



Discussion of Roundabouts Along Victoria Avenue

Public Works Department

Transportation Committee
October 11, 2018

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BACKGROUND

1. On February 8, 2018 a resident requested that the Transportation Committee investigate use of a roundabout at Victoria Avenue and Washington Street;
2. On May 10, 2018, the Transportation Committee requested that Staff prepare a report to preliminarily assess a roundabout at this intersection, and at other locations along Victoria Avenue.



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VICTORIA AT WASHINGTON ASSESSMENT

Alternatives:

1. No Build / Expansion
2. Traffic Signal
3. Roundabout

Study Areas:

1. Operations
2. Design & Cost
3. Safety
4. Historical / Environmental



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ROUNDBABOUTS: GENERAL INFORMATION

1. Differ from neighborhood traffic circles and rotary intersections;
2. Designed to reduce the severity of collisions and encourage free-flowing operations; and
3. Recommended by the Federal Highway Administration and California Department of Transportation.



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OPERATIONAL ANALYSIS

Level of Service Analysis: Victoria Ave + Washington St						
	No Build		Traffic Signal*		Roundabout*	
	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
AM Peak Hour	19.1	C	20.2	C	24.4	C
PM Peak Hour	62.8	F	25.9	C	31.3	D**

*To achieve these levels of service, an additional left turn lane is needed at the traffic signal, and a northbound right turn lane is recommended for the roundabout.

** Can be improved to 'C' with additional turn lanes.



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SAFETY ANALYSIS

1. 10 Year Collision History: 10 total collisions with 5 Injury collisions;
2. Collisions include three broadside collisions, one head-on, three rear-end, and one sideswipe. Three involved pedestrians / bicyclists; and
3. The FHWA has found that a roundabout, when compared to stops/signals, can reduce collisions by 72-82%.



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DESIGN & COST

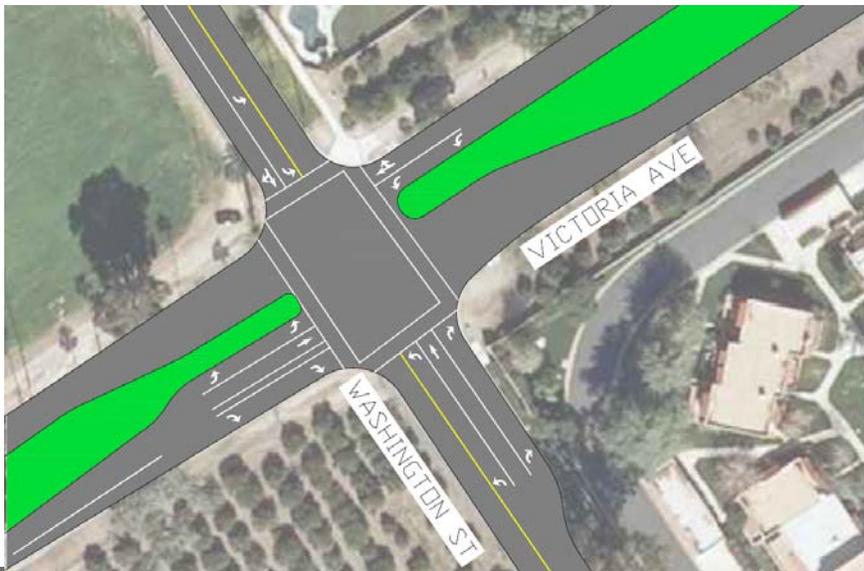
1. Traffic Signal Cost: \$400,000;
2. Roundabout Cost: \$400,000 - \$450,000;
3. Long term maintenance of a roundabout significantly less costly. Roundabouts also save time, gas, and reduce emissions; and
4. Roundabouts can accommodate emergency & large vehicles.



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SIGNAL CONCEPTUAL PLAN



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ROUNDBOUT CONCEPTUAL PLAN



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ROUNDBOUT RIGHT TURN BYPASS



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HISTORICAL & ENVIRONMENTAL REVIEW

1. Victoria Avenue is listed in the National Historic Register and is designated as a City Landmark;
2. The Cultural Heritage Board will require a Certificate of Appropriateness for either alternative, and a Cultural Resources Report would be prepared; and
3. An Environmental Impact Report would fully assess potential impacts. ~\$100,000.



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MULTIPLE ROUNDABOUT LOCATIONS

1. Locations with reduced traffic demand will operate more efficiently;
2. A corridor with multiple roundabouts creates consistent speeds and consistent driver expectation; and
3. The same potential for historical & environmental impacts exists at intersections adjacent to Washington Street.



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RECOMMENDATION

That the Transportation Committee:

1. Receive a report on traffic control alternatives at the intersection of Victoria Avenue & Washington Street; and
2. Provide direction on whether staff should pursue funding, alternative study, design, and implementation of alternative traffic control at Victoria Avenue & Washington Street.

