

RETROFIT OF SWINGING BRIDGE OVER ARROYO GRANDE CREEK, PW 2021-06
QUESTIONS & ANSWERS
JANUARY 31, 2022

Q1: 01/31/22

I see nowhere on the plans referencing testing of any helical anchors but it does mention it in the soils report. Can you give me some guidance on that??

A1: 01/31/22

The Fugro Report recommended the following:

We recommend that the allowable tension capacity of the planned helical anchors also be evaluated using correlations between torque and axial tension capacity. We assume the design-build contractor will provide documentation supporting the relationship between torque and tension capacity and that the documentation is based on a large test database. The anchors should be installed in accordance with the manufacturer's guidelines and maximum torque should not exceed the manufacturer's recommendations.

In addition to evaluating capacity based on theoretical bearing capacity evaluation and correlations, we recommend that at least one helical anchor support for each of the main bridge cable and sway/wind cables be tested in tension to verify the design values. Testing should be performed in accordance with ASTM D3689. Testing should involve non-production anchors if needed. The testing can be performed using an alternative testing program provided that program is acceptable to the City of Arroyo Grande.

The Structural Tests and Inspection Notes required the inspection agency to verify torque so we can correlate with capacity.

We chose not to do a full scale testing of the helical anchors as there was sufficient factor of safety in the design and the existing main cable anchors will remain in place.