December 1, 2025

Mr. Janver Holly
Holly and Associates
73 St. James Drive
Santa Rosa, CA 95403

Addendum to the "Final Focused Traffic Study for the Lago Fresco Project"

Dear Mr. Holly;

Since the "Final Focused Traffic Study for the Lago Fresco Project" (FTS) was issued on December 28, 2023, the project description has undergone some modifications. The purpose of this letter is to address any modifications to our findings or recommendations that are needed as a result of the changes to the project description.

Project Description

The project as previously evaluated included 50 apartment units consisting of 16 one-bedroom, 25 two-bedroom, four three-bedroom, and five four-bedroom units in three- to four-story buildings. Six of the units were proposed as affordable to residents in the very low-income category. A supply of 63 parking spaces was proposed.

The project as modified still includes 16 one-bedroom, 25 two-bedroom, four three-bedroom and five four-bedroom apartments and 63 parking spaces. However, the number of affordable units has been reduced from six to four.

Trip Generation

The trip generation as presented in the FTS was based on 50 multifamily dwelling units. Though affordable units have a lower trip generation rate, this was not accounted for in the analysis, so the reduction in the number of affordable units would not affect the trip generation as previously estimated. The trip generation as used in the FTS would therefore remain valid for the 50 units in the current project proposal. It is noted that the trip generation data used in the FTS was based on the number of dwelling units irrespective of the specific bedroom count for each unit.

Transportation Facilities

The findings and recommendations in the FTS regarding transportation facilities would be unchanged as a result of the modifications to the proposed project.

Significance Finding - With construction of a sidewalk with a landscape buffer along the project frontage on Summerfield Road, as proposed, the project would have a less-than-significant impact on transportation facilities.

Vehicle Miles Traveled (VMT)

Because the mix of unit types and affordability levels has changed, the VMT analysis was updated. The following text should be referenced in lieu of that in the FTS.

The potential for the project to conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b) was evaluated based the project's anticipated VMT characteristics. The City of Santa Rosa issued guidelines for VMT analysis, as outlined in *Vehicle Miles Traveled (VMT) Guidelines Final Draft*, dated June 5, 2020. Santa Rosa's guidelines are consistent with 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. For residential uses VMT is expressed as the number of miles generated per resident, or VMT per capita.

The City of Santa Rosa specifies that VMT performance criteria shall be compared to baseline levels corresponding to the County of Sonoma average. Based on output from the most recent SCTM23 travel demand model maintained by the Sonoma County Transportation and Climate Authorities (SCTCA), the existing average residential VMT per capita in the County of Sonoma is 16.48 miles. VMT significance thresholds are set at 15 percent below this level, or 14.01 miles. Accordingly, the applied VMT significance threshold applied to the project is that the project would have a potentially significant impact on VMT if its projected residential VMT per Capita exceeds 14.01 miles.

Consideration was given to whether adjustments to the baseline per-capita VMT estimates produced by the SCTCA model are warranted to reflect the project's density and inclusion of affordable housing. SCTCA has developed and made available a VMT Reduction Tool to assist in making project-specific VMT adjustments as well as quantify VMT mitigation measures.

Residential Density

The residential density of the proposed project is 38.2 units per acre. Methodologies contained in the SCTCA VMT Reduction Tool were used to estimate how the project's density would affect VMT rates. These methodologies were developed from research showing an elastic relationship between per capita VMT and residential density, with increased density translating to decreased VMT rates. The SCTCA VMT Reduction Tool indicates that the proposed project's density of 38.2 units per acre corresponds to a reduction in per capita VMT of 30 percent.

Provision of Affordable Housing

With respect to affordable housing, the project would designate four apartments as deed-restricted affordable units for very low-income households. Affordable housing has been shown to produce lower per capita VMT than market rate housing; the level of reduction is based on the percentage of a project's overall units that are affordable. Based on output from the SCTCA VMT Reduction Tool, the estimated reduction in the project's residential per capita VMT due to provision of affordable units is 2.3 percent.

Project VMT Findings

Combining the "raw" VMT reduction percentages described above, the project's proposed density and provision of on-site affordable housing would reduce its per capita VMT by 32.3 percent. This number is dampened to 31.6 percent to reflect the diminishing effects of multiple VMT reduction measures. Upon applying this deduction, the project is anticipated to generate 12.51 VMT per capita, which is below the applicable significance threshold of 14.01 VMT per capita. Accordingly, the proposed project would be considered to have a less-than-significant impact on VMT. The VMT findings are shown in Table 1, and a summary of calculations is enclosed for reference.

Table 1– Vehicle Miles Traveled Analysis Summary

VMT Metric	Baseline VMT Rate (Countywide Ave)	Threshold (15% Below Countywide Ave)	Project VMT Rate		
			Base Unadjusted (TAZ 605)	Project Adjusted VMT	Significance Finding
Residential VMT per Capita (Countywide Baseline)	16.48	14.01	18.29	12.51	Less than Significant

Note: VMT Rate is measured in VMT per Capita, or the number of daily miles driven per resident; TAZ=Traffic Analysis Zone

Significance Finding – The project would be expected to have a less-than-significant transportation impact on vehicle miles traveled.

Access and Circulation

The proposed access to the site would remain unchanged, so the evaluation of site access in the FTS, including sight distance, remains valid. Similarly, as the project's trip generation would be lower if the affordable units were considered separately or remain the same for the total of 50 units, the queuing analysis would also be unchanged.

Significance Finding – With the implementation of the recommended change to the existing striping on westbound Hoen Avenue to start the pattern west of 4655 Hoen Avenue about 100 feet west of Summerfield Road, the project would not introduce any hazards through its design or operation, so would have a less-than-significant impact.

Emergency Response

The project site would need to be designed to adequately accommodate emergency response vehicles and meet applicable standards, and the adequacy of the design would need to be determined by a representative of the Santa Rosa Fire Department.

Significance Finding – The project's impact on emergency response would be less than significant upon approval of the site plan by the appropriate fire official.

Parking

The analysis of parking requirements under the City's code as contained in the FTS would be unchanged as the number of one-bedroom units and those with two or more bedrooms would remain the same. Similarly, while the number of affordable units was reduced, due to rounding, the peak parking demand would not change based on application of standard parking generation rates published by the Institute of Transportation Engineers in *Parking Generation,* 5th Edition, as shown in Table 2. The parking study in the FTS therefore remains valid.

Table 2 – Parking Summary

Land Use	Units	Rate	Parking Spaces
ITE Parking Demand Estimate			
Multifamily Housing (Mid Rise)	46 du	1.3 spaces/du	60
Affordable Housing	4 du	1.0 space/du	4
ITE Parking Demand Estimate Total			*64*
Proposed Parking Supply			**63**

Notes: du = dwelling units

Conclusions

- The change in the proposed project's description would not invalidate or alter any of the conclusions or recommendations set forth in the FTS.

- Though the project's estimated VMT increased from 12.08 VMT per capita to 12.51 VMT per capita with the updated description, the project's potential impact on VMT would remain less than significant.

We hope the above information clarifies the effect that the change in the project description has on the analysis performed. Thank you for giving W-Trans the opportunity to provide these services. Please call if you have any questions.

Sincerely,

Dalene J. Whitlock, PE, PTOE
Senior Principal

DJW/SRO576.L2

Enclosures: VMT Summary

Lago Fresco VMT Summary

W-Trans 11/25/2025

Residential VMT Threshold

16.48 VMT/Capita Countywide Average
14.01 Significance Threshold = 15% below Countywide Average

Unadjusted and Adjusted VMT

18.29 VMT/Capita TAZ 605
14.01 Threshold of Significance
-23.4% Project VMT Reduction Required to meet Threshold
NO Is project below threshold?

A. Density Adjustment — *Source:* SCTA VMT Tool

50 Project Units
-30.00% VMT Reduction
-5.49 Adjustment to Base Project VMT/Capita
1.31 Project Acres
38.2 Project Density

B. Integrate Affordable Housing — *Source:* SCTA VMT Tool

4 affordable attached units
-2.3% SCTA Tool affordability reduction for attached units
-0.42 Adjustment to Base Project VMT/Capita

Combined VMT Adjustments

-32.3% Combined Measures VMT Reduction (unadjusted)
-31.6% Adjusted for Dampening of Combined Measures (per CAPCOA)
-5.78 Adjustment to Base Project VMT/Capita

VMT Projections After Adjustments

18.29 TAZ VMT/Capita from SCTA Model
-5.78 Adjustment to Base Project VMT/Capita
12.51 Adjusted Project VMT/Capita
14.01 City o Santa Rosa Residential Threshold
YES Is project below threshold?

December 28, 2023

Mr. Janver Holly
Holly and Associates
73 St. James Drive
Santa Rosa, CA 95403

Final Focused Traffic Study for the Lago Fresco Project

Dear Mr. Holly;

As requested, W-Trans has prepared a focused traffic analysis for the proposed Lago Fresco residential project to be located at 4730 Hoen Avenue in the City of Santa Rosa. The purpose of this letter is to provide the project's anticipated trip generation, evaluate the VMT and adequacy of site access for all modes of transportation, address potential sight distance issues, and determine parking needs.

Existing Conditions

The study area consists of Hoen Avenue, which runs along the frontage of the project site in the City of Santa Rosa. Hoen Avenue is an approximately 1.5-mile long east-west corridor extending from Farmers Lane to Summerfield Road, with a posted speed limit of 35 mph. Hoen Avenue is predominantly a three-lane arterial with a center two-way left-turn lane and turn pockets in select locations and at major intersections, and Class II bike lanes in each direction. Based on traffic count data provided by the City of Santa Rosa for February 19, 2019, the section of Hoen Avenue between Yulupa Avenue and Summerfield Road has a daily traffic volume of about 15,100 vehicles. It is noted that while some time has passed since the counts were taken, pre-COVID counts such as these have generally been found to be higher than current volumes, so continue to be adequate to represent existing conditions.

Project Description

The project as proposed includes 50 apartment units on a currently vacant 1.31-acre site. Access to the site would occur via a new driveway on Hoen Avenue. The proposed 50 apartment units consist of 16 one-bedroom, 25 two-bedroom, 4 three-bedroom, and 5 four-bedroom units in three- to four-story buildings; six of the units are proposed as affordable to residents in the very-low-income category. The project site would provide 63 parking spaces.

Collision History

The collision history for Hoen Avenue/Summerfield Road intersection was reviewed to determine any trends or patterns that indicate a safety risk that may be exacerbated by the addition of project traffic. Average annual collision rates were calculated based on records for October 1, 2017, through September 30, 2022, obtained through the California Highway Patrol and published in their Statewide Integrated Traffic Records System (SWITRS) reports.

The statewide average collision rate for a signalized, four-legged urban intersection is 0.24 collisions per million vehicles entering (c/mve). The study intersection had four reported collisions over the five-year study period for a calculated collision rate of 0.13 c/mve, which is lower than the statewide average, indicating that the intersection is generally operating safely. Of the four collisions, two were a result of right-of-way

violations, one was cited as being associated with traffic signals and signs, and one was an unsafe lane change.

Trip Generation

The anticipated daily and peak hour trip generations for the proposed apartments were estimated using standard rates published by the Institute of Transportation Engineers (ITE) in Trip Generation Manual, 11th Edition, 2021 for "Multifamily Housing (Mid-Rise) Not Close to Rail Transit" (LU #221). Based on application of these rates, the proposed project would be expected to generate an average of 227 trips per day, including 19 a.m. peak hour trips and 20 p.m. peak hour trips. 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
Multifamily Housing (Mid-Rise)	50 du	4.54	227	0.37	19	4	15	0.39	20	12	8

Note: du = dwelling unit

Vehicle Miles Traveled

Senate Bill (SB) 743 established a change in the metric to be applied to determining transportation impacts associated with development projects. Rather than the delay-based criteria associated with a Level of Service analysis, the increase in vehicle-miles-travelled (VMT) as a result of a project will be the basis for determining environmental impacts. The City of Santa Rosa issued guidelines for VMT analysis, as outlined in *Vehicle Miles Traveled (VMT) Guidelines Final Draft*, dated June 5, 2020. Many of the VMT significance criteria in these guidelines are consistent with 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. This document indicates that a residential project generating vehicle travel that is 15 percent or more below the existing regional or citywide residential VMT per capita may be an appropriate VMT threshold.

The VMT associated with the project was adjusted based on the density. The publication *Quantifying Greenhouse Gas Mitigation Measures*, California Air Pollution Control Officers Association (CAPCOA), 2021, includes a methodology to determine the VMT reductions associated with increases in residential density using conventional single-family home development as a baseline. With 50 proposed units on a site of 1.31 acres, the project has a residential density of 38.2 units per acre, resulting in a maximum reduction of 30 percent in VMT. Applying this reduction to the estimated VMT per capita of 17.26 results in a project-specific rate of 12.08 VMT per capita. This is below the VMT significance threshold of 14.11 VMT per capita. Accordingly, the project as proposed would be expected to result in a less-than-significant VMT impact. The VMT findings are shown in Table 2 and a copy of the spreadsheet is enclosed for reference.

Table 2– Vehicle Miles Traveled Analysis Summary

VMT Metric	Baseline VMT Rate (Countywide Ave)	Threshold (15% Below Countywide Ave)	Project VMT Rate		
			Base Unadjusted (TAZ 605)	With Density Adjustment	Significance Finding
Residential VMT per Capita (Countywide Baseline)	16.60	14.11	17.26	12.08	Less than Significant

Note: VMT Rate is measured in VMT per Capita, or the number of daily miles driven per resident; TAZ=Traffic Analysis Zone

Finding – The project would be expected to have a less-than-significant transportation impact on vehicle miles traveled.

Alternative Modes

Pedestrian Facilities

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. Continuous sidewalk coverage is provided on Hoen Avenue on both sides of the street. Additionally, there is an asphalt path along the property frontage on Summerfield Road. To be consistent with the frontages of neighboring properties it is recommended that the asphalt path on Summerfield Road be replaced by a concrete sidewalk with a landscape buffer as shown on the site plan. The signalized intersection at Hoen Avenue/Summerfield Road has crosswalks on all legs and pedestrian phases, and there is a second crosswalk across Hoen Avenue at Sierra Creek Lane, about 600 feet west of the project driveway. Summerfield Road can be crossed at the signalized intersection with Hoen Avenue and at Parktrail Drive approximately one-quarter mile south of the project site.

Finding – Pedestrian facilities serving the project site are generally adequate, though there is not a concrete sidewalk along the project frontage on Summerfield Road.

Recommendation – As is shown on the site plan, a concrete sidewalk with a landscape buffer should be constructed along the project frontage on Summerfield Road.

Bicycle Facilities

Existing bicycle lanes on both sides of Hoen Avenue and both sides of Summerfield Road would provide adequate access for bicyclists.

Finding – Bicycle facilities serving the project site are adequate.

Transit Facilities

The nearest bus stop is at Summerfield Road/Hoen Avenue, which is 200 feet south of the pedestrian entrance to the project site on Summerfield Road. As there are only bus stops on the west side of Summerfield Road, residents accessing the stops would not have to cross the street. Additional bus stops are located approximately one-half mile west of the project site at Yulupa Avenue/Hoen Avenue and Hoen

Avenue/Hillard Court, and residents would be able to access to the bus stops by crossing at the signalized intersection of Yulupa Avenue/Hoen Avenue.

Santa Rosa CityBus Route 8 provides service between eastern Santa Rosa and the Santa Rosa Transit Mall Terminal and stops at Summerfield Road/Hoen Avenue and Yulupa Avenue/Hoen Avenue. Route 8 operates Monday through Friday with half-hour headways between 6:00 a.m. and 8:30 p.m. On weekends, Route 8 operates with one-hour headways between 6:45 a.m. and 8:30 p.m. on Saturdays and between 10:45 a.m. and 5:30 p.m. on Sundays.

CityBus Route 18 stops at Hoen Avenue/Hillard Court and, like Route 8, connects eastern Santa Rosa to the Santa Rosa Transit Mall. Route 18 operates every day of the week with one-hour headways between 10:30 a.m. and 5:00 p.m.

Finding – Transit facilities serving the project site are adequate.

Parking

Parking was evaluated to determine if the proposed parking supply would be adequate to satisfy City requirements for the 50 multifamily housing units, six of which would be affordable. Per the preliminary site plan, a total of 63 parking spaces would be provided on-site, including 17 covered stalls, 20 covered tandem stalls and 26 uncovered spaces.

City Requirements and ITE Parking Demand

Section 20-36.040 of the Santa Rosa City Code requires multifamily housing to provide parking at a rate of 1.0 covered space and half a visitor space for one-bedroom apartments, and 1.0 covered space plus 1.5 visitor spaces per unit for two-bedroom, three-bedroom, and four-bedroom apartments. Based on the 16 one-bedroom units, 25 two-bedroom units, 4 three-bedroom units, and 5 four-bedroom units, 50 resident spaces and 59 visitor parking spaces would need to be provided on-site to meet City Code. The parking supply is, therefore, 46 spaces short of meeting strict application of the City's requirements.

It is understood that a density bonus is being requested for this project, including a concession on the parking requirement. Under the State's Density Bonus law, a project that provides affordable housing can only be required to provide one parking space per one-bedroom unit, 1.5 spaces per two- or three-bedroom unit, and 2.5 spaces per four-bedroom unit, or a total of 72 spaces for the proposed 50-unit project, which exceeds the 63 spaces proposed by nine spaces.

Because there may be concerns about the adequacy of the parking supply as proposed, parking demand rates included in the publication *Parking Generation*, 5th Edition, Institute of Transportation Engineers, 2019 were consulted to assess the project's anticipated total parking demand. Using rates for "Multifamily Housing (Mid Rise)" (LU #221) for the proposed 44 market rate units and rates for "Affordable Housing" (LU #223) for the six affordable units, the proposed residences are projected to have an average weekday peak parking demand of 64 spaces, indicating that the proposed supply of 63 spaces is nominally inadequate to accommodate the peak parking demand. The proposed parking supply and City of Santa Rosa requirements are shown in Table 3.

Table 3 – Parking Summary

Land Use	Units	Rate	Parking Spaces
City Required Parking			
Multifamily – One Bedroom	16 du	1.0 Covered Space/du	16
		0.5 Visitor Spaces/du	8
Multifamily – Two or More Bedrooms	34 du	1.0 Covered Space/du	34
		1.5 Visitor Spaces/du	51
City Required Parking Total			*109*
ITE Parking Demand Estimate			
Multifamily Housing (Mid Rise)	44 du	1.3 Spaces/du	58
Affordable Housing	6 du	1.0 Space/du	6
ITE Parking Demand Estimate Total			*64*
Proposed Parking Supply			**63**

Notes: du = dwelling units

On-Street Parking Survey

On-street parking occupancy was sampled to evaluate the availability of nearby on-street parking, should it be needed. Parking occupancy was determined during three-hour periods between 9:00 a.m. and 12:00 noon and again between 8:00 p.m. and 11:00 p.m. on November 2, 3, and 4, 2021. The time periods were selected to include conditions when nearby medical offices are open in the morning and residents are expected to be at home in the late evening, thus occupying the estimated maximum number of parking spaces. The on-street parking occupancy counts were collected on Hoen Avenue between Summerfield Road and Arroyo Sierra Circle, which was broken up into the following segments:

- **Segment 1:** North side, between Summerfield Road and Sierra Creek Lane, 14 spaces
- **Segment 2:** North side, between Sierra Creek Lane and Arroyo Sierra Circle (West of Arroyo Sierra Drive), 9 spaces
- **Segment 3:** South side, between Arroyo Sierra Circle (West of Arroyo Sierra Drive) and Arroyo Sierra Drive, 6 spaces
- **Segment 4:** South side, between Arroyo Sierra Drive and Arroyo Sierra Circle (East of Arroyo Sierra Drive), 7 spaces
- **Segment 5:** South side, between Arroyo Sierra Circle (East of Arroyo Sierra Drive) and Sierra Creek Lane, 3 spaces
- **Segment 6:** South side, between Sierra Creek Lane and Summerfield Road, 13 spaces

The on-street parking spaces on the study segments are unmarked and do not have any time restrictions. While marked spaces are typically 22 feet long, because parking may be less efficient where it is unmarked, a 25-foot vehicle length was conservatively used to estimate the parking supply. Based on this assumption, it was determined that there are about 52 on-street parking spaces within the study area.

Based on the peak number of vehicles counted during the morning and evening hours surveyed on each day, the peak occupancy for the segment as a whole was determined. Note that the peak occupancy for each segment may not have occurred simultaneously, so the sum of the peaks reflects a conservative result rather than an actual condition. Based on this data there was a peak parking occupancy of 49 percent during the morning and 32 percent during the evening for all the study segments combined. This translates to at least 27 unoccupied parking spaces in the morning and 36 unoccupied spaces in the evening. The peak occupancy rates for each segment are shown in Plate 1 and the parking occupancy survey, which breaks down the number of parking spaces occupied for 20-minute intervals, is enclosed for reference.

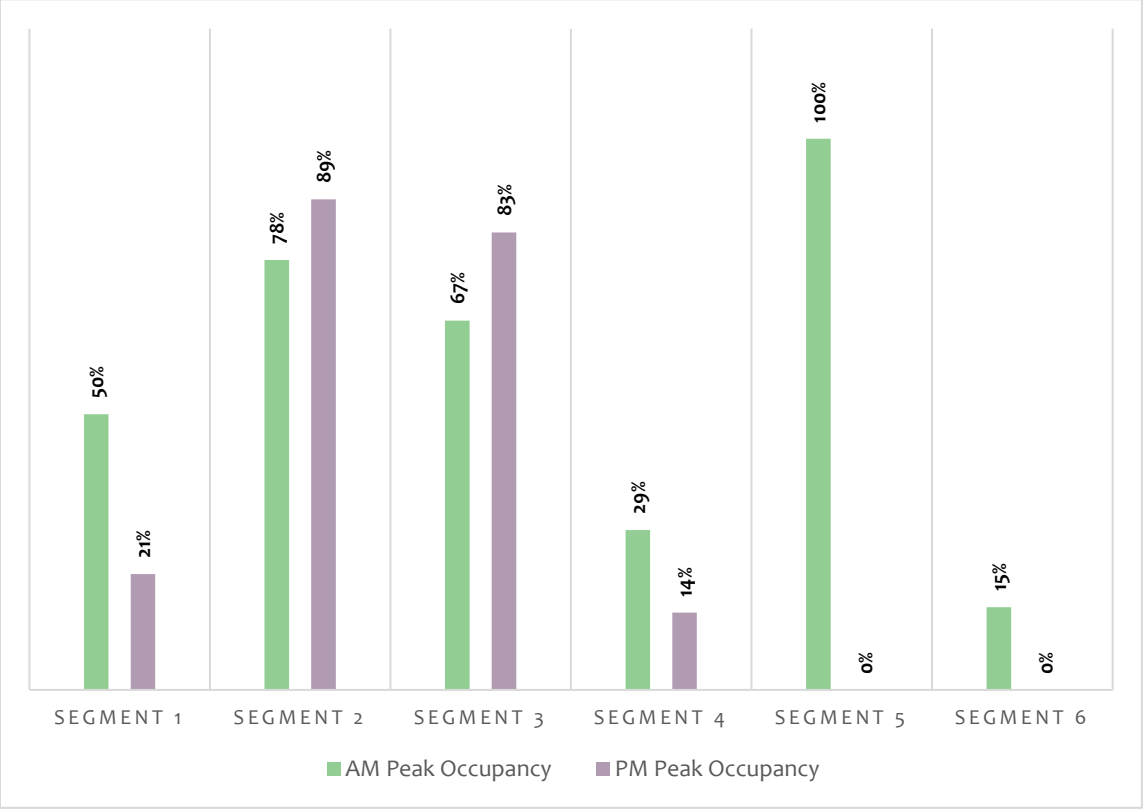


Plate 1 Peak On-Street Parking Occupancy

As Segments 5 and 6 are located on the south side of Hoen Avenue within approximately 800 feet of the project site, these spaces are within a convenient walking distance of the project site and residents would not have to cross the street to access the spaces. During the evening period when residential parking demand is typically highest, an estimated 16 spaces would be available in Segments 5 and 6 (zero percent occupancy was observed during the evening peak) which, in combination with the proposed supply of 63 on-site parking spaces, is more than sufficient to meet the estimated peak parking demand of 64 parking spaces. The 16 excess on-street spaces would be available to accommodate any potential parking overflow. As they are all on the same side of the street, residents would not necessarily need to cross Hoen Avenue to travel between these spaces and the project site. It is, however, anticipated that when overflow parking is needed the driver would exit the full parking lot, turn left onto Hoen Avenue as parking is not allowed to the east of the project driveway, and find it most convenient to park on the north side of the street. This would also allow the driver to continue west toward the majority of potential destinations when leaving the site. To accommodate parking on the north side of Hoen Avenue as well as

to serve any local parking displaced by the project, a crosswalk with enhanced warning devices (rectangular rapid flashing beacons, or RRFBs) should be installed approximately 300 feet west of Summerfield Road.

While few spaces on the north side of the street would be needed to accommodate the anticipated parking demand generated by the project, it is noted that the 23 spaces surveyed had a peak daytime occupancy of approximately 40 percent and peak nighttime occupancy of about 48 percent. It therefore appears that there is sufficient on-street parking available to existing local residents, so any overflow parking from the project that may occur would not result in a lack of parking for these existing residents.

Finding – While the proposed on-site parking supply would be inadequate to meet the City code requirements, the parking supply combined with available nearby parking on the south side of Hoen Avenue would be adequate to meet demand based on the ITE parking demand rates as well as parking requirements upon application of the Density Bonus Law. However, because residents needing to park off-site would likely find it most convenient to park on the north side of Hoen Avenue a crosswalk should be provided.

Recommendation – It is recommended that a crosswalk with RRFBs be installed on Hoen Avenue approximately 300 feet west of Summerfield Road as part of the proposed project.

Bicycle Parking

According to the City of Santa Rosa's Municipal Code, Chapter 20.36.040, multifamily dwellings are required to provide bicycle storage at the rate of one space per four units if the units do not have a private garage or private storage space. As proposed 44 units would have an outdoor storage closet in which to store their bicycles. Additionally, two short-term bicycle racks with eight spaces would be located outside the community center, which is more than adequate to serve the remaining six units.

Finding – The proposed bicycle parking supply would be adequate to meet the City's required bicycle parking.

Access and Circulation

Site Access

The project site would be accessed via a single driveway on Hoen Avenue to be located approximately 150 feet from the western side of Summerfield Road. Because the driveway would align with the existing eastbound left-turn pocket on the approach to Summerfield Road, westbound drivers entering via a left turn would do so from the through lane. Since parking is not allowed on the north side of Hoen Avenue but the through lane is transitioning toward the middle of the road, the 20-foot width at the proposed driveway location is sufficient for through traffic to move around a vehicle waiting to turn left into the project driveway.

Queuing Analysis

To determine if there would be a potential conflict between eastbound traffic queuing on Hoen Avenue at the Summerfield Road/Hoen Avenue intersection and vehicles exiting the project driveway at Hoen Avenue, a queuing analysis was conducted using the methodology contained in the *Highway Capacity Manual* (HCM), 6th Edition, Transportation Research Board, 2017.

The Existing plus Project volumes were applied to the Summerfield Road/Hoen Avenue intersection and assessed using signal timing provided by the City of Santa Rosa and the HCM methodology. The estimated maximum eastbound queue length would extend 188 feet west from the limit line at Summerfield Road/ Hoen Avenue. As the distance between this limit line and the midpoint of the proposed driveway is approximately 150 feet, the eastbound queue at this signal would conflict with drivers making turns in to and out of the project driveway. Drivers exiting the site and attempting to turn into any lane on eastbound Hoen Avenue would need to wait at the driveway until there is a gap in the eastbound traffic.

The queue would also affect the ability of a westbound driver on Hoen Avenue to turn left into the project site. As a vehicle stopped in the through lane would block the westbound travel lane, it is currently illegal to circumnavigate the left-turning vehicle by entering the buffered bike lane according to Section 21460 of the *California Vehicle Code*. As an aside, it is noted that it is also illegal under existing conditions for drivers to enter the parking spaces on the north side of Hoen Avenue east of the driveway for 4655 Hoen Avenue by passing through the buffer. To permit vehicles to enter the parking spaces east of 4655 Hoen Avenue and go around vehicles waiting to turn left into the project site, it is recommended that the existing westbound striping pattern on Hoen Avenue west of 4655 Hoen Avenue, which includes a dashed line as part of the buffer, be extended east to within 100 feet of the intersection of Summerfield Road/Hoen Avenue. The updated striping is also shown in Figure 9C-104 (CA) of the California *Manual on Uniform Traffic Control Devices*.

A copy of the HCM queue length calculations is enclosed.

Recommendation – The existing striping on westbound Hoen Avenue should be modified so that the pattern that starts west of 4655 Hoen Avenue begins instead about 100 feet west of Summerfield Road.

Sight Distance

Sight distance along Hoen Avenue at the project driveway was evaluated based on sight distance criteria contained in the *Highway Design Manual,* 6th Edition published by Caltrans. The recommended sight distance for driveway approaches is based on stopping sight distance, with the approach travel speed used as the basis for determining the recommended sight distance.

Hoen Avenue, which has a posted speed of 35 mph, requires a minimum stopping sight distance of 250 feet. Based on a review of existing field conditions, sight lines for the proposed project driveway at Hoen Avenue extend more than 400 feet to the west and more than 250 feet to the east, both of which are adequate for the posted speed limit.

Finding – Sight distance at the project driveway is adequate.

Emergency Access

The site consists of multiple apartment buildings separated by a 26-foot drive aisle with perpendicular parking spaces. An emergency vehicle turnaround area would be provided to accommodate emergency vehicle maneuverability, as shown on the site plan.

Finding – Emergency access is expected to operate acceptably.

Conclusions and Recommendations

- The proposed Lago Fresco project would be expected to generate an average of 227 daily trips, including 19 a.m. peak hour trips and 20 p.m. peak hour trips.
- The project would be expected to have a less-than-significant transportation impact on vehicle miles traveled.
- Bicycle and transit facilities serving the project site are adequate. A concrete sidewalk with a landscape buffer should be constructed along the project frontage on Summerfield Road.
- Although the proposed supply of 63 vehicle parking spaces would not be adequate to meet City requirements, the supply in combination with nearby parking on Hoen Avenue would be adequate to accommodate the anticipated demand based on ITE parking demand rates and requirements upon application of the Density Bonus Law.
- A crosswalk enhanced with RRFBs should be installed on Hoen Avenue approximately 300 feet west of Summerfield Road as part of the project.
- The proposed bicycle parking supply would be adequate to meet the City's required bicycle parking.
- The striping on westbound Hoen Avenue should be extended west from 4655 Hoen Avenue to within 100 feet west of Summerfield Road.
- Sight distance at the project driveway is adequate for existing conditions and can be retained by ensuring that new landscaping does not impede sight lines from existing or proposed driveways or side streets.
- Emergency access is expected to operate acceptably.
- Parking demand management techniques should be incorporated into the project.

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

Sincerely,

Dalene J. Whitlock, PE, PTOE
Senior Principal

DJW/SRO576.L1

Enclosures: VMT Summary, On-Street Parking Survey, Queuing Calculations

Lago Fresco Project

SRO576

W-Trans 5/3/23

OPR Residential VMT Threshold

16.6 VMT/Capita Sonoma Countywide Average

14.11 OPR and City of Santa Rosa Threshold = 15% below Countywide Average

Base Unadjusted Project VMT

17.26 Base VMT/Capita from SCTA Model - Project in TAZ 605 (December 2021 model)

50	Multi Family Units	2.34	Occupancy/Unit	117	Residents
	ADU Units	1.5	Occupancy/Unit	0	Residents
2019	Base Unadjusted Project VMT (mi)			117	Residents ("capita")

VMT Adjustments and Potential Mitigation Measures

17.26 Base VMT/Capita from SCTA Model - Project in TAZ 605 (December 2021 model)

14.11 OPR and City of Santa Rosa Threshold = 15% below Countywide Average

-18.3% Project VMT Reduction Required to meet OPR Threshold

A. Density Adjustment

Source: CAPCOA 2021 *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*

50	Project Units including ADU				
-30.0%	VMT Reduction				
-5.18	Adjustment to Base Project VMT/Capita	1.3	Project Acres	38.2	Project Density

Combined VMT Adjustments and Mitigation Measures (A through D)

-30.0% VMT Reduction by Density Adjustment

-5.18 Adjustment to Base Project VMT/Capita

VMT Projections After Adjustments and Mitigation

17.26	Base VMT/Capita from SCTA Model	2019	Unadjusted Base Residential VMT (mi)
-5.18	Adjustment to Base Project VMT/Capita	-606	VMT Reduction with Adjustments and Mitigation
12.08	Project VMT/Capita with Adjustments & Mitigation	1414	Project VMT (mi) with Adjustments and Mitigation
14.11	OPR Significance Threshold		
YES	Is threshold met with adjustments and mitigation?		

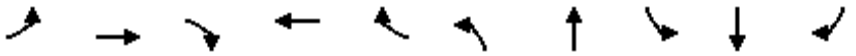
Prepared by National Data & Surveying Services

Parking Study

Location: Hoen Ave

City: Santa Rosa, CA

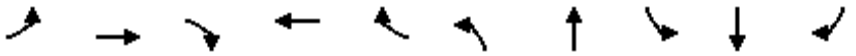
Date	Segment	From	To	Side of the Street	Curb Type	Restriction	Measurement (ft.)	Approximate Space *(Measurements divided by 25')*	AM									PM									
									9:00 AM	9:20 AM	9:40 AM	10:00 AM	10:20 AM	10:40 AM	11:00 AM	11:20 AM	11:40 AM	8:00 PM	8:20 PM	8:40 PM	9:00 PM	9:20 PM	9:40 PM	10:00 PM	10:20 PM	10:40 PM
11/02/2021, TUESDAY	1	Summerfield Rd	Crosswalk	N	Regular	No Restriction	374	14	5	5	5	5	6	7	7	6	6	0	0	0	0	0	0	0	0	0
	1	Summerfield Rd	Crosswalk	N	Gray	No Restriction	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	Crosswalk	4389 Hoen Ave	N	Regular	No Restriction	225	9	7	6	6	5	7	7	5	6	6	8	8	8	8	8	8	8	8	8
	3	Arroyo Sierra Cir (W)	Arroyo Sierra Dr (E)	S	Regular	No Restriction	172	6	2	2	2	2	3	2	1	1	1	2	2	2	3	3	3	3	3	3
	4	Arroyo Sierra Dr (E)	Arroyo Sierra Cir	S	Regular	No Restriction	193	7	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1
	5	Arroyo Sierra Cir	Sierra Creek Ln	S	Regular	No Restriction	88	3	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
	6	Sierra Creek Ln	Summerfield Rd	S	Regular	No Restriction	337	13	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
11/03/2021, WEDNESDAY	1	Summerfield Rd	Crosswalk	N	Regular	No Restriction	374	14	2	2	4	4	3	4	4	4	5	3	0	0	0	0	0	0	0	0
	1	Summerfield Rd	Crosswalk	N	Gray	No Restriction	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	Crosswalk	4389 Hoen Ave	N	Regular	No Restriction	225	9	5	4	4	5	5	4	5	5	5	7	8	8	7	7	7	8	8	8
	3	Arroyo Sierra Cir (W)	Arroyo Sierra Dr (E)	S	Regular	No Restriction	172	6	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4
	4	Arroyo Sierra Dr (E)	Arroyo Sierra Cir	S	Regular	No Restriction	193	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	Arroyo Sierra Cir	Sierra Creek Ln	S	Regular	No Restriction	88	3	0	1	1	1	1	2	2	2	1	0	0	0	0	0	0	0	0	0
	6	Sierra Creek Ln	Summerfield Rd	S	Regular	No Restriction	337	13	0	1	2	2	2	2	0	2	2	0	0	0	0	0	0	0	0	0
11/04/2021, THURSDAY	1	Summerfield Rd	Crosswalk	N	Regular	No Restriction	374	14	2	4	5	4	4	5	6	6	5	0	1	0	0	0	0	0	0	0
	1	Summerfield Rd	Crosswalk	N	Gray	No Restriction	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	Crosswalk	4389 Hoen Ave	N	Regular	No Restriction	225	9	4	3	4	3	3	4	4	5	4	6	8	7	6	6	6	7	8	8
	3	Arroyo Sierra Cir (W)	Arroyo Sierra Dr (E)	S	Regular	No Restriction	172	6	4	4	4	4	4	4	3	3	3	5	4	4	3	3	4	4	4	4
	4	Arroyo Sierra Dr (E)	Arroyo Sierra Cir	S	Regular	No Restriction	193	7	0	0	0	0	0	1	2	1	2	0	0	0	0	0	0	0	0	0
	5	Arroyo Sierra Cir	Sierra Creek Ln	S	Regular	No Restriction	88	3	0	0	0	2	3	4	4	4	3	0	0	0	0	0	0	0	0	0
	6	Sierra Creek Ln	Summerfield Rd	S	Regular	No Restriction	337	13	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0



Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	216	222	109	98	82	170	408	33	338	315
v/c Ratio	0.54	0.55	0.32	0.32	0.25	0.62	0.27	0.20	0.65	0.55
Control Delay	28.4	28.5	10.6	31.3	10.2	42.8	15.4	34.5	28.3	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.4	28.5	10.6	31.3	10.2	42.8	15.4	34.5	28.3	9.5
Queue Length 50th (ft)	75	77	0	34	0	62	45	12	114	15
Queue Length 95th (ft)	168	172	46	93	38	#204	120	44	233	87
Internal Link Dist (ft)		1652		1461			868		788	
Turn Bay Length (ft)	155		155		105	120		120		120
Base Capacity (vph)	1168	1184	337	794	729	274	1724	213	847	1181
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.19	0.32	0.12	0.11	0.62	0.24	0.15	0.40	0.27

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	249	251	133	72	57	105	263	61	331	292
v/c Ratio	0.57	0.56	0.40	0.24	0.18	0.43	0.21	0.32	0.65	0.49
Control Delay	27.6	27.4	11.5	31.3	8.9	36.2	18.0	36.6	28.9	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.6	27.4	11.5	31.3	8.9	36.2	18.0	36.6	28.9	8.1
Queue Length 50th (ft)	89	90	1	26	0	38	40	23	117	13
Queue Length 95th (ft)	187	188	52	75	27	#112	80	70	232	75
Internal Link Dist (ft)		1652		1461			868		788	
Turn Bay Length (ft)	155		155		105	120		120		120
Base Capacity (vph)	1158	1175	363	822	743	284	1778	221	877	1168
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.21	0.37	0.09	0.08	0.37	0.15	0.28	0.38	0.25

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.