

Seismic Testing of Anchor Failures on Unreinforced Masonry Buildings

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Recent Progress

- This week was full of “number crunching” as well finished up the testing rig design calculations, graphed and inputted our Whanganui testing data, and began to analyze and organize the results found from the photo project that was finished last week.
- The results from the 171 tests performed in Whanganui were recorded in text documents that were then copied over to a program in Excel to be graphed and edited
- The final data sheet for the photo project was presented and additional tasks were assigned to compare the results, analyzing the similarities between the failures in various building materials, age, and corrosion factors.

Future Goals

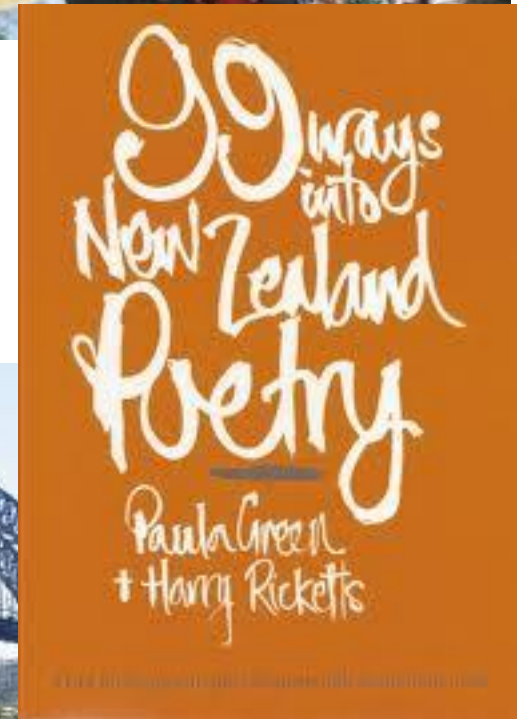
- For next week, we will continue to work on the data analysis from Whanganui with our research team- overlaying the graphs to compare the ultimate and yielding failures of the different anchors (grout vs. epoxy, slant vs. vertical installments) as well as the maximum force sustained by each anchor.
- We will also need to create a program for the photo analysis project next week that will aid us in inputting each of the 272 building data sheets so we can graph the results to better compare the failure modes.

The 2 Week Wrap Up

- As Week 7 is ending, it is important to look at the time left here in Auckland and plan ahead for what needs to be accomplished by the time we depart.
- Further seismic testing in Whanganui is scheduled to occur within the next weeks and should take 2 field days to complete. These tests will be on the existing anchors in the same building we tested weeks ago. Using the testing rig we designed, we will be able to extract these anchors from the URM wall and measure the strength of the existing diaphragm.
- These results will then go into the overall database along with the Christchurch anchor tests, and the adhesive anchor testing results from the first testing in Whanganui.
- As we will be departing before the project is complete, we still plan on assisting in the initial data analysis of the overall database and contribute our finished photo analysis data to the research conducted by the Royal Commission.
- By the end of our time here, all the work we have completed will be in use in assisting the further research of the seismic testing of anchor failures in NZ.

CULTURE!

- Went to a weekly French Market in Parnell and explored the galleries and artisan shops of the “Creative Corner” (aka the Art District).
- Walked along the Harbor Bridge, a famous Auckland landmark
- Visited Devonport, a town across the shore from Auckland-met a local artist on the ferry and exchanged sketches
- Listened to a Maori author read a passage from her book at a book signing in a local café.



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