

Wade
DESIGN ENGINEERS

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The Cloud Auckland Waterfront



Joseph Dean
Wade Design Engineers Pty Ltd

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The Team

Owner	NZ Government
Architectural & Concept Design	Jasmax & Fabric Structure Systems
Builder	Fletcher Construction
Specialist Fabricator	Fabric Structure Systems
Principal Fabric Engineer	Wade Design Engineers

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Concept

- Development of an earlier structure
Telecom Shed – 2003 Amercias Cup.



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Site Conditions

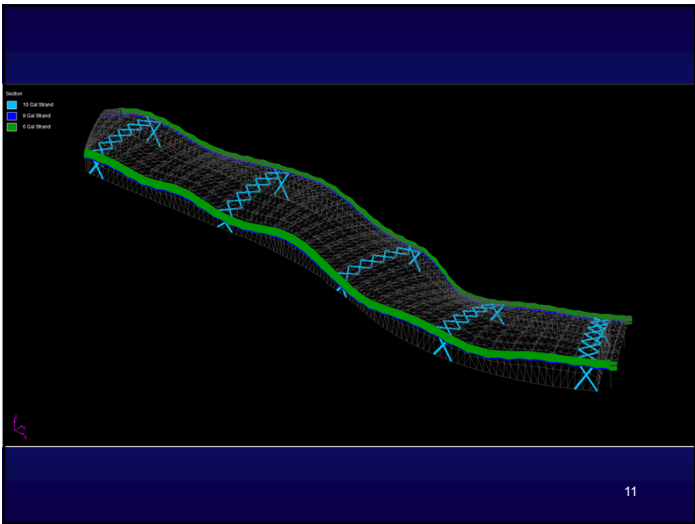
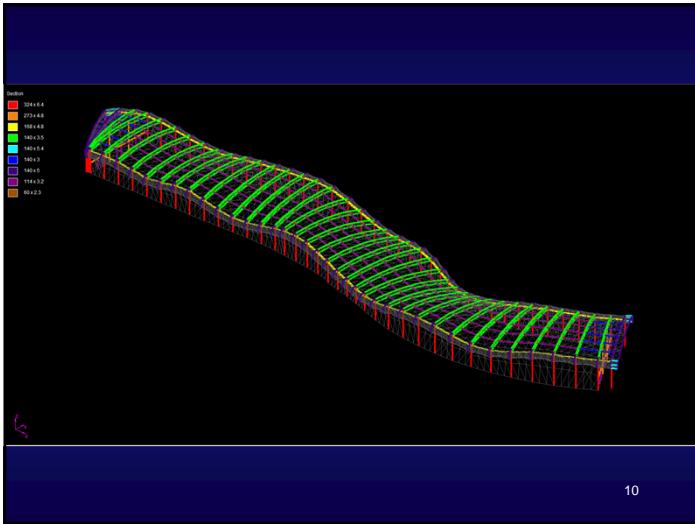
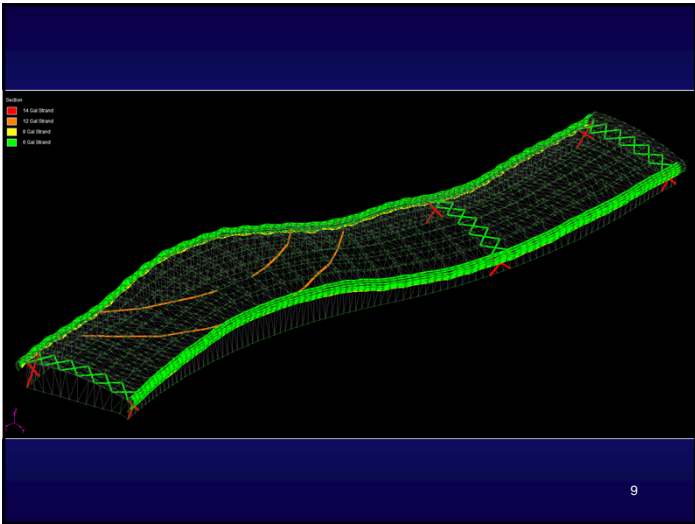
- Long narrow site
- Uneven levels
- Historical wharf structure

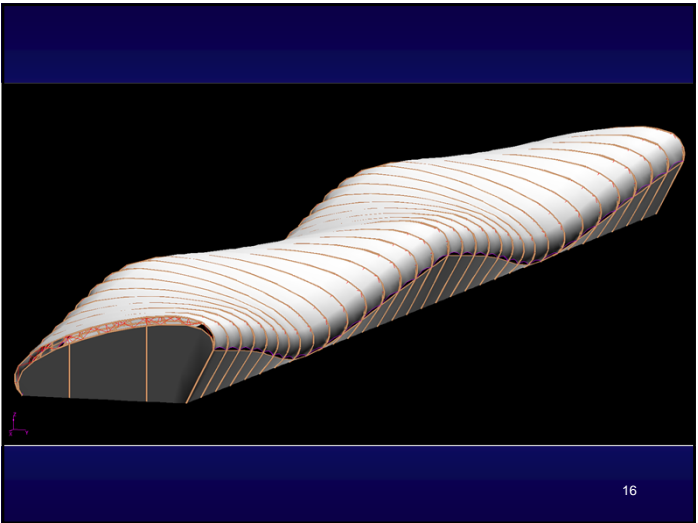
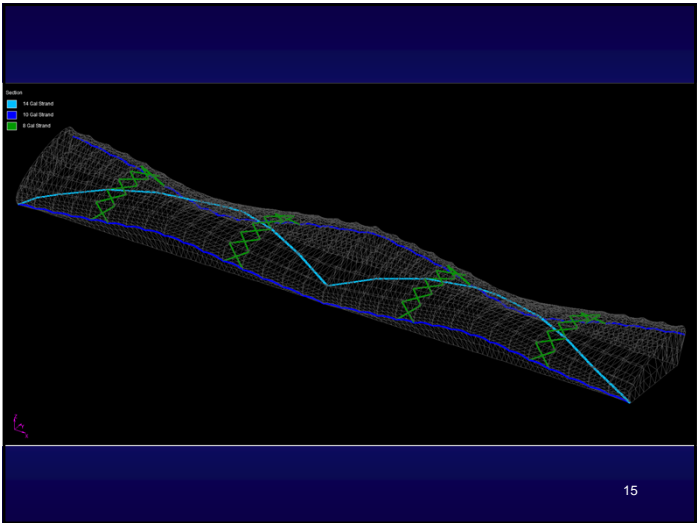
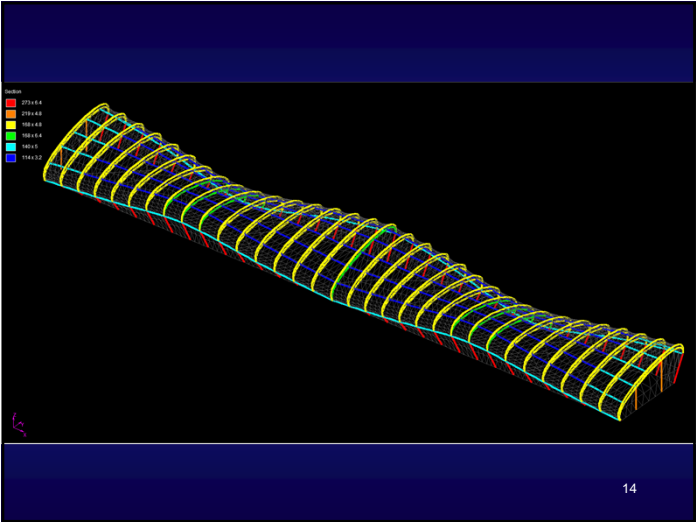
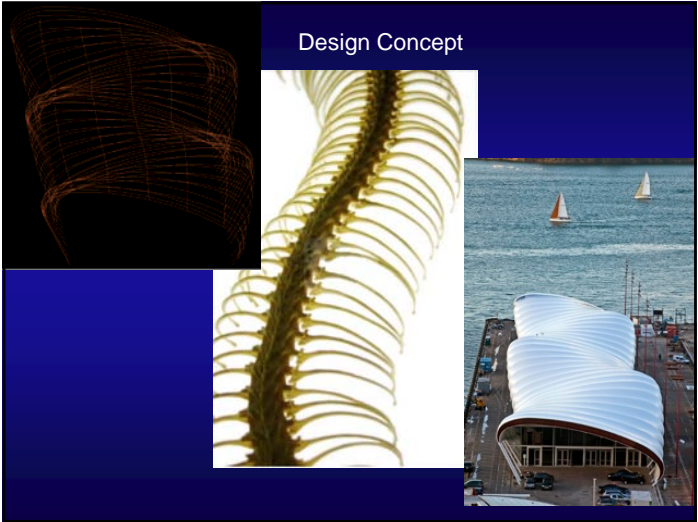
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Early Concept Development

A 3D wireframe model of a curved tension membrane structure. The model is composed of a grid of lines, with the membrane surface highlighted in green and yellow. The structure is shown in a perspective view, curving along the length of the site. A legend on the left side of the image lists various elements in different colors: red, orange, yellow, green, cyan, blue, and purple.

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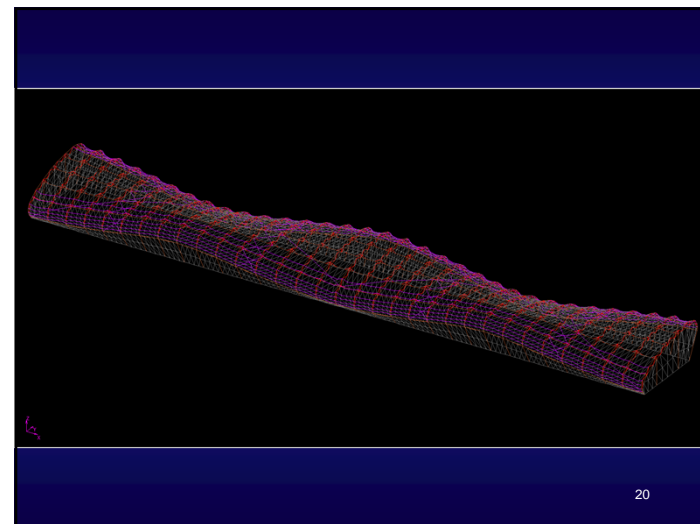
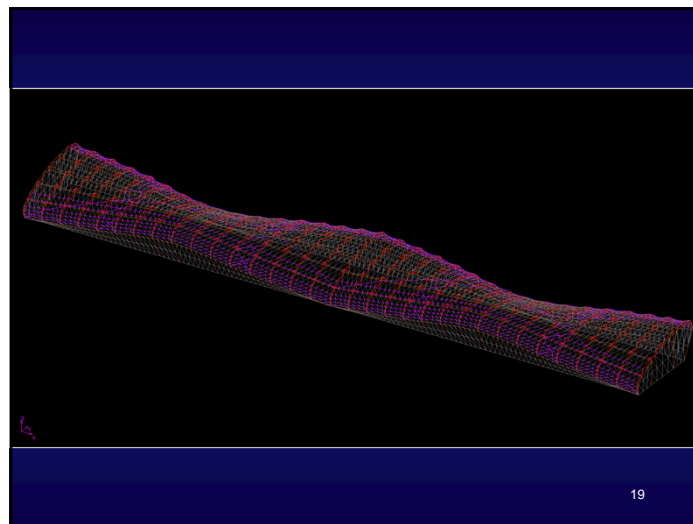
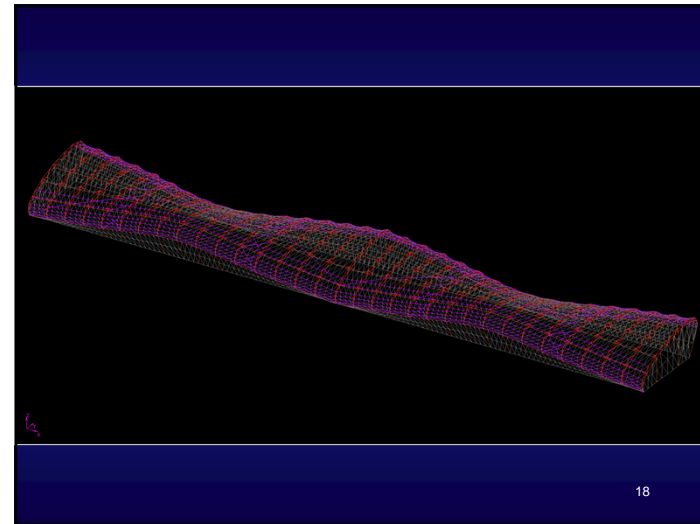


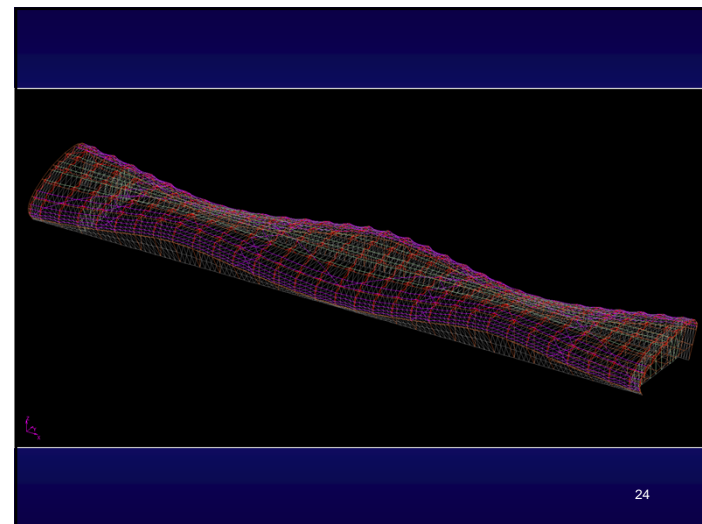
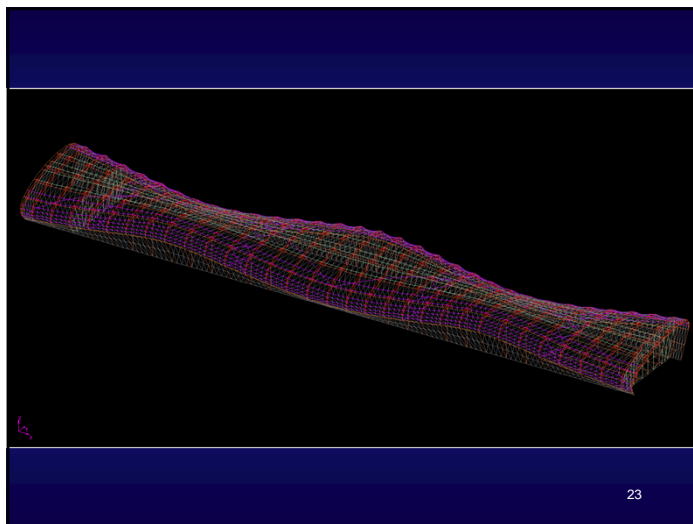
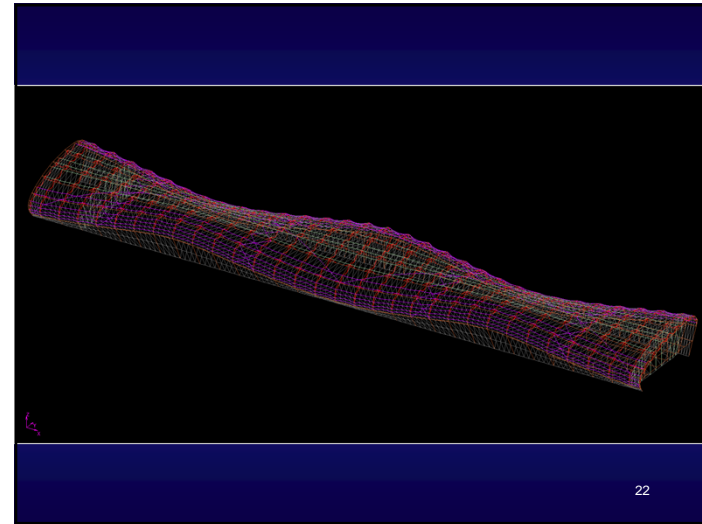
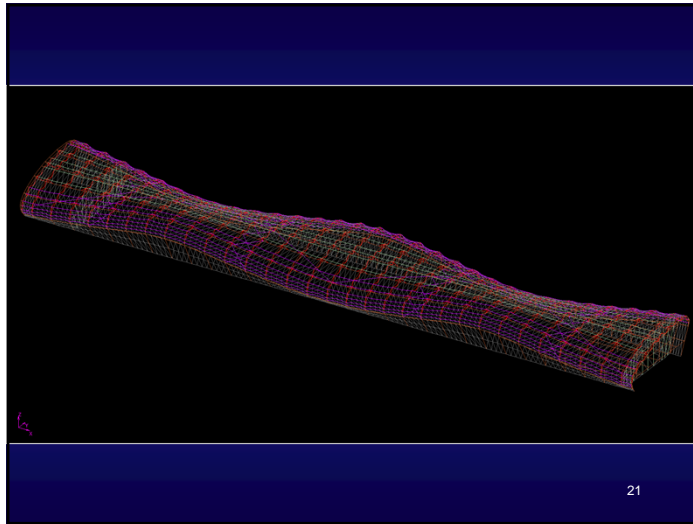


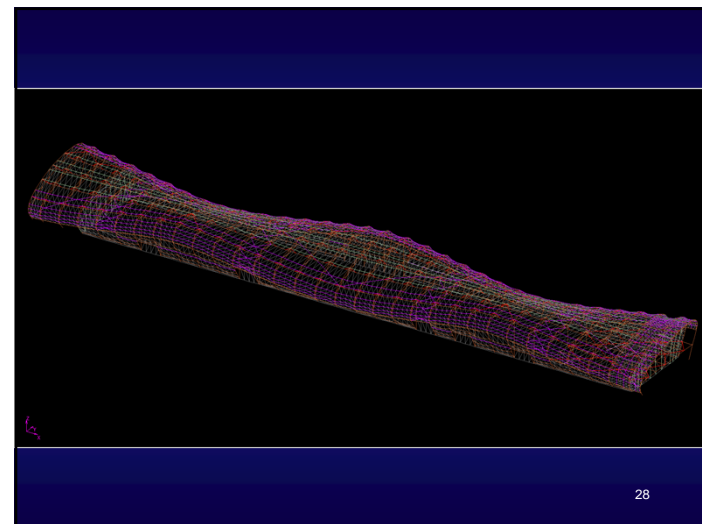
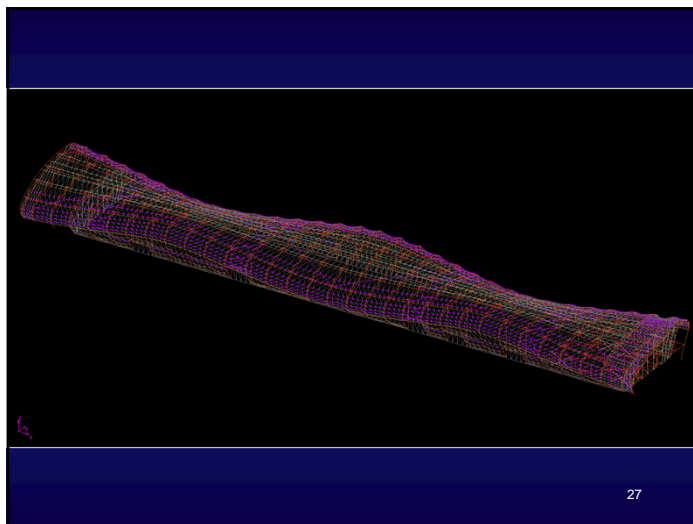
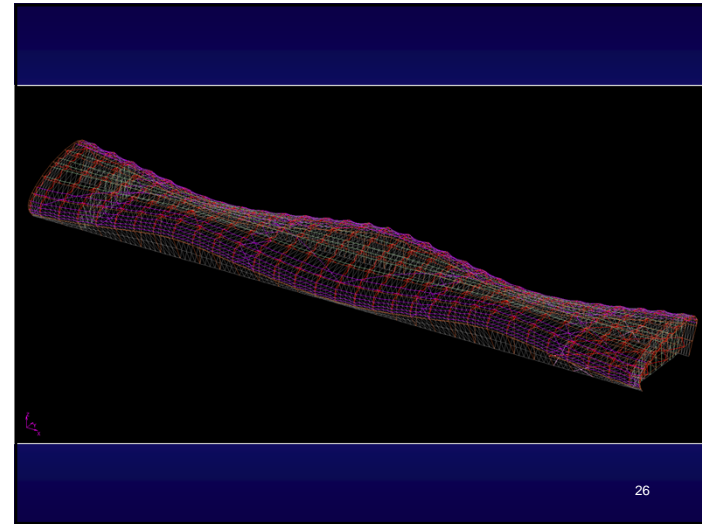
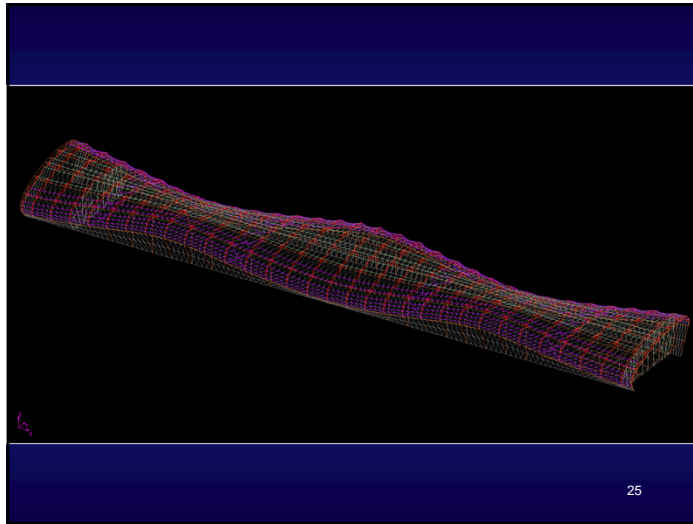
Design Criteria & User Expectations

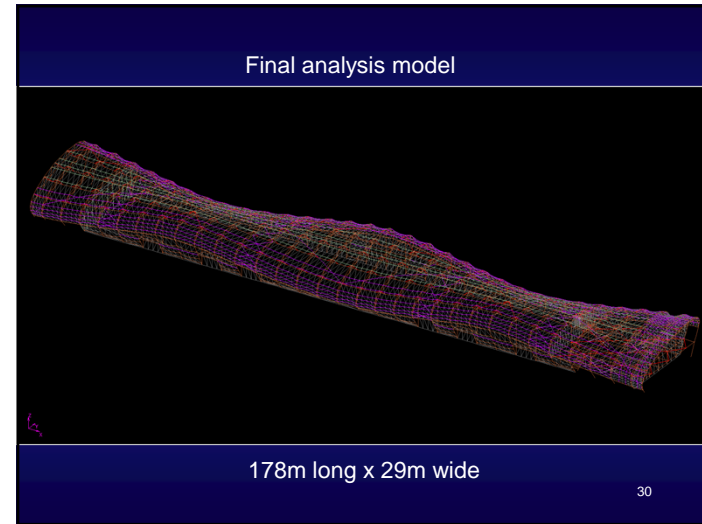
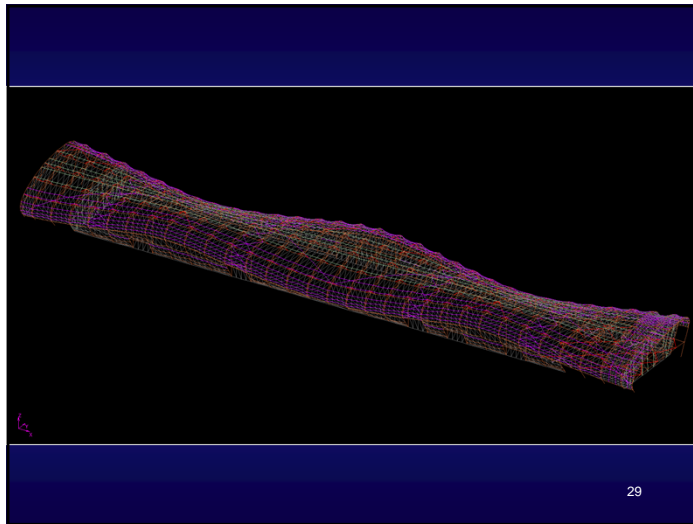
- VIP Section
- Open Public Space
- Video screens
- Design life 5 years
- Re-deployable to other sites

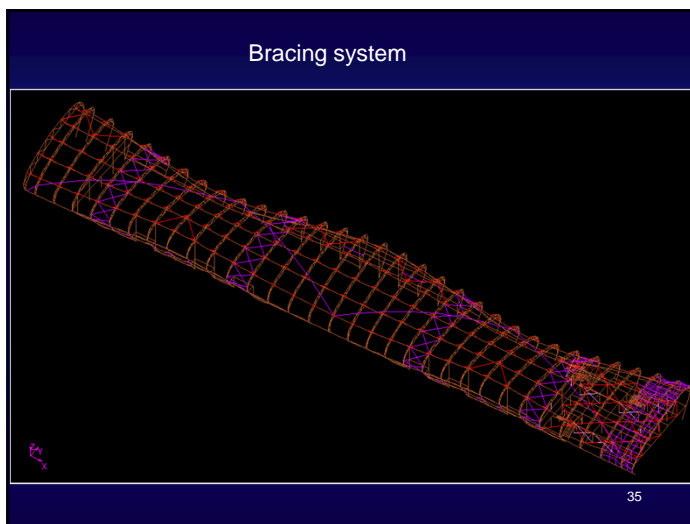
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Construction

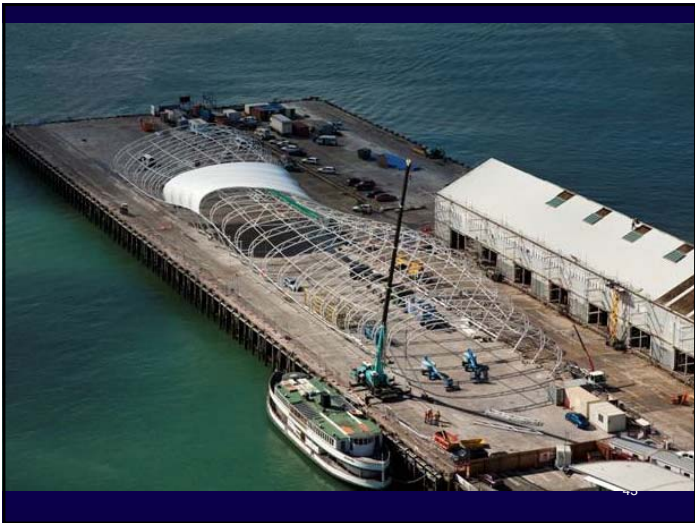
- Tight timeframe
- Design still progressing while construction was underway

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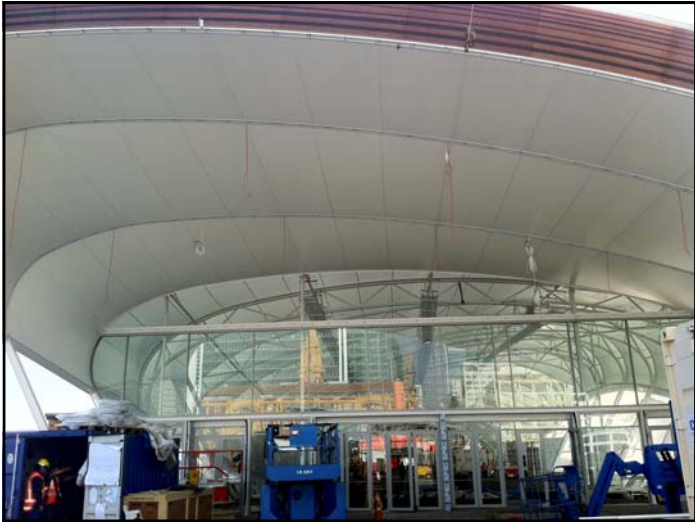


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- Fabric in sections 4 bays wide
- 9,000 sqm of fabric – Ferrari 1002T2
- 1,100 m cables

44





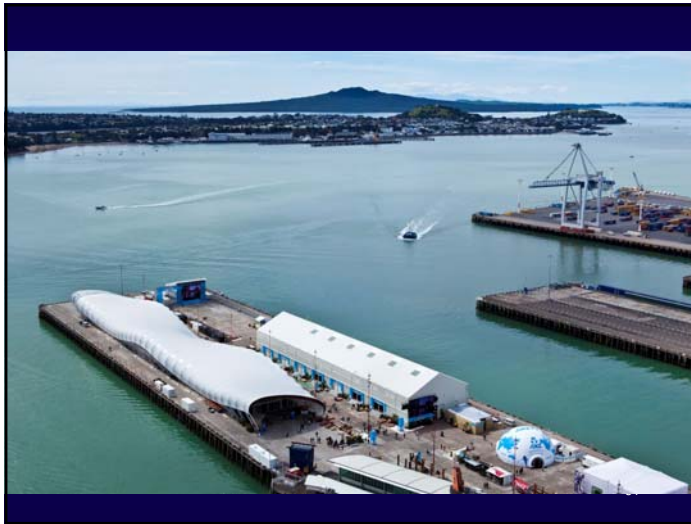


Completion

- Very Successful as a venue during the World Cup
- Could have been twice the size at peak times
- All stakeholders very happy
- Ongoing use as an event venue

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