

# Testing of Anchor Failures on Pre-stressed Concrete Panels

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# Research Project Proposal

Our project is to test and examine the strength of threaded anchors in concrete panels, the same type of panels that were destroyed in the Christchurch Earthquake. This will be done by specifically analyzing the connections between the panels, as that was a main failure in the collapse of many buildings. Oddly enough, there is no prior research found on this subject and therefore most tests will be the first to examine such failures.

This week's progress was focused on the construction of the concrete models that will later be tested in the lab under various cyclic loading patterns.

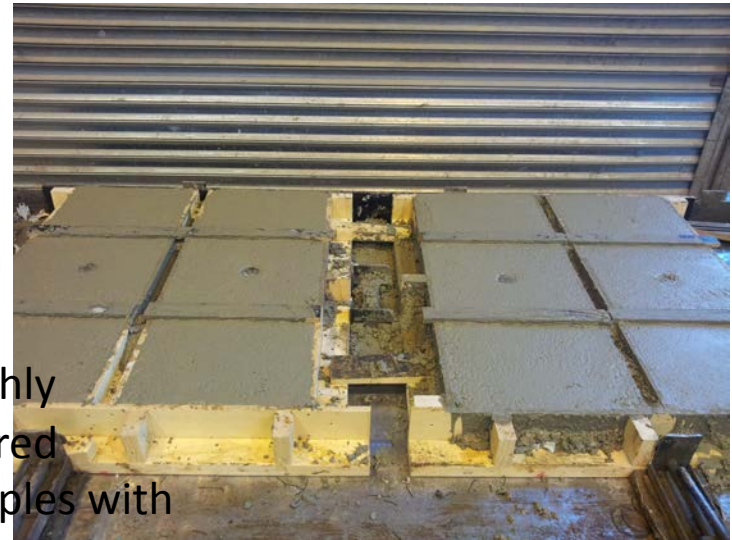
# Research Progress

- The first day, I had an introduction meeting with the team I will be working with for the next couple weeks.
- The next days were spent in the Concrete factory, Stresscrete, where we suited up to form the molds and construct our concrete panels we will later be testing in lab.
- Wooden frames were built and the rebar was set in place according to the design plans of the team. After tying the steel rods and sealing the cracks, the concrete was poured.
- Overall 8 panels were constructed. In the first four, 2 threaded anchors were inserted into each panel. The last four did not have any anchors. This was done to provide reference panels in order to later compare the strength of the anchors.
- At the end of the week we marked the drying panels and lifted them out of the lab, to be delivered to the University later next week. 8 cylinder samples of the concrete were also collected and will be tested next week as well.

# Photos of panel construction



Rebar placement within molds



Freshly poured samples with threaded anchors



Rebar reinforcements in molds



Samples of concrete used in panels





# Culture!!



- This week, besides moving in and buying lots of groceries, we have been busy exploring the city!
- The girls from our research team took us to Cornwall park one afternoon after lab, where we saw lots cattle and sheep and ate some local Feijoa ice cream (yum).
- In between days at the lab, I have managed to spend hours walking the city, sip coffee along the Auckland coast, hang out in Albert Park, visit the Auckland Photography Exhibit, take the bus to Mt. Eden (a large volcanic crater), and do some sketching in the Winter Gardens of The Domain.
- This weekend we plan to go on a little road trip! (which means driving on the wrong side of the road ahhh)

