



**City of Santa Barbara**  
**Transportation & Circulation Committee**  
*Staff Report*

**DATE:** March 23, 2017

**TO:** Transportation & Circulation Committee (TCC) Members

**FROM:** Robert J. Dayton, Transportation and Parking Manager  
Peter Brown, Mobility Coordinator

**SUBJECT:** US 101 Castillo Interchange Improvements

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**RECOMMENDATION**

1. That the Committee receive a report on the California Department of Transportation's (Caltrans) plans to address pavement and safety issues at the US 101 - Castillo Street Interchange, and
2. Recommend that the City Council send a letter to District 5 and Caltrans Headquarters requesting a permanent fix and interchange reconstruction project become a top regional priority.

**BACKGROUND**

In 1961 Caltrans completed the construction of a seal slab concrete bridge to separate Castillo Street from US 101, which had been, up until that point, an at-grade intersection. The interchange is constructed within the water table, which requires it to be sealed so that water does not leak onto the sidewalk and roadway. The original construction began leaking water in its first decade. The constant presence of water on the sidewalk and roadway, even during times of drought, became a safety issue for vehicles, cyclists, and pedestrians. Slippery conditions have led to rear end collisions, cyclist's bike tires slipping out, and pedestrian falls. The collision record since the pavers project was installed in 2015 shows a doubling of collisions related to the surface conditions. Caltrans has tried to address these safety and drainage issues with various projects over time, without any lasting success. The table below, provided by Caltrans, summarizes safety and drainage-related projects over the last 20 years.

Summary of US 101 Castillo Interchange construction projects:

Date	Project Number	Description	Costs	
1961	(Expenditure Authorization)	Seal Slab constructed	Constructed	Considered
1970's		New drainage system and pavement modifications		
4/3/1996		Assigned Bridge Number		
1997	05-417501	Install Trench Drain at back of sidewalk, place OGAC	\$500,000	
1999	05-496501	Concrete Pavers	\$111,000	
September 2001	05-49290k	PSSR developed to look at replacing seal slab.		\$21,000,000*
September 2006	05-0M7204	Electronic Osmotic Pulse	\$3,375,000	
July 2015	05-1F6101	Reinstall Pavers	\$850,137	
June 2017	05-1H950_	PCC Bridge Overlay with Geosynthetic Sheet Drain (Pending Authorization and Funding)		\$1,800,000
Total			\$4,836,137	
*Current estimates for complete interchange reconstruction exceed \$100 million dollars.				

Since July of 2015, when the concrete paver project was completed, inadequate drainage has remained an issue within the interchange. The pavers were intended to allow water to pass down below the street surface. This has not occurred. The road surface remains wet and small shifts in paver location has created a difficult condition for road users, especially those traveling on bicycle. The bicycle collision rate has increased measurably, as gaps have widened in the pavers, and the road surface remains slick year round between Haley and Montecito Streets. Both the City of Santa Barbara and Caltrans have acknowledged that the current condition is unacceptable and Caltrans required the interchange to be closed to bicyclists.

Caltrans is now proposing a “floating slab” project that will create a new drainage system to capture the water beneath the street surface. This project would replace the concrete pavers with a smooth, dry concrete surface. If it remains dry, this will result in an improved condition for all road users, but especially for people traveling by bicycle. Caltrans Headquarters is in the process of making the final determination as to whether the project can be funded and constructed. If funded, the project could be constructed this summer. City staff have informed Caltrans that June through September is the best construction time frame since the largest neighborhood trip generator, the Santa Barbara City College, will be in summer session at that time and traffic impacts could be minimized.

As is apparent in the table above, Caltrans has been focused on low-cost temporary fixes to the interchange that in many cases, have not proven successful over for any substantial period of time. City of Santa Barbara Transportation and Engineering staff expressed concerns about the lack of viability for the 2015 paver fix. While costs and complexity of a full interchange replacement project have grown, Caltrans and City staff both admit that such a replacement is warranted within the coming decade or so. The interchange, now nearly 60 years old, no longer meets the current vehicle, bicycle, and pedestrian demands. The on- and off-ramp intersections have a poor level of service, the southbound off-ramp is currently backing up onto the mainline freeway at peak hours, and the northbound on-ramp is not long enough to queue cars during each signal phase when the freeway is stop and go. An interchange replacement project will take a decade to plan, develop, and fund. The time to begin the planning process is now. Staff is recommending that City Council send a letter to Caltrans and the Santa Barbara County Association of Governments, expressing the need for commitment to move forward with a permanent solution now.

RD/PB/mj