



August 25, 2026

Mr. John Jay
City of Sebastopol
714 Johnson Street
Sebastopol, CA 95472

Focused Transportation Impact Study for 8100 Valentine Avenue Development

Dear Mr. Jay;

As requested, W-Trans has prepared a focused transportation impact study for the proposed residential development at 8100 Valentine Avenue in the City of Sebastopol. The purpose of this letter is to address the project's potential transportation effects related to trip generation levels, traffic safety, and adequacy of emergency access and onsite circulation.

Project Description

The project as proposed includes 20 Single-Family Detached (SFD) homes with 19 detached Accessory Dwelling Units (ADU). The site is currently occupied by a vacant church building that is no longer in operation. Vehicular access to the project site would be provided through a single driveway on Valentine Avenue, at the same location as the existing driveway to the church. The project also includes a 12-foot-wide emergency vehicle access (EVA) linking the end of its internal drive aisle to Valentine Avenue.

Trip Generation

The anticipated trip generation was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 12th Edition. For the 20 SFD dwelling units, trip generation rates for Single Family Detached (SFD) Housing (LU #210) were used. For the 19 detached ADUs, trip generation was estimated with rates for a specialized land use commonly referred to as "patio homes." A patio home is a detached housing unit that is located on a small lot with little (or no) front or back yard, and is typically smaller than standard single-family homes, along with having lower average household sizes. Trip rates for patio homes are provided as a special subset of the Single Family Detached Housing land use. Based on the application of these rates, the proposed project would be expected to generate an average of 284 trips per day, including 19 a.m. peak hour trips and 28 trips during the p.m. peak hour. These results are summarized in Table 1.

Table 1 – Trip Generation Summary

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Primary Residences <i>SFD Housing</i>	20 du	9.09	182	0.70	14	4	10	0.93	19	12	7
Accessory Units <i>SFD-Patio Homes¹</i>	19 du	5.35	102	0.26	5	1	4	0.47	9	6	3
Total Trips			284		19	5	14		28	18	10

Note: du = dwelling unit; LU = ITE Land Use; ¹Specialized land use described under Single-Family Detached Housing (LU #210) in ITE Trip Generation 12th Edition

Sight Distance

As proposed, the project site would be served by a single full-access driveway on Valentine Avenue. Sight distance at the proposed driveway was evaluated in accordance with the intersection sight distance criteria presented in the *Caltrans Highway Design Manual (HDM)*. The HDM recommends corner sight distance for public street intersections based on the prevailing approach speed of through traffic.

Although the posted speed limit on Valentine Avenue is 25 mph, a field speed survey conducted along the project frontage found that the average operating speed of vehicles is approximately 30 mph. At the posted speed of 25 mph, the HDM recommends minimum corner sight distances of 275 feet for left-turn departures and 240 feet for right-turn departures. Based on the observed average operating speed of 30 mph, the recommended corner sight distances increase to 330 feet for left-turn departures and 290 feet for right-turn departures.

Valentine Avenue is generally level in the vicinity of the project site. To the east, the horizontal alignment of the roadway is straight with no obstruction to the line of sight. The intersection of Valentine Avenue and Pleasant Hill Avenue, located approximately 400 feet east of the proposed driveway, is clearly visible from the driveway departure point. To the west, a horizontal curve begins approximately 240 feet from the driveway. Because the curve deflects away from the driver's line of sight, visibility extends beyond the curve, providing approximately 500 feet of available sight distance.

Finding – Available sight distance from the proposed driveway measures approximately 400 feet to the east and 500 feet to the west. These distances exceed the minimum corner sight distance criteria for both left- and right-turn departures based on the observed average operating speed of 30 mph. Therefore, the proposed driveway provides adequate sight distance for ingress and egress.

Collisions

Collision records obtained from the California Highway Patrol's Statewide Integrated Traffic Records System (SWITRS) were reviewed to identify any collision patterns or trends that may indicate safety concerns associated with roadway geometry or traffic control along Valentine Avenue in the vicinity of the project site. The most recent SWITRS data available covers the five-year period from 2020 through 2024.

During the five-year study period (2020–2024), two reported collisions occurred on Valentine Avenue, with no collisions recorded at or in the immediate vicinity of the proposed project driveway. The collision nearest the project site occurred approximately 800 feet east of the site and involved a driver who unlawfully crossed into the opposing lane and struck a parked vehicle. The second collision occurred at the Valentine Avenue/Zimpher Drive intersection and involved an impaired driver colliding with a roadside fixed object.

Based on the reviewed collision records, both reported collisions were attributable to driver error rather than deficiencies in roadway geometry or traffic control. Accordingly, no identifiable traffic safety issues were found in the vicinity of the project site that would warrant roadway or traffic control improvements.

Warrants Evaluation

Left-Turn Lane Warrants

The need for a left-turn lane on Valentine Avenue for vehicles returning to the project site was evaluated based on criteria contained in the *Intersection Channelization Design Guide*, National Cooperative Highway Research Program (NCHRP) Report No. 279, Transportation Research Board, 1985, as well as an update of the methodology developed by the Washington State Department of Transportation and published in the *Method for Prioritizing Intersection Improvements*, January 1997. The NCHRP report references a methodology developed by M. D.

Harmelink that includes equations that can be applied to expected or actual traffic volumes to determine the need for a left-turn pocket based on safety issues.

The p.m. peak hour was selected for the left-turn lane warrant analysis because the project trip generation estimates (Table 1) indicate that the project would generate more inbound vehicle trips during the p.m. peak hour than during the a.m. peak hour. The directional distribution of project inbound trips was based on the 2023 Sonoma County Travel Demand Model (SCTM), which indicates that westbound traffic on Valentine Avenue is approximately three times greater than eastbound traffic during the p.m. peak hour. Accordingly, it was assumed that 75 percent of project inbound trips would approach from the east and turn right into the project driveway, while the remaining 25 percent would approach from the west and turn left. Of the projected 18 inbound trips during the p.m. peak hour, approximately five eastbound vehicles on Valentine Avenue are expected to turn left into the project driveway, while the remaining 13 vehicles would turn right from westbound Valentine Avenue.

Using these assumptions, the left-turn lane warrant analysis indicates that a left-turn lane would be warranted only if opposing westbound through traffic on Valentine Avenue reached approximately 1,390 vehicles per hour and concurrent eastbound through traffic reached approximately 464 vehicles per hour. These volumes are equivalent to average traffic flow rates exceeding 20 westbound vehicles per minute and 8 eastbound vehicles per minute throughout the p.m. peak hour.

Traffic count data are not currently available for Valentine Avenue. However, field observations conducted during the speed survey recorded traffic flow rates of approximately three to four westbound vehicles per minute and one to two eastbound vehicles per minute during the p.m. peak hour, corresponding to approximately 210 westbound and 90 eastbound vehicles per hour. These observations are consistent with forecasts from the 2023 SCTM, which estimates 203 westbound vehicles and 72 eastbound vehicles on Valentine Avenue during the p.m. peak hour.

Both the field observations and the SCTM forecasts indicate that existing traffic volumes on Valentine Avenue are substantially below the volumes required to satisfy the left-turn lane warrant criteria. Therefore, the conditions necessary to warrant a left-turn lane at the proposed project driveway are not expected to occur.

Finding: A left-turn lane is not warranted on eastbound Valentine Avenue at the proposed project driveway.

Emergency Access

The proposed project includes a single, approximately 545-foot-long drive aisle that would serve all parking areas and day-to-day traffic generated at the site. The drive aisle would be 26 feet wide. The project also proposes an approximately 200-foot long, 12-foot-wide drivable landscaped surface that is intended to be available as a secondary emergency route connecting the terminus of the internal drive aisle to Valentine Avenue. The project description states that the homeowner's association will ensure that this route is maintained and remains clear of obstructions.

The 26-foot drive aisle width would accommodate emergency ingress and egress, with fire equipment able to navigate the drive aisle bend based on review of the fire truck maneuverability exhibit in the project's tentative map. Consistent with preliminary feedback provided by Gold Ridge Fire officials during their review of the site plan, curbs on both sides of the drive aisle and turnaround should be painted red in areas without designated parking.

The proposed drive aisle would be a dead-end roadway. While a secondary emergency access is proposed from the end of the drive aisle to Valentine Avenue, its 12-foot width would be inadequate to accommodate passage by fire trucks. Consistent with preliminary feedback provided by Gold Ridge Fire representatives, modification of the site plan to either extend the drive aisle back to Valentine Avenue as a loop or widen the emergency access to

at least 24 feet would be preferable to the current design. Any modifications would need to be confirmed as adequate and consistent with applicable fire codes by the Gold Ridge Fire Chief.

If creating a loop drive aisle or widening the emergency access are deemed infeasible, emergency responders will need to rely on the hammerhead type turnaround at the end of the internal driveway. Provision of a hammerhead is generally consistent with State Minimum Fire Safe Regulations (California Code of Regulations Title 14, Section §1273.05), though it is unclear whether the hammerhead design as proposed would be sufficiently sized for fire trucks to effectively turn around. During detailed reviews of the project, it is recommended that Gold Ridge Fire representatives confirm that the proposed hammerhead configuration would adequately accommodate turnaround maneuverability for the fire department's equipment.

While the proposed 12-foot-wide emergency road may accommodate passenger vehicle-sized emergency response vehicles, it would be inadequate for passage by fire trucks. Gold Ridge Fire officials should review the proposed configuration and provide more specific feedback on modifications that would be needed to accommodate the department's emergency response vehicles and comply with applicable fire codes. If fire officials find a revised emergency access road configuration to be acceptable, it is recommended that removable bollards or barriers be installed at each end of the emergency access to prevent non-emergency use of the road. While the project description indicates that the roadway would be kept clear of all obstructions, it is also recommended that this requirement be reinforced through a condition of approval.

Importantly, fire officials retain ultimate authority regarding the adequacy of emergency access and compliance with all applicable local and State fire codes.

Finding – Modification of the site plan to either extend the drive aisle back to Valentine Avenue as a loop or widen the emergency access to at least 24 feet would be preferable to the current design.

Recommendation – Curbs on both sides of the drive aisle and turnaround in areas without designated parking should be painted red to ensure clear emergency access.

Recommendation – Gold Ridge Fire representatives should confirm that the proposed hammerhead configuration would adequately accommodate maneuverability for the fire department's equipment.

Recommendation – Removable bollards or barriers should be installed at each end of the emergency access, if allowed, to prevent non-emergency use of the road.

Recommendation – The City should consider adding a condition of approval requiring the emergency access road to remain clear of obstructions at all times.

Conclusions and Recommendations

- The project would be expected to generate an average of 284 trips per day, including 19 a.m. peak hour trips and 28 trips during the p.m. peak hour.
- Sight distances available at the proposed driveway departure point meet the recommendations for left- and right-turn maneuvers from the driveway.
- Based on collision records for the last five years, no identifiable traffic safety issues were found in the vicinity of the project site that would warrant roadway or traffic control improvements.
- A left-turn lane is not warranted on Valentine Avenue into the project driveway.

- Modification of the site plan to either extend the drive aisle back to Valentine Avenue as a loop or widen the emergency access to at least 24 feet would be preferable to the current design.
- Curbs on both sides of the drive aisle and turnaround in areas without designated parking should be painted red to ensure clear emergency access.
- Gold Ridge Fire representatives should confirm that the proposed hammerhead configuration would adequately accommodate maneuverability for the fire department's equipment.
- Removable bollards or barriers should be installed at each end of the emergency access, if allowed, to prevent non-emergency use of the road.
- The City should consider adding a condition of approval requiring the emergency access road to remain clear of obstructions at all times.

Thank you for giving W-Trans the opportunity to provide these services. Please call if you have any questions.

Sincerely,



Zachary Matley, AICP
Principal