State of California
DEPARTMENT OF TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: LOURDES DAVID
Senior Resident Engineer
SFOBB Corridor

Date: August 18, 2005

File: 04-SF-80-KP 12.6/13.2
04241 0120R4
South - South Detour

From: TRINH LAI
Project Engineer
Office of Toll Bridge Design

Subject: Analysis of Incorporating Drop-Through to Provide Deck Drainage

The Office of Toll Bridge Design recommends a change order be written to address water encroachment onto the traveled way. After consulting with Hydraulics, HQ Geometric Design, and Right of Way, we recommend an analysis be performed by the Contractor given the below parameters:

a) The deck drainage system (drainage inlets, pipes, etc) as submitted by Imbsen and Associates remains in place.
b) The Class 1 restriction as specified in Design Criteria No. 8 is suspended with exception to the drainage inlet system submitted by Imbsen and Associates. (Item a above)
c) No excess water is transferred from the existing structure to the Temporary Bypass Structure at the east-tie-in and west-tie-in.
d) Drop-through (openings through the deck) may be used in conjunction with submitted drainage inlets to improve overall drainage capacity. The dimension of the drop-through may not be wider than 50mm and should be placed longitudinally at the face of the concrete barrier.
e) Water from the upper deck drop-through should be deflected to the outside.
f) Use a 25-year rainfall intensity for all analysis.

With the parameters stated above, perform analysis to provide the following for both the upper deck and lower deck:

1) Location of drop-throughs that can be incorporated in conjunction with the submitted drainage inlets to alleviate water encroachment, without impacting the structure's integrity.
2) Dimensions of the drop-throughs.

RECEIVED
NOV 17 05
00181

3) Detailed drawing of the deflection device for the upper deck drop-throughs and the impact of the device to the lower deck vertical clearance. (Item e above)
4) Calculation and table showing water spread at five-meter increments.
5) Cost estimate to incorporate these changes into the design.

If you have any questions or need additional information please contact me at (510) 286-1046.

c: SHulsebus, KAzarmi, IPerez, BZandipour, DAdams, GLai, MShindler