



BOARD OF SUPERVISORS
AGENDA LETTER

Agenda Number:

Clerk of the Board of Supervisors
105 E. Anapamu Street, Suite 407
Santa Barbara, CA 93101
(805) 568-2240

Department Name: Public Works
Department No.: 054
For Agenda Of: November 20, 2007
Placement: Departmental
Estimated Tme: 30 minutes total (15 minutes staff)
Continued Item: No
If Yes, date from:
Vote Required: Majority

TO: Board of Supervisors
FROM: Department Scott D. McGolpin, Director of Public Works, 568-3010
Director
Contact Info: Dacé Morgan, Interim Deputy Director, Transportation, 568-3064
SUBJECT: County Bridge Status Update, All Supervisorial Districts

County Counsel Concurrence

As to form: No

Other Concurrence:

As to form: No

Recommended Actions:

That the Board of Supervisors:

Receive an update on the structural integrity of the County's bridge structures (estimated time 30 minutes total, 15 minutes staff).

Summary Text:

Recently the State of Minnesota suffered a catastrophic failure of one of their interstate bridges which resulted in the loss of lives. As a result there has been an increased interest in the condition of bridges across the country and within Santa Barbara County and how they are inspected, maintained, and how ratings are assigned to bridges. The Public Works Department would like to take this opportunity to answer some of these questions your Board may have with regards to the health of the County's bridges.

Bridge Inspection Program within the County of Santa Barbara

The Bridge Inspection Program is a federally mandated program in which each bridge in the State of California is inspected every two years, including those bridges owned by local agencies. A bridge must be at least 20 feet in length to qualify for this inspection program. Of the 122 bridges owned and maintained by the County, 96 bridges are the responsibility of Caltrans to inspect on behalf of the County. The remaining 26 bridges that are less than 20 feet in length are inspected by the County. Each time a bridge inspection is performed by Caltrans, a Bridge Inspection Report (BIR) is created and each

bridge is given a Sufficiency Rating and may also be given a status of Structurally Deficient (SD) or Functionally Obsolete (FO). This rating and status is used by the Federal Highway Administration to indicate whether a bridge is eligible for the "Highway Bridge Program" (CHBP) funds and placed on the "Eligible Bridge List."

The **Sufficiency Rating (SR)** can be considered an overall "health" indicator for the bridge. The condition and characteristics of various elements of the bridge, such as the deck, superstructure, substructure, bridge roadway width etc. are given a rating from 0 to 9 which are then weighted and calculated to determine the bridge's Sufficiency Rating. The Sufficiency Rating is reported as a percentage in which 100 percent would represent an entirely sufficient bridge and zero percent would represent an entirely insufficient or deficient bridge. Essentially, this system of Bridge Inspection attempts to objectively answer the question, "Is this bridge *sufficiently* doing the job it was intended to do?"

A status of **Structurally Deficient (SD)** is based on the ratings given to just a few of the bridge's key elements, such as the condition of the deck, superstructure, substructure, and channel protection. It may indicate that certain aspects of the bridge's structure warrant rehabilitation or replacement and periodic monitoring.

A status of **Functionally Obsolete (FO)** is based on the ratings given to just a few of the bridge's key characteristics and its condition, such as the deck geometry, underclearances, approach roadway alignment, and structural condition. It may indicate that this bridge is not functioning as it was intended to; especially in relation to the traffic corridor it serves.

After Caltrans performs an inspection and completes the Bridge Inspection Report, a copy is sent to the Director of Public Works. As they are received, the reports are thoroughly evaluated by a qualified Bridge Engineer at the County. Typically the report will be compared with the previous report to note any changes in condition or status and any recommended work will be scheduled. Each year the Department sets aside funding for Bridge Maintenance through the Measure D Program of Projects and the Road Maintenance Annual Plan (RdMap) process this allows us to be able to perform any repair work that is required as a result of Caltrans' inspection process or any work that is required as a result of the Department's inspections.

Highway bridges considered Structurally Deficient or Functionally Obsolete *and* with a Sufficiency Rating of 80 or less will be placed on the "Eligible Bridge List." Those bridges appearing on the list with a Sufficiency Rating of less than 50 will be eligible to receive funding for replacement or rehabilitation while those with a Sufficiency Rating of 80 or less will be eligible for rehabilitation.

Of the 96 bridges Caltrans inspects, 28 bridges have a Sufficiency Rating (SR) between 50 and 80 and 7 bridges have a SR less than 50; however, only 3 of these bridges are classified as SD or FO and thus eligible for replacement funding. The remaining 61 bridges have a SR of 80 or greater and are not classified as FO or SD.

Status of Structurally Deficient with an SR less than 50: 2

One of these bridges is programmed for partial replacement and partial seismic retrofit funded 88% by Federal Highway Bridge Program (HBP) funds and 12% by Measure D. A funding request for the replacement of the other bridge is currently being developed for submission to Caltrans.

Status of Structurally Deficient with an SR between 50 and 80: 4

One bridge is programmed for replacement funded 88% by federal HBP funds and 12% by Measure D and one bridge is being programmed for seismic retrofit funded 88% by federal HBP Seismic Retrofit funds and 12% from Proposition 1B. Funding requests for the other two bridges are currently being developed.

Status of Functionally Obsolete with an SR less than 50: 1

This bridge is currently being replaced. It is funded with 88% Federal HBP Funds and 12% Measure D.

Status of Functionally Obsolete with an SR between 50 and 80: 4

One bridge is programmed for a seismic retrofit funded 88% by Federal HBP Seismic Retrofit funds and 12% from Proposition 1B. Funding requests for the other three bridges are currently being developed.

In addition, the County also has an ongoing Bridge Seismic Retrofit program. Caltrans identified 12 County bridges as being seismically vulnerable. To date, 5 of the 12 bridges have been replaced or retrofitted. The remaining 7 bridges are in various stages of the seismic retrofit design process and will be funded 88% by Federal HBP Seismic Retrofit funds and 12% from Proposition 1B.

Caltrans performs subsequent inspections for those bridges that are susceptible to scour and steel bridges that have members that are critical to the functionality of the bridge. County staff has prepared lists of those structures that could be vulnerable in a storm or an earthquake. These structures are inspected prior to, and during, the rainy season and after an earthquake.

Overall, the County's bridges are in very good condition. One reason for this is that the Department has been able to leverage Measure D funds to match the Federal HBP funds. The Department realizes that our bridge structures are a vital component to our transportation infrastructure and therefore, we take a very proactive approach in maintaining our bridges. Our County Bridge Engineer often accompanies Caltrans personnel during their inspections of our bridges, so that any problems that are identified can be corrected quickly.

Background:

The tragic collapse of the I-35 West Bridge in the State of Minnesota has put a renewed focus on the health of bridge structures across the entire country. The purpose of this report is to inform your Board of the process that the Department follows with regards to reviewing Bridge Inspection Reports (BIRs) provided by Caltrans and how aggressively the Department seeks funding for the repair, rehabilitation and maintenance of its bridge structures.

Fiscal and Facilities Impacts:

Budgeted: N/A

Fiscal Analysis:

<u>Funding Sources</u>	<u>Current FY Cost:</u>	<u>Annualized On-going Cost:</u>	<u>Total One-Time Project Cost</u>
General Fund			
State			
Federal			
Fees			
Other:			
Total	\$ -	\$ -	\$ -

Narrative:

The County is able to fund the replacement, rehabilitation and necessary maintenance to our bridges through the use of Measure D Funds. As stated above, in most cases, a 12% investment of Local

Measure D Funds will leverage 88% in Federal Highway Administration (FHWA) Funds for the entire engineering and construction costs of a bridge project. If Measure D is not renewed at the current level to local agencies or a replacement funding source is not identified, we will not be able to replace, rehabilitate or perform necessary maintenance on our bridge structures. This could result in the posting of weight limits on some structures and the closure of others.

Staffing Impacts:

Legal Positions:
None

FTEs:
None

Special Instructions:

Please forward a certified, stamped copy of the Minute Order approving these recommendations to Public Works Department, Transportation Division, Engineering Section, Attn: Beverly Cross

Attachments:

Santa Barbara County Eligible Bridge List

Authored by:

Dacé Morgan, Interim Deputy Director – Transportation, 568-3064