

---

**From:** Zachariasen, Judith@DOC <Judith.Zachariasen@conservation.ca.gov>

**Sent:** Friday, June 21, 2024 1:43 PM

**To:** VTB Deck Replacement Project <caltransvtb@virtualeventroom.net>

**Cc:** OLRA@DOC <OLRA@conservation.ca.gov>; OPR State Clearinghouse <State.Clearinghouse@opr.ca.gov>

**Subject:** VTB Deck Replacement Project - SCH No. 2023040301

You don't often get email from [judith.zachariasen@conservation.ca.gov](mailto:judith.zachariasen@conservation.ca.gov). [Learn why this is important](#)

Dear Jason Roach,

The California Geological Survey (CGS) has received the Draft Environmental Impact Report (DEIR) for the Vincent Thomas Bridge Deck Replacement Project. This email conveys recommendations from CGS concerning geologic issues related to the project area as addressed in the DEIR.

We note that, despite CGS providing a list of geologic issues that should be considered in development of the DEIR in our response to the Notice of Preparation (NOP), the DEIR has not addressed any of them but instead states that there is no impact to the project from any listed geologic conditions. However, the DEIR describes the project as including “the approach” to the bridge span, and the project map shows the beginning and end points as extending into the land on either side of the span proper. Consequently, several of the geologic hazards that CGS pointed out in our response to the NOP may affect the project. The DEIR should have addressed them and demonstrated whether there is an impact, rather than asserting *a priori* that there is no impact.

CGS, therefore, reiterates the recommendations made in the response the NOP regarding geologic issues related to the project area:

#### 1. Liquefaction Hazards

The bridge abutment area – “the approach” – is located within an earthquake zone of required investigation (ZORI) for liquefaction mapped by CGS. The DEIR and supporting documents should address this hazard as it relates to the design of the proposed structures. Additional information is available at the links below:

<https://maps.conservation.ca.gov/cgs/EQZApp/app/>

[https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?  
map=regulatorymaps](https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps)

#### 2. Ground Shaking Hazards

The project area is not located in an Earthquake Fault Zone mapped by CGS. However, several active faults are nearby, and the site could be subject to significant ground shaking. The DEIR and supporting documents should address this hazard as it relates to the design of the proposed structures. Additional information about ground shaking hazard can be obtained at the following sites:

[https://usgs.maps.arcgis.com/apps/webappviewer/index.html?  
id=14d2f75c7c4f4619936dac0d14e1e468](https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=14d2f75c7c4f4619936dac0d14e1e468)

<https://earthquake.usgs.gov/scenarios/catalog/bssc2014/>

### 3. Surface Fault Rupture Hazard

The project area is not located in an Earthquake Fault Zone mapped by CGS. However, the Latest Quaternary (less than 15,000 years) Palos Verdes Fault Zone has been mapped at or near the abutments of the bridge. CGS will be evaluating this fault for possible inclusion in an Earthquake Fault Zone of Required Investigation in the near future. The DEIR and supporting documents should address potential surface fault rupture hazard as it relates to the design of the proposed structures. Additional information about surface faults can be obtained at the following site:

<https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf>

If you have any additional comments or questions, please feel free to call or email.

Thank you,  
Judy Zachariasen



**Judith Zachariasen, PhD, PG, CEG**

Senior Engineering Geologist  
Fault Zoning Unit Supervisor  
Seismic Hazards Program  
**California Geological Survey**

**California Department of Conservation**

715 P Street, MS 1900, Sacramento, CA 95814

T: (916) 879-2844

E: [judith.zachariasen@conservation.ca.gov](mailto:judith.zachariasen@conservation.ca.gov)