DECISION DOCUMENT

Senate Bill 1 – Definition of "Fix Bridge" and Baseline Establishment

Problem Statement. Senate Bill 1 (SB1) includes a performance requirement to "Fix not less than an additional 500 bridges" over a 10 year period ending in 2027. The performance measure implies that a baseline number of bridges that were being fixed before SB1 must be established. In order to establish the baseline and to report on SB1 accomplishments, the definition of "Fix Bridge" must be documented.

Recommendation. The following categories of activities comprise the recommended definition of "fix bridge" for the purposes of SB1 measurement and reporting.

Bridge Health
Any project that improves the condition of the bridge from a lesser condition to a better condition shall be counted as a fixed bridge. In terms of adopted performance metrics this would be any project that improves the condition from fair to good or poor to fair or good as defined in the National Bridge Inspection Standards.

Bridge Seismic Restoration
Seismic restoration projects either update obsolete seismic retrofit elements of previously retrofitted bridges or address newly identified seismic vulnerabilities to provide adequate seismic safety. These seismic vulnerability mitigation projects shall be counted as fixed bridges.

Bridge Scour Mitigation
Bridge scour can threaten a structure by erosion of the foundation soil caused by flowing water. Any project that addresses scour vulnerability where bridges have been determined to be unstable for scour conditions shall be counted as fixing a bridge.

Bridge Rail Upgrades
Bridge rail crash test requirements change over time. Any project that replaces a bridge rail that does not meet current federal crash test standards shall be counted as a fixed bridge.

Bridge Goods Movement Upgrades
Bridges with identified operational limitations for vertical clearance or load capacity may warrant strengthening, raising or replacement to address freight movement needs. Any bridge whose vertical clearance is increased to current Highway Design Manual standards or whose load capacity is increased for permit vehicles shall be counted as a fixed bridge.

To establish a recommended baseline for the defined "fix bridge" criteria, Caltrans reviewed pre-SB1 accomplishments over a five year period as shown in the following table:

	Count of bridges "fixed" by fiscal year of delivery					
Bridge Fix Category	FY 12/13	FY 13/14	FY 14/15	FY 15/16	FY 16/17	**Totals**
Bridge Health	156	81	101	53	102	493
Bridge Seismic Restoration	8	8	7	18	9	50
Bridge Scour Mitigation	5	0	3	2	4	14
Bridge Rail Upgrades	6	10	17	14	14	61
Bridge Goods Movement Upgrade	0	8	3	1	2	14
	Five Year Average Baseline					**126 bridges /year**

Based on the analysis shown in the table above, the recommended baseline of bridges "fixed" prior to the passage of SB1 is 126 bridges per year.

Fiscal Impact. Tracking and reporting of the number of "fixed bridges" will require additional effort at the project level and program levels. The additional effort, while not insignificant, will be addressed through redirection of existing staff currently managing other related information.

Organizational Impact

- **Employee Impact.** This policy will have no organizational impacts.
- **Stakeholder Impact.** This policy is internal to Caltrans and has no stakeholder impacts.

Policy Impact. Caltrans currently measures the benefits of our bridge projects using a number of metrics. Project benefits may be captured in terms of improved condition, reduced vulnerabilities, improved operation or asset preservation as applicable. This policy defines a new metric, "fix bridge", that is an aggregate count of many of the performance metrics already in place. This policy does not propose any changes to the calculation of existing bridge performance measures.

Risks. The definition of how to count "fixed bridges" will influence the baseline, measurement and reporting of this accountability measure for Senate Bill 1. Certain activities performed, such as bridge preservation, may not add to the count of bridges fixed based on the recommended definition.

Proposed Implementation Schedule. This policy will be implemented retroactive to July 1, 2017 for all projects made possible by Senate Bill 1 funding.

Decision Document
SB1 - Definition of "Fix Bridge"

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