May 9, 2024

Mr. Jay Ryder
Ryder Homes
1425 Treat Boulevard
Walnut Creek, CA 94597

Focused Transportation Impact Study for the Meadow Creek Townhomes Project

Dear Mr. Ryder;

W-Trans has completed an evaluation of the potential transportation impacts associated with the Meadow Creek Townhomes project to be located on the east side of Burgess Drive north of Colgan Creek in the City of Santa Rosa. The purpose of this letter is to set forth the project's trip generation and potential impacts based on the criteria contained in the California Environmental Quality Act (CEQA). It is understood that this project is tiering off the *Roseland Area/Sebastopol Road Specific Plan* and does not require a full CEQA evaluation. However, as directed by staff, the physical elements of the project were evaluated because they were not covered in the Specific Plan EIR.

Setting

The study area consists of the section of Burgess Drive fronting the project site, the project access point, as well as the intersection of Burgess Drive/Bellevue Avenue.

Burgess Drive has two unstriped travel lanes in the study area, including one lane in each direction. Parking is prohibited on both sides of the street. The daily volume on Burgess Drive is approximately 2,300, and the posted speed limit in the project vicinity is 25 mph.

Bellevue Avenue has two striped lanes in the study area, including one lane in each direction and a westbound striped on-street bike lane west of Burgess Drive for 1,000 feet. Parking is prohibited on both sides of the street. The daily volume on Bellevue Avenue is approximately 6,200, and the posted speed limit in the project vicinity is 35 mph.

The intersection of **Burgess Drive/Bellevue Avenue** is a three-legged "tee" intersection with all-way stop control. The eastbound approach has a left turn pocket and the westbound approach a right-turn pocket.

Project Description

The project as proposed includes 62 attached townhome units. The currently vacant site is located south of and adjacent to the Ryder Homes Meadow Creek single-family housing development. The project would have one access from Burgess Drive and one emergency exit point to the north. The site is bordered by Elsie Allen High School, Colgan Creek, and developed and undeveloped residential property.

Trip Generation

The anticipated trip generation for a proposed subdivision was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 11th Edition, 2021, for Attached Single Family Housing (LU #215). Based on the application of these rates the proposed project would be expected to generate an average of 446 trips per day, including 30 a.m. peak hour trips and 35 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
Attached SFD	62 du	7.20	446	0.48	30	7	23	0.57	35	21	14

Note: SFD = single-family dwelling; du = dwelling unit

Because the project would be expected to generate fewer than 50 trips during each peak hour, an operational analysis is not required under the City of Santa Rosa's policies.

Alternative Modes

Pedestrian Environment

Pedestrian facilities include sidewalks, crosswalks, pedestrian signal phases, curb ramps, curb extensions, and various streetscape amenities such as lighting, benches, etc. In general, there is a lack of a complete network of pedestrian facilities in the vicinity of the proposed project. There is a sidewalk on the west side of Burgess Drive adjacent to the high school, on the east side of Burgess Drive north of the project site, and on the north side of Bellevue Avenue that also serves as a multi-use pathway. The proposed project would be required to dedicate a portion of the east side of Burgess Drive to street right-of-way and installation of a new sidewalk along its frontage. In addition, the project would provide pedestrian access to the east via a short path to Common Way.

The collision history for the study area was reviewed to determine any trends or patterns that may indicate a safety issue for pedestrians. Collision records available from the California Highway Patrol as published in their Statewide Integrated Traffic Records System (SWITRS) reports were reviewed for the most current five-year period available, which was January 1, 2018, through December 31, 2022, at the time of the analysis. During the five-year study period there were no reported pedestrian-involved collisions in the study area.

Bicycle Facilities

The *Highway Design Manual*, Caltrans, 2017, classifies bikeways into four categories:

- **Class I Multi-Use Path** – a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flows of motorized traffic minimized.
- **Class II Bike Lane** – a striped and signed lane for one-way bicycle travel on a street or highway.
- **Class III Bike Route** – signage only for shared use with motor vehicles within the same travel lane on a street or highway.
- **Class IV Bikeway** – also known as a separated bikeway, a Class IV Bikeway is for the exclusive use of bicycles and includes a separation between the bikeway and the motor vehicle traffic lane. The separation may include, but is not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

Existing bicycle facilities in the project area include a Class I Colgan Creek Trail and a Class II bike lane in the westbound direction on Bellevue Avenue for 1,000 feet along the frontage of the high school. Table 2 summarizes the existing and planned bicycle facilities in the project vicinity, as contained in the City of Santa Rosa's *Bicycle and Pedestrian Master Plan*, 2018.

Table 2 – Bicycle Facility Summary

Status *Facility*	Class	Length (miles)	Begin Point	End Point
Existing				
Colgan Creek Trail	I	1.90	Todd Rd	Bellevue Ave e/o Juniper Ave
Bellevue Ave – WB Only	II	0.18	High School West Boundary	Burgess Dr
Hearn Ave	II	1.12	Stony Point Rd	SMART Rail Corridor
Stony Point Rd	II	7.90	College Ave	Gravenstein Hwy (SR-116)
Planned				
Colgan Creek Trail	I	0.55	Bellevue Ave e/o Juniper Ave	Dutton Ave
Southwest Community Trail	I	0.80	Hearn Ave	Bellevue Ave
Bellevue Ave	II	1.82	Stony Point Rd	Santa Rosa East City Limit
Dutton Meadow	II	0.85	Hearn Ave	Burgess Dr
Dutton Ave	II	1.87	Dutton Meadow	Todd Rd
Burgess Dr	III	0.40	Bellevue Ave	Rain Dance Wy

Source: *City of Santa Rosa Bicycle and Pedestrian Master Plan,* City of Santa Rosa, 2018
Note: e/o = east of

Collision records for the study area were reviewed to determine if there had been any bicyclist-involved collisions. During the five-year study period between January 1, 2018, and December 31, 2022, there were no bicyclist-involved collisions reported in the study area.

Transit Services

Santa Rosa CityBus provides fixed-route bus service in Santa Rosa. Route 15 provides service along the Stony Point Road corridor north to the Coddingtown Transit Hub and Shopping Center. Within the study area, Route 15 makes a clockwise loop on Hearn Avenue, Dutton Meadow, and Bellevue Avenue. There is a bus stop at the intersection of Bellevue Avenue/Burgess Drive for buses westbound toward Stony Point Road and continuing north. Two bicycles can be carried on the bike racks located on the front of Santa Rosa CityBus buses. Bike rack space is provided on a first-come, first-served basis, and riders are responsible for loading and unloading their bicycles.

Existing transit routes and details regarding their operation are summarized in Table 3.

Table 3 – Transit Routes

Transit Agency Route	Distance to Stop (mi)[1]	Service			Connection
		Days of Operation	Time	Frequency	
Santa Rosa CityBus					
Route #15 - Stony Point	0.1	Mon-Fri Sat Sun	6:20 a.m. - 8:10 p.m. 8:20 a.m. - 5:10 p.m. 10:20 a.m. - 5:10 p.m.	1 hour	Coddingtown Transit Hub and Shopping Center

Note: [1] Defined as the shortest walking distance between the project site and the nearest bus stop
Source: Santa Rosa CityBus

Finding – The project as proposed would provide a sidewalk along its frontage on an existing street and along new street frontages and would conform with City policy relative to pedestrian, bicycle, and transit facilities. It would therefore have a less-than-significant impact on these modes.

Collisions

Collision records for the study intersection of Bellevue Avenue/Burgess Drive were reviewed for potential trends or patterns. For the five-year analysis period that includes 2018 through 2022, a total of six collisions were reported, resulting in a collision rate of 0.45 collisions per million vehicles entering (c/mve). This is significantly higher than the statewide average of 0.04 c/mve for intersections with comparable characteristics, though with zero crashes resulting in injuries or fatalities. With five of the six collisions reportedly caused by a driver colliding with a fixed object or parked vehicle, there does not appear to be a specific safety trend that requires remediation. The collision rate worksheet is enclosed for reference.

Sight Distance

The site would be accessed via a new street connecting to Burgess Drive. Sight distance at this access intersection was evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. Recommended sight distance for public street intersections is based on corner sight distance, which uses the approach travel speeds as the basis for determining the recommended sight distance. Given the posted speed limit of 25 mph on Burgess Drive, the recommended corner sight distance for left turns is 275 feet, while sight lines of 240 feet are needed for right turns.

Burgess Drive has level terrain, and on-street parking adjacent to the project access is currently prohibited. However, with the additional street width dedicated from the project, on-street parking could be accommodated. In order to maintain adequate sight distance at the project access intersection, on-street parking should be prohibited on the east side of Burgess Drive within 25 feet of the new street.

Finding – Motor vehicles parked on-street adjacent to the project access intersection may obstruct sight distance once Burgess Drive is widened on the project frontage.

Recommendation – Parking should be prohibited within 25 feet north and south of the project access street through painted red curb. Proposed landscaping within the vision triangle should be either low-lying (three feet high or less) or else trees with all branches trimmed to a minimum height of seven feet above the roadway elevation. Implementation of this recommendation would result in less-than-significant impacts as regards potential hazards.

Warrants Evaluation

Left-Turn Lane Warrants

The need for a left-turn lane at the proposed street connection on Burgess Drive 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. Under conditions with existing and project volumes, a left-turn lane is not warranted on Burgess Drive at the new street intersection during either of the a.m. or p.m. peak hours. Copies of the left-turn lane warrant worksheet are enclosed.

Signal Warrants

A traffic signal warrant analysis was conducted to determine the potential need for a traffic signal at Bellevue Avenue/Burgess Drive under existing conditions with the project. Chapter 4C of the *California Manual on Uniform Traffic Control Devices* (CA-MUTCD) provides guidance on when a traffic signal should be considered. For the purposes of this study, the following warrants were evaluated. Copies of the worksheets for Warrants 1 and 2 are enclosed as well as the daily traffic counts for all three legs of the intersection.

Warrant 1 bases the need for a traffic control signal if an engineering study finds that one of the following conditions exist for each of any eight hours of an average day:

A. The vehicles per hour given in both of the 100 percent columns of Condition A in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection;

B. The vehicles per hour given in both of the 100 percent columns of Condition B in Table 4C-1 exist on the major-street and the higher-volume minor-street approaches, respectively, to the intersection;

C. In applying each condition, the major-street and minor-street volumes shall be for the same eight hours. On the minor street, the higher volume shall not be required to be on the same approach during each of these eight hours.

Warrant 2 is met when an engineering study finds that, for each of any four hours of an average day, the plotted points representing the vehicles per hour on the major street (total of both approaches) and the corresponding vehicles per hour on the higher-volume minor street approach (one direction only) all fall above the applicable curve in Figure 4C-1 for the existing combination of approach lanes. On the minor street, the higher volume shall not be required to be on the same approach during each of these four hours.

Warrant 7 addresses the collision history of a location. The need for a traffic control signal shall be considered if an engineering study finds that all of the following criteria are met:

A. Adequate trial of alternatives with satisfactory observance and enforcement has failed to reduce the crash frequency; and

B. Five or more reported crashes of types susceptible to correction by a traffic control signal, have occurred within a 12-month period, each crash involving personal injury or property damage exceeding the applicable requirements for a reportable crash; and

C. For each of any eight hours of an average day, the vehicles per hour (vph) given in both of the 80 percent columns of Condition A in Table 4C-1 (see Section 4C.02), or the vph in both of the 80 percent columns of Condition B in Table 4C-1 exists on the major-street and the higher-volume minor-street approach, respectively, to the intersection, or the volume of pedestrian traffic is not less than 80 percent of the requirements specified in the Pedestrian Volume warrant. These major-street and minor-street volumes shall be for the same eight hours. On the minor street, the higher volume shall not be required to be on the same approach during each of the eight hours.

To assess these warrant criteria under typical conditions, vehicle counts on each approach to the intersection of Bellevue Avenue/Burgess Drive were recorded on a weekday in April 2023 for a 24-hour period. The counts were obtained while local schools were in session. Based on these vehicle counts, neither of the volume warrants is met. Further, there were fewer than five crashes of a type susceptible to signalization in a 12-month period, so Warrant 7 is also not met.

Finding – Neither a left-turn lane at the project access point nor a traffic signal at Bellevue Avenue/Burgess Drive is warranted.

Emergency Access and Response

The project would include a small private internal street network with street widths of between 24 and 26 feet. This network and the parking stalls located along them appear to be in accordance with City design standards. Site access and circulation is therefore expected to function acceptably for emergency response vehicles.

Additionally, the nominal increase in traffic volumes resulting from the project can reasonably be expected to result in similarly nominal changes to traffic delays in the area. Since emergency responders can claim the right-of-way through use of their lights and sirens, the addition of project-generated traffic would be expected to have little to no impact on emergency response times.

Finding – The project would have a less-than-significant impact on emergency response.

Parking

Parking supply requirements are based on the City of Santa Rosa's Municipal Code, Chapter 20-36.040 "Number of Parking Spaces Required." One covered parking space per single-family attached dwelling, plus 1.5 visitor spaces for each dwelling unit, are required. The visitor spaces may be in tandem with spaces for the unit or on a public street within or adjacent to the site.

Based on the 62 single-family attached units proposed, a total of 155 parking spaces would be required, including 62 covered and 93 visitor spaces. The proposed project would provide two garage parking spaces within each unit to account for 62 covered parking spaces plus 62 visitor spaces. The remaining visitor spaces would be provided by 45 on-street spaces on-site. The total proposed parking supply of 169 spaces meets the City's requirement for 155 spaces. Five of the on-site uncovered visitor spaces would be designated as accessible.

The Municipal Code also states that one bicycle parking space shall be provided for every four units if there is no private space for bike storage. Since the proposed project would provide for private bicycle parking inside each garage, the project would meet the City's minimum requirement for bike parking.

Finding – The proposed parking supply of 124 in-garage spaces and 45 uncovered visitor spaces would satisfy the City's Code requirements for vehicle parking. Private bike storage areas would be provided inside private garages, satisfying the City's requirements for bike parking.

Conclusions and Recommendations

- The proposed project would be expected to generate an average of 446 trips per day, including 30 a.m. peak hour trips and 35 trips during the p.m. peak hour.

- The pedestrian facilities in the vicinity of the project will be adequate once the street widening and sidewalk installation associated with the project are completed.

- The existing transit facilities are adequate to serve trips to and from the project site.

- The existing bicycle facilities in the project vicinity are adequate.

- The study intersection had a collision rate significantly higher than the average rate statewide for similar locations, though as most of the crashes were a single vehicle and none included injuries, no remedial action is suggested.

- To accommodate proper sight distance, it is recommended that parking be prohibited on Burgess Drive for 25 feet on either side of the new project access point once the project is completed.

- Site access and circulation is expected to function acceptably for emergency response vehicles and the project is expected to have a less-than-significant impact on emergency response times.

- The proposed parking supply of 124 in-garage spaces and 45 uncovered visitor spaces satisfies the City's Code requirements for vehicle parking on-site.

We hope this information is helpful to staff in evaluating your project's potential environmental impacts. Thank you for giving us the opportunity to provide these services.

Sincerely,

Mark Brown
Associate Planner

Dalene J. Whitlock, PE, PTOE
Senior Principal

DJW/mjb/SRO624.L1

Enclosures: Collision Rate Worksheet, Left-Turn Lane Warrant Worksheets, Traffic Signal Warrant Worksheets, Count Data

Intersection Collision Rate Calculations

Meadows Creek Townhomes Project

Intersection # 1: Bellevue Ave & Burgess Dr
Date of Count: April 2023

Number of Collisions: 6
Number of Injuries: 0
Number of Fatalities: 0
ADT: 7300
Start Date: January 1, 2018
End Date: December 31, 2022
Number of Years: 5

Intersection Type: Tee
Control Type: 4 Way Stop
Area: Urban

$$\text{collision rate} = \frac{\text{Number of Collisions x 1 Million}}{\text{ADT x 365 Days per Year x Number of Years}}$$

$$\text{collision rate} = \frac{6 \times 1{,}000{,}000}{7{,}300 \times 365 \times 5}$$

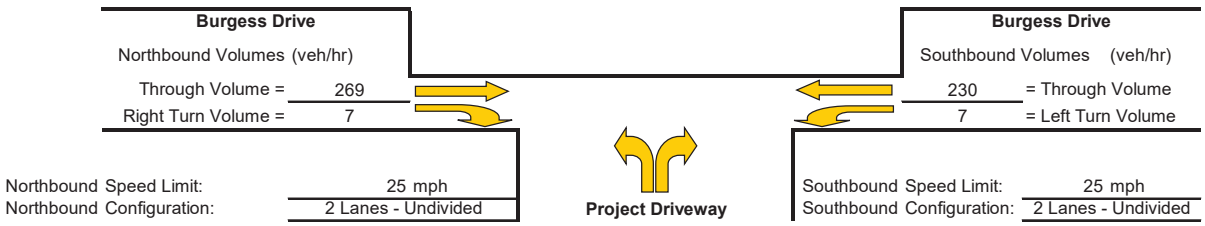
	Collision Rate	Fatality Rate	Injury Rate
Study Intersection	**0.45 c/mve**	**0.0%**	**0.0%**
Statewide Average*	**0.04 c/mve**	**1.1%**	**16.7%**

ADT = average daily total vehicles entering intersection
c/mve = collisions per million vehicles entering intersection
* 2020 Collision Data on California State Highways, Caltrans

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Burgess Drive/Project Street
Study Scenario: AM Existing plus Project

Direction of Analysis Street: North/South
Cross Street Intersects: From the East



Northbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	997.6
Advancing Volume	Va =	276
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Northbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

NOT WARRANTED - Less than 20 vehicles

2. Check advance volume threshold criteria for taper

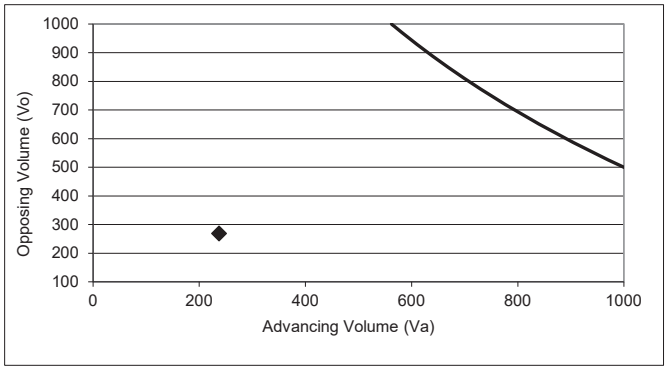
Advancing Volume Threshold	AV =	-
Advancing Volume	Va =	276
If AV<Va then warrant is met		-

Right Turn Taper Warranted: **NO**

Southbound Left Turn Lane Warrants

Percentage Left Turns	%lt	3.0 %
Advancing Volume Threshold	AV	1304 veh/hr

If AV<Va then warrant is met



◆ Study Intersection
Two lane roadway warrant threshold for: 25 mph
Turn lane warranted if point falls to right of warrant threshold line

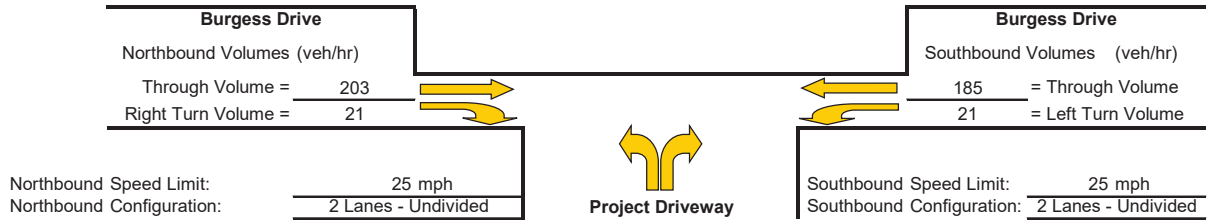
Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Turn Lane Warrant Analysis - Tee Intersections

Study Intersection: Burgess Drive/Project Street
Study Scenario: PM Existing plus Project

Direction of Analysis Street: North/South
Cross Street Intersects: From the East



Northbound Speed Limit: 25 mph
Northbound Configuration: 2 Lanes - Undivided

Southbound Speed Limit: 25 mph
Southbound Configuration: 2 Lanes - Undivided

Northbound Right Turn Lane Warrants

1. Check for right turn volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for turn lane

Advancing Volume Threshold	AV =	892.6
Advancing Volume	Va =	224
If AV<Va then warrant is met		No

Right Turn Lane Warranted: **NO**

Northbound Right Turn Taper Warrants
(evaluate if right turn lane is unwarranted)

1. Check taper volume criteria

Thresholds not met, continue to next step

2. Check advance volume threshold criteria for taper

Advancing Volume Threshold	AV =	690
Advancing Volume	Va =	224
If AV<Va then warrant is met		No

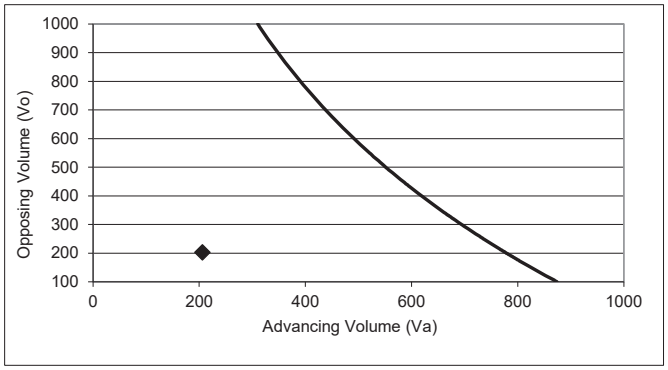
Right Turn Taper Warranted: **NO**

Southbound Left Turn Lane Warrants

Percentage Left Turns %lt 10.2 %

Advancing Volume Threshold AV 776 veh/hr

If AV<Va then warrant is met



◆ Study Intersection

Two lane roadway warrant threshold for: 25 mph

Turn lane warranted if point falls to right of warrant threshold line

Left Turn Lane Warranted: **NO**

Methodology based on Washington State Transportation Center Research Report *Method For Prioritizing Intersection Improvements*, January 1997.
The right turn lane and taper analysis is based on work conducted by Cottrell in 1981.
The left turn lane analysis is based on work conducted by M.D. Harmelink in 1967, and modified by Kikuchi and Chakroborty in 1991.

Warrant 3: Peak-Hour Volumes and Delay

Bellevue Ave & Burgess Dr
Santa Rosa

Project Name: Focused TIS for the Meadow Creek Townhomes Project

Intersection: 1

	Major Street	Minor Street
Street Name	Bellevue Ave	Burgess Dr
Direction	E-W	N-S
Number of Lanes	1	1
Approach Speed	35	25

Population less than 10,000? No
Date of Count: Thursday, April 6, 2023
Scenario: Existing

Warrant 3 Met?: Met when either Condition A or B is met — **No**

Condition A: Met when conditions A1, A2, and A3 are met — Not Met

Condition A1 — Not Met

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: N/A vehicle-hours

Condition A2 — Met

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 248 vph

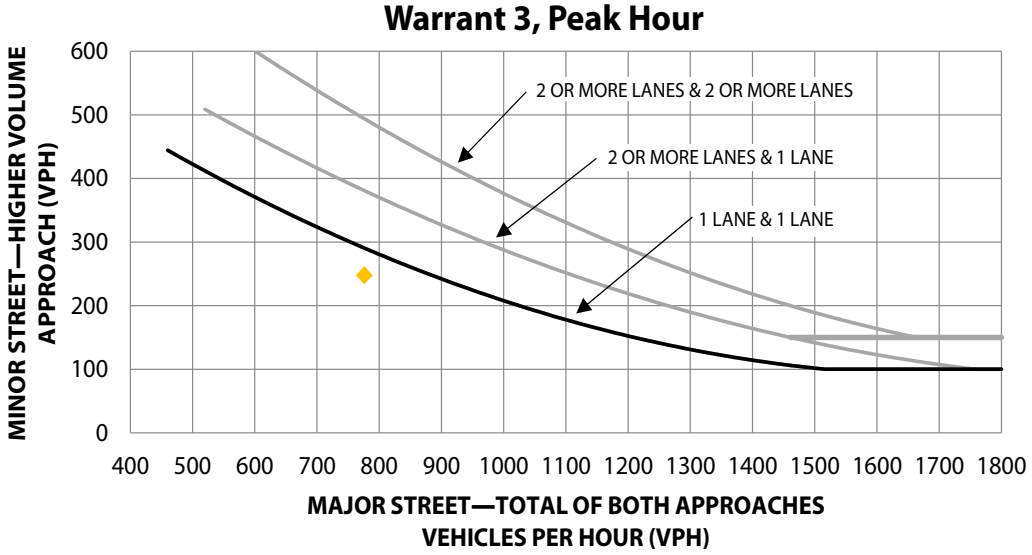
Condition A3 — Met

The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more appraches or 650 vph for intersections with three approaches

Total Entering Volume: 1024 vph

Condition B — Not Met

The plotted point falls above the curve



Prepared by NDS/ATD

VOLUME

Burgess Dr N/O Bellevue Ave

Day: Thursday
Date: 4/6/2023

City: Santa Rosa
Project #: CA23_080079_001

DAILY TOTALS	NB	SB	EB	WB	Total
	1,235	1,088	0	0	2,323

AM Period	NB		SB		EB		WB		TOTAL	
00:00	2		2						4	
00:15	0		1						1	
00:30	1		1						2	
00:45	0	3	1	5					1	8
01:00	1		0						1	
01:15	0		0						0	
01:30	0		2						2	
01:45	0	1	0	2					0	3
02:00	0		0						0	
02:15	0		0						0	
02:30	0		0						0	
02:45	0		0						0	
03:00	0		0						0	
03:15	1		0						1	
03:30	0		0						0	
03:45	0	1	0						0	1
04:00	0		0						0	
04:15	0		0						0	
04:30	1		3						4	
04:45	0	1	0	3					0	4
05:00	1		3						4	
05:15	0		3						3	
05:30	3		1						4	
05:45	2	6	2	9					4	15
06:00	2		3						5	
06:15	0		4						4	
06:30	1		3						4	
06:45	4	7	3	13					7	20
07:00	8		4						12	
07:15	10		9						19	
07:30	25		25						50	
07:45	39	82	26	64					65	146
08:00	69		44						113	
08:15	99		76						175	
08:30	62		81						143	
08:45	32	262	29	230					61	492
09:00	12		8						20	
09:15	9		11						20	
09:30	10		8						18	
09:45	8	39	6	33					14	72
10:00	12		10						22	
10:15	18		12						30	
10:30	8		8						16	
10:45	13	51	8	38					21	89
11:00	6		3						9	
11:15	9		10						19	
11:30	11		15						26	
11:45	11	37	15	43					26	80
TOTALS		490		440						**930**
SPLIT %		52.7%		47.3%						**40.0%**

PM Period	NB		SB		EB		WB		TOTAL	
12:00	17		23						40	
12:15	13		20						33	
12:30	8		12						20	
12:45	10	48	10	65					20	113
13:00	11		10						21	
13:15	12		12						24	
13:30	13		12						25	
13:45	5	41	6	40					11	81
14:00	22		12						34	
14:15	33		47						80	
14:30	24		32						56	
14:45	25	104	14	105					39	209
15:00	46		16						62	
15:15	67		31						98	
15:30	52		104						156	
15:45	38	203	34	185					72	388
16:00	35		16						51	
16:15	24		16						40	
16:30	19		12						31	
16:45	18	96	5	49					23	145
17:00	13		8						21	
17:15	19		8						27	
17:30	25		21						46	
17:45	21	78	32	69					53	147
18:00	14		22						36	
18:15	23		15						38	
18:30	26		12						38	
18:45	16	79	5	54					21	133
19:00	9		2						11	
19:15	15		7						22	
19:30	6		15						21	
19:45	7	37	7	31					14	68
20:00	11		5						16	
20:15	12		3						15	
20:30	7		27						34	
20:45	2	32	4	39					6	71
21:00	5		2						7	
21:15	3		1						4	
21:30	0		2						2	
21:45	3	11	3	8					6	19
22:00	5		0						5	
22:15	2		1						3	
22:30	0		1						1	
22:45	4	11	0	2					4	13
23:00	2		0						2	
23:15	0		0						0	
23:30	2		1						3	
23:45	1	5	0	1					1	6
TOTALS		745		648						**1393**
SPLIT %		53.5%		46.5%						**60.0%**

DAILY TOTALS	NB	SB	EB	WB	Total
	1,235	1,088	0	0	2,323

AM Peak Hour	07:45	08:00			**07:45**	**PM Peak Hour**	15:00	15:00			**15:00**
AM Pk Volume	269	230			**496**	**PM Pk Volume**	203	185			**388**
Pk Hr Factor	0.679	0.710			**0.709**	**Pk Hr Factor**	0.757	0.445			**0.622**
7 - 9 Volume	344	294	0	0	**638**	**4 - 6 Volume**	174	118	0	0	**292**
7 - 9 Peak Hour	07:45	08:00			**07:45**	**4 - 6 Peak Hour**	16:00	17:00			**17:00**
7 - 9 Pk Volume	269	230	0	0	**496**	**4 - 6 Pk Volume**	96	69	0	0	**147**
Pk Hr Factor	0.679	0.710	0.000	0.000	**0.709**	**Pk Hr Factor**	0.686	0.539	0.000	0.000	**0.693**

Prepared by NDS/ATD

VOLUME

Bellevue Ave E/O Burgess Dr

Day: Thursday
Date: 4/6/2023

City: Santa Rosa
Project #: CA23_080080_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	0	3,021	3,021

AM Period	NB	SB	EB	WB		TOTAL		PM Period	NB	SB	EB	WB		TOTAL	
00:00				9		9		12:00				46		46	
00:15				0		0		12:15				45		45	
00:30				4		4		12:30				47		47	
00:45				2	15	2	15	12:45				39	177	39	177
01:00				3		3		13:00				39		39	
01:15				3		3		13:15				32		32	
01:30				1		1		13:30				43		43	
01:45				3	10	3	10	13:45				41	155	41	155
02:00				5		5		14:00				43		43	
02:15				0		0		14:15				58		58	
02:30				0		0		14:30				70		70	
02:45				0	5	0	5	14:45				79	250	79	250
03:00				1		1		15:00				62		62	
03:15				1		1		15:15				79		79	
03:30				2		2		15:30				89		89	
03:45				2	6	2	6	15:45				66	296	66	296
04:00				2		2		16:00				107		107	
04:15				1		1		16:15				68		68	
04:30				8		8		16:30				78		78	
04:45				4	15	4	15	16:45				64	317	64	317
05:00				9		9		17:00				94		94	
05:15				7		7		17:15				87		87	
05:30				14		14		17:30				72		72	
05:45				17	47	17	47	17:45				54	307	54	307
06:00				8		8		18:00				52		52	
06:15				20		20		18:15				48		48	
06:30				29		29		18:30				35		35	
06:45				16	73	16	73	18:45				36	171	36	171
07:00				22		22		19:00				25		25	
07:15				32		32		19:15				23		23	
07:30				61		61		19:30				24		24	
07:45				72	187	72	187	19:45				25	97	25	97
08:00				79		79		20:00				19		19	
08:15				104		104		20:15				10		10	
08:30				95		95		20:30				16		16	
08:45				44	322	44	322	20:45				11	56	11	56
09:00				31		31		21:00				15		15	
09:15				34		34		21:15				11		11	
09:30				20		20		21:30				6		6	
09:45				37	122	37	122	21:45				8	40	8	40
10:00				39		39		22:00				10		10	
10:15				38		38		22:15				3		3	
10:30				34		34		22:30				6		6	
10:45				39	150	39	150	22:45				5	24	5	24
11:00				36		36		23:00				2		2	
11:15				53		53		23:15				0		0	
11:30				43		43		23:30				5		5	
11:45				35	167	35	167	23:45				5	12	5	12
TOTALS					1119		**1119**	**TOTALS**					1902		**1902**
SPLIT %					100.0%		**37.0%**	**SPLIT %**					100.0%		**63.0%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	0	3,021	3,021

AM Peak Hour				07:45	**07:45**	**PM Peak Hour**				15:15	**15:15**
AM Pk Volume				350	**350**	**PM Pk Volume**				341	**341**
Pk Hr Factor				0.841	**0.841**	**Pk Hr Factor**				0.797	**0.797**
7 - 9 Volume	0	0	0	509	**509**	**4 - 6 Volume**	0	0	0	624	**624**
7 - 9 Peak Hour				07:45	**07:45**	**4 - 6 Peak Hour**				16:30	**16:30**
7 - 9 Pk Volume	0	0	0	350	**350**	**4 - 6 Pk Volume**	0	0	0	323	**323**
Pk Hr Factor	0.000	0.000	0.000	0.841	**0.841**	**Pk Hr Factor**	0.000	0.000	0.000	0.859	**0.859**

Prepared by NDS/ATD

VOLUME

Bellevue Ave W/O Burgess Dr

Day: Thursday
Date: 4/6/2023

City: Santa Rosa
Project #: CA23_080080_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,193	0	3,193

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			6		6	12:00			46		46
00:15			1		1	12:15			41		41
00:30			4		4	12:30			37		37
00:45			2	13	2 13	12:45			47	171	47 171
01:00			3		3	13:00			38		38
01:15			3		3	13:15			43		43
01:30			0		0	13:30			54		54
01:45			2	8	2 8	13:45			35	170	35 170
02:00			1		1	14:00			52		52
02:15			3		3	14:15			51		51
02:30			1		1	14:30			50		50
02:45			2	7	2 7	14:45			68	221	68 221
03:00			2		2	15:00			105		105
03:15			4		4	15:15			124		124
03:30			2		2	15:30			93		93
03:45			10	18	10 18	15:45			87	409	87 409
04:00			1		1	16:00			74		74
04:15			8		8	16:15			81		81
04:30			1		1	16:30			59		59
04:45			11	21	11 21	16:45			54	268	54 268
05:00			9		9	17:00			42		42
05:15			16		16	17:15			52		52
05:30			12		12	17:30			58		58
05:45			29	66	29 66	17:45			65	217	65 217
06:00			17		17	18:00			31		31
06:15			19		19	18:15			46		46
06:30			23		23	18:30			31		31
06:45			43	102	43 102	18:45			32	140	32 140
07:00			48		48	19:00			24		24
07:15			46		46	19:15			20		20
07:30			60		60	19:30			21		21
07:45			89	243	89 243	19:45			16	81	16 81
08:00			100		100	20:00			18		18
08:15			122		122	20:15			29		29
08:30			109		109	20:30			24		24
08:45			81	412	81 412	20:45			12	83	12 83
09:00			50		50	21:00			7		7
09:15			30		30	21:15			11		11
09:30			41		41	21:30			10		10
09:45			33	154	33 154	21:45			12	40	12 40
10:00			41		41	22:00			16		16
10:15			33		33	22:15			8		8
10:30			35		35	22:30			6		6
10:45			34	143	34 143	22:45			6	36	6 36
11:00			29		29	23:00			9		9
11:15			38		38	23:15			4		4
11:30			38		38	23:30			2		2
11:45			47	152	47 152	23:45			3	18	3 18
TOTALS			1339		1339	TOTALS			1854		1854
SPLIT %			100.0%		41.9%	SPLIT %			100.0%		58.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,193	0	3,193

AM Peak Hour			07:45		07:45	PM Peak Hour			15:00		15:00
AM Pk Volume			420		420	PM Pk Volume			409		409
Pk Hr Factor			0.861		0.861	Pk Hr Factor			0.825		0.825
7 - 9 Volume	0	0	655	0	655	4 - 6 Volume	0	0	485	0	485
7 - 9 Peak Hour			07:45		07:45	4 - 6 Peak Hour			16:00		16:00
7 - 9 Pk Volume	0	0	420	0	420	4 - 6 Pk Volume	0	0	268	0	268
Pk Hr Factor	0.000	0.000	0.861	0.000	0.861	Pk Hr Factor	0.000	0.000	0.827	0.000	0.827