



March 11, 2021

Mr. Jake Morley
Guillon Inc.
2550 Lakehurst Drive, Suite 50
Chico, CA 95928

Traffic Analysis for the Bella Vista (formerly Garden's Gate) Housing Project

Dear Mr. Morley;

As requested, W-Trans has prepared traffic-related analysis for the Bella Vista Subdivision Project, which is a modification to the Garden's Gate Subdivision in which an Environmental Impact Report (EIR) was certified. The purpose of this analysis is to evaluate any changes to the transportation impacts of the Bella Vista project, based on the modifications to the previously approved Garden's Gate project as studied in the EIR.

Project Description

The Bella Vista project is a modification of the Garden's Gate project, for which there is a certified EIR. The modified project includes 171 homes, 39 of which would be age-restricted. The project would therefore result in fewer lots than the Garden's Gate project, which included 197 homes. The site circulation has been modified as well. Garden's Gate included access points to South State Street, where the project access would have been located directly across South State Street from the existing Plant Road, and to Gobalet Lane, which also connects to South State Street. The Bella Vista project would also have two access points, both onto South State Street. As with Garden's Gate, the Bella Vista project proposes to reconfigure the existing T-intersection of South State Street/Plant Road as a roundabout with the addition of Charlie Barra Drive as a new west leg that would serve the project. The project's second access point would be South Road, a new street to be constructed as part of the project that would connect to South State Street approximately 500 feet to the south of the roundabout.

Trip Generation

The anticipated trip generation for the Garden's Gate project was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation*, 7th Edition. For the currently proposed Bella Vista project a more recent version of the ITE *Trip Generation Manual* (10th Edition, 2017) was used. The land use categories of Single-Family Detached Housing (Land Use #210) and Senior Adult Housing – Detached (Land Use #251) were determined to most closely match the proposed project.

Based on application of these assumptions, the proposed Bella Vista project is expected to generate an average of 1,413 trips per day, including 107 a.m. peak hour trips and 143 trips during the p.m. peak hour. Compared to the Garden's Gate project, this represents a decrease of 199 trips per day, including a reduction of 17 trips during the a.m. peak hour and 21 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
Approved (Garden's Gate)											
Single-Family Housing	123 du	9.57	1178	0.75	92	23	69	1.01	125	79	46
Multifamily Housing	74 du	5.86	434	0.44	32	5	27	0.52	39	26	13
Subtotal			1612		124	28	96		164	105	59
Proposed (Bella Vista)											
Single-Family Housing	132 du	9.44	1246	0.74	98	24	74	0.99	131	82	49
Senior Adult Housing	39 du	4.27	167	0.24	9	3	6	0.30	12	7	5
Subtotal			1413		107	27	80		143	89	54
Net Change			-199		-17	-1	-16		-21	-16	-5

Note: du = dwelling unit

Trip Distribution

The pattern used to allocate new project trips to the street network was based on the assumptions applied in the EIR, which were derived from the UVAP traffic model. The trip distribution assumptions are shown in Table 2.

Table 2 – Trip Distribution Assumptions

Route	AM Peak Hour		PM Peak Hour	
	Inbound	Outbound	Inbound	Outbound
S State St North of Project Access	52%	40%	27%	46%
S State St South of Project Access	48%	60%	73%	54%
TOTAL	100%	100%	100%	100%

Study Area and Scope of Analysis

The study area includes the project frontage along South State Street and the proposed intersections of South State Street with South Road and Charlie Barra Drive. South State Street includes two travel lanes and has a posted speed of 45 mph. Five intersections that do not provide direct access to the project were evaluated as part of the EIR. These five intersections were South State Street/Talmadge Road, South State Street/Washington Avenue-Hastings Avenue, South State Street/Plant Road, South State Street/US 101 North Ramps, South State Street/US 101 South Off-Ramp-Stipp Lane, and South State Street/US 101 South On-Ramp-CA 253.

As noted above, the Bella Vista subdivision would generate fewer trips per day and during peak hours than Garden's Gate project. Assuming the same trip distribution, the study intersections evaluated in the EIR that would not provide direct access to the project would therefore receive fewer project trips. As the analysis contained in the EIR is based on a higher number of added trips from the project, this analysis would remain valid for the project as currently proposed so operation of these intersections was not analyzed.

Conversely, the number and location of the project access points was changed as part of the redesign of the project, so operations of both proposed Bella Vista access points – South State Street/ Plant Road-Charlie Barra

Drive and South State Street/South Road – were evaluated. The locations of the access points are indicated in the Bella Vista site plan, which is enclosed.

Existing and Existing Plus Project Conditions

The project trips were distributed to the two project access points. The Garden’s Gate project was expected to add 124 trips to the South State Street/Plant Road intersection during the a.m. peak hour and 145 trips during the p.m. peak hour. The Bella Vista project would be expected to add 77 trips to the South State Street/Plant Road intersection during the a.m. peak hour and 98 trips during the p.m. peak hour. Since the impact of the project would be less than what was analyzed in the Garden’s Gate EIR, an operational analysis of this intersection was not performed as the results presented in the EIR remain valid. An operational analysis was conducted for the proposed South State Street/South Road intersection since it was not included in the Garden’s Gate project.

Due to impacts of Covid-19 restrictions on 2020 traffic volumes, traffic volumes under non-pandemic conditions were estimated. The nearest location for which recent pre-pandemic counts were available was South State Street/Talmadge Road, where peak period turning movement counts were collected in May 2018. Turning movement counts were also collected in the a.m. and p.m. peak periods in November 2020 for the South State Street/Talmadge Road and South State Street/Plan Road intersections. The 2018 counts were then used to develop a factor indicating the difference between 2018 volumes and 2020 volumes that was then applied to estimate what current volumes at South State Street/Plant Road would now be under typical conditions.

The estimated project traffic was added to the Existing volumes to generate the Existing plus Project Conditions scenario. This scenario also accounted for the conversion of South State Street/Plant Road from a tee intersection to a four-legged roundabout and the addition of the South State Street/South Road intersection. The new project intersection of South State Street/South Road intersection would be expected to operate at LOS B during both the a.m. and p.m. peak hours. A summary of the intersection level of service calculations for the Existing plus Project Conditions scenario is contained in Table 3. A copy of the level of service calculations is enclosed.

Table 3 – Plus Project Conditions

Study Intersection <i>Approach</i>	Existing plus Project				Future plus Project			
	AM Peak		PM Peak		AM Peak		PM Peak	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
S State St/South Rd <i>Eastbound Approach</i>	12.3	B	13.6	B	13.8	B	14.8	B

Notes: Delay is in average number of seconds per vehicle, LOS = Level of Service; results for stop-controlled minor street approach are shown in *italics*

Future and Future Plus Project Conditions

Future traffic volumes for the horizon year 2040 were estimated using the Caltrans District 1 20-year growth factor of 1.30 for US 101 in the Ukiah area. The calculated 2040 volumes were used to estimate the Future volumes at the proposed South State Street/South Road intersection. The estimated project traffic was added to the Future volumes to generate the Future plus Project Conditions scenario. With the addition of project traffic, the South State Street/South Road intersection is expected to continue operating at LOS B during the a.m. and p.m. peak hours. A summary of the intersection level of service calculations for the Future plus Project Conditions scenario is contained in Table 3. A copy of the level of service calculations is enclosed.

CEQA Checklist

The change in the project's potential impacts from what was evaluated in the EIR based on the project as now proposed as well as the current CEQA Checklist are summarized in Table 4.

Table 4 – XVII. TRANSPORTATION/TRAFFIC				
Would the Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?		X		
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

The project was evaluated based on conformity with CEQA requirements and consistency with the Mendocino County General Plan as well as other relevant plans.

Would the project:

- a) *Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?*

There are several plans that address the need to provide improvements to support all modes of transportation, but specific improvements in the project area are not identified.

Mendocino County General Plan, 2009

The Mendocino County General Plan includes the following policies regarding the provision of pedestrian and bicycle accommodations that are relevant to the proposed project:

- **Policy DE-153:** Provide pedestrian and bicycle ways along public roadway systems consistent with community area goals and policies and where sufficient right of way is available.
- **Policy DE-155:** Connect pedestrian, bicycle, and trail routes to form local and regional networks. Link pedestrian, bicycle, and trail routes with other transportation modes to maximize local and regional non-motorized transportation.
- **Policy DE-156:** Concentrate pedestrian improvements along school and transit routes, in areas of established pedestrian activity, and adjacent to sites serving senior citizen and/or persons with disabilities.
- **Policy DE-157:** When development occurs, require installation of pedestrian and bicycle systems or, if infeasible, the payment of in-lieu fees to fund improvements to bicycle and pedestrian facilities.

Ukiah Valley Area Plan

The Ukiah Valley Area Plan includes the following policies related to the provision of facilities for pedestrians, bicyclists, and transit users.

- **GOAL CT2.** Enhance pedestrian, bicycle, and transit connectivity between land use types.
- **CT2.1b Pedestrian Walkways.** To the extent allowed under state law, require private development projects to provide pedestrian walkways that provide direct access between key destinations.
- **Policy CT2.2.** Develop a safe and integrated bicycle transportation system in order to promote the use of bicycles as a viable and attractive alternative to the automobile.

Mendocino County Regional Transportation Plan

- **Non-Motorized Transportation Goal:** Provide a safe and useable network of bicycle and pedestrian facilities throughout the region as a means to lessen dependence on vehicular travel and improve the health of Mendocino County's residents.
 - *Objective:* Provide a nonmotorized transportation network that offers a feasible alternative to vehicular travel.
- **Policy:** Consider the needs of the transit system (bus stops and bike/pedestrian access) when planning roadway improvements.

Existing and Proposed Facilities Serving the Project Site

There are currently no sidewalks along South State Street, which is typical of development where density is relatively low. Pedestrians and bicyclists may use the shoulders, which are generally at least eight feet wide.

Mendocino Transit Routes 7 (Ukiah Jitney) and 9 (Ukiah Local) provide service to central Ukiah from the bus stop on Plant Road, approximately 250 feet east of the project, an acceptable walking distance. The nearest bus stop to the project for service heading south from Ukiah is located approximately 900 feet north of the South State Street/Plant Road intersection. While this is within a reasonable walking distance, bus riders would be required to walk along the shoulder of the roadway to travel between the stop and Bella Vista.

The project includes conversion of the South State Street/Plant Road intersection to a roundabout, including a marked crosswalk to support pedestrian access to Plant Road. Currently there is a narrow shoulder along westbound Plant Road approaching South State Street. Additional improvements should be constructed to provide an adequate connection for pedestrians between the intersection and the bus stop. This walkway should be addressed as part of the roundabout design, which will identify the right-of-way required for the necessary improvements.

There are no designated bicycle facilities on South State Street, but bicyclists may use the shoulders along the roadway as well as local streets where they can mix with vehicle traffic. To access central Ukiah, bicyclists could use South Dora Street, which is parallel to South State Street and has lower traffic volumes. South Dora Street includes bike lanes within the City limits, approximately 1.5 miles north of the project.

Less than significant impact with mitigation. The inclusion of a marked crosswalk as part of the roundabout that would be constructed as part of the project would enhance pedestrian access between the project and the northbound bus stop on Plant Road. To complete this connection, a pedestrian walkway should be included as part of the project to improve access from the east side of the crosswalk to the bus stop. To provide adequate pedestrian access between the project site and transit facilities for service from central Ukiah to the project, the applicant should work with the Mendocino Transit Authority to investigate the feasibility of adding a southbound stop near the South State Street/Plant Road-Charlie Barra Drive intersection on South State Street or across from the existing northbound stop on Plant Road. Alternatively, pedestrian improvements could be provided along

South State Street to provide access between the project site and the existing southbound bus stop at Whitmore Lane. Such improvements would consist of a pedestrian path, designed to be consistent with adopted plans. The inclusion of these enhancements to pedestrian facilities and the provision of access to a southbound bus stop within walking distance of the project site would reduce the impact of the project to less than significant.

Would the project:

b) Conflict or be inconsistent with CEQA Guidelines §15064.3, subdivision (b)?

Less than significant impact. Senate Bill (SB) 743 established a change in the metric to be applied for determining traffic impacts associated with development projects. Rather than the delay-based criteria associated with a Level of Service analysis, the increase in Vehicle Miles Traveled (VMT) as a result of a project is now the basis for determining impacts. The Mendocino Council of Governments (MCOG) has adopted a regional baseline VMT study based on the 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 citywide residential VMT per capita may be an appropriate VMT threshold.

In June 2020, MCOG accepted the *Senate Bill 743 Vehicle Miles Traveled Baseline Study*, which includes a recommended methodology and thresholds for VMT analysis for use in Mendocino County. Since Mendocino County has not yet adopted VMT thresholds, the MCOG methodology was used to analyze the potential impacts of the Bella Vista project.

The MCOG baseline study included a review of the proposed Garden's Gate project as a test case for applying the recommended approach, which compares the VMT per service population (based on the number of residents and employees) in the project's traffic analysis zone (TAZ) to the VMT in the corresponding sub-regional area. The analysis determined that the project is consistent with the General Plan and Regional Transportation Plan and with the Suburban Residential zoning designation in the Ukiah Valley Area Plan. Using MCOG's screening tool, it was determined that the Ukiah Adjacent sub-regional mean VMT was 27.2, and the recommended threshold was 23.3, 14.3 percent below the sub-regional mean. The VMT per service population for TAZ 770, where the project is located, is 17.3, which is 25.8 percent below this threshold. Based on this analysis, the transportation impact of the project was determined to be less than significant. Since the Bella Vista project is located within the same footprint as the Garden's Gate project and has the same land use, it would be expected to have the same VMT per service population. Therefore, the impact of the project would be less than significant. A summary of the project's VMT findings is provided in Table 5 and the section of the MCOG baseline study summarizing the Garden's Gate VMT analysis is enclosed.

Table 5 – Vehicle Miles Traveled Analysis Summary

VMT Metric	Ukiah Adjacent Sub-regional Mean VMT	Significance Threshold	Project VMT Rate	Resulting Significance
VMT per Service Population (sub-regional baseline)	27.2	23.3	17.3	Less than significant

Would the project:

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than significant impact. Access to the project site would be via two access roads from South State Street, one at the intersection of South State Street/ Plant Road, which is proposed to be converted to a roundabout with

Charlie Barra Drive connecting as the west leg, and the second at South Road, approximately 500 feet south of this intersection. South State Street is straight and flat through the project area. The roundabout, the South State Street/South Road intersection and the interior project streets and intersections would be designed and constructed to meet currently applicable codes and requirements, so would not be expected to result in any increased hazards. The project is therefore expected to have a less-than-significant impact regarding geometric design features or incompatible uses.

Would the project:

d) Result in inadequate emergency access?

Less than significant impact. Emergency access to the project site was evaluated relative to the previously approved Garden's Gate project. Garden's Gate included access at the intersection of South State Street/ Plant Road, to be reconstructed as a roundabout. The roundabout would also provide the primary access for Bella Vista, connecting to Charlie Barra Drive within the project. Secondary access for Garden's Gate was via a connection from an interior street to Gobalet Lane, just north of the project, which in turn would provide a connection to South State Street, approximately 150 feet north of the proposed roundabout. As indicated in the site plan, the secondary access to Bella Vista would be directly onto South State Street, approximately 500 feet south of the roundabout; the secondary access is therefore 350 feet further from the primary access than was proposed for Garden's Gate. Neither Garden's Gate nor Bella Vista included access via Oak Knoll Road.

Resolution No. 09-230, adopted by the County Board of Supervisors on October 6, 2009 certified the EIR and indicated that "an alternative mitigation has been proposed by the developer and has been approved by the Ukiah Valley Fire Protection District that such an alternative mitigation including fire sprinklers will adequately address fire protection." Further, the Conditions of Approval associated with the approved project (Case # S 3-2005) indicated that "in lieu of an emergency evacuation access, the developer agrees to provide fire sprinklers in all structures and will continue to seek an alternative access to the south of the project." As required in the Conditions of Approval, the site plan identifies future connections along the south side of the project, providing stubs for roadway connections to future development on the adjoining parcels.

Since Bella Vista is consistent with the required mitigations in the Garden's Gate EIR and the physical distance between the two project access points is greater than in the previously approved project, the project is expected to have a less-than-significant impact related to emergency access.

Conclusions and Recommendations

- The Bella Vista project would be expected to generate an average of 1,413 trips per day, including 107 during the a.m. peak hour and 143 during the p.m. peak hour. This is 199 fewer daily trips than the previous version of the project – known as Garden's Gate – which was proposed for the same site and for which there is a certified EIR.
- Based on the estimated trip generation for the Bella Vista project and using the same trip distribution assumptions, all intersections that were previously analyzed in the Garden's Gate EIR, including the proposed roundabout at South State Street/Plant Road-Charlie Barra Drive, would receive fewer project-related trips from the Bella Vista project. The analysis as presented in the EIR therefore remains valid to address potential impacts at these locations.
- The proposed intersection of South State Street/South Road would be expected to operate at LOS B under Existing plus Project and Future plus Project volumes, which is considered to be acceptable.

- To provide access for project residents to the existing Mendocino Transit northbound bus stop on Plant Road across from the project site, a pedestrian walkway should be constructed between the proposed roundabout at South State Street/ Plant Road-Charlie Barra Drive and the bus stop. The applicant should also work with Mendocino Transit Authority to investigate the feasibility of providing a bus stop for southbound bus service within walking distance of the project site; alternatively, pedestrian improvements could be provided along South State Street between the project site and the existing bus stop at Whitmore Lane. With the inclusion of pedestrian improvements and provision of access to a southbound bus stop near the site, the project would have a less-than-significant impact in terms of program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- The project would have a less-than-significant impact in terms of VMT based on the thresholds and methodology recommended in the SB 743 VMT Baseline Study that has been accepted by the Mendocino County Council of Governments.
- The project would be designed in accordance with current standards and code requirements and would therefore have a less-than-significant impact regarding geometric design features or incompatible uses.
- The project would comply with the emergency access-related mitigations identified in the Garden's Gate EIR and would increase the distance between the two project access points. Therefore, the project would have a less-than-significant impact regarding emergency access.

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

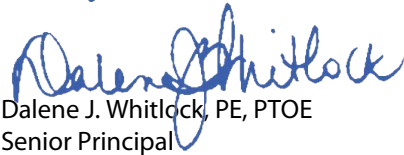
Sincerely,



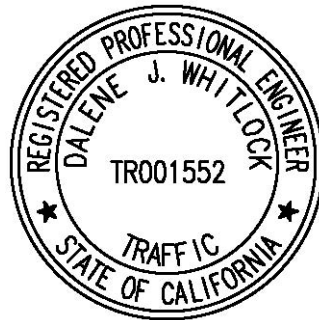
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DJW/bdb/kt/MEX050.L1

Enclosures: Bella Vista Site Plan; Level of Service Calculations; Garden's Gate VMT Test Case Summary

Intersection Level Of Service Report
Intersection 2: South State St/South Rd

Control Type: Two-way stop
Analysis Method: HCM 2010
Analysis Period: 15 minutes

Delay (sec / veh): 14.6
Level Of Service: B
Volume to Capacity (v/c): 0.040

Intersection Setup

Name	Northbound	South State St	South Rd
Approach	Southbound	Eastbound	
Lane Configuration	←	→	→
Turning Movement	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0
Pocket Length [ft]	100.00	100.00	100.00
Speed [mph]	45.00	45.00	30.00
Grade [%]	0.00	0.00	0.00
Crosswalk	Yes	Yes	Yes

Volumes

Name	South State St	South Rd
Base Volume Input [veh/h]	311	0
Base Volume Adjustment Factor	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00
Growth Factor	1.0000	1.0000
In-Process Volume [veh/h]	0	0
Site-Generated Trips [veh/h]	7	24
Diverted Trips [veh/h]	0	0
Pass-by Trips [veh/h]	0	0
Existing Site Adjustment Volume [veh/h]	0	0
Other Volume [veh/h]	0	0
Total Hourly Volume [veh/h]	7	337
Peak Hour Factor	0.9700	0.9700
Other Adjustment Factor	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	87
Total Analysis Volume [veh/h]	7	347
Pedestrian Volume [ped/h]	0	0

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.04	0.04
d_M, Delay for Movement [s/veh]	8.00	0.00	0.00	0.00	14.61	10.73
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.25	0.25
95th-Percentile Queue Length [ft/ln]	0.44	0.44	0.00	0.00	6.17	6.17
d_A, Approach Delay [s/veh]	0.16				12.25	
Approach LOS	A				B	
d_I, Intersection Delay [s/veh]				0.75		
Intersection LOS				B		

Intersection Level Of Service Report
Intersection 2: South State St/South Rd

Control Type: Two-way stop
 Analysis Method: HCM 2010
 Analysis Period: 15 minutes
 Delay (sec / veh): 16.9
 Level Of Service: C
 Volume to Capacity (v/c): 0.044

Intersection Setup

Name	Northbound	South State St	South Rd
Approach	Southbound	Eastbound	
Lane Configuration			
Turning Movement	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0
Pocket Length [ft]	100.00	100.00	100.00
Speed [mph]	45.00	45.00	30.00
Grade [%]	0.00	0.00	0.00
Crosswalk	Yes	Yes	Yes

Volumes

Name	South State St	South Rd
Base Volume Input [veh/h]	0	353
Base Volume Adjustment Factor	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00
Growth Factor	1.0000	1.0000
In-Process Volume [veh/h]	0	0
Site-Generated Trips [veh/h]	33	33
Diverted Trips [veh/h]	0	0
Pass-by Trips [veh/h]	0	0
Existing Site Adjustment Volume [veh/h]	0	0
Other Volume [veh/h]	0	0
Total Hourly Volume [veh/h]	33	386
Peak Hour Factor	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	107
Total Analysis Volume [veh/h]	37	429
Pedestrian Volume [ped/h]	0	0

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.04	0.02
d_M, Delay for Movement [s/veh]	8.08	0.00	0.00	0.00	16.93	10.76
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.00	0.00	0.22	0.22
95th-Percentile Queue Length [ft/ln]	2.37	2.37	0.00	0.00	5.50	5.50
d_A, Approach Delay [s/veh]	0.64					
Approach LOS	A					
d_I, Intersection Delay [s/veh]					0.84	B
Intersection LOS						C

Intersection Level Of Service Report
Intersection 2: South State St/South Rd

Control Type: Two-way stop
Analysis Method: HCM 2010
Analysis Period: 15 minutes

Delay (sec / veh): 17.2
Level Of Service: C
Volume to Capacity (v/c): 0.051

Intersection Setup

Name	Northbound	South State St	South Rd
Approach	Southbound	Eastbound	
Lane Configuration			
Turning Movement	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00
No. of Lanes in Pocket	0	0	0
Pocket Length [ft]	100.00	100.00	100.00
Speed [mph]	45.00	45.00	30.00
Grade [%]	0.00	0.00	0.00
Crosswalk	Yes	Yes	Yes

Volumes

Name	South State St	South Rd
Base Volume Input [veh/h]	404	0
Base Volume Adjustment Factor	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00
Growth Factor	1.0000	1.0000
In-Process Volume [veh/h]	0	0
Site-Generated Trips [veh/h]	7	24
Diverted Trips [veh/h]	0	0
Pass-by Trips [veh/h]	0	0
Existing Site Adjustment Volume [veh/h]	0	0
Other Volume [veh/h]	0	0
Total Hourly Volume [veh/h]	7	428
Peak Hour Factor	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	107
Total Analysis Volume [veh/h]	7	428
Pedestrian Volume [ped/h]	0	0

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C Ratio	0.01	0.00	0.00	0.00	0.05	0.04
d_M_Delay for Movement [s/veh]	8.22	0.00	0.00	0.00	17.24	11.56
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.29	0.29
95th-Percentile Queue Length [ft/ln]	0.47	0.47	0.00	0.00	7.32	7.32
d_A_Approach Delay [s/veh]	0.13					13.83
Approach LOS	A					B
d_I_Intersection Delay [s/veh]				0.67		
Intersection LOS				C		

Intersection Level Of Service Report
Intersection 2: South State St/South Rd

Control Type: Two-way stop
Analysis Method: HCM 2010
Analysis Period: 15 minutes

Delay (sec / veh): 18.8
Level Of Service: C
Volume to Capacity (v/c): 0.047

Intersection Setup

Name	Northbound	South State St	South Rd
Approach	Southbound	Eastbound	
Lane Configuration	Left	Thru	Right
Turning Movement	12.00	12.00	12.00
Lane Width [ft]	0	0	0
No. of Lanes in Pocket	100.00	100.00	100.00
Pocket Length [ft]	45.00	45.00	30.00
Speed [mph]	0.00	0.00	0.00
Grade [%]	Yes	Yes	Yes
Crosswalk			

Volumes

Name	South State St	South Rd
Base Volume Input [veh/h]	0	0
Base Volume Adjustment Factor	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00
Growth Factor	1.0000	1.0000
In-Process Volume [veh/h]	0	0
Site-Generated Trips [veh/h]	33	15
Diverted Trips [veh/h]	0	0
Pass-by Trips [veh/h]	0	0
Existing Site Adjustment Volume [veh/h]	0	0
Other Volume [veh/h]	0	0
Total Hourly Volume [veh/h]	33	15
Peak Hour Factor	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000
Total 15-Minute Volume [veh/h]	8	4
Total Analysis Volume [veh/h]	33	15
Pedestrian Volume [ped/h]	0	0

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.03	0.00	0.00	0.00	0.05	0.02
d_M, Delay for Movement [s/veh]	8.22	0.00	0.00	0.00	18.83	11.23
Movement LOS	A	A	A	A	C	B
95th-Percentile Queue Length [veh/ln]	0.09	0.09	0.00	0.00	0.23	0.23
95th-Percentile Queue Length [ft/ln]	2.21	2.21	0.00	0.00	5.67	5.67
d_A, Approach Delay [s/veh]	0.52		0.00		14.76	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]			0.71			
Intersection LOS			C			

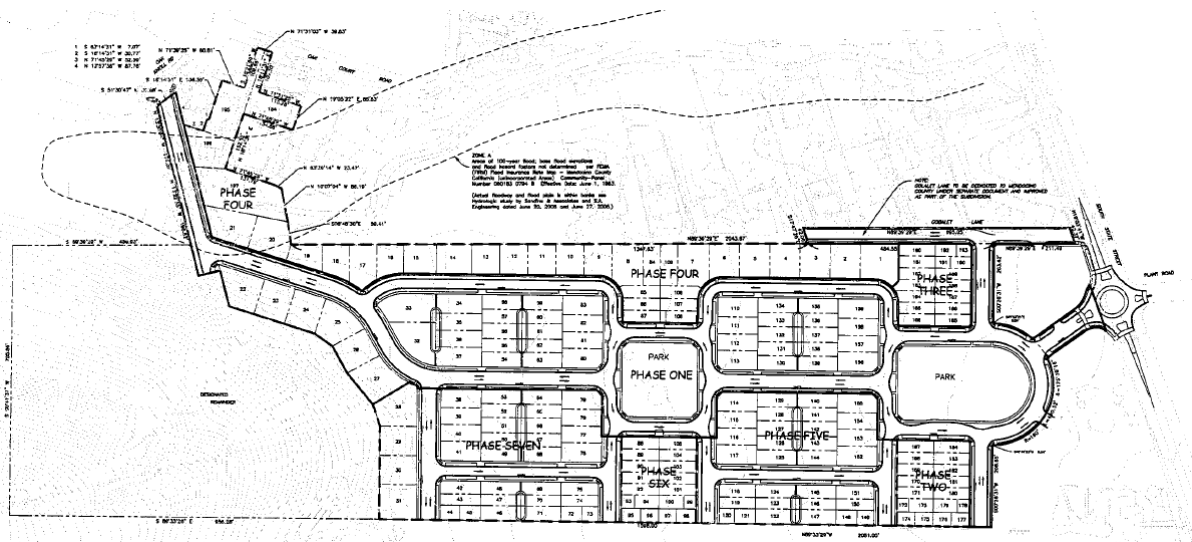
4. Test Cases for VMT Analysis

This section uses recent projects in Mendocino County as test cases for the proposed VMT analysis methodologies and thresholds. For each test case, the project was assessed to determine if the methodology was appropriate or if more detailed analysis was required. If the methodology was determined to be appropriate, the flowchart above was used to analyze the test case.

Each test case is discussed below. Analysis results are shown in italics.

4.1 Garden's Gate Subdivision

This proposed project consists of 123 detached homes and 74 townhouses just south of the Ukiah city limit, in the Ukiah Adjacent subregion.



Garden's Gate Tentative Map 1 (Garden's Gate Subdivision Draft Environmental Impact Report, September 2008)

4.1.1 Analysis

The project was assessed to determine if the methodology is appropriate, including:

- Does the project change the assumptions in the model?
- Does the project have specific impacts outside the model area?
- Does the project have specific impacts that will not be captured by the model?

The methodology is appropriate: the project does not change the assumptions in the model, nor have specific impacts outside the model area, nor have specific impacts that will not be captured by the model.

The questions in the flowchart were evaluated:



- Is the project/plan consistent with the General Plan and Regional Transportation Plan (RTP)?

Yes: The project is consistent with the suburban residential designation in the Ukiah Valley Area Plan. The project is consistent with the land use in the model TAZ used to evaluate the RTP.

- Is the project a local-serving retail project, 50,000 square feet or less?

No.

- Is the project/plan residential or work-related land use located in a TAZ with similar land uses?

Yes, the project is residential and there is existing residential land use in the TAZ.

- Is the project/plan located in a TAZ with total VMT per service population x% less than the subregional mean?

Yes. For this analysis, X was assumed to be 14.3 percent in accordance with the reduction in total VMT per capita recommended in the California Air Resource Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals. The base year was assumed to be 2019. The screening tool showed that the total VMT per service population for the TAZ is 36 percent less than Ukiah Adjacent subregional mean. Figure 4 shows the screening tool inputs and Figure 5 shows the screening tool results



Figure 4: Screening tool inputs

MCOG SB 743 VMT Screening Tool Powered by FEHR PEERS

CRITERIA

Select Project Inputs
 Use tools below to draw on the map and select the parcels you wish to screen.

Select parcels that represent your project

Enrich your map with layers
 Turn layers on and off and adjust visibility to aide in parcel selection.

<input checked="" type="checkbox"/>	Traffic Analysis Zones	100%
<input checked="" type="checkbox"/>	Parcels (Zoom in to view)	100%
<input checked="" type="checkbox"/>	Subregions	75%
<input checked="" type="checkbox"/>	Project Area	100%

Map showing a highlighted parcel in green on a street grid. Map data: Esri, NASA, NGA, USGS, FEMA | Esri Community Maps Contrib... Powered by Esri

Figure 5: Screening tool results

Screening Results

Screening Inputs

Criteria	Input
VMT Metric	Total VMT per Service Population
Baseline Year	2019
Threshold (% reduction from Baseline Year)	Subregion Benchmark (-14.3%)

Legend

Category	Color
Selected Project Area	

Project Location

Map showing project location on a street grid. Map data: Esri, HERE, Garmin, SafeGraph, MET... Powered by Esri

Project Proximity to Output Low VMT Generating TAZs

Map showing project proximity to low VMT generating TAZs. Map data: Esri, HERE, Garmin, SafeGraph, MET... Powered by Esri

Passed

Screening Questions Results

Within a low VMT generating TAZ? Yes (Pass)

Screening results are based on location of parcel centroids. If results are desired considering the full parcel, please refer to the associated map layers to visually review parcel and TAZ boundary relationship.

Traffic Analysis Zone (TAZ) Details

TAZ Questions	TAZ ID: 770
Subarea	Ukiah Adjacent
TAZ VMT	17.3
Subarea VMT	27.2
% Difference	-36.31%
VMT Metric	Total VMT per Service Population
Threshold	23.3

Threshold Evaluation

Bar chart showing VMT Metric for TAZ 770 (17.3) compared to Threshold (23.3).

VMT Metric	17.3
Threshold	23.3

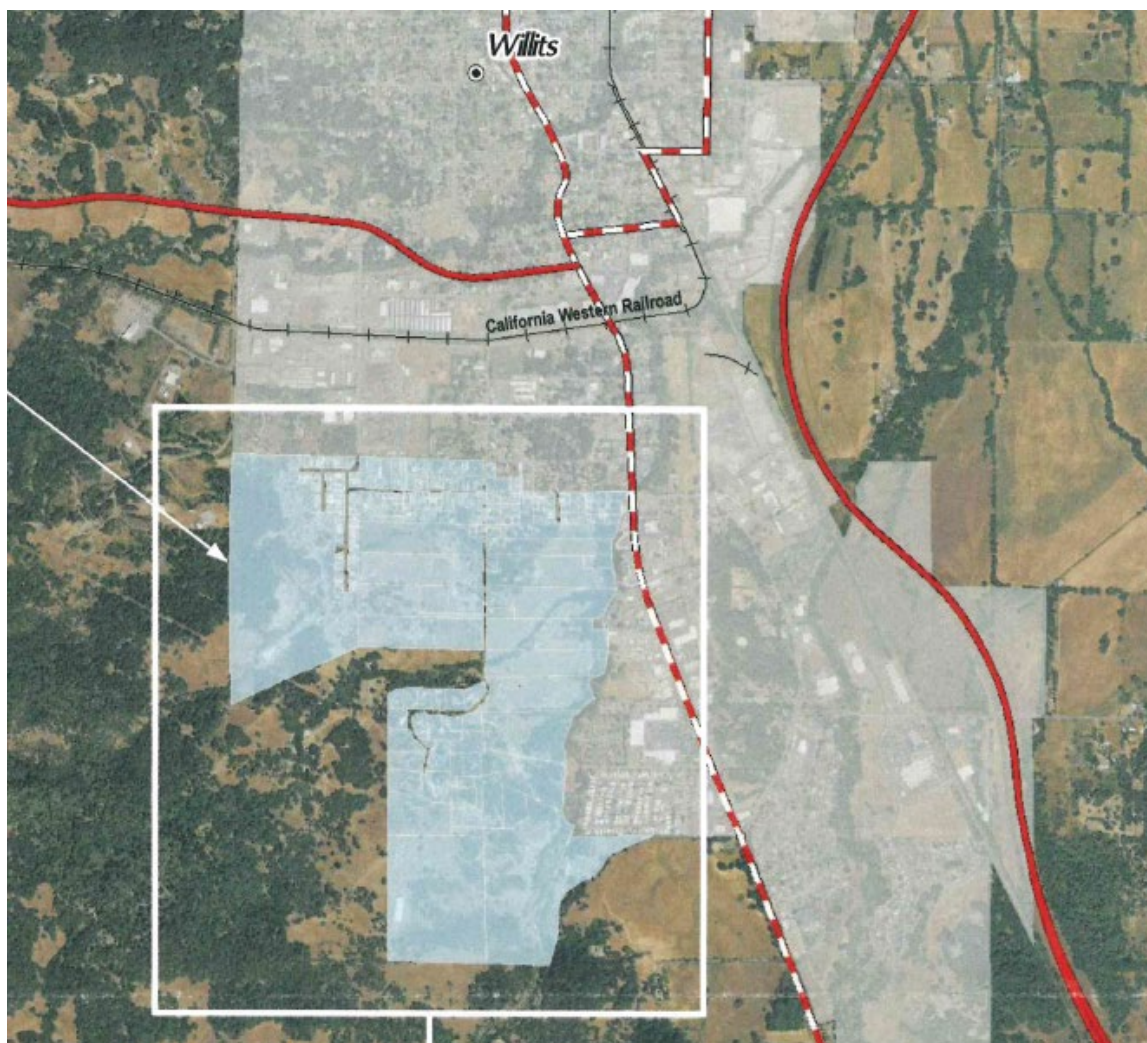


Conclusion: Project passes screening and supports the presumption that VMT impact is less than significant.

This evidence supports a conclusion that the project would have a less than significant VMT impact under baseline plus project conditions. This conclusion would also apply under cumulative conditions presuming no substantial changes to the subregion land use and transportation context.

4.2 Willits Sphere of Influence Expansion

This proposal is to expand the City of Willits sphere of influence to the southwest. The area would be rezoned for a mix of residential types, including single family dwelling units, duplexes, apartments, and senior housing. A minimum of 1,932 dwelling units would be planned.



Excerpt from Draft City SOI Update figure, Mendocino County, July 2019

4.2.1 Analysis

The project was assessed to determine if the methodology is appropriate, including:

