



Rogers Place – Design Assist

Jesse Chrismer – Thornton Tomasetti

Serge Dussault – Canam-Heavy

Edmonton

May 5, 2016



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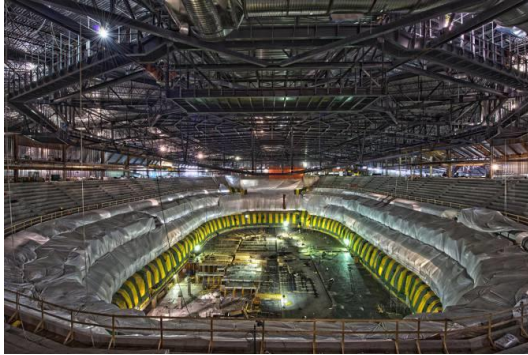
Partners



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Project Status

- Arena will open in fall 2016
- Steel substantial completion has been accepted
- Steel final close-out is in progress

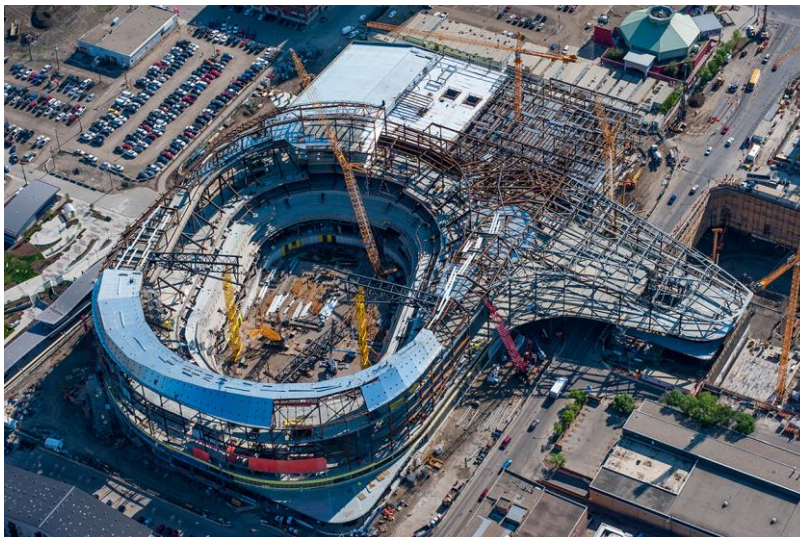


Thornton Tomasetti
Civil, Building & Infrastructure

CANAM
Civil, Building & Infrastructure

Rogers Place – Design Assist

Main Roof

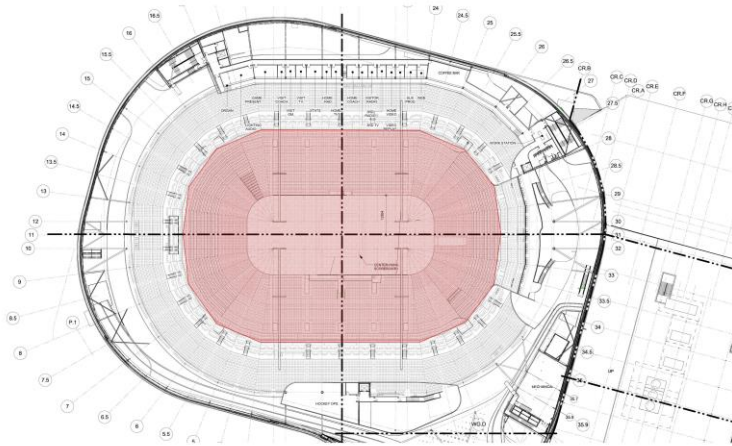


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Civil, Building & Infrastructure

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Civil, Building & Infrastructure

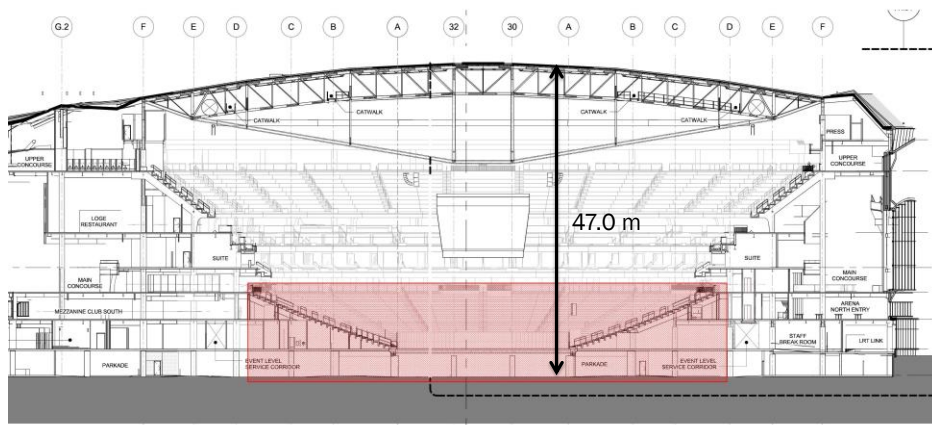
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Main Roof – work zone



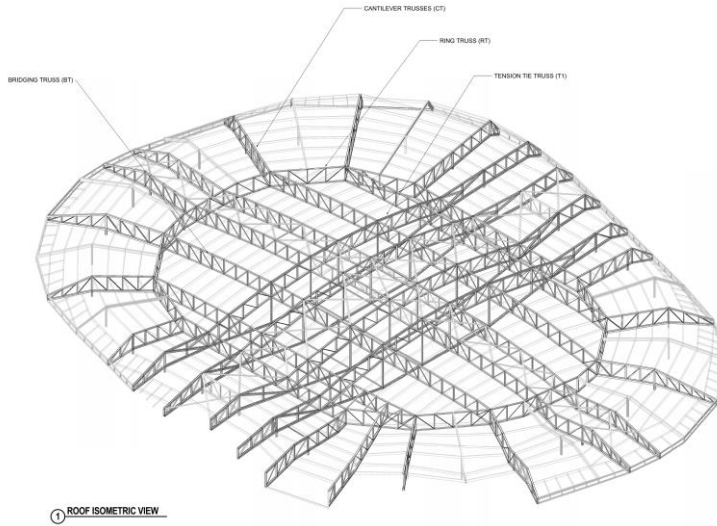
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Main Roof – work zone



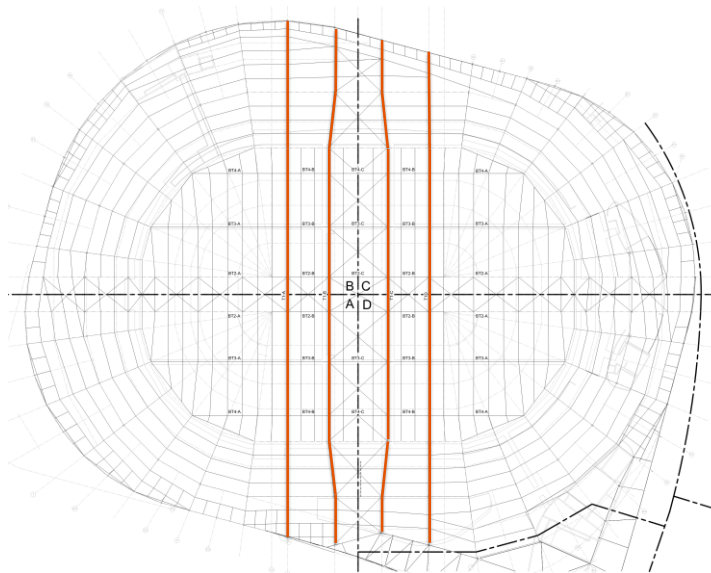
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Main Roof – DD level design – September 2012



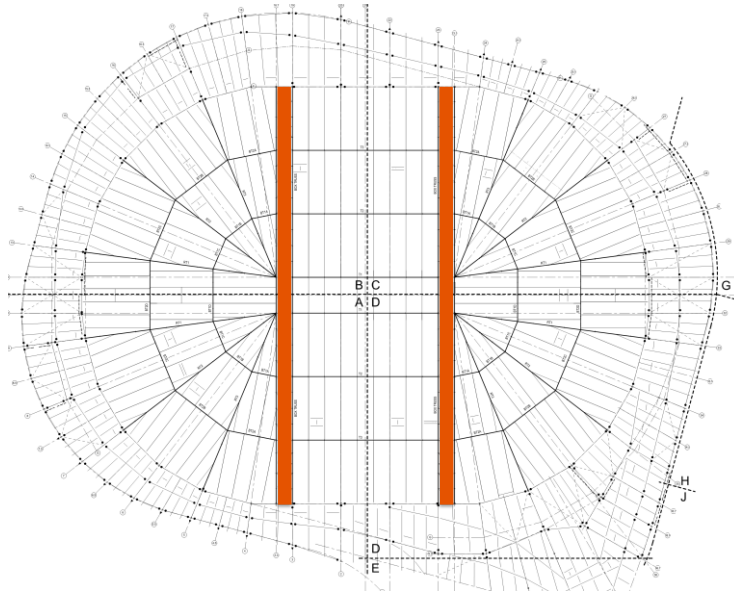
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Main Roof – Main trusses



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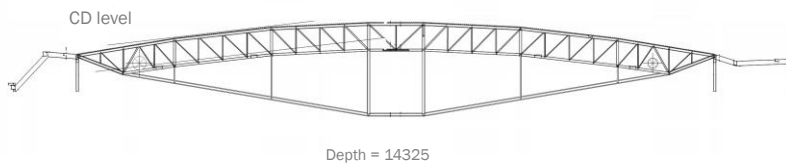
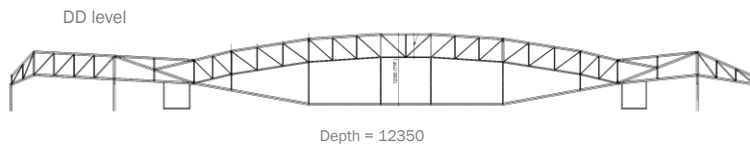
Main Roof – Main trusses



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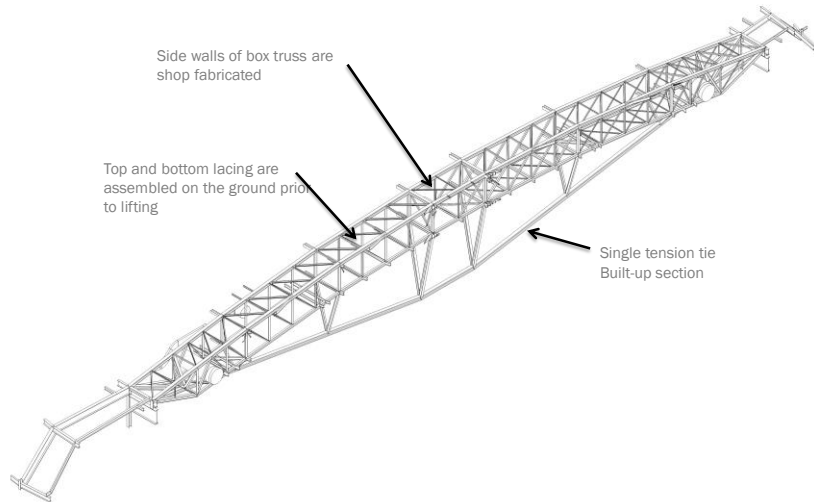
Main Roof – Main trusses



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Main Roof – Main trusses



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Main Roof – TD Garden with planar trusses (1993)



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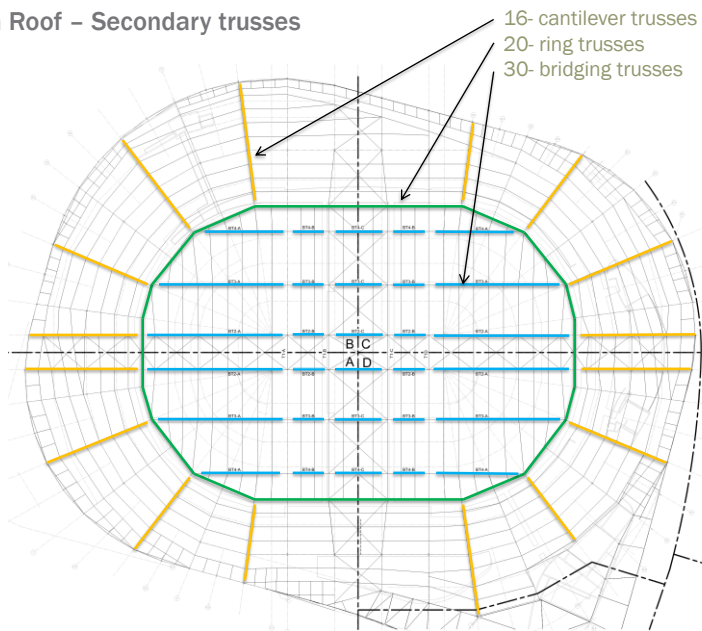
Main Roof – Box trusses stable on their own



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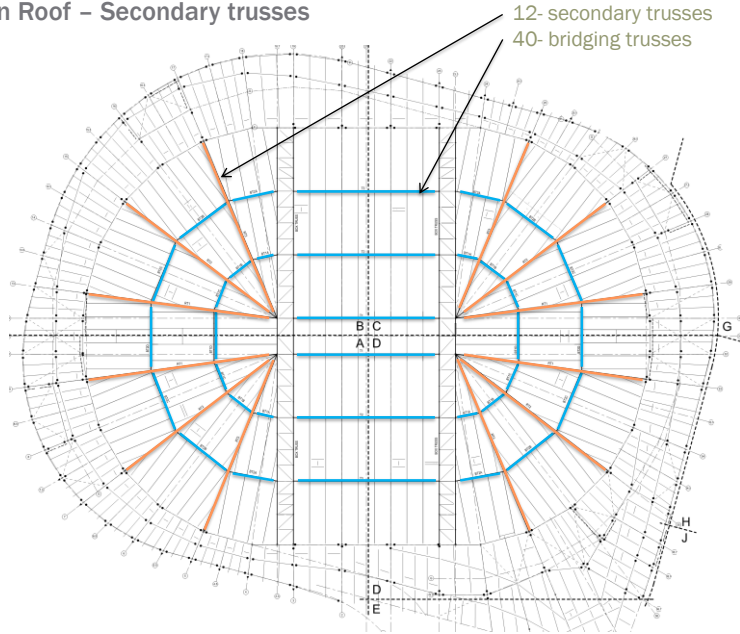
Main Roof – Secondary trusses



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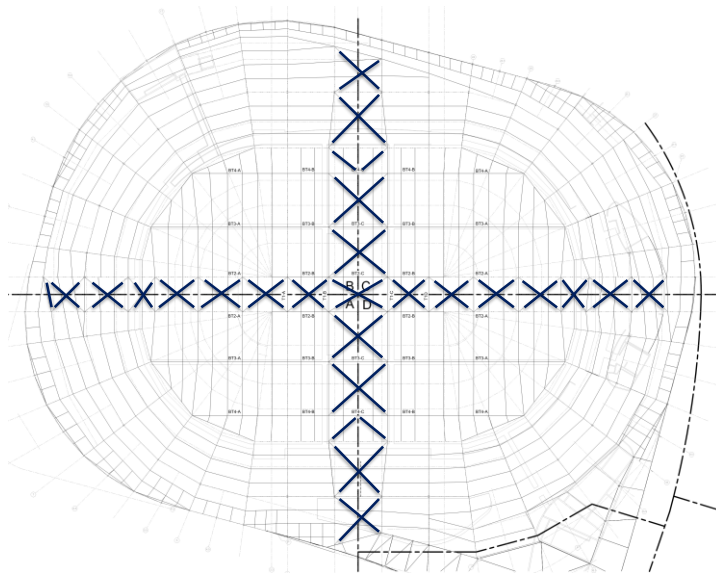
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Main Roof – Secondary trusses



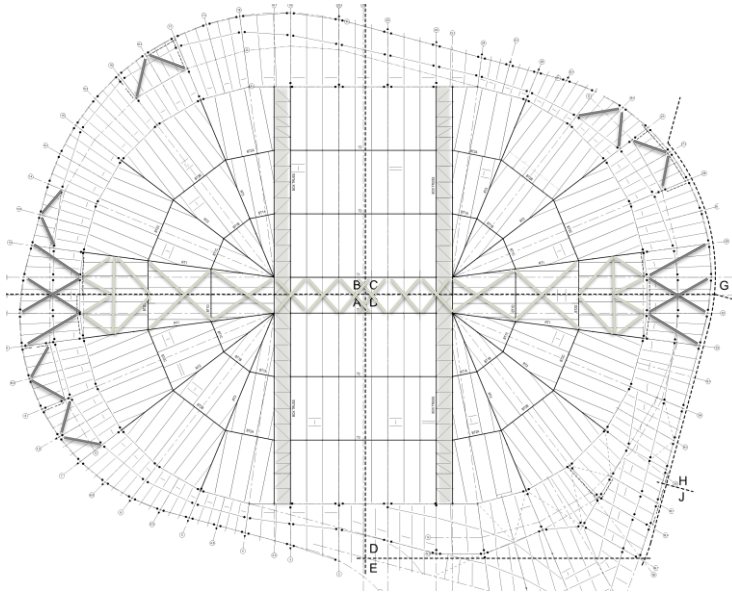
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Main Roof – Horizontal bracing



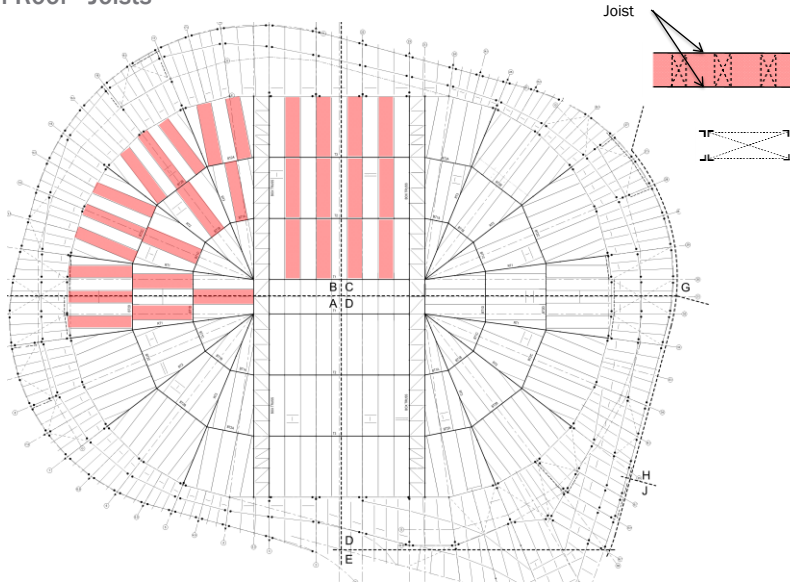
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Main Roof – Horizontal bracing



Rogers Place – Design Assist

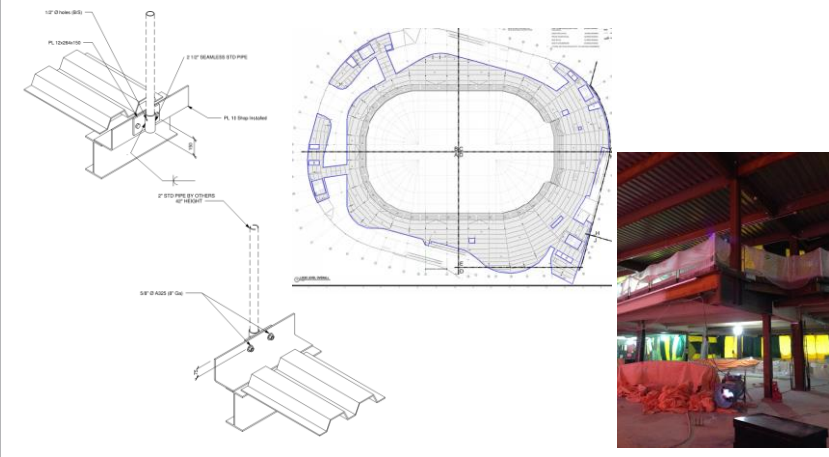
Main Roof - Joists



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Construction Safety Rail Integration

- Over 6000m of construction guard rails needed
- Integrated pour stop with temporary guard support



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Winter Garden

- Main entry point to arena.
- An estimate 1.4 million people will use the bridge annually
- 40m span at bridge, up to 70m wide, up to 25M tall ceilings
- 1,100 tonnes of steel



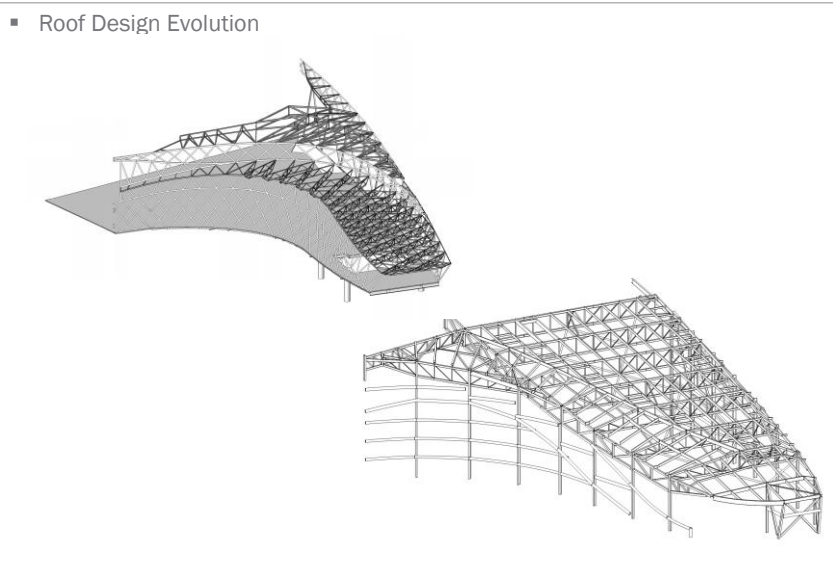
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Winter Garden

▪ Roof Design Evolution

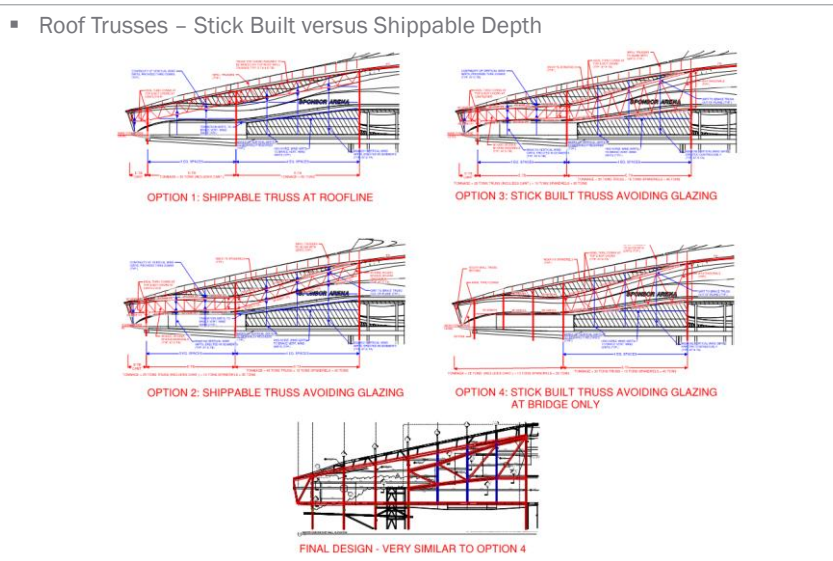


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Winter Garden

▪ Roof Trusses – Stick Built versus Shippable Depth

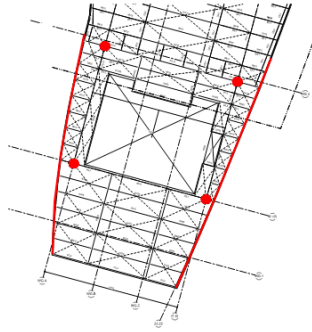


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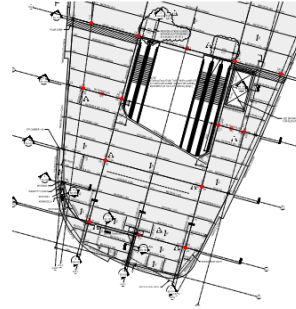
Winter Garden

- South Terminus - Pot Bearings versus Long Span Framing



ORIGINAL CONCEPT

- 4 MEGA COLUMNS WITH SLIDE BEARINGS
- WALL TRUSSES EXTEND TO TERMINUS SUPPORTING 20m CANTILEVER



DESIGN ASSIST FINAL DESIGN

- 12 COLUMNS WITH SLIDE BEARINGS
- WALL TRUSSES ONLY AT BRIDGE
- SAVINGS OF OVER 50 TONS

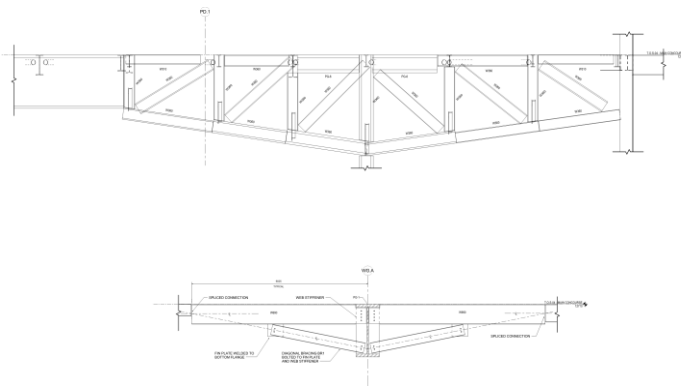


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Winter Garden

- Design Assist Deck Complexity



Thornton Tomasetti
General Building Structures

