

Lessons learned from one of New Zealand's most challenging civil engineering projects: rebuilding the earthquake damaged pipes, roads, bridges and retaining walls in the city of Christchurch 2011 - 2016.

Safety Initiative: 3D modelling for construction methodology of Triumphal Arch

Story: Bridge of Remembrance and Memorial Arch

Theme: Construction

A document describing the use of 3D modelling for construction methodology.

This document has been provided as an example of a tool that might be useful for other organisations undertaking complex disaster recovery or infrastructure rebuild programmes.

For more information about this document, visit www.scirtlearninglegacy.org.nz



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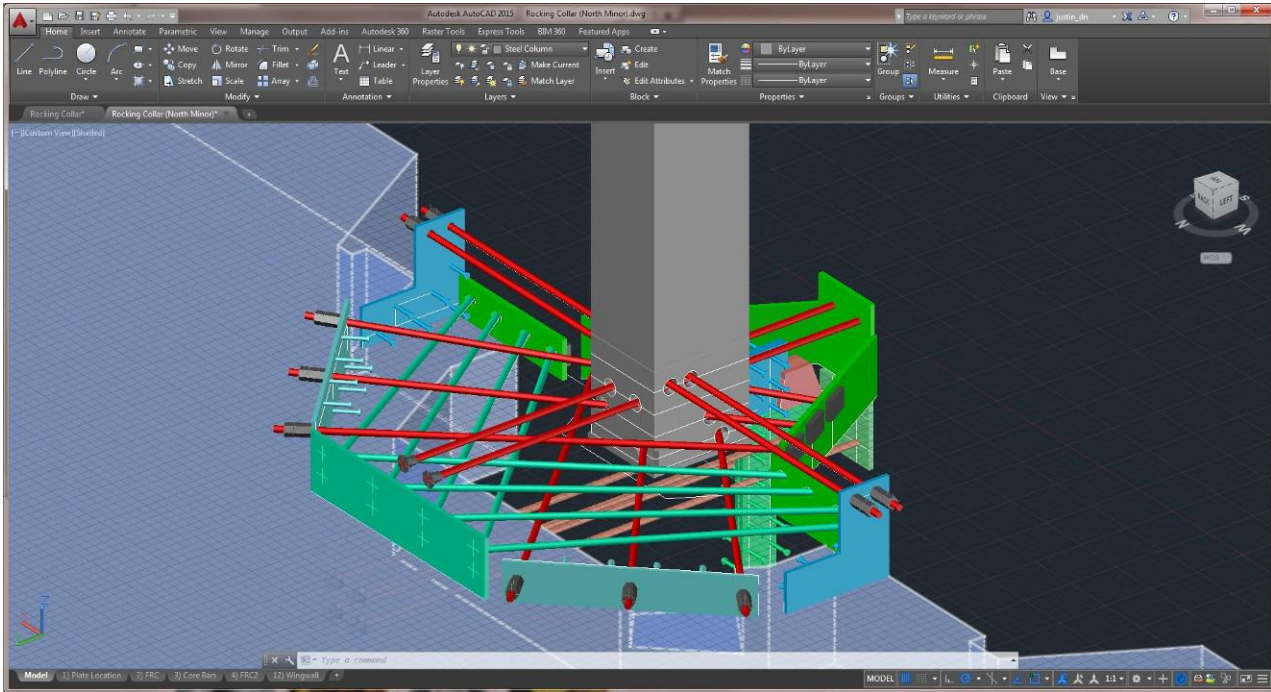


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SAFETY INITIATIVE



3D Modelling for construction methodology of Triumphal Arch



What is the initiative?

3D Modelling used on the Triumphal Arch where we are creating a 3Dimensional environment for clear viewing of the proposed design works. These images and the 3D model will form the basis of safety, technical and programming discussions where we will timeline sequence the model components to match our programme, input temporary works systems and identify safety related issues trying to construct elements of the arch. We are in essence prototyping the Triumphal Arch in a virtual environment to eliminate issues on site which could be unforeseeable

Benefits and future plans

- This approach allowed us to identify that elements could be pre-fabricated off site, hence eliminating the need for confined space and hot works on site (Critical Risk),
- This method can be used for the planning of any other project, but particularly useful for “structure” projects
- Good at raising awareness as it is visual, and easy to understand
- Cost of development was \$38,000. This is justified by the cost of not adequately planning a complex activity
- The modelling was done in house by an Engineer who was trained in the software

For further information contact:	Justin Duke Norris Project Manager	Phone	
Authorized by:	David Maucor Zero Harm Advisor	Phone	