

BART Agreement Number: 6M8145

Approval Date: 06/15/21

Work Plan No. B.20-02-Silicon Valley Berryessa Extension Seismic Assessment

2. SCOPE OF SERVICES

2.1 Berryessa Station – Guideway Pile Assessment (Bents 8 to 19)

- 2.1.1 Review relevant project specific design criteria, specifications, geotechnical reports, record drawings, shop submittals, as needed.
- 2.1.2 BART to provide the following items to Jacobs:
 - Geotechnical Data Report (Parikh, March 2011)
 - 65% Design - Zone 7 (Sta. 506+00 to 562+00) Preliminary Geotechnical Report (Parikh, December 2005)
 - Other geotechnical engineering design reports related to pile foundations at Bents 8 thru 19
- 2.1.3 Compute section properties, plastic moment capacities of columns ($M-\phi$), shear capacities of columns.
- 2.1.4 Build 2D models for pushover analysis. There will be (3) unique longitudinal models, and (3) unique transverse frames.
- 2.1.5 The 2D models will be stand-alone models as defined in Caltrans Seismic Design Criteria and thus will assume no coupling between longitudinal guideway sections between hinges.
- 2.1.6 Determine Displacement Capacity of all frames by pushover analysis. Displacement capacity will occur at onset of ultimate strain in column plastic hinge regions (i.e. at plastic rotation capacity), or at onset of shear failure in columns, whichever comes first.

Prime: Jacobs

Subconsultants: None

Total Work Plan Value: \$ 183,334