City of Petaluma, California
Memorandum

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DATE: May 9, 2019

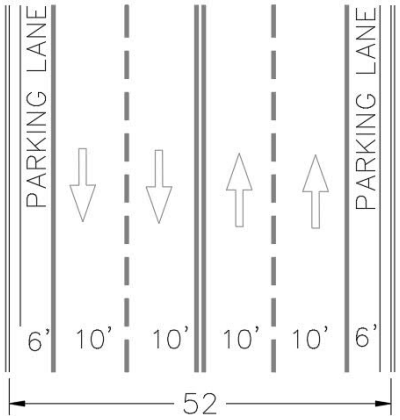
TO: Outreach

FROM: Jeff Stutsman, Senior Civil Engineer

SUBJECT: Petaluma Boulevard South Road Diet Project

Petaluma Boulevard South Road Diet Project is Petaluma Boulevard South from E Street to Crystal Lane. The project consists of a road diet to reduce the existing four lanes to three lanes with the third lane being a two way left turn lane (TWLTL). The project will include reconstruction of Petaluma Boulevard South, construction of curb extensions, ADA curb ramps, Rectangular Rapid Flashing Beacons (RRFB), signal modifications and new striping.

Petaluma Boulevard South is 52’ from face of curb to face of curb and includes four-10’ travel lanes and two-6’ parking lanes.

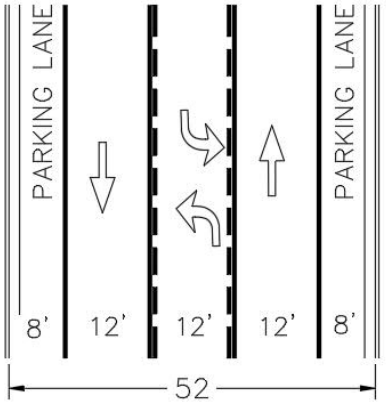


- Per the Caltrans Highway Design Manual (HDM) (Index 301.1) the minimum lane width on a two lane and multi-lane highways shall be 12’unless the speed is less than 40 mph and AADTT (truck volume) is less than 250 per lane can be 11’. The Highway Design Manual also references AASHTO, A Policy on Geometric Design of Highway and Streets and states that lane widths can vary from 9’ to 12’ and generally 12 is predominant for most high speed, high volume roadways. Based on the volume, speed and truck volume 11’ should be the minimum lane width for Petaluma Boulevard South.
- Per the Caltrans Highway Design Manual (405.2) the minimum lane width for a TWLTL shall be 12’.
- Per the Caltrans Highway Design manual minimum class II bikeway width shall be 4’ and 5’ adjacent to parking.
- Per Caltrans Design Information Bulletin (DIB) 89 a class IV bike lane shall be 5’ for one direction and 8’minimum / 10’ preferred for a two-way path. Buffer width shall be 3’minimum with flexible posts and 2 minimum with an inflexible physical barrier.

Based on the existing right of way width, there are three proposed layout options:

Option 1: Road Diet, No Bike Lane (Class III)

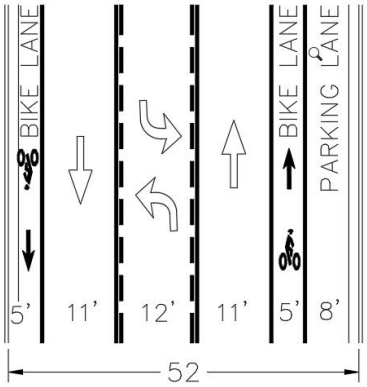
This option would reduce the four travel lanes to three lanes with 12' travel lanes, 12' TWLTL and 8' parking Lanes from Mountain View Avenue to E Street. This option would include Class III bike route



- ✓ Exceeds the minimum travel lane width Requirement.
- ✓ Meets the minimum TWLTL width Requirement.
- ✓ Meets the minimum parking lane width Requirement.

Option 2: Road Diet with Bike Lane (Class II)

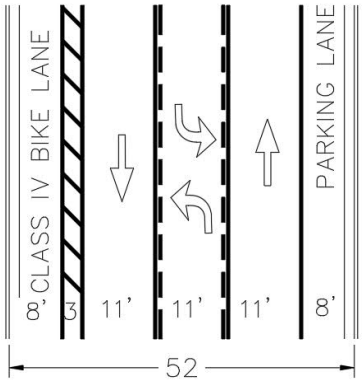
This option would reduce the four travel to three lanes with 11' travel lanes, 12' TWLTL , 8' parking lane and 5' class II bike lane from Mountain View Avenue to H St. This option would require parking removal on the north side of Petaluma Boulevard from Mountain View Avenue to H Street.



- ✓ Meets the minimum travel lane width requirement.
- ✓ Meets the minimum TWLTL width requirement.
- ✓ Meets the minimum bike lane width requirement.
- ✓ Meets the minimum parking lane width requirement.

Option 3: Road Diet With Protected Bike Lane (Class IV)

This option would reduce the four travel lanes to three lanes with 11' travel lanes, 11' TWLTL , 8' parking lane and 8' two-directional protected class IV bike lane utilizing flexible posts from Mountain View Avenue to H St. This option would require parking removal on the north side of Petaluma Boulevard from Mountain View Avenue to G Street. Enhanced striping thru the intersection would be required for bike crossings.



- ✓ Meets the minimum travel lane width requirement.
- ✗ Does not meet the minimum TWLTL width requirement.
- ✓ Meets the minimum protected bike lane width and buffer space width requirement.
- ✓ Meets the minimum parking lane width requirement.

Parking Removal

Parking removal would be on the north side (industrial side) of Petaluma Boulevard South from Mountain View Avenue to H St. Parking Removal would be necessary to install a bike lane within the limits. Based on the parking study that was done March 6, 2019, this section of roadway was underutilized. In the peak hour, only 5 cars utilize on-street parking. See **Attachment A** for Parking Study. Parking on the south side (residential side) would remain.

Existing Bike Network

Based off the Proposed and Existing Bicycle Facilities from the Petaluma General Plan 2025 (See **Attachment B** for Network Map):

- G St is an existing Class III Bike Route
- I St is an existing Class III Bike Route
- Mountain View Avenue is an existing Class III Bike Route
- 6th St is an existing Class III Bike Route
- 2nd St is an existing Class III Bike Route
- McNears Avenue is a proposed Class II Bike Route

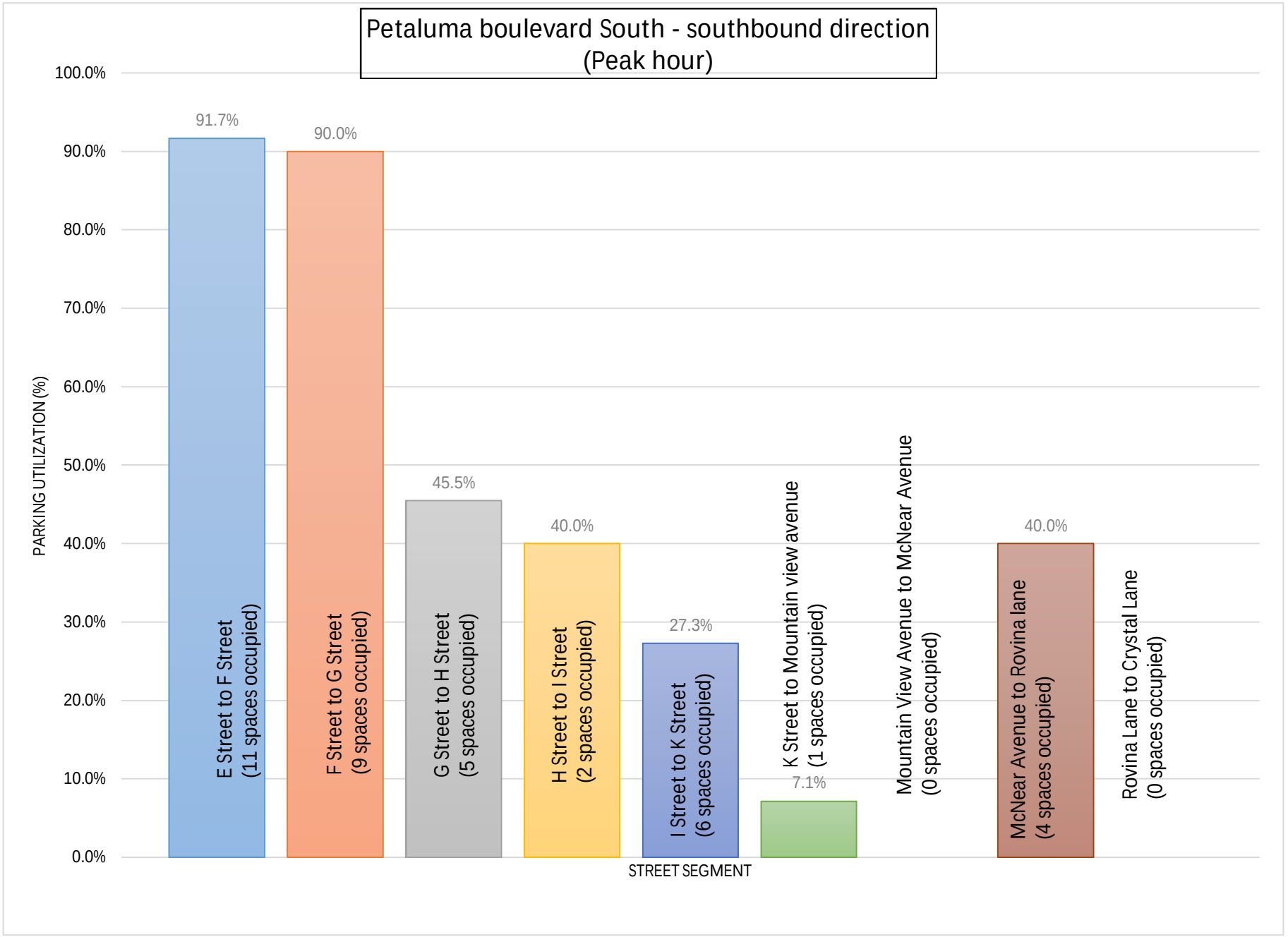
2nd Street , H Street and Petaluma Boulevard South are apart of the Sonoma-Marin Area Rail Transit Multi-Use Path Alignment and the route to Lynch Creek Trail.

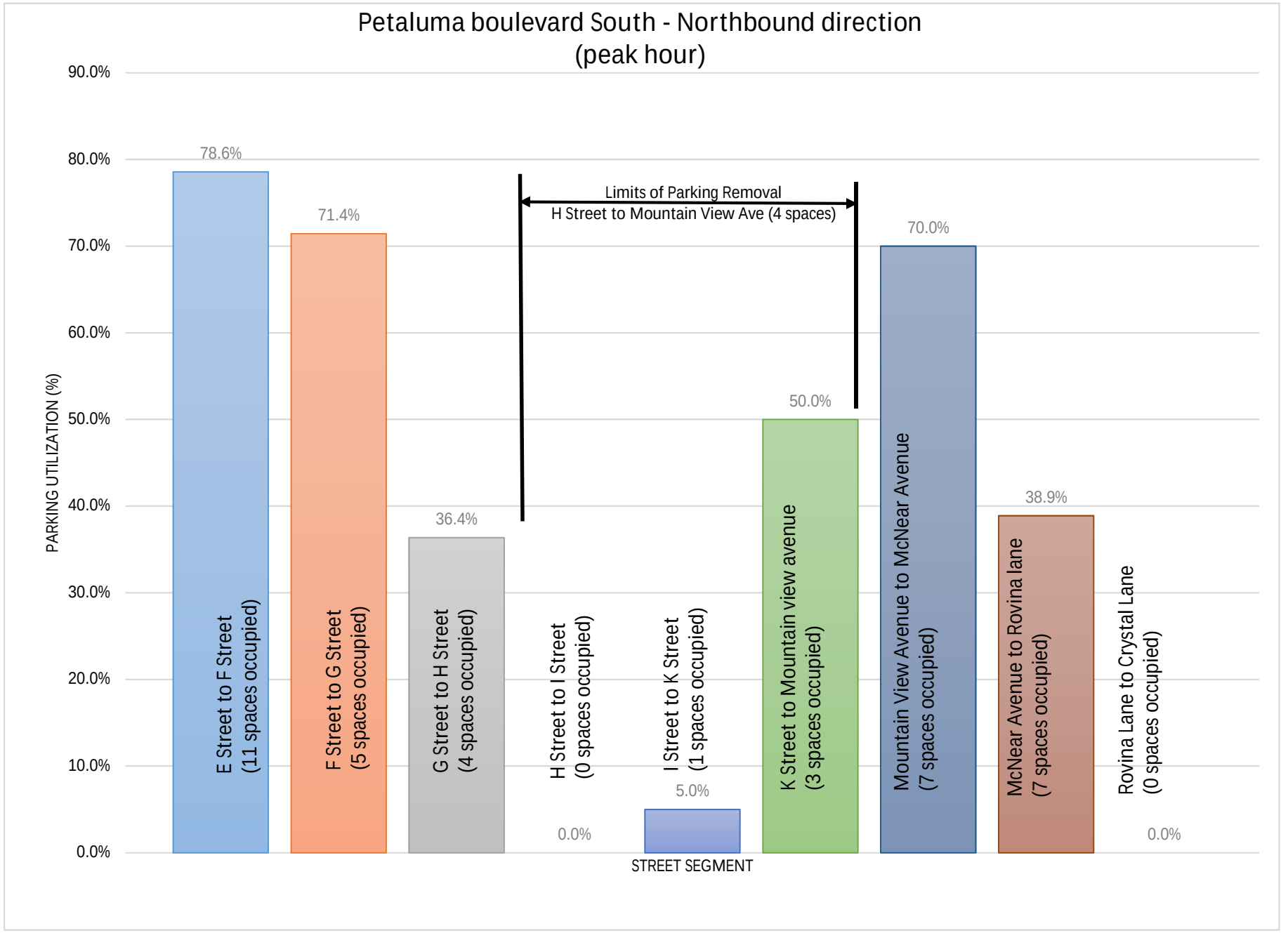
Petaluma Boulevard South
E Street to Crystal Lane
Parking Occupancy (Pre Project, Existings)
Date: 3/6/19 Weather: Overcast / Rain

	Time Period Counted		9:00 - 10:00		10:00 - 11:00		11:00 - 12:00		12:00 - 1:00		1:00 - 2:00		2:00 - 3:00		3:00 - 4:00		4:00 - 5:00	
	Block	Available Spaces	Occupancy Stalls	%	Occupancy Stalls	%	Occupancy Stalls	%	Occupancy Stalls	%	Occupancy Stalls	%	Occupancy Stalls	%	Occupancy Stalls	%	Occupancy Stalls	%
Petaluma Blvd South (Southbound)	E Street to F Street	12	2	16.7%	7	58.3%	9	75.0%	11	91.7%	8	66.7%	7	58.3%	6	50.0%	6	50.0%
	F Street to G Street	10	1	10.0%	8	80.0%	9	90.0%	8	80.0%	6	60.0%	6	60.0%	7	70.0%	7	70.0%
	G Street to H Street	11	4	36.4%	4	36.4%	5	45.5%	2	18.2%	2	18.2%	5	45.5%	2	18.2%	3	27.3%
	H Street to I Street	5	2	40.0%	2	40.0%	1	20.0%	2	40.0%	2	40.0%	1	20.0%	1	20.0%	2	40.0%
	I Street to K Street	22	6	27.3%	4	18.2%	5	22.7%	4	18.2%	4	18.2%	4	18.2%	6	27.3%	7	31.8%
	K Street to Mountain View Ave	14	0	0.0%	1	7.1%	0	0.0%	1	7.1%	0	0.0%	0	0.0%	0	0.0%	1	7.1%
	Mountain View Ave to McNear Ave	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	McNear Ave to Rovina Lane	10	2	20.0%	3	30.0%	3	30.0%	3	30.0%	3	30.0%	4	40.0%	3	30.0%	2	20.0%
	Rovina Lane to Crystal Lane	1	0	0.0%	0	0.0%	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
		85	17	20.0%	29	34.1%	33	38.8%	31	36.5%	25	29.4%	27	31.8%	25	29.4%	28	32.9%

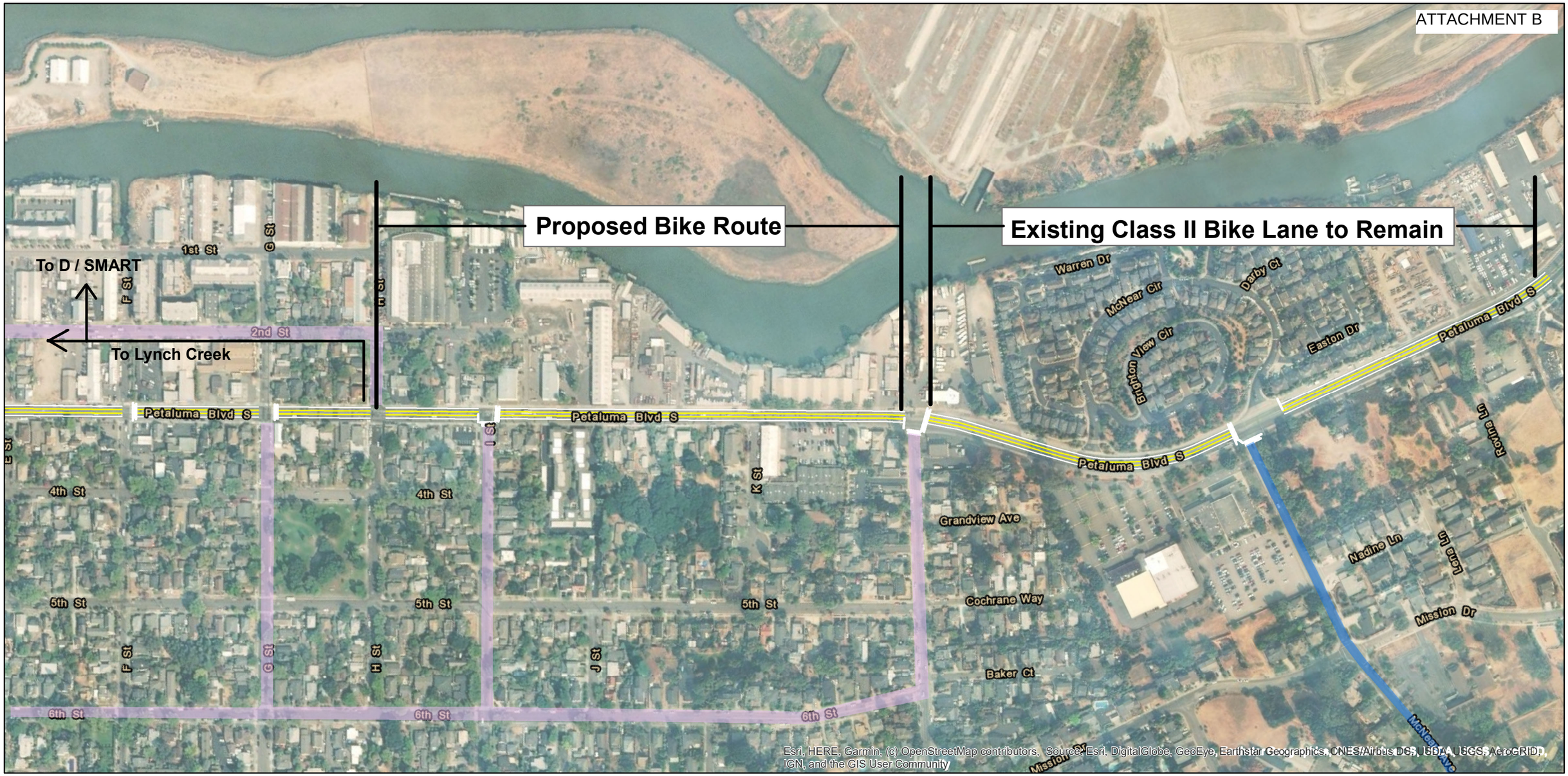
	Time Period Counted		9:00 - 10:00		10:00 - 11:00		11:00 - 12:00		12:00 - 1:00		1:00 - 2:00		2:00 - 3:00		3:00 - 4:00		4:00 - 5:00	
	Block	Available Spaces	Occupancy Stalls	%	Occupancy Stalls	%	Occupancy Stalls	%	Occupancy Stalls	%	Occupancy Stalls	%	Occupancy Stalls	%	Occupancy Stalls	%	Occupancy Stalls	%
Petaluma Blvd South (Northbound)	E Street to F Street	14	5	35.7%	8	57.1%	9	64.3%	11	78.6%	10	71.4%	5	35.7%	6	42.9%	4	28.6%
	F Street to G Street	7	2	28.6%	5	71.4%	3	42.9%	3	42.9%	2	28.6%	2	28.6%	2	28.6%	2	28.6%
	G Street to H Street	11	0	0.0%	1	9.1%	2	18.2%	3	27.3%	2	18.2%	4	36.4%	3	27.3%	0	0.0%
	H Street to I Street	3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
	I Street to K Street	20	1	5.0%	1	5.0%	1	5.0%	1	5.0%	1	5.0%	1	5.0%	1	5.0%	1	5.0%
	K Street to Mountain View Ave	6	3	50.0%	3	50.0%	3	50.0%	3	50.0%	3	50.0%	3	50.0%	3	50.0%	2	33.3%
	Mountain View Ave to McNear Ave	10	7	70.0%	6	60.0%	5	50.0%	4	40.0%	4	40.0%	3	30.0%	3	30.0%	5	50.0%
	McNear Ave to Rovina Lane	18	7	38.9%	5	27.8%	6	33.3%	6	33.3%	6	33.3%	5	27.8%	6	33.3%	5	27.8%
	Rovina Lane to Crystal Lane	0	0	0.0%	0	0.0%	1	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
		89	25	28.1%	29	32.6%	30	33.7%	31	34.8%	28	31.5%	23	25.8%	24	27.0%	19	21.3%

Notes: total available parking and utilization rates for Petaluma Blvd South pre project, existing


Petaluma boulevard South - southbound direction
(Peak hour)
PARKING UTILIZATION (%)
100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
91.7%
90.0%
45.5%
40.0%
27.3%
7.1%
40.0%
E Street to F Street (11 spaces occupied)
F Street to G Street (9 spaces occupied)
G Street to H Street (5 spaces occupied)
H Street to I Street (2 spaces occupied)
I Street to K Street (6 spaces occupied)
K Street to Mountain view avenue (1 spaces occupied)
Mountain View Avenue to McNear Avenue (0 spaces occupied)
McNear Avenue to Rovina lane (4 spaces occupied)
Rovina Lane to Crystal Lane (0 spaces occupied)
STREET SEGMENT


Petaluma boulevard South - Northbound direction
(peak hour)
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
PARKING UTILIZATION (%)
78.6%
71.4%
36.4%
0.0%
5.0%
50.0%
70.0%
38.9%
0.0%
Limits of Parking Removal
H Street to Mountain View Ave (4 spaces)
E Street to F Street
(11 spaces occupied)
F Street to G Street
(5 spaces occupied)
G Street to H Street
(4 spaces occupied)
H Street to I Street
(0 spaces occupied)
I Street to K Street
(1 spaces occupied)
K Street to Mountain view avenue
(3 spaces occupied)
Mountain View Avenue to McNear Avenue
(7 spaces occupied)
McNear Avenue to Rovina lane
(7 spaces occupied)
Rovina Lane to Crystal Lane
(0 spaces occupied)
STREET SEGMENT

ATTACHMENT B

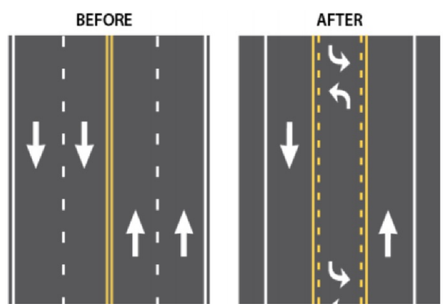


Petaluma Boulevard South Road Diet

Network Map

Existing Class II

Existing Class III



EXAMPLE OF TWO-WAY CLASS IV PROTECTED BIKE LANE

ATTACHMENT C