional Use Permit for 100% residential within a Commercial Zone project at 7621 Healdsburg Avenue. The project is a 12 unit apartment building on the frontage of Healdsburg Avenue and attached Townhomes on the southern end of the property that faces Murphy Avenue.

Project Description:
The project proposes to construct seven 1120 and five 1148 square foot townhomes with 1 car garage and 1 car parking space on site along the rear of the site with entrance from Murphy Avenue. The project also includes one apartment building with six 760 square foot and six 590 square foot one bedroom apartment units. The apartment units would be accessible from Healdsburg Avenue with parking in the rear of the building along with an ADA elevator access on the western side of the building.

Project Location and Surrounding Land Uses:
The project is located along Healdsburg Ave on the northwestern end of the City. The surrounding land uses are Commercial Office and General Office along the Healdsburg Avenue Street. Behind the street frontage the use changes to Multi-Family residential including duplex and triplex units along Bately Court.

General Plan Consistency:
This project is consistent with the following General Plan policies as shown below.

- *Goal LU1 - Maintain Sebastopol as a unique, charming, and environmentally sensitive small town that provides residents, businesses, and visitors with opportunities to enjoy a high quality of life.*
- *Policy LU 1-2: Avoid urban sprawl by concentrating development within the City limits; favor infill development over annexation.*

- *Policy LU 5-5: Strongly encourage residential development in a balanced and efficient pattern that reduces sprawl, preserves open space, and creates convenient connections to other land uses.*
- *Policy LU 6-1: Promote increased residential densities.*
- *Policy LU 6-2: Promote compact urban form that provides residential opportunities in close proximity to jobs, services, and transit.*
- *Policy LU 7-1: Maintain an inventory of developable and appropriately zoned office, commercial, industrial, and mixed-use land sufficient to attract and provide regional services.*
- *Policy LU 7-6: Encourage mixed-use developments throughout the city.*
- *Policy LU 7-7: In mixed use, commercial, office, and other non-residential developments, encourage non-residential uses on the ground floor while allowing residential uses on the ground floor where appropriate.*
- *Housing Element Policy C-4: The City will encourage development of new housing to meet a range of income levels, including market-rate housing, and a variety of housing sizes and types.*
- *Housing Element Goal D-1: Promote Housing Affordability for both Renters and Homeowners*

Zoning Ordinance Consistency:
The project site has two zoning districts located within the property. The Office Commercial (CO) district fronts Healdsburg Avenue and the rear, southern part of the parcel with access to Murphy Avenue is zoned Multi-family Residential (R7). The project intends to develop the Commercially zoned part of the project with twelve one bedroom apartment units. However, 100% residential projects within a Commercial Zoning district that are not 100% affordable require a conditional use permit to be approved by the Planning Commission. The second/southern half of the parcel that is zoned Multi-Family Residential (R7) and is subject to the R7 development standards as well as the small lot subdivisions standards set forth in Chapter 17.230 of the Sebastopol Municipal Code.

Required Findings:
The required findings of the project for a Major Subdivision (5 or more parcels), and would be subject to the State Subdivision Map Act and the findings in SMC Section 16.28.070 and 17.230.090 as follows:

A. In recommending approval or conditional approval or in approving or conditionally approving a tentative map, the Planning Commission or City Council as applicable shall find:

1. That the proposed subdivision, together with the provisions for its design and improvement, is consistent with the General Plan, any applicable specific plan, and other applicable provisions of this code; and

2. Except for condominium conversion projects where no new structures are added, that the design of the proposed subdivision provides, to the extent feasible, for future passive or natural heating or cooling opportunities in the subdivision, as described in the State Subdivision Map Act and any guidelines promulgated by the City Council.

B. In making recommendations or in disapproving, or in approving or in approving at a lower density a housing development which is in compliance with the applicable plans, zoning and

development policies in effect at the time the project's application was determined to be complete, the Planning Commission or City Council, as applicable shall make written findings based upon substantial evidence in the record that both of the following conditions exist:

1. The housing development project would have a specific, adverse impact upon the public health or safety unless the project is disapproved or approved upon the condition that the project be developed at a lower density.

2. There is no feasible method to satisfactorily mitigate or avoid the adverse impact identified other than disapproval of the housing development project or approval upon condition that the project be developed at a lower density.

C. (not appliable to this development)

D. The Planning Commission may recommend, and the City Council may deny, approval of the tentative map on any grounds provided by law including, without limitation, a finding that the discharge of waste from the proposed subdivision into an existing community sewer system would result in, or add to, violation of existing requirements prescribed by a State regional water quality control board. A tentative map shall be denied if any of the following findings are made:

1. That the proposed map is not consistent with the General Plan, applicable specific plans, or other applicable provisions of this code;

2. That the design or improvement of the proposed subdivision is not consistent with the General Plan, applicable specific plans, or other applicable provisions of this code;

3. That the site is not physically suitable for the type of development;

4. That the site is not physically suitable for the proposed density of development;

5. That the design of the subdivision or the proposed improvements are likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat. Notwithstanding the foregoing, the City Council may approve such a tentative map if an environmental impact report was prepared with respect to the project and a finding was made pursuant to Section 21081 of CEQA that specific economic, social or other considerations make infeasible the mitigation measures or project alternatives identified in the environmental impact report;

6. That the design of the subdivision or the type of improvements are likely to cause serious public health problems;

7. That the design of the subdivision or the type of improvements will conflict with easements of record or easements established by court judgment, acquired by the public at large, for access through or use of property within the proposed subdivision. In this connection, the City Council may approve a map if they find that alternate easements for access or for use will be provided and that those will be substantially equivalent to ones previously acquired by the public. This subsection shall apply only to easements of record or to easements established by judgment of a court of competent jurisdiction, and no authority is hereby granted to the Planning Commission to determine that the public at large has acquired easements for access through or use of property within the proposed subdivision;

8. That all requirements of the California Environmental Quality Act and the rules and procedures adopted by the City Council pursuant thereto have not been met;

9. That the applicant has failed to submit complete or adequate information;

10. Subject to Section 66474.4 of the State Subdivision Map Act, that the land is subject to a contract entered into pursuant to the California Land Conservation Act of 1965 (commencing with Section 51200 of the Government Code) and that the resulting parcels following a subdivision of the land would be too small to sustain their agricultural use.

Section 17.230.090 - Findings for approval of small lot subdivisions.

Small lot subdivisions conforming to these provisions shall only be approved if the following findings can be made in an affirmative manner:

A. The subject property is physically suitable for the type of development proposed;

B. The proposed development would be compatible with existing and permissible land uses within the district and the general area in which the proposed use is to be located;

C. The proposed development, including the density, site design, and design of units, is compatible with the existing neighborhood and nearby uses;

D. Approval of the proposed development will not be detrimental to the public health, safety, convenience, or general welfare; and

E. Approval of the proposed development is consistent with the General Plan.

Section 17.415.030 – Findings for a conditional use permit

A. The proposed use is consistent with the General Plan and all applicable provisions of this title.

B. The establishment, maintenance, and operation of the use applied for will not, under the circumstances of the particular case (location, size, design, and operating characteristics), be detrimental to the health, safety, peace, morals, comfort, or general welfare of persons residing or working in the area of such use or be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the City.

Analysis:

The proposed project intends to increase the housing stock within the City of Sebastopol by developing a currently vacant site into 24 residential housing units that mix attached townhomes and apartments. The project would also achieve a list of General Plan goals as noted earlier in the staff report as well as helping Sebastopol reach its Regional Housing Needs Allocation goals for the next cycle.

Project background

Through the Cities preapplication conference, the applicant met with the City departments to go over the very early stages of the proposal and with that included a site plan which showed an internal connection through the site with ingress and egress onto Murphy and Healdsburg Avenue. Modifications were made to the site vehicle access as the applicant noted grading work to be done and retaining walls needed would be outside of the realm of possibility.

The revised site plan is instead configured to have an entrance from Healdsburg to the apartment units with parking behind this structure. This site access no longer connects to the upper units/Murphy Avenue. The entrance from Murphy Avenue serves the townhomes on the southern portion of the site, it then dead ends on the eastern portion of the site where the trash enclosure will be located and where emergency vehicles would have to back up and turn around. This iteration of the project was then presented to the Planning Commission as well as the Design Review Board who provided much guided feedback and encouraged the applicant to develop a project that was 100% residential and thus the project is before the Planning Commission.

Lastly, as the project was revised as the request of the Planning Director to move the Healdsburg driveway to the western side of the site, which was done by the applicant, the traffic study conditions require the driveway to be relocated back to the eastern side of the site. With that, the applicant is providing an exhibit of this and a written statement requesting the Planning Commission move forward with the project with a condition of approval that requires the final plan set with the correct location of the driveway be submitted before City Council approval. The location of the building on the site does not change with this correction and further justification is within the applicant's letter. Staff is supportive of this request and recommends the Planning Commission add this condition of approval. However, if the Planning Commission is not comfortable with the request, they should require the applicant to return at a future meeting with the correct site plan and driveway location.

Site analysis

There are some constraints to the site itself as it is heavily wooded along with steep slopes. As the site moves away from Healdsburg Avenue it starts to climb up the hill towards Murphy Ave and with that would require an immense amount of grading work to be done. The applicant has provided a grading plan with earthwork quantities within the application.

As the current proposal has two forms of entrance and exiting the site, traffic on and off the site was studied as part of the project and included in the report. This traffic configuration will require both site and intersection-specific traffic analysis to ensure appropriate safety and queuing of vehicles. The Healdsburg/ Murphy intersection is also one of the intersections identified in the General Plan as needing to be upgraded to either a traffic signal or potential roundabout. As this is a CalTrans right-of-way, a signal warrant will need to be included in the traffic study and, if warranted, work will need to be coordinated with CalTrans as Healdsburg Ave /Hwy 116 is a state right-of-way. As part of the project a traffic study was done, it was determined that the project will meet the applicable significance thresholds for vehicle miles traveled and has a recommendation to have the driveway on Healdsburg Ave placed on the eastern side of the site and no traffic signal has been required.

Housing

As the project provides more than 5 units of residential housing on the site it is subject to the city's inclusionary housing requirements. Set forth in Section 17.250.050 the percentage requirement is as follows

1. Fifteen percent of the units shall be inclusionary units affordable to households earning 120 percent or less of AMI; or

2. Ten percent of the units shall be inclusionary units affordable to households earning 80 percent or less of AMI; or

3. Five percent of the units shall be inclusionary units affordable to households earning 50 percent or less of AMI.

Currently the applicant has not determined what inclusionary unit rates they would be using or where those units would be located on the site. Staff is recommending a condition of approval that prior to final map recordation the applicant include the inclusionary percentage along with location of said units on the final map and those inclusionary requirements would be subject to the current requirements at time of recordation.

Environmental Review:
The project is categorically exempt from the requirements of CEQA pursuant to Section 15332 In-fill Development Projects

City Departmental Comments:
The Planning Department routed this project to all of the city departments and the following departments provided no comments but have included conditions of approval in Exhibit B.

Public Comment:
As prescribed by Section 17.460 of the Zoning Ordinance, the Planning Department completed the following: (1) Provided written notice to all property owners within 600 feet of the external boundaries of the subject property.

Public comments have been received as of the writing of this staff report and are attached.

Recommendation:
Based on the facts, findings, and analysis set forth in this staff report, staff recommends that the Planning Commission adopt Planning Commission Resolution 24-06, recommending City Council approve the Conditional Use Permit, Tentative Subdivision map, and Density Bonus for additional building height, subject to the findings and Conditions included in Exhibit A: Recommended Findings for Approval, the Conditions of Approval included in Exhibit B: Recommended Conditions of Approval, and Standard Conditions of Approval included in Exhibit C.

In particular, staff requests the Planning Commission discuss the following areas and provide feedback to the applicant and staff:

- Approval of the driveway location as a condition of approval which would be acted upon by the City Council

Attachments:
Application Materials

Traffic Study
Applicant letter on driveway condition with exhibit
Planning Commission Resolution 24-06 with recommendations to City Council
Exhibit A – Tentative Map
Exhibit B – Conditions of Approval
Exhibit C – Standard Conditions of Approval
Public Comment

City of Sebastopol
Planning Department
7120 Bodega Avenue
Sebastopol, CA 95472
(707) 823-6167

MASTER PLANNING APPLICATION FORM

APPLICATION TYPE

☐ Administrative Permit Review	☐ Lot Line Adjustment/Merger	☐ Temporary Use Permit
☐ Alcohol Use Permit/ABC Transfer	☐ Preapplication Conference	☐ Tree Removal Permit
☑ Conditional Use Permit	☐ Preliminary Review	☐ Variance
☑ Design Review	☐ Sign Permit	☑ Other Tentative Map Application

This application includes the checklist(s) or supplement form(s) for the type of permit requested: ☐ Yes ☑ No

REVIEW/HEARING BODIES

☐ Staff/Admin ☑ Design Review/Tree Board ☑ Planning Commission ☑ City Council ☐ Other_____

APPLICATION FOR

Street Address: Pacific Knolls, 7621 Healdsburg Ave. | Assessor's Parcel No(s): 004-291-019

Present Use of Property: Single Family Structure | Zoning/General Plan Designation: CO Office Commercial/R7 Multifamily

APPLICANT INFORMATION

Property Owner Name: Pacific Realty Development LLC, attn: Mark Hanf

Mailing Address: 1555 Grant Ave. | Phone: 415-926-4444

City/State/ZIP: Novato, CA 94945 | Email: mark@pacificprivatemoney.com

Signature: | Date:

Authorized Agent/Applicant Name: Katherine Austin, AIA, Architect

Mailing Address: 179 SE Rice Way | Phone: 707-529-5565

City/State/ZIP: Bend, OR 97702 | Email: kaaustin@pacbell.net

Signature: | Date:

Contact Name *(If different from above):* | Phone/Email:

PROJECT DESCRIPTION AND PERMITS REQUESTED (ATTACH ADDITIONAL PAGES IF NECESSARY)

Tentative Map(Small Lot Subdivision) Use Permit & Design Review: (7) 1120 + (5) 1148 SF Town Homes with 1-car garages +1-car driveways on R7 zone + Apart. Building of (6)760 SF+/- Apartments + (6)590 SF+/- Apartments on CO zone. 20' private drive + 4' sidewalk off Murphy Ave. accesses the Town Homes. A 20' driveway off Healdsburg Ave. accesses an 18 space parking lot for the apartments. ADA access is provided on the west side and one ADA space is provided plus elevator. Several oaks on the south + east perimeter, proposed to be saved.

CITY USE ONLY

Fill out upon receipt:		**Action:**		**Action Date:**
Application Date:		Staff/Admin:		Date:
Planning File #:		Planning Director:		Date:
Received By:		Design Review/Tree Board:		Date:
Fee(s):	$	Planning Commission:		Date:
Completeness Date:		City Council:		Date:

SITE DATA TABLE

If an item is not applicable to your project, please indicate "Not Applicable" or "N/A" in the appropriate box; do not leave cells blank.

SITE DATA TABLE	REQUIRED / ZONING STANDARD	EXISTING	PROPOSED
Zoning	N/A	CO & R7	CO & R7/Small lot subdivision
Use	N/A	SF Home, abandoned	12 Town Homes + 12 Apartments
Lot Size	1,500 min for small lot subdivisions	55,696sf 1.28 ac	21,000 +/- CO, 34,741 R7, Sm Lot Subdivision
Square Feet of Building/Structures *(if multiple structures include all separately)*	n/a	unknown	3,530sf apartments (6) 590 sf 5057sf apartments (6) 760 sf 13,680sf town homes (7) 1120 + (5)1148sf FAR of both com & res .388 total lot
Floor Area Ratio (F.A.R)	____._____FAR	____._____FAR	____._____FAR
Lot Coverage	40 % of lot	? % of lot	31 % of lot
	65 sm lot subdivision sq. ft.	? sq. ft.	_____ sq. ft.
Parking	2/unit res.1/300 comm.1.5/apt	n/a	16 garage 16 tandem 24 in lot 4-5 on st.
Building Height	30' max	unknown	30' max
Number of Stories	two	one	two
Building Setbacks – Primary			
Front	15' small lot subdivisions	unknown	10' commercial bldg.
Secondary Front Yard (corner lots)	R7 is 10'	unknown	varies 10' min
Side – Interior	4' or zero lot line attached	unknown	zero lot line minimum
Rear	10' small lot subdivisions	unknown	varies 10' min
Building Setbacks – Accessory			
Front		unknown	n/a
Secondary Front Yard (corner lots)		unknown	n/a
Side – Interior		unknown	n/a
Rear		unknown	n/a
Special Setbacks *(if applicable)*	20' min. to garage face from PL		
Other (_____)			
Number of Residential Units	_____Dwelling Unit(s)	1 Dwelling Unit(s)	24 Dwelling Unit(s)
Residential Density	1 unit per varies sq. ft.	1 unit per 55,696 sq. ft.	1 unit per 2,320 sq. ft.
Useable Open Space	150 per unit sm lot - 50 apt sq. ft.	unknown sq. ft.	meet min/res unit sq. ft.
Grading	Grading should be minimized to the extent feasible to reflect existing topography and protect significant site features, including trees.	N/A	Total: 4,045 cu. yds Cut: 2,530 cu. yds. Fill: 1,515 cu. yds. Off-Haul: 1,015 cu. yds
Impervious Surface Area	N/A	6.3 % of lot	66 % of lot
		3,485 sq. ft.	36,544 sq. ft.
Pervious Surface Area	N/A	93.7 % of lot	34 % of lot
		52,211 sq. ft.	19,152 sq. ft.

CONDITIONS OF APPLICATION

1. All Materials submitted in conjunction with this form shall be considered a part of this application.
2. This application will not be considered filed and processing may not be initiated until the Planning Department determines that the submittal is complete with all necessary information and is "accepted as complete." The City will notify the applicant of all application deficiencies no later than 30 days following application submittal.
3. The property owner authorizes the listed authorized agent(s)/contact(s) to appear before the City Council, Planning Commission, Design Review/Tree Board and Planning Director and to file applications, plans, and other information on the owner's behalf.
4. The Owner shall inform the Planning Department in writing of any changes.
5. **INDEMNIFICATION AGREEMENT:** As part of this application, applicant agrees to defend, indemnify, release and hold harmless the City, its agents, officers, attorneys, employees, boards, committees and commissions from any claim, action or proceeding brought against any of the foregoing individuals or entities, the purpose of which is to attack, set aside, void or annul the approval of this application or the adoption of the environmental document which accompanies it or otherwise arises out of or in connection with the City's action on this application. This indemnification shall include, but not be limited to, damages, costs, expenses, attorney fees or expert witness fees that may be asserted by any person or entity, including the applicant, arising out of or in connection with the City's action on this application, whether or not there is concurrent passive or active negligence on the part of the City.

   If, for any reason, any portion of this indemnification agreement is held to be void or unenforceable by a court of competent jurisdiction, the remainder of the agreement shall remain in full force and effect.

   NOTE: The purpose of the indemnification agreement is to allow the City to be held harmless in terms of potential legal costs and liabilities in conjunction with permit processing and approval.
6. **REPRODUCTION AND CIRCULATION OF PLANS:** I hereby authorize the Planning Department to reproduce plans and exhibits as necessary for the processing of this application. I understand that this may include circulating copies of the reduced plans for public inspection. Multiple signatures are required when plans are prepared by multiple professionals.
7. **NOTICE OF MAILING**: Email addresses will be used for sending out staff reports and agendas to applicants, their representatives, property owners, and others to be notified.
8. **DEPOSIT ACCOUNT INFORMATION:** Rather than flat fees, some applications require a 'Deposit'. The initial deposit amount is based on typical processing costs. However, each application is different and will experience different costs. The City staff and City consultant time, in addition to other permit processing costs, (i.e., legal advertisements and copying costs are charged against the application deposit). If charges exceed the initial deposit, the applicant will receive billing from the City's Finance department. If at the end of the application process, charges are less than the deposit, the City Finance department will refund the remaining monies. Deposit accounts will be held open for up to 90 days after action or withdrawal for the City to complete any miscellaneous clean up items and to account for all project related costs.
9. **NOTICE OF ORDINANCE/PLAN MODIFICATIONS**: Pursuant to Government Code Section 65945(a), please indicate, by checking the boxes below, if you would like to receive a notice from the City of any proposal to adopt or amend any of the following plans or ordinances if the City determines that the proposal is reasonably related to your request for a development permit:

   ☑ A general plan ☑ A specific plan

   ☑ An ordinance affecting building permits or grading permits ☑ A zoning ordinance

Certification

I, the undersigned owner of the subject property, have read this application for a development permit and agree with all of the above and certify that the information, drawings and specifications herewith submitted are true and correct to the best of my knowledge and belief and are submitted under penalty of perjury. I hereby grant members of the Planning Commission, Design Review Board and City Staff admittance to the subject property as necessary for processing of the project application.

Property Owner's Signature: _____ **Date:** 4/18/22 / 12/14/23

I, the undersigned applicant, have read this application for a development permit and agree with all of the above and certify that the information, drawings and specifications herewith submitted are true and correct to the best of my knowledge and belief and are submitted under penalty of perjury.

Applicant's Signature: _____ **Date:** 4·19·2022 / 12·14·2023

NOTE: It is the responsibility of the applicant and their representatives to be aware of and abide by City laws and policies. City staff, Boards, Commissions, and the City Council will review applications as required by law; however, the applicant has responsibility for determining and following applicable regulations.

Neighbor Notification

In the interest of being a good neighbor, it is highly recommended that you contact those homes or businesses directly adjacent to, or within the area of your project. Please inform them of the proposed project, including construction activity and possible impacts such as noise, traffic interruptions, dust, larger structures, tree removals, etc.

Many projects in Sebastopol are remodel projects which when initiated bring concern to neighboring property owners, residents, and businesses. Construction activities can be disruptive, and additions or new buildings can affect privacy, sunlight, or landscaping. Some of these concerns can be alleviated by neighbor-to-neighbor contacts early in the design and construction process.

It is a "good neighbor policy" to inform your neighbors so that they understand your project. This will enable you to begin your construction with the understanding of your neighbors and will help promote good neighborhood relationships.

Many times, development projects can have an adverse effect on the tranquility of neighborhoods and tarnish relationships along the way. If you should have questions about who to contact or need property owner information in your immediate vicinity, please contact the Building and Safety Department for information at (707) 823-8597, or the Planning Department at (707) 823-6167.

I have informed site neighbors of my proposed project: ☐ Yes ☑ No

If yes, or if you will inform neighbors in the future, please describe outreach efforts:

The neighbors were notified previously for our preliminary review. Once we know a date for our hearings we can notify again or we ask that you do the notification. Please provide verbiage for the sign/s on the property so that we may place in time for the hearings.

Website Required for Major Projects

Applicants for major development projects (which involves proposed development of **10,000 square feet of new floor area or greater, or 15 or more dwelling units/lots),** are required to create a project website in conjunction with submittal of an application for Planning approval (including but not limited to Subdivisions, Use Permits, Rezoning, and Design Review). Required information may be provided on an existing applicant web site.

The website address shall be provided as part of the application. The website shall be maintained and updated, as needed until final discretionary approvals are obtained for the project.

Such website shall include, at a minimum, the following information:

- √ Project description
- √ Contact information for the applicant, including address, phone number, and email address
- √ Map showing project location
- √ Photographs of project site
- √ Project plans and drawings

12/14/23

December 14, 2023

Pacific Knolls, 7621 Healdsburg Ave.
Proposed Development of 12 Apartments + 12 Town Homes
From: Katherine Austin, AIA Project Architect

Project Description:

Zoning:
The parcel has split zoning. The north portion of the site is Zoned CO Commercial Office, and the southerly portion of the site is zoned R7 High Density Residential. We received preliminary support from the Planning Commission to propose 100% Residential in the CO zone as housing is a much greater need than more commercial space. Our proposal is to provide much needed housing for Sebastopol by providing 12 town homes accessed off Murphy Ave. and 12 apartments accessed off Healdsburg Avenue through a Use Permit.

Tree Preservation:
We propose to save as many mature oak trees on the site as possible while still providing the needed circulation and parking required per city standards. Grading was carefully considered to save many trees in the south and east behind the town homes and between the parking lot and east property line. We have changed the location of the access drive of the parking lot to the west side of the proposed apartment building which provides greater retention of oaks on the east and minimizes grading.

Landscaping: large, boxed specimen native oak trees are being proposed for an immediate effect, to mitigate the removal of trees. Six street trees are proposed.

Town Homes:
The town homes are designed with a pier and grade beam foundation around root zones and are internally stepped down where needed for driveway access to minimize grading where possible. We are providing universal design access where grading permits. Full baths are on the first floor of 5 of the 12 town homes for universal design. EV charging will be provided in garages of each unit and PVs on each roof. Heat Pump mini-splits and WH will be used, and bike storage is provided in a rear exterior closet. Private rear patios and yards are provided for each town home. Town Homes are as follows: (7) 1120SF - 2 BR 2 1/2 Baths and (5) 1148 SF – 2 BR 3 Baths. The town homes have (2) BR suites to allow for flexible living. A multi-unit mailbox will be sited in coordination with the post office. 1st Fl plate is 9', 2nd floor plate 8'. No roof ridge exceeds 30 from average grade.

Apartments:
The apartment building is located on a gently sloped area behind the sidewalk along Healdsburg Ave and parking is in the rear, accessed off Healdsburg Ave on the westerly side of the new building. An elevator is proposed to provide an accessible route of travel to both floors so that all units can be adaptable for ADA. PVs and mini split units as well as heat pump WH will be provided on the roof concealed by parapets. Each upper unit has their own laundry and there is a skylight letting light into the center of the units. The lower units may have stacked w/d units provided. A California Access Specialist will review all plans for compliance with ADA including all path of travel signage. Private outdoor

spaces are provided for each apartment: 104+/- SF 2nd Fl & 143 +/- 1st fl. Apartments are as follows: (6) 590 SF 1-BD, 1-BA (6) 760 SF 1-BD, 1BA. The smaller apartments are necessary to provide for the depth of the required rear parking lot and retaining wall between the lower north side and higher south side of the site. Additional outdoor space is provided in the garden seating area on the west side. A multi-unit mailbox will be sited in coordination with the post office. Parapets do not exceed 30' from average grade.

Town Home Site & Access:
To access the town homes, we propose a 20' private drive plus 4' sidewalk off Murphy Ave with a "T" turn around and a 20' wide private drive plus 4' sidewalk for 4 of the town homes. The roadway is wider than 26' next to the fire hydrant per the Fire Dept. The trash and recycle center are located near the center of the access road and will be landscaped. The turnaround is sufficient for the trash hauler. Each town home has a 1 car garage and 1 tandem space in the driveway. We propose to make those driveways of permeable concrete. Between driveways we propose planting trees per the landscape plan to help with the storm water mitigation which is provided around the site in many retention areas as indicated in the Civil Engineering plans. Note there is a retention basin in the rear of each town home to retain the existing drainage pattern on site. A pathway from the town homes leads down the east side of the site. It steps down the hill to avoid grading under the trees proposed to be retained. The accessible route of travel is by private sidewalk to public sidewalk along Murphy Ave to Healdsburg Ave.

Apartment Site & Access:
A 20' driveway off Healdsburg Ave. on the west side of the new building is proposed, providing access to the rear 18 space parking lot for the 12 1-BR apartments. Half of the parking spaces are "tuck-under" the walkway above. On the south side of the parking lot is a planting area that will contain storm water filtration and include plantings. A retaining wall between the lower and upper area is provided with a guardrail placed at the top of the wall. Dark sky compliant lighting is indicated in the landscape plans as is 40% (7) EV charging spaces in the parking lot.

A handicap parking space is provided next to the elevator that serves the upper apartments which each have a semiprivate outdoor area on the south side. One unit, to be determined, will be built out for accessibility and the remainder will be adaptable. Bike parking is provided next to the garden seating area on the west side of the parking lot.

There is a walled multi-unit trash/recycle enclosure under the walkway and beside the stairs for the apartments that will be managed by the owner transporting the bins to the streetside and back. The sidewalk along Healdsburg Ave is proposed to be widened so that the cans can be placed on trash day without blocking the path of travel. This is after discussion with the trash hauler, Recology, who will not pull into or back out of the driveway onto Healdsburg Ave.

Possible Easement on South Property Line
There is a small triangular area at the rear of lots 2-5 of the town homes that is above the slope and on our side of the existing fence that belongs to the adjacent property. Should our project be approved, we would like to work with the neighboring property to obtain an easement to use that as yard area and replace the fence with a new one.

Street View of Healdsburg Avenue

Street View of Murphy Avenue with proposed new private street entrance to Town Homes

REVISIONS	BY

7621 Healdsburg Ave. Sebastopol CA

Pacific Realty Development LLC
1555 Grant Ave., Novato, CA, 415-850-5555

Pacific Knolls
Street Views of Both
Healdsburg & Murphy Aves.

Katherine Austin, AIA, Architect
524 South Main Street, Sebastopol, CA
179 SE Rice Way, Bend, OR
707-529-5565 kaaustin@pacbell.net

Date 3-27-2024
Scale As Noted
Drawn K. Austin
Job
Sheet 1
Of 10 Sheets

Perspective of Apartments looking from North East Corner along Healdsburg Avenue

Perspective of the Apartments from the rear Parking Lot

REVISIONS	BY

7621 Healdsburg Ave. Sebastopol CA

Pacific Realty Development LLC
1555 Grant Ave., Novato, CA, 415-850-5555

Pacific Knolls
Apartments Perspectives

Katherine Austin, AIA, Architect
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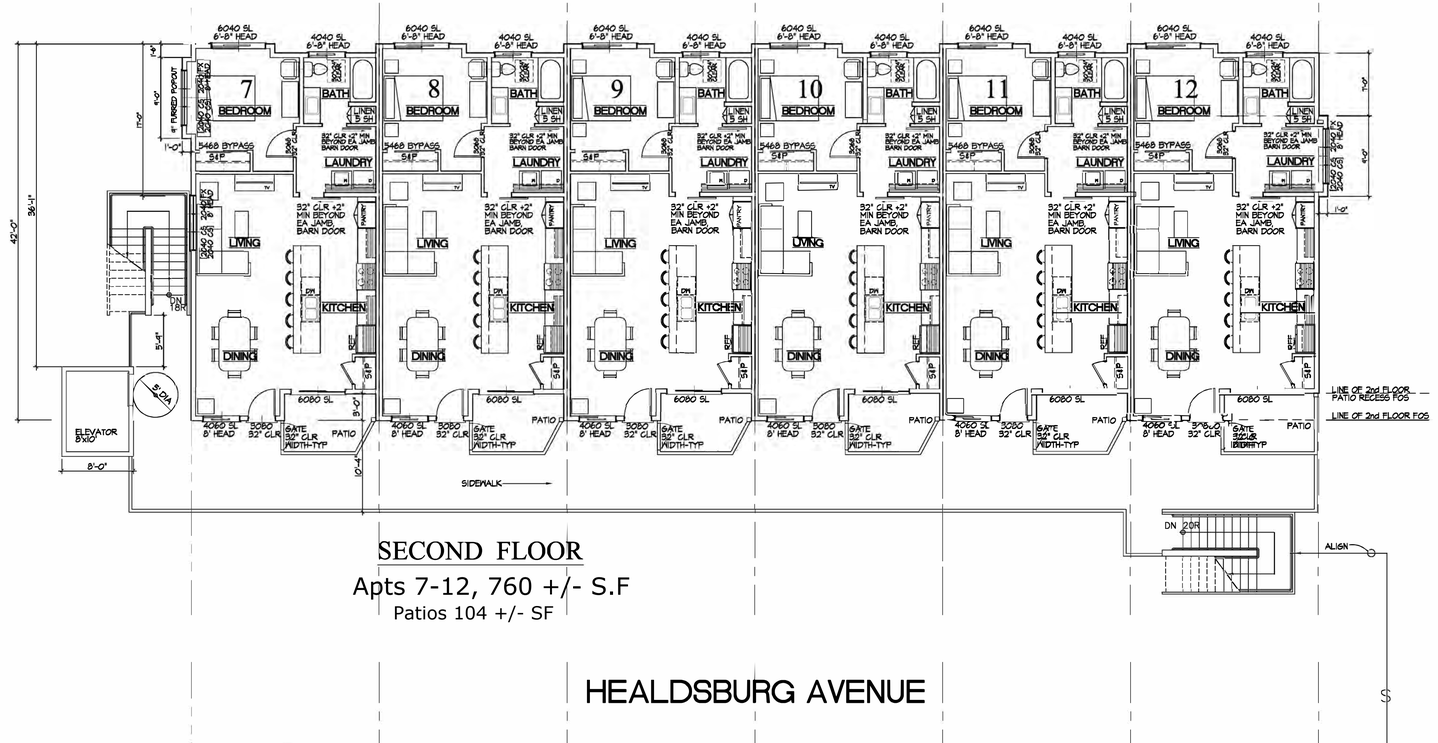
707-529-5565 kaaustin@pacbell.net

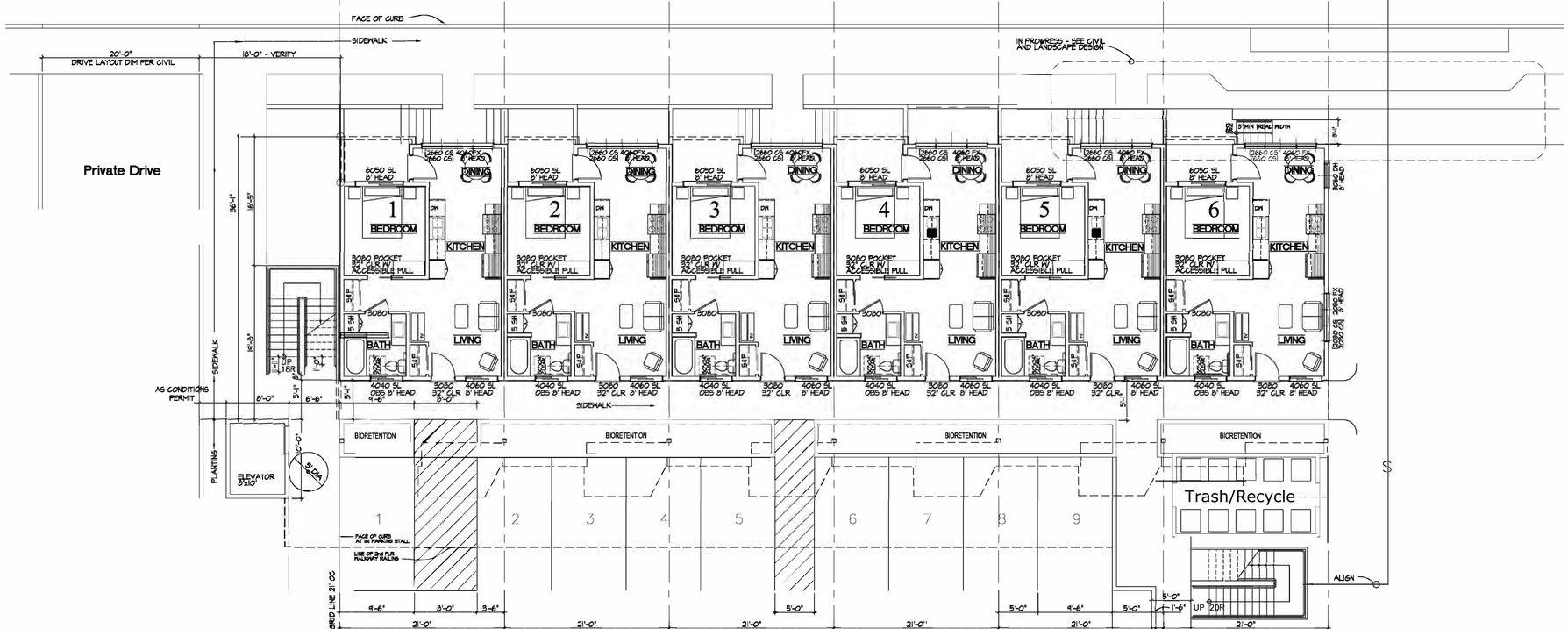
Date 3-27-2024
Scale As Noted
Drawn K. Austin
Job
Sheet 2
Of 10 Sheets



SECOND FLOOR

Apts 7-12, 760 +/- S.F

Patios 104 +/- SF



GROUND FLOOR

Apts 1-6, 590 +/- SF

Porches 143 +/- SF

Proposed Apartments
7621 Healdsburg Ave
Sebastopol,CA 1/8"=1'-0"

7621 Healdsburg Ave. Sebastopol CA

Pacific Realty Development LLC
1555 Grant Ave., Novato, CA, 415-850-5555

Pacific Knolls
Apartment Building
Floor Plans

Katherine Austin, AIA, Architect
524 South Main Street, Sebastopol, CA
179 SE Rice Way, Bend, OR
707-529-5565 kaaustin@pacbell.net

Date: 3-27-2024
Scale: As noted
Drawn: KA&MG
Sheet: 3
of 10 sheets

East Elevation

North Elevation along Healdsburg Avenue

Note: Drawings are not to scale. Maximum Height at middle parapet is 29' +/- Building steps 6" at each color change to work with slope to minimize height. At no point will the building exceed 30' in height. Floor to floor height is 10' at west end and 11' at east end. Parapet is 3' on east and west, 4' at center. Site slopes in both east and west and north and south direction. Maximum foundation height is 4' on north east and 3' on north west to provide ADA access on the south side.

West Elevation with elevator tower

South Elevation facing parking lot

Apartment Building Elevations NTS

24 X 36 PRINTED ON NO. 1000H CLEARPRINT®

REVISIONS	BY

7621 Healdsburg Ave. Sebastopol CA

Pacific Realty Development LLC
1555 Grant Ave., Novato, CA, 415-850-5555

Pacific Knolls

Apartment Elevations

Katherine Austin, AIA, Architect
524 South Main Street, Sebastopol, CA
179 SE Rice Way, Bend, OR
707-529-5565 kaaustin@pacbell.net

Date 3-27-2024
Scale As Noted
Drawn K. Austin
Job
Sheet 4
of 10 Sheets

Perspective of Town Homes lots 8 through 5 left to right

Perspective of Town Homes 4 through 1 left to right

REVISIONS	BY

7621 Healdsburg Ave. Sebastopol CA

Pacific Realty Development LLC
1555 Grant Ave., Novato, CA, 415-850-5555

Pacific Knolls

Town Home Perspectives

Katherine Austin, AIA, Architect
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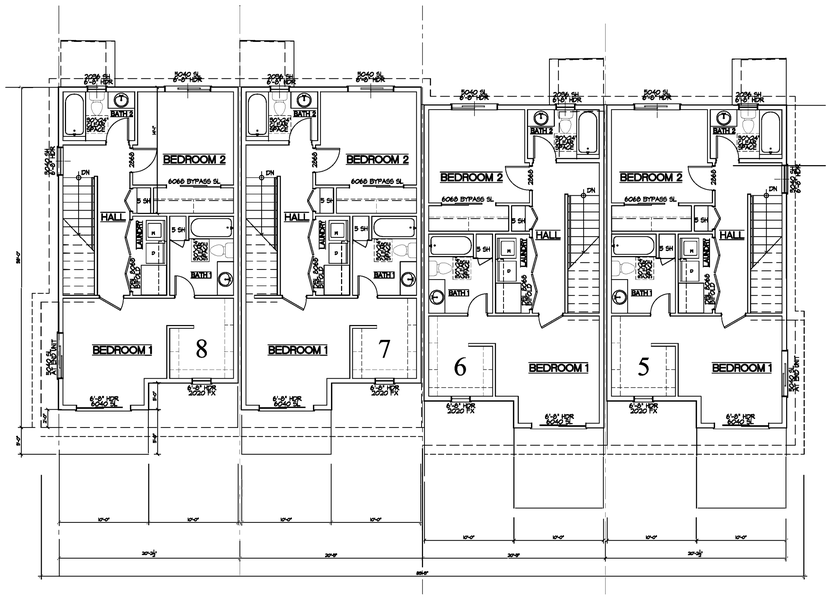
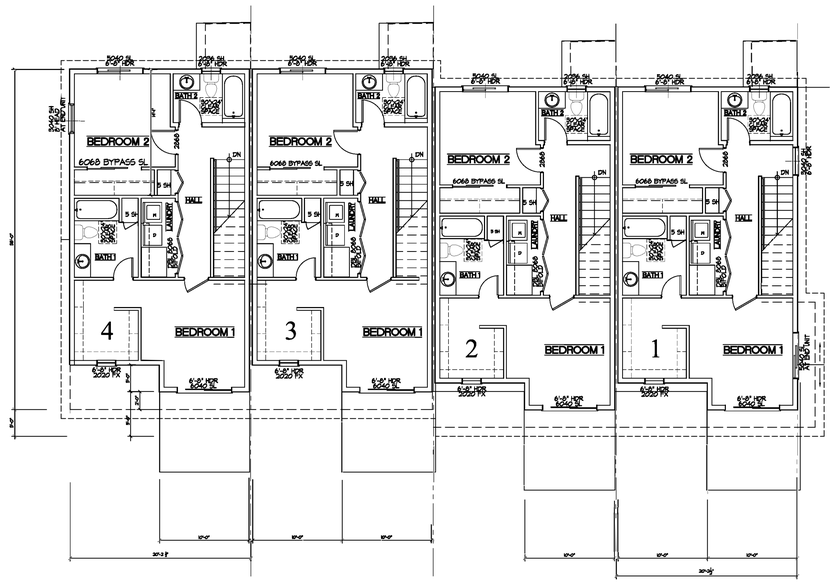
707-529-5565 kaustin@pacbell.net

Date 3-27-2024
Scale As Noted
Drawn K. Austin
Job
Sheet 5
of 10 Sheets

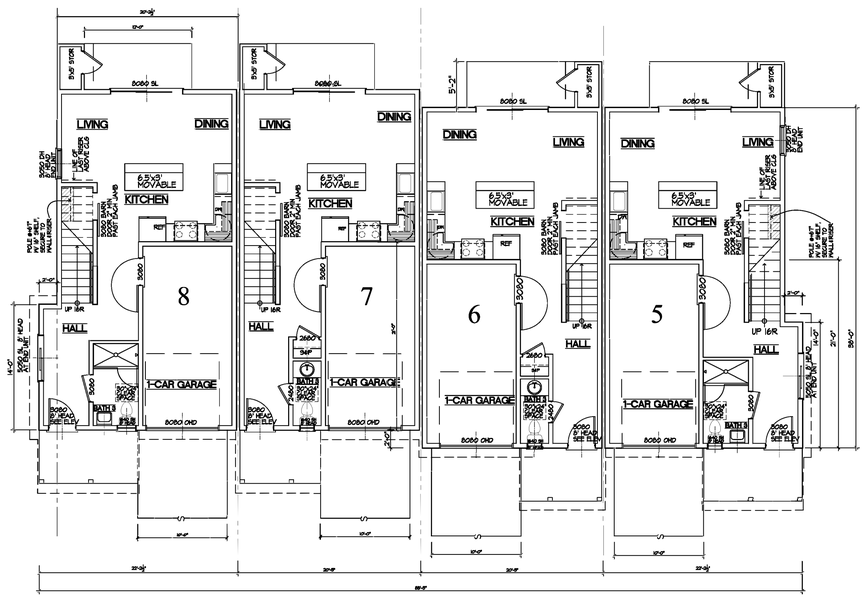


2nd FLOOR

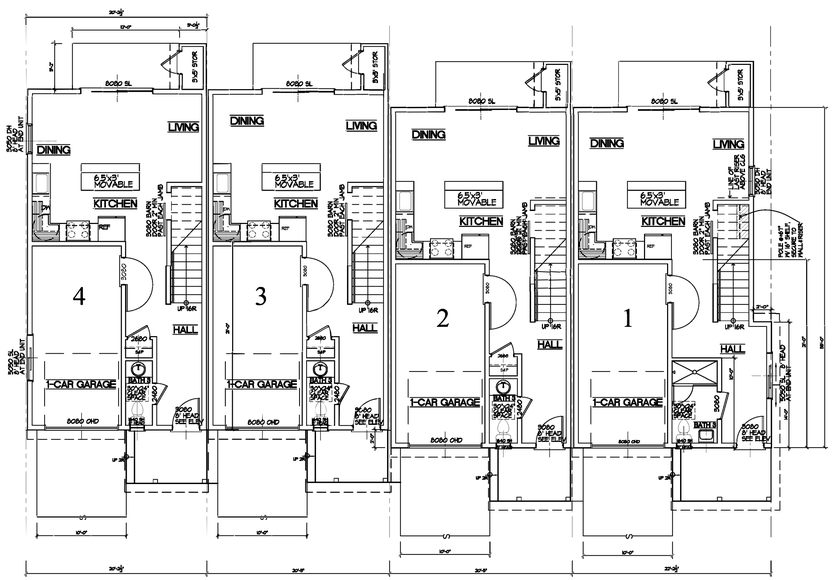


2nd FLOOR

Town Homes 1,5,8 = 1148 +/- SF
Town Homes 2,3,4,6&7 = 1120 +/- SF



GROUND FLOOR



GROUND FLOOR

Town Homes lots 1 - 8
Floor Plans

1/8"=1'-0"

7621 Healdsburg Ave. Sebastopol CA

Pacific Realty Development LLC
1555 Grant Ave., Novato, CAc 415-850-5555

Katherine Austin, AIA, Architect
524 South Main Street, Sebastopol, CA
179 SE Rice Way, Bend, OR
707-529-5565

Pacific Knolls
Town Homes 1-8
Floor Plans

Date: 3-27-2024
Scale: As Noted
Drawn: KA&MG
Sheet: 6
of 10 Sheets

East Elevation Lot 4

North Elevations lots 4 through 1 left to right

Note: Drawings are not to scale. Maximum height at peak of ridge is 30', each unit steps with the grade.
First floor 9' plate, 12"+/- ceiling joists, second floor 8' plate with scissor trusses for vaulted ceilings.
Foundations to be pier and grade beam around root zones and remain as low as possible to grade.

West Elevation lot 1 on Murphy Avenue

South Elevations lots 1 through 4 left to right

Town Home Elevations lots 1 through 4 NTS

REVISIONS	BY

7621 Healdsburg Ave. Sebastopol CA

Pacific Realty Development LLC
1555 Grant Ave., Novato, CA, 415-850-5555

Pacific Knolls
Town Home Elevations
Lots 1 through 4

Katherine Austin, AIA, Architect
524 South Main Street, Sebastopol, CA
179 SE Rice Way, Bend, OR
707-529-5565 kaaustin@pacbell.net

Date 3-27-2024
Scale As Noted
Drawn K. Austin
Job
Sheet 7 of 10 Sheets

East Elevation lot 8

Note: Drawings are not to scale. Maximum height at peak of ridge is 30'. each unit steps with the grade. First floor 9' plate, 12"+/- ceiling joists, second floor 8' plate with scissor trusses for vaulted ceilings. Foundations to be pier and grade beam around root zones and remain as low as possible to grade.

North Elevation lots 8 through 5 left to right

West Elevation lot 5

South Elevation lots 5 through

Town Home Elevations lots 5 through 8 NTS

REVISIONS	BY

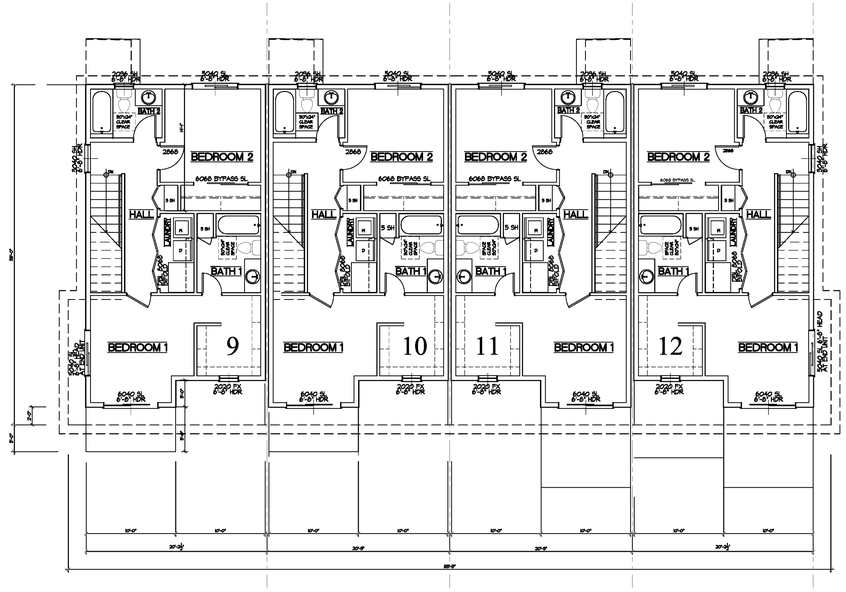
7621 Healdsburg Ave. Sebastopol CA

Pacific Realty Development LLC
1555 Grant Ave., Novato, CA, 415-850-5555

Pacific Knolls
Town Home Elevations
Lots 5 through 8

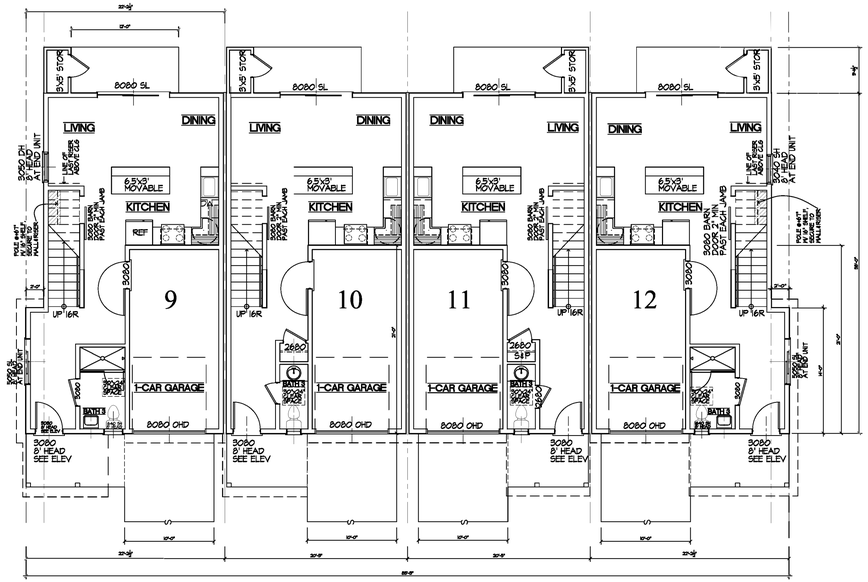
Katherine Austin, AIA, Architect
524 South Main Street, Sebastopol, CA
179 SE Rice Way, Bend, OR
707-529-5565 kaaustin@pacbell.net

Date 3-27-2024
Scale As Noted
Drawn K. Austin
Job
Sheet 8 of 10 Sheets



2nd FLOOR

Town Homes 9 & 12 = 1148 +/- SF
Town Homes 10 & 11 =1120 +/-
SF



GROUND FLOOR

Town Homes 9 - 12
Floor Plans

1/8"=1'0"

Katherine Austin, AIA, Architect
524 South Main Street, Sebastopol, CA
179 SE Rice Way, Bend, OR
707-529-5565 kaaustin@pacbell.net

Pacific Knolls
Town Homes 9-12
Floor Plans

7621 Healdsburg Ave. Sebastopol CA

Pacific Realty Development LLC
1555 Grant Ave., Novato, CA, 415-850-5555

Date: 3-27-2024
Scale: As Noted
Drawn: KA&MG
Sheet:

North Elevation lot 9

Note: Drawings are not to scale. Maximum height at peak of ridge is 30', each unit steps with grade. First floor 9' plate, 12"+/- ceiling joists, second floor 8' plate with scissor trusses for vaulted ceilings. Foundations to be pier and grade beam around root zones and remain as low as possible to grade.

West Elevation lots 9 through 12 left to right

South Elevation lot 12

East Elevation lots 12 through 9 left to right

Town Home Elevations lots 9 through 12 NTS

REVISIONS	BY

7621 Healdsburg Ave. Sebastopol CA

Pacific Realty Development LLC
1555 Grant Ave., Novato, CA, 415-850-5555

Pacific Knolls
Town Home Elevations
Lots 9 through 12

Katherine Austin, AIA, Architect
524 South Main Street, Sebastopol, CA
179 SE Rice Way, Bend, OR
707-529-5565 kaustin@pacbell.net

Date 3-27-2024
Scale As Noted
Drawn K. Austin
Job
Sheet 10 of 10 Sheets

Street View of Healdsburg Avenue Revised to show access drive on east

Street View of Murphy Avenue with proposed new private street entrance to Town Homes

REVISIONS	BY
8-13-2024	KA

7621 Healdsburg Ave. Sebastopol CA

Pacific Realty Development LLC
1555 Grant Ave., Novato, CA, 415-850-5555

Pacific Knolls
Street Views of Both
Healdsburg & Murphy Aves.

Katherine Austin, AIA, Architect
524 South Main Street, Sebastopol, CA
179 SE Rice Way, Bend, OR
707-529-5565 kaaustin@pacbell.net

Date 3-27-2024
Scale As Noted
Drawn K. Austin
Job
Sheet 1
Of 10 Sheets

Perspective of Apartments looking from North East Corner along Healdsburg Avenue, Revised to show access on East

Perspective of the Apartments from the rear Parking Lot, Revised to show access on East

REVISIONS	BY
8-13-2024	KA

7621 Healdsburg Ave. Sebastopol CA

Pacific Realty Development LLC
1555 Grant Ave., Novato, CA, 415-850-5555

Pacific Knolls
Apartments Perspectives

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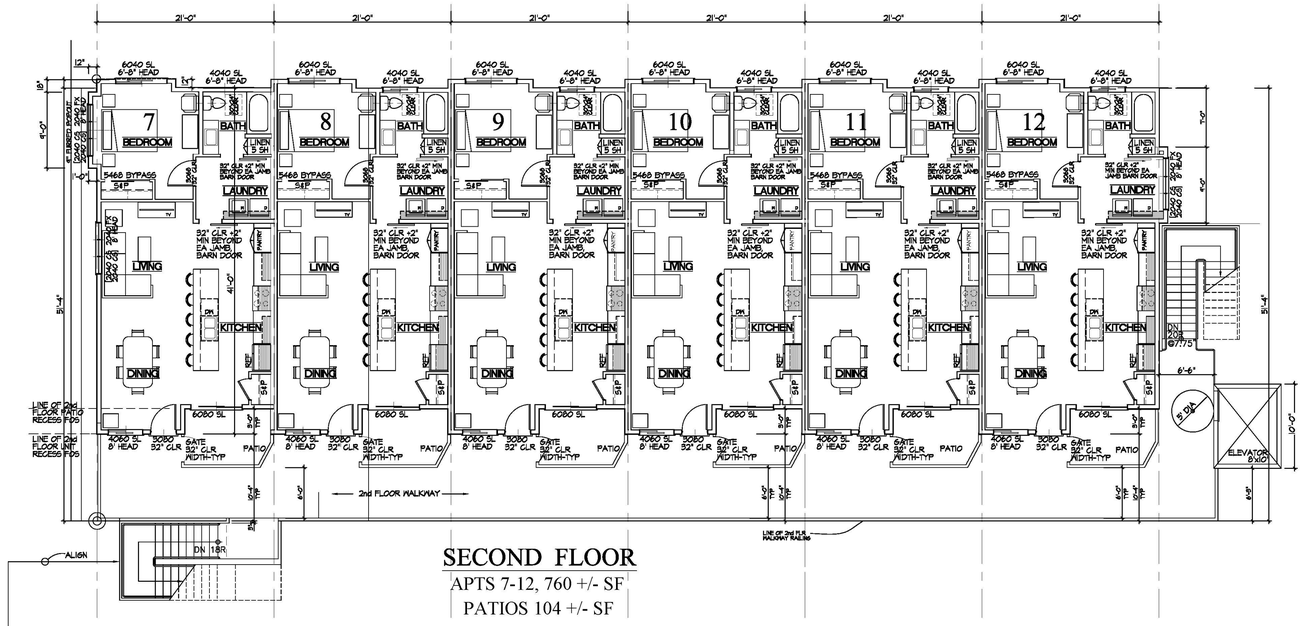
Date 3-27-2024
Scale As Noted
Drawn K. Austin
Job
Sheet 2 of 10 Sheets

Apts 7-12, 760 +/- S.F

Patios 104 +/- SF



SECOND FLOOR

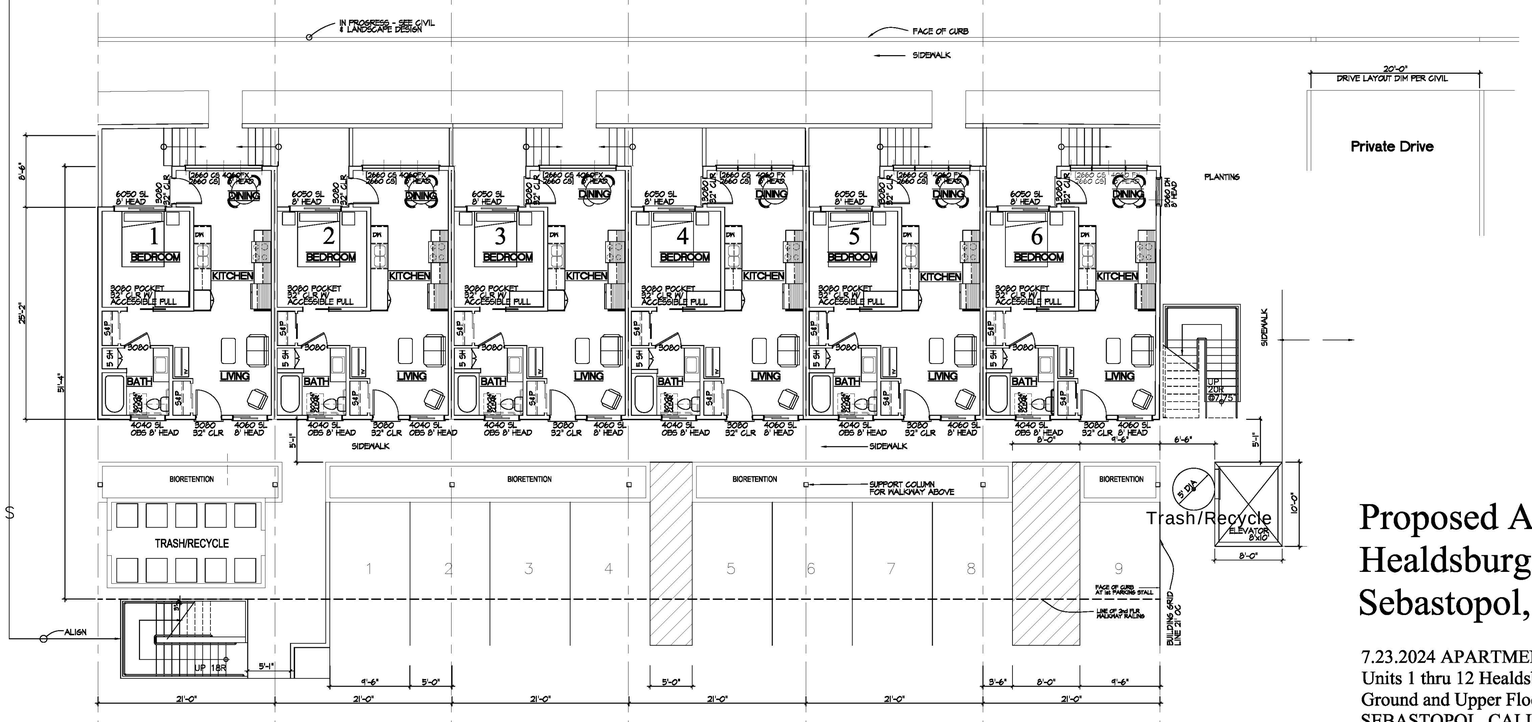
APTS 7-12, 760 +/- SF

PATIOS 104 +/- SF

HEALDSBURG AVENUE

Apts 1-6, 590 +/- SF

Porches 143 +/- SF



GROUND FLOOR

APTS 1-6, 590 +/- SF

PORCHES 143 +/- SF

1/8"=1'-0"

Proposed Apartments
Healdsburg Ave
Sebastopol, California

7.23.2024 APARTMENTS
Units 1 thru 12 Healdsburg Ave
Ground and Upper Floors
SEBASTOPOL, CALIFORNIA
KATHERINE AUSTIN, AIA, ARCHITECT
SCALE 1/8"=1'-0"

Revisions	By
8-13-2024	KA

7621 Healdsburg Ave. Sebastopol CA

Pacific Realty Development LLC
1555 Grant Ave., Novato, CA, 415-850-5555

Pacific Knolls
Apartment Building
Floor Plans

Katherine Austin, AIA, Architect
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179 SE Rice Way, Bend, OR
707-529-5565 kaaustin@pacbell.net

Date: 3-27-2024
Scale: As noted
Drawn: KA&MG
Sheet: 3
of 10 sheets

East Elevation with elevator tower

North Elevation along Healdsburg Avenue

Note: Drawings are not to scale. Maximum Height at middle parapet is 29' +/- Building steps 6" at each color change to work with slope to minimize height. At no point will the building exceed 30' in height. Floor to floor height is 10' at west end and 11' at east end. Parapet is 3' on east and west, 4' at center. Site slopes in both east and west and north and south direction. Maximum foundation height is 4' on north east and 3' on north west to provide ADA access on the south side.

West Elevation

South Elevation facing parking lot

Apartment Building Elevations NTS

8-13-2024 Revised to show access drive on east

REVISIONS	BY
8-13-2024	KA

7621 Healdsburg Ave. Sebastopol CA

Pacific Realty Development LLC
1555 Grant Ave., Novato, CA, 415-850-5555

Pacific Knolls
Apartment Elevations

Katherine Austin, AIA, Architect
524 South Main Street, Sebastopol, CA
179 SE Rice Way, Bend, OR
707-529-5565 kaaustin@pacbell.net

Date 3-27-2024
Scale As Noted
Drawn K. Austin
Job
Sheet 4
Of 10 Sheets

TREE LEGEND

EXISTING TREES TO REMAIN

PROPOSED OAK TREES
VALLEY OAKS + LIVE OAKS

PROPOSED STREET TREES

PROPOSED FLOWERING ACCENT TREES

PROPOSED BIORETENTION TREES

MATERIAL LEGEND

ASPHALT

CONCRETE

CELL PAVERS

LOW HEDGE

BIORETENTION

GENERAL PLANTING

PRIVATE YARDS

MULCH

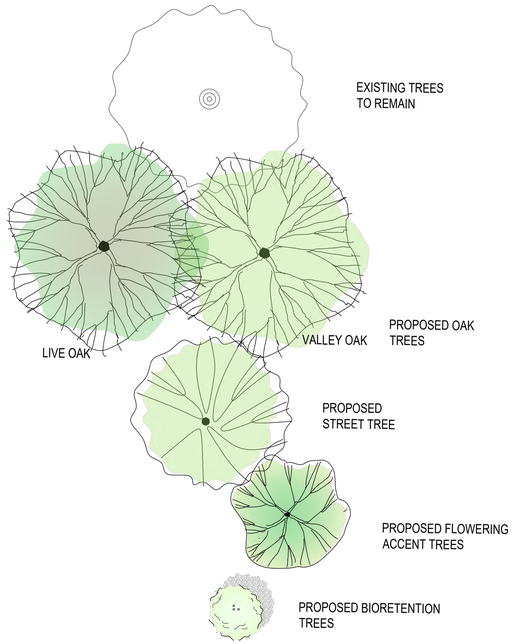
LIGHT FIXTURE

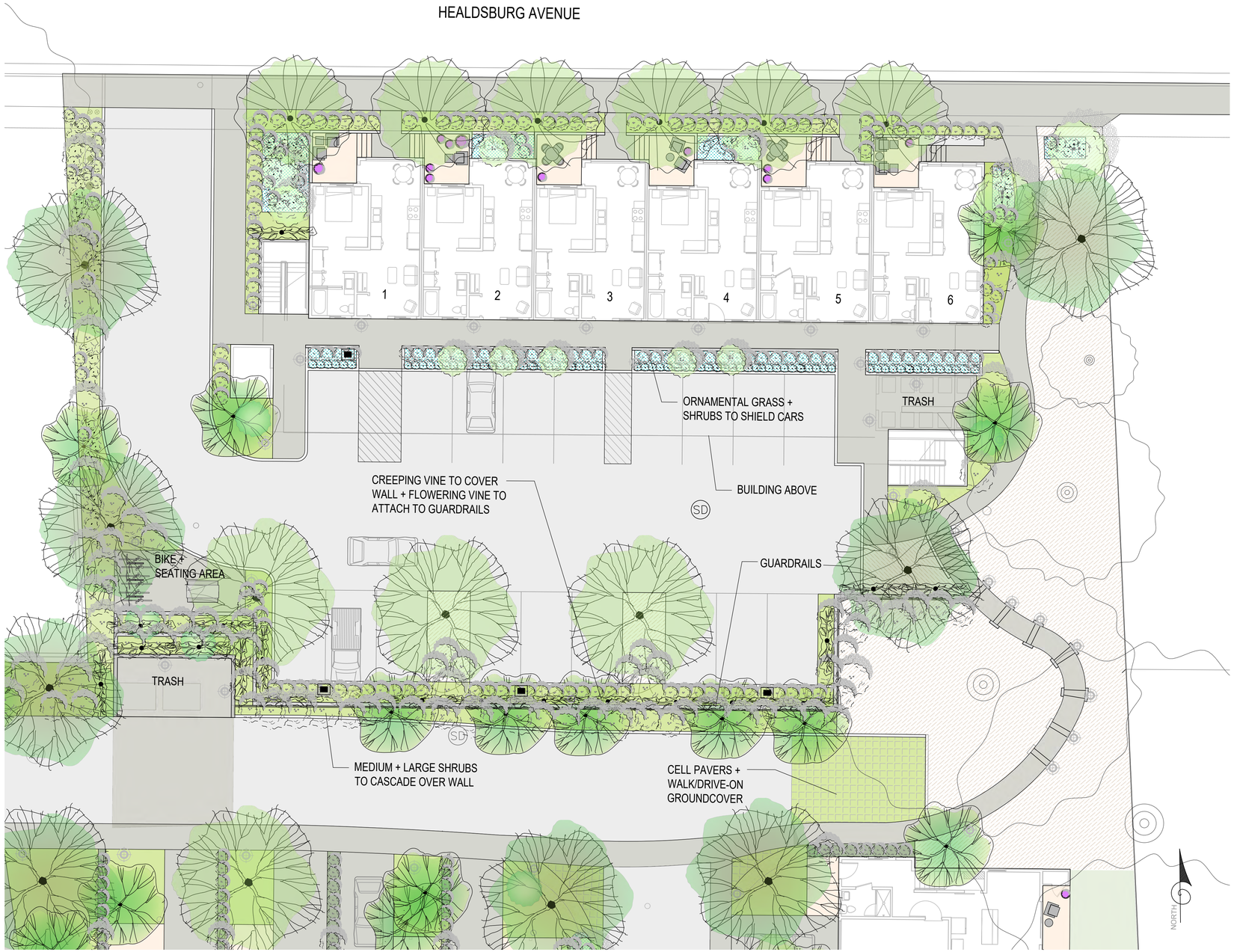
LIGHT FIXTURES

- TYPE A - BOLLARD
- TYPE B - BOLLARD
- TYPE C - PATH LIGHT
- TYPE D - WALL SCONCE
- ELECTRIC VEHICLE CHARGING STATION

DATE		SHEET TITLE	SHEET NUMBER	
12-11-2023	HEALDSBURG AVENUE SEBASTOPOL CALIFORNIA	OVERALL PRELIMINARY LANDSCAPE PLAN	L10`	ZAC Landscape Architects, Inc. 404 East D Street Petaluma, California 94952 (707) 696-2967 sr@zaclandscape.com

TREE LEGEND



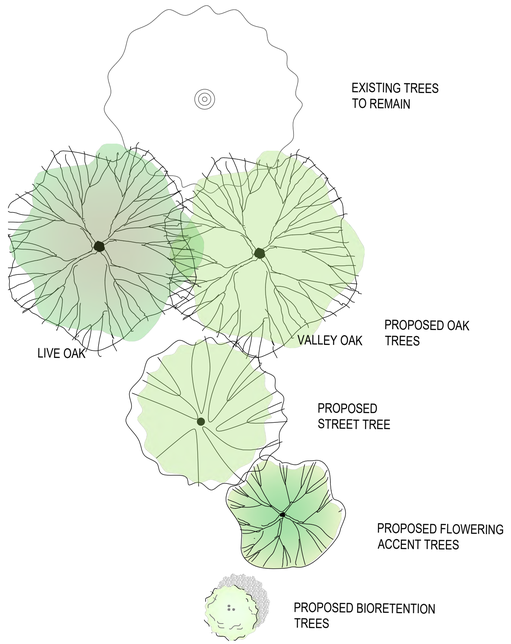


SCALE: 1"=10'

0' 5' 10' 20'

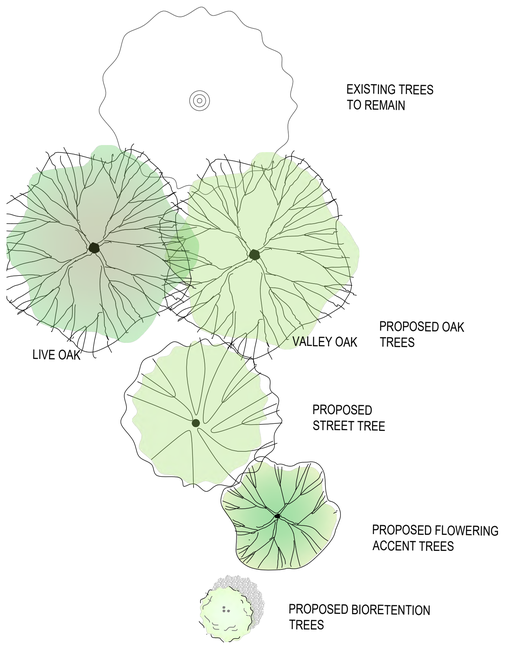
DATE		SHEET TITLE	SHEET NUMBER	
12-11-2023	HEALDSBURG AVENUE SEBASTOPOL CALIFORNIA	APARTMENTS PRELIMINARY LANDSCAPE PLAN	L11`	ZAC Landscape Architects, Inc. 404 East D Street Petaluma, California 94952 (707) 696-2967 sr@zaclandscape.com

TREE LEGEND

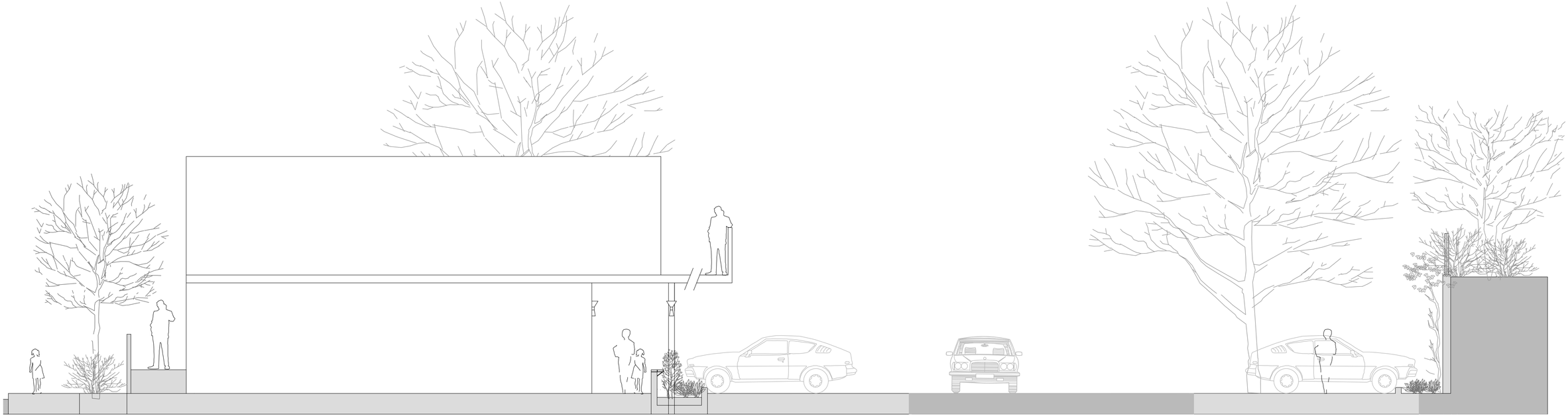


DATE	HEALDSBURG AVENUE	SHEET TITLE	SHEET NUMBER	ZAC Landscape Architects, Inc.
12-11-2023	SEBASTOPOL CALIFORNIA	TOWNHOUSES WEST PRELIMINARY LANDSCAPE PLAN	L12`	404 East D Street Petaluma, California 94952 (707) 696-2967 sr@zaclandscape.com

TREE LEGEND



DATE		SHEET TITLE	SHEET NUMBER	
12-11-2023	HEALDSBURG AVENUE SEBASTOPOL CALIFORNIA	TOWNHOUSES EAST PRELIMINARY LANDSCAPE PLAN	L1.3	ZAC Landscape Architects, Inc. 404 East D Street Petaluma, California 94952 (707) 696-2967 sr@zaclandscape.com



SEAT WALL at BIORETENTION

SCALE: 1/4"=1'-0"

0' 2' 4' 8'

DATE
12-11-2023

HEALDSBURG AVENUE
SEBASTOPOL CALIFORNIA

SHEET TITLE
LANDSCAPE SECTIONS

SHEET NUMBER
L14`

ZAC Landscape Architects, Inc.
404 East D Street
Petaluma, California 94952
(707) 696-2967


OAKS


BIORENTION TREE


STREET TREES at Healdsburg Avenue


ACCENT TREE


ACCENT TREES

TREES

CODE	BOTANICAL NAME	COMMON NAME	SIZE	DEER	EDIBLE	CA NATIVE	DROUGHT	WUCOLS	BIORETENTI	FIRE	GENERAL DESCRIPTION
				D	E	N	Dr				
CER OCC	CERCIS OCCIDENTALIS	WESTERN REDBUD	24" BOX	D		N	Dr	VL		F	DEC 10-18H1018W PT SHD MAG MULTI TRNK SEED FC NO WET SOILS
LAG BIL	LAGERSTROEMIA 'BILOXI'	PINK CRAPE MYRTLE	24" BOX	D			Dr	L		F	DEC 20W12W PALE PINK RED FALL
LAG MUS	LAGERSTROEMIA 'MUSKOGEE'	WHITE CRAPE MYRTLE	24" BOX	D			Dr	L		F	DEC 25H12W LAVENDER RED FALL
LAG NAT	LAGERSTROEMIA 'NATCHEZ'	WHITE CRAPE MYRTLE	24" BOX	D			Dr	L		F	DEC 25H12W WHT ORG-RED FALL
QUE AGR	QUERCUS AGRIFOLIA	CALIF. LIVE OAK	36" BOX	D		N	Dr	VL		F	EV 50-70H 50-70W RIPARIAN HIGH & BIORENTION
QUE LOB	QUERCUS LOBATA	VALLEY OAK	36" BOX	D		N	Dr	L		F	DEC 70H 70W YEL FALL CL RIPARIAN MID-HIGH & BIORETENTION

GENERAL PLANTING

CODE	BOTANICAL NAME	COMMON NAME	SIZE	D	E	N	Dr	WELCO RATING			GENERAL DESCRIPTION
ALY HUE	ALYOGYNE HUEGELII	BLUE HIBISCUS	5 GAL	D			Dr	L	B		EV 5-8H5-8W ROUGH GRN FOIL LILAC FLWR
AME ALN	AMELANCHIER ALNIFOLIA	WESTERN SERVICEBERRY	5 GAL		E	N		L	B		DEC 10H10W TO THICKETS LIGHT GREEN WHT FLRS RED-YLW FALL EDIBLE BLUEBERRIES MECDICINAL BARK WOOD USED FOR ARROWS
ARC EME	ARCTOSTAPHYLOS EMERALD CARPET	GROUND MANZANITA	1 GAL	D		N	Dr	L		F	EV8-14"H5W PINK BRGTH GREEN LVS
ART LEN	ARTIPLEX LENTIFORMIS	QUAIL BUSH	1 GAL	D		N	Dr	L		F	SEMI EV 4-10H4-12W CRM-WHT FLWR BLUE-SILVER LVS QUAIL, BIRD HEDGE WINDBREAK EROSION
CAL OCC	CALYCANTHUS OCCIDENTALIS	SPICEBUSH	5 GAL	D		N	Dr	L	B		DEC 4-12H 4-12W RED/BROWN FRAG brd
CAR NUD	CAREX NUDATA	CALIFORNIA BLACK SEDGE	1 GAL	D		N	Dr	L	B		2H2W SOFT TEX ORANGE IN FROST SHOWY BLK FOWER SPIKES
CAR CAL	CARPENTERIA CALIFORNICA	BUSH ANEMONE	5 GAL	D		N	Dr	M	B	F	EV 4-6H 4-6W SNGL WHT SPR-SUM PART SHADE
CIS HYB	CISTUS HYBRIDUS	WHITE ROCKROSE	I GAL				Dr	L		F	EV 3H3W FRGNT GREY GRN CRINKLY 2" LVS WHT FLRW YLW CENTER
CIS LAD	CISTUS LADANIFER	ROCKROSE	I GAL	D			Dr	L		F	EV 4H 4W WHT RED SPOT DK GRN FOL
COR COR C	CORYLUS CORNUTA CALIFORNICA	WESTERN HAZELNUT	5 GAL			N		L	B	F	DEC 5-12H 5-12W YEL WITHSTANDS DAMP SOIL EDIBLE NUTS
COT DAM L	COTONEASTER DAMMERII LOWFAST	BEARBERRY	1 GAL				Dr	L		F	EV 12"H10"W GREY GRN LVS WHT FLRW RED FRUIT BRANCHES ROOT
FIC PUM	FICUS PUMILA	CREEPING FIG	5 GAL					M			EV VINE CLINGS AND COVERS WOOD MASONRY METAL DEEP GREEN
HET ARB	HETEROMELES ARBUTIFOLIA	TOYON	I5 GAL	D		N	Dr	L		F	EV 6-18H 5-15W WHT PT SHD RED FRT BRD RIPARIAN
PEN EAT	PENSTEMON EATONII	EATONS PENSTEMON	I GAL	D		N	DR	L			EV 2H1.5W RE ATTRACTS BUT & HUM
PHI MEX	PHILADELPHUS MEXICANUS	EVERGREEN MOCK ORANGE	5 GAL			N	Dr	L			EV 6-15H VINING PT SHD WHT FRAG BANK COVER
RHA CAL	RHAMNUS CALIFORNICA	COFFEEBERRY	15 GAL			N	Dr	L		F	EV 5-8H 8-10W SUN-SHD RED BLU FRT BUT BRD
ROM COU	ROMNEYA COULTERI	MATILIJA POPPY	5 GAL	D		N	Dr	VL		F	8H 4W WHT FRA
ROS CAL	ROSA CALIFORNICA	CALIFORNIA ROSE	5 GAL			N	Dr	L	B	F	DEC 3-5H3-6W PIN RED FRT BRD
SAM MEX	SAMBUCUS CAERULEA N. MEXICANA	BLUE ELDERBERRY	5 GAL	D	E	N	Dr	L	B	F	DEC 10-25H8-20W LT GRN CRM WHT BLU/BLK FRUIT EDIBL ALONG STREAMS PRUNE TO KEEP COMPACT
TEU FRU	TEUCRIUM FRUITICANS	BUSH GERMANDER	5 GAL	D			Dr	L		F	EV 4-8H 4-8W LAV/BLU FRAG LEAV
WES FRT M	WESTRINGIA FRUTICOSA MORNING LIGHT	VARIGATED COAST ROSEMARY	5 GAL	D			Dr	L		F	EV 3H 3W WHT,GREY FOL W.WHT MARGINS
WIS FLO H	WISTERIA FLORIBUNDA 'HONBENI'	PURPLE JAPANESE WISTERIA	5 GAL					M		F	DEC 60' FRAG WHT 2' LONG


BIORENTION


GENERAL PLANTING

BIORETENTION

CODE	BOTANICAL NAME	COMMON NAME	SIZE	D	E	N	Dr	WELCO RATING			GENERAL DESCRIPTION
ACE CIR	ACER CIRCINATUM	VINE MAPLE	15 GAL	D		N		M	B	F	DE,5-35H ORG/RED FALL CLR SHADE RIPARIAN HIGH & BIORETENTION
ALY HUE	ALYOGYNE HUEGELII	BLUE HIBISCUS	5 GAL	D			Dr	L	B		EV 5-8H5-8W ROUGH GRN FOIL LILAC FLWR
AME ALN	AMELANCHIER ALNIFOLIA	WESTERN SERVICEBERRY	5 GAL		E	N		L	B		DEC 10H10W TO THICKETS LIGHT GREEN WHT FLRS RED-YLW FALL EDIBLE BLUEBERRIES MECDICINAL BARK WOOD USED FOR ARROWS TOOLS SHELTERS PROPOATE BY SEEDS HEGE-WINDBREAK
CAL OCC	CALYCANTHUS OCCIDENTALIS	SPICEBUSH	5 GAL	D		N	Dr	L	B		DEC 4-12H 4-12W RED/BROWN FRAG brd
CAR NUD	CAREX NUDATA	CALIFORNIA BLACK SEDGE	4" POT	D		N	Dr	L	B		2H2W SOFT TEX ORANGE IN FROST SHOWY BLK FOWER SPIKES
CAR CAL	CARPENTERIA CALIFORNICA	BUSH ANEMONE	5 GAL	D		N	Dr	M	B	F	EV 4-6H 4-6W SNGL WHT SPR-SUM PART SHADE
COR COR C	CORYLUS CORNUTA CALIFORNICA	WESTERN HAZELNUT	5 GAL			N		L	B	F	DEC 5-12H 5-12W YEL WITHSTANDS DAMP SOIL EDIBLE NUTS
ROS CAL	ROSA CALIFORNICA	CALIFORNIA ROSE	5 GAL			N	Dr	L	B	F	DEC 3-5H3-6W PIN RED FRT BRD
SAM MEX	SAMBUCUS CAERULEA N. MEXICANA	BLUE ELDERBERRY	5 GAL	D	E	N	Dr	L	B	F	DEC 10-25H8-20W LT GRN CRM WHT BLU/BLK FRUIT EDIBL ALONG STREAMS PRUNE TO KEEP COMPACT
SYM RIV	SYMPHORICARPUS RIVULARIS	SNOWBERRY	5 GAL	D		N	Dr	L	B	F	DEC 2-6H 3W WHT BERRY RIPARIAN

NOTES:

GENERAL PLANTING WILL ALSO INCLUDE PLANTS FROM BIORETENTION LIST

PLANTING PLAN TO COMPLY WITH THE CRITERIA OF THE WATER EFFICIENT LANDSCAPE ORDINANCE AND APPLY THEM FOR THE EFFICIENT USE OF WATER IN THE LANDSCAPE DESIGN PLAN AND IN THE IRRIGATION DESIGN PLAN.

BIORETENTION PLANTING TO COMPLY WITH BASMAA POST CONSTRUCTION MANUAL APPENDIX E 2019 UPDATE.

DATE
12-11-2023

HEALDSBURG AVENUE
SEBASTOPOL CALIFORNIA

SHEET TITLE
OVERALL PLANTING CONCEPT PLAN

SHEET NUMBER
L2.0

ZAC Landscape Architects, Inc.
404 East D Street
Petaluma, California 94952
(707) 696-2967
www.zaclandscape.com
sr@zaclandscape.com

FIXTURE TYPES

WAC Lighting
Ledge Path Light

FIXTURE TYPE C
-PATH LIGHT

pemcolighting.com/product
/enterprise-20-bollard/

FIXTURE TYPE A
-BOLLARD

PILOT LED Outdoor -
3000k

FIXTURE TYPE D
-WALL SCONCE

We-ef PSY-400 Bollard Series
Wider Bollard Base Design:
40" High x 7" Wide

FIXTURE TYPE B
-BOLLARD

ELECTRIC VEHICLE
CHARGING STATION
-DOUBLE-SIDED

NORTH

SCALE: 1"=20' 0' 10' 20' 40'

FIXTURE LEGEND

- A TYPE A - BOLLARD
- B TYPE B - BOLLARD
- C TYPE C - PATH LIGHT
- D TYPE D - WALL SCONCE
- EV ELECTRIC VEHICLE CHARGING STATION

DATE		SHEET TITLE	SHEET NUMBER	
12-11-2023	HEALDSBURG AVENUE SEBASTOPOL CALIFORNIA	OVERALL PRELIINARY LIGHTING PLAN`	L30`	ZAC Landscape Architects, Inc. 404 East D Street Petaluma, California 94952 (707) 696-2967 sr@zaclandscape.com

HORTICULTURAL
Associates

Consultants in Horticulture and Arboriculture

TREE INVENTORY REPORT

7621 Healdsburg Avenue
Sebastopol, CA

Prepared for:

Kathy Austin
AIA, Architect
179 SE Rice Way
Bend, Oregon 97702

Prepared by:

John C. Meserve
ISA Certified Arborist, WE #0478A
ISA Qualified Tree Risk Assessor/TRAQ
ASCA Qualified Tree and Plant Appraiser/TPAQ

July 17, 2023

HORTICULTURAL Associates
Consultants in Horticulture and Arboriculture
P.O Box 1261, Glen Ellen, CA 95442

July 17, 2023

Kathy Austin
Architect AIA
179 SE Rice Way
Bend, Oregon 97702

Re: Completed Tree Inventory Report, 7621 Healdsburg Avenue, Sebastopol, California

Kathy,

Attached you will find our completed Tree Inventory Report for the above noted site in Sebastopol. A total of 59 trees were evaluated and this includes all trees that are present which are 6 inches or greater in trunk diameter measured at 4.5' above grade and located within or overhanging the property boundaries.

All trees in this report were evaluated and documented for species, size, health, and structural condition. The Tree Inventory Chart also provides an assessment of expected impact for each tree based on the revised plan that was provided, as well as recommendations for preservation or removal. A Tree Location Plan shows the location and numbering sequence of all trees. Also included are a Fencing Detail, Pruning Guidelines, and Tree Preservation Guidelines.

This report is intended to be a basic inventory of trees present at this site, which includes a general review of tree health and structural condition. No in-depth evaluation has occurred on any tree, and assessment has included only external visual examination without probing, drilling, coring, root collar examination, root excavation, or dissecting any tree part. Failures, deficiencies, and problems may occur in these trees in the future, and this inventory in no way guarantees or provides a warranty for their condition. No other trees are included in this report. If other trees need to be included it your responsibility to provide that direction to us.

EXISTING SITE CONDITION SUMMARY

The project site consists of an infill property adjacent to a commercial building, apartments, and a residence.

EXISTING TREE SUMMARY

Species that are native to the site include Coast Live Oak and Black Oak.

Ornamental species include Pears and Fruitless Mulberry.

EXPECTED IMPACTS OF DEVELOPMENT

The following impacts are expected based on the tentative map that was reviewed:

(29) Trees will be removed

(18) Trees can be retained with a moderate or less impact

(7) Trees can be retained with a significant impact

(5) Fruit trees removed without requiring mitigation

This site poses significant constraints on the effective preservation of many trees. There are seven trees that will be significantly impacted, and there will be a serious effort to preserve and protect these trees to the greatest extent possible given site constraints. These efforts will include pre-construction enhancement of health and vitality as well as active post construction management to offset the impacts of construction.

Please feel free to contact me if you have questions regarding this report.

Regards,

John C. Meserve
ISA Certified Arborist, WE #0478A
ISA Qualified Tree Risk Assessor/TRAQ
ASCA Qualified Tree and Plant Appraiser/TPAQ

TREE INVENTORY CHART

TREE INVENTORY
7621 Healdsburg Avenue
Sebastopol, CA

July 17, 2022

Tree #	Species	Common Name	Trunk (dbh ± inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Impact	Recommendations
220	*Quercus agrifolia*	Coast Live Oak	5+6+6+8	18	12	4	3	0	1, 6, 7, 8, 9,
221	*Pyrus communis*	Pear	4+5+6	12	8	2	2	3	2, 3
222	*Quercus agrifolia*	Coast Live Oak	9	15	8	a	3	3	2
223	*Quercus agrifolia*	Coast Live Oak	14	20	16	4	3	3	2
224	*Quercus agrifolia*	Coast Live Oak	25	40	24	4	3	3	2
225	*Quercus agrifolia*	Coast Live Oak	8+11	35	18	4	3	3	2
226	*Quercus agrifolia*	Coast Live Oak	3+15	45	30	4	2	3	2, 3
227	*Quercus agrifolia*	Coast Live Oak	12+29	45	30	4	3	3	2
228	*Quercus agrifolia*	Coast Live Oak	27	40	30	4	3	3	2
229	*Quercus agrifolia*	Coast Live Oak	32	45	30	4	3	3	2
230	*Quercus agrifolia*	Coast Live Oak	20+30	45	30	4	3	3	2

Tree #	Species	Common Name	Trunk (dbh ± inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Impact	Recommendations
231	*Quercus agrifolia*	Coast Live Oak	11+12+15	45	20	4	2	3	2
232	*Quercus agrifolia*	Coast Live Oak	10+21+26+26+38	45	35	4	3	3	2
233	*Quercus agrifolia*	Coast Live Oak	10+16	40	21	4	3	3	2
234	*Quercus agrifolia*	Coast Live Oak	9	40	15	4	3	3	2
235	*Quercus agrifolia*	Coast Live Oak	19	45	22	4	3	3	2
236	*Quercus agrifolia*	Coast Live Oak	18+21	45	30	4	2	3	2
237	*Quercus agrifolia*	Coast Live Oak	7+18	35	22	4	3	1	1, 6, 7, 8, 9, 10, 11, 12
238	*Quercus agrifolia*	Coast Live Oak	19	45	18	4	3	1	1, 6, 7, 8, 9
239	*Quercus agrifolia*	Coast Live Oak	13	30	18	2	2	2	3
240	*Quercus agrifolia*	Coast Live Oak	12+17+19	40	25	4	3	2	1, 6, 7, 8, 9
241	*Quercus agrifolia*	Coast Live Oak	7+7	22	12	4	3	2	1, 6, 7, 8, 9

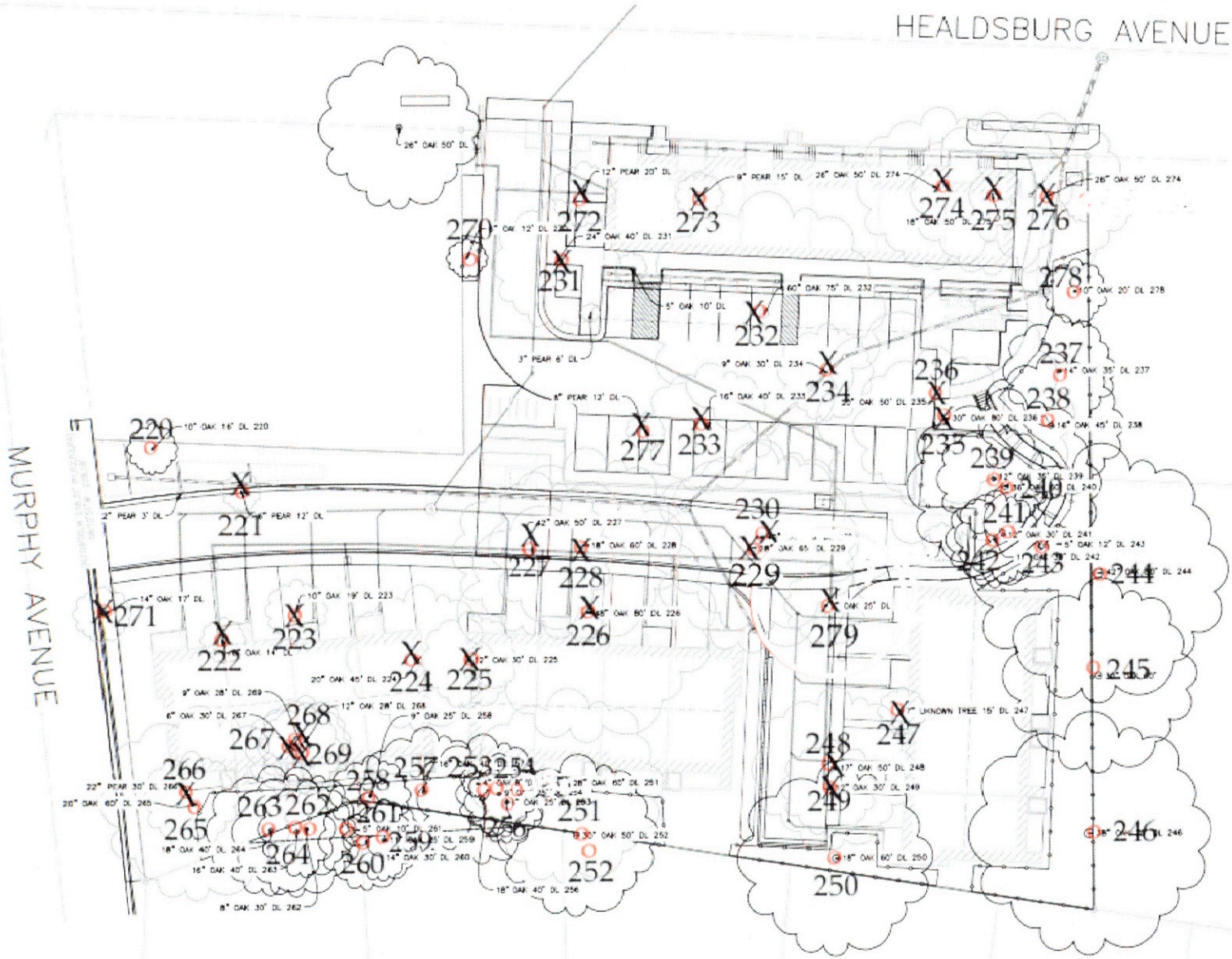
Tree #	Species	Common Name	Trunk (dbh ± inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Impact	Recommendations
242	*Quercus kelloggii*	Black Oak	12	35	17	4	3	2	1, 6, 7, 8, 9
243	*Quercus agrifolia*	Coast Live Oak	5	14	10	3	3	3	1, 6, 7, 8, 9
244	*Quercus kelloggii*	Black Oak	30+36	50	40	4	2	2	1, 6, 7, 8, 9, 10, 11, 12
245	*Quercus agrifolia*	Coast Live Oak	24+26	50	35	4	2	3	1, 6, 7, 8, 9, 10, 11, 12
246	*Quercus agrifolia*	Coast Live Oak	44	50	35	4	3	3	1, 6, 7, 8, 9, 10, 11, 12
247	*Morus alba*	Fruitless Mulberry	7	10	8	2	2	3	2, 3
248	*Quercus kelloggii*	Black Oak	19	40	22	4	3	3	2
249	*Quercus kelloggii*	Black Oak	12	35	20	4	3	3	2
250	*Quercus kelloggii*	Black Oak	14+14	35	24	3	3	3	1, 6, 7, 8, 9, 10, 11, 12
251	*Quercus agrifolia*	Coast Live Oak	30	50	30	4	3	2	1, 6, 7, 8, 9, 10, 11, 12
252	*Quercus agrifolia*	Coast Live Oak	24+24	45	28	3	3	1	1, 6, 7, 8, 9, 10, 11, 12

Tree #	Species	Common Name	Trunk (dbh ± inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Impact	Recommendations
253	*Quercus agrifolia*	Coast Live Oak	6	18	10	3	3	3	1, 6, 7, 8, 9, 10, 11, 12
254	*Quercus agrifolia*	Coast Live Oak	11	40	16	4	3	3	1, 6, 7, 8, 9, 10, 11, 12
255	*no tree 355*	x	x	x	x	x	x	x	x
256	*Quercus agrifolia*	Coast Live Oak	21	50	26	4	2	3	1, 6, 7, 8, 9, 10, 11, 12
257	*Quercus agrifolia*	Coast Live Oak	16	40	20	4	3	3	1, 6, 7, 8, 9, 10, 11, 12
258	*Quercus agrifolia*	Coast Live Oak	8+9	35	16	4	3	3	1, 6, 7, 8, 9, 10, 11, 12
259	*Quercus agrifolia*	Coast Live Oak	12	40	14	4	3	1	1, 6, 7, 8, 9
260	*Quercus agrifolia*	Coast Live Oak	14	40	18	4	3	0	1, 6
261	*Quercus agrifolia*	Coast Live Oak	5	18	8	2	2	1	1, 6, 7, 8, 9
262	*Quercus agrifolia*	Coast Live Oak	6	12	10	3	3	1	1, 6, 7, 8, 9
263	*Quercus agrifolia*	Coast Live Oak	16+16	40	30	4	3	1	1, 6, 7, 8, 9

Tree #	Species	Common Name	Trunk (dbh ± inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Impact	Recommendations
264	*Quercus agrifolia*	Coast Live Oak	7+22	45	22	3	3	1	1, 6, 7, 8, 9
265	*Quercus agrifolia*	Coast Live Oak	23	50	24	4	3	3	1, 6, 7, 8, 9, 10, 11, 12
266	*Pyrus communis*	Pear	5+5+6+7+12	15	10	2	3	3	3, 13
267	*Quercus kelloggii*	Black Oak	6	25	15	4	3	3	2
268	*Quercus agrifolia*	Coast Live Oak	14	35	16	4	3	3	2
269	*Quercus kelloggii*	Black Oak	9	35	16	4	3	3	2
270	*Quercus agrifolia*	Coast Live Oak	5+6	15	10	4	3	2	1, 6, 7, 8, 9, 10, 11, 12
271	*Quercus agrifolia*	Coast Live Oak	15	22	14	4	3	3	2
272	*Pyrus communis*	Pear	6+9+10+10+10	15	10	1	2	3	2, 3, 13
273	*Pyrus communis*	Pear	5+5+6+6+6	15	10	1	2	3	2, 3, 13
274	*Quercus agrifolia*	Coast Live Oak	30	22	35	3	1	3	2, 3

Tree #	Species	Common Name	Trunk (dbh ± inches)	Height (± feet)	Radius (± feet)	Health 1 - 5	Structure 1 - 4	Expected Impact	Recommendations
275	*Quercus agrifolia*	Coast Live Oak	10+20	40	35	4	3	3	2
276	*Quercus agrifolia*	Coast Live Oak	23	40	35	4	1	3	1, 6, 7, 8, 9, 10, 11, 12
277	*Pyrus communis*	Pear	3+4+5	12	6	4	3	3	2, 13
278	*Quercus agrifolia*	Coast Live Oak	11	24	12	2	2	0	1, 6
279	*Quercus agrifolia*	Coast Live Oak	8	25	14	4	3	3	2

TREE LOCATION PLAN



TREE LOCATION AND NUMBERING PLAN
7621 HEALDSBURG AVENUE
SEBASTOPOL, CA

KEY TO TREE INVENTORY CHART

KEY TO TREE INVENTORY CHART

7621 Healdsburg Avenue
Healdsburg, CA

Tree Number

Each tree has been identified in the field with an aluminum tag and reference number. Tags are attached to the trunk at approximately eye level. The *Tree Location Plan* illustrates the location of each numbered tree.

Species

Each tree has been identified by genus, species and common name. Many species have more than one common name.

Trunk

Each trunk has been measured or estimated, in inches, to document its diameter, at 4.5 feet above adjacent grade. Trunk diameter is a good indicator of age, and is commonly used to determine mitigation replacement requirements.

Height

Height is estimated in feet, using visual assessment.

Radius

Radius is estimated in feet, using visual assessment. Since many canopies are asymmetrical, it is not uncommon for a radius estimate to be an average of the canopy size.

Health

The following descriptions are used to rate the health of a tree. Trees with a rating of 4 or 5 are very good candidates for preservation and will tolerate more construction impacts than trees in poorer condition. Trees with a rating of 3 may or may not be good candidates for preservation, depending on the species and expected construction impacts. Trees with a rating of 1 or 2 are generally poor candidates for preservation.

(5) Excellent - health and vigor are exceptional, no pest, disease, or distress symptoms.

(4) Good - health and vigor are average, no significant or specific distress symptoms, no significant pest or disease.

(3) Fair - health and vigor are somewhat compromised, distress is visible, pest or disease may be present and affecting health, problems are generally correctable.

(2) Marginal - health and vigor are significantly compromised, distress is highly visible and present to the degree that survivability is in question.

(1) Poor - decline has progressed beyond the point of being able to return to a healthy condition again. Long-term survival is not expected. This designation includes dead trees.

Structure

The following descriptions are used to rate the structural integrity of a tree. Trees with a rating of 3 or 4 are generally stable, sound trees which do not require significant pruning, although cleaning, thinning, or raising the canopy might be desirable. Trees with a rating of 2 are generally poor candidates for preservation unless they are preserved well away from improvements or active use areas. Significant time and effort would be required to reconstruct the canopy and improve structural integrity. Trees with a rating of 1 are hazardous and should be removed.

(4) Good structure - minor structural problems may be present which do not require corrective action.

(3) Moderate structure - normal, typical structural issues which can be corrected with pruning.

(2) Marginal structure - serious structural problems are present which may or may not be correctable with pruning, cabling, bracing, etc.

(1) Poor structure - hazardous structural condition which cannot be effectively corrected with pruning or other measures, may require removal depending on location and the presence of targets.

Development Impacts

Considering the proximity of construction activities, type of activities, tree species, and tree condition - the following ratings are used to estimate the amount of impact on tree health and stability. Most trees will tolerate a (1) rating, many trees could tolerate a (2) rating with careful consideration and mitigation, but trees with a (3) rating are poor candidates for preservation due to their very close proximity to construction or because they are located within the footprint of construction and cannot be preserved.

(3) A significant impact on long term tree integrity can be expected as a result of proposed development.

(2) A moderate impact on long term tree integrity can be expected as a result of proposed development.

(1) A minor impact on long term tree integrity can be expected as a result of proposed development.

(0) No impact expected if protected per recommendations.

Suitability for Preservation

(4) Excellent suitability for preservation based on existing condition

(3) Good suitability for preservation based on existing condition

(2) Fair suitability for preservation based on existing condition

(1). Very poor suitability for preservation based on existing condition

Recommendations

Recommendations are provided for removal or preservation. For those being preserved, protection measures and mitigation procedures to offset impacts and improve tree health are provided.

(1) Preservation appears to be possible.

(2) Removal is required due to significant development impacts.

(3) Removal is required due to poor health or hazardous structure.

(4) Removal is required due to significant development impacts and poor existing condition.

(5) Removal is recommended due to poor species characteristics.

(6) Install temporary protective fencing at the edge of the dripline, or edge of approved construction, prior to beginning grading or construction. Maintain fencing in place for duration of all construction activity in the area.

(7) Maintain existing grade within the fenced portion of the dripline. Route drainage swales and all underground work outside the dripline where possible.

(8) Place a 4" layer of chipped bark mulch over the soil surface within the fenced dripline prior to installing temporary fencing. Maintain this layer of mulch throughout construction.

(9) Prune to clean the canopy, per International Society of Arboriculture pruning standards.

(10) The impacts of adjacent grading cannot be mitigated due to design constraints.

(11) Excavation will be required within the TPZ and the dripline for development. Excavation within the TPZ of any type must adhere to the following guidelines:

All roots encountered that are 1 inch or larger in diameter must be cleanly cut as they are encountered by excavating equipment.

Roots may not be ripped from the ground and then trimmed. They must be trimmed as encountered and this will require the use of a ground man working with a suitable power tool.

Pruned and exposed roots greater than 1inches in diameter must be protected from desiccation if left exposed for more than 24 hours. Cover cut roots with heavy cloth, burlap, used carpeting, or similar material that has been soaked in water, until trench or excavation has been backfilled.

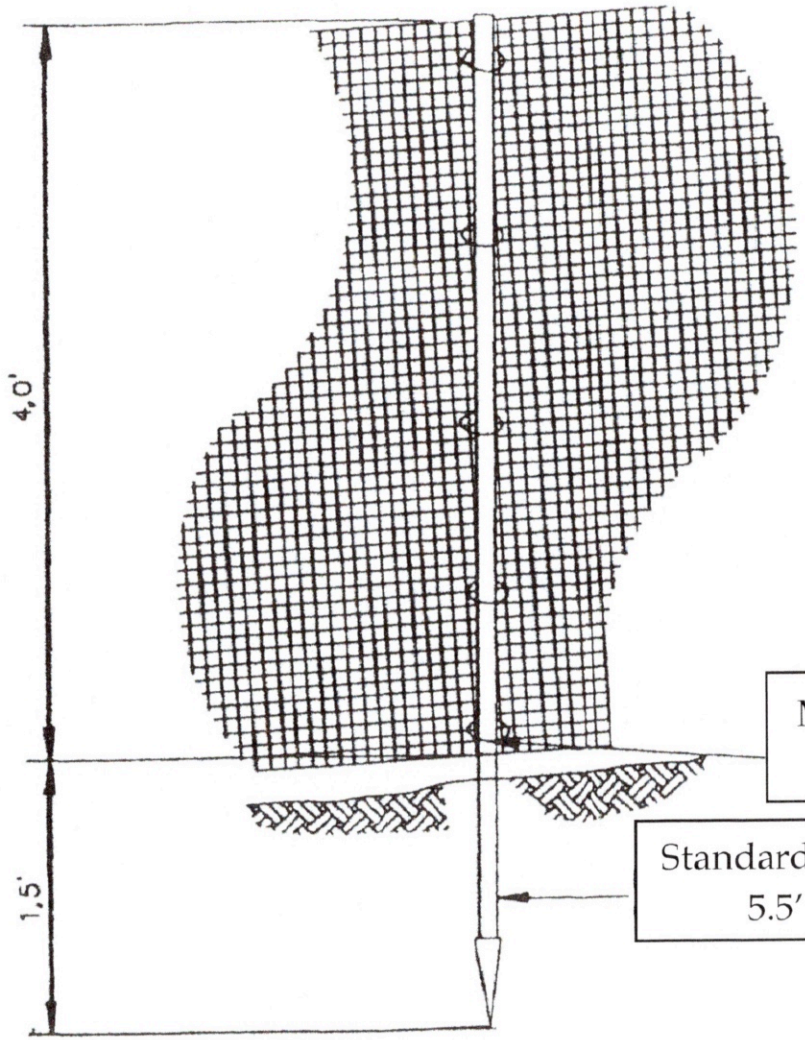
If excavation impacts more than 20% of the defined TPZ then supplemental irrigation may be required to offset loss of roots. Excavation in this case should be directed by the project arborist who will determine whether mitigation is required, when, and how.

Any excavation within the defined TPZ will require that the tree be monitored on a monthly basis by the project arborist for the duration of construction and for two years beyond completion of construction. Monitoring may determine other mitigation measures that may be required to offset root loss or damage.

(12) Post construction remediation will be required for any chance of survival including mulching and irrigation during the growing season.

(13) Fruit tree exempt from preservation or mitigation

TREE FENCING DETAIL



NOTE
Metal Wire Tree Protection Fencing

Minimum 4-ft high steel welded wire fencing with mesh size 2-in x 4-in, or arborist approved wire fence substitute. Cut and shape as needed for sloping terrain

Metal tie wire, flip tie, or equivalent, 5 per post

Standard farm quality metal 'T' post, 5.5' tall, placed 8' on center

METAL WIRE TREE PROTECTION FENCING

TREE PRESERVATION GUIDELINES

TREE PRESERVATION GUIDELINES
7621 Healdsburg Avenue
Sebastopol, CA

INTRODUCTION

Great care must be exercised when development is proposed in the vicinity of established trees of any type. The trees present at this site require specialized protection techniques during all construction activities to minimize negative impact on their long term health and vigor. The area immediately beneath and around canopy driplines is especially critical, and the specifications that follow are established to protect short and long term tree integrity. The purpose of this specification is therefore to define the procedures that must be followed during any and all phases of development in the immediate vicinity of designated protected trees.

Established, mature trees respond in a number of different ways to the disruption of their natural conditions. Change of grade within the root system area or near the root collar, damage to the bark of the trunk, soil compaction above the root system, root system reduction or damage, or alteration of summer soil moisture levels may individually or collectively cause physiological stress leading to tree decline and death. The individual impacts of these activities may cause trees to immediately exhibit symptoms and begin to decline, but more commonly the decline process takes many years, with symptoms appearing slowly and over a period of time. Trees may not begin to show obvious signs of decline from the negative impacts of construction until many years after construction is completed. It is not appropriate to wait for symptoms to appear, as this may be too late to correct the conditions at fault and to halt decline.

It is therefore critical to the long-term health of all protected trees that a defined protection program be established before beginning any construction activity where protected trees are found. Once incorporated at the design level, it is mandatory that developers, contractors, and construction personnel understand the critical importance of these guidelines, and the potential penalties that will be levied if they are not fully incorporated at every stage of development.

The following specifications are meant to be utilized by project managers and those supervising any construction in the vicinity of protected trees including grading contractors, underground contractors, all equipment operators, construction personnel, and landscape contractors. Questions which arise, or interpretation of specifications as they apply to specific site activities, must be referred to the project arborist as they occur.

Horticultural Associates
P.O. Box 1261
Glen Ellen, CA 95442
707-935-3911

TREE PROTECTION ZONE

1. The canopy dripline is illustrated on the Improvement Plans and represents the area around each tree, or group of trees, which must be protected at all times with tree protection fencing.

2. No encroachment into the dripline is allowed at any time without approval from the project arborist, and unauthorized entry may be subject to civil action and penalties.

3. The dripline will be designated by the project arborist at a location determined to be adequate to ensure long term tree viability and health. This is to occur prior to installation of fencing and in conjunction with the fencing contractor

TREE PROTECTION FENCING

1. Prior to initiating any construction activity on a construction project, including demolition or grading, temporary protective fencing shall be installed at each site tree, or group of trees. Fencing shall be located at the dripline designated by the project arborist and generally illustrated on the Improvement Plans.

2. Fencing shall be minimum 4' height at all locations, and shall form a continuous barrier without entry points around all individual trees, or groups of trees. Barrier type fencing such as *Tensar* plastic fencing is recommended, but any fencing system that adequately prevents entry will be considered for approval by the project arborist. The use of post and cable fencing is not acceptable, however.

3. Fencing shall be installed tightly between steel fence posts (standard quality farm 'T' posts work well) placed no more than 8 feet on center. Fencing shall be attached to each post at 5 locations with plastic electrical ties, metal tie wire, or flip ties. See attached fencing detail.

4. Fencing shall serve as a barrier to prevent encroachment of any type by construction activities, equipment, materials storage, or personnel.

5. All encroachment into the fenced dripline must be approved and supervised by the project arborist. Approved dripline encroachment may require

additional mitigation or protection measures that will be determined by the project arborist at the time of the request.

6. Contractors and subcontractors shall direct all equipment and personnel to remain outside the fenced area at all times until project is complete, and shall instruct personnel and sub-contractors as to the purpose and importance of fencing and preservation.

7. Fencing shall be upright and functional at all times from start to completion of project. Fencing shall remain in place and not be moved or removed until all construction activities at the site are completed.

TREE PRUNING AND TREATMENTS

1. All recommendations for pruning or other treatments must be completed prior to acceptance of the project. It is strongly recommended that pruning be completed prior to the start of grading to facilitate optimum logistics and access.

2. All pruning shall be conducted in conformance with International Society of Arboriculture pruning standards, and all pruning must occur by, or under the direct supervision of, an arborist certified by the International Society of Arboriculture.

GRADING AND TRENCHING

1. Any construction activity that necessitates soil excavation in the vicinity of preserved trees shall be avoided where possible, or be appropriately mitigated under the guidance of the project arborist. All contractors must be aware at all times that specific protection measures are defined, and non conformance may generate stop-work orders.

2. The designated dripline is defined around all site trees to be preserved. Fences protect the designated areas. No grading or trenching is to occur within this defined area unless so designated by the Improvement Plan, and where designated shall occur under the direct supervision of the project arborist.

3. Trenching should be routed around the dripline. Where trenching has been designated within the dripline, utilization of underground technology to bore, tunnel or excavate with high-pressure air or water will be specified. Hand digging will be generally discouraged unless site conditions restrict the use of alternate technology.

4. All roots greater than one inch in diameter shall be cleanly hand-cut as they are encountered in any trench or during any grading activity. The tearing of roots by equipment shall not be allowed. Mitigation treatment of pruned roots shall be specified by the project arborist as determined by the degree of root pruning, location of root pruning, and potential exposure to desiccation. No pruning paints or sealants shall be used on cut roots.

5. Where significant roots are encountered mitigation measures such as supplemental irrigation and/or organic mulches may be specified by the project arborist to offset the reduction of root system capacity.

6. Retaining walls are effective at holding grade changes outside the area of the dripline and are recommended where necessary. Retaining walls shall be constructed in post and beam or drilled pier construction styles where they are necessary near or within a dripline.

7. Grade changes outside the dripline, or those necessary in conjunction with retaining walls, shall be designed so that drainage water of any type or source is not diverted toward or around the root crown in any manner. Grade shall drain away from root crown at a minimum of 2%. If grading toward the root collar is unavoidable, appropriate surface and/or subsurface drain facilities shall be installed so that water is effectively diverted away from root collar area.

8. Grade reduction within the designated dripline shall be generally discouraged, and where approved, shall be conducted only after careful consideration and coordination with the project arborist.

9. Foundations of all types within the dripline shall be constructed using design techniques that eliminate the need for trenching into natural grade. These techniques might include drilled piers, grade beams, bridges, or cantilevered structures. Building footprints should generally be outside the dripline whenever possible.

DRAINAGE

The location and density of native trees may be directly associated with the presence of naturally occurring water, especially ephemeral waterways. Project design, especially drainage components, should take into consideration that these trees may begin a slow decline if this naturally present association with water is changed or eliminated.

TREE DAMAGE

1. Any form of tree damage which occurs during the demolition, grading, or construction process shall be evaluated by the project arborist. Specific mitigation measures will be developed to compensate for or correct the damage. Fines and penalties may also be levied.

2. Measures may include, but are not limited to, the following:

- pruning to remove damaged limbs or wood
- bark scoring to remove damaged bark and promote callous formation
- alleviation of compaction by lightly scarifying the soil surface
- installation of a specific mulching material
- supplemental irrigation during the growing season for up to 5 years
- treatment with specific amendments intended to promote health, vigor, or root growth
- vertical mulching or soil fracturing to promote root growth
- periodic post-construction monitoring at the developer's expense
- tree replacement, or payment of the established appraised value, if the damage is so severe that long term survival is not expected.

3. Any tree that is significantly damaged and whose survivability is threatened, due to negligence by any contractor, shall be appraised using the Trunk Formula Method provided in the 9th Edition of the Guide For Plant Appraisal. This appraisal value will be the basis for any fines levied on the offending contractor.

MULCHING

1. Trees will benefit from the application of a 4 inch layer of chipped bark mulch over the soil surface within the Tree Protection Zone. Ideal mulch material is a chipped bark containing a wide range of particle sizes. Bark mulches composed of shredded redwood, bark screened for uniformity of size, dyed bark, or chipped lumber will not function as beneficially. All trees that are expected to be

impacted in any way by project activities shall have mulch placed prior to the installation of protection fencing.

2. Mulch should be generated from existing site trees that are removed or pruned as part of the project. Much brought onto the site from an outside source must be from trees that are verified to be free of the Sudden Oak Death pathogen *Phytophtora ramorum*.

Horticultural Associates
P.O. Box 1261
Glen Ellen, CA 95442
707-935-3911

ISA PRUNING STANDARDS

WESTERN CHAPTER

ISA

PRUNING STANDARDS

Purpose:

Trees and other woody plants respond in specific and predictable ways to pruning and other maintenance practices. Careful study of these responses has led to pruning practices which best preserve and enhance the beauty, structural integrity, and functional value of trees.

In an effort to promote practices which encourage the preservation of tree structure and health, the W.C. ISA Certification Committee has established the following Standards of Pruning for Certified Arborists. The Standards are presented as working guidelines, recognizing that trees are individually unique in form and structure, and that their pruning needs may not always fit strict rules. The Certified Arborist must take responsibility for special pruning practices that vary greatly from these Standards.

I. Pruning Techniques

A. A thinning cut removes a branch at its point of attachment or shortens it to a lateral large enough to assume the terminal role. Thinning opens up a tree, reduces weight on heavy limbs, can reduce a tree's height, distributes ensuing invigoration throughout a tree and helps retain the tree's natural shape. Thinning cuts are therefore preferred in tree pruning.

When shortening a branch or leader, the lateral to which it is cut should be at least one-half the diameter of the cut being made. Removal of a branch or leader back to a sufficiently large lateral is often called "drop crotching."

B. A heading cut removes a branch to a stub, a bud or a lateral branch not large enough to assume the terminal role. Heading cuts should seldom be used because vigorous, weakly attached upright sprouts are forced just below such cuts, and the tree's natural form is altered. In some situations, branch stubs die or produce only weak sprouts.

C. When removing a live branch, pruning cuts should be made in branch tissue just outside the branch bark ridge and collar, which are trunk tissue. *(Figure 1)* If no collar is visible, the angle of the cut should approximate the angle formed by the branch bark ridge and the trunk. *(Figure 2)*

D. When removing a dead branch, the final cut should be made outside the collar of live callus tissue. If the collar has grown out along the branch stub, only the dead stub should be removed, the live collar should remain intact, and uninjured. *(Figure 3)*

E. When reducing the length of a branch or the height of a leader, the final cut should be made just beyond (without violating) the branch bark ridge of the branch being cut to. The cut should approximately bisect the angle formed by the branch bark ridge and an imaginary line perpendicular to the trunk or branch cut. *(Figure 4)*

F. A goal of structural pruning is to maintain the size of lateral branches to less than three-fourths the diameter of the parent branch or trunk. If the branch is codominant or close to the size of the parent branch, thin the branch's foliage by 15% to 25%, particularly near the terminal. Thin the parent branch less, if at all. This will allow the parent branch to grow at a faster rate, will reduce the weight of the lateral branch, slow its total growth, and develop a stronger branch attachment. If this does not appear appropriate, the branch should be completely removed or shortened to a large lateral. *(Figure 5)*

G. On large-growing trees, except whorl-branching conifers, branches that are more than one-third the diameter of the trunk should be spaced along the trunk at least 18 inches apart, on center. If this is not possible because of the present size of the tree, such branches should have their foliage thinned 15% to 25%, particularly near their terminals. *(Figure 6)*

H. Pruning cuts should be clean and smooth with the bark at the edge of the cut firmly attached to the wood.

I. Large or heavy branches that cannot be thrown clear, should be lowered on ropes to prevent injury to the tree or other property.

J. Wound dressings and tree paints have not been shown to be effective in preventing or reducing decay. They are therefore not recommended for routine use when pruning.

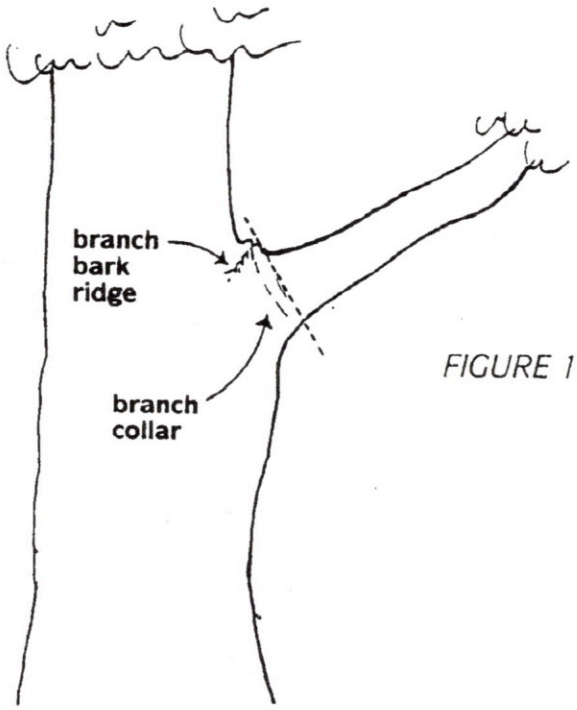


FIGURE 1. When removing a branch, the final cut should be just outside the branch bark ridge and collar.

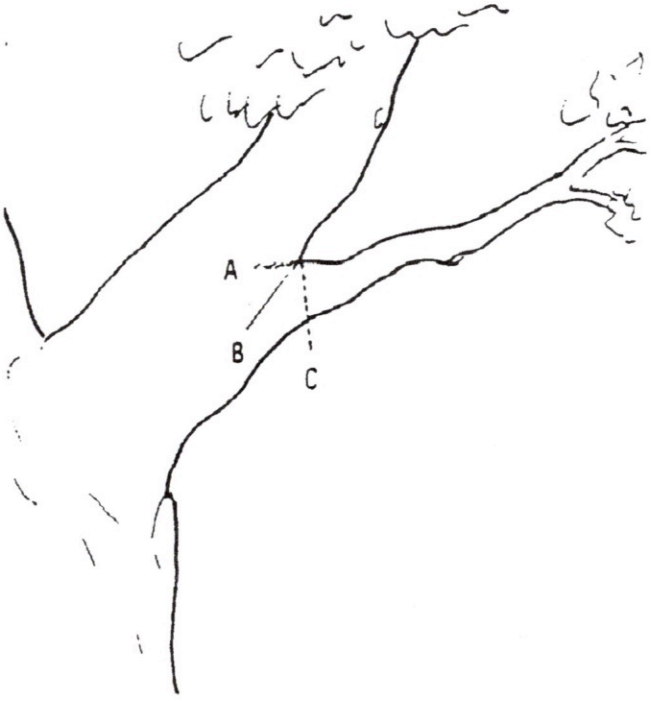


FIGURE 2. In removing a limb without a branch collar, the angle of the final cut to the branch bark ridge should approximate the angle the branch bark ridge forms with the limb. Angle AB should equal Angle BC.

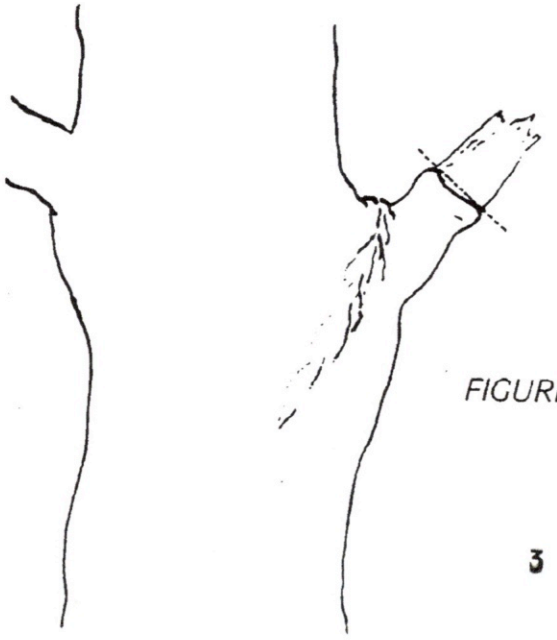


FIGURE 3. When removing a dead branch, cut outside the callus tissue that has begun to form around the branch.

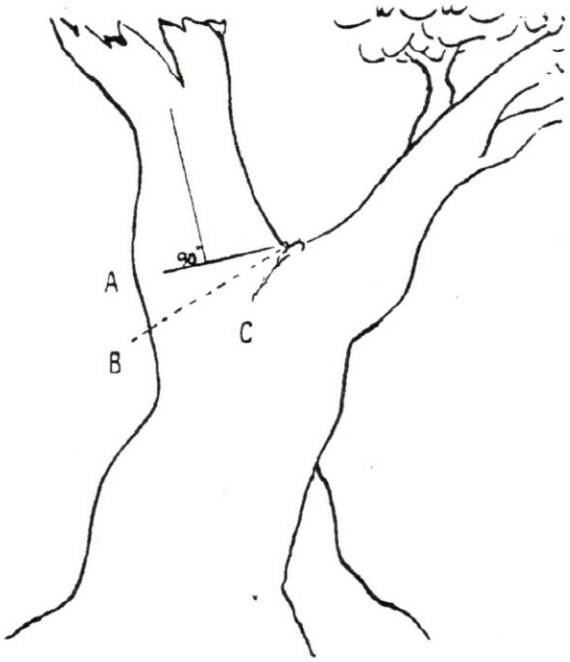


FIGURE 4. *In removing the end of a limb to a large lateral branch, the final cut is made along a line that bisects the angle between the branch bark ridge and a line perpendicular to the limb being removed. Angle AB is equal to Angle BC.*

FIGURE 5. *A tree with limbs tending to be equal-sized, or codominant. Limbs marked B are greater than ¾ the size of the parent limb A. Thin the foliage of branch B more than branch A to slow its growth and develop a stronger branch attachment.*

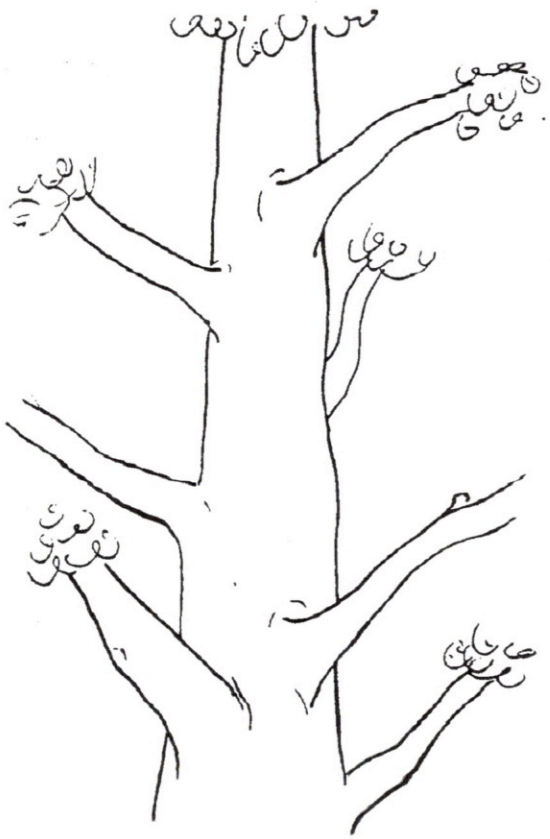


FIGURE 6. *Major branches should be well spaced both along and around the stem.*

II. Types of Pruning — Mature Trees

A. CROWN CLEANING

Crown cleaning or cleaning out is the removal of dead, dying, diseased, crowded, weakly attached, and low-vigor branches and watersprouts from a tree crown.

B. CROWN THINNING

Crown thinning includes crown cleaning and the selective removal of branches to increase light penetration and air movement into the crown. Increased light and air stimulates and maintains interior foliage, which in turn improves branch taper and strength. Thinning reduces the wind-sail effect of the crown and the weight of heavy limbs. Thinning the crown can emphasize the structural beauty of trunk and branches as well as improve the growth of plants beneath the tree by increasing light penetration. When thinning the crown of mature trees, seldom should more than one-third of the live foliage be removed.

At least one-half of the foliage should be on branches that arise in the lower two-thirds of the trees. Likewise, when thinning laterals from a limb, an effort should be made to retain inner lateral branches and leave the same distribution of foliage along the branch. Trees and branches so pruned will have stress more evenly distributed throughout the tree or along a branch.

An effect known as "lion's-tailing" results from pruning out the inside lateral branches. Lion's-tailing, by removing all the inner foliage, displaces the weight to the ends of the branches and may result in sunburned branches, water-sprouts, weakened branch structure and limb breakage.

C. CROWN REDUCTION

Crown reduction is used to reduce the height and/or spread of a tree. Thinning cuts are most effective in maintaining the structural integrity and natural form of a tree and in delaying the time when it will need to be pruned again. The lateral to which a branch or trunk is cut should be at least one-half the diameter of the cut being made.

D. CROWN RESTORATION

Crown restoration can improve the structure and appearance of trees that have been topped or severely pruned using heading cuts. One to three sprouts on main branch stubs should be selected to reform a more natural appearing crown. Selected vigorous sprouts may need to be thinned to a lateral, or even headed, to control length growth in order to ensure adequate attachment for the size of the sprout. Restoration may require several prunings over a number of years.

II. Types of Pruning — Mature Trees *(continued)*

E. CROWN RAISING

Crown raising removes the lower branches of a tree in order to provide clearance for buildings, vehicles, pedestrians, and vistas. It is important that a tree have at least one-half of its foliage on branches that originate in the lower two-thirds of its crown to ensure a well-formed, tapered structure and to uniformly distribute stress within a tree.

When pruning for view, it is preferable to develop "windows" through the foliage of the tree, rather than to severely raise or reduce the crown.

III. Size of Pruning Cuts

Each of the Pruning Techniques (Section I) and Types of Pruning (Section II) can be done to different levels of detail or refinement. The removal of many small branches rather than a few large branches will require more time, but will produce a less-pruned appearance, will force fewer watersprouts and will help to maintain the vitality and structure of the tree. Designating the maximum size (base diameter) that any occasional undesirable branch may be left within the tree crown, such as ½", 1" or 2" branch diameter, will establish the degree of pruning desired.

IV. Climbing Techniques

A. Climbing and pruning practices should not injure the tree except for the pruning cuts.

B. Climbing spurs or gaffs should not be used when pruning a tree, unless the branches are more than throw-line distance apart. In such cases, the spurs should be removed once the climber is tied in.

C. Spurs may be used to reach an injured climber and when removing a tree.

D. Rope injury to thin barked trees from loading out heavy limbs should be avoided by installing a block in the tree to carry the load. This technique may also be used to reduce injury to a crotch from the climber's line.

Pacific Knolls
Storm Water Low Impact Development Report
Prepared For
Pacific Realty Development LLC

7261 Healdsburg Ave
Sebastopol, CA 95472
405-686-0772
LACO Job No. 9272.02
APN: 164-150-054

PREPARED BY

LACO ASSOCIATES
1550 Airport Blvd, Suite 120
Santa Rosa, Ca 95403
(707) 525-1222

March, 2024

Prepared under the supervision of
Paul Peck, PE

Project Description:

The project involves the construction of six new townhomes, twelve new single-family duplexes, construction of two residential driveways including grading and drainage, and associated site improvements.

Existing Site Description:

The site is located at 4245 Hargrave Ave. Sebastopol, CA. The total project area contained within parcel 164-150-054 encompasses 1.28 acres and consists primarily of oak woodland, tall grass, and scattered shrubs. The site includes a one-story dilapidated house with minimal concrete walkways around it. All existing structures and concrete will be demolished and removed. Pre-development on-site runoff consists of sheet flow from the southeast corner of the site flowing both north and west toward Healdsburg Ave and Murphy Ave, where it then collects into the city storm drain system. Once in the storm drain system, runoff eventually exits at the Morris St outfall into the Laguna de Santa Rosa. Of the 68 existing trees on the site, 27 will be preserved and remain and there are no other sensitive features. See Tree Preservation Plan.

Project Triggers:

The project will involve the construction of 37,192 SF (0.85 acres) of new or replaced impervious areas. According to Chapter 2, of the 2020 Storm Water LID Technical Design Manual (LIDTDM), project sites that create or replace more than 10,000 SF and less than 1.0 acres of impervious surface are required to incorporate permanent Storm Water BMPs to achieve 100% delta volume Capture as required by the NPDES MS4 Permit. There are no creek outfalls and therefore the size of the impervious area is the only project trigger.

Runoff Reduction Measures:

Downspouts from roof gutters will be disconnected from the storm drain system and discharge into landscape areas and swales. Drainage Management Area (DMA) 7 is the only DMA that takes credit for impervious area disconnection and trees. The total tributary area used for BMP sizing calculations has been reduced by 2,210 SF in the by taking credit for these measures.

Because it is a residential project, the only pollution prevention measures that will be required is that trash be kept inside a covered trash enclosure. There are no other pollution prevention requirements.

Types of BMPs

The selected BMPs for the developed site will include the following:

Universal LID Features

Impervious area disconnection: Allows stormwater coming from impervious areas to pervious areas that more effectively treat storm water and allow for infiltration. Paved area disconnection is used on the site to disconnect direct discharge.

Interceptor Trees: Existing trees that intercept rain water on their leaves and branches, allowing rain water to evaporate or run down the branches and trunk of the tree where it readily infiltrates into the soil. Tree roots also increase infiltration. Trees also provide shade over impervious surfaces which reduce peak flow in streams and provide shade which reduces the heat island effects of urban areas.

Priority 2 BMPs

Roadside Bio-retention – No Curb and Gutter (P2-05): Priority two bioretention facilities are designed with perforated pipe beneath the engineered treatment material that allows gradual drainage after the runoff is treated. (See attached detail)

Pre & Post Development Runoff Conditions:

We have analyzed the pre and post development condition by using the Santa Rosa LID runoff curve number worksheet. We compared the pre and post development worksheets and determined the following composite curve numbers (CN) and runoff coefficients (C).

DMA #	Curve Number (CN)	Runoff Coefficient (C)
1	90.0	0.80
2	89.6	0.80
3	90.0	0.80
4	89.3	0.80
5	89.5	0.80
6	89.4	0.80
7	83.1	0.36
8	87.4	0.46
9	85.1	0.49
10	87.3	0.63

For the CN calculations, it was assumed that the native soil type had an infiltration rate of 0.05 in/hr and a cover description of 50% woods, 50% grass and curve number of 76. See attached for the composite curve numbers (CN) and runoff coefficients (C) calculations.

By utilizing the City of Santa Rosa Storm Water Calculator we modeled the pre vs. post condition. The imported BMP fill material (Soiland BASMAA Bioswale Mix) for the priority one bioretention facility will have an infiltration rate of 5 in/hr. Additionally, porosity of the imported BMP soil was assumed to be 0.30 or better.

The results show that, with the designed bioretention areas, the 100% volume capture requirement is achieved. Furthermore, the bioretention facilities effectively meet the 100% treatment requirement. The bioretention facilities are designed and will be constructed to effectively treat trash debris. The mechanism for this is the flora and engineered soil that filters and intercept particles down to 100 microns in size, before entering the downstream waterways. Trash capture will not be an issue on this site given the nature of the project such as site use and location.

See all calculations in attached documents. As a result, this project conforms to County standards and post construction water quality impacts are not anticipated.

Maintenance and Funding

BMPs shall be inspected and maintained as described in the Storm Water Low Impact Development Technical Design Manual. All BMPs are located on private land throughout the entire property. Furthermore, BMPs will be the sole responsibility of and funded by the owner. All legal documents and agreements have been provided within this Report.

Maintenance of BMPs

The maintenance of selected BMPs is recommended as follows:

<u>Impervious Area Disconnection</u>

At a minimum inspection and maintenance shall include the following:

- Routinely inspect for ponding water near building foundation
- Annually inspect for undercutting/washouts at the outlet of pipe
- Annually inspect for splash blocks or rain chain damage
- Annually inspect for vegetation or debris blocking outlet of pipe

Roadside Bio-retention – No Curb and Gutter (P2-05)

At a minimum maintenance shall include the following:

- Dry street sweeping upon completion of construction
- Dry street sweeping annually, and
  - When water is observed flowing in the gutter during a low intensity storm.
  - Algae is observed in the gutter.
  - Sediment/debris covers 1/3 of the gutter width or more.
- Inspect twice during the rainy season for ponded water.
- Obstructions and trash shall be removed and properly disposed of.
- Pesticides and fertilizers shall not be used in the bioretention area.
- Plants should be pruned, weeds pulled, and dead plants replaced as needed.
- Inspection - $100
- Annual Maintenance - $300
- Replacement (30 years) - $5000

Inspections of all BMPs will be recorded using the checklists attached at the end of this document. The property owner is responsible for following all county inspection and maintenance requirements. BMP inspection record keeping requirements, provisions for unscheduled maintenance, estimated costs associated with inspection & maintenance, design life and estimated replacement costs can be found in the operations and maintenance agreement.

Attachments:

1. Preliminary SUSMP Submittal Guide
2. Determination Worksheet
3. BMP Selection Tables
4. Calculations (CN Composite Worksheet, Storm Water Calculator, and BMP Sizing Calculations)
4. BMP Details
5. Fact Sheets
6. Inspection & Maintenance Checklists
7. Soils Data
8. Pre and Post development Conditions & BMP Location Exhibits

Project Name: Pacific Knolls

Date: _3/22/2024_____

Storm Water Low Impact Development Submittal Coversheet

To be submitted with all SW LID submittals

1. **Submittal Information:**

Submittal Date: _____

Initial SW LIDS ☑ **Final SW LIDS** ☐

Design Manual Used for design:

☐ 2005 Standard Urban Storm Water Mitigation Plan
☐ 2011 Storm Water Low Impact Development Technical Design Manual
☑ 2017 Storm Water Low Impact Development Technical Design Manual

2. **Applicant Information:**

Applicant Name (Owner or Developer): Pacific Realty Development LLC

Mailing Address: 1555 Grant Ave

City/State/Zip: Novato, CA 94945

Phone/Email/Fax: 405-686-0772

Project Name: Pacific Knolls

Date: 3/22/2024_____

Storm Water Low Impact Development Submittal Coversheet

To be submitted with all SW LID submittals

3. Project Information:

Project Name: Pacific Knolls

Site Address: 7261 Healsburg Ave.

City/State/Zip: Sebastopol, CA

APN (s): 164-150-054

Permit # (s):

Subdivision	☐	Grading Permit	☐	Building Permit	☐	Design Review	☑
Use Permit	☐	Hillside Development	☐	Encroachment	☐	Time Extension	☐

Other:

Project Name: Pacific Knolls

Date: 3/22/2024_____

Storm Water Low Impact Development Submittal Coversheet

To be submitted with all SW LID submittals

4. Design Information:

Narrative:

Project Description

- [x] Description of proposed project type, size, location, and any specific uses or features.
- [x] Description of any sensitive features (creeks, wetlands, trees, etc.) and whether they are going to be preserved, removed or altered.
- [x] Description of the existing site.
- [x] Description of how this project triggers these requirements (impervious area, CALGreen, 401 Permit, etc.).
- [ ] Describe any "on-site offset" used.

Pollution Prevention and Runoff Reduction Measures

- [x] Description of all proposed pollution prevention measures (street sweeping, covered trash enclosures, indoor uses, etc).
- [x] Description of all Runoff Reduction Measures (Interceptor Trees, Impervious Area Disconnection, and/or Alternative Driveway Design).

Type of BMPs Proposed

- [x] Description of the types of BMPs selected including priority group that each is in.
- [x] Description of level of treatment and volume capture achieved for each BMP.

Maintence

- [x] Description of maintenance for each type of BMP.
- [x] Description of funding mechanism.
- [x] Designation of Responsible Party.

Project Name: Pacific Knolls

Date: 3/22/2024_____

Storm Water Low Impact Development Submittal Coversheet

To be submitted with all SW LID submittals

Exhibits:

Proposed SW LID Exhibit:

- [x] Exhibit should include: street names, property lines, strom drainage system, waterways, title block, scale and north arrow.
- [x] Tributary areas shown for all inlets (including off-site drainage areas).
- [x] C value for each tributary area.
- [x] Soil Type of existing site.
- [x] New or replaced impervious area shown.
- [x] All inlets and BMP, shown (including unique identifier).
- [x] All interceptor trees shown.
- [x] All proposed BMPs shown including dimensions.

Existing Condition Exhibit

- [x] Exhibit should include: street names, property lines, proposed storm drainage system, waterways, title block, scale, and north arrow.
- [x] Soil Type of existing site.
- [x] Proposed tributary areas shown for all proposed inlets (including offsite drainage areas). Existing impervious areas.
- [x] Existing impervious area.

BMP Details:

- [x] Detail for each type of BMP selected- provide a preliminary 8.5”x11” detail for each BMP type or include on submitted drawings. These can be taken straight from the Fact Sheets if no significant changes are proposed.

On Plans:

- [x] Show all applicable elements of the selected BMPs on the appropriate plan sheets.

Calculations:

- [x] Calculations, for each inlet, and summary sheet using the Storm Water Calculator found at *www.srcity.org/stormwaterLID*
- [ ] Supplemental or supporting calculation if applicable.

2017 Storm Water LID Determination Worksheet

PURPOSE AND APPLICABILITY: This determination worksheet is intended to satisfy the specific requirements of "ORDER NO. R1-2015-0030, NPDES NO. CA0025054 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS." Additional design requirements imposed by Governing Agencies, such as local grading ordinances, CAL Green, CEQA, 401 permitting, and hydraulic design for flood control still apply as appropriate. Additionally, coverage under another regulation may trigger the requirement to design in accordance with the Storm Water LID Technical Design Manual.

Part 1: Project Information

Pacific Knolls	Pacific Realty Development LLC
Project Name	Applicant (owner or developer) Name
7261 Healsburg Ave	1555 Grant Ave
Project Site Address	Applicant Mailing Address
Sebastopol, California, 95472	Novato, California
Project City/State/Zip	Applicant City/State/Zip
	707-236-7624
Permit Number(s) - (if applicable)	1550 Airport Blvd., Ste 120 Santa Rosa, CA 95
David Thiessen	Designer Mailing Address
Designer Name	707-525-1222 thiessend@lacoassociates.com
Santa Rosa, CA 95403	Designer Phone/Email
Designer City/State/Zip	

Type of Application/Project:

☐ Subdivison ☐ Grading Permit ☐ Building Permit ☐ Hillside Development

☑ DesignReview ☐ Use Permit ☐ Encroachment ☐ Time Extensions ☐ Other :_____

PART 2: Project Exemptions

1. Is this a project that creates or replaces *less than* 10,000 square feet of impervious surface[1], including all project phases and off-site improvements?

   ☐ Yes ☑ No

1 Impervious surface replacement, such as the reconstruction of parking lots or excavation to roadway subgrades, is not a routine maintenance activity. Reconstruction is defined as work that replaces surfaces down to the subgrade. Overlays, resurfacing, trenching and patching are defined as maintenance activities per section VI.D.2.b.

2. Is this project a routine maintenance activity[2] that is being conducted to maintain original line and grade, hydraulic capacity, and original purpose of facility such as resurfacing existing roads and parking lots?

☐ Yes ☑ No

3. Is this project a stand alone pedestrian pathway, trail or off-street bike lane?

☐ Yes ☑ No

4. **Did you answer "YES" to any of the questions in Part 2?**

☐ **YES:** This project will *not* need to incorporate permanent Storm Water BMP's as required by the NPDES MS4 Permit. **Please complete the "Exemption Signature Section" on Page 4.**

☑ **NO:** Please complete the remainder of this worksheet.

Part 3: Project Triggers

Projects that Trigger Requirements:
Please answer the following questions to determine whether this project requires permanent Storm Water BMP's and the submittal of a SW LIDs as required by the NPDES MS4 Permit order No. R1-2015-0030.

1. Does this project create or replace a combined total of 10,000 square feet or more of impervious surface[1] including all project phases and off-site improvements?

☑ Yes ☐ No

2. Does this project create or replace a combined total or 10,000 square feet or more of impervious streets, roads, highways, or freeway construction or reconstruction[3]? ☐ Yes ☑ No

3. Does this project create or replace a combined total of 1.0 acre or more of impervious surface[1] including all project phases and off-site improvements? ☐ Yes ☑ N o

4. **Did you answer "YES" to any of the above questions in Part 3?**

☑ **YES:** This project will need to incorporate permanent Storm Water BMP's as required by the NPDES MS4 Permit. **Please complete remainder of worksheet and sign the "Acknowledgement Signature Section" on Page 4.**

☐ **NO:** This project will *not* need to incorporate permanent Storm Water BMP's as required by the NPDES MS4 permit. **Please complete the "Exemption Signature Section" on Page 4.**

---

1 Imprevious surface replacement, such as the reconstruction of parking lots or excavation to roadway subgrades, is not a routine maintence activity. Reconstruction is defined as work that replaces surfaces down to the subgrade. Overlays, resurfacint, trenching and patching are defined as maintenance activities per section VI.D.2.b.

2 "Rountine Maintenance Activity" includes activities such as overlays and/or resurfacing of existing roads or parking lots as well as trenching and patching activities and reroofing activities per section VI.D.2.b.

3 "Reconstruction" is defined as work that extends into the subgrade of a pavement per section VI.D.2.b.

Part 4: Project Description

1. Total Project area: 1.28 ○ square feet ◉ acres

2. Existing land use(s): (check all that apply)

☐ Commercial ☐ Industrial ☑ Residential ☐ Public ☐ Other

Description of buildings, creeks, wetlands, heritage trees, etc on the site.

There are is one existing building that will be demolished, but there are no creeks, wetlands, heritage trees, etc on the site.

3. Existing impervious surface area: 0.03 ○ square feet ◉ acres

4. Proposed Land Use(s): (check all that apply)

☐ Commercial ☐ Industrial ☑ Residential ☐ Public ☐ Other

Description of buildings, creeks, wetlands, heritage trees, etc on the site.

The project involves the construction of six new townhomes, twelve new single-family duplexes, construction of two residential driveways including grading and drainage, and associated site improvements.

5. Proposed ~~Existing~~ impervious surface area: 0.85 ○ square feet ◉ acres

Project Name

2017 Storm Water LID Determination Worksheet | Pacific Knolls

Acknowledgment Signature Section:

As the property owner or developer, I understand that this project is required to implement permanent Storm Water Best Management Practices and provide a Storm Water Low Impact Development Submittal (SW LIDS) as required by the City's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer Systems (MS4) Permit Order No. R1-2015-0030. *Any unknown responses must be resolved to determine if the project is subject to these rec

Applicant Signature _____ Date _____

Exemption Signature Section:

As the property owner or developer, I understand that this project as currently designed does not require permanent Storm Water BMP's nor the submittal of a Storm Water Low Impact Development Submittal (SW LIDS) as required by the City's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer Systems (MS4) Permit*. I understand that redesign may require submittal of a new Determination Worksheet and may require permanent Storm Water BMP's.

Applicant Signature _____ Date _____

* **This determination worksheet is intended to satisfy the specific requirements of "ORDER NO. R1-2015-0030, NPDES NO. CA0025054 NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES FROM THE MUNICIPAL SEPARATE STORM SEWER SYSTEMS." Additional design requirements imposed by Governing Agencies, such as local grading ordinances, CAL Green, CEQA, 401 permitting, and hydraulic design for flood control still apply as appropriate. Additionally, coverage under another regulation may trigger the requirement to design in accordance with the Storm Water LID Technical Design Manual.**

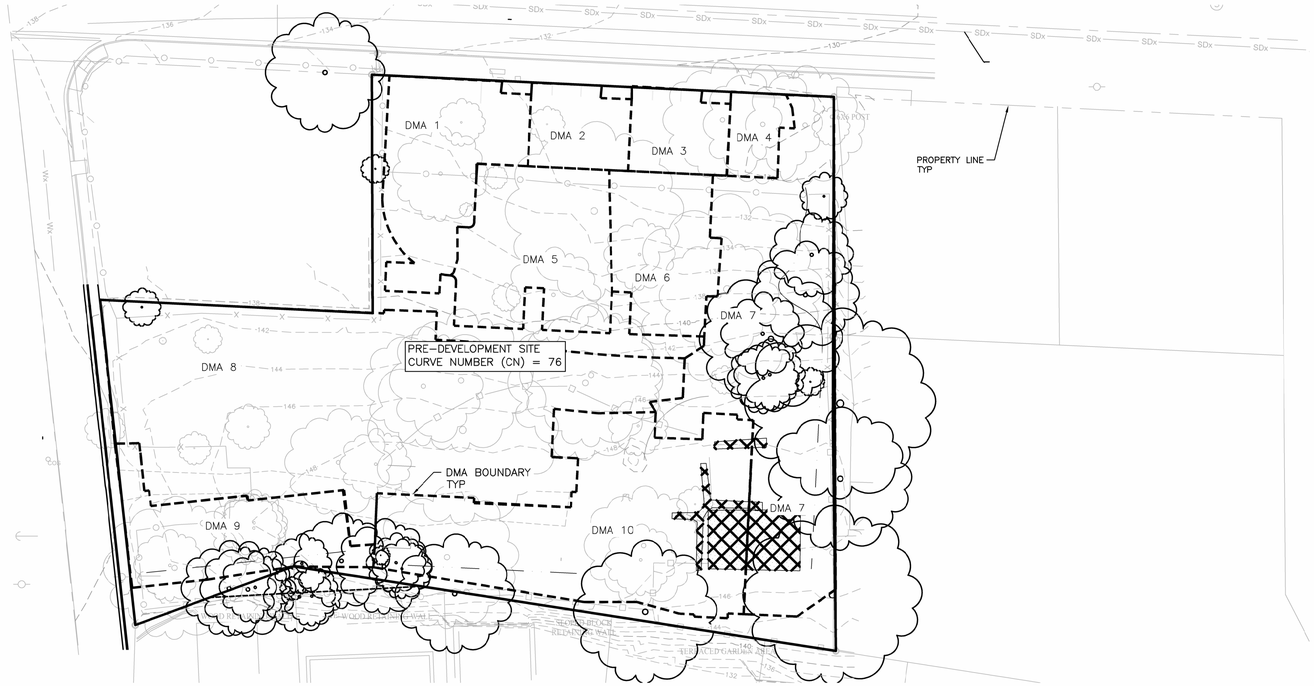
Implementation Requirements: *All calculations shall be completed using the "Storm Water Calculator" available at: www.srcity.org/stormwaterLID*

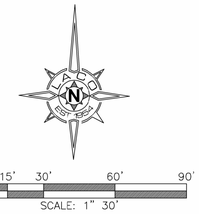
Hydromodification Control/100% Volume Capture: Capture (infiltration and/or reuse) of 100% of the volume of runoff generated by a 1.0" 24-hour storm event, as calculated using the "Urban Hydrology for Small Watersheds" TR-55 Manual method. This is a retention requirement.

Treatment Requirement: Treatment of 100% of the flow calculated using the modified Rational Method and a known intensity of 0.20 inches per hour.

Delta Volume Capture Requirement: Capture (infiltration and/or reuse) of the increase in volume of storm water due to development generated by a 1.0" 24-hour storm event, as calculated using the "Urban Hydrology for Small Watersheds" TR-55 Manual method. This is a retention requirement.

EXISTING CONDITION





	EXISTING IMPERVIOUS SURFACE (S.F.)	1,250
	EXISTING PERVIOUS SURFACE (S.F.)	54,343

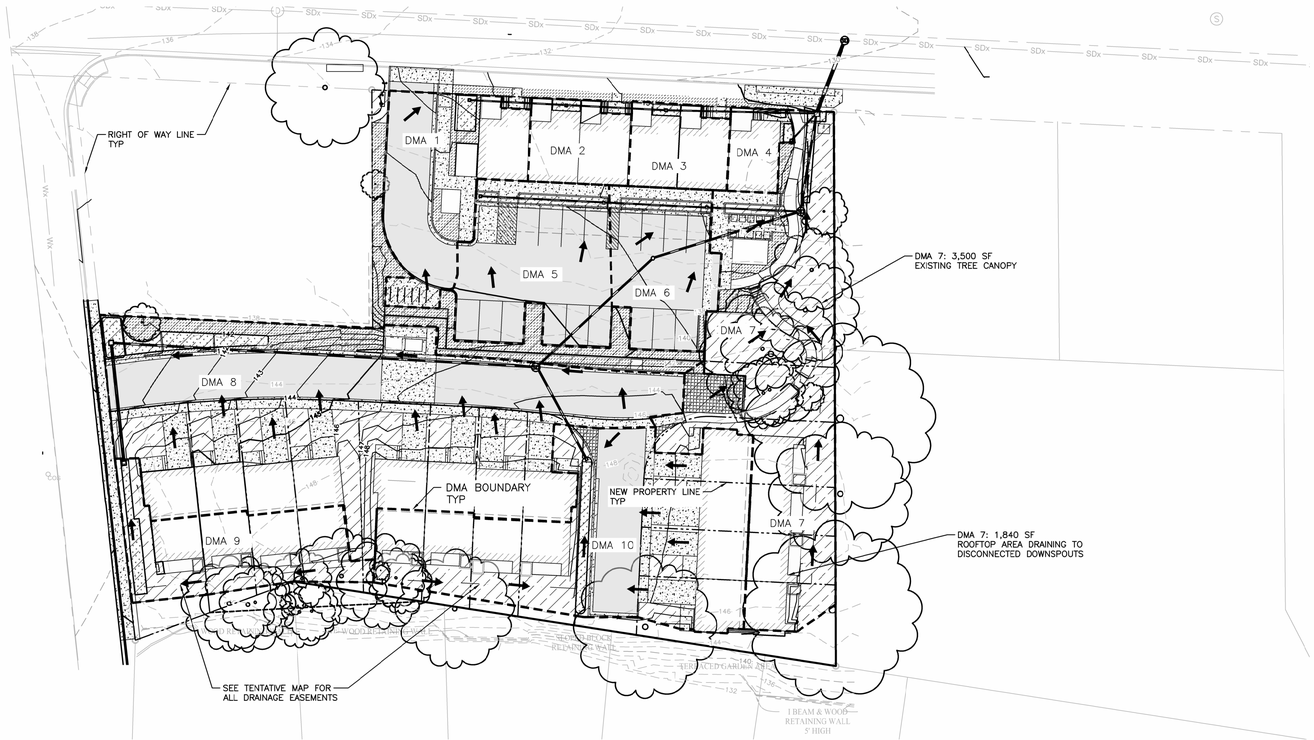
TREE TO BE PRESERVED

TREE TO BE REMOVED

GRASS SWALE FLOW LINE

PROPOSED CONDITION

NOTE: SITE SOIL=
SEBASTOPOL SANDY LOAM
HYDROLOGIC SOIL GROUP C



	BIO RETENTION AREA (S.F.)	1,797
	NEW OR REPLACED IMPERVIOUS SURFACE (S.F.)	37,192
	NEW PERVIOUS SURFACE (S.F.)	14,227
	TOTAL PROJECT IMPERVIOUS SURFACE (S.F.)	37,192

NO.	REVISION	DATE

LACO
SURVEYORS | ENGINEERS | PLANNERS | GEOLOGISTS
lacoassociates.com

PACIFIC REALTY DEVELOPMENT, LLC
SEBASTOPOL, CA

LID EXHIBIT

JOB NO. 9272.02
DATE 8/30/2022
DESIGNER PAP
CHECKED PAP DRAWN JMG

SHEET 1 OF 2

Mar 22,2024-12:02pm
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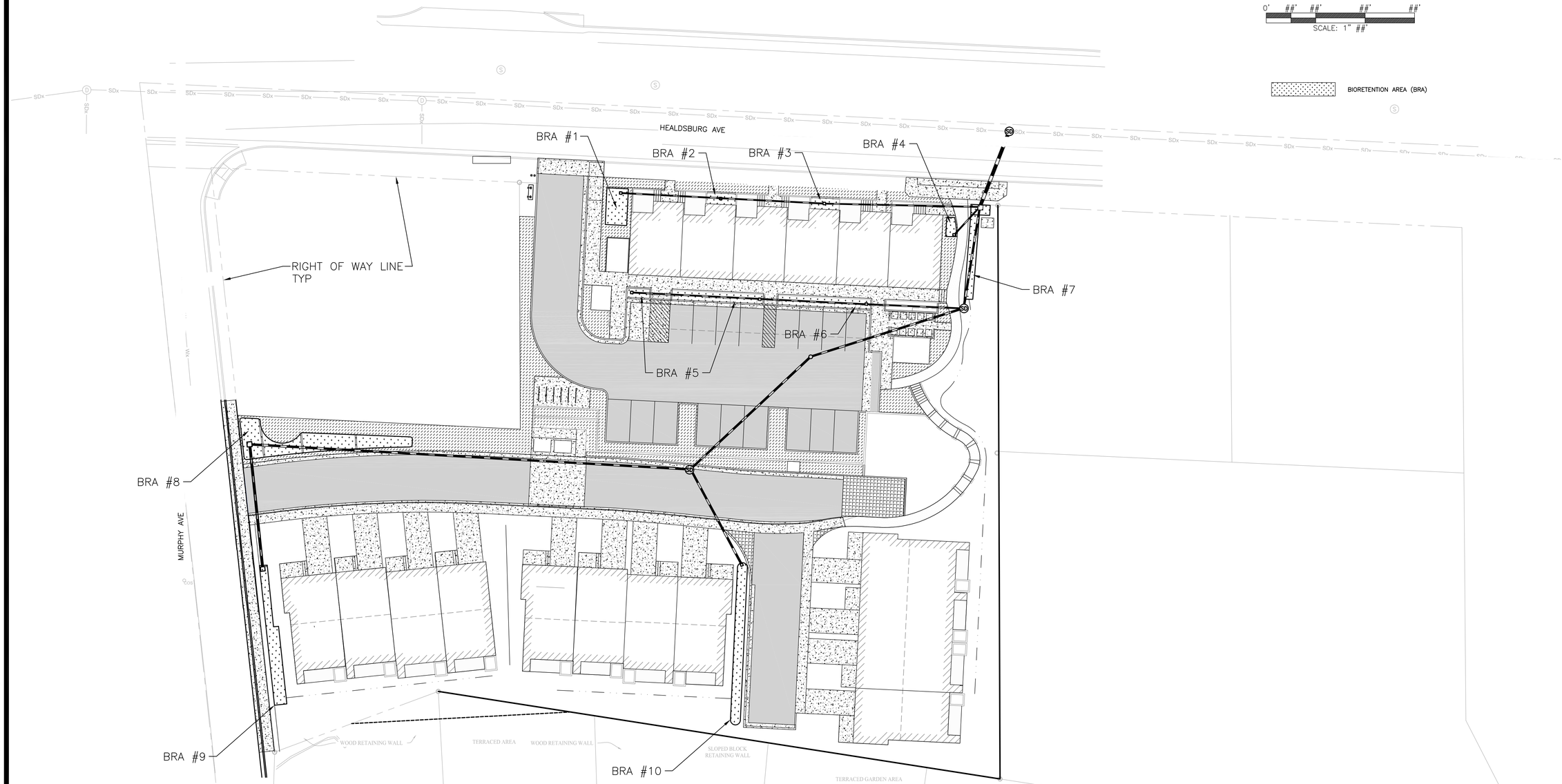

NO.	REVISION	DATE

LACO
SURVEYORS | ENGINEERS | PLANNERS | GEOLOGISTS
lacoassociates.com

PACIFIC REALTY DEVELOPMENT, LLC

SEBASTOPOL, CA

BMP LOCATION EXHIBIT

JOB NO. 9272.02
DATE 8/30/2022
DESIGNER PAP
CHECKED PAP DRAWN JMG

SHEET 1 OF 2

Mar 22,2024-12:03pm
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City of Santa Rosa WATER

STORM WATER CALCULATOR

LID BMP Summary Page & Site Global Values

Project Information:

Project Name:	9272.02 Pacific Realty
Address/Location:	7261 Healdsburg Ave
Designer:	David Thiessen
Date:	3/1/2024

Site Information:

Mean Seasonal Precipitation (MSP) of Project Site:	35.00	(inches)
K=MSP/3(K=	1.17	
Impervious area - pre development:	1,250.3	ft^2
Impervious area - post development:	36,805.0	ft^2

Based upon the pre and post development impervious area, the post construction BMP requirement is:

Delta Volume & Treatment

Summary of Saved BMP Results:

		Tributary Area		Requirements		BMP Design Results						
							Hydromodification Control		Flow Base Treatment		Delta Volume Capture	
	BMP ID:	Tributary Area (ft^2.)	Runoff Reduction Measures (Y/N)	Type of Requirement Met	Type of BMP Design	Percent Achieved	Required $V_{Hydromod}$ (ft^3)	Achieved (ft^3)	Required Q Treatment (cfs)	Achieved (ft^3)	Required Vdelta (ft^3)	Achieved (ft^3)
1	DMA 1	3,588	No	Delta Volume Capture	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	101.3					106.7071	360.4500
2	DMA 2	1,411	No	Delta Volume Capture	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	112.7					39.9454	150.0000
3	DMA 3	1,405	No	Delta Volume Capture	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	113.1					39.7756	150.0000
4	DMA 4	807	No	Delta Volume Capture	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	109.3					21.9504	80.0000
5	DMA 5	4,081	No	Delta Volume Capture	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	104.4					114.3496	397.9000
6	DMA 6	2,776	No	Delta Volume Capture	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	110.9					76.2567	282.0000
7	DMA 8	15,465	No	Delta Volume Capture	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	111.8					329.4045	1227.5000
8	DMA 9	3,339	No	Delta Volume Capture	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	141.9					50.7528	240.0000
9	DMA 10	8,873	No	Delta Volume Capture	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	104.3					187.0428	650.0000
10	DMA 7	9,405	Yes	Delta Volume Capture	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	105.3					77.9219	273.6000
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STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: 9272.02 Pacific Realty

BMP ID:	DMA 1
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	3,588.0 ft^2
Description/Notes:	

Delta Volume Capture; V_{Delta}

V_{DELTA} = 106.71 ft^3

Hydrologic soil type within tributary area:	C: 0.05 - 0.15 in/hr infiltration (transmission) rate
Predevelopment ground cover description:	Woods (50%), grass (50%) combination (orchard or tree farm) - Fair
Post development ground cover description:	Residential - 1/8 acre or less (town houses)
CN_{PRE}:	76
CN_{POST}:	90
User Composite Predevelopment CN:	0.0
User Composite Post development CN:	0.0

BMP Sizing Tool Delta Volume Capture Requirement

Percent of Goal Achieved = 101.34 %

	BMP Volume Below Ground		Ponded Water Above Ground	
Porosity:	0.30			
Depth below perforated pipe if present:	2.67	ft	Depth: 0.00	ft
Width:	9.00	ft	Width: 0.00	ft
Length:	15.00	ft	Length: 0.00	ft
Area:	0.00	ft^2	Area: 0.00	ft^2

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: 9272.02 Pacific Realty

BMP ID:	DMA 2
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	1,411.0 ft^2
Description/Notes:	

Delta Volume Capture; V_{Delta}

V_{DELTA} = 39.95 ft^3

Hydrologic soil type within tributary area:	C: 0.05 - 0.15 in/hr infiltration (transmission) rate
Predevelopment ground cover description:	Woods (50%), grass (50%) combination (orchard or tree farm) - Fair
Post development ground cover description:	Impervious - Paved Parking, Rooftop, Driveways
CN_{PRE}:	76
CN_{POST}:	
User Composite Predevelopment CN:	0.0
User Composite Post development CN:	89.6

BMP Sizing Tool Delta Volume Capture Requirement

Percent of Goal Achieved = 112.65 %

	BMP Volume Below Ground		Ponded Water Above Ground	
Porosity:	0.30			
Depth below perforated pipe if present:	2.50	ft		
Depth:			0.00	ft
Width:	5.00	ft	0.00	ft
Length:	12.00	ft	0.00	ft
Area:	0.00	ft^2	0.00	ft^2

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: 9272.02 Pacific Realty

BMP ID:	DMA 3
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	1,405.0 ft^2
Description/Notes:	

Delta Volume Capture; V_{Delta}

V_{DELTA} = 39.78 ft^3

Hydrologic soil type within tributary area:	C: 0.05 - 0.15 in/hr infiltration (transmission) rate
Predevelopment ground cover description:	Woods (50%), grass (50%) combination (orchard or tree farm) - Fair
Post development ground cover description:	Impervious - Paved Parking, Rooftop, Driveways
CN_{PRE}:	76
CN_{POST}:	
User Composite Predevelopment CN:	0.0
User Composite Post development CN:	89.6

BMP Sizing Tool Delta Volume Capture Requirement

Percent of Goal Achieved = 113.13 %

	BMP Volume Below Ground		Ponded Water Above Ground	
Porosity:	0.30			
Depth below perforated pipe if present:	2.50	ft		
Depth:			0.00	ft
Width:	5.00	ft	0.00	ft
Length:	12.00	ft	0.00	ft
Area:	0.00	ft^2	0.00	ft^2

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: 9272.02 Pacific Realty

BMP ID:	DMA 4
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	807.0 ft^2
Description/Notes:	

Delta Volume Capture; V_{Delta}

V_{DELTA} = 21.95 ft^3

Hydrologic soil type within tributary area:	C: 0.05 - 0.15 in/hr infiltration (transmission) rate
Predevelopment ground cover description:	Woods (50%), grass (50%) combination (orchard or tree farm) - Fair
Post development ground cover description:	Impervious - Paved Parking, Rooftop, Driveways
CN_{PRE}:	76
CN_{POST}:	
User Composite Predevelopment CN:	0.0
User Composite Post development CN:	89.3

BMP Sizing Tool Delta Volume Capture Requirement

Percent of Goal Achieved = 109.34 %

	BMP Volume Below Ground		Ponded Water Above Ground	
Porosity:	0.30			
Depth below perforated pipe if present:	2.50	ft		
Depth:			0.00	ft
Width:	4.00	ft	0.00	ft
Length:	8.00	ft	0.00	ft
Area:	0.00	ft^2	0.00	ft^2

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: 9272.02 Pacific Realty

BMP ID:	DMA 5
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	4,081.0 ft^2
Description/Notes:	

Delta Volume Capture; V_{Delta}

V_{DELTA} = 114.35 ft^3

Hydrologic soil type within tributary area:	C: 0.05 - 0.15 in/hr infiltration (transmission) rate
Predevelopment ground cover description:	Woods (50%), grass (50%) combination (orchard or tree farm) - Fair
Post development ground cover description:	Impervious - Paved Parking, Rooftop, Driveways
CN_{PRE}:	76
CN_{POST}:	
User Composite Predevelopment CN:	0.0
User Composite Post development CN:	89.5

BMP Sizing Tool Delta Volume Capture Requirement

Percent of Goal Achieved = 104.39 %

	BMP Volume Below Ground		Ponded Water Above Ground	
Porosity:	0.30			
Depth below perforated pipe if present:	2.30	ft		
Depth:			0.00	ft
Width:	0.00	ft	0.00	ft
Length:	0.00	ft	0.00	ft
Area:	173.00	ft^2	0.00	ft^2

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: 9272.02 Pacific Realty

BMP ID:	DMA 6
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	2,776.0 ft^2
Description/Notes:	

Delta Volume Capture; V_{Delta}

V_{DELTA} = 76.26 ft^3

Hydrologic soil type within tributary area:	C: 0.05 - 0.15 in/hr infiltration (transmission) rate
Predevelopment ground cover description:	Woods (50%), grass (50%) combination (orchard or tree farm) - Fair
Post development ground cover description:	Impervious - Paved Parking, Rooftop, Driveways
CN_{PRE}:	76
CN_{POST}:	
User Composite Predevelopment CN:	0.0
User Composite Post development CN:	89.4

BMP Sizing Tool Delta Volume Capture Requirement

Percent of Goal Achieved = 110.94 %

	BMP Volume Below Ground		Ponded Water Above Ground	
Porosity:	0.30			
Depth below perforated pipe if present:	2.00	ft		
Depth:			0.00	ft
Width:	0.00	ft	0.00	ft
Length:	0.00	ft	0.00	ft
Area:	141.00	ft^2	0.00	ft^2

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: 9272.02 Pacific Realty

BMP ID:	DMA 7
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	9,405.0 ft²
Description/Notes:	

Runoff Reduction Measures

Resulting reduced Tributary Area used for BMP sizing = 7,195.0 ft²

Total Runoff Reduction Measures = 2,210.0 ft²

Interceptor Trees

Number of ***new*** interceptor ***Evergreen Trees***:	0	Total Number of New trees in BMP Tributary Area: 0
Number of ***new*** interceptor ***Deciduous Trees***:	0	
Square footage of qualifying **existing tree canopy**:	3,500.0 ft²	

Disconnected Roof Drains

Select disconnection condition: Runoff is directed across landscape; Width of area: 5' to 9'

Disconnected Roof Drains Method 1

Roof area of disconnected downspouts: 1,840 ft²

Disconnected Roof Drains Method 2

Percent of rooftop area: 0 %

Select Density: 1 Units per Acre

Paved Area Disconnection

Paved Area Type:	Select paved area type
Alternatively designed paved area:	0.0 ft²

Buffer Strips & Bovine Terraces

Area draining to a Buffer Strip or Bovine Terrace: 0.0 ft²

Delta Volume Capture; V_{Delta}

V_{DELTA} = 77.92 ft³

Hydrologic soil type within tributary area:	C: 0.05 - 0.15 in/hr infiltration (transmission) rate
Predevelopment ground cover description:	Woods (50%), grass (50%) combination (orchard or tree farm) - Fair
Post development ground cover description:	Impervious - Paved Parking, Rooftop, Driveways
CN_{PRE}:	76
CN_{POST}:	
User Composite Predevelopment CN:	0.0
User Composite Post development CN:	83.1

BMP Sizing Tool Delta Volume Capture Requirement

Percent of Goal Achieved = 105.34 %

	BMP Volume Below Ground		Ponded Water Above Ground	
Porosity:	0.30			
Depth below perforated pipe if present:	1.80	ft		
Depth:			0.00	ft
Width:	0.00	ft	0.00	ft
Length:	0.00	ft	0.00	ft
Area:	152.00	ft²	0.00	ft²

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: **9272.02 Pacific Realty**

BMP ID:	DMA 8
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	15,465.0 ft^2
Description/Notes:	

Delta Volume Capture; V_{Delta}

V_{DELTA} = **329.40** ft^3

Hydrologic soil type within tributary area:	C: 0.05 - 0.15 in/hr infiltration (transmission) rate
Predevelopment ground cover description:	Woods (50%), grass (50%) combination (orchard or tree farm) - Fair
Post development ground cover description:	Open Space (lawns, parks, golf courses, cemeteries, etc.) - Fair (50% to 75% grass cover)
CN_{PRE}:	76
CN_{POST}:	
User Composite Predevelopment CN:	0.0
User Composite Post development CN:	87.4

BMP Sizing Tool Delta Volume Capture Requirement

Percent of Goal Achieved = **111.79** %

	BMP Volume Below Ground		Ponded Water Above Ground	
Porosity:	0.30			
Depth below perforated pipe if present:	2.50	ft		
Depth:			0.00	ft
Width:	0.00	ft	0.00	ft
Length:	0.00	ft	0.00	ft
Area:	491.00	ft^2	0.00	ft^2

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: 9272.02 Pacific Realty

BMP ID:	DMA 9
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	3,339.0 ft^2
Description/Notes:	

Delta Volume Capture; V_{Delta}

V_{DELTA} = 50.75 ft^3

Hydrologic soil type within tributary area:	C: 0.05 - 0.15 in/hr infiltration (transmission) rate
Predevelopment ground cover description:	Woods (50%), grass (50%) combination (orchard or tree farm) - Fair
Post development ground cover description:	Impervious - Paved Parking, Rooftop, Driveways
CN_{PRE}:	76
CN_{POST}:	
User Composite Predevelopment CN:	0.0
User Composite Post development CN:	85.1

BMP Sizing Tool Delta Volume Capture Requirement

Percent of Goal Achieved = 141.86 %

	BMP Volume Below Ground		Ponded Water Above Ground	
Porosity:	0.30			
Depth below perforated pipe if present:	1.00	ft		
Depth:			0.00	ft
Width:	0.00	ft	0.00	ft
Length:	0.00	ft	0.00	ft
Area:	240.00	ft^2	0.00	ft^2

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: 9272.02 Pacific Realty

BMP ID:	DMA 10
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	8,873.0 ft^2
Description/Notes:	

Delta Volume Capture; V_{Delta}

V_{DELTA} = 187.04 ft^3

Hydrologic soil type within tributary area:	C: 0.05 - 0.15 in/hr infiltration (transmission) rate
Predevelopment ground cover description:	Woods (50%), grass (50%) combination (orchard or tree farm) - Fair
Post development ground cover description:	Impervious - Paved Parking, Rooftop, Driveways
CN_{PRE}:	76
CN_{POST}:	
User Composite Predevelopment CN:	0.0
User Composite Post development CN:	87.3

BMP Sizing Tool Delta Volume Capture Requirement

Percent of Goal Achieved = 104.25 %

	BMP Volume Below Ground		Ponded Water Above Ground	
Porosity:	0.30			
Depth below perforated pipe if present:	2.50	ft		
Depth:			0.00	ft
Width:	4.00	ft	0.00	ft
Length:	65.00	ft	0.00	ft
Area:	0.00	ft^2	0.00	ft^2

City of Santa Rosa WATER

STORM WATER CALCULATOR

LID BMP Summary Page & Site Global Values

Project Information:

Project Name:	9272.02 Pacific Realty
Address/Location:	7261 Healdsburg Ave
Designer:	David Thiessen
Date:	3/1/2024

Site Information:

Mean Seasonal Precipitation (MSP) of Project Site:	35.00	(inches)
K=MSP/3(K=	1.17	
Impervious area - pre development:	1,250.3	ft^2
Impervious area - post development:	36,805.0	ft^2

Based upon the pre and post development impervious area, the post construction BMP requirement is:

Delta Volume & Treatment

Summary of Saved BMP Results:

		Tributary Area		Requirements		BMP Design Results						
							Hydromodification Control		Flow Base Treatment		Delta Volume Capture	
	BMP ID:	Tributary Area (ft^2.)	Runoff Reduction Measures (Y/N)	Type of Requirement Met	Type of BMP Design	Percent Achieved	Required $V_{Hydromod}$ (ft^3)	Achieved (ft^3)	Required Q Treatment (cfs)	Achieved (ft^3)	Required Vdelta (ft^3)	Achieved (ft^3)
1	DMA 1	3,588	No	100% Vertical Flow Treatment	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	101.6			0.0154	0.0156		
2	DMA 2	1,411	No	100% Vertical Flow Treatment	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	114.9			0.0060	0.0069		
3	DMA 3	1,405	No	100% Vertical Flow Treatment	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	115.3			0.0060	0.0069		
4	DMA 4	807	No	100% Vertical Flow Treatment	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	107.1			0.0035	0.0037		
5	DMA 5	4,081	No	100% Vertical Flow Treatment	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	143.1			0.0175	0.0250		
6	DMA 6	2,776	No	100% Vertical Flow Treatment	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	136.8			0.0119	0.0163		
7	DMA 8	15,465	No	100% Vertical Flow Treatment	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	161.6			0.0381	0.0616		
8	DMA 9	3,339	No	100% Vertical Flow Treatment	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	330.2			0.0088	0.0289		
9	DMA 10	8,873	No	100% Vertical Flow Treatment	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	100.5			0.0299	0.0301		
10	DMA 7	9,405	Yes	100% Vertical Flow Treatment	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter	100.7			0.0139	0.0140		
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STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: **9272.02 Pacific Realty**

BMP ID:	DMA 1
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	3,588.0 ft^2
Description/Notes:	

100% Treatment

$Q_{TREATMENT}$ = **0.0154** cfs

Post surface type:	Concrete			
C_{POST}:	0.80			
User Composite post development C_{POST}:	0.00	Treatment Factor (Tf):	1	Calculated
User Input $I_{Historical}$:	0.00 in./hr.	$I_{Design\ Storm}$:	0.20	in./hr.

BMP Sizing 100% Treatment Vertical

Percent of Goal Achieved = **101.62** %

Infiltration rate of the specified BMP soil:	5.00 in./hr.
Depth of drainage pipe:	1.50 ft
BMP Length:	15.00 ft
BMP Width:	9.00 ft

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: **9272.02 Pacific Realty**

BMP ID:	DMA 2
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	1,411.0 ft^2
Description/Notes:	

100% Treatment

$Q_{TREATMENT}$ = **0.0060** cfs

Post surface type:	Concrete			
C_{POST}:	0.80			
User Composite post development C_{POST}:	0.00	Treatment Factor (Tf):	1	Calculated
User Input $I_{Historical}$:	0.00 in./hr.	$I_{Design\ Storm}$:	0.20	in./hr.

BMP Sizing 100% Treatment Vertical

Percent of Goal Achieved = **114.85** %

Infiltration rate of the specified BMP soil:	5.00 in./hr.
Depth of drainage pipe:	1.50 ft
BMP Length:	12.00 ft
BMP Width:	5.00 ft

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: 9272.02 Pacific Realty

BMP ID:	DMA 3
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	1,405.0 ft^2
Description/Notes:	

100% Treatment

$Q_{TREATMENT}$ = 0.0060 cfs

Post surface type:	Concrete			
C_{POST}:	0.80			
User Composite post development C_{POST}:	0.00	Treatment Factor (Tf):	1	Calculated
User Input $I_{Historical}$:	0.00 in./hr.	$I_{Design\ Storm}$:	0.20	in./hr.

BMP Sizing 100% Treatment Vertical

Percent of Goal Achieved = 115.34 %

Infiltration rate of the specified BMP soil:	5.00 in./hr.
Depth of drainage pipe:	2.50 ft
BMP Length:	12.00 ft
BMP Width:	5.00 ft

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: **9272.02 Pacific Realty**

BMP ID:	DMA 4
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	807.0 ft^2
Description/Notes:	

100% Treatment

$Q_{TREATMENT}$ = 0.0035 cfs

Post surface type:	Concrete			
C_{POST}:	0.80			
User Composite post development C_{POST}:	0.00	Treatment Factor (Tf):	1	Calculated
User Input $I_{Historical}$:	0.00 in./hr.	$I_{Design\ Storm}$:	0.20	in./hr.

BMP Sizing 100% Treatment Vertical

Percent of Goal Achieved = 107.10 %

Infiltration rate of the specified BMP soil:	5.00	in./hr.
Depth of drainage pipe:	2.50	ft
BMP Length:	8.00	ft
BMP Width:	4.00	ft

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: 9272.02 Pacific Realty

BMP ID:	DMA 5
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	4,081.0 ft^2
Description/Notes:	

100% Treatment

$Q_{TREATMENT}$ = 0.0175 cfs

Post surface type:	Concrete			
C_{POST}:	0.80			
User Composite post development C_{POST}:	0.00	Treatment Factor (Tf):	1	Calculated
User Input $I_{Historical}$:	0.00 in./hr.	$I_{Design\ Storm}$:	0.20	in./hr.

BMP Sizing 100% Treatment Vertical

Percent of Goal Achieved = 143.09 %

Infiltration rate of the specified BMP soil:	5.00 in./hr.
Depth of drainage pipe:	2.30 ft
BMP Length:	46.00 ft
BMP Width:	4.70 ft

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: **9272.02 Pacific Realty**

BMP ID:	DMA 6
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	2,776.0 ft^2
Description/Notes:	

100% Treatment

$Q_{TREATMENT}$ = 0.0119 cfs

Post surface type:	Concrete		
C_{POST}:	0.80		
User Composite post development C_{POST}:	0.00	Treatment Factor (Tf):	1 Calculated
User Input $I_{Historical}$:	0.00 in./hr.	$I_{Design\ Storm}$:	0.20 in./hr.

BMP Sizing 100% Treatment Vertical

Percent of Goal Achieved = 136.80 %

Infiltration rate of the specified BMP soil:	5.00 in./hr.
Depth of drainage pipe:	1.50 ft
BMP Length:	38.00 ft
BMP Width:	3.70 ft

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: 9272.02 Pacific Realty

BMP ID: DMA 7

BMP Design Criteria: Delta Volume & Treatment

Type of BMP Design: Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter

BMP's Physical Tributary Area: 9,405.0 ft^2

Description/Notes:

Runoff Reduction Measures

Resulting reduced Tributary Area used for BMP sizing = 7,195.0 ft^2

Total Runoff Reduction Measures = 2,210.0 ft^2

Interceptor Trees

Number of ***new*** interceptor ***Evergreen Trees***: 0

Number of ***new*** interceptor ***Deciduous Trees***: 0

Square footage of qualifying **existing tree canopy**: 3,500.0 ft^2

Total Number of New trees in BMP Tributary Area: 0

Disconnected Roof Drains

Select disconnection condition: Runoff is directed across landscape; Width of area: 5' to 9'

Disconnected Roof Drains Method 1

Roof area of disconnected downspouts: 1,840 ft^2

Disconnected Roof Drains Method 2

Percent of rooftop area: 0 %

Select Density: 1 Units per Acre

Paved Area Disconnection

Paved Area Type: Select paved area type

Alternatively designed paved area: 0.0 ft^2

Buffer Strips & Bovine Terraces

Area draining to a Buffer Strip or Bovine Terrace: 0.0 ft^2

100% Treatment

$Q_{TREATMENT}$ = 0.0139 cfs

Post surface type: Concrete

C_{POST}:

User Composite post development C_{POST}: 0.36

User Input $I_{Historical}$: 0.00 in./hr.

Treatment Factor (Tf): 1 Calculated

$I_{Design\ Storm}$: 0.20 in./hr.

BMP Sizing 100% Treatment Vertical

Percent of Goal Achieved = 100.73 %

Infiltration rate of the specified BMP soil: 5.00 in./hr.

Depth of drainage pipe: 1.50 ft

BMP Length: 34.50 ft

BMP Width: 3.50 ft

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: **9272.02 Pacific Realty**

BMP ID:	DMA 8
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	15,465.0 ft^2
Description/Notes:	

100% Treatment

$Q_{TREATMENT}$ = **0.0381** cfs

Post surface type:	Concrete			
C_{POST}:				
User Composite post development C_{POST}:	0.46	Treatment Factor (Tf):	1	Calculated
User Input $I_{Historical}$:	0.00 in./hr.	$I_{Design\ Storm}$:	0.20	in./hr.

BMP Sizing 100% Treatment Vertical

Percent of Goal Achieved = **161.59** %

Infiltration rate of the specified BMP soil:	5.00 in./hr.
Depth of drainage pipe:	1.50 ft
BMP Length:	66.50 ft
BMP Width:	8.00 ft

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: 9272.02 Pacific Realty

BMP ID:	DMA 9
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	3,339.0 ft^2
Description/Notes:	

100% Treatment

$Q_{TREATMENT}$ = 0.0088 cfs

Post surface type:	Asphalt			
C_{POST}:				
User Composite post development C_{POST}:	0.49	Treatment Factor (Tf):	1	Calculated
User Input $I_{Historical}$:	0.00 in./hr.	$I_{Design\ Storm}$:	0.20	in./hr.

BMP Sizing 100% Treatment Vertical

Percent of Goal Achieved = 330.16 %

Infiltration rate of the specified BMP soil:	5.00 in./hr.
Depth of drainage pipe:	1.50 ft
BMP Length:	50.00 ft
BMP Width:	5.00 ft

STORM WATER CALCULATOR

BMP Tributary Parameters

Project Name: 9272.02 Pacific Realty

BMP ID:	DMA 10
BMP Design Criteria:	Delta Volume & Treatment
Type of BMP Design:	Priority 2: P2-05 Roadside Bioretention - No Curb AND Gutter
BMP's Physical Tributary Area:	8,873.0 ft^2
Description/Notes:	

100% Treatment

$Q_{TREATMENT}$ = 0.0299 cfs

Post surface type:	Concrete			
C_{POST}:				
User Composite post development C_{POST}:	0.63	Treatment Factor (Tf):	1	Calculated
User Input $I_{Historical}$:	0.00 in./hr.	$I_{Design\ Storm}$:	0.20	in./hr.

BMP Sizing 100% Treatment Vertical

Percent of Goal Achieved = 100.50 %

Infiltration rate of the specified BMP soil:	5.00 in./hr.
Depth of drainage pipe:	1.50 ft
BMP Length:	65.00 ft
BMP Width:	4.00 ft

BMP Selection Table

Project Name: 4245 Hargrave Ave.

	Best Management Practice (BMP)	Detail Sheet	Detail Title	Can be used with...	High Ground Water	Contamination	Slope Constraints	Achieves...	Treatment	Volume Capture	Runoff Reduction Measure	BMP in priority selected?	Yes	No	Unique Identifier of BMP per planes	Explanation of selection	Other notes:
Universal BMP- to be considered on all projects.	Living Roof	N/A	N/A		X	X	X		X	X				X			
	Rainwater Harvesting	N/A	N/A		X	X	X			X				X			
Runoff Reduction Measures	Interceptor Trees	N/A	N/A		X	X	X				X		X				
	Bovine Terrace	RRM-01	Bovine Terrace		X						X			X			
	Vegetated Buffer Strip	RRM-02	Vegetated Buffer Strip								X			X			
	Impervious Area Disconnection	N/A	N/A		X	X	X				X		X				
Priority 1- to be installed with no underdrains or liners. Must drain all stading water within 72 hours.	Bioretention	P1-02	Roadside Bioretention - no C & G						X	X				X			
	Vegetated Swale- with Bioretention	P1-06	Swale with Bioretention						X	X				X			
	Constructed Wetlands	N/A	N/A						X	X				X			
Priority 2 BMPs- with subsurface drains installed above the capture volume.	Bioretention	P2-02	Roadside Bioretinton - Flush Design Roadside						X	X				X			
		P2-03	Roadside Bioretenion- Contiguous SW						X	X				X			
		P2-04	Roadside Bioretenion- Curb Opening						X	X				X			
		P2-05	Roadside Bioretenion- No C & G						X	X			X				
	Constructed Wetlands	N/A	N/A						X	X				X			

Date: _____

Page _____ of _____

BMP Selection Table

	Best Management Practice (BMP)	Detail Sheet	Detail Title	Can be used with...	High Ground Water	Contamination	Slope Constraints	Achieves...	Treatment	Volume Capture	Runoff Reduction Measure	BMP in priority selected?	Yes	No	Unique Identifier of BMP per planes	Explanation of selection	Other notes:
Priority 3 BMPs- installed with subdrains and/or impermeable liner. Does not achieve volume capture and must be used as part of a treatment train.	Bioretention	P3-02	Roadside Bioretinton - Flush Design Roadside		X	X	X		X					X			
		P3-03	Roadside Bioretenion- Contiguous SW		X	X	X		X					X			
		P3-04	Roadside Bioretenion- Curb Opening		X	X	X		X					X			
	Flow Through Planters	P3-05	Flow Through Planters		X	X	X		X					X			
	Vegetated Swale	P3-06	With Bioretention		X	X	X		X	X				X			
		P3-07	Vegetated Swale		X	X	X		X					X			
Priority 4 BMPs- does not achieve volume capture and must be used as part of a	Tree Filter Unit				X	X	X		X					X			
	Modular Bioretention				X	X	X		X					X			
Priority 5 BMPs- does not achieve volume capture and must be used as part of a treatment train.	Chambered Separator Units				X	X	X		X					X			
	Centrifugal Separator Units				X	X	X		X					X			
	Trash Excluders				X	X	X		X					X			
	Filter Inserts				X	X	X		X					X			
Priority 6 BMPs- see the "Offset Program" chapter for details.	Offset Program								N/A	N/A	N/A			X			
Other	Detention				X									X			

FACT SHEET- IMPERVIOUS AREA DISCONNECTION

IMPERVIOUS AREA DISCONNECTION

Including: splash blocks, rain chains, bubble up emitters, and pavement disconnection.

OVERVIEW

Impervious area disconnection allows storm water from impervious areas, such as rooftops and pavement, to be directed to pervious natural or landscaped areas and infiltrate into the soil. Impervious surfaces that drain directly to catch basins or storm drains are a directly connected impervious area. These areas prevent storm water infiltration into the soil or filtering through vegetation and soil. Impervious areas also increase the speed and amount of runoff from a site, which may contribute to peak flows and scour in downstream creeks and waterways. This BMP addresses these issues by disconnecting direct discharges by using: splash blocks, bubble-up emitter, and paved area disconnection.

SPLASH BLOCK DESCRIPTION

Splash blocks are a low tech option to hard piped downspout systems. Existing downspouts can be retrofitted using splash blocks.

ADVANTAGES

- Can be used as part of a treatment train with volume capture BMPs.
- Can reduce the size of downstream water quality treatment and volume capture BMPs by increasing the potential for infiltration.

- Can be used as a retrofit BMP.
- Can be used to direct storm water to other BMPs

LIMITATIONS

- Adjacent buildings and overflow requirements need to be considered in design.
- May not be appropriate on all sites due to space constraints.

KEY DESIGN FEATURES

- Sites should be evaluated to ensure that splash blocks won't have negative impacts.
- Rain water must be directed away from foundations and footings.
- Downspouts should not be directed to paved areas or across sidewalks.
- Landscaped areas receiving roof water should be adequately sized to prevent runoff or erosion.

BUBBLE-UP EMITTER DESCRIPTION

Bubble-up emitters work very much like splash blocks, but allow for storm water to be released further from the building and even in landscape areas that are not directly adjacent to the building.

ADVANTAGES

- Can be used as part of a treatment train with volume capture BMPs.
- Can reduce the size of downstream water quality treatment and volume capture BMPs by increasing the potential for infiltration.
- Can be used as a retrofit BMP.
- Can be used to direct storm water to other BMPs

LIMITATIONS

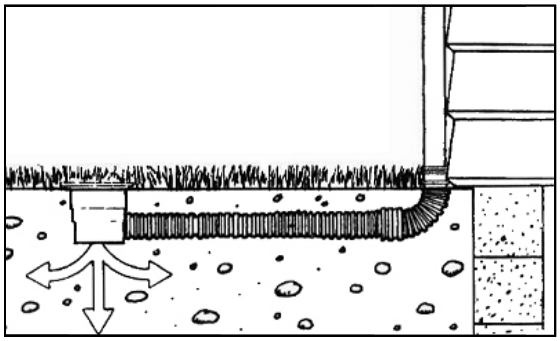
- Adjacent buildings and overflow requirements need to be considered in design.
- May not be appropriate on all sites due to space constraints.

KEY DESIGN FEATURES

- Rain water must be directed away from foundations and footings.
- Downspouts should not be directed to paved areas or across sidewalks.
- 4" diameter SDR-35 pipe required as a minimum.

FACT SHEET- IMPERVIOUS AREA DISCONNECTION

- Distance and location of emitter relative to the building must be approved by a Licensed Geotechnical Engineer.
- Landscaped areas receiving roof water should be adequately sized to prevent runoff or erosion.
- Landscaped areas receiving roof water need to be designed to ensure proper drainage and to prevent ponding water.
- May be installed with a bottomless emitter to allow for infiltration. Bottom of emitter should be placed over drain rock to prevent sedimentation of pipe.
- Emitter should be equipped with "pop up" cover to prevent mosquito breeding.



PAVED AREA DISCONNECTION DESCRIPTION

Paved areas that can be graded so that they drain onto pervious area, such as landscape or natural area can increase the opportunity for infiltration and minimize the size of downstream treatment.

ADVANTAGES

- Can be used as part of a treatment train with other BMPs.
- Can reduce the size of downstream treatment and volume capture BMPs by increasing the potential for infiltration.

LIMITATIONS

- Areas receiving flow need to be adequately sized and stabilized.
- May be limited by site slopes.
- Overflow drainage must be provided.
- May not be appropriate on all sites.

KEY DESIGN FEATURES

- Rain water must be directed away from foundations and footings.
- Landscaped areas receiving storm water should be adequately sized to prevent runoff or erosion.
- Landscaped areas receiving roof water need to be designed to ensure proper drainage and to prevent ponding water.

IMPERVIOUS AREA DISCONNECTION- CHECKLIST

Impervious Area Disconnection

Inspection and Maintenance Checklist

(aka: splash blocks, rain chains, bubble up emitters and pavement disconnection)

Date of Inspection: _____

Inspector(s): _____

BMP ID #: _____

Property Owner: _____

Location Description: _____

Type of Inspection: ☐ Pre-rainy Season (PRS) ☐ Rainy Season (RS) ☐ After-rainy Season (ARS)

This Inspection and Maintenance Checklist is to be usde in conjunction with its corresponding LID Factsheet and Maintenance Plan. Please review these documents before performing the field inspection.

Inspection Category	When to Inspect	Maintenance Issue	Is the Issue Present?	Require Maintenance	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)
Drainage	RS	Is there standing or pooling of water after 3 days of dry weather?		• Regrade drainage area. • Reposition splash block. • Clean inlets/outlets of obstructions.	
	RS	Is there excessive splashing/spray?		• Reposition splash block or dissipater to reduce or eliminate splash/spray.	
	RS	Are the house/building gutters overflowing during a rain event?		• Flush bubble up pipe to remove any obstructions. • Check gutter down spout and gutter for obstructions. Clean if necessary.	

IMPERVIOUS AREA DISCONNECTION- CHECKLIST

Inspection Category	When to Inspect	Maintenance Issue	Is the Issue Present?	Require Maintenance	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)
Erosion	RS ARS	Is there evidence of under cutting or washouts around splash block/dissipater?		• Reposition the inlet splash block or dissipater. • Fill in eroded areas and regrade.	
	RS ARS	Is there channelization (gully) forming around the bubble ups?		• Fill in eroded areas and regrade.	
	RS ARS	Is there accumulation of sediment (sand, dirt, mud) in the inlets/outlets areas?		• Remove sediment and check the grading.	
	RS ARS	Are there voids or holes along the path of the bubble up pipe or excess sediment in and around the bubble up outlet?		• Flush and inspect pipe for damage. • Replace damage pipe, fill in voids, and regrade.	

IMPERVIOUS AREA DISCONNECTION- CHECKLIST

Inspection Category	When to Inspect	Maintenance Issue	Is the Issue Present?	Require Maintenance	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)
Vegetation	PRS RS ARS	Is the vegetation clogging the Inlet/outlet areas?		• Trim and/or remove the excess vegetation around the inlet/outlet areas.	
	PRS RS ARS	Is the mulch spread evenly throughout the vegetation area?		• Redistribute and add additional mulch if needed. • Regrade vegetation area.	
	PRS RS ARS	Are there dead or dry plants/weeds?		• Remove dead and/or dry vegetation. Replace as needed. • Remove or trim any vegetation that is causing a visual barrier hazard.	

IMPERVIOUS AREA DISCONNECTION- CHECKLIST

Inspection Category	When to Inspect	Maintenance Issue	Is the Issue Present?	Require Maintenance	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)
BMP General	PRS RS ARS	Is there debris/trash in the area?		• Remove all trash and debris.	
	PRS RS ARS	Is the surrounding area marked with graffiti?		• Remove all graffiti from the area.	
	PRS RS ARS	Are there missing or disturbed aesthetics features?		• Replace and/or reposition aesthetic features to original placement. • Placement should not disrupt flow characteristics/design.	
	PRS RS ARS	Check for broken or damage drain inlets/outlets, splash blocks, bubble ups, and grates.		• Replace or repair all damaged features.	
	PRS RS ARS	Is the vegetation irrigation functional?		• Repaired broken missing spray/drip emitters. • Reposition to eliminate over spray and/or over watering.	
	PRS RS ARS	Are the aesthetic features firmly secured in placed?		• Repair and/or replace loose or damaged features.	

FACT SHEET- BIORETENTION

BIORETENTION

Also know as: Street rain garden, roadside bioretention, and bioretention cell

DESCRIPTION

The bioretention area best management practice (BMP) functions as a soil and plant-based filtration and infiltration feature that removes pollutants through a variety of natural physical, biological, and chemical treatment processes.

ADVANTAGES

- Achieves both water quality and volume capture objectives.
- Bioretention areas provide storm water treatment that enhances the quality of downstream water bodies by using natural processes.
- The vegetation provides shade and wind breaks, absorbs noise, reduces heat island effects and improves an area's landscape.
- Bioretention provides habitat for birds and attracts other pollinators like butterflies and bees.
- Does not interrupt utility installation.
- Does not interfere with tree planting.

FACT SHEET- BIORETENTION

LIMITATIONS

- Bioretention is not recommended for areas where street slopes exceed 10%.
- Should not be used in areas of known contamination. If soil and/or groundwater contamination is present on the site or within a 100' radius of the proposed BMP location, the North Coast Regional Water Quality Control Board will need to be contacted and the site reviewed.
- Should not be used in areas of high groundwater. In general a minimum of 2' of clearance should be provided between the bottom of the bioretention cell and seasonal high groundwater.
- Should not be used in areas of slope instability where infiltrated storm water may cause failure. Slope stability should be determined by a licensed geotechnical engineer.
- Do not use in locations that can negatively impact building foundation or footings. Location shall be approved by a licensed Geotechnical Engineer.

KEY DESIGN FEATURES

ALL BIORETENTION

- Structural soil should be used within the bioretention area requiring load bearing capacity (adjacent to roadways and/or buildings.)
- Structural soil shall be installed as described in Reference Document E.
- Some BMPs may not require the use of structural soil and a more organic type planting soil and/or treatment media may be used in its place. It may be possible in some cases to use native soil or to amend the native soil so that it is suitable. Use of non-structural soil will depend on evaluation of the criteria in "Chapter 4-Site Assessment" as well as consideration of structural needs and may require evaluation by a licensed Geotechnical Engineer.
- Native soil should remain uncompacted to preserve infiltration capacity. Fence off the area during construction to protect it from compaction.
- Bottom of bioretention should be unlined to allow infiltration into native soil.
- Moisture barrier must be installed to protect road sub-base and any trenches adjacent to the bioretention area.
- If used, pervious concrete shall be designed and installed as described in Appendix G.
- If used, porous gutter must be protected during construction to prevent sediment loading.
- If the porous gutter design option is used additional trash and sediment capture BMPs may be required
- A curb opening type design may be used in place of a porous gutter if appropriate for the project.
- Bioretention areas shall be planted with plants from the approved plant and tree list included in Appendix F and shall be planted to achieve 51% cover.

- All bioretention areas shall be designed with a designated high flow bypass inlet for storms larger than the design storm.
- 6" perforated pipe to be installed at a depth of 6" below road structural section.
- Perforated pipe shall be installed in straight runs.
- The volume below the perforated pipe must be sufficient to hold and infiltrate the design volume.

SIZING DESIGN- GOAL AND REQUIREMENTS

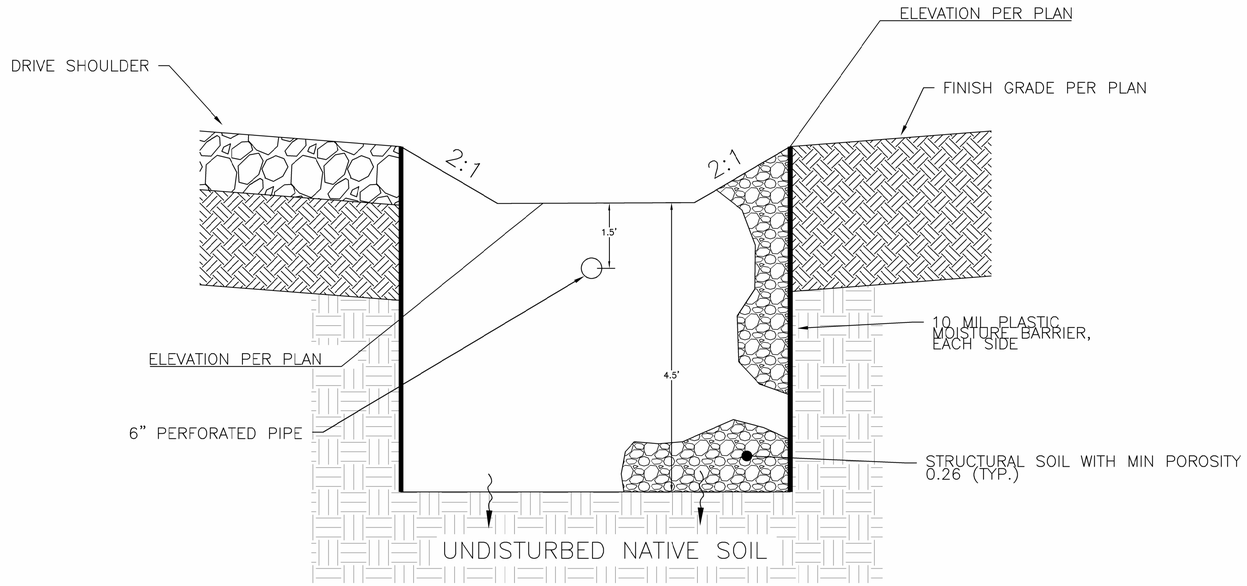
- The **design goal** for all bioretention areas is to capture (infiltration and/or reuse) 100% of the volume of runoff generated by the 85th percentile 24 hour storm event. This is a retention requirement. If 100% volume capture is achieved than no additional treatment is required.
- If the design goal is not achievable, then the bioretention area *sizing requirement* is:
    - **Water Quality Treatment** of 100% of the flow generated by the 85th percentile 24 hour storm event, as calculated using the Rational Method and a known intensity of 0.20 inches per hour, **and**
    - **Volume Capture** (infiltration and/or reuse) of the increase in volume of storm water due to development generated by the 85th percentile 24 hour storm event. This is a retention requirement.
- All calculations shall be completed using the "Storm Water Calculator" available at www.srcity.org/stormwaterLID.

INSPECTION AND MAINTENANCE REQUIREMENTS

A maintenance plan shall be provided with the Final SUSMP. The maintenance plan shall include recommended maintenance practices, state the parties responsible for maintenance and upkeep, specify the funding source for ongoing maintenance with provisions for full replacement when necessary and provide site specific inspection checklist.

At a minimum maintenance shall include the following:

- Dry street sweeping upon completion of construction
- Dry street sweeping annually, and
    - When water is observed flowing in the gutter during a low intensity storm.
    - Algae is observed in the gutter.
    - Sediment/debris covers 1/3 of the gutter width or more.
- Inspect twice annually for sedimentation and trash accumulation in the gutter. Obstructions and trash shall be removed and properly disposed of.
- Inspect twice during the rainy season for ponded water.
- Pesticides and fertilizers shall not be used in the bioretention area.
- Plants should be pruned, weeds pulled and dead plants replaced as needed.



ROADSIDE BIORETENTION 3

NO.	REVISION	DATE

LACO
SURVEYORS | ENGINEERS | PLANNERS | GEOLOGISTS
lacoassociates.com

PACIFIC KNOLLS
SEBASTOPOL, CA

BIORETENTION DETAIL

JOB NO. 9272.02
DATE 3/14/2024
DESIGNER
CHECKED DRAWN
SHEET 1 OF 1

Mar 22,2024-12:35pm
J:\Shared\Projects\9200\9272.02 Healdsburg Ave\Civil\Civil\DWG\ 9272.02 Details.dwg

PLANTER STRIP BIORETENTION- CHECKLIST

Planter Strip Bioretention
Inspection and Maintenance Checklist
(aka: Street Rain Garden, Roadside Bioretention, Bioretention Cell)

Date of Inspection: _____
Inspector(s): _____
BMP ID #: _____
Property Owner: _____

Location Description: _____

Type of Inspection: ☐ Pre-rainy Season (PRS) ☐ Rainy Season (RS) ☐ After-rainy Season (ARS)

This Inspection and Maintenance Checklist is to be used in conjunction with its corresponding LID Factsheet and Maintenance Plan. Please review these documents before performing the field inspection.

Inspection Category	When to Inspect	Maintenance Issue	Is the Issue Present?	Require Maintenance	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)
Drainage	RS	Is there standing or pooling of water in the Bioretention area after 3 days of dry weather?		• Check perforated pipe outlet for obstruction or damage. * • Flush perforated pipe to remove obstructions/sediment. * • Remove and replace the first few inches of topsoil. • Remove soil and inspect perforated pipe. Repair or replace perforated pipe, replace with new soil and regrade.	
		Is water not draining into catch basin from the overflow pipe during a high intensity storm? *			
	PRS RS ARS	Is there sediment visible in the gutter?		• In dry weather, use a mechanical sweeper or a Vactor truck to clean gutter pan.	
	RS	Is there water flowing in the pervious concrete gutter section during a low intensity storm? *		• In wet weather, use a Vactor truck to clean gutter pan.	

* If perforated pipe is present.

PLANTER STRIP BIORETENTION- CHECKLIST

Inspection Category	When to Inspect	Maintenance Issue	Is the Issue Present?	Require Maintenance	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)
Erosion	RS ARS	Is there under cutting or washouts along the sidewalks and/or curbs abutting the planter strip?		• Fill in eroded areas and regrade.	
	RS ARS	Is there channelization (gully) forming along the length of the planter area?		• Fill in eroded areas and regrade.	
	RS ARS	Is there accumulation of sediment (sand, dirt, mud) in the planter?		• Remove sediment and check the grading. Add replacement soil and/or mulch.	
	PRS RS ARS	Is the mulch unevenly distributed in the planter area?		• Redistribute and add additional mulch if needed. • Regrade planter area.	
	PRS RS ARS	Are there voids or deep holes present? Is there sediment present in the catch basin and in the overflow pipe?		• Check the perforated pipe for damage.*	
	PRS RS ARS	Is there evidence of animal activity such as holes or dirt mounds from digging or borrowing?		• Repair and fill in damage areas. • Rodent control activities must be in accordance with applicable laws and do not affect any protected species.	

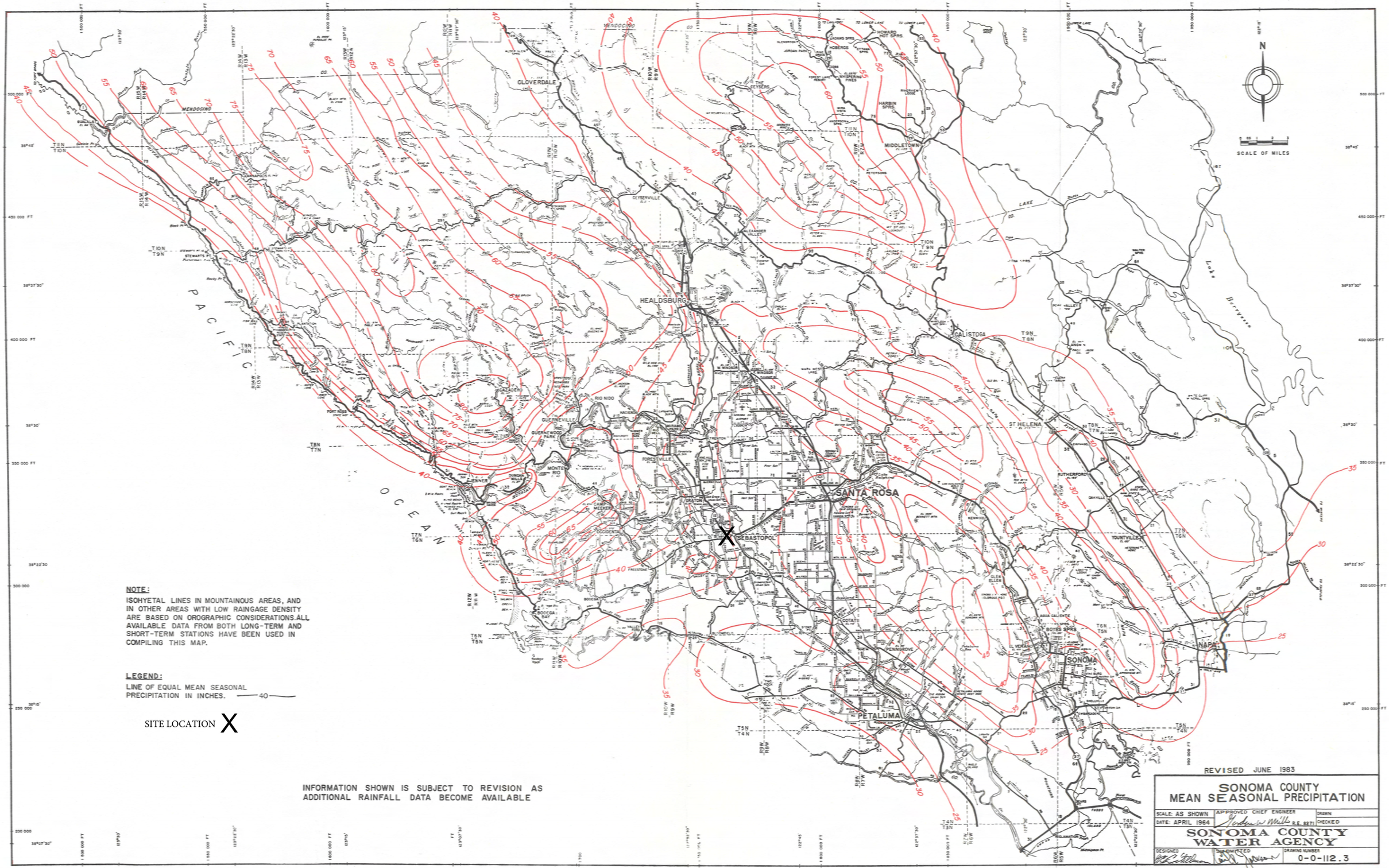
* If perforated pipe is present.

PLANTER STRIP BIORETENTION- CHECKLIST

Inspection Category	When to Inspect	Maintenance Issue	Is the Issue Present?	Require Maintenance	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)
Vegetation	PRS RS ARS	Is the vegetation clogging the inlet flow areas?		• Trim and/or remove the excess vegetation.	
	PRS RS ARS	Is the mulch distributed evenly throughout the planter area?		• Redistribute and add additional mulch if needed. • Regrade planter area.	
	PRS RS ARS	Are there dead or dry plants/weeds? Is the vegetation over grown?		• Remove dead and/or dry vegetation. Replace as needed. • Remove or trim any vegetation that is causing a visual barrier, trip, and or obstruction hazard.	

PLANTER STRIP BIORETENTION- CHECKLIST

Inspection Category	When to Inspect	Maintenance Issue	Is the Issue Present?	Require Maintenance	**Comments** (Describe maintenance completed and if needed maintenance was not conducted, note when it will be done)
BMP General	PRS RS ARS	Is there debris/trash in the planter area?		• Remove all trash and debris.	
	PRS RS ARS	Is graffiti present?		• Remove all graffiti from the area.	
	PRS RS ARS	Are there missing or disturbed aesthetics features?		• Replace and/or reposition aesthetics features to original placement. • Placement should not disrupt flow characteristics/design.	
	PRS RS ARS	Is the vegetation irrigation functional?		• Repaired broken missing spray/drip emitters. • Reposition and/or adjust to eliminate over spray and/or over watering.	
	PRS RS ARS	Are the aesthetic features firmly secured in placed?		• Repair and/or replace loose or damage features.	
	PRS RS ARS	Check for damage sidewalk, curb, gutter, and catch basin including uplift and settling.		• Remove and replace damaged areas.	



NOTE:

ISOHYETAL LINES IN MOUNTAINOUS AREAS, AND IN OTHER AREAS WITH LOW RAINGAGE DENSITY ARE BASED ON OROGRAPHIC CONSIDERATIONS. ALL AVAILABLE DATA FROM BOTH LONG-TERM AND SHORT-TERM STATIONS HAVE BEEN USED IN COMPILING THIS MAP.

LEGEND:

LINE OF EQUAL MEAN SEASONAL PRECIPITATION IN INCHES. ——40——

SITE LOCATION X

INFORMATION SHOWN IS SUBJECT TO REVISION AS ADDITIONAL RAINFALL DATA BECOME AVAILABLE

REVISED JUNE 1983

SONOMA COUNTY MEAN SEASONAL PRECIPITATION

SCALE: AS SHOWN	APPROVED CHIEF ENGINEER	DRAWN
DATE: APRIL 1964	John W Mills R.E. 8271	CHECKED
SONOMA COUNTY WATER AGENCY		
DESIGNED	SUBMITTED	DRAWING NUMBER 0-0-112.3

PLATE No. B-3


122° 50' 0" W
122° 49' 53" W
38° 24' 19" N
38° 24' 15" N
514560
514570
514580
514590
514600
514610
514620
514630
514640
514650
514660
514670
514680
514690
514700
4250800
4250790
4250780
4250770
4250760
4250750
4250740
4250730
4250720
4250710
SbD2
GdC
GdC
Soil Map may not be valid at this scale.
Map Scale: 1:705 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 10 20 40 60
Feet
0 30 60 120 180
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 Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Sonoma County, California
Survey Area Data: Version 17, Sep 11, 2023

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

Date(s) aerial images were photographed: Mar 26, 2022—Apr 25, 2022

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
GdC	Goldridge fine sandy loam, 2 to 9 percent slopes	C	0.0	1.2%
SbD2	Sebastopol sandy loam, 9 to 15 percent slopes, eroded	C	1.7	98.8%
Totals for Area of Interest			**1.8**	**100.0%**

Description

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

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

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

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

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

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

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

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Hydrology & Hydraulics Report

Prepared For

Pacific Realty Development LLC

7261 Healdsburg Ave
Sebastopol, CA 95472
405-686-0772
LACO Job No. 9272.02
APN: 164-150-054

PREPARED BY

LACO ASSOCIATES
2561 California Park Dr #200
Chico, Ca 95928
(530) 801-6170

March, 2024

Prepared under the supervision of
Paul Peck, PE

Project Description:
The project involves the development of a mixed-use subdivision, which will include the construction of townhomes, apartment and commercial buildings, a drive aisle, and a parking structure. The project will include grading & earthwork fill, storm drainage, and associated site improvements.

Pre & Post Development Runoff Conditions:
The total project area contained within parcel 004-291-019 encompasses 1.28 acres.

Pre-development on-site runoff primarily consists of sheet flow that begins at the southeast corner of the site and flows both north and west toward Healdsburg Ave and Murphy Ave, where it then collects into the city storm drain system. Once in the storm drain system, runoff eventually exits at the Morris St outfall into the Laguna de Santa Rosa. Refer to the attached Existing Conditions Exhibit for Pre-Development conditions which also shows an outline of impervious areas.

Post-development on-site runoff will generally flow through proposed gutters and collect into the various proposed bioretention areas. Tributary Areas 7, 9, 10, and 12 will drain through grass swales behind the townhomes before entering bioretention areas. When bioretention areas are at capacity, overflow will enter the proposed storm drain system and be conveyed to the city storm drain system at Healdsburg Ave, or overland flow to Healdsburg and Murphy Ave where it will collect into the city storm drain system.

Potential Impacts
Industrial operations occur on highly impervious surfaces such as gravel equipment parking areas, concrete, and asphalt paving. In addition to the high rate of runoff from these types of surfaces, non-visible pollutants such as sediment and sand, hydrocarbon emissions from vehicles and equipment, oils and greases, and particulate matter all pose potential environmental impacts. In accordance with CASQA and the USEPA, the project is being designed with Low Impact Development (LID) features to capture and treat stormwater runoff which may contain sediment and pollutants. Please see the document entitled “Pacific Knolls Storm Water Low Impact Development Report.”

Concentrating and channelizing stormwater runoff increases the chance of erosion and sedimentary deposit, and increasing the impervious area will increase the flow rate of runoff. Design elements included in this project include bioretention areas and drop inlets set above grade to allow for settling and infiltration as a primary means of stormwater flood control.

Flood Control Hydrology

The project existing site consists of an old building, a concrete walkway, a gravel driveway, dirt, grass, and trees. The existing site drainage consists generally of sheet flow from south to north and east to west over grass, dirt, and gravel.

The proposed drainage will route runoff to landscaped areas and then to bioretention areas that will eventually overflow into storm drain inlets. Overflow inlets are set 6" over grade.

Websoil survey has identified one soil type for this site: Sebastopol sandy loam, which belongs to hydrologic soil group C.

For the purposes of the flood control portion of this drainage report we used the Flood Management Design Manual (FMDM) as a guideline for estimating runoff.

In accordance with the FMDM, the rational method was used to estimate flow rates. The FMDM also provides the following mathematical models and constant values used in the hydraulic analysis:

Design Storm Event	10 Year
Runoff Coefficient:	C = 0.85 (FMDM, Table C-1)
Time of Concentration	7 min
Rainfall Intensity	(NOAA Atlas 14)

Table C-1 of the FMDM was used to calculate the composite runoff coefficient. Per the FMDM, a runoff coefficient value of 0.47 was used for the pervious area and 0.90 for impervious area. A slope greater than twelve percent was assumed for the future landscaped area to make the design conservative. See attached spreadsheet calculation and tabulation called "Pre and Post Development Flow Calculations" for each tributary area (includes 10 and 100 year flows). Attached Hydrology exhibit shows the tributary areas. Predevelopment and Post-development overall flows were calculated. The project design includes closed pipe systems which were designed to convey the 10 year storm; see attached Channel report.

Associated design elements from Storm Water Low Impact Development have been sized to capture and treat the increase in runoff from the predevelopment to post-development. More detailed information can be found in the document titled "Pacific Knolls Storm Water Low Impact Development Report."

100 year storm overland release route is shown on the 100 Year Overland Flow Exhibit. Note that site design features and slopes mimic existing patterns, especially in terms of outfall locations from the project, and proposed grading maintains a general south to north and east to west drainage pattern. Should the proposed on-site storm drain system become inundated, overland flow release

from the project site will remain at the existing north and west locations for the vast majority of the project area. Grades at the northern overland release locations are 132.29 and 129.59, and grades at the western overland release locations are 140.25 and 139.95.

Table 1: C-Values

Soil Type C						
Residential[1]						
Rural		0.03	0.33	0.38	0.43	0.47
Very low density	2	0.11	0.38	0.42	0.47	0.51
	1	0.24	0.45	0.49	0.53	0.57
Low density	1/2	0.32	0.50	0.53	0.57	0.60

Land Use	Lot Size (acres)	Impervious Fraction	Average Slope (%)			
			0-2	>2-6	>6-12	>12
	1/3	0.41	0.56	0.59	0.62	0.64
Medium-low density	1/4	0.49	0.60	0.63	0.65	0.68
Medium density	1/8	0.70	0.73	0.74	0.76	0.77
Medium-high density	1/18	1	0.90	0.90	0.90	0.90
Business, commercial, etc.		1	0.90	0.90	0.90	0.90
General industrial		1	0.90	0.90	0.90	0.90
Parks and recreation		0.05	0.34	0.39	0.44	0.48
Ag and open space		0.02	0.33	0.38	0.43	0.47

C value taken as 0.9 for post-development impervious areas. C value taken as 0.47 for pervious areas given the soil Hydrologic group C and Ag and open space land use with average slopes of >12% coupled with Table 1 above, per FMDM.

Table 2: Manning's n

Table D.2-1. Manning's Roughness Coefficients for Channels

Channel Material	Manning's Roughness (*n*)
Concrete, steel troweled, or smooth-form finish	0.014
Concrete, wood float or broomed finish, including pneumatically applied mortar	0.015
Asphaltic concrete	0.017
Sack concrete riprap	0.030
Grouted rock riprap	0.030
Loose rock riprap	0.035
Grass channels	0.035
Constructed natural waterways	0.050 minimum, under typical conditions*
Other natural channels	See references: Arcement, G. J., and V. R. Schneider. 1989. Guide for selecting Manning's roughness coefficients for natural channels and flood plains. U.S. Department of the Interior, US Geological Survey, 67 pp. Available at: pubs.er.usgs.gov/publication/wsp2339. Barnes, H. H. 1967. Roughness characteristics of natural channels. U.S. Government Printing Office, 213 pp. Available at: pubs.usgs.gov/wsp/wsp_1849/pdf/wsp_1849_h.pdf.

* Sonoma Water may be willing to allow values as low as 0.035 for channels that are well maintained and hydraulically smooth.

Manning's roughness coefficient is selected as 0.012 for storm drain HDPE pipe. A value of 0.035 was used for grass swales and channels.

Hydraulics

Hydraflow Express Civil 3D extension was used to model proposed storm drain pipes and swales using the calculated flow for a 10 year storm. The proposed storm drain system outfalls into the city storm drain system at the northeast corner of the site through a 12" HDPE pipe. A 12" HDPE pipe was modeled with the flow from the entire site to ensure it had the capacity for a 10 year storm. The three proposed swales that will transport the water from Tributary Areas 7, 9,10, and 12 will be 6" deep with 2:1 side slopes and have the capacity to carry the flows from each of the respective areas. See attached for full calculations and channel models.

Conclusion

In accordance with Sonoma County Code sections 11.14.040, this project's drainage system has been designed for the 10 year design discharge. The project has been analyzed in accordance with FMDM section 3.3.1 in utilizing the rational method for hydrology to calculate peak flow rates.

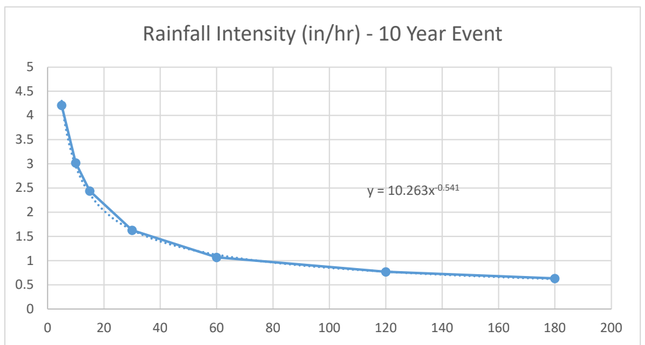
Attachments:

1. Pre and Post Development Flow Calculations
2. Existing Conditions Exhibit
3. Hydrology Exhibit
4. 100 Year Overland Flow Exhibit
5. Hydraflow Express – Storm Drain Pipe Model
6. Hydraflow Express – Swale Model – Tributary Area 9
7. Hydraflow Express – Swale Model – Tributary Area 10
8. Hydraflow Express – Swale Model – Tributary Area 12
9. Hydraflow Express – Swale Model – Tributary Area 7 &12
10. NOAA Point Precipitation Frequency Estimates
11. NOAA PDS-Based Intensity-Duration-Frequency (IDF) Curves
12. NOAA Maps and Aerials
13. Websoilsurvey Soil Map and Map Unit Descriptions

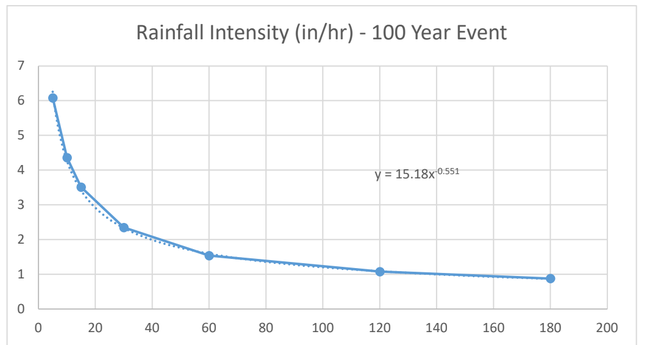
Pre-Development												
Tributary Area	Area (SF)	Pervious Area (SF)	Impervious Area (SF)	Trib Area (ac.)	$C_{pervious}$	$C_{impervious}$	$C_{weighted}$	t_c (min)	i_{10} (in/hr)	i_{100} (in/hr)	Q_{10} (cfs)	Q_{100} (cfs)
1	55593	54343	1250	1.28	0.47	0.9	0.48	7	3.58	5.20	2.19	3.18

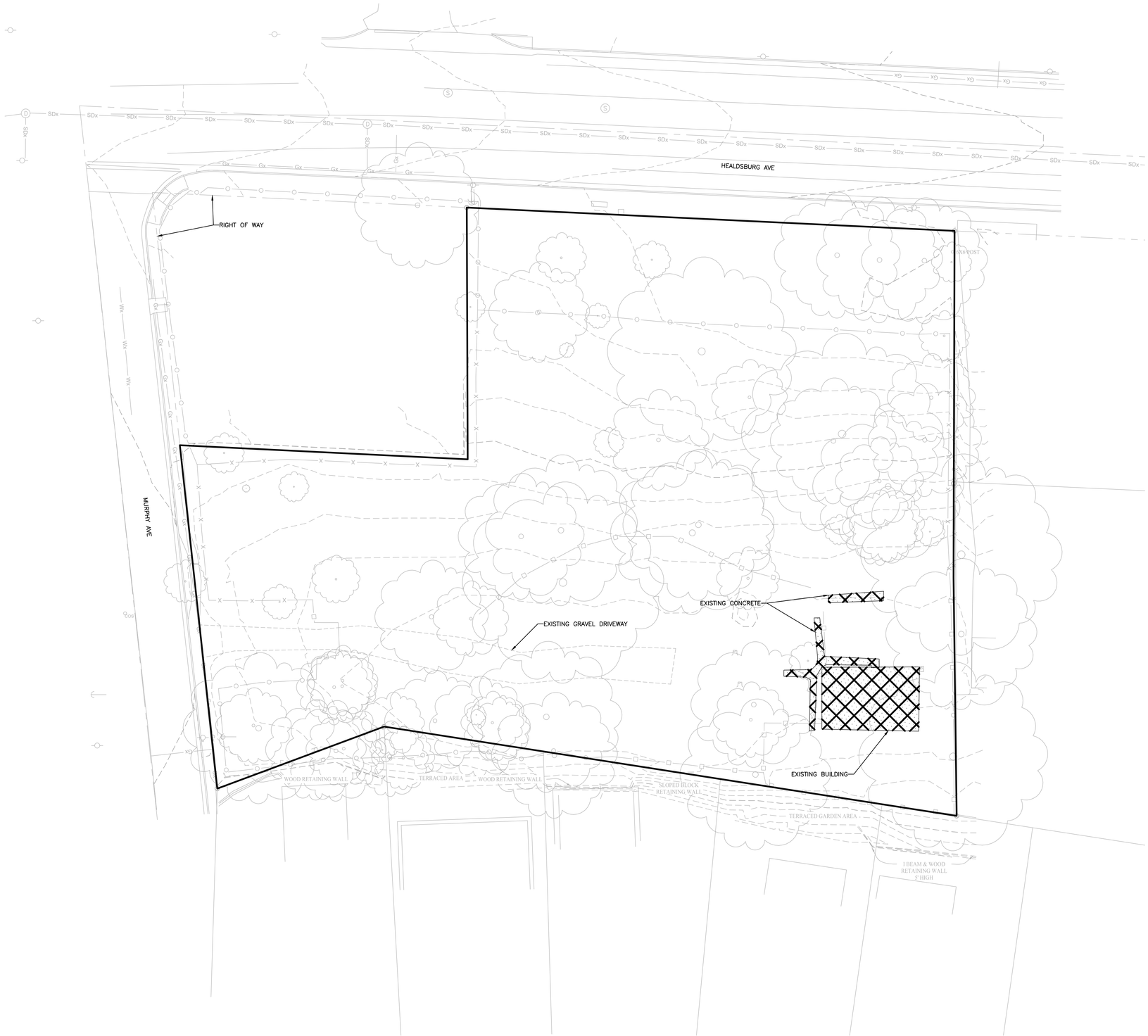
Post-Development												
Tributary Area	Area (SF)	Pervious Area (SF)	Impervious Area (SF)	Trib Area (ac.)	$C_{pervious}$	$C_{impervious}$	$C_{weighted}$	t_c (min)	i_{10} (in/hr)	i_{100} (in/hr)	Q_{10} (cfs)	Q_{100} (cfs)
1	4697	1452	3245	0.11	0.47	0.9	0.77	7	3.58	5.20	0.30	0.43
2	1411	58	1353	0.03	0.47	0.9	0.88	7	3.58	5.20	0.10	0.15
3	1405	52	1353	0.03	0.47	0.9	0.88	7	3.58	5.20	0.10	0.15
4	807	48	759	0.02	0.47	0.9	0.87	7	3.58	5.20	0.06	0.08
5	4467	604	3863	0.10	0.47	0.9	0.84	7	3.58	5.20	0.31	0.45
6	3054	461	2593	0.07	0.47	0.9	0.84	7	3.58	5.20	0.21	0.30
7	6533	4792	1741	0.15	0.47	0.9	0.58	7	3.58	5.20	0.31	0.46
8	16009	4012	11997	0.37	0.47	0.9	0.79	7	3.58	5.20	1.04	1.51
9	4397	2624	1773	0.10	0.47	0.9	0.64	7	3.58	5.20	0.23	0.34
10	3358	1584	1774	0.08	0.47	0.9	0.70	7	3.58	5.20	0.19	0.28
11	6456	1717	4739	0.15	0.47	0.9	0.79	7	3.58	5.20	0.42	0.60
12	3413	1662	1751	0.08	0.47	0.9	0.69	7	3.58	5.20	0.19	0.28
						Avg C	0.77			Total Post	3.47	5.03

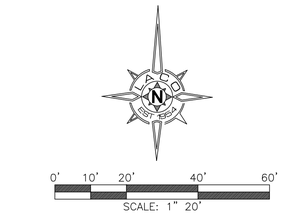
10 Yr t (min)	Rainfall Intensity (in/hr)
5	4.21
10	3.02
15	2.44
30	1.63
60	1.07
120	0.771
180	0.633



100 Yr t	Rainfall Intensity (in/hr)
5	6.08
10	4.36
15	3.51
30	2.35
60	1.54
120	1.08
180	0.88







LEGEND

PROPERTY LINE

EXISTING CONTOUR 55

EXISTING IMPERVIOUS SURFACE

EXISTING PERVIOUS SURFACE

NO.	REVISION	DATE

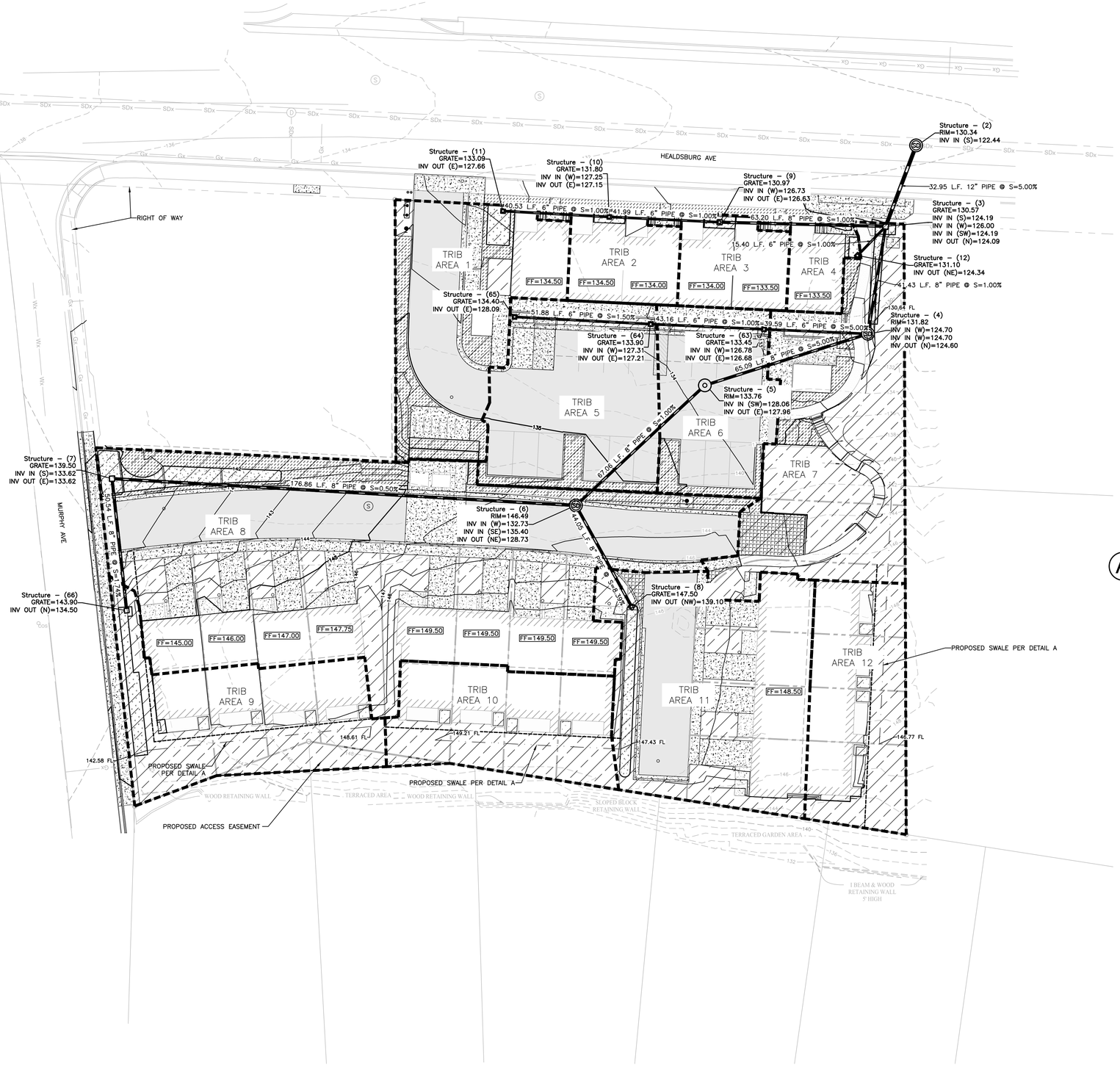
LACO
SURVEYORS | ENGINEERS | PLANNERS | GRANT WRITERS
lacoassociates.com

PACIFIC KNOLLS
SEBASTOPOL, CA

EXISTING CONDITIONS

JOB NO. 9272.02
DATE 3/14/2024
DESIGNER
CHECKED DRAWN
SHEET 1 OF 3

Mar 14,2024-3:52pm
T:\Civil\Projects\9200\9272.02 Pacific Realty - 7261 Healdsburg Ave\Civil\DWGS\ 9272.02 HYDRO EXHIBIT .dwg

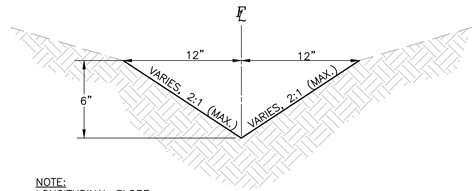


0' 10' 20' 40' 60'

SCALE: 1" 20'

LEGEND

- PROPERTY LINE
- LOT LINE
- EXISTING CONTOUR — 55 —
- PROPOSED CONTOUR — 55 —
- BIO RETENTION AREA
- PERVIOUS SURFACE



NOTE:
LONGITUDINAL SLOPE VARIES

TYPICAL SECTION

Ⓐ EARTH SWALE
NOT TO SCALE

NO.	REVISION	DATE

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PACIFIC KNOLLS
SEBASTOPOL, CA

HYDROLOGY EXHIBIT

JOB NO. 9272.02
DATE 3/14/2024
DESIGNER
CHECKED DRAWN

SHEET 2 OF 3

Mar 26,2024-8:38am
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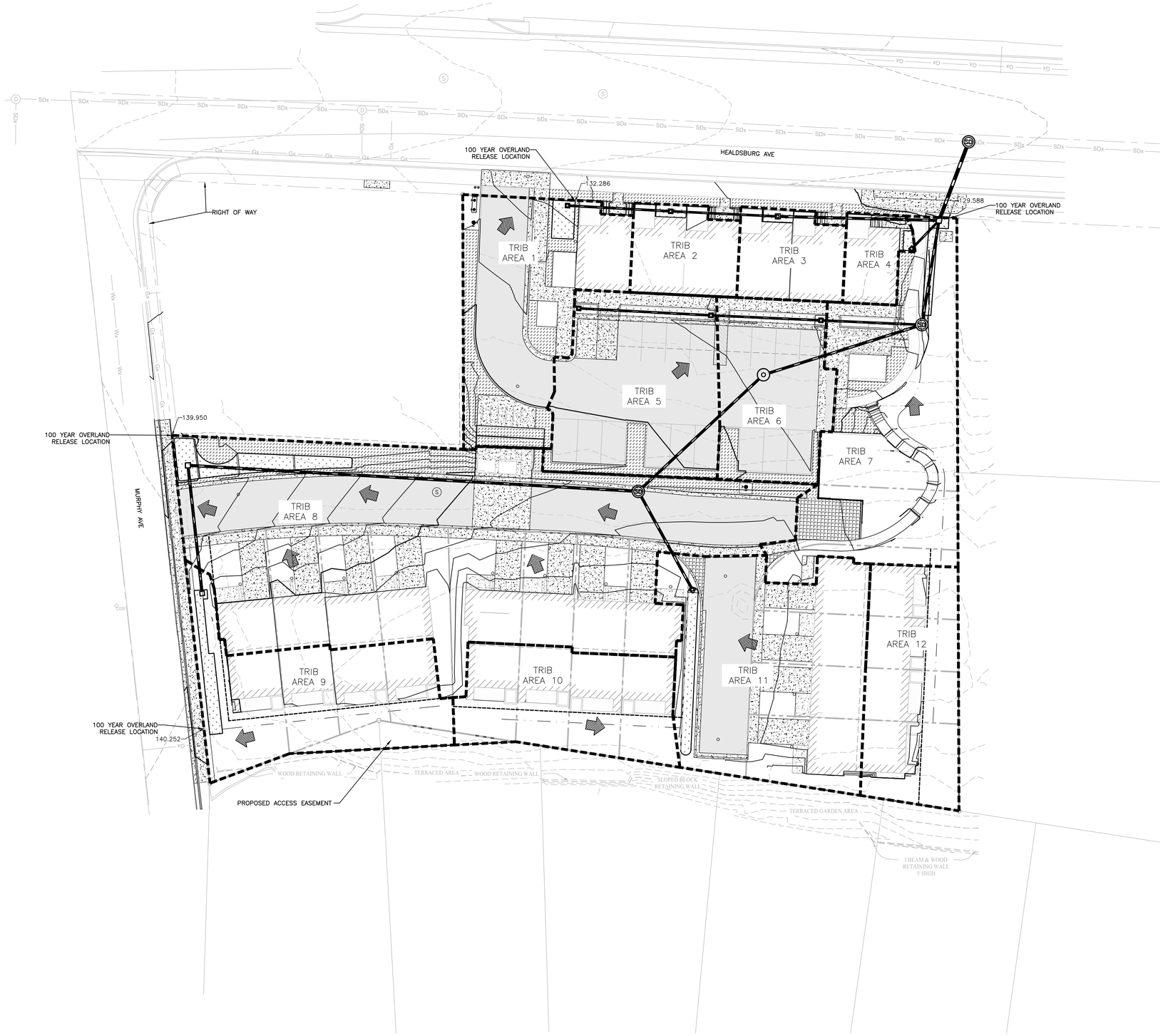

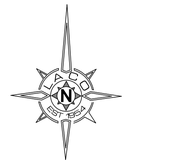

LEGEND

- PROPERTY LINE
- LOT LINE
- EXISTING CONTOUR 55
- PROPOSED CONTOUR 55
- OVERLAND FLOW DIRECTION

NO.	REVISION	DATE

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PACIFIC KNOLLS
SEBASTOPOL, CA

100 YEAR OVERLAND FLOW

JOB NO. 9272.02
DATE 3/14/2024
DESIGNER
CHECKED DRAWN

SHEET 3 OF 3

Mar 26, 2024-8:38am
\\Egnyte\DriveVaco\Shared\Projects\9200\9272.02 Healdsburg Ave\Civil\DWG\ 9272.02 HYDRO EXHIBIT .dwg

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Thursday, Mar 14 2024

Storm Drain Pipe

Circular

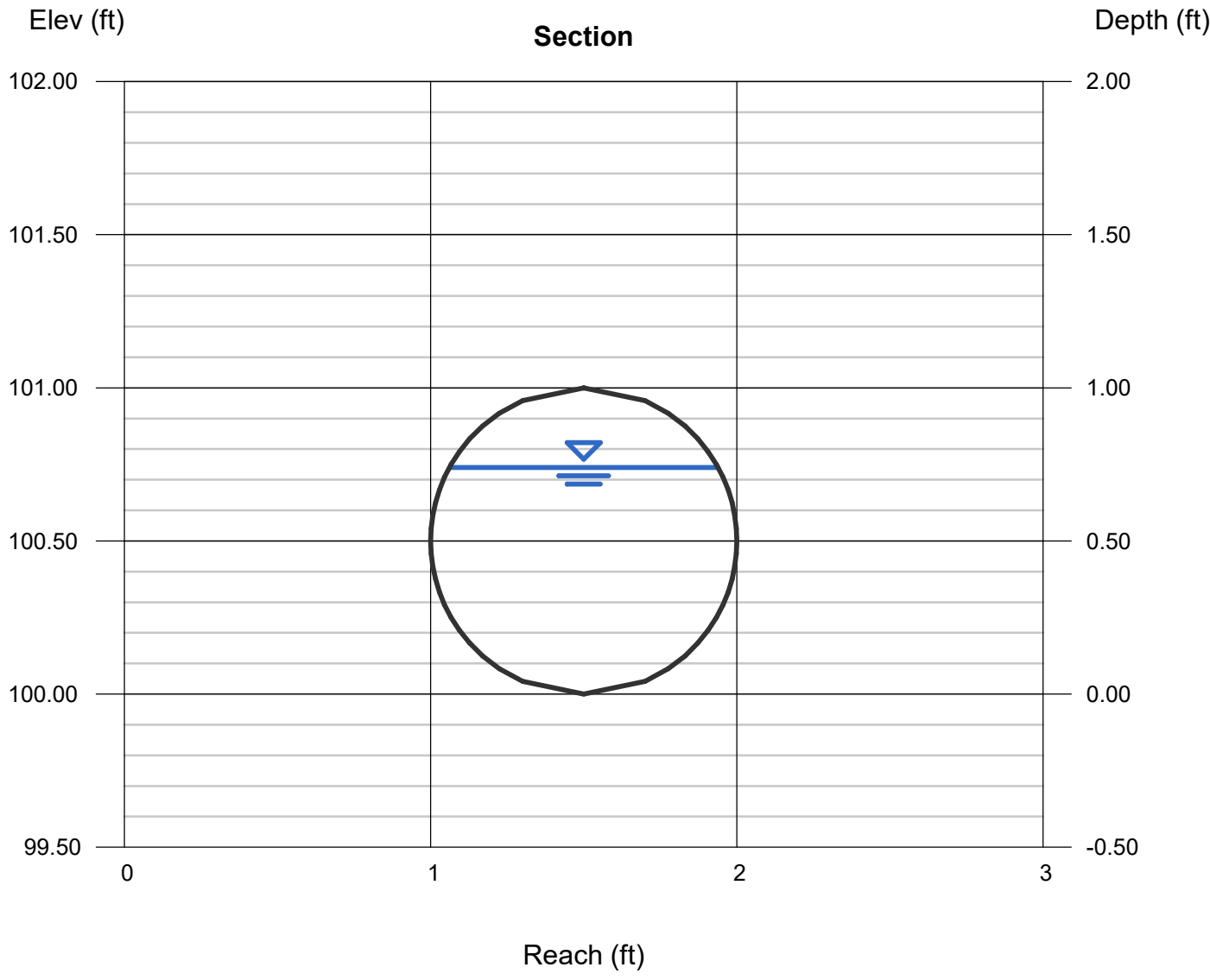
Diameter (ft)	= 1.00
Invert Elev (ft)	= 100.00
Slope (%)	= 1.00
N-Value	= 0.012

Calculations

Compute by:	Known Q
Known Q (cfs)	= 3.47

Highlighted

Depth (ft)	= 0.74
Q (cfs)	= 3.470
Area (sqft)	= 0.62
Velocity (ft/s)	= 5.56
Wetted Perim (ft)	= 2.08
Crit Depth, Yc (ft)	= 0.80
Top Width (ft)	= 0.88
EGL (ft)	= 1.22



Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Thursday, Mar 14 2024

Typical Swale - Trib Area 9

Triangular

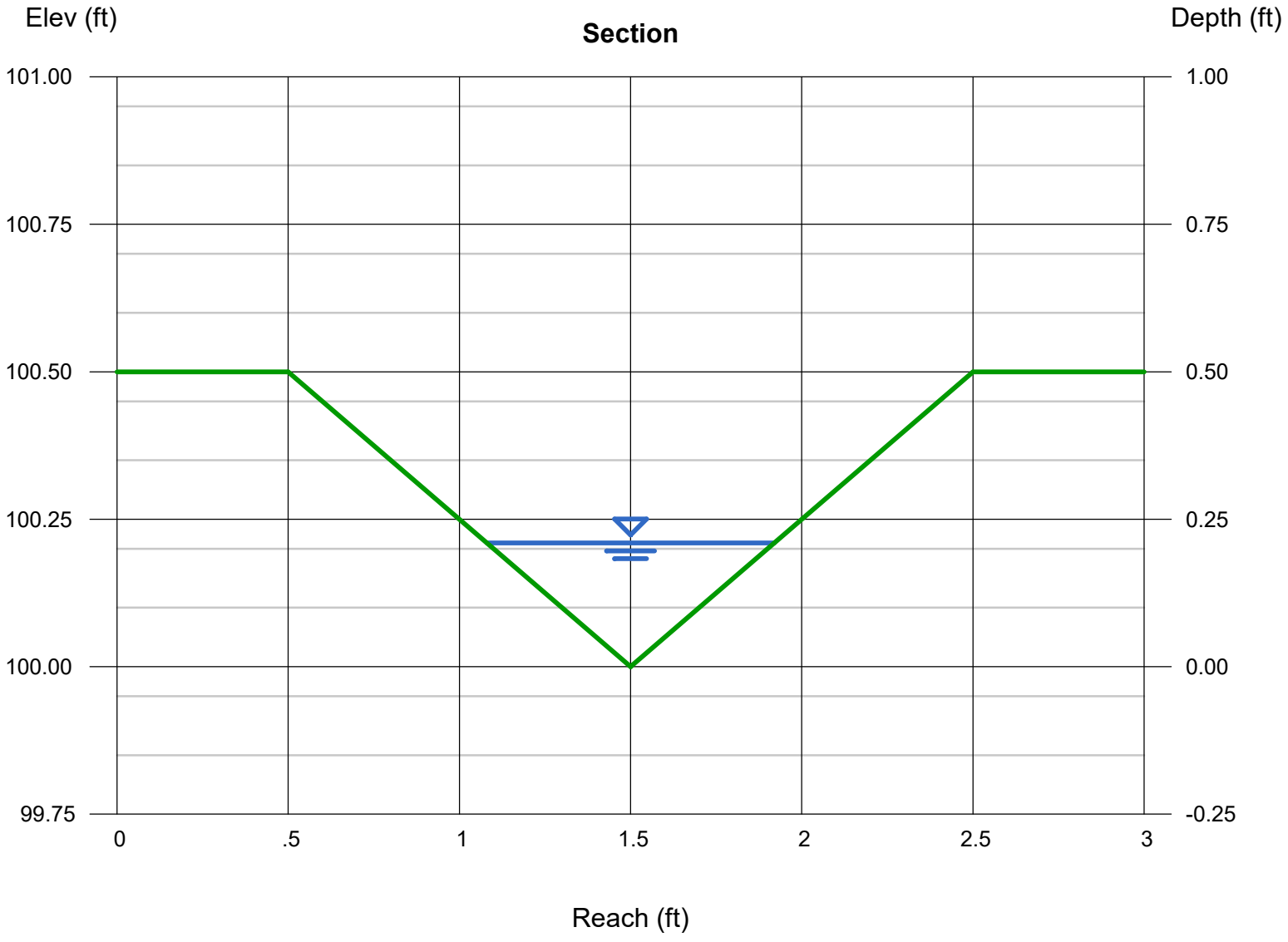
Side Slopes (z:1)	= 2.00, 2.00
Total Depth (ft)	= 0.50
Invert Elev (ft)	= 100.00
Slope (%)	= 9.50
N-Value	= 0.035

Calculations

Compute by:	Known Q
Known Q (cfs)	= 0.23

Highlighted

Depth (ft)	= 0.21
Q (cfs)	= 0.230
Area (sqft)	= 0.09
Velocity (ft/s)	= 2.61
Wetted Perim (ft)	= 0.94
Crit Depth, Yc (ft)	= 0.25
Top Width (ft)	= 0.84
EGL (ft)	= 0.32



Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Thursday, Mar 14 2024

Typical Swale - Trib Area 10

Triangular

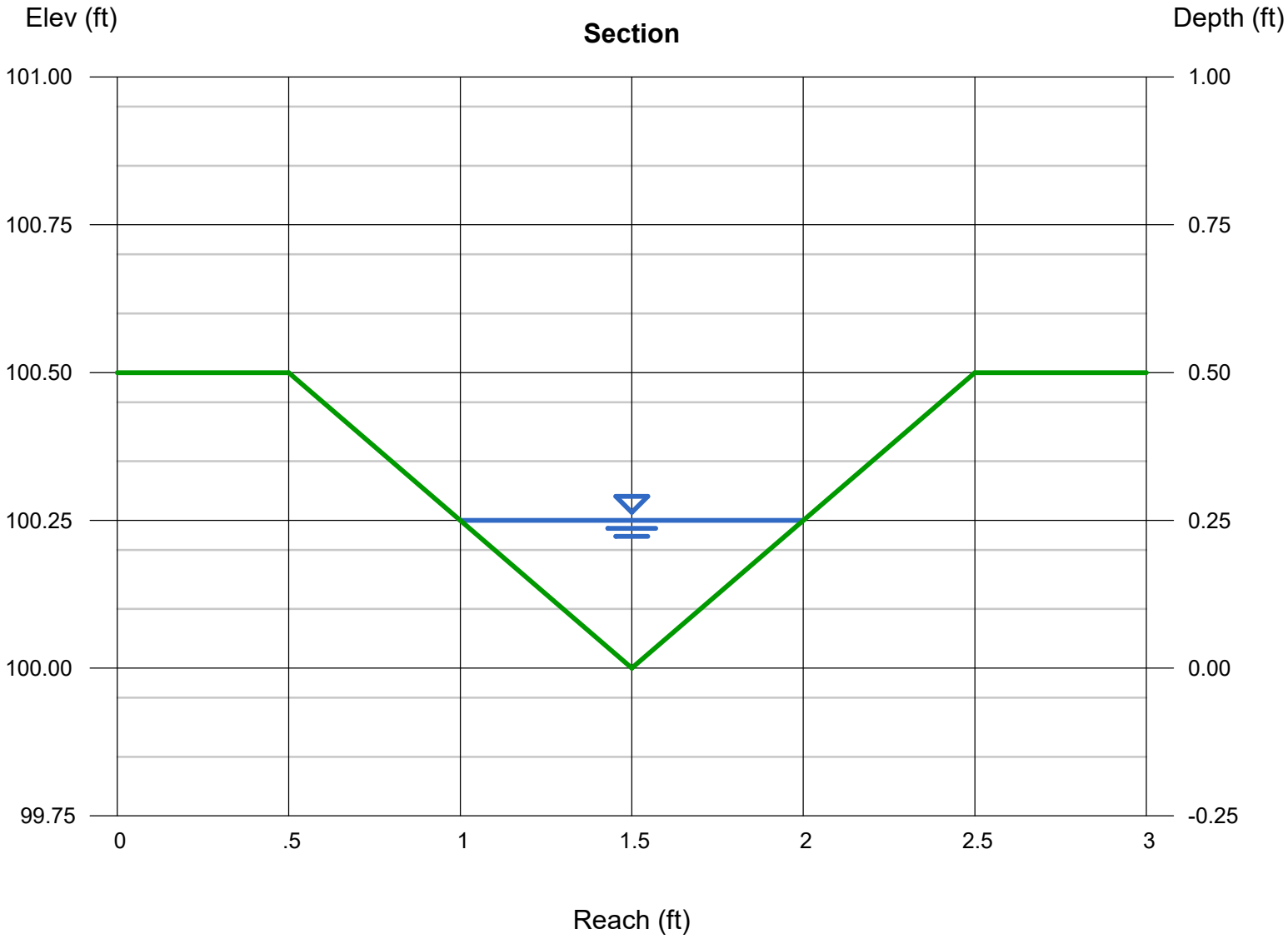
Side Slopes (z:1)	= 2.00, 2.00
Total Depth (ft)	= 0.50
Invert Elev (ft)	= 100.00
Slope (%)	= 2.70
N-Value	= 0.035

Calculations

Compute by:	Known Q
Known Q (cfs)	= 0.19

Highlighted

Depth (ft)	= 0.25
Q (cfs)	= 0.190
Area (sqft)	= 0.13
Velocity (ft/s)	= 1.52
Wetted Perim (ft)	= 1.12
Crit Depth, Yc (ft)	= 0.23
Top Width (ft)	= 1.00
EGL (ft)	= 0.29



Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Friday, Mar 22 2024

DMA 7 & 12 Swale

Triangular

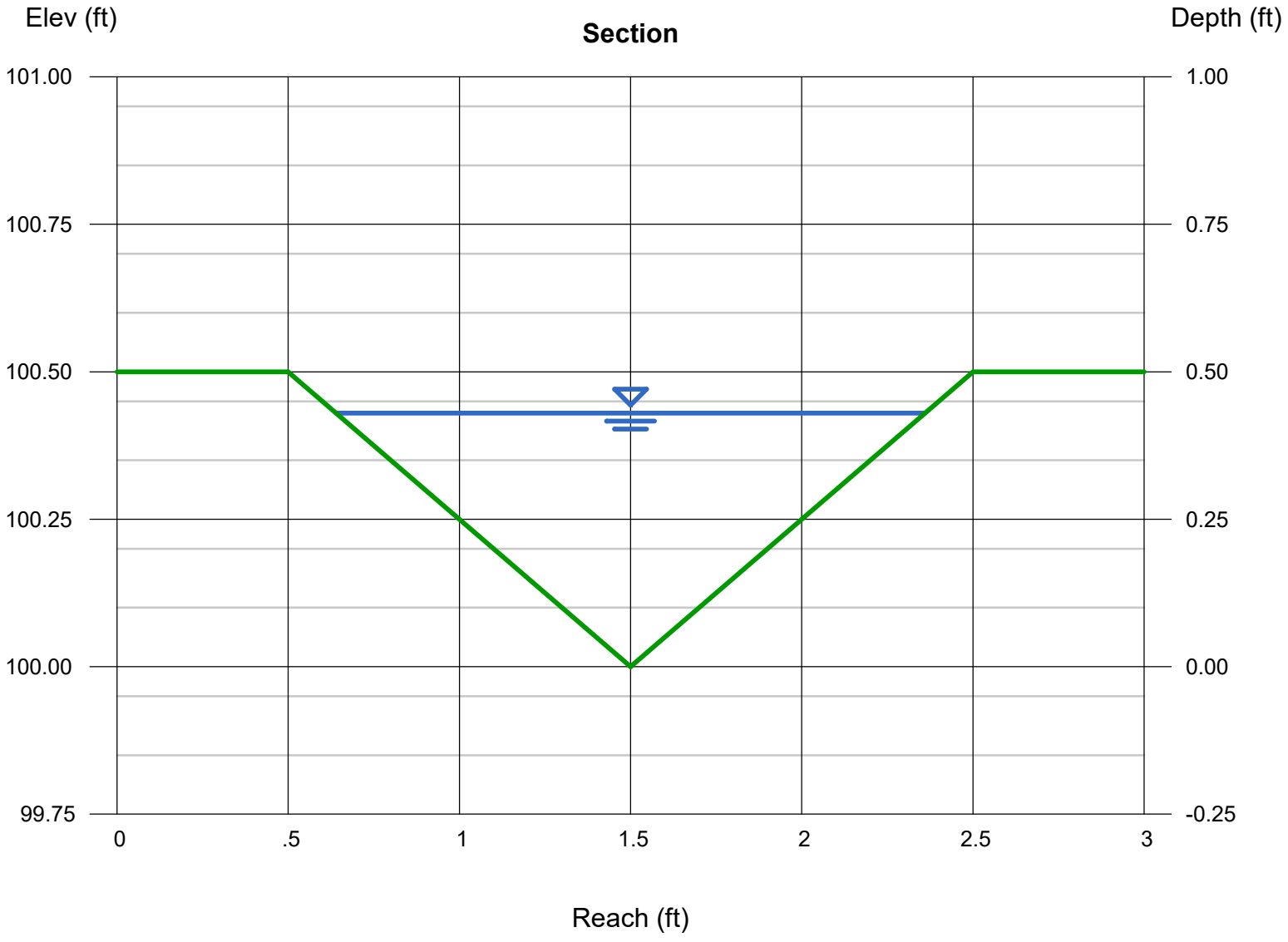
Side Slopes (z:1)	= 2.00, 2.00
Total Depth (ft)	= 0.50
Invert Elev (ft)	= 100.00
Slope (%)	= 1.00
N-Value	= 0.035

Calculations

Compute by:	Known Q
Known Q (cfs)	= 0.50

Highlighted

Depth (ft)	= 0.43
Q (cfs)	= 0.500
Area (sqft)	= 0.37
Velocity (ft/s)	= 1.35
Wetted Perim (ft)	= 1.92
Crit Depth, Yc (ft)	= 0.33
Top Width (ft)	= 1.72
EGL (ft)	= 0.46



NOAA Atlas 14, Volume 6, Version 2 SEBASTOPOL
Station ID: 04-8072
Location name: Sebastopol, California, USA*
Latitude: 38.4086°, Longitude: -122.8211°
Elevation:
Elevation (station metadata): 68 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**2.42** (2.16-2.76)	**2.96** (2.64-3.37)	**3.66** (3.24-4.18)	**4.21** (3.70-4.86)	**4.96** (4.18-5.94)	**5.52** (4.54-6.78)	**6.08** (4.85-7.69)	**6.65** (5.14-8.70)	**7.40** (5.45-10.2)	**7.98** (5.64-11.4)
10-min	**1.74** (1.55-1.97)	**2.13** (1.89-2.42)	**2.62** (2.32-2.99)	**3.02** (2.65-3.48)	**3.55** (2.99-4.26)	**3.95** (3.25-4.86)	**4.36** (3.48-5.51)	**4.76** (3.68-6.23)	**5.30** (3.90-7.29)	**5.72** (4.04-8.18)
15-min	**1.40** (1.25-1.59)	**1.72** (1.52-1.95)	**2.12** (1.87-2.41)	**2.44** (2.14-2.81)	**2.86** (2.41-3.44)	**3.19** (2.62-3.92)	**3.51** (2.80-4.44)	**3.84** (2.96-5.02)	**4.28** (3.15-5.88)	**4.61** (3.26-6.59)
30-min	**0.938** (0.834-1.07)	**1.15** (1.02-1.30)	**1.41** (1.25-1.61)	**1.63** (1.43-1.88)	**1.92** (1.61-2.30)	**2.13** (1.75-2.62)	**2.35** (1.87-2.97)	**2.57** (1.98-3.36)	**2.86** (2.10-3.93)	**3.08** (2.18-4.41)
60-min	**0.616** (0.548-0.699)	**0.752** (0.668-0.855)	**0.928** (0.822-1.06)	**1.07** (0.937-1.23)	**1.26** (1.06-1.51)	**1.40** (1.15-1.72)	**1.54** (1.23-1.95)	**1.68** (1.30-2.20)	**1.88** (1.38-2.58)	**2.02** (1.43-2.89)
2-hr	**0.452** (0.402-0.513)	**0.550** (0.489-0.625)	**0.674** (0.597-0.768)	**0.771** (0.676-0.888)	**0.897** (0.756-1.08)	**0.991** (0.814-1.22)	**1.08** (0.864-1.37)	**1.17** (0.907-1.54)	**1.29** (0.950-1.78)	**1.38** (0.975-1.97)
3-hr	**0.373** (0.332-0.424)	**0.454** (0.403-0.516)	**0.554** (0.491-0.633)	**0.633** (0.555-0.729)	**0.734** (0.618-0.880)	**0.808** (0.664-0.994)	**0.880** (0.702-1.11)	**0.951** (0.734-1.24)	**1.04** (0.766-1.43)	**1.11** (0.782-1.58)
6-hr	**0.276** (0.245-0.313)	**0.337** (0.300-0.384)	**0.412** (0.365-0.471)	**0.470** (0.412-0.542)	**0.544** (0.458-0.652)	**0.596** (0.490-0.733)	**0.647** (0.516-0.819)	**0.696** (0.538-0.911)	**0.759** (0.558-1.04)	**0.803** (0.567-1.15)
12-hr	**0.189** (0.168-0.215)	**0.237** (0.211-0.270)	**0.295** (0.261-0.336)	**0.338** (0.297-0.390)	**0.393** (0.331-0.471)	**0.432** (0.355-0.531)	**0.468** (0.374-0.593)	**0.504** (0.389-0.659)	**0.548** (0.403-0.752)	**0.579** (0.409-0.828)
24-hr	**0.123** (0.111-0.140)	**0.158** (0.142-0.180)	**0.200** (0.179-0.228)	**0.232** (0.206-0.266)	**0.270** (0.233-0.320)	**0.298** (0.252-0.359)	**0.323** (0.268-0.398)	**0.348** (0.281-0.439)	**0.378** (0.294-0.496)	**0.399** (0.301-0.540)
2-day	**0.088** (0.079-0.099)	**0.113** (0.101-0.128)	**0.142** (0.127-0.162)	**0.164** (0.146-0.188)	**0.191** (0.165-0.226)	**0.210** (0.178-0.253)	**0.228** (0.189-0.281)	**0.245** (0.198-0.310)	**0.266** (0.207-0.349)	**0.281** (0.211-0.380)
3-day	**0.067** (0.061-0.077)	**0.086** (0.078-0.098)	**0.109** (0.098-0.124)	**0.126** (0.112-0.144)	**0.146** (0.126-0.173)	**0.161** (0.136-0.194)	**0.174** (0.144-0.215)	**0.187** (0.151-0.236)	**0.202** (0.157-0.266)	**0.214** (0.161-0.289)
4-day	**0.056** (0.051-0.064)	**0.072** (0.065-0.082)	**0.091** (0.081-0.104)	**0.105** (0.093-0.120)	**0.122** (0.105-0.144)	**0.134** (0.113-0.161)	**0.145** (0.120-0.179)	**0.156** (0.126-0.197)	**0.169** (0.131-0.221)	**0.178** (0.134-0.241)
7-day	**0.040** (0.036-0.046)	**0.051** (0.046-0.058)	**0.065** (0.058-0.074)	**0.074** (0.066-0.085)	**0.086** (0.075-0.102)	**0.095** (0.080-0.114)	**0.103** (0.085-0.127)	**0.110** (0.089-0.139)	**0.119** (0.093-0.157)	**0.126** (0.095-0.170)
10-day	**0.032** (0.029-0.036)	**0.041** (0.037-0.046)	**0.051** (0.046-0.058)	**0.059** (0.052-0.068)	**0.069** (0.059-0.081)	**0.075** (0.064-0.091)	**0.081** (0.067-0.100)	**0.087** (0.070-0.110)	**0.094** (0.073-0.124)	**0.099** (0.075-0.135)
20-day	**0.021** (0.019-0.024)	**0.027** (0.024-0.031)	**0.034** (0.030-0.039)	**0.039** (0.035-0.045)	**0.045** (0.039-0.054)	**0.050** (0.042-0.060)	**0.054** (0.044-0.066)	**0.057** (0.046-0.073)	**0.062** (0.048-0.081)	**0.065** (0.049-0.088)
30-day	**0.017** (0.015-0.019)	**0.022** (0.019-0.025)	**0.027** (0.024-0.031)	**0.031** (0.028-0.036)	**0.036** (0.031-0.043)	**0.039** (0.033-0.047)	**0.042** (0.035-0.052)	**0.045** (0.037-0.057)	**0.049** (0.038-0.064)	**0.051** (0.039-0.070)
45-day	**0.014** (0.012-0.016)	**0.018** (0.016-0.020)	**0.022** (0.020-0.025)	**0.025** (0.022-0.029)	**0.029** (0.025-0.034)	**0.032** (0.027-0.038)	**0.034** (0.028-0.042)	**0.036** (0.029-0.046)	**0.039** (0.030-0.052)	**0.041** (0.031-0.056)
60-day	**0.012** (0.011-0.014)	**0.015** (0.014-0.018)	**0.019** (0.017-0.022)	**0.022** (0.020-0.025)	**0.025** (0.022-0.030)	**0.028** (0.023-0.033)	**0.030** (0.025-0.037)	**0.032** (0.026-0.040)	**0.034** (0.026-0.045)	**0.036** (0.027-0.048)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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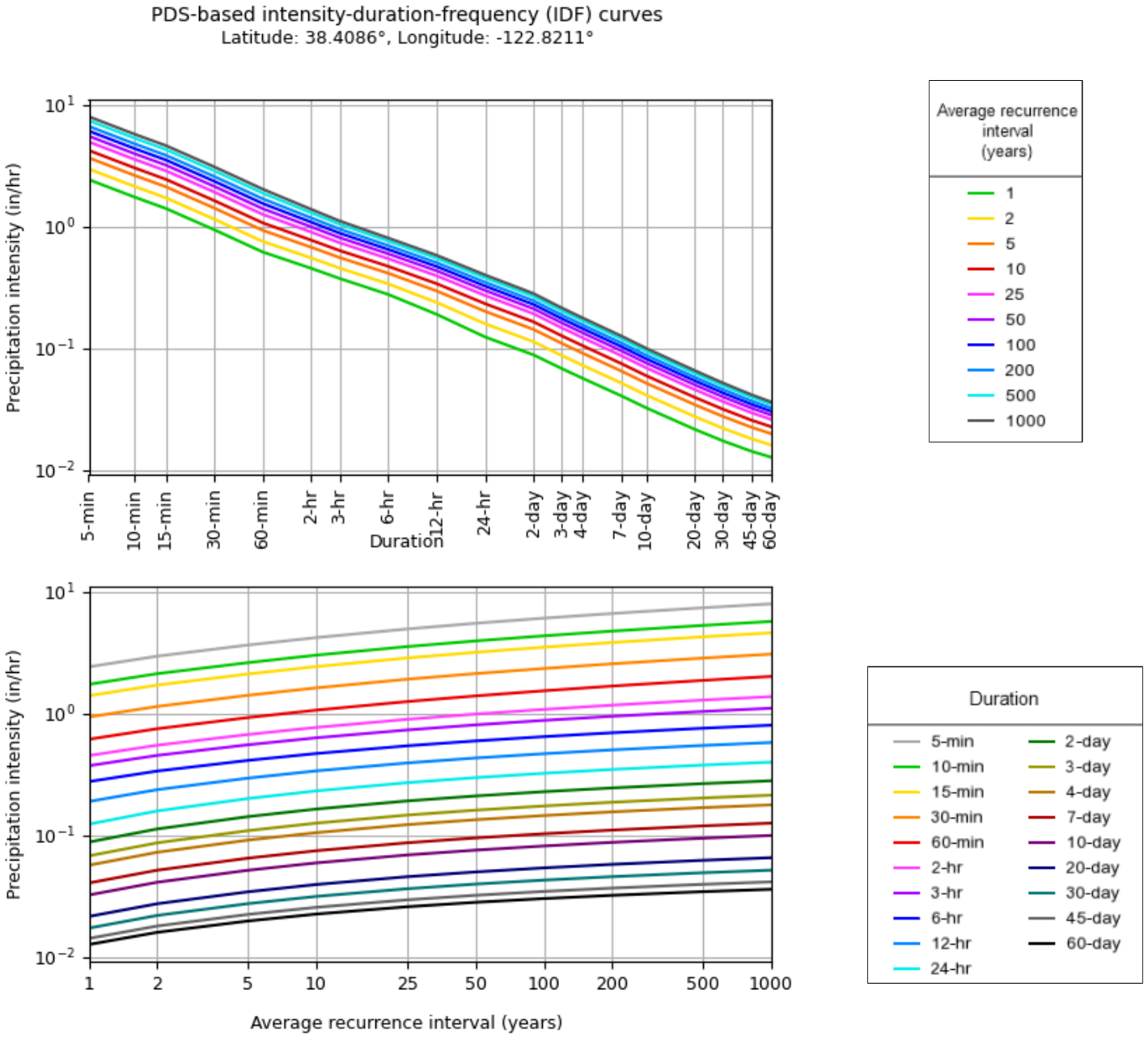
PF graphical



NOAA Atlas 14, Volume 6, Version 2

Created (GMT): Wed Mar 13 21:17:08 2024

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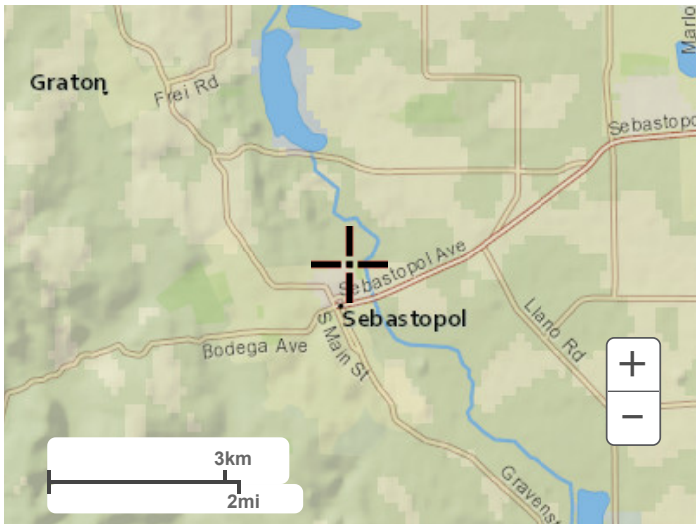
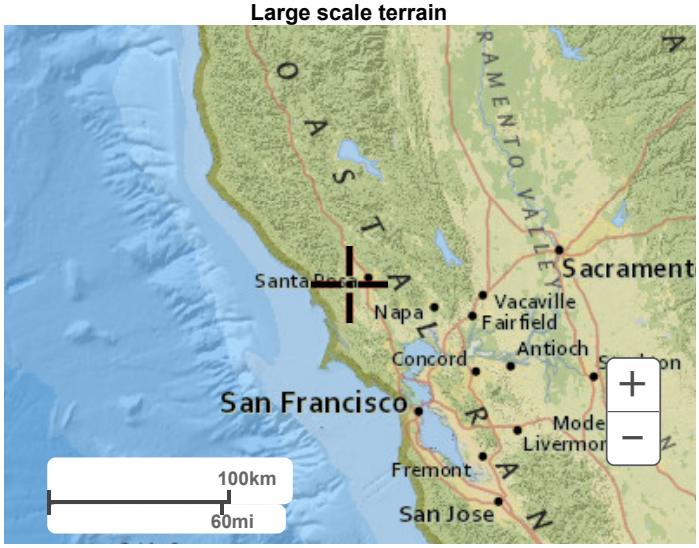
Maps & aerials

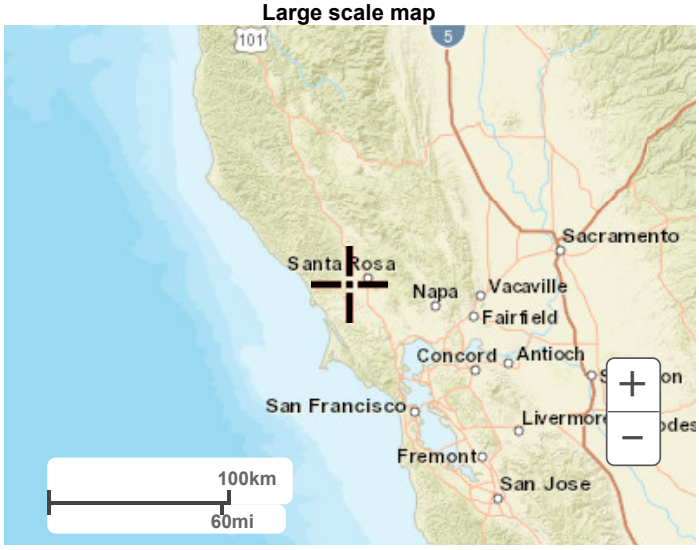
Small scale terrain



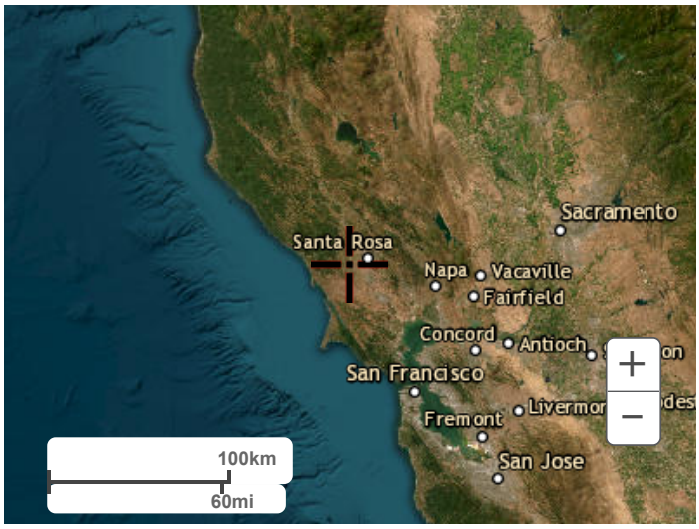
Large scale terrain



Large scale map



Large scale aerial



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US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

Custom Soil Resource Report
Soil Map

Map Scale: 1:659 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 5 10 20 30

Feet
0 30 60 120 180

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: Sonoma County, California
Survey Area Data: Version 17, Sep 11, 2023

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

Date(s) aerial images were photographed: Mar 26, 2022—Apr 25, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
GdC	Goldridge fine sandy loam, 2 to 9 percent slopes	0.0	0.1%
SbD2	Sebastopol sandy loam, 9 to 15 percent slopes, eroded	1.5	99.9%
Totals for Area of Interest		**1.5**	**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.

Sonoma County, California

GdC—Goldridge fine sandy loam, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: hfcy
Elevation: 200 to 2,000 feet
Mean annual precipitation: 40 inches
Mean annual air temperature: 57 degrees F
Frost-free period: 225 to 240 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Goldridge and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Goldridge

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Residuum weathered from sandstone

Typical profile

H1 - 0 to 24 inches: fine sandy loam
H2 - 24 to 28 inches: sandy clay loam
H3 - 28 to 72 inches: sandy clay loam

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: F004BK103CA - Upper slopes and higher elevation mountains
Hydric soil rating: No

Minor Components

Cotati

Percent of map unit: 4 percent
Hydric soil rating: No

Blucher
Percent of map unit: 4 percent
Hydric soil rating: No

Sebastopol
Percent of map unit: 3 percent
Hydric soil rating: No

Steinbeck
Percent of map unit: 3 percent
Hydric soil rating: No

Unnamed
Percent of map unit: 1 percent
Landform: Swales
Hydric soil rating: Yes

SbD2—Sebastopol sandy loam, 9 to 15 percent slopes, eroded

Map Unit Setting
National map unit symbol: hfjf
Elevation: 100 to 1,000 feet
Mean annual precipitation: 40 inches
Mean annual air temperature: 55 degrees F
Frost-free period: 200 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Sebastopol and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sebastopol

Setting
Landform: Terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Alluvium derived from sedimentary rock

Typical profile
H1 - 0 to 8 inches: sandy loam
H2 - 8 to 12 inches: sandy clay loam
H3 - 12 to 43 inches: clay
H4 - 43 to 62 inches: clay loam
H5 - 62 to 72 inches: sandy clay loam

Properties and qualities
Slope: 9 to 15 percent

Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 9.1 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: R004BY066CA - CLAYPAN
Hydric soil rating: No

Minor Components

Cotati

Percent of map unit: 8 percent
Hydric soil rating: No

Goldridge

Percent of map unit: 7 percent
Hydric soil rating: No

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Santa Rosa, CA 95403
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UPDATED PRELIMINARY REPORT NO. 1

Mark Hanf
Pacific Private Money, Inc.
1555 Grant Ave.
Novato, CA 94945
Phone No: 415 926-4444

Escrow Officer: Lisa L. Witt
Email: lisa.witt@cstitleco.com
Assistant: Team Santa Rosa
Email: teamsantarosa@cstitleco.com
Escrow Number: 3675124-00211

Owner:	Pacific Realty Development 1, Llc, A California Limited Liability Company
Property:	7621 Healdsburg Avenue Sebastopol, Ca 95472

PRELIMINARY REPORT

In response to the above referenced application for a policy of title insurance, this company hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a Policy or Policies of Title Insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an Exception below or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations of said Policy forms.

The printed Exceptions and Exclusions from the coverage and Limitations on Covered Risks of said policy or policies are set forth in Exhibit B attached. The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. Limitations on Covered Risks applicable to the CLTA and ALTA Homeowner's Policies of Title Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth in Exhibit B. Copies of the policy forms should be read. They are available from the office which issued this report.

Please read the exceptions shown or referred to below and the exceptions and exclusions set forth in Exhibit B of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

Dated as of February 22, 2024 at 7:30 A.M.

The form of Policy of title insurance contemplated by this report is:

ALTA/CLTA Homeowner's Policy of Title Insurance (2013), if applicable, or CLTA/ALTA Standard Owner's Policy 1990; and/or ALTA Loan Policy (2006).

A specific request should be made if another form or additional coverage is desired.

Title to said estate or interest at the date hereof is vested in:

Pacific Realty Development I, LLC, a California limited liability company

The estate or interest in the land hereinafter described or referred to covered by this Report is:

A Fee

The Land referred to herein is described as follows:

(See attached Legal Description)

At the date hereof exceptions to coverage in addition to the printed Exceptions and Exclusions in said policy form would be as follows:

1. General and special taxes and/or assessments for the fiscal year 2024-2025, a lien, but not yet due or payable.
2. General and special taxes and/or assessments for the fiscal year 2023-2024, as follows:

   Assessor's Parcel Number: 004-291-019-000
   TRA: 005014
   1st Installment: $11,198.36 DELINQUENT
   2nd Installment: $10,180.33 OPEN, Due on or before April 10, 2024
3. Said property has been declared tax defaulted for non-payment of delinquent taxes for the fiscal year 2020-2021, and subsequent years thereafter, if any.

   Amount To Redeem: $76,538.22
   If Paid By: March 31, 2024
   Default Number: DEF210000060
   Assessor's Parcel Number: 004-291-019-000

   The Tax Collector must be contacted to verify payment information about taxes and assessments owing for prior years, and amounts necessary to redeem.
4. The lien of supplemental taxes, if any, assessed pursuant to the provisions of Section 75, et seq. of the Revenue and Taxation Code of the State of California.
5. The taxes, lien and assessments, if any, pursuant to Chapter 29, Part of 3 of Division 7 of the California Streets and Highway Code.
6. Water rights, claims or title to water, whether or not shown by the public records.

7. Easements, servitudes, lesser rights, and other matters that would be apparent from an inspection and/or survey of said land.

8. Easements, recitals, setbacks, and other matters affecting that portion of said land for the purposes stated thereon and incidental purposes as shown upon a filed map

   Filed: Book 806 of Record of Surveys, Page 43

9. Our examination of record title to the herein described land does not disclose any existing loans. We therefore require the Owners Declaration attached hereto be signed, notarized, and returned to us before recording.

10. Rights of parties in possession.

REQUIREMENTS

1. The requirement that the owner's property statement be executed and upon review further requirements may be requested prior to the issuance of any policy of insurance.

2. The requirement that underwriting approval be obtained if any policy of title insurance is requested other than a standard owners policy.

3. The requirement that High Liability approval be obtained prior to the close and issuance of any policy of title insurance. The High Liability process must be completed according to the Policy Underwriter’s requirements.

4. Should this report be used to facilitate your transaction, we must be provided with the following prior to the issuance of the policy:

   A copy of its operating agreement and any amendments thereto; If it is a California limited liability company, a certified copy of its articles of organization (LLC-1) and any certificate of correction (LLC-11), certificate of amendment (LLC-2), or restatement of articles of organization (LLC-10) to be recorded in the public records; If it is a foreign limited liability company, a certified copy of its application for registration (LLC-5) to be recorded in the public records; With respect to any deed, deed of trust, lease, subordination agreement or other document or instrument executed by such limited liability company and presented for recordation by the Company or upon which the Company is asked to rely, such document or instrument must be executed in accordance with one of the following, as appropriate: If the limited liability company properly operates through officers appointed or elected pursuant to the terms of a written operating agreement, such documents must be executed by at least two duly elected or appointed officers, as follows: the chairman of the board, the president or any vice president, and any secretary, assistant secretary, the chief financial officer or any assistant treasurer; If the limited liability company properly operates through a manager or managers identified in the articles of organization and/or duly elected pursuant to the terms of a written operating agreement, such document must be executed by at least two such managers or by one manager if the limited liability company properly operates with the existence of only one manager. Requirements which the Company may impose following its review of the above material and other information which the Company may require.

INFORMATIONAL NOTES

Note: The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than the certain dollar amount set forth in any applicable arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties. If you desire to review the terms of the policy, including any arbitration clause that may be included, contact the office that issued this Commitment or Report to obtain a sample of the policy jacket for the policy that is to be issued in connection with your transaction.

1. If this report is preparatory to the issuance of an ALTA Loan Policy we have no knowledge of any fact which would preclude the issuance of the policy with CLTA endorsement forms 100 and 116 and if applicable, 115 and 116.2 attached.

   When issued, the CLTA endorsement form 116 or 116.2, if applicable will reference Vacant Land known as 7621 Healdsburg Avenue, Sebastopol, CA 95472.

2. There are no conveyances affecting said land within two (2) years of the date of this report, except the following:

   None

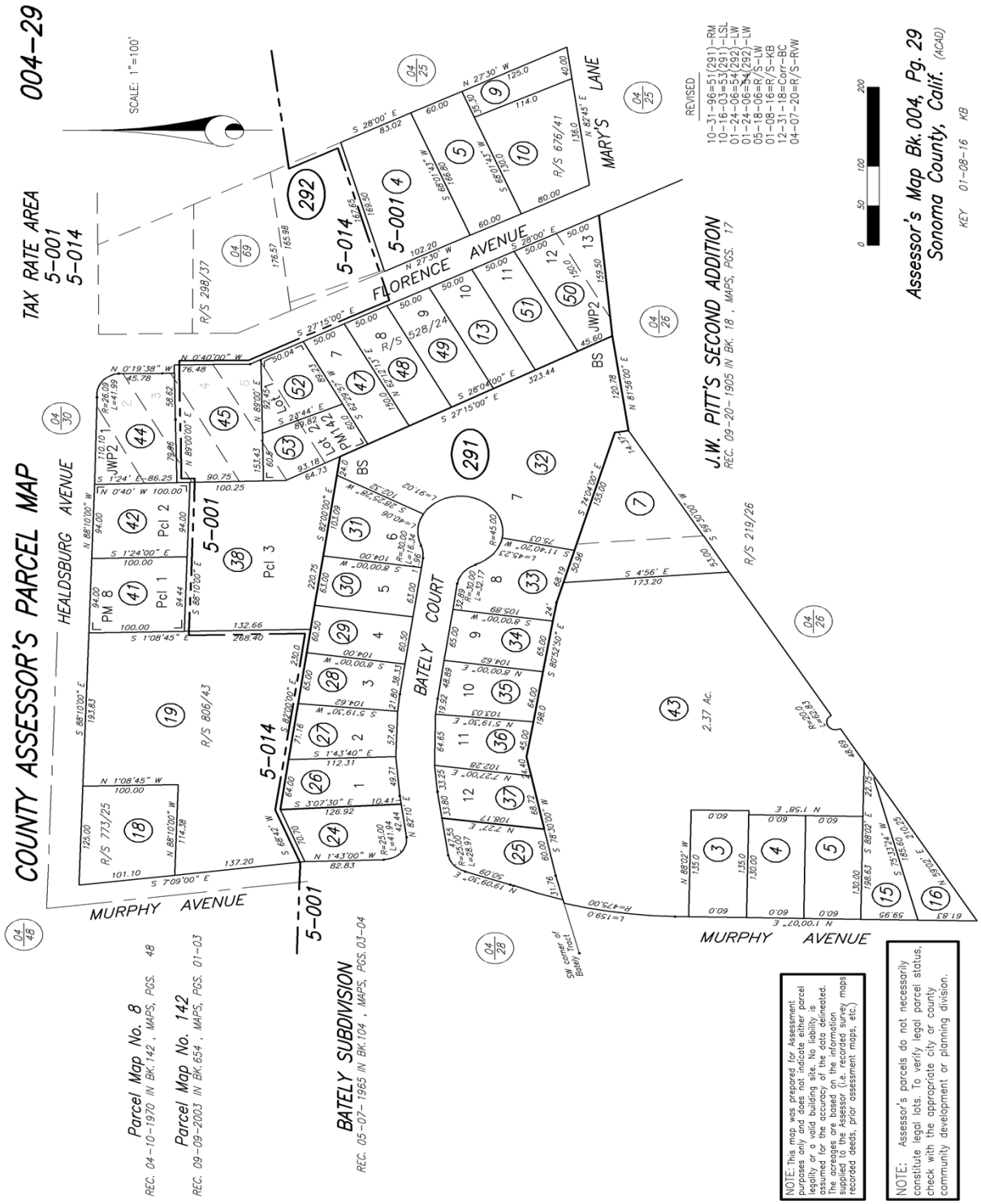
3. The map attached, if any, may or may not be a survey of the land depicted hereon. Cornerstone Title Company expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of the title insurance policy, if any, to which this map is attached.

LEGAL DESCRIPTION

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE CITY OF SEBASTOPOL, COUNTY OF SONOMA, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF LOT 1, AS SAID LOT IS NUMBERED AND DELINEATED UPON THE MAP ENTITLED MAP OF BATELY SUBDIVISION FILED MAY 7, 1965, IN BOOK 104 OF MAPS, AT PAGES 3 AND 4, SONOMA COUNTY RECORDS; THENCE FROM SAID POINT OF BEGINNING SOUTH 68°42' EAST 70.70 FEET TO THE EAST LINE OF MURPHY AVENUE; THENCE NORTH 7°09' WEST AND ALONG THE EAST LINE OF MURPHY AVENUE TO THE SOUTHWEST CORNER OF THE PARCEL OF LAND DEEDED TO SONOMA COUNTY LAND TITLE COMPANY BY DEED RECORDED APRIL 23, 1959, BOOK 1663 PAGE 638, UNDER SONOMA COUNTY RECORDER'S SERIAL NO. F-71749; THENCE NORTH 88°10' EAST AND ALONG SAID SONOMA COUNTY LAND TITLE COMPANY SOUTH LINE 144.38 FEET; THENCE NORTH 1°08'45" WEST AND ALONG SONOMA COUNTY LAND TITLE COMPANY SAID WEST LINE 100.00 FEET TO THE SOUTH LINE OF HEALDSBURG AVENUE; THENCE NORTH 89°00' WEST AND ALONG THE SOUTH LINE OF HEALDSBURG AVENUE TO THE NORTHEAST CORNER OF THE PARCEL DEEDED TO CLARA A. BATELY BY DEED RECORDED SEPTEMBER 24, 1954, BOOK 1297 PAGE 271, UNDER SONOMA COUNTY RECORDER'S SERIAL NO. E-30768; THENCE SOUTH 1°08'45" EAST AND ALONG THE EAST LINE OF THE SAID CLARA A. BATELY PARCEL TO THE NORTH LINE OF BATELY SUBDIVISION AFORESAID; THENCE NORTH 82°00' WEST 230.0 FEET TO THE POINT OF BEGINNING.

APN: 004-291-019-000



NOTICE

Section 12413.1 of the California Insurance Code, effective January 1, 1990, requires that any title insurance company, underwritten title company, or controlled escrow company handling funds in an escrow or sub-escrow capacity, wait a specified number of days after depositing funds, before recording any documents in connection with the transaction or disbursing funds. This statute allows for funds deposited by wire transfer to be disbursed the same day as deposit. In the case of cashier's checks or certified checks, funds may be disbursed the next day after deposit. In order to avoid unnecessary delays of three to seven days, or more, please use wire transfer, cashier's checks, or certified checks whenever possible.

If you have any questions about the effect of this new law, please contact your escrow office for more details.

TRG® Title Resource Group

Protect What You Have From Cyber-Criminals

CYBER-CRIMINALS are constantly looking for new victims to wire them commissions, sales proceeds or deposits. Real estate transactions are especially vulnerable. Here's how you can help guard your money:

CALL BEFORE SENDING

Call us initially. Before sending funds, call us at a number you know is accurate to verify the instructions. Do not use the phone number in an email – even if the email looks like it is from us.

Call us if you are suspicious. Be wary of any email asking for money early or asking for part of the money needed to close. Don't trust an email that change, updates or is "re-sending" wire instructions – call us at a number you know is accurate if you are suspicious.

Call your bank. After talking to us, talk to your bank to confirm it has the correct information.

CALL AFTER SENDING

Call us after sending us your money. Call us to make sure we got it. It may take some time but staying in touch is the best way to be sure there is not a problem.

ACT QUICKLY IF SOMETHING SEEMS WRONG

Call the bank and the authorities. If you think your money was sent to a criminal, you might be able to get it back but time is not your friend. You should immediately:

- Contact your bank.
- Ask your bank to contact the bank where the fraudulent wire was sent.
- Contact your local Federal Bureau of Investigation (FBI) office – the FBI can work with other agencies and might be able to help return or freeze the funds.
- File a complaint online with the FBI at bec.ic3.gov.

For more information about preventing fraud in the home closing process, please visit:
TRGC.com/Wire-Fraud-Warning

Cornerstone Title Company
Privacy Statement

Rev 5-10-2023

FACTS	**WHAT DOES CORNERSTONE TITLE COMPANY DO WITH YOUR PERSONAL INFORMATION?**
Why?	Financial companies choose how they share your personal information. Federal law gives consumers the right to limit some but not all sharing. Federal law also requires us to tell you how we collect, share, and protect your personal information. Please read this notice carefully to understand what we do.
What?	The types of personal information we collect and share depend on the product or service you have with us. This information can include: ■ Social Security number and account balances ■ payment history and credit card or other debt ■ checking account information and wire transfer instructions When you are *no longer* our customer, we continue to share your information as described in this notice.
How?	All financial companies need to share customers' personal information to run their everyday business. In the section below, we list the reasons financial companies can share their customers' personal information; the reasons Cornerstone Title Company chooses to share; and whether you can limit this sharing.

Reasons we can share your personal information	**Does Cornerstone Title Company share?**	**Can you limit this sharing?**
For our everyday business purposes— such as to process your transactions, maintain your account(s), respond to court orders and legal investigations, or report to credit bureaus	Yes	No
For our marketing purposes— to offer our products and services to you	No	We don't share
For joint marketing with other financial companies	No	We don't share
For our affiliates' everyday business purposes— information about your transactions and experiences	Yes	No
For our affiliates' everyday business purposes— information about your creditworthiness	No	We don't share
For our affiliates to market to you	No	We don't share
For nonaffiliates to market to you	No	We don't share

Questions?	Go to http://www.anywhere.re/privacypolicy

Cornerstone Title Company
Privacy Statement

Rev. 5-10-2023

Who we are	
Who is providing this notice?	Cornerstone Title Company
What we do	
How does Cornerstone Title Company protect my personal information?	To protect your personal information from unauthorized access and use, we use security measures that comply with federal law. These measures include computer safeguards and secured files and buildings.
How does Cornerstone Title Company collect my personal information?	We collect your personal information, for example, when you ■ Apply for insurance or pay insurance premiums ■ Provide your mortgage information or show your driver's license ■ Give us your contact information We also collect your personal information from others, such as credit bureaus, affiliates, or other companies.
Why can't I limit all sharing?	Federal law gives you the right to limit only ■ Sharing for affiliates' everyday business purposes—information about your creditworthiness ■ Affiliates from using your information to market to you ■ Sharing for nonaffiliates to market to you State laws and individual companies may give you additional rights to limit sharing.
Definitions	
Affiliates	Companies related by common ownership or control. They can be financial and nonfinancial companies. ■ *Our affiliates include companies that are owned in whole or in part by Anywhere Real Estate Inc., such as Better Homes and Gardens® Real Estate, CENTURY 21®, Coldwell Banker®, Coldwell Banker Commercial®, The Corcoran Group®, ERA®, Sotheby's International Realty®, Anywhere Advisors LLC, Cartus, Anywhere Leads Inc. and Anywhere Integrated Services LLC.*
Nonaffiliates	Companies not related by common ownership or control. They can be financial and nonfinancial companies. ■ *Cornerstone Title Company does not share with nonaffiliates so they can market to you*
Joint marketing	A formal agreement between nonaffiliated financial companies that together market financial products or services to you. ■ *Cornerstone Title Company does not share with nonaffiliated financial companies for joint marketing purposes*
Other Important Information	
For European Union Customers	Please see our Privacy Policy located at http://www.anywhere.re/privacypolicy
For our California Customers	Please see our notice about the California Consumer Protection Act located at http://www.anywhere.re/privacypolicy

Exhibit B (Revised 11-04-22)
LIST OF PRINTED EXCEPTIONS AND EXCLUSIONS (By Policy Type)

CALIFORNIA LAND TITLE ASSOCIATION
STANDARD COVERAGE POLICY – 1990 (11-09-18)

EXCLUSIONS FROM COVERAGE

The following matters are expressly excluded from the coverage of this policy and the Company will not pay loss or damage, costs, attorneys' fees or expenses which arise by reason of:

1. (a) Any law, ordinance or governmental regulation (including but not limited to building or zoning laws, ordinances, or regulations) restricting, regulating, prohibiting or relating (i) the occupancy, use, or enjoyment of the land; (ii) the character, dimensions or location of any improvement now or hereafter erected on the land; (iii) a separation in ownership or a change in the dimensions or area of the land or any parcel of which the land is or was a part; or (iv) environmental protection, or the effect of any violation of these laws, ordinances or governmental regulations, except to the extent that a notice of the enforcement thereof or a notice of a defect, lien, or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
   (b) Any governmental police power not excluded by (a) above, except to the extent that a notice of the exercise thereof or notice of a defect, lien or encumbrance resulting from a violation or alleged violation affecting the land has been recorded in the public records at Date of Policy.
2. Rights of eminent domain unless notice of the exercise thereof has been recorded in the public records at Date of Policy, but not excluding from coverage any taking which has occurred prior to Date of Policy which would be binding on the rights of a purchaser for value without knowledge.
3. Defects, liens, encumbrances, adverse claims or other matters:
   (a) whether or not recorded in the public records at Date of Policy, but created, suffered, assumed or agreed to by the insured claimant;
   (b) not known to the Company, not recorded in the public records at 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 Date of Policy; or
   (e) resulting in loss or damage which would not have been sustained if the insured claimant had paid value for the insured mortgage or for the estate or interest insured by this policy.
4. Unenforceability of the lien of the insured mortgage because of the inability or failure of the insured at Date of Policy, or the inability or failure of any subsequent owner of the indebtedness, to comply with the applicable “doing business” laws of the state in which the land is situated.
5. Invalidity or unenforceability of the lien of the insured mortgage, or claim thereof, which arises out of the transaction evidenced by the insured mortgage and is based upon usury or any consumer credit protection or truth in lending law.
6. Any claim, which arises out of the transaction vesting in the insured the estate of interest insured by this policy or the transaction creating the interest of the insured lender, by reason of the operation of federal bankruptcy, state insolvency or similar creditors' rights laws.

EXCEPTIONS FROM COVERAGE - SCHEDULE B, PART I

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) which arise by reason of:

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. Any 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 which may be asserted by persons in possession thereof.
3. Easements, liens or encumbrances, or claims thereof, not shown by the public records.
4. Discrepancies, conflicts in boundary lines, shortage in area, encroachments, or any other facts which a correct survey would disclose, and which are not shown by the public records.
5. (a)Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b) or (c) are shown by the public records.
6. Any lien or right to a lien for services, labor or material unless such lien is shown by the public records at Date of Policy.

EXCEPTIONS FROM COVERAGE - SCHEDULE B, PART II

(Variable exceptions such as taxes, easements, CC&R’s, etc., are inserted here)]

CALIFORNIA LAND TITLE ASSOCIATION STANDARD COVERAGE OWNER’S POLICY (02-04-22)

EXCLUSIONS FROM COVERAGE

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.

EXCEPTIONS FROM COVERAGE

Some historical land records contain Discriminatory Covenants that are illegal and unenforceable by law. This policy treats any Discriminatory Covenant in a document referenced in Schedule B as if each Discriminatory Covenant is redacted, repudiated, removed, and not republished or recirculated. Only the remaining provisions of the document are excepted from coverage.

This policy does not insure against loss or damage and the Company will not pay costs, attorneys’ fees, or expenses resulting from the terms and conditions of any lease or easement identified in Schedule A, and the following matters:

PART I

1. (a) Taxes or assessments that 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; (b) proceedings by a public agency that 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. Any facts, rights, interests, or claims that are not shown by the Public Records at Date of Policy but that could be (a) ascertained by an inspection of the Land, or (b) asserted by persons or parties in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records at Date of Policy.
4. Any encroachment, encumbrance, violation, variation, easement, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records at Date of Policy.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.

6. Any lien or right to a lien for services, labor, material or equipment unless such lien is shown by the Public Records at Date of Policy.
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 or are shown in Schedule B.

PART II

(Variable exceptions such as taxes, easements, CC&R's, etc., are inserted here)

CLTA/ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE (07-01-2021)

EXCLUSIONS FROM COVERAGE

The following matters are excluded from the coverage of this policy and We 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, or 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 8.a., 14, 15, 16, 18, 19, 20, 23, or 27.
2. Any power to take the Land by condemnation. Exclusion 2 does not modify or limit the coverage provided under Covered Risk 17.
3. Any defect, lien, encumbrance, adverse claim, or other matter:
   a. created, suffered, assumed, or agreed to by You;
   b. not Known to Us, not recorded in the Public Records at the Date of Policy, but Known to You and not disclosed in writing to Us by You prior to the date You became an Insured under this policy;
   c. resulting in no loss or damage to You;
   d. attaching or created subsequent to the Date of Policy (Exclusion 3.d. does not modify or limit the coverage provided under Covered Risk 5, 8.f., 25, 26, 27, 28, or 32); or
   e. resulting in loss or damage that would not have been sustained if You paid consideration sufficient to qualify You as a bona fide purchaser of the Title at the Date of Policy.
4. Lack of a right:
   a. to any land outside the area specifically described and referred to in Item 3 of Schedule A; and
   b. in any street, road, avenue, alley, lane, right-of-way, body of water, or waterway that abut the Land.
   Exclusion 4 does not modify or limit the coverage provided under Covered Risk 11 or 21.
5. The failure of Your existing structures, or any portion of Your existing structures, to have been constructed before, on, or after the Date of Policy in accordance with applicable building codes. Exclusion 5 does not modify or limit the coverage provided under Covered Risk 14 or 15.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights law, that the transfer of the Title to You 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 30.
7. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake, or subsidence.
8. Negligence by a person or an entity exercising a right to extract or develop oil, gas, minerals, groundwater, or any other subsurface substance.
9. Any lien on Your 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 9 does not modify or limit the coverage provided under Covered Risk 8.a. or 27.
10. Any discrepancy in the quantity of the area, square footage, or acreage of the Land or of any improvement to the Land.

LIMITATIONS ON COVERED RISKS

Your insurance for the following Covered Risks is limited on the Owner's Coverage Statement as follows:

1. For Covered Risk 16, 18, 19, and 21 Your Deductible Amount and Our Maximum Dollar Limit of Liability shown in Schedule A.

The deductible amounts and maximum dollar limits shown on Schedule A are as follows:

	Your Deductible Amount	Our Maximum Dollar Limit of Liability
Covered Risk 16:	1% of Policy Amount Shown in Schedule A or $ 2,500.00 (whichever is less)	$ 10,000.00
Covered Risk 18:	1% of Policy Amount Shown in Schedule A or $ 5,000.00 (whichever is less)	$ 25,000.00
Covered Risk 19:	1% of Policy Amount Shown in Schedule A or $ 5,000.00 (whichever is less)	$ 25,000.00
Covered Risk 21:	1% of Policy Amount Shown in Schedule A or $ 2,500.00 (whichever is less)	$ 5,000.00

CLTA/ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE (12-02-13)
EXCLUSIONS

In addition to the Exceptions in Schedule B, You are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of those portions of any law or government regulation concerning:
   a. building;
   b. zoning;
   c. land use;
   d. improvements on the Land;
   e. land division; and
   f. environmental protection.

   This Exclusion does not limit the coverage described in Covered Risk 8.a., 14, 15, 16, 18, 19, 20, 23 or 27.
2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not limit the coverage described in Covered Risk 14 or 15.
3. The right to take the Land by condemning it. This Exclusion does not limit the coverage described in Covered Risk 17.
4. Risks:
   a. that are created, allowed, or agreed to by You, whether or not they are recorded in the Public Records;
   b. that are Known to You at the Policy Date, but not to Us, unless they are recorded in the Public Records at the Policy Date;
   c. that result in no loss to You; or
   d. that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.e., 25, 26, 27 or 28.
5. Failure to pay value for Your Title.
6. Lack of a right:
   a. to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
   b. in streets, alleys, or waterways that touch the Land.

   This Exclusion does not limit the coverage described in Covered Risk 11 or 21.
7. The transfer of the Title to You is invalid as a preferential transfer or as a fraudulent transfer or conveyance under federal bankruptcy, state insolvency, or similar creditors' rights laws.
8. Contamination, explosion, fire, flooding, vibration, fracturing, earthquake or subsidence.
9. Negligence by a person or an Entity exercising a right to extract or develop minerals, water, or any other substances.

LIMITATIONS ON COVERED RISKS

Your insurance for the following Covered Risks is limited on the Owner's Coverage Statement as follows:
2. For Covered Risk 16, 18, 19, and 21 Your Deductible Amount and Our Maximum Dollar Limit of Liability shown in Schedule A.
The deductible amounts and maximum dollar limits shown on Schedule A are as follows:

	Your Deductible Amount	Our Maximum Dollar Limit of Liability
Covered Risk 16:	1% of Policy Amount Shown in Schedule A or $ 2,500.00 (whichever is less)	$ 10,000.00
Covered Risk 18:	1% of Policy Amount Shown in Schedule A or $ 5,000.00 (whichever is less)	$ 25,000.00
Covered Risk 19:	1% of Policy Amount Shown in Schedule A or $ 5,000.00 (whichever is less)	$ 25,000.00
Covered Risk 21:	1% of Policy Amount Shown in Schedule A or $ 2,500.00 (whichever is less)	$ 5,000.00

ALTA OWNER'S POLICY (07-01-2021)
EXCLUSIONS FROM COVERAGE

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.

EXCEPTIONS FROM COVERAGE

Some historical land records contain Discriminatory Covenants that are illegal and unenforceable by law. This policy treats any Discriminatory Covenant in a document referenced in Schedule B as if each Discriminatory Covenant is redacted, repudiated, removed, and not republished or recirculated. Only the remaining provisions of the document are excepted from coverage.

This policy does not insure against loss or damage and the Company will not pay costs, attorneys' fees, or expenses resulting from the terms and conditions of any lease or easement identified in Schedule A, and the following matters:
NOTE: The 2021 ALTA Owner's Policy may be issued to afford either Standard Coverage or Extended Coverage. In addition to variable exceptions such as taxes, easements, CC&R's, etc., the Exceptions from Coverage in a Standard Coverage policy will also include the Western Regional Standard Coverage Exceptions listed as 1 through 7 below:

1. (a) Taxes or assessments that 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; (b) proceedings by a public agency that 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. Any facts, rights, interests, or claims that are not shown by the Public Records at Date of Policy but that could be (a) ascertained by an inspection of the Land or (b) asserted by persons or parties in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records at Date of Policy.
4. Any encroachment, encumbrance, violation, variation, easement, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records at Date of Policy.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor, material or equipment unless such lien is shown by the Public Records at Date of Policy.
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 or are shown in Schedule B

2006 ALTA OWNER'S POLICY (06-17-06)
EXCLUSIONS FROM COVERAGE

The following matters are expressly 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) restricting, regulating, prohibiting, or relating 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 protection;

or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.

(b) Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.

2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
   (a) created, suffered, assumed, or agreed to by the Insured Claimant;
   (b) not Known to the Company, not recorded in the Public Records at 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 Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or
   (e) resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is
   (a) a fraudulent conveyance or fraudulent transfer; or
   (b) a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage, and the Company will not pay costs, attorneys' fees or expenses, that arise by reason of:
NOTE: The 2006 ALTA Owner's Policy may be issued to afford either Standard Coverage or Extended Coverage. In addition to variable exceptions such as taxes, easements, CC&R's, etc., the Exceptions from Coverage in a Standard Coverage policy will also include the Western Regional Standard Coverage Exceptions listed below as 1 through 7 below:

1. (a) Taxes or assessments that 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; (b) proceedings by a public agency that 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. Any facts, rights, interests, or claims that are not shown by the Public Records at Date of Policy but that could be (a) ascertained by an inspection of the Land, or (b) asserted by persons or parties in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records at Date of Policy.
4. Any encroachment, encumbrance, violation, variation, easement, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records at Date of Policy.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor, material or equipment unless such lien is shown by the Public Records at Date of Policy.
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 or are shown in Schedule B.

Exhibit A

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE CITY OF SEBASTOPOL, COUNTY OF SONOMA, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF LOT 1, AS SAID LOT IS NUMBERED AND DELINEATED UPON THE MAP ENTITLED MAP OF BATELY SUBDIVISION FILED MAY 7, 1965, IN BOOK 104 OF MAPS, AT PAGES 3 AND 4, SONOMA COUNTY RECORDS; THENCE FROM SAID POINT OF BEGINNING SOUTH 68°42' EAST 70.70 FEET TO THE EAST LINE OF MURPHY AVENUE; THENCE NORTH 7°09' WEST AND ALONG THE EAST LINE OF MURPHY AVENUE TO THE SOUTHWEST CORNER OF THE PARCEL OF LAND DEEDED TO SONOMA COUNTY LAND TITLE COMPANY BY DEED RECORDED APRIL 23, 1959, BOOK 1663 PAGE 638, UNDER SONOMA COUNTY RECORDER'S SERIAL NO. F-71749; THENCE NORTH 88°10' EAST AND ALONG SAID SONOMA COUNTY LAND TITLE COMPANY SOUTH LINE 144.38 FEET; THENCE NORTH 1°08'45" WEST AND ALONG SONOMA COUNTY LAND TITLE COMPANY SAID WEST LINE 100.00 FEET TO THE SOUTH LINE OF HEALDSBURG AVENUE; THENCE NORTH 89°00' WEST AND ALONG THE SOUTH LINE OF HEALDSBURG AVENUE TO THE NORTHEAST CORNER OF THE PARCEL DEEDED TO CLARA A. BATELY BY DEED RECORDED SEPTEMBER 24, 1954, BOOK 1297 PAGE 271, UNDER SONOMA COUNTY RECORDER'S SERIAL NO. E-30768; THENCE SOUTH 1°08'45" EAST AND ALONG THE EAST LINE OF THE SAID CLARA A. BATELY PARCEL TO THE NORTH LINE OF BATELY SUBDIVISION AFORESAID; THENCE NORTH 82°00' WEST 230.0 FEET TO THE POINT OF BEGINNING.

APN: 004-291-019-000

City of Sebastopol

ENVIRONMENTAL INFORMATION/ASSESSMENT FORM

(To be completed by applicant)

The submittal information shall be provided to the Planning Department.

Date Filed: _____

General Information:

1. Name of developer or project sponsor: Pacific Development LLC. attn: Mark Hanf
   Address of developer or project sponsor: 1555 Grant Ave. Novato, CA 94945, 415-926-4444
   Katherine Austin, Project Architect

2. Address of project: 7621 Healdsburg Ave. **(Pacific Knolls)**

   Assessor's Block and Lot Number: 004-291-019

3. Name of person to be contacted concerning this project:: Katherine Austin
   Address of person to be contacted concerning this project: 179 SE Rice Way, Bend OR 97702
   Telephone Number of person to be contacted concerning this project: 707-529-5565
   email: kaaustin@pacbell.net

4. Indicate number of the permit application for the project to which this form pertains:
   _____

5. List and describe any other related permits and other public approvals required for this project, including those required by City, Regional, State and Federal Agencies:

Small Lot Subdivision Tentative Map, Use Permit for 100% Residential in CO, Design Review

Possible Tree Removal Permit if not part of Subdivision Approval

6. Existing Zoning District: CO & R7 Existing General Plan Designation: Office Comm/Multifamily

7. Propose Use of Site (Project for which this form is filed): (12) 2-BR Town Homes on R7

(12) 1-BR 2-Story apartment bldg on the CO zone along Healdsburg Ave. with 18 space parking lot

Access for Town Homes off Murphy Ave. Access for apartments off Healdsburg Ave.

PROJECT DESCRIPTION:

8. Site Size: 55,741 SF or 1.28 AC

9. Square Footage: 21600 SF conditioned space

10. Number of floors of construction: two

11. Amount of off-street parking: 18 for Apts. 24 for Town Homes

12. Attach plans

13. Proposed scheduling : assume construction spring 2025 dependent on entitlements and permitting

14. Associated project none, other than demolition of existing abandoned structure on site

15. Anticipated incremental development: No phasing is proposed

16. If residential, include the number of units, schedule of unit sizes, range of sale prices or rents, and type of household size expected. (6) 590 SF 1-BR apts, (6) 760 SF 1-BR apts, (7) 1120 SF 2-BR 2.5 BA (5) 1148 SF 2-BR 3 BA Town Homes. All proposed to be rentals. Unknown rents at this time

17. If commercial, indicate the type, whether neighborhood, city or regionally oriented, square footage of sales area, and loading facilities. N/A

18. If industrial, indicate type, estimated employment per shift, and loading facilities. N/A

19. If institutional, indicate the major function, estimated employment per shift, estimated occupancy, loading facilities, and community benefits to be derived from the project. N/A

20. If the project involves a variance, conditional use or rezoning application, state this and indicate clearly why the application is required. Use Permit to allow 100% residential in CO Zone

Are the following items applicable to the project or its effects? Discuss below all items checked yes (attach additional sheets as necessary).

21.	Change in existing features of any bays, tidelands, beaches or hills, or substantial alternation of ground contour.	Yes ☒	No ☐
	Steep lot requires retaining wall between upper and lower uses		
22.	Change in scenic views or vistas from existing residential areas or public lands or roads.	Yes ☐	No ☒
23.	Change in pattern, scale or character of general area of project.	Yes ☒	No ☐
	100% Residential in CO zone, but R7 is consistant		
24.	Significant amounts of solid waste or litter.	Yes ☐	No ☒
25.	Change in dust, ash, smoke, fumes or odors in vicinity.	Yes ☐	No ☒
26.	Change in ocean, bay, lake, stream or ground water quality or	Yes	No

	quantity, or alteration of existing drainage patterns.	❑	❑
27.	Substantial change in existing noise or vibration levels in the vicinity.	Yes ❑	No ❑
28.	Site on filled land or on slope of 10 percent or more.	Yes ❑	No ❑
	Some portion of the side may exceed 10%		
30.	Substantial change in demand for municipal services (police, fire, water, sewage, etc).	Yes ❑	No ❑
31.	Substantially increase fossil fuel consumption (electricity, oil, natural gas, etc).	Yes ❑	No ❑
	All electric development and EV charging stations and PV provided		
32.	Relationship to a larger project or series of projects.	Yes ❑	No ❑

Environmental Setting:

33. Describe the project site as it exists before the project, including information on topography, soil stability, plants and animals, and any cultural, historical or scenic aspects. Describe any existing structures on the site, and the use of the structures. Attach photographs of the site. Snapshots or Polaroid photos will be accepted.

See Arborist Report. One abandoned structure on site with gravel driveway,

34. Describe the surrounding properties, including information on plant and animals and any cultural historical, or scenic aspects. Indicate the type of land use (residential, commercial, etc), intensity of land use (one-family, apartment houses, shops, department stores, etc), and scale of development (height, frontage, set-back, rear yard, etc). Attach photographs of the site. Snapshots or Polaroid photos will be accepted.

South is R7 with multifamily residences. East is a Commercial bldg and Restaurant, West is a Church, North are a mix of commercial and residential properties.

	YES	NO
A. Does the Project involve any of the following?		
1. No change in the square footage to the existing structure?	X	
2. An addition of more than 50% of square footage to the existing structure?		X
3. An addition of more than 2500 square feet to the existing structure?		X
4. An addition of more than 10,000 square feet to the existing structure?		X
5. Demolition of the existing structure?	X	
	YES	**NO**
B. Does the Project involve the replacement or reconstruction of existing structures or facilities at the site which:		
1. Will have substantially the same purpose and capacity as existing structures at the site?		X
2. Will result in an increase in square footage or capacity as compared to the existing structure?	X	

	YES	NO
C. Does the Project involve new construction of:		
1. 35 or more dwelling units?		X
2. More than 15,000 square feet of commercial, industrial, governmental, or institutional floor area?		X
3. Stores, motels, offices, restaurants, and similar structures designed for an occupant load of more than 30 persons?		X
	YES	**NO**
D. Does the Project involve division of property into more than four parcels or consolidation of more than four parcels?	X	
12 Small lots + common lot and 1 lot for the apartment building	**YES**	**NO**
E. Will the Project require issuance of a Variance, Use Permit, Zoning Ordinance Amendment, Zoning Map Amendment, or General Plan Amendment?	X	
Use permit to allow 100% residential in the CO zone		
	YES	**NO**
F. Will the Project result in a change in use at the site (for example: from residential to commercial or from office to restaurant?)	X	
Abandoned SF bldg to 24 residences	**YES**	**NO**
G. Is this Project:		
1. Similar to the other projects for which you have received permits in the last two years in the City of Sebastopol?	X	
2. Similar to other projects, which you are planning to develop within two years in the City of Sebastopol?		N/A
No other projects in development at this time	**YES**	**NO**
H. Does the Project involve changes to an official City landmark?		X
	YES	**NO**
I. Does the Project involve use of disposal of potentially hazardous materials, such as toxic substances, flammables, or explosives?		X
	YES	**NO**
J. If the Project is located within 500 feet of a residential zone or noise-sensitive land uses, will the construction of the project involve the use of pile driving, night time track hauling, blasting, 24 hour pumping, or other equipment that creates high noise levels and or vibrations?		X
	YES	**NO**
K. Does the Project involve the construction, substantial remodel, or 50% or more addition to the following types of uses?		
Mobile home, amphitheater, concert hall, auditorium, meeting hall, hospital, church, library, school classrooms, or day care?		X

I certify that the information in this form is correct to the best of my knowledge.

12-1-2023

Applicant Signature — Date

Katherine Austin, Project Architect

Certification:

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best of my ability, and that the facts, statements, and information represented are true and correct to the best of my knowledge and belief.

Date: 12-1-2023

Signature: 

Printed Name: Katherine Austin

For: Pacific Realty Development LLC, Mark Hanf

Traffic Study for the Pacific Knolls Project

Prepared for the City of Sebastopol

Submitted by
W-Trans

July 24, 2024

TRAFFIC ENGINEERING
TRANSPORTATION PLANNING
Balancing Functionality and Livability since 1995
w-trans.com

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Table of Contents

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Introduction

This report presents an analysis of the potential transportation, traffic, and mobility impacts that would be associated with a proposed residential development to be located on the southeast corner of Healdsburg Avenue (SR 116) and Murphy Avenue in the City of Sebastopol. The traffic study was completed in accordance with the criteria established by the City of Sebastopol and is consistent with standard traffic engineering techniques.

Prelude

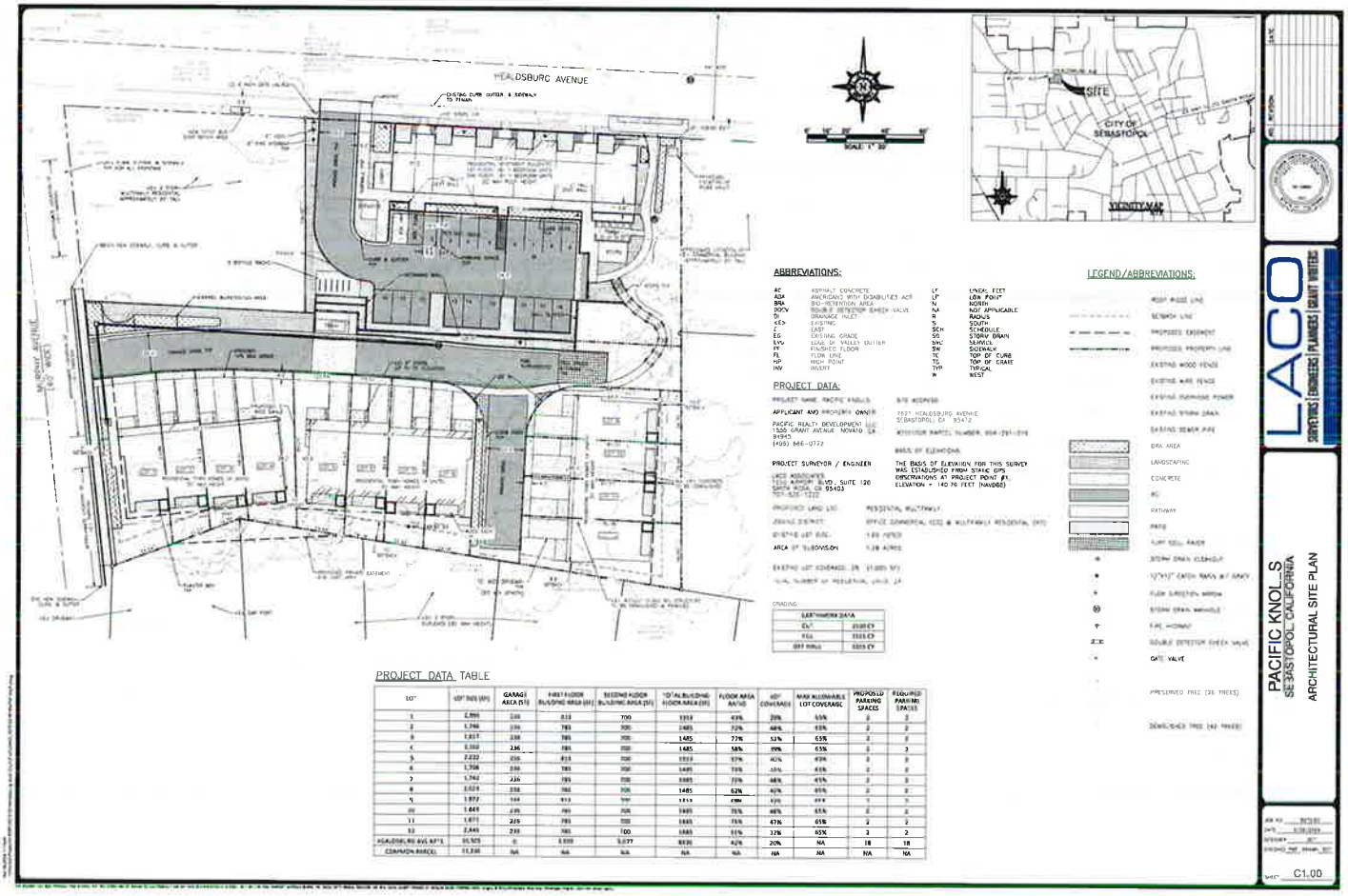
The purpose of a traffic impact study is to provide City staff and policy makers with data that they can use to make an informed decision regarding the potential transportation impacts of the proposed project, and any associated improvements that would be required to mitigate these impacts to an acceptable level under the California Environmental Quality Act (CEQA), the City's General Plan, or other policies. This report provides an analysis of those items that are identified as areas of environmental concern under the CEQA. Impacts associated with access for pedestrians, bicyclists, and to transit; the vehicle miles traveled (VMT) generated by the project; and safety concerns are addressed in the context of the CEQA criteria. While no longer a part of the CEQA review process, vehicular traffic service levels at key intersections were evaluated for consistency with General Plan policies by determining the number of new trips that the proposed use would be expected to generate, distributing these trips to the surrounding street system based on anticipated travel patterns specific to the proposed project, then analyzing the effect the new traffic would be expected to have on the study intersections and need for improvements to maintain acceptable operation.

The report is organized to provide background data that supports the various aspects of the analysis, followed by the assessment of CEQA issues and then evaluation of policy-related issues.

Project Profile

Project Description

The proposed residential project site is located on a vacant parcel near the intersection of Healdsburg Avenue/Murphy Avenue. Access would be provided via two new driveways, one on Healdsburg Avenue and one on Murphy Avenue. The project would include 24 residential units, including 12 townhomes with access only onto Murphy Avenue and 12 apartments with access only onto Healdsburg Avenue. The proposed project site plan is shown in Figure 1.



Source: LACO Associates 6/24

seb083.ai 6/24

Traffic Study for the Pacific Knolls Project

Figure 1 – Site Plan

W-Trans

Transportation Setting

Study Area and Periods

The study area varies depending on the topic. For pedestrian trips it consists of all streets within a half-mile of the project site that would lie along primary routes of pedestrian travel, or those leading to nearby generators or attractors. For bicycle trips it consists of all streets within one mile of the project site that would lie along primary routes of bicycle travel. For the safety and traffic operational analyses, it consists of the project frontage and the intersection of Healdsburg Avenue (SR 116)/Murphy Avenue and the project access points on both frontages.

Operating conditions during the a.m. and p.m. peak periods were evaluated to capture the highest potential impacts for the proposed project as well as the highest volumes on the local transportation network. The morning peak hour occurs between 7:00 and 9:00 a.m. and reflects conditions during the home to work or school commute, while an extended p.m. peak period between 2:00 and 6:00 p.m. was counted to capture afternoon traffic from the nearby schools including Analy High School as well as traffic typically reflecting the highest level of congestion during the homeward bound commute.

Study Intersection

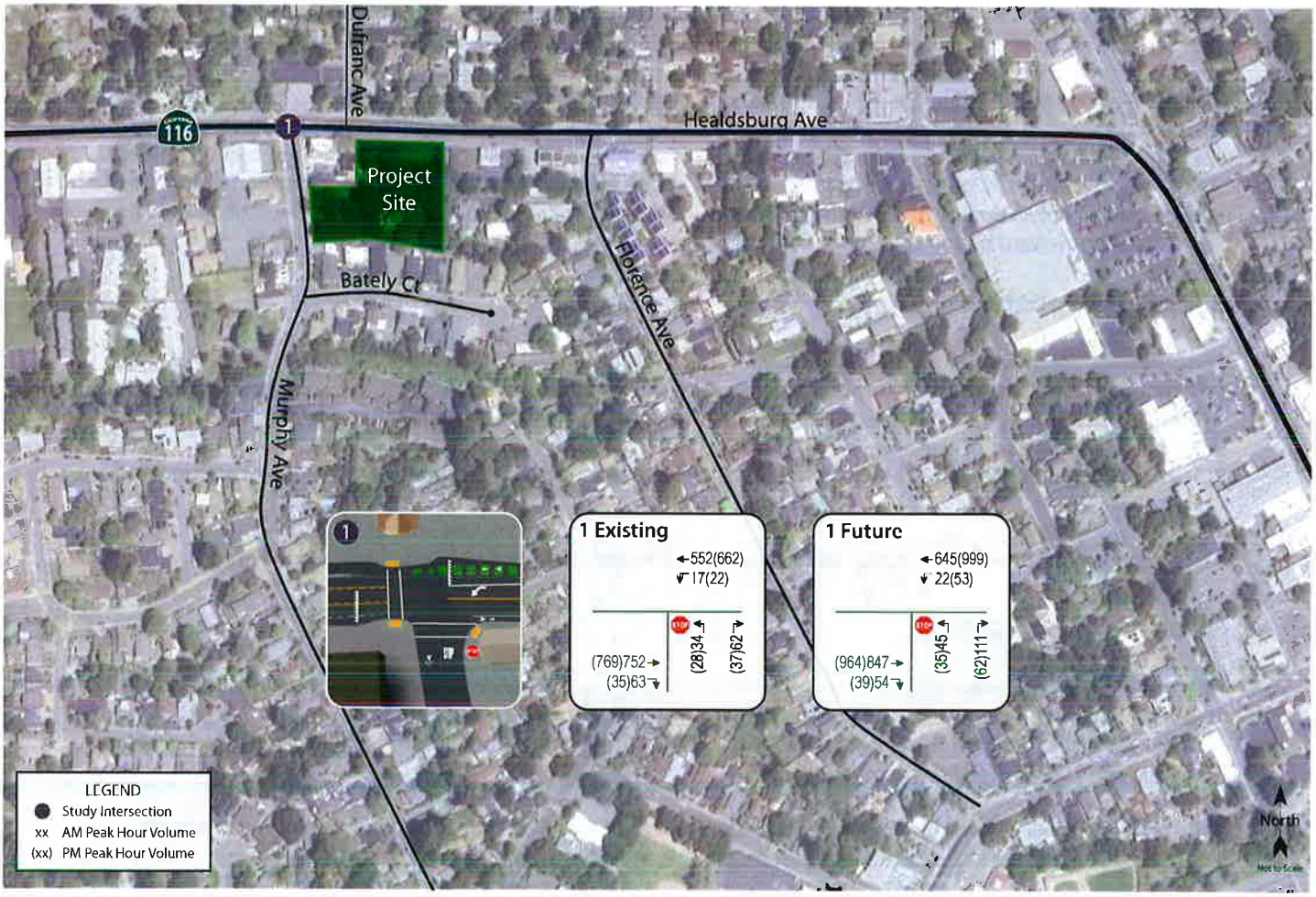
Healdsburg Avenue (SR 116)/Murphy Avenue is a three-legged intersection with stop control on the northbound Murphy Avenue approach. Marked crosswalks exist on the west and south legs of the intersection. There are yield markings on the east and west legs approaching the intersection and Circular Rapid Flashing Beacons are present on the west leg which is the standard crosswalk warning device used in the City of Sebastopol. Class II bike lanes exist on SR 116, while there are sharrow markings on Murphy Avenue which is a city designated bike route.

The location of the study intersection and existing lane configurations and controls are shown in Figure 2.

Collision History

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue. Collision rates were calculated based on records available from the California Highway Patrol as published in their Statewide Integrated Traffic Records System (SWITRS) reports. The most current five-year period available is October 1, 2018, through September 30, 2023.

The calculated collision rate for the study intersections was compared to average collision rates for similar facilities statewide, as indicated in *2021 Collision Data on California State Highways*, California Department of Transportation (Caltrans). These average rates statewide are for intersections in the same environment (urban), with the same number of approaches, and the same controls. The study intersection of Healdsburg Avenue/Murphy Avenue had a calculated collision rate of 0.04 collisions per million vehicles entering (c/mve) based on the four reported crashes, which is below the statewide average collision rate of 0.13 c/mve for similar interactions. The collision rate calculations are provided in Appendix A.



seb083.ai 7/24

Traffic Study for the Pacific Knolls Project

Figure 2 – Study Area, Existing Lane Configurations, Existing Traffic Volumes and Future Traffic Volumes

W-Trans

Circulation System

This section addresses the first transportation bullet point on the CEQA checklist, which relates to the potential for a project to conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Pedestrian Facilities

Existing and Planned Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. Existing pedestrian facilities along the proposed project site frontage as well as within a one-quarter mile distance of the project site were reviewed.

A generally connected pedestrian network currently exists along SR 116 near the project site. However, there is no sidewalk on the north side of SR 116 west of its intersection with Lyding Lane until Soll Court. An enhanced crosswalk with Circular Rapid Flashing Beacons is present on the west leg of Healdsburg Avenue (SR 116)/Murphy Avenue, which connects to DuFranc Avenue to the northeast, providing pedestrian access to the West County-Joe Rodota Trail, located 550 feet north of the SR 116/DuFranc Avenue intersection.

Pedestrian Safety

The collision history for the study area was reviewed to determine if any trends or patterns may indicate a potential safety issue for pedestrians. Collision records available from SWITRS reports were reviewed for the most current five-year period available, which was October 1, 2018, through September 30, 2023, at the time of the analysis. During the five-year study period there were no reported collisions involving a pedestrian within a half mile of the project site.

Impact on Pedestrian Facilities

Given the proximity of commercial uses, it is reasonable to assume that some residents will want to walk, bicycle, and/or use transit for trips from and to the project site. Sidewalk connectivity is generally continuous throughout the surrounding neighborhood and along the project frontage. Per the site plan, there is a proposed pathway along the eastern edge of the site, connecting the existing sidewalk along the project frontage on Healdsburg Avenue and the proposed internal pedestrian network.

Finding – Pedestrian facilities serving the project site are adequate. The paths proposed and recommended as part of the project would provide adequate access to the existing pedestrian facilities. The project would not conflict with any existing plans or policies relative to pedestrian facilities.

Bicycle Facilities

Existing and Planned Bicycle Facilities

The *Highway Design Manual 7th Edition*, Caltrans, 2020, classifies bikeways into four categories:

- **Class I Multi-Use Path –** a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
- **Class II Bike Lane** – a striped and signed lane for one-way bike travel on a street or highway.
- **Class III Bike Route** – signage only for shared use with motor vehicles within the same travel lane on a street or highway.

- **Class IV Bikeway** – also known as a separated bikeway, a Class IV Bikeway is for the exclusive use of bicycles and includes a separation between the bikeway and the motor vehicle traffic lane. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, striped buffers, or on-street parking.

In the project vicinity there are several existing Class I, II, and III bikeway facilities, including the Class I multi-use bicycle and pedestrian West County-Joe Rodota Trail. There are existing Class II bicycle lanes along SR 116 between the north city limit and North Main Street, along Gravenstein Highway North and Healdsburg Avenue, along Covert Lane between Ragle Road and SR 116, and along High School Road-North Main Street between Occidental Road and SR 116. DuFranc Avenue to the northeast of the project site provides bicyclist access to the West County-Joe Rodota Trail, which extends north to Occidental Road and east to Analy High School and provides connection facilities to the Joe Rodota Trail. There are also existing Class III bike routes in the project vicinity including along Murphy Avenue, most of which feature sharrow pavement markings.

According to the *Draft Sonoma County Active Transportation Plan* (2024), Class I bicycle facilities are planned on Analy Avenue between North Main Street and Sunset Avenue (in front of and through Analy High School), along Bodega Avenue between Pleasant Hill Road and Nelson Way, on Ragle Road between Covert Lane and Bodega Avenue, along SR 116 between Mill Station Road/West County Trail and Keating Avenue and connecting Willow Street/South Main Street to the Joe Rodota Trail. Class III routes are planned along various streets within one mile of the project vicinity. Bicyclists ride in the roadway and/or on sidewalks along all other streets within the project study area. Table 1 summarizes the existing and planned bicycle facilities in the project vicinity, as contained in the *Draft Sonoma County Active Transportation Plan*.

Table 1 – Bicycle Facility Summary				
Status **Facility**	**Class**	**Length (miles)**	**Begin Point**	**End Point**
Existing				
West County/Rodota Trail	I	1.68	Occidental Rd	N Main St
Covert Ln	II	0.50	Ragle Rd	SR 116
SR 116 (Gravenstein Hwy N)	II	0.52	North City Limit	Covert Ln
SR116 (Healdsburg Ave)	II	0.64	Covert Ln	N Main St
High School Rd/N Main St	II	1.56	Occidental Rd	SR 116
Valentine Ave	III	0.60	Ragle Rd	Murphy Ave
Danmar Dr/Norlee St	III	0.48	SR 116	Covert Ln
Washington Ave	III	0.56	Willard Libby Park	Bodega Ave
Ragle Rd	III	0.52	Covert Ln	Bodega Ave
Pleasant Hill Ave	III	0.50	Covert Ln	Bodega Ave
Zimpher Dr	III	0.21	Covert Ln	Valentine Ave
Murphy Ave	III	0.38	SR 116	Valentine Ave
Planned				
Analy Ave	I	0.18	N Main St	Sunset Ave
Bodega Ave	I	0.34	Pleasant Hill Rd	Nelson Wy
Ragle Rd	I	0.52	Covert Ln	Bodega Ave
SR 116	I/IV	1.29	Mill Station Rd/West County Trail	Keating Ave
Willow St Connection	I	0.07	Willow St/S Main St	Joe Rodota Trail
Dutton Ave	III	0.16	Huntley St	Bodega Ave
Florence Ave	III	0.05	Huntley St	Wilton Ave
Huntley St	III	0.22	Murphy Ave	Florence Ave
Johnson St	III	0.27	Eddie Ln	Laguna Pkwy
McKinley Ave	III	0.22	Morris St	Petaluma Ave
Sunset Ave	III	0.13	Taft St	Johnson St
Washington Ave	III	0.44	Willard Libby Park	Murphy Ave
Wilton Ave	III	0.23	Florence Ave	N Main St

Source: *Draft Sonoma County Active Transportation Plan*, Sonoma County Transportation Authority, 2024

Impact on Bicycle Facilities

The project as proposed would not result in the construction of any new bicycle facilities nor would it impact the ability of the City or Caltrans to construct any planned facilities.

Bicyclist Safety

Collision records for the study area were reviewed to determine if there had been any bicyclist-involved crashes during the five-year study period between January 1, 2019, and December 31, 2023. There were no reported collisions involving bicyclists in the study area, therefore no remedial action is recommended.

Finding – Existing and planned bicycle facilities would provide adequate access for bicyclists traveling to and from the project site. The project would not conflict with any policies or plans for bicycle facilities.

Transit Facilities

Existing Transit Facilities

Sonoma County Transit

Sonoma County Transit (SCT) provides fixed-route bus service in Sebastopol and surrounding areas. SCT Route 20 and Route 24 both have stops within a half mile of the project site. Route 20 runs from the Coddingtown Mall in the City of Santa Rosa to Monte Rio in West County. Route 24 runs from the Sebastopol Transit Hub to the intersection of SR 116/Mill Station Road. Existing transit routes and details regarding their operation are summarized in Table 2.

Table 2 – Transit Routes

Transit Agency Route	Distance to Stop (mi)[1]	Service			Connections
		Days of Operation	Time	Frequency	
Sonoma County Transit					
Route #20	< 0.1	Mon-Fri Sat-Sun	6:30 a.m. - 9:30 p.m. 6:30 a.m. - 9:30 p.m.	50 – 80 min 50 – 105 min	Monte Rio Coddingtown/Santa Rosa
Route #24	< 0.1	Mon-Fri Sat	7:45 a.m. - 6:30 p.m. 7:45 a.m. - 5:30 p.m.	45 – 55 min 45 – 55 min	Sebastopol SR 116/Mill Station Rd

Notes: [1] Defined as the shortest walking distance between the project site and the nearest bus stop
Source: sctransit.com/maps-schedules

Two to three bicycles can be carried on most SCT buses, and bike rack space is provided on a first-come, first-served basis. Additional bicycles are allowed on SCT buses at the discretion of the bus operator.

Dial-a-ride, also known as paratransit or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. SCT Paratransit is designed to serve the needs of individuals with disabilities within the City of Sebastopol and the greater Sonoma County area.

Impact on Transit Facilities

Given the size of the proposed project, there is unlikely to be substantial new demand for transit service generated by the development, though it is likely that some residents or visitors will occasionally choose to use transit. The existing pedestrian facilities are adequate to provide access from the project site to the transit stops and there are sufficient routes and headways to accommodate the nominal additional demand.

Finding – Existing public transit routes are adequate to accommodate the additional demand generated by the project, and existing bus stops are accessible via continuous sidewalks. Transit facilities serving the project site are

therefore considered to be adequate and the project would not conflict with any programs or policies regarding transit.

Significance Finding – The proposed project would have a less-than-significant impact relative to pedestrian, bicycle, and transit modes as it would be consistent with existing plans, policies, and programs for these modes.

Vehicle Miles Traveled (VMT)

The potential for the project to conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b) was evaluated based the project's anticipated Vehicle Miles Traveled (VMT). This is the second bullet point in the CEQA checklist.

Background

The Vehicle Miles Traveled (VMT) associated with a project is the primary basis for determining traffic impacts under CEQA. Because the City of Sebastopol has not yet adopted standards of significance for evaluating VMT, guidance provided by the California Governor's Office of Planning and Research (OPR) in the publication *Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory*, 2018, was used (referred to herein as the Technical Advisory). These criteria are consistent with those applied by Caltrans as outlined in the *Vehicle Miles Traveled-Focused Transportation Impact Study Guide*, California Department of Transportation, May 2020.

Significance Threshold

The OPR Technical Advisory provides VMT threshold guidance for several land use types. Residential uses are assessed using a home-based VMT per capita metric, with VMT significance thresholds set at a level of 15 percent below the citywide or regional average. The Technical Advisory indicates that it may be appropriate to apply a countywide, rather than regional, average if most people both live and work within the smaller geographic area. According to data contained in the *Sonoma County Travel Behavior Study*, Fehr & Peers, 2020, approximately 98 percent of Sebastopol's vehicle trips remain within Sonoma County. Use of a common model to produce both project-level and threshold values also allows for a clear "apples to apples" assessment. Accordingly, the applied significance threshold was based on the Sonoma County per-capita VMT average rather than the nine-County Bay Area regional average.

SCTA operates and maintains the regional travel demand model that produces baseline VMT estimates. The VMT thresholds and projections applied in this analysis reflect the SCTM19 model updated in December 2021, which remains the current version as of the June 2024 timeframe of this analysis. Based on output from the SCTA model, the existing average residential VMT per capita in the County of Sonoma is 16.60 miles. VMT significance thresholds are set at 15 percent below this level, or 14.11 miles. Accordingly, the project would have a potentially significant impact on VMT if its projected residential VMT per Capita exceeds 14.11 miles.

Project VMT Assessment

VMT per Capita

The SCTA model includes traffic analysis zones (TAZ) covering geographic areas throughout Sonoma County. The Pacific Knolls project site is located within TAZ 808, which has a baseline VMT per capita of 16.46 miles. For the project to achieve the applied threshold of 14.11 VMT per capita, its projected VMT per capita would need to be reduced by at least 14.3 percent.

Consideration was given to whether adjustments to the baseline per-capita VMT estimates produced by the SCTA model are warranted to reflect the project's characteristics. SCTA has developed and made available a VMT Reduction Tool to assist in making project-specific VMT adjustments as well as quantify VMT mitigation measures. One of the characteristics having the greatest influence on VMT levels, thereby requiring adjustments to baseline values, pertains to the residential density of a development. The SCTA VMT Reduction Tool indicates that average residential densities exceeding 9.1 units per acre can be expected to effectively reduce per capita VMT. The residential density of the proposed project is 18.8 dwelling units per acre, which based on the SCTA VMT Reduction

Tool results in a VMT reduction of 23.3 percent below baseline VMT per capita values. Applying this percentage reduction yields an adjusted value of 12.62 VMT per capita, which is below the applicable significance threshold of 14.11 VMT per capita. Upon including adjustments to account for the project's residential density, the project would therefore be considered to have a less-than-significant impact on VMT. A summary of the VMT analysis is shown in Table 3.

Table 3 – Vehicle Miles Traveled Analysis Summary

VMT Metric	Countywide VMT per Capita		Project VMT per Capita		
	Average	Significance Threshold[1]	Unadjusted (TAZ 808)	Adjusted (Density)[2]	Threshold Met?
Residential VMT per Capita (Countywide Baseline)	16.60	14.11	16.46	12.62	Yes

Notes: VMT Rate is measured in VMT per Capita, or the number of daily miles driven per resident; TAZ=Traffic Analysis Zone; du/acre=dwelling units per acre; [1] equal to 15 percent below Countywide average; [2] includes adjustments for residential density per methodology contained in the SCTA VMT Reduction Tool

Finding – The project would be expected to result in a less-than-significant VMT impact.

Safety Issues

The potential for the project to impact safety was evaluated in terms of the adequacy of sight distance and need for turn lanes at the project access locations, as well as the adequacy of stacking space in the left-turn lane at the study intersection. This section addresses the third transportation bullet on the CEQA checklist which is whether or not the project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Site Access

Access to the site would be provided by two new driveways: one on Murphy Avenue that provides access to only the townhome units and one on Healdsburg Avenue (SR 116) that provides access to only the apartment units. It is understood that the project designers explored an interior project access that connected both driveways; however, the change in topography was challenging so this concept was abandoned.

Queuing

The City of Sebastopol does not prescribe thresholds of significance regarding queue lengths. However, an increase in queue length due to project traffic was considered a potentially significant impact if the increase would cause the queue to extend out of a dedicated turn lane into a through traffic lane, or the back of queue into a visually restricted area, such as a blind corner. If queues would already be expected to extend past a dedicated turn lane or into a visually restricted area without project traffic, the addition of project traffic was considered to constitute a potentially adverse effect only if it would cause a new unacceptable conditions; in other words, if the queue were already beyond the turn lane and the project would cause it to stack into an adjacent intersection or a visually restricted area, and that would not occur without the project, that would be considered an impact.

Queuing in the existing westbound left-turn lane on Healdsburg Avenue at the study intersection was evaluated using a methodology contained in "*Estimating Maximum Queue Length at Unsignalized Intersections*," John T. Gard, *ITE Journal*, November 2001. Queuing was evaluated here to determine if left-turn movements out of the project would be in conflict with queued vehicles in the westbound left-turn lane. Maximum queue lengths were estimated by assuming vehicle lengths of 25 feet and multiplying that by the number of vehicles expected to queue.

Based on Future plus Project volumes, the maximum queue in the Healdsburg Avenue westbound left-turn lane was determined to be two vehicles, or 50 feet during the a.m. peak hour, and three vehicles, or 75 feet during the p.m. peak period. The westbound left-turn lane has approximately 150 feet of storage space preceding the proposed driveway on Healdsburg Avenue. Therefore, the existing turn lane is adequate to accommodate the anticipated queue length and the maximum anticipated queue would not be expected to conflict with left turns out of the project driveway at this location.

Queuing calculations for the study intersection are provided in Appendix C.

Finding – The existing storage space in the turn lanes at the study intersection is adequate to accommodate the maximum anticipated queue.

Driveway Conflicts

Murphy Avenue Access – The project access would be located approximately 120 feet south of the south leg crosswalk at SR 116. Given the stop control on Muphy Avenue and low traffic volumes, the addition of the driveway would not result in significant conflicts with traffic on Muphy Avenue.

SR 116 (Healdsburg Avenue) Access – The project access is proposed approximately 160 feet east of Murphy Avenue and slightly offset to the east with DuFranc Avenue. Turn movements at the driveway were assessed as follows.

- Left turns into the site should operate acceptably as vehicles could queue in the center two-way left-turn lane to make the left turn and should not interfere with left turns onto DuFranc Avenue as the movements do not overlap.
- Left-turn movements onto Healdsburg Avenue from the site could be made by turning into the two-way left-turn lane before merging onto westbound Healdsburg Avenue. However, this movement would present several points of conflict. Exiting vehicles from the project would be turning into the two-way left-turn lane where vehicles are entering for left-turns onto Murphy Avenue. Also, these exiting vehicles would present conflicts with left-turn movements into and out of DuFranc Avenue. A point of access further to the east of the project site would be more optimal.

Significance Finding – The proposed location of the driveway on Murphy Avenue is considered acceptable. The driveway on SR 116 (Healdsburg Avenue) presents conflicts and therefore results in a potential safety impact.

Recommendation – Restricted access to right-turn in/right-turn out only was considered, but was not recommended, since this is the only access for this portion of the project. The project driveway on SR 116 should be relocated to the eastern side of the project site to minimize conflicts with other vehicle movements to and from Healdsburg Avenue.

Significance after Mitigation – With the driveway located to maximize separation from Dufranc Avenue, the project's impact on safety would be less than significant.

Sight Distance

Sight distances along Healdsburg Avenue and Murphy Avenue at the proposed new project driveways were evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. Though Caltrans does not indicate a recommended sight distance for driveways in urban areas, for safety reasons the stopping sight distance was evaluated using the approach travel speed as the basis for determining the recommended sight distance. Additionally, the stopping sight distance needed for a following driver to stop if there is a vehicle waiting to turn into a side street or driveway was evaluated based on the stopping sight distance criterion and approach speed on the major street. Based on a posted speed limit of 30 mph for Healdsburg Avenue, the minimum stopping sight distance needed is 200 feet; for a posted speed limit of 25 mph on Murphy Avenue, the required minimum stopping sight distance is 150 feet.

Using both field measurements and aerial imagery it was determined that sight distance at the driveway on Healdsburg Avenue is more than 250 feet in each direction and exceeds the stopping sight distance needed for vehicles traveling five mph above the posted speed limit of 30 mph. The sight distance at the driveway location on Murphy Avenue was measured at 150 feet or more in each direction which meets the stopping sight distance requirement for the *prima facie* speed limit of 25 mph. As landscaping and signage can impede sight lines, any landscaping or signage placed within the vision triangle at the driveway should be less than three feet in height or more than seven feet above the pavement surface to maintain a clear line of sight.

Finding – Adequate sight distance exists at both the proposed and preferred driveway locations. This could be impacted by the design, however.

Recommendation – Any landscaping or signing proposed near the driveways should either be placed outside the vision triangle of drivers entering from the driveway or be trimmed to lie below three feet in height or above seven feet.

Significance Finding – Sufficient sight distance is anticipated to be available at the new driveways.

Capacity Analysis

Intersection Level of Service Methodologies

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The study intersection was analyzed using the "Two-Way Stop-Controlled" methodology published in the *Highway Capacity Manual* (HCM), 6th Edition, Transportation Research Board, 2016. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle. This methodology determines a level of service for each minor turning movement by estimating the average delay in seconds per vehicle. Results are presented for the stop-controlled approaches together with the weighted overall average delay for the intersection.

The ranges of delay associated with the various levels of service are indicated in Table 4.

Table 4 – Two-Way Stop-Controlled Intersection Level of Service Criteria	
LOS A	Delay of 0 to 10 seconds. Gaps in traffic are readily available for drivers exiting the minor street.
LOS B	Delay of 10 to 15 seconds. Gaps in traffic are somewhat less readily available than with LOS A, but no queuing occurs on the minor street.
LOS C	Delay of 15 to 25 seconds. Acceptable gaps in traffic are less frequent, and drivers may approach while another vehicle is already waiting to exit the side street.
LOS D	Delay of 25 to 35 seconds. There are fewer acceptable gaps in traffic, and drivers may enter a queue of one or two vehicles on the side street.
LOS E	Delay of 35 to 50 seconds. Few acceptable gaps in traffic are available, and longer queues may form on the side street.
LOS F	Delay of more than 50 seconds. Drivers may wait for long periods before there is an acceptable gap in traffic for exiting the side streets, creating long queues.

Reference: *Highway Capacity Manual*, Transportation Research Board, 2016

Traffic Operation Standards

Caltrans

The study intersection of Healdsburg Avenue (SR 116)/Murphy Avenue is under the jurisdiction of Caltrans, but Caltrans does not have a standard of significance relative to operation as this is no longer a CEQA issue. The *Vehicle Miles Traveled-Focused Transportation Impact Study Guide* (TISG), published in May 2020, replaced the *Guide for the Preparation of Traffic Impact Studies*, 2002. As indicated in the TISG, the Department is transitioning away from requesting LOS or other vehicle operation analyses of land use projects and will instead focus on Vehicle Miles Traveled (VMT). Adequacy of operation was therefore evaluated using the City of Sebastopol's standards for intersections.

City of Sebastopol

The following criteria referenced in the *Draft Environmental Impact Report* (DEIR) *for the 2016 Sebastopol General Plan Update*, May 2016, De Novo Planning Group, were applied in order to determine if the project would have an adverse effect on operation at the three study intersections within the City limits:

- Utilize a Level of Service objective of LOS D at intersections to evaluate conditions and impacts, with primary focus on access and safety.
- At unsignalized intersections, level of service shall be determined for both controlled movements and for the overall intersection. Controlled movements operating at LOS E or F would be considered acceptable if:
  - The intersection is projected to operate at LOS D or better overall; and
  - The projected traffic volume on the controlled movement is relatively low (30 vehicles or less per hour on approaches with single lanes, 30 vehicles or less per hour on lanes serving left turns and through movements).
- For intersections already operating worse than LOS objectives, development projects should not contribute substantially to further decline in LOS (causing the LOS to decline by a letter grade from LOS E to LOS F) or by more than a five percent increase in delay for intersections currently operating at an unacceptable LOS.

It was also considered an adverse effect on operations if project traffic would cause an intersection operating acceptably at LOS D or better to operate unacceptably at LOS E or F. It is also noted Policy CIR 1-5 of the *City of Sebastopol 2040 General Plan*, November 2016, De Novo Planning Group, states that "when analyzing impacts to the circulation network created by new development or roadway improvements, consider the needs of all users, including those with disabilities, ensuring that pedestrians, bicyclists, and transit riders are considered preeminent to automobile drivers." In other words, there should be careful review to ensure that automobile improvements do not negatively affect the experiences of pedestrians, bicyclists, and transit riders.

Existing Conditions

The Existing Conditions scenario provides an evaluation of current operation based on existing traffic volumes during the a.m. and p.m. peak periods. This condition does not include project-generated traffic volumes. Existing traffic counts were obtained for the study intersection on May 29, 2024, while area schools were in session.

Under Existing Conditions, the study intersection operates acceptably according to City General Plan standards during both the a.m. and p.m. peak hours. It should be noted that the p.m. peak hour captures the largest traffic volume in a single hour during the extended p.m. peak period between 2:00 and 6:00 p.m. The existing traffic volumes are shown in Figure 2. A summary of the intersection Level of Service calculations is presented in Table 5, and copies of the calculations are provided in Appendix B.

Table 5 – Existing Peak Hour Intersection Levels of Service

Study Intersection *Approach*	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
1. Healdsburg Ave (SR 116)/Murphy Ave	1.7	A	1.0	A
Northbound (Murphy Ave) Approach	*24.9*	*C*	*20.9*	*C*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*

Future Conditions

Future intersection turning movements were obtained from the Circulation Element of the *City of Sebastopol 2040 General Plan* which represents General Plan Buildout conditions. Under anticipated future volumes, the

northbound approach at Healdsburg Avenue/Murphy Avenue is expected to operate at LOS E during the p.m. peak hour, which would not be considered acceptable operation per City General Plan standards. Future volumes are shown in Figure 2, operating conditions are summarized in Table 6, and copies of the calculations are provided in Appendix B.

Table 6 – Future Peak Hour Intersection Levels of Service

Study Intersection *Approach*	AM Peak		PM Peak	
	Delay	LOS	Delay	LOS
1. Healdsburg Ave (SR 116)/Murphy Ave	3.2	A	2.0	A
NB (Murphy Ave) Approach	*34.1*	*D*	***37.1***	***E***

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics;* **Bold** text = deficient operation

Project Conditions

Trip Generation

The anticipated vehicle trip generation for the proposed project was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 11th Edition, 2021. Since the site is currently undeveloped, there are no existing trips. The trip generation potential of the project as planned was developed using the published standard rates for Single Family Attached Housing (Land Use #215) and Multifamily Housing (Low-Rise) (Land Use #220), as the description of these land uses most closely matches the proposed project. Based on application of these rates, the proposed project is expected to generate an average of 167 trips per day, including 11 a.m. peak hour trips and 13 trips during the p.m. peak hour during the typical weekday peak hour. These results are summarized in Table 7.

Table 7 – Trip Generation Summary

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Single Family (Attached)	12 du	7.20	86	0.48	6	2	4	0.57	7	4	3
Multifamily Housing	12 du	6.74	81	0.40	5	2	3	0.51	6	4	2
Total			**167**		**11**	**4**	**7**		**13**	**8**	**5**

Note: du = dwelling unit

Trip Distribution

The pattern used to allocate new project trips to the street network was determined by reviewing existing turning movements at the study intersection as well as employment patterns for residents of the City of Sebastopol as indicated by the 2010 Census. Since traffic conditions are generally most critical during the weekday p.m. peak hour, these distribution assumptions are primarily based on the expected trip routes during that time. The distribution assumptions shown in Table 8 were used.

Table 8 – Trip Distribution Assumptions				
Route	**Percent**	**Daily Trips**	**AM Trips**	**PM Trips**
SR 116 (To/From the North)	41%	68	5	5
SR 116 (To/From the South)	59%	99	6	8
TOTAL	**100%**	**167**	**11**	**13**

Existing plus Project Conditions

Upon the addition of project-generated traffic to the existing volumes, the study intersection is expected to operate acceptably during both peaks. It should also be noted that traffic signals are not warranted under Existing or Existing plus Project volumes. The analysis results are summarized in Table 9, and copies of the calculations are provided in Appendix B. Project traffic volumes, including at the driveways, and Existing plus Project volumes at the study intersection are shown in Figure 3.

Table 9 – Existing and Existing plus Project Peak Hour Intersection Levels of Service								
Study Intersection ***Approach***	**Existing Conditions**				**Existing plus Project**			
	AM Peak		**PM Peak**		**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
1. Healdsburg Ave (SR 116)/Murphy Ave	1.7	A	1.0	A	1.8	A	1.1	A
Northbound (Murphy Ave) Approach	*24.9*	*C*	*20.9*	*C*	*25.6*	*D*	*21.3*	*C*

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*

Finding – The study intersection would be expected to operate acceptably per City standards with the addition of project traffic to existing volumes during both the a.m. and p.m. peak hours.

Future plus Project Conditions

Upon the addition of project-generated traffic to the anticipated future volumes, the northbound approach at Healdsburg Avenue (SR 116)/Murphy Avenue would be expected to continue operating unacceptably during the p.m. peak and deteriorate to LOS E during the a.m. peak. Future plus Project intersection operations are summarized in Table 10, and volumes are shown in Figure 3. Copies of the calculations are provided in Appendix B.

Table 10 – Future and Future plus Project Intersection Levels of Service								
Study Intersection ***Approach***	**Future Conditions**				**Future plus Project**			
	AM Peak		**PM Peak**		**AM Peak**		**PM Peak**	
	Delay	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**	**Delay**	**LOS**
1. Healdsburg Ave (SR 116)/Murphy Ave	3.2	A	2.0	A	3.4	A	2.1	A
NB (Murphy Ave) Approach	*34.1*	*D*	***37.1***	***E***	***35.2***	***E***	***38.2***	***E***

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; **Bold** = Unacceptable operation; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*

The northbound approach of SR 116/Murphy Avenue would continue operating at LOS E with the addition of project traffic during the p.m. peak. However, the project's effect would be considered acceptable since the delay would be expected to increase by less than five percent. The project would cause operation to deteriorate from

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Traffic Study for the Pacific Knolls Project

Figure 3 – Project, Existing plus Project, and Future plus Project Traffic Volumes

W-Trans

LOS D to LOS E during the morning peak hour and the approach volumes exceed 30 vehicles, which would be considered unacceptable. However, as the increase in delay is only 1.2 seconds, or 3.5 percent, this would also be considered acceptable.

It is noted that the Peak Hour Volume traffic signal warrant would be met by the future volumes, both without and with the project, during both the a.m. and p.m. peak hours indicating that at some point in the future, a traffic signal may be needed at the intersection of SR 116/Murphy Avenue.

Given that the intersection would operate unacceptably without the project under anticipated future volumes, even though the project would contribute to unacceptable operation during the morning peak hour as well, this project on its own does not cause this condition. Further, Caltrans does not have a standard for operation, and even with the anticipated LOS E operation drivers would be experiencing delays that are relatively minor (less than 40 seconds) so Caltrans may not accept signalization of this location. Finally, model volumes are often overly conservative, in which case the volumes that would warrant signalization may never be achieved. The City may therefore prefer to defer any potential improvements at this location until such time as there is a demonstrated need for them.

Finding – Though the northbound approach of SR 116/Murphy Avenue would operate unacceptably under Future plus Project volumes or without project traffic added, the delay would not increase by more than five percent. Similarly, where operation would deteriorate from low LOS D to high LOS E during the morning peak hour, the 1.2-second increase in delay would not represent an adverse effect. Therefore, based on City standards, the addition of project traffic to future volumes would not result in an adverse effect.

Recommendation – Since the peak hour volumes at SR 116/Murphy Avenue would warrant a traffic signal under future volumes, the City may wish to monitor volumes to determine if traffic signal volume warrants are met for the intersection and signalization should be considered.

Driveway Operation

Although operation is generally not considered for private driveways, an analysis was performed to determine the amount of delay drivers exiting the site would be expected to encounter. For the driveway on Healdsburg Avenue (SR 116) the maximum calculated average delay would occur during the p.m. peak hour when 23.8 seconds of delay would be expected. Drivers exiting via the Murphy Avenue driveway would be expected to experience a maximum of 9.2 seconds of delay based on future a.m. peak hour volumes. These levels of delay would be well within what is expected for entry to a public street.

Conclusions and Recommendations

Conclusions

- The proposed project is expected to generate an average of 167 trips per day, including 11 a.m. peak hour trips and 13 trips during the p.m. peak hour on a typical weekday.
- The existing and planned pedestrian, bicycle, and transit facilities provide adequate access to and from the project site and the project does not conflict with any policies, plans or programs for these modes, therefore having a less-than-significant impact on these modes.
- The project is expected to meet the applicable significance threshold for vehicle miles traveled.
- Left-turn movements onto Healdsburg Avenue from the site would present several points of conflict including with vehicles entering the two-way left-turn lane approaching Murphy Avenue and vehicles making left-turn movements into and out of DuFranc Avenue.
- Sight distances at both the driveway on Healdsburg Avenue and the driveway on Murphy Avenue meet the stopping sight distance requirements for the posted speed limits on either roadway.
- Under existing conditions with and without the project, the study intersection operates acceptably and would continue to do so per City standards.
- The northbound approach at Healdsburg Avenue (SR 116)/Murphy Avenue is expected to operate unacceptably under Future and Future plus Project conditions. The addition of project traffic to future volumes would not result in an adverse impact, per the City's standards since the increase in delay would be less than five percent.
- A traffic signal installation at the intersection of SR 116 (Healdsburg Avenue)/Murphy Avenue is not currently warranted, but would be warranted under future volumes, without or with the project.
- The study driveways would be expected to operate with an acceptable level of delay based on project trips and future volumes.

Recommendations

- The driveway on SR 116 (Healdsburg Avenue) should be relocated to the eastern side of the project site to minimize conflicts with vehicle movements to and from Healdsburg Avenue. Restricted access to right-turn in/right-turn out only was considered, but was not recommended, since this is the only access for this portion of the project.
- The City may wish to monitor volumes at the intersection of Healdsburg Avenue (SR 116)/Murphy Avenue vis-à-vis traffic signal warrants to determine potential timing for a future traffic signal installation.

Study Participants and References

Study Participants

Principal in Charge	Steve Weinberger, PE (Civil, Traffic), PTOE
Principal Planner	Zack Matley, AICP
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Graphics	Jessica Bender
Editing/Formatting	Jessica Bender, Rebecca Mansour
Quality Control	Dalene J. Whitlock, PE (Civil, Traffic), PTOE

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Appendix A

Collision Rate Calculations

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Intersection Collision Rate Worksheet

Traffic Study for the Pacific Knolls Project

Intersection # 1: Healdsburg Avenue (SR 116) & Murphy Avenue
Date of Count: Wednesday, May 29, 2024

Number of Collisions: 1
Number of Injuries: 0
Number of Fatalities: 0
Average Daily Traffic (ADT): 15500
Start Date: October 1, 2018
End Date: September 30, 2023
Number of Years: 5

Intersection Type: Tee
Control Type: Stop & Yield Controls
Area: Urban

$$\text{Collision Rate} = \frac{\text{Number of Collisions} \times 1 \text{ Million}}{\text{ADT} \times \text{Days per Year} \times \text{Number of Years}}$$

$$\text{Collision Rate} = \frac{1 \times 1{,}000{,}000}{15{,}500 \times 365 \times 5}$$

	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.04 c/mve**	**0.0%**	**0.0%**
Statewide Average*	**0.13 c/mve**	**1.3%**	**47.3%**

Notes
ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2021 Collision Data on California State Highways, Caltrans

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Appendix B

Intersection Level of Service Calculations

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Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	752	63	17	552	34	62
Future Vol, veh/h	752	63	17	552	34	62
Conflicting Peds, #/hr	0	19	13	0	19	13
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	855	72	19	627	39	70

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	946	0	1594	923
Stage 1	-	-	-	-	910	-
Stage 2	-	-	-	-	684	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	725	-	118	327
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	501	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	714	-	111	318
Mov Cap-2 Maneuver	-	-	-	-	245	-
Stage 1	-	-	-	-	387	-
Stage 2	-	-	-	-	480	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	24.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	288	-	-	714	-
HCM Lane V/C Ratio	0.379	-	-	0.027	-
HCM Control Delay (s)	24.9	-	-	10.2	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	1.7	-	-	0.1	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	769	35	22	662	28	37
Future Vol, veh/h	769	35	22	662	28	37
Conflicting Peds, #/hr	0	27	19	0	27	19
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	793	36	23	682	29	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	856	0	1593	857
Stage 1	-	-	-	-	838	-
Stage 2	-	-	-	-	755	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	784	-	118	357
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	464	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	766	-	110	343
Mov Cap-2 Maneuver	-	-	-	-	245	-
Stage 1	-	-	-	-	415	-
Stage 2	-	-	-	-	440	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	20.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	293	-	-	766	-
HCM Lane V/C Ratio	0.229	-	-	0.03	-
HCM Control Delay (s)	20.9	-	-	9.8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	847	54	22	645	45	111
Future Vol, veh/h	847	54	22	645	45	111
Conflicting Peds, #/hr	0	27	19	0	27	19
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-		125		0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	873	56	23	665	46	114

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	956	0	1666	947
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	738	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	719	-	106	317
Stage 1	-	-	-	-	385	-
Stage 2	-	-	-	-	473	-
Platoon blocked, %	-	-				
Mov Cap-1 Maneuver	-	-	703	-	98	305
Mov Cap-2 Maneuver	-	-	-	-	231	-
Stage 1	-	-	-	-	377	-
Stage 2	-	-	-	-	447	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	34.1
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	279	-	-	703	-
HCM Lane V/C Ratio	0.576	-	-	0.032	-
HCM Control Delay (s)	34.1	-	-	10.3	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	3.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	964	39	53	999	35	62
Future Vol, veh/h	964	39	53	999	35	62
Conflicting Peds, #/hr	0	27	19	0	27	19
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	994	40	55	1030	36	64

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1061	0	2208	1060
Stage 1	-	-	-	-	1041	-
Stage 2	-	-	-	-	1167	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	657	-	49	272
Stage 1	-	-	-	-	340	-
Stage 2					208	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	642	-	43	262
Mov Cap-2 Maneuver	-	-	-	-	154	-
Stage 1	-	-	-	-	333	-
Stage 2	-	-	-	-	264	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	37.1
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	209	-	-	642	-
HCM Lane V/C Ratio	0.478	-	-	0.085	-
HCM Control Delay (s)	37.1	-	-	11.1	-
HCM Lane LOS	E	-	-	B	-
HCM 95th %tile Q(veh)	2.3	-	-	0.3	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	753	64	18	553	36	64
Future Vol, veh/h	753	64	18	553	36	64
Conflicting Peds, #/hr	0	19	13	0	19	13
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	856	73	20	628	41	73

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	948	0	1599	925
Stage 1	-	-	-	-	912	-
Stage 2	-	-	-	-	687	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	724	-	117	326
Stage 1	-	-	-	-	392	-
Stage 2	-	-	-	-	499	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	713	-	110	317
Mov Cap-2 Maneuver	-	-	-	-	244	-
Stage 1	-	-	-	-	386	-
Stage 2	-	-	-	-	478	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	25.6
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	266	-	-	713	-
HCM Lane V/C Ratio	0.397	-	-	0.029	-
HCM Control Delay (s)	25.6	-	-	10.2	-
HCM Lane LOS	D	-	-	B	-
HCM 95th %tile Q(veh)	1.8	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	771	37	24	663	29	39
Future Vol, veh/h	771	37	24	663	29	39
Conflicting Peds, #/hr	0	27	19	0	27	19
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	795	38	25	684	30	40

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	860	0	1602	860
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	761	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	781	-	116	356
Stage 1	-	-	-	-	423	-
Stage 2	-	-	-	-	461	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	763	-	107	342
Mov Cap-2 Maneuver	-	-	-	-	243	-
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	436	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	21.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	291	-	-	763	-
HCM Lane V/C Ratio	0.241	-	-	0.032	-
HCM Control Delay (s)	21.3	-	-	9.9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	848	55	23	646	47	113
Future Vol, veh/h	848	55	23	646	47	113
Conflicting Peds, #/hr	0	27	19	0	27	19
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0			0	0	
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	874	57	24	666	48	116

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	958	0	1671	949
Stage 1	-	-	-	-	930	-
Stage 2	-	-	-	-	741	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	716	-	105	316
Stage 1	-	-	-	-	384	-
Stage 2	-	-	-	-	471	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	702	-	97	304
Mov Cap-2 Maneuver	-	-	-	-	230	-
Stage 1	-	-	-	-	378	-
Stage 2	-	-	-	-	445	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	35.2
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	278	-	-	702	-
HCM Lane V/C Ratio	0.593	-	-	0.034	-
HCM Control Delay (s)	35.2	-	-	10.3	-
HCM Lane LOS	E	-	-	B	-
HCM 95th %tile Q(veh)	3.5	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	986	41	65	1000	36	64
Future Vol, veh/h	986	41	55	1000	36	64
Conflicting Peds, #/hr	0	27	19	0	27	19
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	125	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	996	42	57	1031	37	66

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1065	0	2216	1063
Stage 1	-	-	-	-	1044	-
Stage 2	-	-	-	-	1172	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	654	-	46	271
Stage 1	-	-	-	-	339	-
Stage 2					291	
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	639	-	42	261
Mov Cap-2 Maneuver	-	-	-	-	153	-
Stage 1	-	-	-	-	332	-
Stage 2	-	-	-	-	262	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	38.2
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	206	-	-	639	-
HCM Lane V/C Ratio	0.496	-	-	0.089	-
HCM Control Delay (s)	38.2	-	-	11.2	-
HCM Lane LOS	E	-	-	B	-
HCM 95th %tile Q(veh)	2.5	-	-	0.3	-

Appendix C

Queuing Calculations

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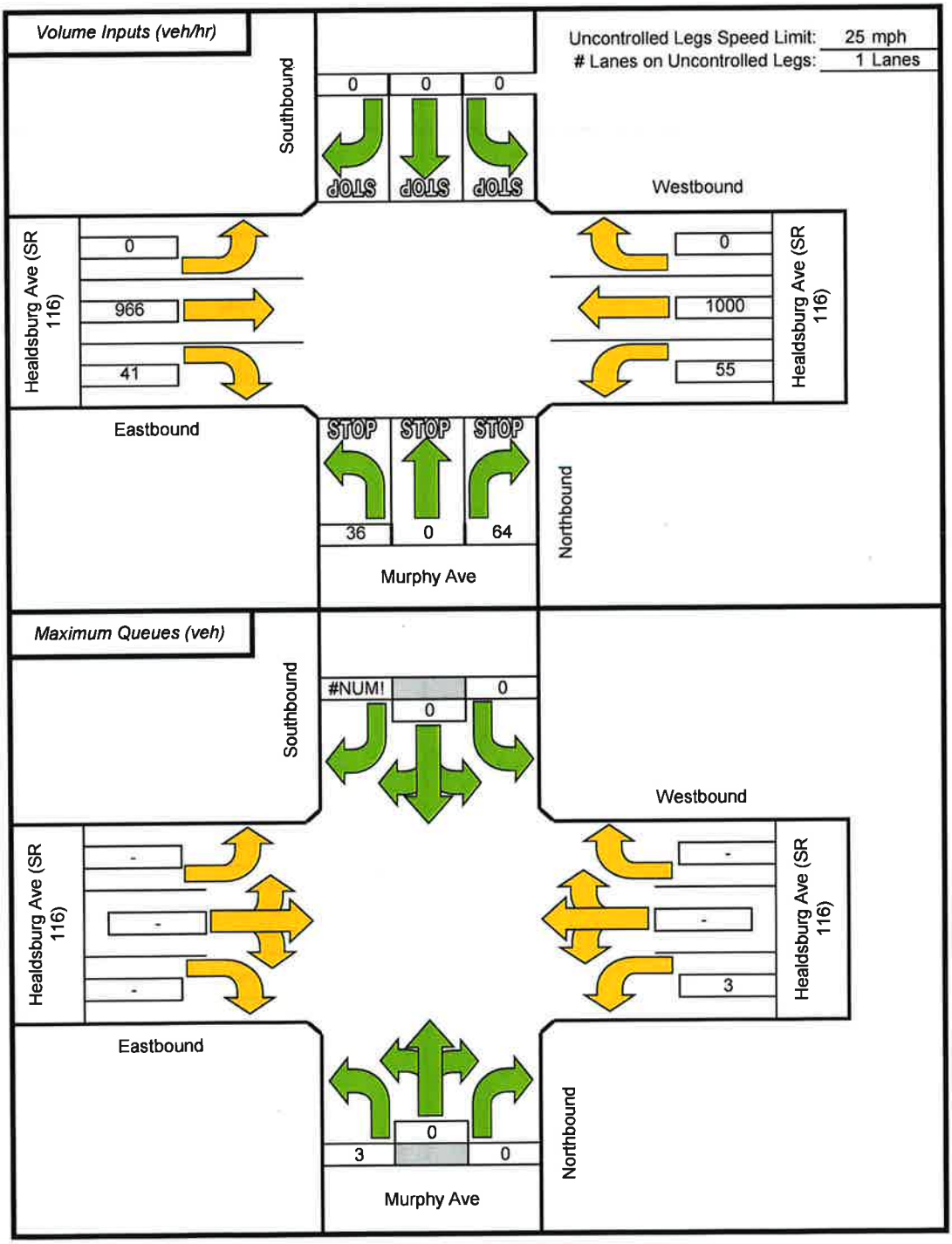
Maximum Queue Length
Two-Way Stop-Controlled Intersections

Through Street: Healdsburg Ave (SR 116)
Side Street: Murphy Ave

Scenario: Future plus Project PM
Stop Controlled Legs: North/South

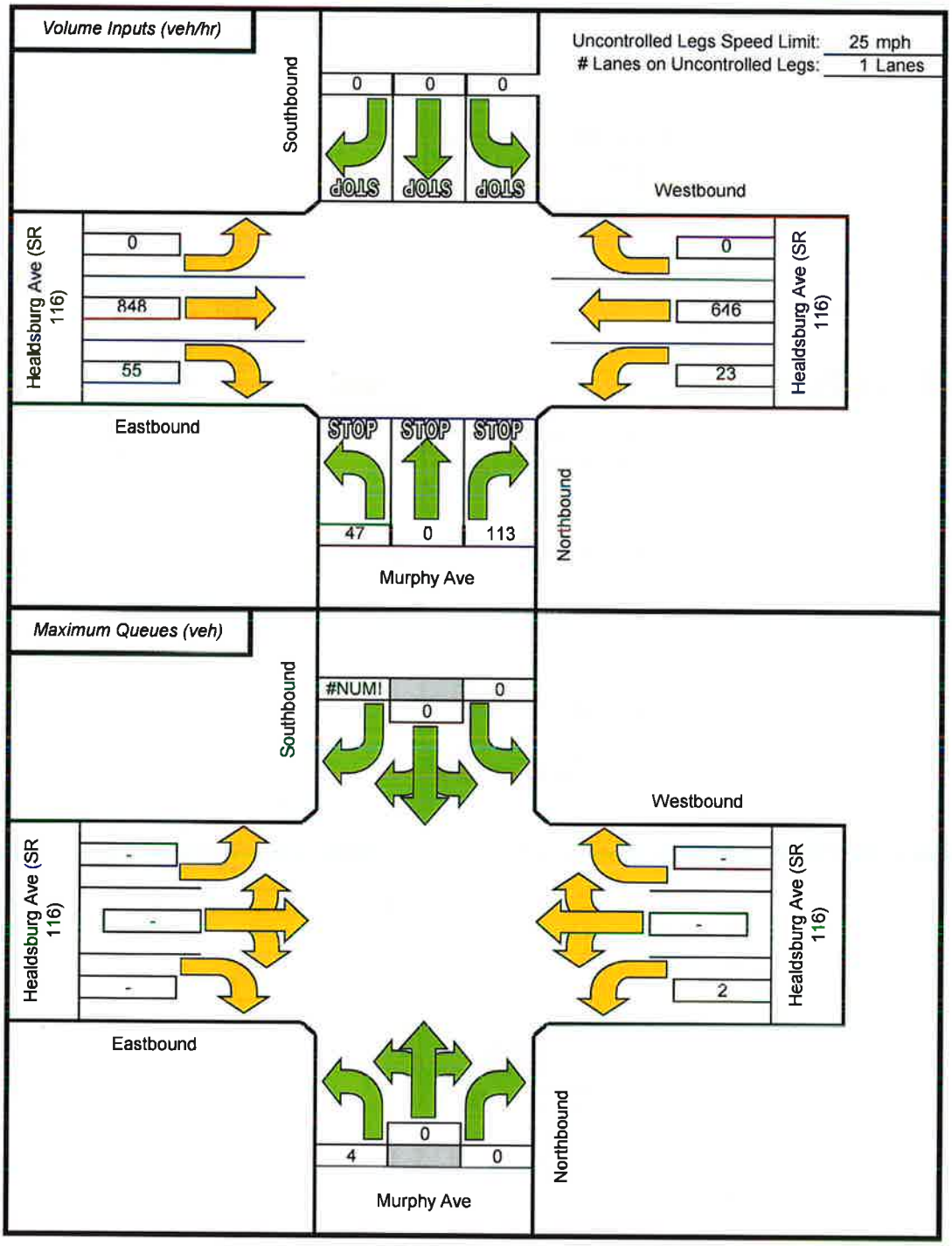


Source: John T. Gard, ITE Journal, November 2001, "Estimating Maximum Queue Length at Unsignalized Intersections"

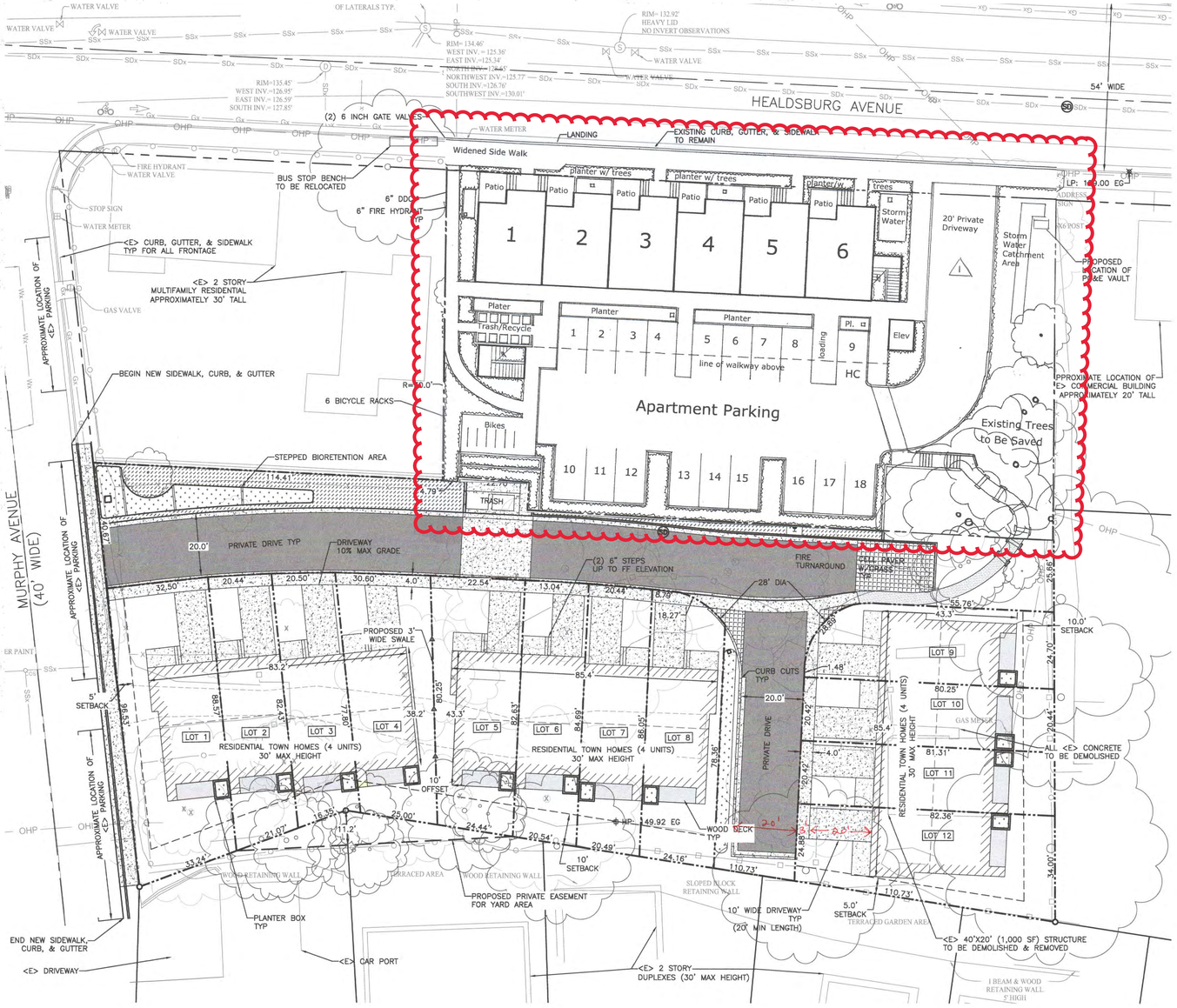
Maximum Queue Length
Two-Way Stop-Controlled Intersections

Through Street: Healdsburg Ave (SR 116)
Side Street: Murphy Ave

Scenario: Future plus Project AM
Stop Controlled Legs: North/South

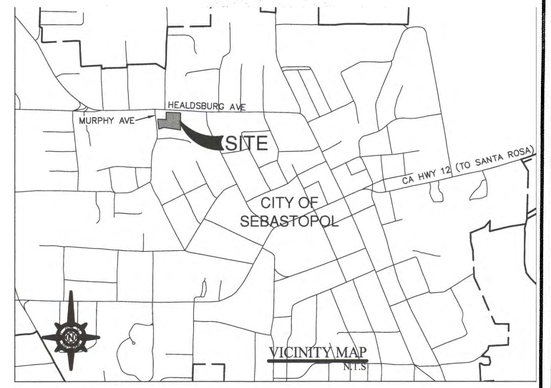


Source: John T. Gard, ITE Journal, November 2001, "Estimating Maximum Queue Length at Unsignalized Intersections"



0' 10' 20' 40' 60'

SCALE: 1" 20'



ABBREVIATIONS:

AC	ASPHALT CONCRETE
ADA	AMERICANS WITH DISABILITIES ACT
BRA	BIO-RETENTION AREA
DDCV	DOUBLE DETECTOR CHECK VALVE
DI	DRAINAGE INLET
<E>	EXISTING
E	EAST
EG	EXISTING GRADE
EVG	EDGE OF VALLEY GUTTER
FF	FINISHED FLOOR
FL	FLOW LINE
HP	HIGH POINT
INV	INVERT
LF	LINEAL FEET
LP	LOW POINT
N	NORTH
NA	NOT APPLICABLE
R	RADIUS
S	SOUTH
SCH	SCHEDULE
SD	STORM DRAIN
SVC	SERVICE
SW	SIDEWALK
TC	TOP OF CURB
TG	TOP OF GRATE
TYP	TYPICAL
W	WEST

PROJECT DATA:

PROJECT NAME: PACIFIC KNOLLS

SITE ADDRESS:

7621 HEALDSBURG AVENUE
SEBASTOPOL, CA 95472

APPLICANT AND PROPERTY OWNER:

PACIFIC REALTY DEVELOPMENT LLC
1555 GRANT AVENUE, NOVATO, CA 94945
(405) 686-0772

ASSESSOR PARCEL NUMBER: 004-291-019

BASIS OF ELEVATIONS:

THE BASIS OF ELEVATION FOR THIS SURVEY WAS ESTABLISHED FROM STATIC GPS OBSERVATIONS AT PROJECT POINT #1, ELEVATION = 140.79 FEET (NAVD88).

PROJECT SURVEYOR / ENGINEER:

LACO ASSOCIATES
1550 AIRPORT BLVD., SUITE 120
SANTA ROSA, CA 95403
707-525-1222

PROPOSED LAND USE:	RESIDENTIAL MULTIFAMILY
ZONING DISTRICT:	OFFICE COMMERCIAL (CO) & MULTIFAMILY RESIDENTIAL (R7)
EXISTING LOT SIZE:	1.28 ACRES
AREA OF SUBDIVISION:	1.28 ACRES

EXISTING LOT COVERAGE: 2% (1,000 SF)

TOTAL NUMBER OF RESIDENTIAL UNITS: 24

GRADING:

EARTHWORK DATA	
CUT	2530 CY
FILL	1515 CY
OFF-HAUL	1015 CY

LEGEND/ABBREVIATIONS:

- ROOF RIDGE LINE
- SETBACK LINE
- PROPOSED EASEMENT
- PROPOSED PROPERTY LINE
- EXISTING WOOD FENCE
- EXISTING WIRE FENCE
- EXISTING OVERHEAD POWER
- EXISTING STORM DRAIN
- EXISTING SEWER PIPE
- BRA AREA
- LANDSCAPING
- CONCRETE
- AC
- PATHWAY
- PATIO
- TURF CELL PAVER
- STORM DRAIN CLEANOUT
- 12"X12" CATCH BASIN W/ GRATE
- FLOW DIRECTION ARROW
- STORM DRAIN MANHOLE
- FIRE HYDRANT
- DOUBLE DETECTOR CHECK VALVE
- GATE VALVE
- PRESERVED TREE (26 TREES)
- DEMOLISHED TREE (42 TREES)

PROJECT DATA TABLE

LOT	LOT SIZE (SF)	GARAGE AREA (SF)	FIRST FLOOR BUILDING AREA (SF)	SECOND FLOOR BUILDING AREA (SF)	TOTAL BUILDING FLOOR AREA (SF)	FLOOR AREA RATIO	LOT COVERAGE	MAX ALLOWABLE LOT COVERAGE	PROPOSED PARKING SPACES	REQUIRED PARKING SPACES
1	2,995	236	813	700	1513	43%	29%	65%	2	2
2	1,746	236	785	700	1485	72%	48%	65%	2	2
3	1,617	236	785	700	1485	77%	52%	65%	2	2
4	2,165	236	785	700	1485	58%	39%	65%	2	2
5	2,222	236	813	700	1513	57%	40%	65%	2	2
6	1,708	236	785	700	1485	73%	49%	65%	2	2
7	1,742	236	785	700	1485	72%	48%	65%	2	2
8	2,024	236	785	700	1485	62%	42%	65%	2	2
9	1,872	236	813	700	1513	68%	43%	65%	2	2
10	1,649	236	785	700	1485	76%	48%	65%	2	2
11	1,671	236	785	700	1485	75%	47%	65%	2	2
12	2,445	236	785	700	1485	51%	32%	65%	2	2
HEALDSBURG AVE APTS.	20,505	0	3,559	5,077	8636	42%	20%	NA	18	18
COMMON PARCEL	11,336	NA	NA	NA	NA	NA	NA	NA	NA	NA

Disclaimer: This drawing has been prepared by K. Austin with the permission of LACO to be used for conceptual purposes. LACO is not responsible for the content of this drawing

Deed Restriction
50% 1.2 5%
80% 10% 2.4
120% 15% 3.6

REVISIONS	BY

7621 Healdsburg Ave. Sebastopol, CA

Pacific Realty Development LLC
1555 Grant Ave., Novato, CA 415-850-5555

Pacific Knolls

Revised Overall Site Plan

Katherine Austin, AIA, Architect
524 South Main Street, Sebastopol, CA
179 SE Rice Way, Bend, OR
707-529-5565 kaustin@pacbell.net

Date	8-14-2024
Scale	1"=10'
Drawn	K Austin
Job	
Sheet	Rev. SP
Of	1 Sheets 1

RESOLUTION NO. 24-06

RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF SEBASTOPOL RECOMMENDING THE CITY COUNCIL APPROVE A USE PERMIT AND TENTATIVE MAP FOR THE PROPERTY AT 7621 HEALDSBURG AVE (APN 004-291-019)

WHEREAS, the City of Sebastopol completed a comprehensive General Plan update with adoption of a new General Plan on November 15, 2016; and

WHEREAS, the City of Sebastopol completed a Housing Element Update to the General Plan with adoption of a new Housing Element on January 3, 2023, and Certified by the State of California Department of Housing and Community Development (HCD) on March 7, 2023; and,

WHEREAS, pursuant to the California Environmental Quality Act (CEQA, codified at Public Resources Code § 21000 et seq.) and the State CEQA Guidelines (14 CCR, § 15000 et seq.), on November 15, 2016, the City Council certified and adopted an Environmental Impact Report (EIR) for the Sebastopol General Plan (the "Project"; State Clearinghouse No. 2016032001); and

WHEREAS, an application for a Conditional Use Permit for residential development in a Commercial Office district and a Tentative Map for an 12-Unit townhome project and 12 unit apartment building known as Pacific Knolls (the "Project"), was filed on May 8, 2024, by Kathy Austin / Pacific Knolls LLC, which consists of subdividing one vacant parcels into 12 townhome lots and one parcel to include; to be developed with 12 townhome units, landscaped areas, and parking. Parking will be provided via a surface parking lot on site as well as garage parking for all of the units; and

WHEREAS, the project, as conditioned, is consistent with the General Plan, in that it conforms to the following goals and policies:

- *Goal LU1 - Maintain Sebastopol as a unique, charming, and environmentally sensitive small town that provides residents, businesses, and visitors with opportunities to enjoy a high quality of life, in that the project will provide housing opportunities that are environmentally friendly with the low water landscape, and improvements to existing pedestrian facilities.*
- *Policy LU 1-2: Avoid urban sprawl by concentrating development within the City limits; favor infill development over annexation, in that the project is an infill development as it intends to develop two vacant parcels within city limits.*
- *Policy LU 1-7: Encourage new development to be contiguous to existing development, whenever possible, in that the project reflects similar characteristics to the existing development of the building to the west as it's the same owner and developer.*

- *Policy LU 5-5: Strongly encourage residential development in a balanced and efficient pattern that reduces sprawl, preserves open space, and creates convenient connections to other land uses, in that the project provides pedestrian access to an adjacent bus line, and is within walking distance of a major shopping center.*
- *Policy LU 6-1: Promote increased residential densities in that the project provides 12 townhome units on the R7 Multifamily zoned portion of the lot and also provides 12 apartments on the Commercial Office zoned portion of the site.*
- *Policy LU 6-2: Promote compact urban form that provides residential opportunities in close proximity to jobs, services, and transit, in that the project is a compact design of townhomes located in close proximity to a large shopping center, bus stop and two schools.*
- *Policy CIR 1-5: When analyzing impacts to the circulation network created by new development or roadway improvements, consider the needs of all users, including those with disabilities, ensuring that pedestrians, bicyclists, and transit riders are considered preeminent to automobile drivers in that the project provides connectivity to an adjacent to a bus transit line.*
- *Housing Element Goal D-1: Promote Housing Affordability for both Renters and Homeowners; Housing Element Policy C-4: The City will encourage development of new housing to meet a range of income levels, including market-rate housing, and a variety of housing sizes and types. The project is consistent with this Goal and Policy in that it includes both market-rate and affordable housing units and both rental and ownership opportunities. The number and affordability level of the units offered as affordable will be not less than required by the City's Inclusionary Housing program, with final numbers determined at the time of or prior to final map recordation and guaranteed affordable in perpetuity.*

WHEREAS, granting a Conditional Use Permit for the Project is appropriate as it complies with SMC 17.415.030 as detailed below:

1. The proposed use is consistent with the General Plan and all applicable provisions of this title in that residential development in a Commercial Office zoning district is allowed with the approval of a Conditional Use Permit.

2. The establishment, maintenance, and operation of the use applied for will not, under the circumstances of the particular case (location, size, design, and operating characteristics), be detrimental to the health, safety, peace, morals, comfort, or general welfare of persons residing or working in the area of such use or be detrimental or injurious to property and improvements in the neighborhood or to the general welfare of the City in that:

    i. The proposed use of a residential development is compatible with the surrounding uses of residential, office, and scholastic.

ii. The Project maintains the existing trees and screening to the adjoining residential areas, as well as appropriate setbacks from adjoining properties.
iii. The Project is consistent with the R7 Multi-family housing zoning requirements.
iv. The Project, with the approval of a Use Permit, is consistent with the Commercial Office Zoning District.
v. The Project underwent a Traffic Study to ensure that traffic effects on the Healdsburg and Murphy Avenue intersection would not warrant a new traffic signal.

WHEREAS, granting a Tentative Map for the Project is appropriate as it complies with SMC 16.28.070(A) in that:

1. The proposed subdivision, together with the provisions for its design and improvement, is consistent with the General Plan as detailed above, and other applicable provisions of SMC Chapter 16 and the State Subdivision Map Act (SMA); and
2. The design of the proposed subdivision provides, to the extent feasible, for future passive or natural heating or cooling opportunities in the subdivision, as described in the State Subdivision Map Act and any guidelines promulgated by the City Council.
    i. The Project is required to comply with the California Green Building Standard Code (CalGreen) requirements for energy efficient buildings and appliances, including Tier 2 standards required by the City of Sebastopol (which are higher than the base State requirements for green design). CalGreen Standards require that buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant - emitting finish materials. The project also incorporates many sustainable features which help reduce energy consumption, such as:
        - Low water use landscape
        - Native Plant materials
        - Accessible/adaptable features in all buildings

WHEREAS, on May 3, 2022, the Development Review Team which consists of the Planning Director, Police Chief, Fire Chief, Building Official, City Engineer, Public Works Superintendent and Associate Planner conducted a preapplication conference of the proposed project and provided comments to the applicant; and,

WHEREAS, on December 21, 2022, the Design Review Board conducted a preliminary review of the proposed project and provided comments to the applicant; and,

WHEREAS, on January 10, 2023, the Planning Commission conducted a preliminary review of the proposed project; and,

WHEREAS, on August 27, 2024, the Planning Commission held a duly noticed public hearing to review the proposed residential development with the including entitlements of a use permit and tentative map, heard a staff report and public testimony, and deliberated; and,

NOW, THEREFORE, BE IT RESOLVED THAT, The Planning Commission of the City of Sebastopol, California, does hereby recommend approval to the City Council, based on the findings above and subject to the Conditions of Approval in Exhibit B and Exhibit C:

1. A use permit for residential development in a Commercial Office district.
2. A tentative map for the creation of 12 Townhome units, one building including 12 apartment units, common areas, and on-site parking as shown in Exhibit A.

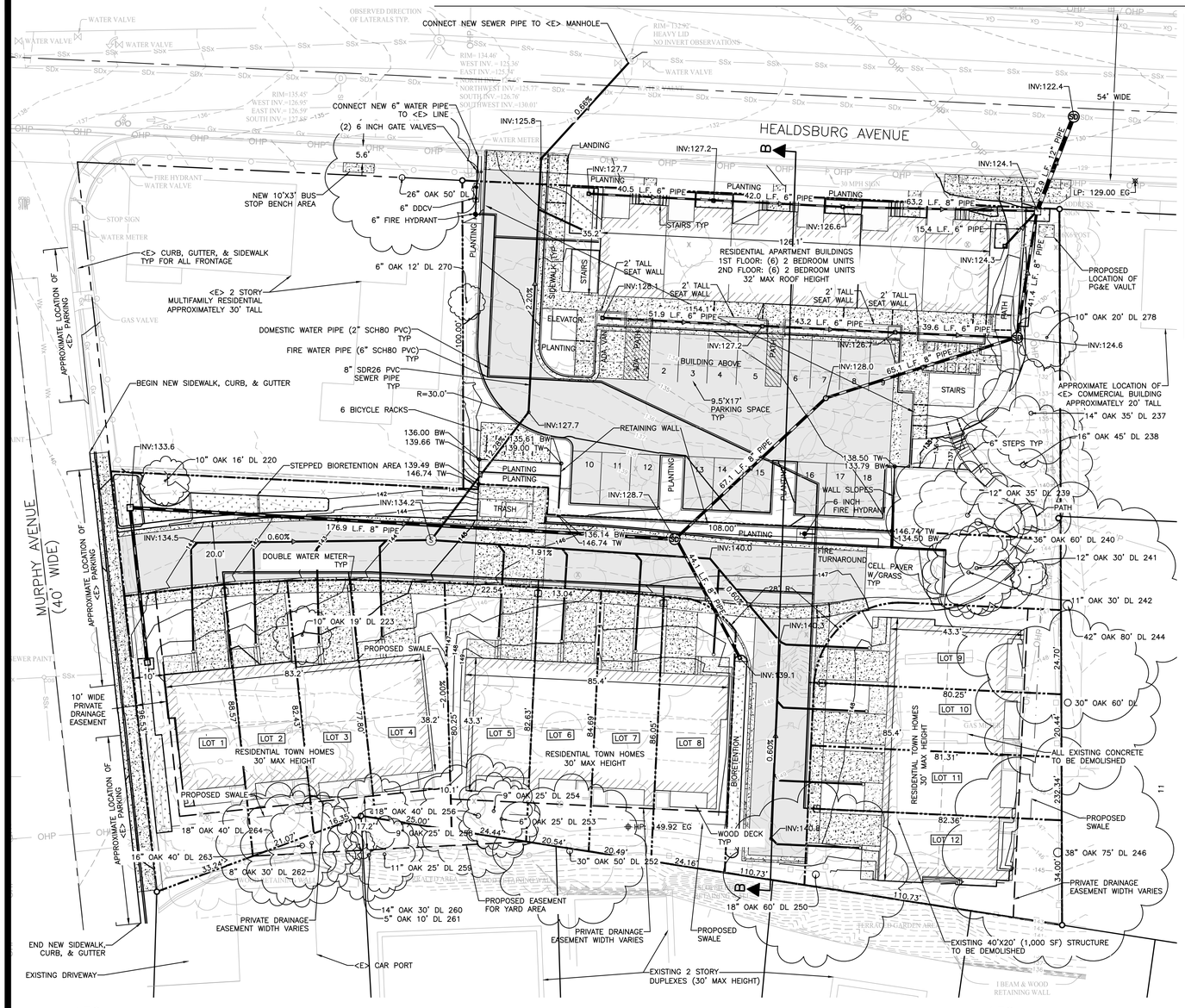
Approved on August 27, 2024, by the following vote:

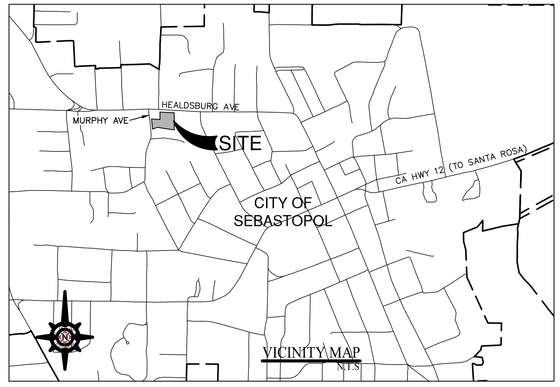
AYES:
NOES:
ABSTAIN:
ABSENT:

Certified: _____

Jane Riley, Interim Planning Director

PACIFIC KNOLLS VESTING TENTATIVE MAP





ABBREVIATIONS:

AC	ASPHALT CONCRETE	LF	LINEAL FEET
ADA	AMERICANS WITH DISABILITIES ACT	LP	LOW POINT
BRA	BIO-RETENTION AREA	N	NORTH
DDCV	DOUBLE DETECTOR CHECK VALVE	NA	NOT APPLICABLE
DI	DRAINAGE INLET	R	RADIUS
<E>	EXISTING	S	SOUTH
E	EAST	SCH	SCHEDULE
EG	EXISTING GRADE	SD	STORM DRAIN
EVG	EDGE OF VALLEY GUTTER	SVC	SERVICE
FF	FINISHED FLOOR	SW	SIDEWALK
FL	FLOW LINE	TC	TOP OF CURB
HP	HIGH POINT	TG	TOP OF GRATE
INV	INVERT	TYP	TYPICAL
		W	WEST

PROJECT DATA:

APPLICANT AND PROPERTY OWNER:

PACIFIC REALTY DEVELOPMENT LLC
1555 GRANT AVENUE, NOVATO, CA 94945
(405) 686-0772

SITE ADDRESS:

7621 HEALDSBURG AVENUE
SEBASTOPOL, CA 95472

ASSESSOR PARCEL NUMBER: 004-291-019

PROJECT SURVEYOR / ENGINEER:

LACO ASSOCIATES
1550 AIRPORT BLVD., SUITE 120
SANTA ROSA, CA 95403
707-525-1222

BASIS OF ELEVATIONS:

THE BASIS OF ELEVATION FOR THIS SURVEY WAS ESTABLISHED FROM STATIC GPS OBSERVATIONS AT PROJECT POINT #1, ELEVATION = 140.79 FEET (NAVD88).

PROPOSED LAND USE: RESIDENTIAL MULTIFAMILY

ZONING DISTRICT: OFFICE COMMERCIAL (CO) & MULTIFAMILY RESIDENTIAL (R7)

EXISTING LOT SIZE: 1.28 ACRES

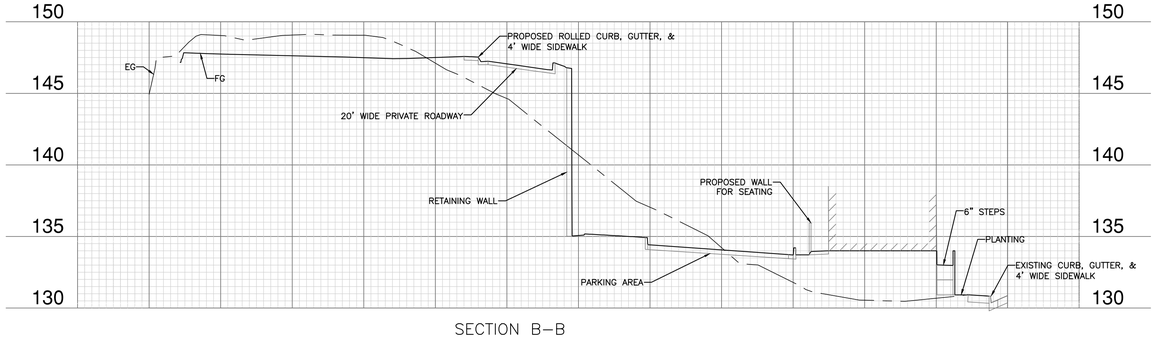
EXISTING LOT COVERAGE: 2% (1,000 SF)

EARTHWORK DATA	
CUT	2530
FILL	1515
OFF-HAUL	1015

LOTS FOR HEALDSBURG AVE APARTMENTS AND COMMON PARCEL ARE COMMON AREA PARCELS AND ALSO A PUBLIC UTILITY EASEMEMT DEDICATED THIS MAP.

LEGEND/ABBREVIATIONS:

- EXISTING CONTOUR LINE
- GRADE BREAK
- ROOF RIDGE LINE
- PROPOSED EASEMENT
- PROPOSED PROPERTY LINE
- OHP — EXISTING OVERHEAD POWER
- SDx — EXISTING STORM DRAIN
- STORM DRAIN PIPE
- SSx — EXISTING SEWER PIPE
- SEWER PIPE (8" SDR26 PVC)
- DOMESTIC WATER PIPE (2", SCH80 PVC) & FIRE WATER PIPE (6" SCH80 PVC)
- BRA AREA
- CONCRETE
- AC
- TURF CELL PAVER
- FLOW DIRECTION ARROW
- STORM DRAIN CLEANOUT
- 12"X12" CATCH BASIN W/ GRATE
- SD — STORM DRAIN MANHOLE
- SEWER CLEANOUT
- WATER METER
- FIRE HYDRANT
- DOUBLE DETECTOR CHECK VALVE
- PRESERVED TREE (28 TREES)
- X — DEMOLISHED TREE (40 TREES)



SECTION B-B
VERTICAL SCALE: 1"=5'
HORIZONTAL SCALE: 1"=20'

PROJECT DATA TABLE

LOT	LOT SIZE (SF)	GARAGE AREA (SF)	FIRST FLOOR BUILDING AREA (SF)	SECOND FLOOR BUILDING AREA (SF)	TOTAL BUILDING FLOOR AREA (SF)	FLOOR AREA RATIO	LOT COVERAGE	MAX ALLOWABLE LOT COVERAGE	PROPOSED PARKING SPACES	REQUIRED PARKING SPACES
1	2,995	236	813	700	1513	43%	29%	65%	2	2
2	1,746	236	785	700	1485	72%	48%	65%	2	2
3	1,617	236	785	700	1485	77%	52%	65%	2	2
4	2,165	236	785	700	1485	58%	39%	65%	2	2
5	2,222	236	813	700	1513	57%	40%	65%	2	2
6	1,708	236	785	700	1485	73%	49%	65%	2	2
7	1,742	236	785	700	1485	72%	48%	65%	2	2
8	2,024	236	785	700	1485	62%	42%	65%	2	2
9	1,872	236	813	700	1513	68%	43%	65%	2	2
10	1,649	236	785	700	1485	76%	48%	65%	2	2
11	1,671	236	785	700	1485	75%	47%	65%	2	2
12	2,445	236	785	700	1485	51%	32%	65%	2	2
HEALDSBURG AVE APTS.	20,505	0	3,559	5,077	8636	42%	20%	NA	18	18
COMMON PARCEL	11,336	NA	NA	NA	NA	NA	NA	NA	NA	NA

DATE
NO. REVISION

REGISTERED PROFESSIONAL ENGINEER
PAUL ALLEN PEAS
NO. C58602
CIVIL
STATE OF CALIFORNIA

LACO
SURVEYORS | ENGINEERS | PLANNERS | GRANT WRITERS
lacoassociates.com

PACIFIC KNOLLS
SEBASTOPOL, CA
VESTING TENTATIVE MAP

JOB NO. 9272.02
DATE MARCH 2024
DESIGNER PAP
CHECKED PAP DRAWN DCT

SHEET 1 OF 1

Mar 26,2024 - 1:20pm
\\EignyleDrive\Loco\Shared\Projects\9200\9272.02 Healdsburg Ave\Civil\CWI\DWG\ 9272.02 TENTATIVE MAP_20230605.dwg

EXHIBIT B
RECOMMENDED CONDITIONS OF APPROVAL
Conditional Use Permit, Vesting Tentative Map 7621 Healdsburg Ave
004-291-019, File# **2023-078**

PLANNING:

1. Plans and elevations shall be in substantial conformance with plans prepared by Kathy Austin and LACO Associates and stamped received on May 8th, 2024, as revised on August 13th, 2024, and on file at the City of Sebastopol Planning Department, except as modified herein.

2. The Use shall be in substantial conformance with the proposed operations as described in the application materials prepared by Kathy Austin, and stamped received on May 8th, 2024, as revised on August 13th, 2024, and on file at the City of Sebastopol Planning Department, except as modified herein.

3. The project's open spaces shall be maintained by the property owner, not by the City.

4. The project site includes protected trees intended to remain. Protective measures are required for these trees. All final tree protection measures shall be submitted for review and approval by the City Arborist prior to issuance of Improvement Plans.

5. A Tree Removal permit is required for any trees proposed for removal.

6. Design Review approval is required by the Design Review Board for the design of the units, site features, landscaping, and other amenities.

7. The Vesting Tentative Map shall expire 24 months after its approval or conditional approval unless an extension is approved as provided in SMC 16.28.100 and in accordance with the State Subdivision Map Act

8. The Planning Director shall interpret applicable requirements in the event of any redundancy or conflict in the conditions of approval.

9. This approval does not include any signs. Any new signs that will identify the use of this property are subject to the prior approval of the Design Review Board or City staff, as appropriate.

10. All other approvals than the Vesting Tentative Map shall be valid for three years, except that the applicant may request a one (1) year extension of this approval from the Planning Director, pursuant to Section 17.250.050 of the Zoning Ordinance.

11. Project will fully comply with the Inclusionary Housing requirements set forth in Section 17.250 of the Sebastopol Municipal Code, and an Affordable Housing Agreement shall be executed and recorded prior to or concurrent with issuance of Building Permits. This condition shall be included as a note on the Final Map.

PUBLIC WORKS:

12. The applicant shall label all onsite sewer lines as private.

13. The applicant shall install a three-valve tree to the City's 3 inch water main.

14. Fire Hydrants will be part of the private onsite system. The City will provide hydrant testing to ensure fire protection.
15. All projects are subject to Impact Fees as adopted by the City Council at the time the preliminary application was submitted, which are due at the time of issuance of the Building Permit unless otherwise stipulated by the City.

ENGINEERING:

TENTATIVE MAP -FINAL MAP

16. Revise final Tentative Map to show the driveway for the Healdsburg Avenue apartments lot on the east side of property in conformance with Traffic Study Recommendations and Conclusions.

17. Show all proposed easements on revised Tentative Map that run through the subservient lot for utilities, drainage, pedestrian access, etc., and clearly indicate whether public or private. Also clearly indicate that all private shared-use facilities (e.g., water lines, sewer collectors, storm drains, pathways, etc.) shall be subject to joint maintenance and repair responsibilities.

18. Remove from revised Tentative Map reference to "Propose Easement For Yard Area" shown along the southerly boundary of Lots 2-5.

19. Each parcel shall be numbered or lettered clearly, including common areas and the apartments lot.

20. Prepare and submit for review and approval joint maintenance agreement (JMA) for the maintenance, repair, replacement, etc. of the private common use facilities, including, but not limited to, pedestrian access, water and sewer utilities, storm drain, LID measures, etc. The approved JMA shall be recorded with the Sonoma County Recorder's Office concurrent with an approved Final Map.

21. After approval of the Tentative Map, a Final Map prepared by a licensed surveyor and civil engineer, shall be prepared and submitted for the review and approval of the City Engineer. The Final Map shall conform to the requirements of the Subdivision Map Act and local ordinances. Upon recording the map, the subdivision is valid.

22. Prior to the recording of the Final Map, the Developer shall complete the required construction of the subdivision improvements in accordance with the approved Improvement Plans, except when the Developer alternatively elects to secure the completion of the required construction by posting with the City of Sebastopol the required securities in the form required and accepted by the City. In this case the Developer shall execute, and enter into, an Improvement Agreement with the City of Sebastopol, agreeing therein to complete the required construction within 24 months after the filing of the Final Map. The fully executed agreement shall be recorded with the Final Map.

23. The Developer shall execute a covenant running with the land on behalf of itself and its successors, heirs and assigns agreeing to annex this subdivision into the existing City of Sebastopol Lighting Assessment District.

SUBDIVISION IMPROVEMENTS

24. Pursuant to SCOA 23 (prepare and submit site improvement plans), the designs for water distribution and sanitary sewer collection systems shall incorporate design features that do not depend or rely on imposing onto subservient lot(s) wherever possible. This shall include evaluating water and sewer connections to Murphy Avenue for Lots 1 – 12 and involve extension of the existing sewer collector and ganging banks of water meters from one or more service connections from Murphy Avenue water main.

25. If the proposed project intends to reuse existing water and sewer services, Developer shall verify and provide proof thereof to the City Engineer that existing water and sewer services are adequate for reuse for proposed Project. Otherwise, existing water and sewer services connected into the property shall be removed to the point of connection at the city water and sewer mains, respectively, in accordance with City of Sebastopol Standard specifications and Details.

26. The Project is subject to the City of Sebastopol storm water low impact development requirements. Developer shall prepare and submit Storm Water Low Impact Development Submittal (SWLIDS) package for review and approval. In addition, Developer shall execute a Stormwater BMP Facilities Maintenance/Monitoring Agreement on behalf of itself and its successors, heirs and assigns accepting responsibilities and financial obligation for all maintenance, repair and replacement, therefore. The Agreement shall be recorded with the Sonoma County Recorder's Office.

27. The Project shall install Murphy Avenue frontage improvements along the property, including curb, gutter, driveway approach, etc. in accordance with improvement plans prepared by a registered civil engineer in conformance with City Street Standard Details and Specifications, and submitted for city engineer review and approval. Improvement plans shall include all proposed grading, paving, utilities and drainage improvements. Improvements plans shall include but not be limited to street and utility information, all concrete curbs, gutters, sidewalk, walkways, storm drain system, striping and signing, paving, water lines and sewer lines, tree preservation plan, erosion and sediment control, Storm Water Pollution Prevention Plan, and any necessary transitions for the portion of the public street fronting the project, if applicable. All improvements shall be designed in accordance with the City of Sebastopol Standard Details and Specifications.

28. The developer shall prepare and submit storm drainage design calculations supporting the proposed storm drain design.

29. The developer shall prepare and submit the Engineer's Estimate of Cost of the required subdivision improvements, including contingency, for review and approval of the City Engineer. The estimate of costs shall include the cost of labor pursuant to Section 1720 et seq. of the Labor Code of California.

GENERAL:

30. Applicant shall apply for any permits required for permanent work or temporary traffic control that encroaches onto Caltrans' Right-of-Way (ROW). The proposed project will add a new driveway connection off SR-116, it will require an encroachment permit. As part of the

encroachment permit submittal process, you may be asked by the Office of Encroachment Permits to submit a completed encroachment permit application package, digital set of plans clearly delineating Caltrans' ROW, digital copy of signed, dated and stamped (include stamp expiration date) traffic control plans, this comment letter, your response to the comment letter, and where applicable, the following items: new or amended Maintenance Agreement (MA), approved Design Standard Decision Document (DSDD), approved encroachment exception request, and/or airspace lease agreement.

31. Site landscaping shall be generally consistent with the Landscape Plan included as part of the plans stamped received on May 8th, 2024, as revised on August 13th, 2024 on file with the Sebastopol Planning Department. The final landscape plan shall be stamped by a licensed landscape architect and filed with the Planning Department prior to occupancy. Plans for any irrigation of the site shall be incorporated into the landscape plan. All planting associated with a building, as shown on the approved plan, shall be installed prior to occupancy of that building. Upon the request of an Applicant to receive a Temporary Certificate of Occupancy and at discretion of the Planning Director, landscape installation may be suitably guaranteed by posting a cash bond equal to l00% of the cost and installation of any landscape improvements.

Building Department:

32. The project shall comply with the Green Building regulations contained in the Sebastopol Municipal Code that are in effect at the time the preliminary application was submitted.

EXHIBIT C
STANDARD CONDITIONS OF APPROVAL
Conditional Use Permit, Vesting Tentative Map 7621 Healdsburg Ave
004-291-019, File# **2023-078**

1. All plans shall include a brief description of the project on the cover sheet.

2. All submitted building permit plan check sets shall include a plan sheet incorporating these conditions of approval.

3. Except as otherwise noted in these conditions of approval, the plans submitted to the Building Department for plan check shall be in substantial conformance to those approved by the review body. If any changes are made to submitted plans which were approved by the review body the applicant shall work with the Planning Department to determine if the changes are significant enough to once again be seen by the review body, or if staff can approve the changes. Any changes that have not been approved by Planning staff are not approved. Construction or demolition work that does not conform to the Planning approval is not valid and shall be subject to stop work orders and may require removal.

4. Site landscaping shall be generally consistent with the Landscape Plan included as part of "Exhibit A" on file with the Sebastopol Planning Department. The final landscape plan shall be stamped by a licensed landscape architect and filed with the Planning Department prior to occupancy. Plans for any irrigation of the site shall be incorporated into the landscape plan. All planting shown on the approved plan shall be installed prior to occupancy of the proposed project. Upon the request of an Applicant to receive a Temporary Certificate of Occupancy and at discretion of the Planning Director, landscape installation may be suitably guaranteed by posting a cash bond equal to l00% of the cost and installation of any landscape improvements.

5. Acceptance of the construction drawings and specifications does not release the applicant and owner from correction of mistakes, errors, or omissions contained therein. If, during the course of construction, the field conditions or other previously unknown conditions require a modification or a departure from the accepted plans, the applicant shall provide the modifications or departure and specify the correction of mistakes errors, or omissions in compliance with the CBC and City Standards.

6. The City of Sebastopol and its agents, officers and employees shall be defended, indemnified, and held harmless from any claim, action or proceedings against the City, or its agents, officers and employees to attach, set aside, void, or annul the approval of this application or the environmental determination which accompanies it, or which otherwise arises out of or in connection with the City's action on this application, including but not limited to, damages, costs, expenses, attorney's fees, or expert witness fees.

7. A Construction Management Plan (CMP) shall be submitted to the City as part of the Building Permit and/or Grading Permit and shall be incorporated into the plans, unless waived by staff. The City's CMP template, provided by the Planning Department, may be used for small, infill projects. Revisions to the CMP to increase or add on time to the construction timeline shall be coordinated with the Building Official and any additional requests will be at the applicant's responsibility.

   This CMP shall be a binding document. Failure to adhere to the CMP may result in a

"Stop Work Notice" being placed on the project. An electronic copy of the APPROVED CMP shall be submitted to the City, and may be posted to the city's website. The CMP shall be updated as project conditions warrant. Updates to the CMP shall be provided to the City for review and approval. The CMP shall include but not be limited to:

a) Work schedule (start of construction date, road or lane closure intent/dates, important milestones and proposed final dates)
b) Construction Hours
c) Travel routes and turn-around locations with staff approval
    - Impact to state highways
d) Road and/or lane closures (Applicant to provide information on how many anticipated road closures, and the reasons for each road closure).
e) Worker auto parking space locations/construction parking
f) Phasing (if applicable)
g) If construction improvements are located in areas of slopes 15% or greater, the Contractor shall provide safe temporary hard surface stair access to the improvements, unless waived by the Building Official. This access shall be shown on the CMP.
h) Projects that require a grading permit shall comply with the City's grading ordinance.

The CMP may be more stringent if the project is located close to schools or in impacted neighborhoods. A CMP may be required to be modified if a neighborhood becomes "impacted" during the course of the construction. Impacted neighborhoods are defined as areas in geographic proximity (i.e. using the same streets for access) with a significant number of simultaneous construction projects.

The hours of construction activity shall be limited 7:00 a.m. to 8:00 p.m., Monday through Friday, 8:00 a.m. to 5:00 p.m. on Saturdays with staff approval, depending on scope of work being done, or unless modified by a project's Specific Conditions of Approval.

A **24-inch by 36-inch** weatherproof copy with items A-F posted on site. The remaining Construction Management Plan shall be made available on site. The Construction Management Plan shall be posted on the site as part of the job site signage and should include:

a) Address of the project site.
b) Permitted hours of construction and of deliveries/off-haul.
c) Name, e-mail address and direct phone number of the General Contractor.
d) Name, e-mail address and direct phone number of the person responsible for managing the project.
e) Name and direct phone number of the party to call in case of an emergency.
f) City of Sebastopol Building Department (707-823-8597).

8. All construction materials, debris and equipment shall be stored on site. If that is not physically possible, an encroachment permit shall be obtained from the Public Works Department prior to placing any construction materials, debris, debris boxes or unlicensed equipment in the right-of-way. The fee for using the right-of-way for storage of construction materials or equipment is $10.00 per day. A minimum of 11' passable auto traffic clearance (paved travel way) shall be maintained at all times along the roadway. The placing of portable restroom facilities in the City right-of-way will not be permitted.

9. All portions of the job site shall be maintained in an organized and professional condition. All trash, debris, construction scraps and broken/deteriorated machinery shall be removed from the site by the end of each week. If off loaded construction materials are not used within 2 weeks, they shall be screened from public view. All sidewalks, driveways and public/private roadways fronting the subject site shall be broom cleaned at the end of each business day.

10. A pre-construction meeting is required with city staff for projects that:

    a) Require a City encroachment permit, a Caltrans encroachment permit, or a City grading permit; or
    b) Have 5 dwelling units or more; or
    c) Have a total of 5,000 square feet of building or more; or
    d) Have a creek setback requirement; or
    e) Are required to have a pre-construction meeting under a specific condition of approval.

11. All permits and/or inspection fees required shall be paid in full prior to final occupancy being granted unless otherwise stipulated by the City.

12. All required construction signage and any required tree-protection shall be posted and available for City inspection at the time of the Pre-construction meeting or, if no pre-construction meeting is required, prior to commencing construction. If these measures are not in place at the time of the pre-construction meeting, a re- inspection fee will be required, and issuance of building permit will be delayed.

13. The Planning Director shall interpret applicable requirements in the event of any redundancy or conflict in conditions of approval.

Planning Department Standard Conditions of Approval:

14. This approval is valid for a period of three (3) years during which time the rights granted must be exercised. However, the applicant may request one (1) one-year extension of this Use Permit from the Planning Director, pursuant to Zoning Ordinance §17.400.100.

15. The light source for all exterior lighting fixtures shall be shielded from adjacent properties. Cut sheets for all exterior lighting shall be submitted as part of the Design Review or other planning application.

16. For projects with new foundations or retaining walls less than 10’ away from a required setback property lines shall be physically identified (string line or equal), and the applicant shall submit a letter or certificate from a licensed surveyor that confirms that the structure complies with the approved setbacks prior to placing the foundation. For any project that includes new foundations or retaining walls more than 10’ away from a required setback, the applicant may apply for a waiver from this requirement from the City Engineer and Planning Department.

17. For any project that includes new structures within 2 feet of the allowed height limit, a letter or certificate from a surveyor confirming that the height of the roof complies with the approved plans shall be submitted to the Planning Department at the earliest point possible.

18. All landscape and irrigation plans must be designed in accordance with the most current City of Sebastopol landscape requirements. Prior to providing water service for new landscape areas, or improved or modified landscape areas, the Planning Department must review and approve the project's working drawings for planting and irrigation systems. Any question regarding the City of Sebastopol current water conservation and Landscape Ordinance should be directed to the Planning Department.

    New construction and rehabilitated (renovations or changes made to sites with an existing irrigation system) landscape projects will be affected by these requirements if the altered landscape area is greater than 500 square feet.

19. For any new housing unit development, the developer/owner shall submit the total amount of fees and exactions associated with the project prior to issuance of certificate of occupancy or final inspection.

Engineering and Public Works Department Standard Conditions of Approval:

20. All projects are subject to Impact Fees as adopted by the City Council, which are due at the time of issuance of the Building Permit unless otherwise stipulated by the City.

21. An Encroachment Permit is required from the Public Works Department for any and all work within the public right-of-way. If the work is within a CalTrans right-of way, an Encroachment Permit from CalTrans shall also be procured by the applicant. Encroachment Permit shall not be issued until the City Engineer approves the applicant's site improvement plans.

22. Construction within the public right-of-way is limited to that necessary to support the lot's use. This may include but is not limited to: driveways, sidewalks and any utility connections. For all improvements within the public right of way, the applicant shall submit plans to adequately describe the work. Plans shall include but not be limited to drainage details, cross-sections, driveway/roadway grades and utility locations as necessary.

23. The applicant shall prepare and submit site improvement plans for the construction of all improvements including water, sanitary sewer, storm drain, water quality facilities, roadway improvements, curbs, gutters, sidewalks, elevated or structural pedestrian walkways, landscaping, landscape irrigation, signing, striping, joint trench and streetlights. All design and construction shall conform to the latest edition of the City of Sebastopol Design and Construction Standards and other applicable codes, standards, guidelines and specifications. Public improvement drawings shall be drafted in the City-approved sheet format.

24. Once approved by the City Engineer, the applicant shall submit PDF files of the signed improvement plans. As-Built record drawings shall also be submitted as PDF files.

25. Deviations from City Standards and applicable Code requirements shall be approved by the City Engineer. The applicant's engineer shall request all design exceptions in writing.

26. Any improvements, public or private, damaged during construction shall be replaced,

by the applicant, in-kind or with new improvements. All cracked, broken, or uplifted sidewalk, driveway and/or curb and gutter fronting the property shall be replaced. Applicant shall coordinate with the Public Works Department prior to the first submittal of project improvement plans to identify the extents and limits of replacement.

27. An erosion and sediment control plan are required as part of the building permit application. The plan shall be prepared by a certified erosion control specialist and in full compliance with CASQA standards, The plan is subject to review and approval by the Engineering Department prior to the issuance of the building or grading permit. No modifications to the approved plans shall be made without approval of the City Engineer.

28. Mailbox plans and locations shall be approved by the Sebastopol Postmaster prior to improvement plan approval. The developer shall provide a letter and exhibit showing mailbox locations from the Sebastopol Postmaster approving mailbox locations.

29. City Public Water and Sewer and Drainage utility easements as required by the City Engineer utility companies shall be provided within the development. Easement locations shall be subject to review and approval by the City Engineer.

Roadway Improvements:

30. The improvement plans for the first phase of development shall include and provide for the construction of all offsite improvements as required to support full project build-out. Each subsequent phase of development shall construct sufficient onsite roadway and utility improvements to support the cumulative development proposed to be constructed as approved by the City Engineer.

31. Road closures, if permitted by the Project Approval, will only be permitted with prior authorization from the Public Works Department consistent with the City's road closure policy. Signs containing details of the proposed closure must be posted 48 hours in advance. Coordinate road closures with the Sebastopol Public Works Department. Contact the Public Works Department at 707-823-5331 to obtain a road closure permit.

32. An emergency vehicle access, meeting the requirements of the Sebastopol Fire Department shall be constructed.

33. All private driveway areas less than 24-foot wide shall require the approval of the Sebastopol Fire Department.

34. Sidewalk warps shall be provided to allow a clear five-foot walkway at all locations, including areas where mailboxes, street furniture, streetlights, street signs and fire hydrants are to be installed, or as otherwise approved by the City Engineer.

35. The structural section of all public road improvements shall be designed using a soil investigation which provides the basement soils R-value and expansion pressure test results. A copy of Geotechnical report and structural section calculations shall be submitted with the first improvement plan check.

36. The structural section of the private on-site drive aisles and parking areas shall meet the requirements and recommendations of the geotechnical report for the project.

37. Retaining walls and retaining curbs may be required to protect damage to trees as determined by a licensed Arborist. All retaining structures shall be designed and

constructed to minimize damage to trees.

38. Pedestrian curb ramps, meeting City standards and current accessibility requirements, shall be provided at all intersections and crosswalks where sidewalks are proposed.

Drainage Improvements:

39. All project related flooding impacts shall be mitigated by the project developer. Drainage improvements shall be designed by a Civil Engineer registered in the State of California in accordance with the Sonoma County Water Agency's Flood Management Design Manual (FMDM). Public and private drainage improvements shall be shown on the improvement plans and the City Engineer may require the applicant to acquire the review and recommendations by the Sonoma County Water Agency (Sonoma Water) prior to approval by the City Engineer. Private storm drain easements will be required for any portions of the private storm drain not entirely located with the lot being served or for any portion of a private utility located on an adjacent parcel.

40. No lot-to-lot drainage will be allowed between the project site and any adjacent parcels. No concentrated drainage may discharge across sidewalks. All site drains must be connected to the public storm drain system or discharged through the face of curb or to an established waterway.

41. Plans and certifications shall demonstrate compliance of all improvements, including building finished floor elevations, with the City's Flood Ordinance, to the satisfaction of the Building Official and City Engineer. Building finished floor elevations shall be constructed at a minimum of 2 foot above the 100-year storm event water surface elevation as determined by the City and certified by the project engineer. The Engineer of Record shall provide a signed and stamped letter indicating the project meets the requirements of the Ordinance before plan approval.

Stormwater Quality:

42. Projects that create or replace 10,000 square feet or more of impervious surface area are subject to design and construction requirements of the most recent edition of City of Sebastopol Low Impact Development (LID) Technical Design Manual. Improvement plans with required LID design features shall be approved by the City Engineer.

43. Projects that will disturb 1.0 acre or more of developed or undeveloped land shall provide evidence that a Notice of Intent (NOI) has been submitted by the applicant and received by the State Water Resources Control Board for a General Construction Activity Storm Water Permit. Two copies of the project Storm Water Pollution Protection Plan (SWPPP) shall be provided to the City prior to issuing a grading permit, encroachment permit, or building permit.

44. For required LID features constructed on private property or on street frontage, the owner shall provide a Declaration Letter to the City Manager regarding the owner’s commitment to ongoing maintenance of said LID features (LID Declaration) prior to occupancy.

Grading:

45. The improvement plans shall include a site-grading plan prepared by a Civil Engineer registered in the State of California as part of the required improvement drawings. Lots shall be generally designed to drain to public and private streets or parking areas, unless otherwise approved in the interest of tree preservation or other unusual circumstances.

46. The City of Sebastopol shall require a grading permit for projects that meet these requirements.

    a) Cut or fill exceeding 50 cubic yards
    b) Cut or fill greater than 3 feet in depth
    c) Cut creating a cut slope greater than 5 feet in height and steeper than 2 units horizontal to 1 unit vertical
    d) Fill intended to support a structure or surcharge greater than 1 foot in depth or placed on terrain with a natural slope steeper than 15 percent

47. When required by the Building Official the applicant shall submit to the City for review and approval, a detailed Geotechnical Report prepared by a Geotechnical Engineer registered in the State of California. The grading plan shall incorporate the recommendations of the approved Geotechnical Report.

48. Where soil or geologic conditions encountered during grading operations are different from those anticipated in the Geotechnical Report, or where such conditions warrant changes to the recommendations contained in the original soil investigation, a revised soil or geologic report shall be submitted for approval by the City Engineer. It shall be accompanied by an engineering and geological opinion as to the safety of the site from hazards of land slippage, erosion, settlement, and seismic activity.

49. Existing wells, septic tanks and/or underground fuel storage tanks that are defective or will no longer be in use shall be permanently destroyed or removed under permit and inspection by the Sonoma County Permit and Resource Management Department, Well and Septic Division and/or Sonoma County Environmental Health or other designated agency. Underground fuel storage tanks are subject to UST regulations of the State Water Resources Control Board.

50. The grading plan shall clearly show all existing survey monuments and property corners and shall state that they shall be protected and preserved. Should monuments be damaged or destroyed during construction, they shall be replaced by the developer.

51. Improvements plans shall include an erosion control (winterization) plan. The plan shall include an order of work and staging/scheduling component indicating when facilities must be installed and when they may be removed.

52. Sewer services and laterals shall be CCTV inspected to determine if the service needs to be removed and replaced. A copy of the CCTV report shall be provided to the City Engineer. A waiver for CCTV inspection may be waived by the City Engineer, if the sewer lateral has been replaced within ten years of the submittal of the improvement plans. A copy of the documentation evidencing such replacement shall be included in the submittal package.

53. If the proposed project is located in or adjacent to a waterway, within an area designated as habitat for threatened or endangered species, or other special status

area, it possibly falls under the jurisdiction of another agency such as the United States Army Corps of Engineers, the California Regional Water Quality Control, or the California Department of Fish & Wildlife, U. S. Fish & Wildlife Service, etc. These agencies shall be contacted to determine if the project lies within their respective jurisdictions. All necessary permits and/or approvals shall be obtained prior to the City issuing any permits. If permits are not required, a letter stating so shall be submitted to the City as part of the record.

54. Trees and vegetation shall be trimmed according to Section 8.12 of the Sebastopol Municipal Code. Trees and shrubs shall be kept trimmed so that the lowest branches projecting over public properties provide a clearance of not less than eight (8) feet over sidewalks and not less than twelve (12) feet over streets.

Fire Department. Standard Conditions of Approval:

55. The address shall be posted in accordance with requirements of the California Building Code and California Fire Code. The Fire Chief shall review and approve all requests for new addresses. Inspection and signoff of address posting shall be coordinated through Building Department.

56. Smoke and CO detectors shall be installed in accordance with the California Building Code. Final inspection and signoff of smoke detectors shall be coordinated through Building Department.

57. Noncombustible roofing shall be provided for:
    a. All new roofs shall be non-combustible.
    b. Roof Repairs or replacement:
        i. Less than 25% - no requirement
        ii. 25Hr to 50% - Class C minimum
        iii. 50% or more — Non-Combustible
    c. In no case shall the roofing material used to be less fire resistive than the existing roof.

    NOTE: A "noncombustible" roof is a Class A roof (for other than Group R Occupancies, a Class A or Class A assembly) as defined in the California Building Code and approved by the Building Department.

58. Prior to occupancy, a spark arrester shall be installed on the chimney(s) 3/8" mesh minimum.

Building Department Standard Conditions of Approval:

59. All construction shall comply with all applicable Title 24 Codes in effect at the time of building permit submittal. It is the responsibility of the designer(s) to ensure that all applicable Title 24 codes, as well as any applicable Sebastopol Municipal Codes are incorporated into the design.

60. The project shall comply with the Green Building regulations contained in the Sebastopol Municipal Code that are in effect at the time of building permit submittal.

END OF STANDARD CONDITIONS OF APPROVAL

From: [redacted]
Sent: Thursday, August 1, 2024 5:56 PM
To: John Jay
Subject: project at 7621 Healdsburg Ave.

Hi John,

In regard to the Planning Commission meeting on August 27th considering 24 units to be added to 7621 Healdsburg
Ave. I own a two unit property on DuFranc Ave. and with the heavy traffic on Healdsburg Ave. it's already very difficult
making a left turn out of DuFranc Ave. The added traffic of this development will make that even worse. It would be
most helpful if they were to install a traffic light at the corner of DuFranc and Healdsburg Ave., or at Murphy and
Healdsburg Ave., depending on where their driveway is going to be.

Thank you,

Norbert Tenenbaum