

TTC Bus Ramps

16 November 2010

Bus Ramp Update

- **Demolition in Progress – est. Spring 2011**

- **Final design phase**

- **Turn Box/CHSR Changes**

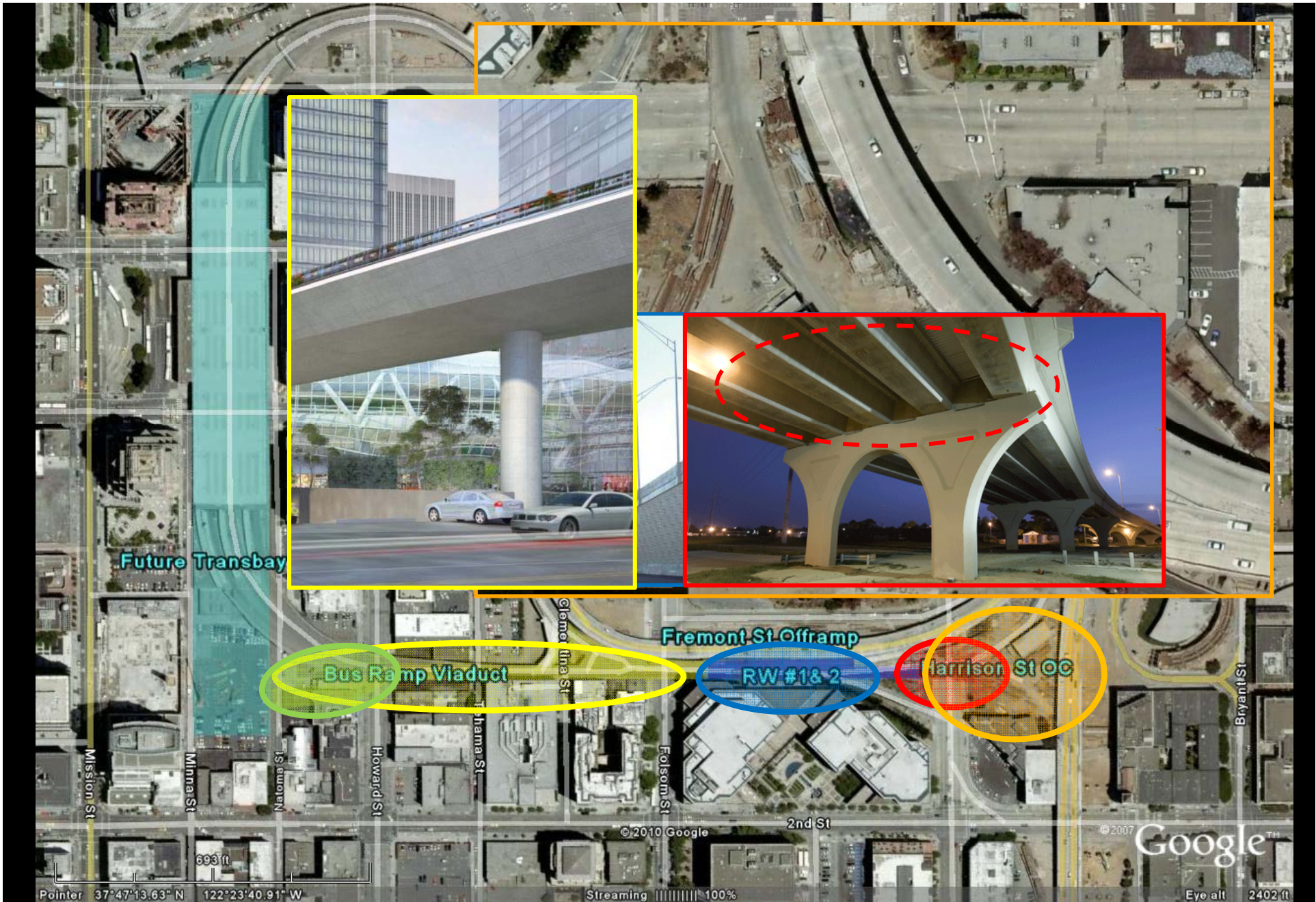
- Stakeholder Review – Planning/SFERA – 10/7/10
- Seismic and Structural Review – 10/11/10
- Advancing Cable Bridge Alternative

- **Cable bridge design development**

- **Schedule**

- **Next steps**

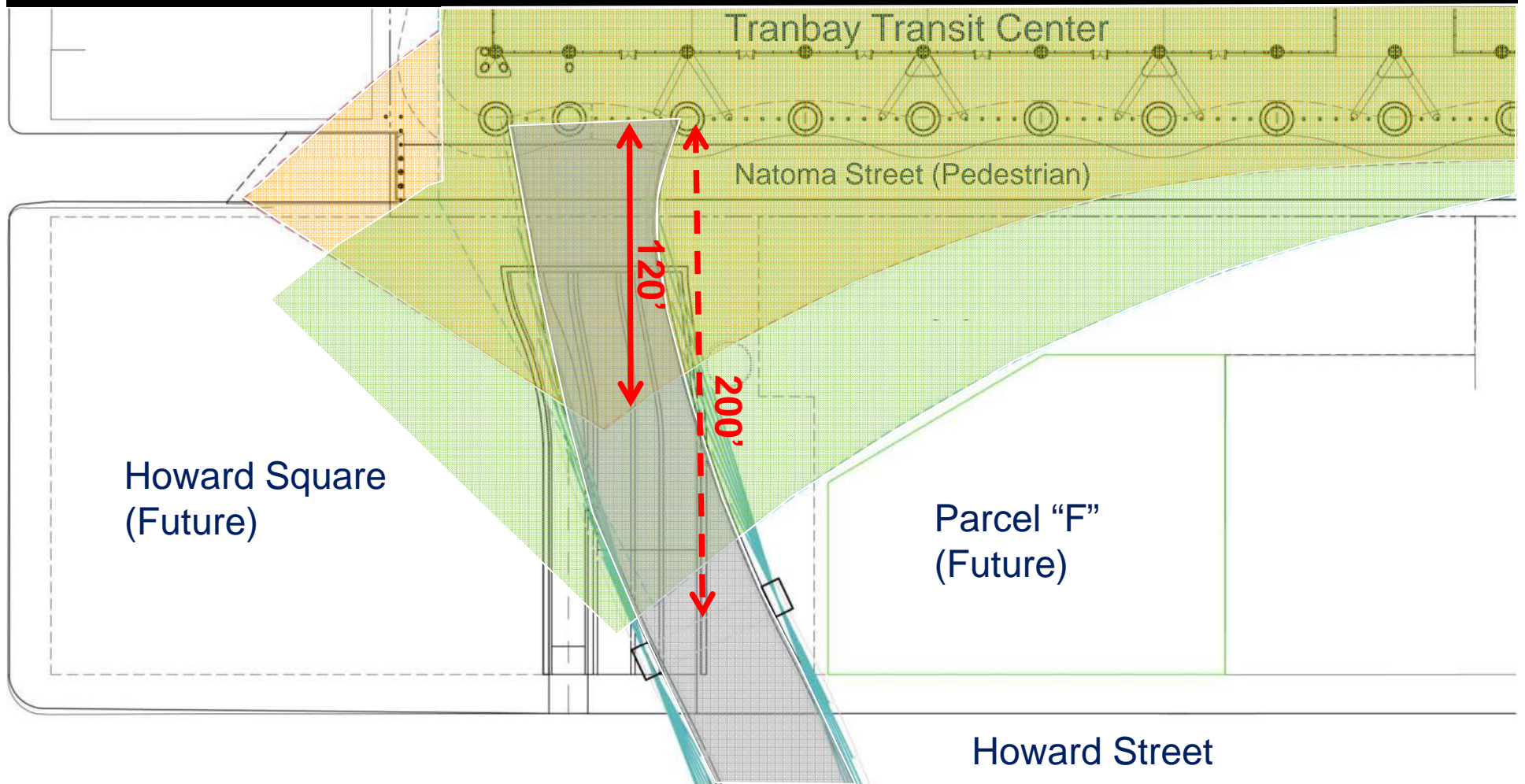




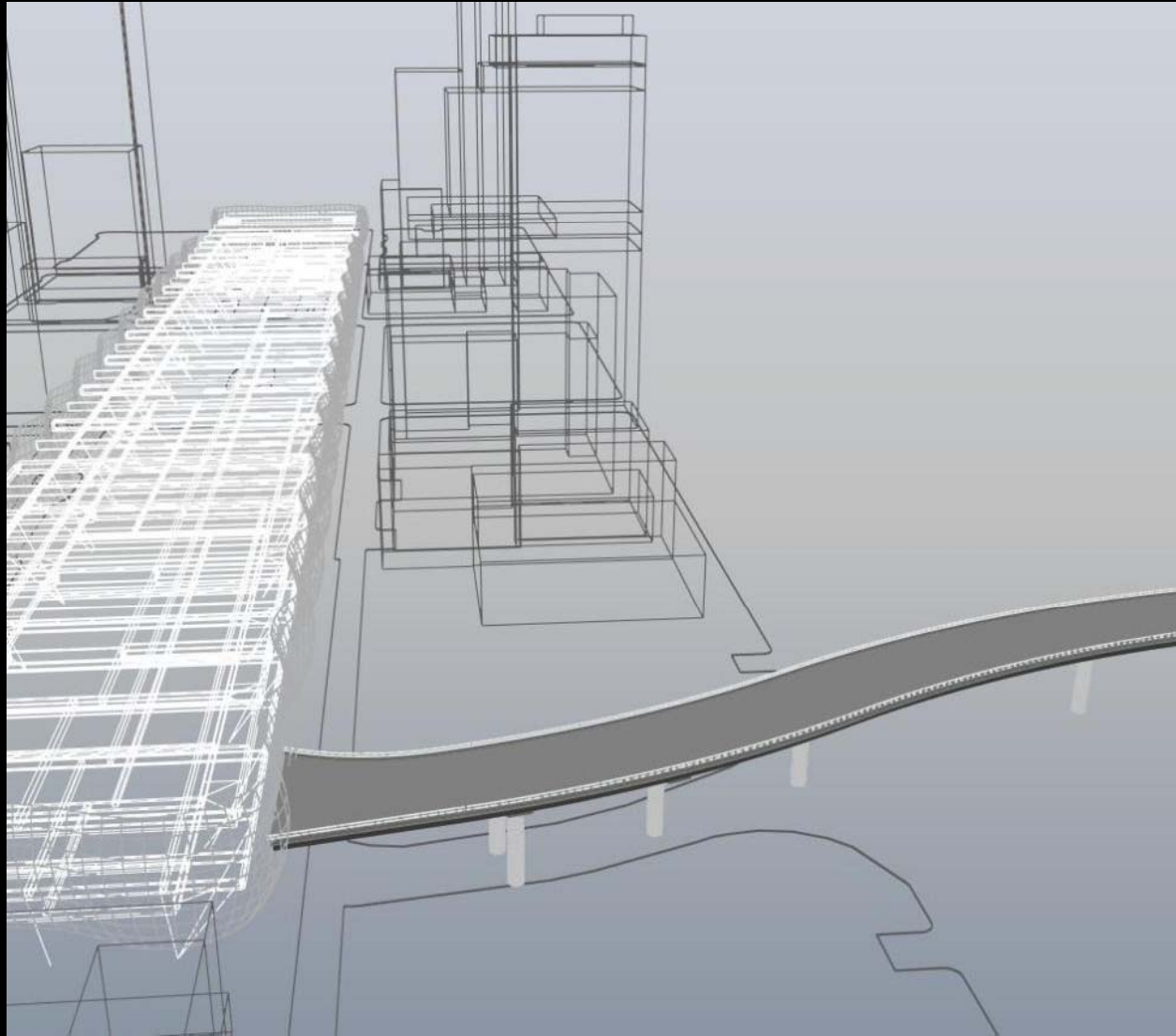
Transit Center Bus Ramps

ARUP

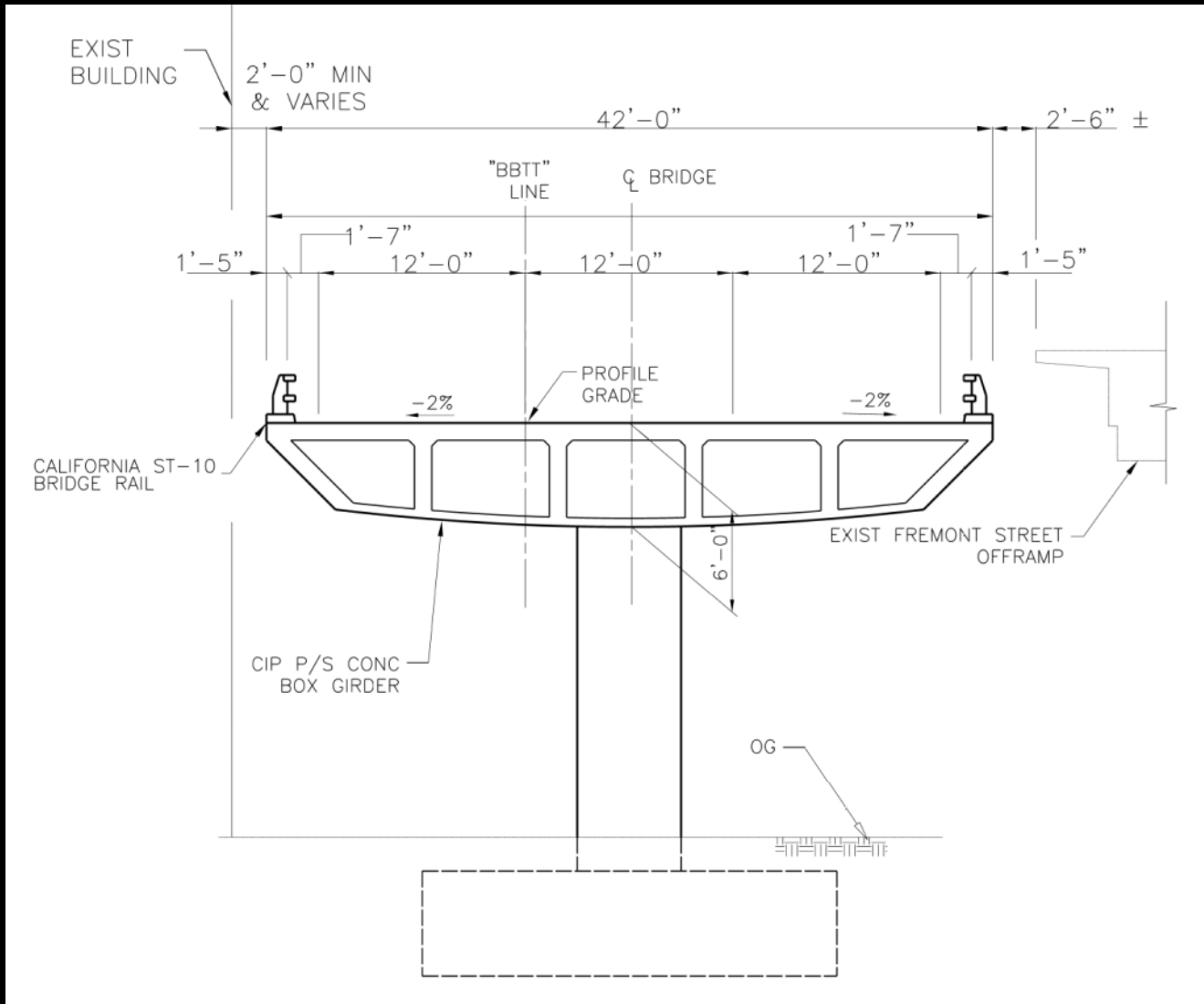
Bus Ramps to TTC



Steel Girder Bridge 3-D Model



Bus Ramp Viaduct (South of Howard) (cont.)

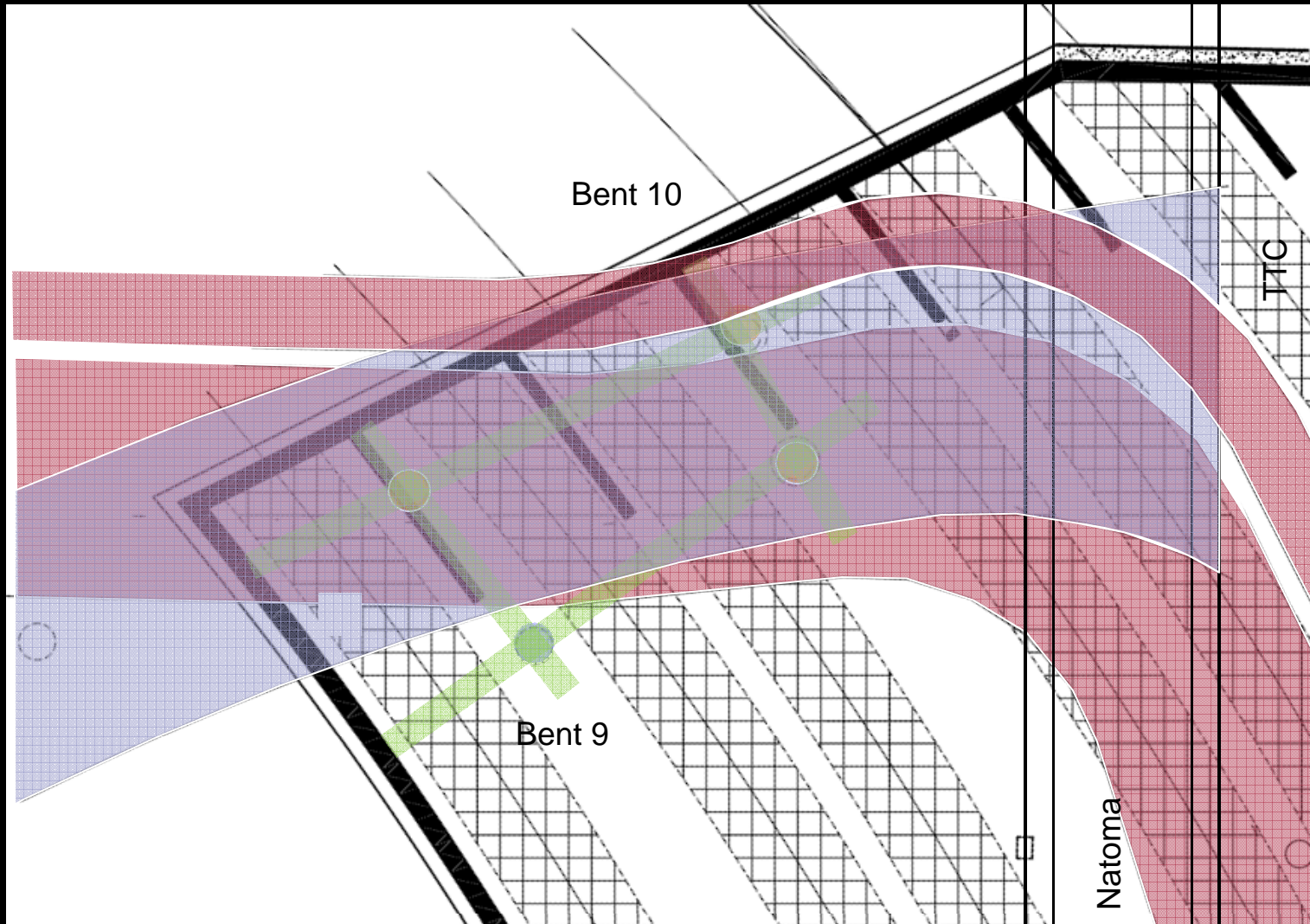




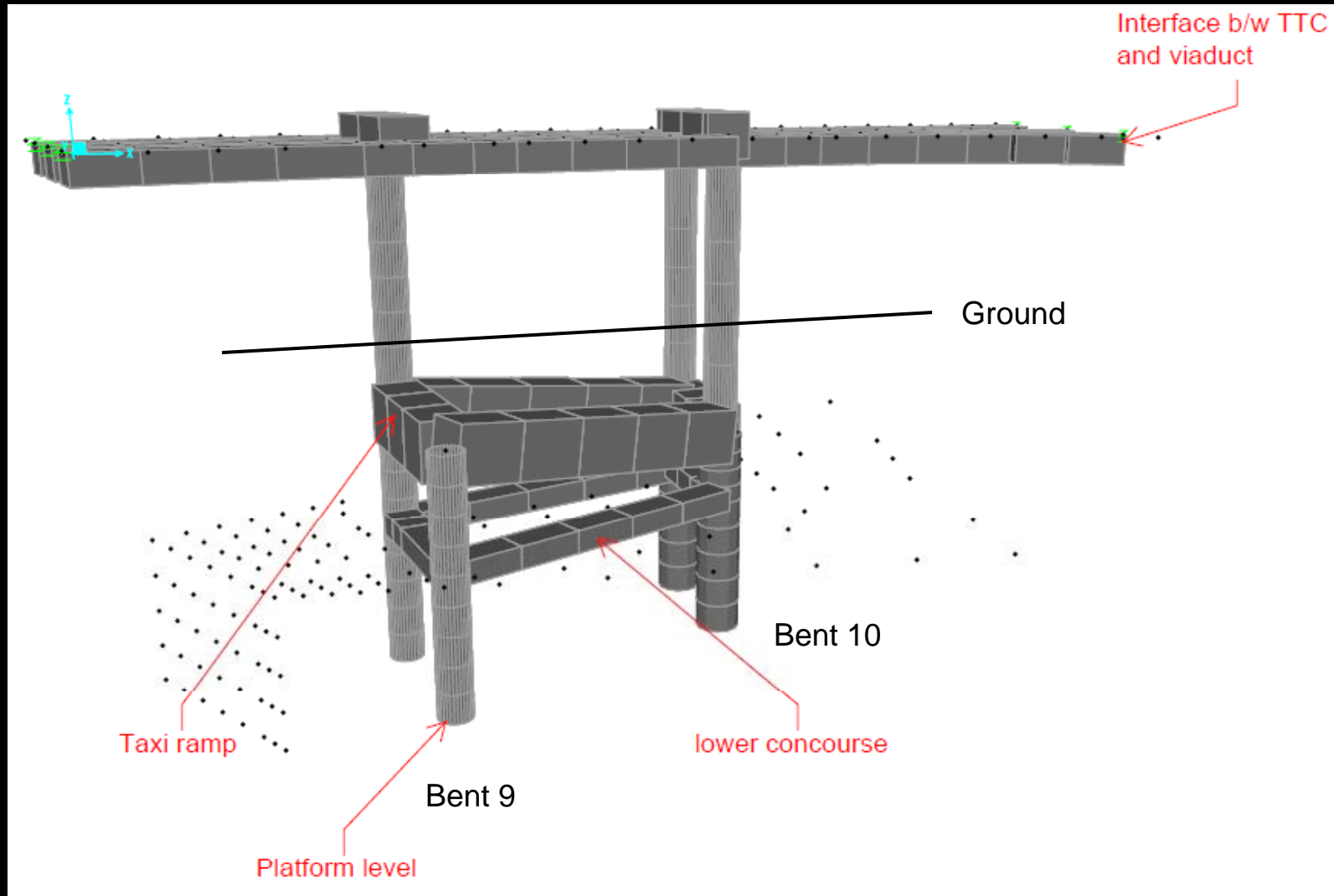
View of Steel Girder Bridge Option

ARUP

Steel Girder Bridge over Train Box



Steel Girder Bridge over Train Box (cont.)

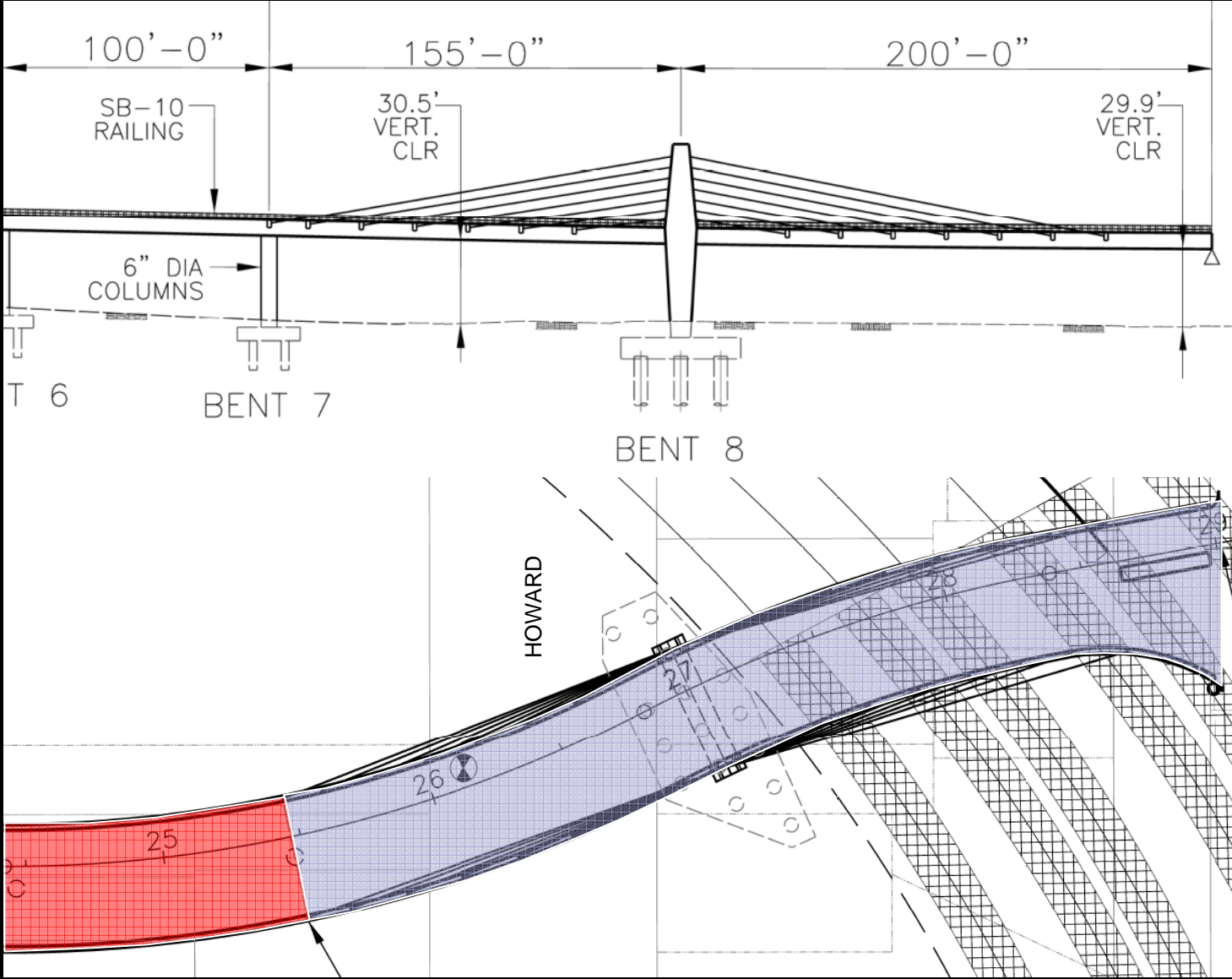




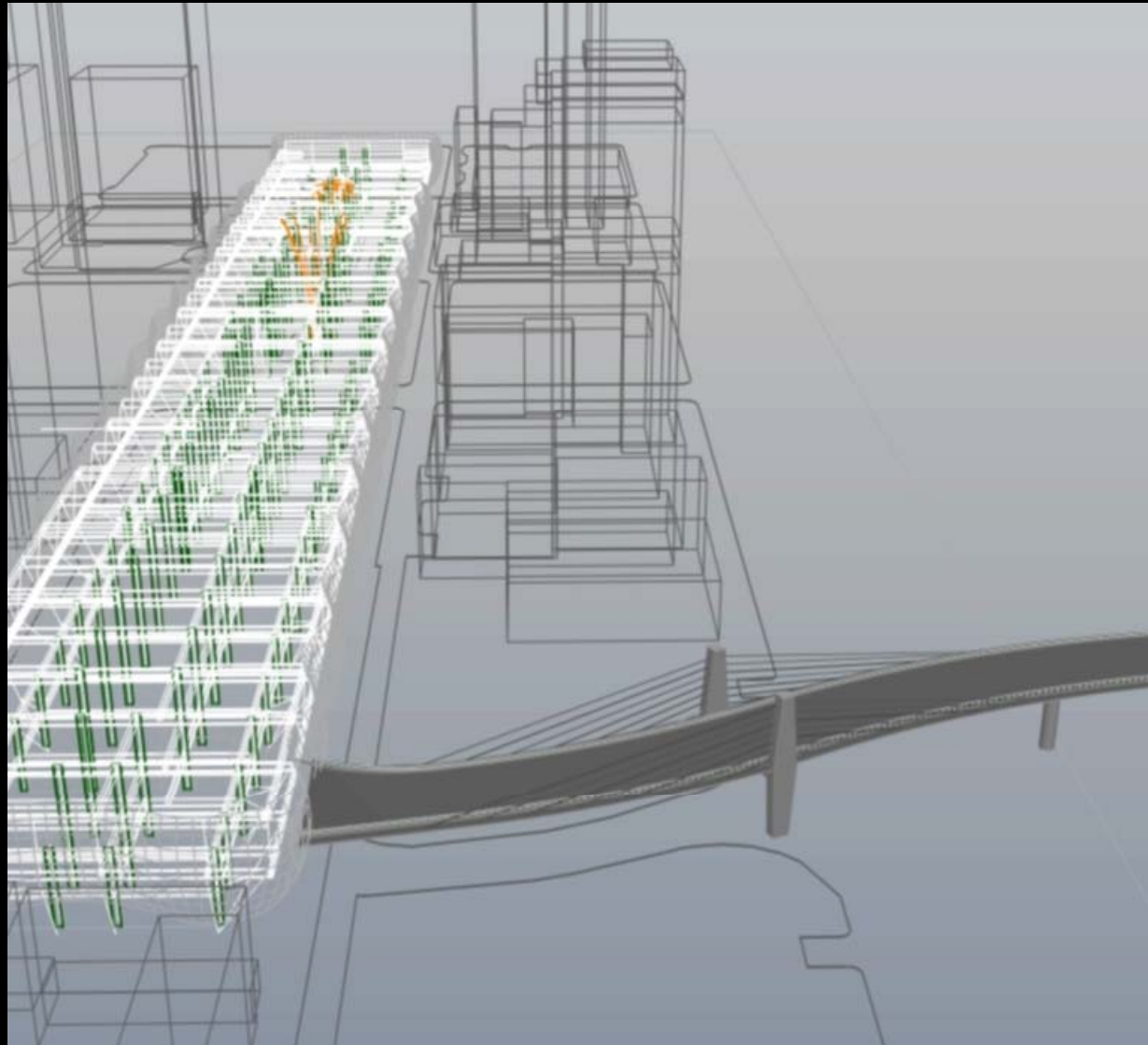
View of Steel Girder Bridge Option

ARUP

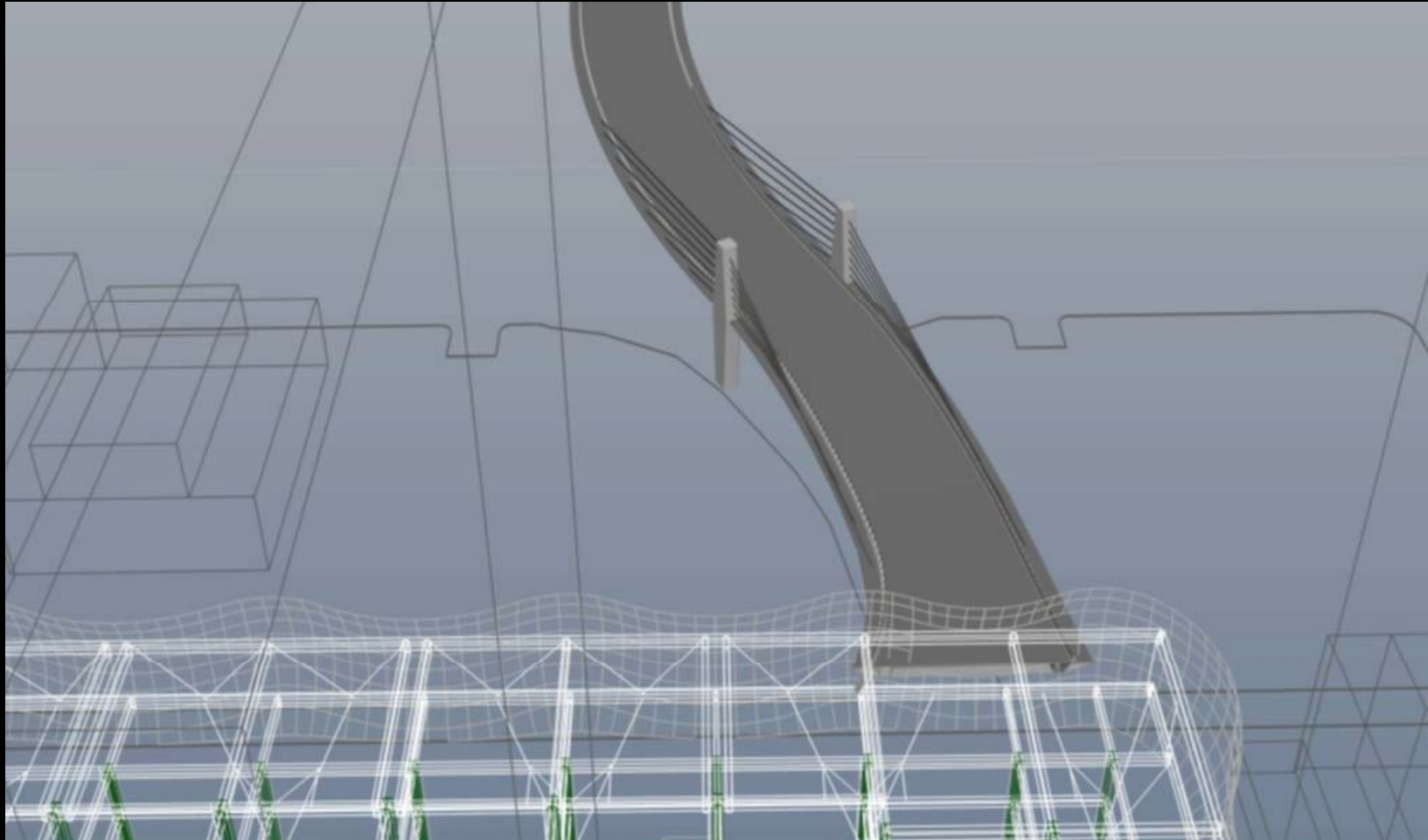
Cable Bridge General Arrangement



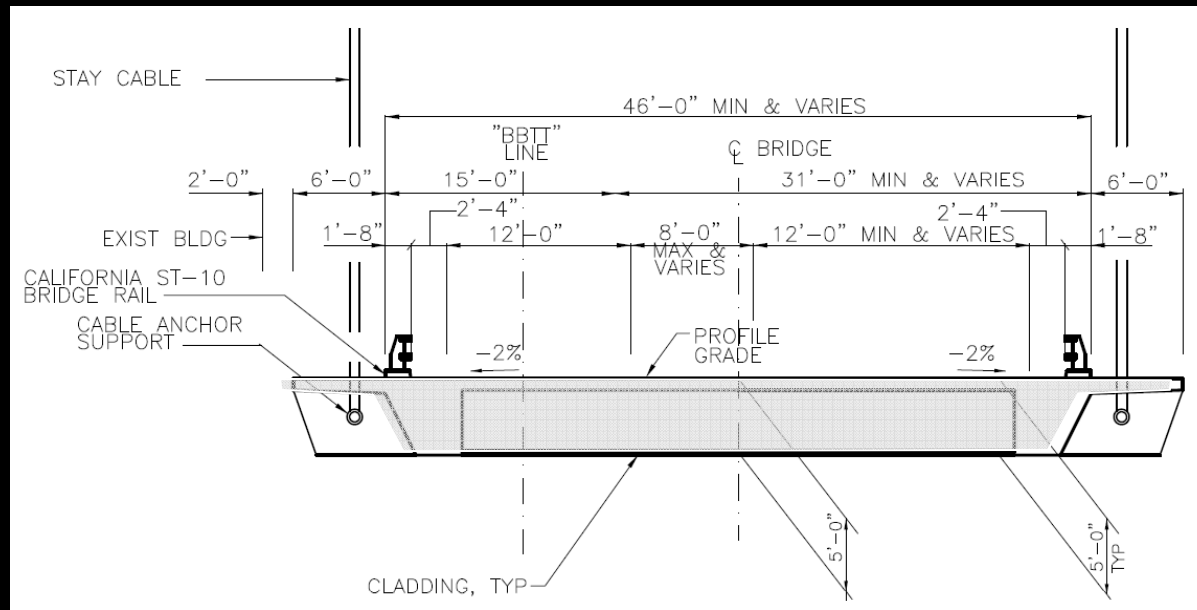
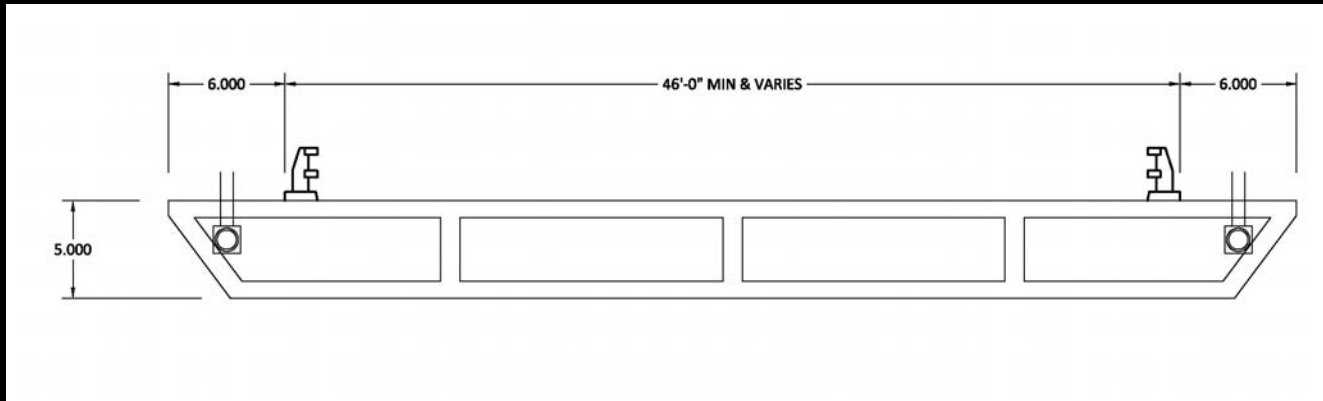
Cable Bridge 3-D Model



Cable Bridge 3-D Model



Cable Bridge Cross Section





View of Cable Bridge Option

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View of Cable Bridge Option

Pelli-Clarke-Pelli Architects

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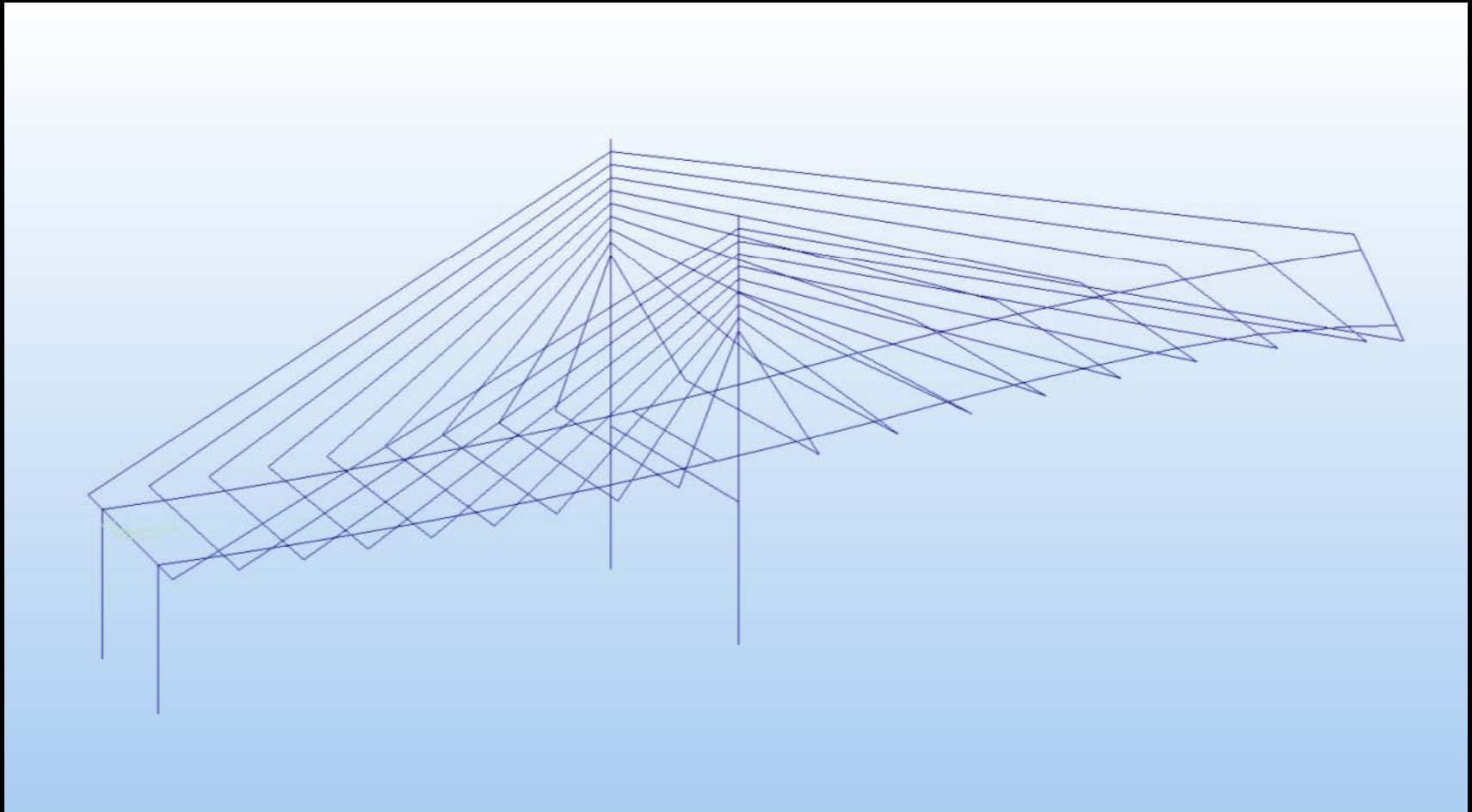
View of Cable Bridge Option

ARUP

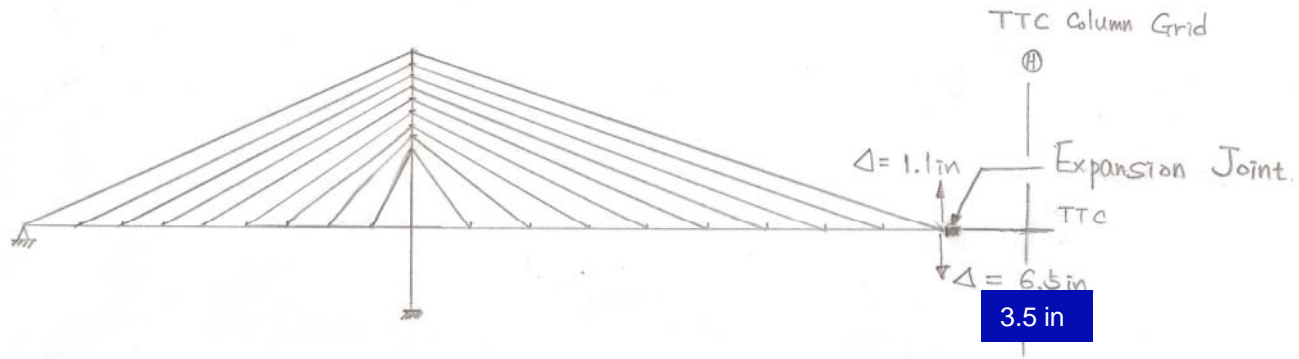


View of Cable Bridge Option

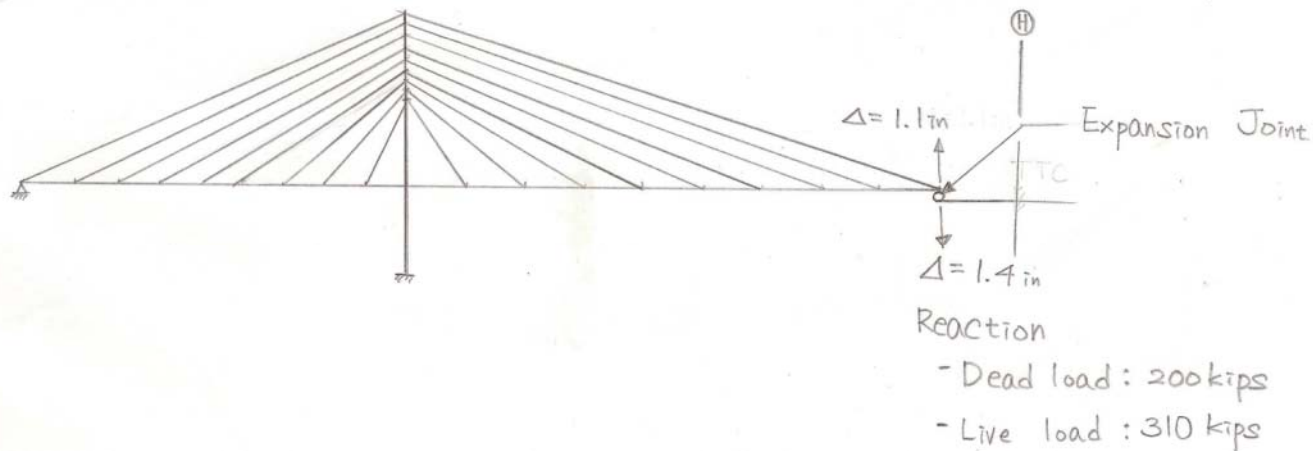
Current Model



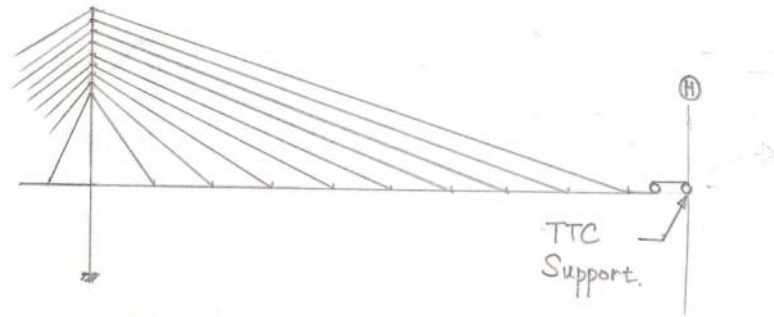
Option 1 : Free cantilever



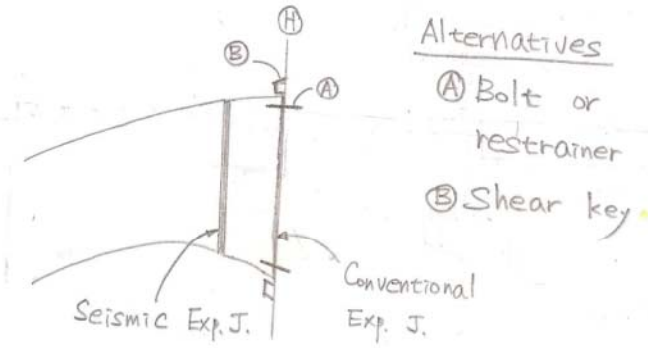
Option 2 : Support from TTC



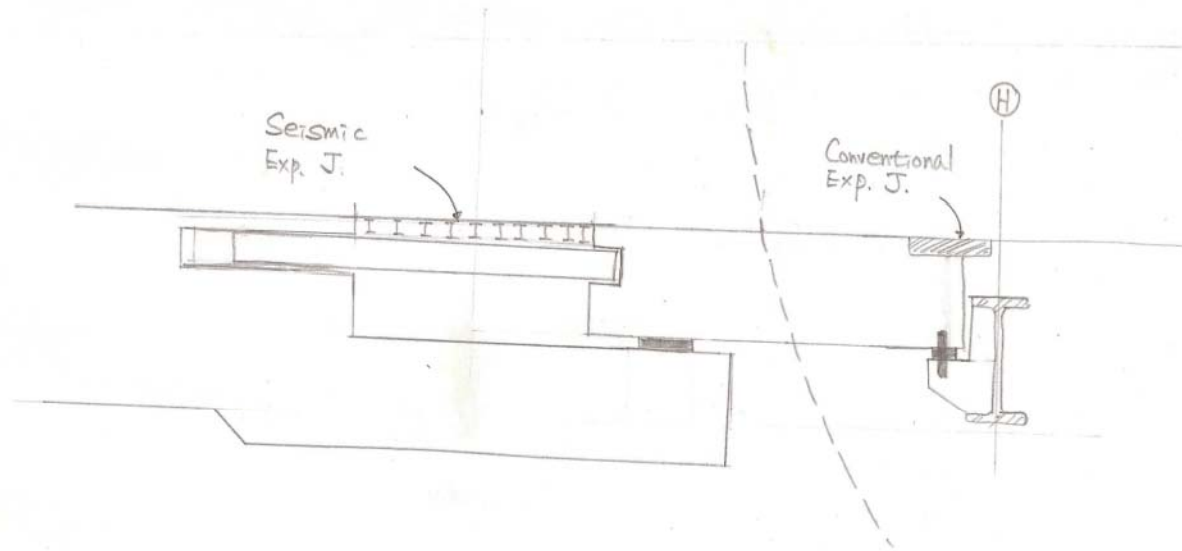
Option 3 : Drop-in section



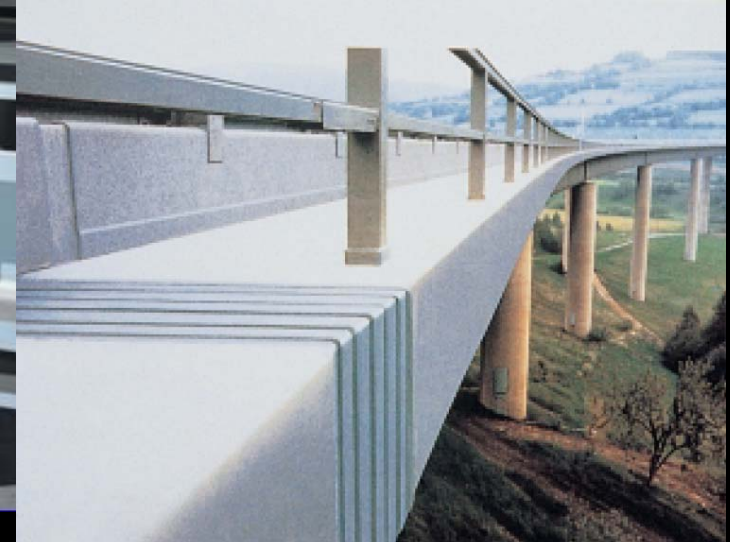
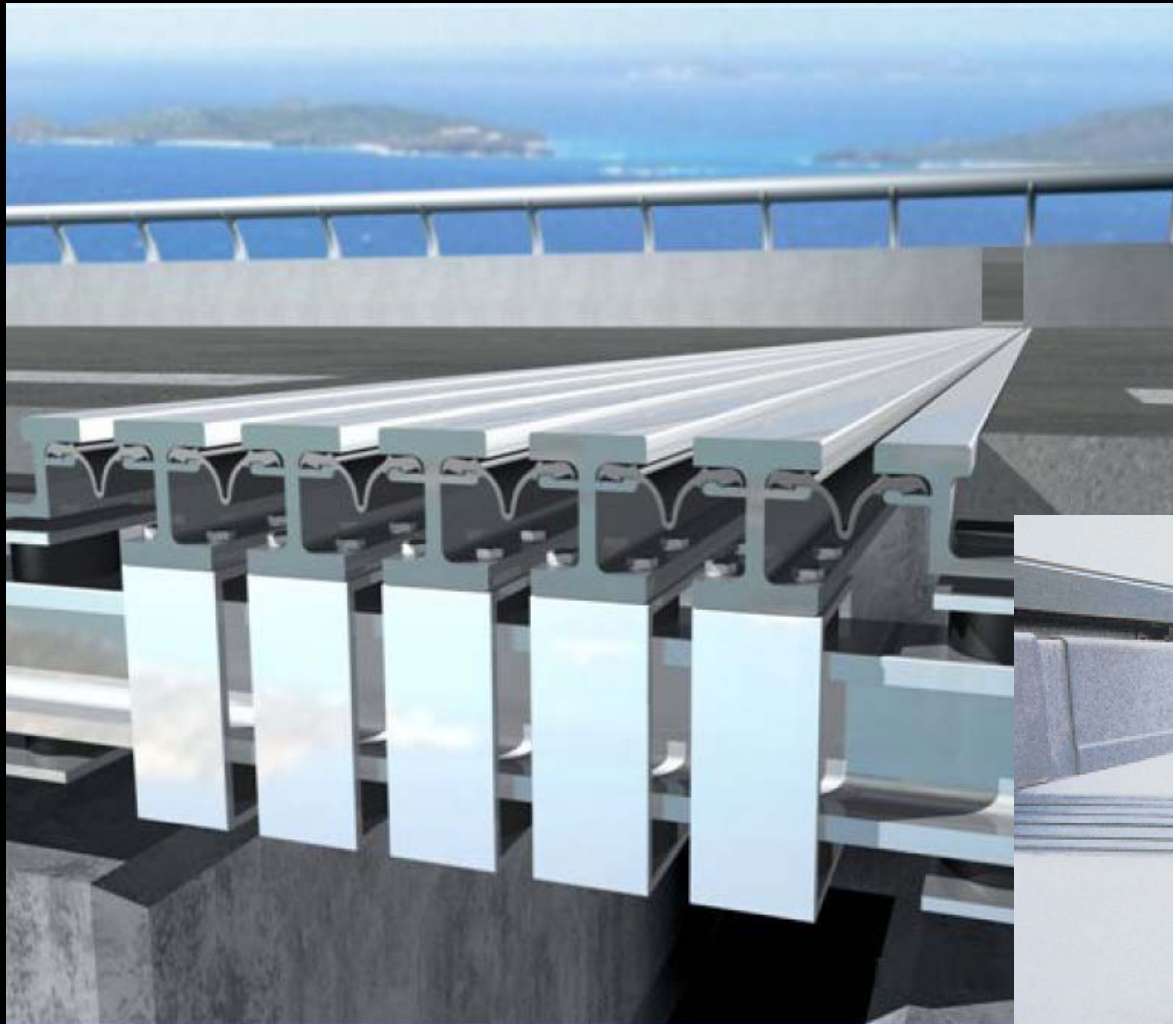
ELEVATION



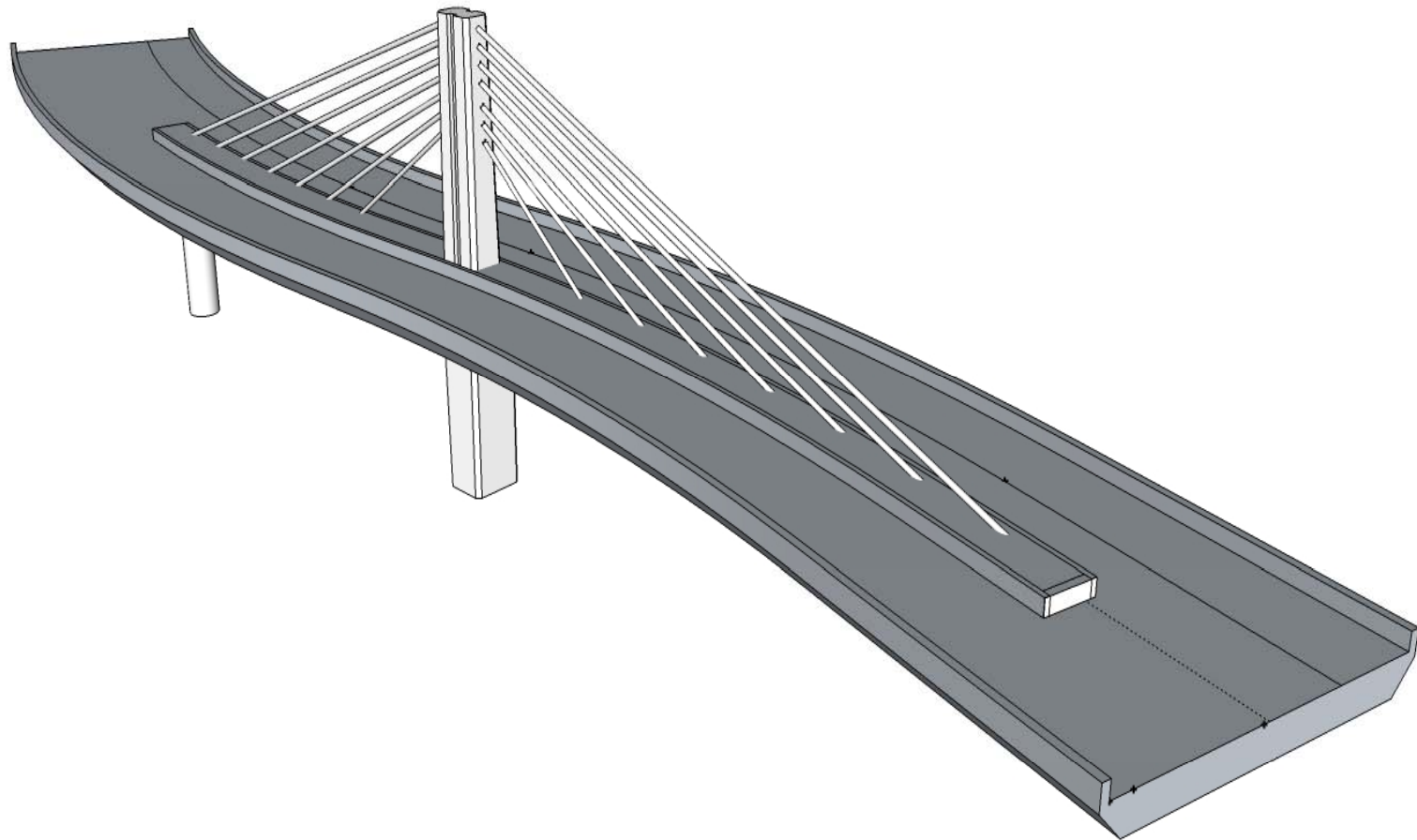
PLAN



Seismic Joint



Single tower option



Schedule Summary

Task	Schedule
Cable Bridge Design Refinements	12/10
65% Design (PS&E)	3/11
100% Design (PS&E)	11/11
TJPA Construction Contract Approval	3/12
Construction	6/12 to 6/15

Next Steps

- **Refine cable bridge design**
- **Caltrans and SSRC design review**
- **Draft Construction Documents**
- **Other adjacent studies**
 - Area under the bus ramps
 - Existing Fremont ramp modifications

Questions?

