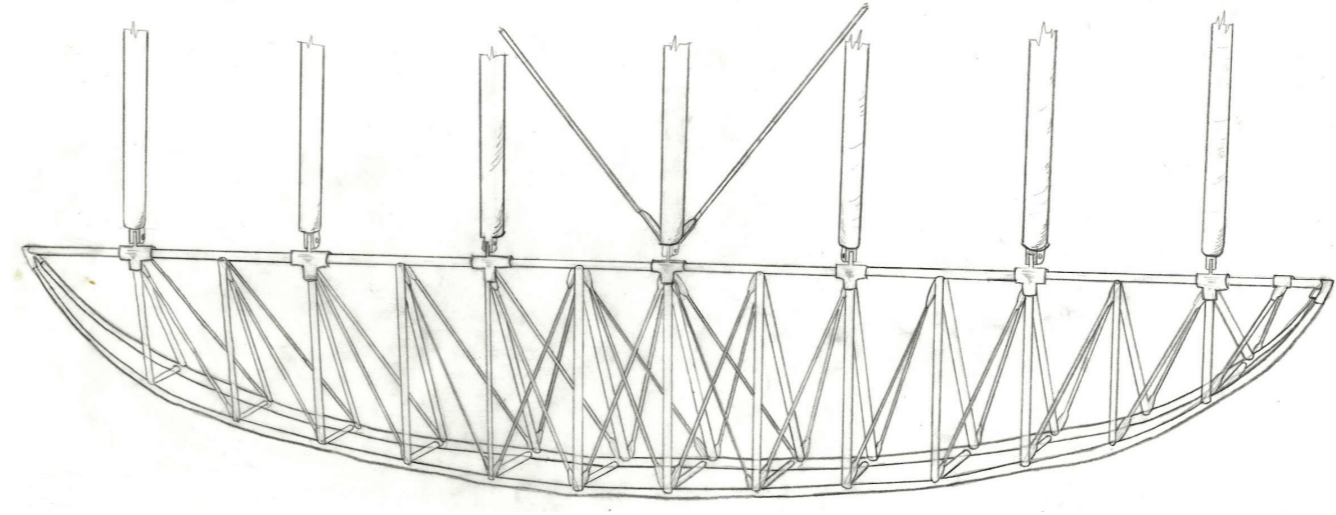
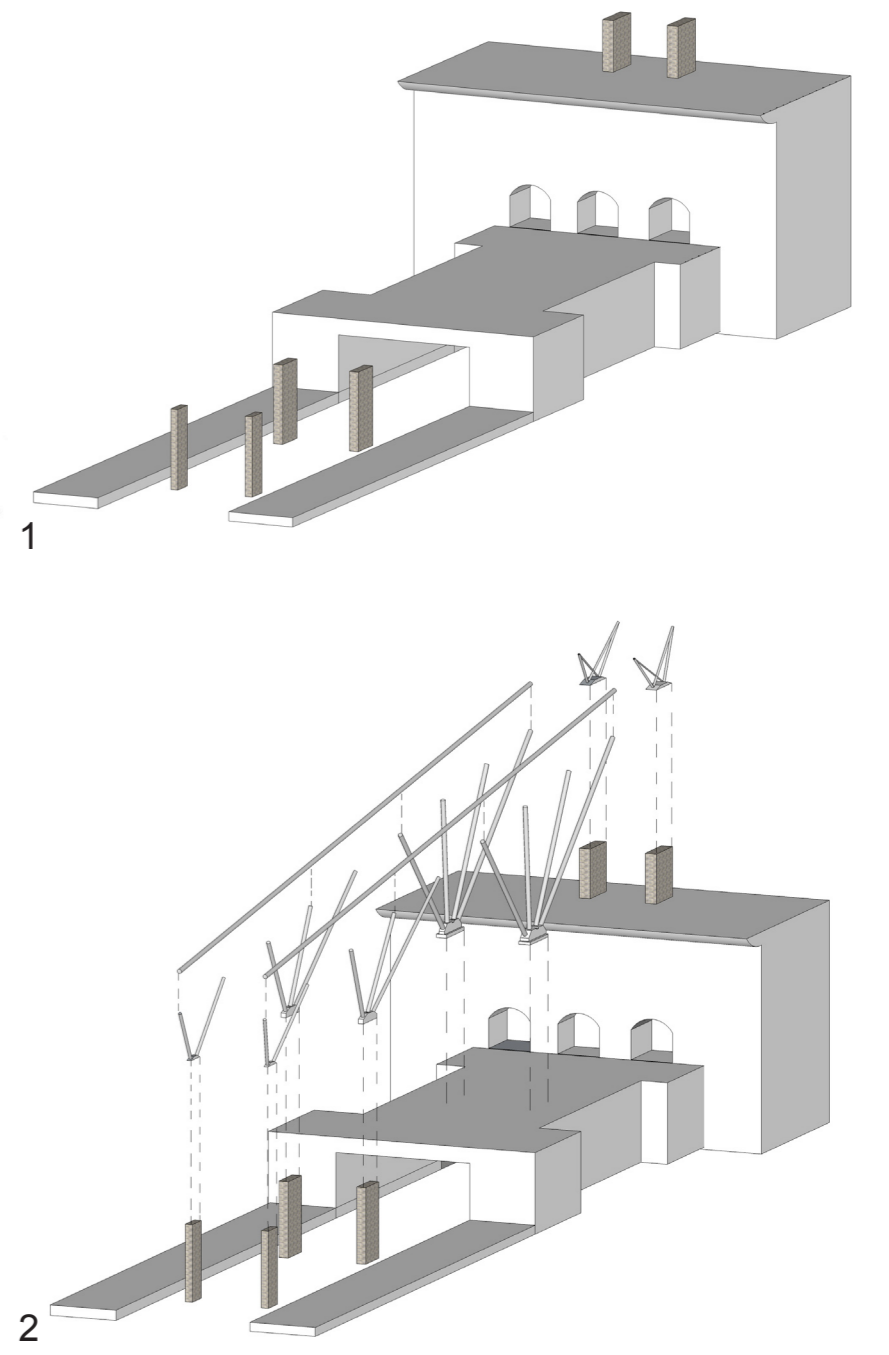


The station was opened in 1994. It connects the airport to Paris and other cities in France as well as Belgium. The Railway Station is located directly beneath Terminal 2 of the Paris-Charles De Gaulles. It runs perpendicular to the road network and the southern runway of the airport. Peter Rice's company RFR was commissioned to design a glazed roof and side walls enclosing the concrete platforms. Although Peter Rice was not the Architect or Director responsible for the project from initial design through to completion he played a big part with Hugh Dutton with the design intent from a Structural Engineer and Architectural view. Positioned between Terminal two and the forthcoming Terminal three at Charles de Gaulle Airport in Roissy, Paris the TGV station is composed of four steel and glass constructions symmetrical about the axis of the terminals.

The concept had two particular strands that would guide the direction of the project. The first was that the station should contrast sharply with the dark enclosed tunnel space that emerged into it. The experience of moving from darkness to natural light should be accentuated. This meant that the structure had to be very light and transparent. Looking up at the sky should be as significant looking as any structure that might be up there in the roof. Another design style was to make the roof appear that it was floating over the cutting that the station sat in making reference to the machinery of flight to which the airport owed its presence.

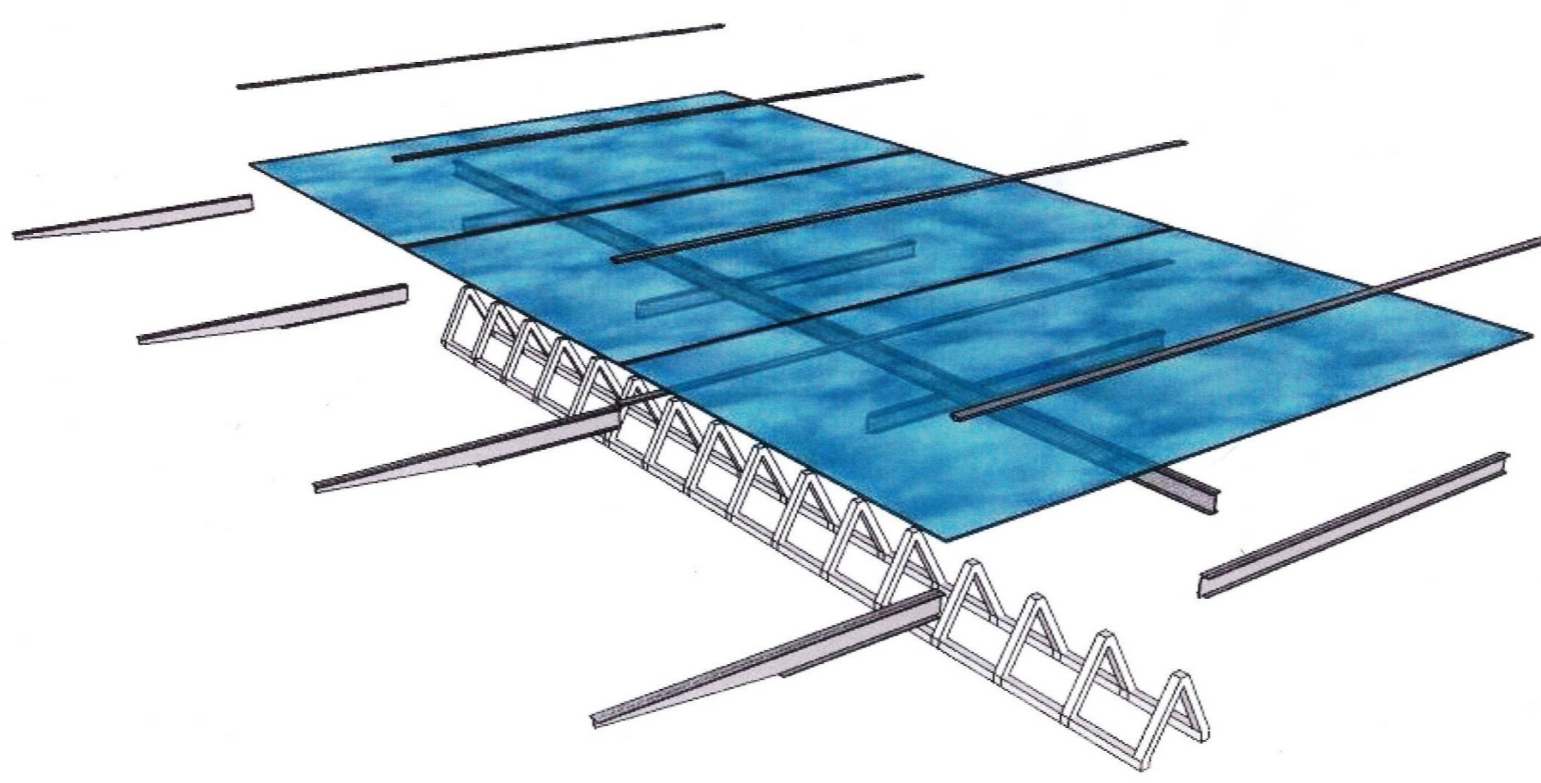
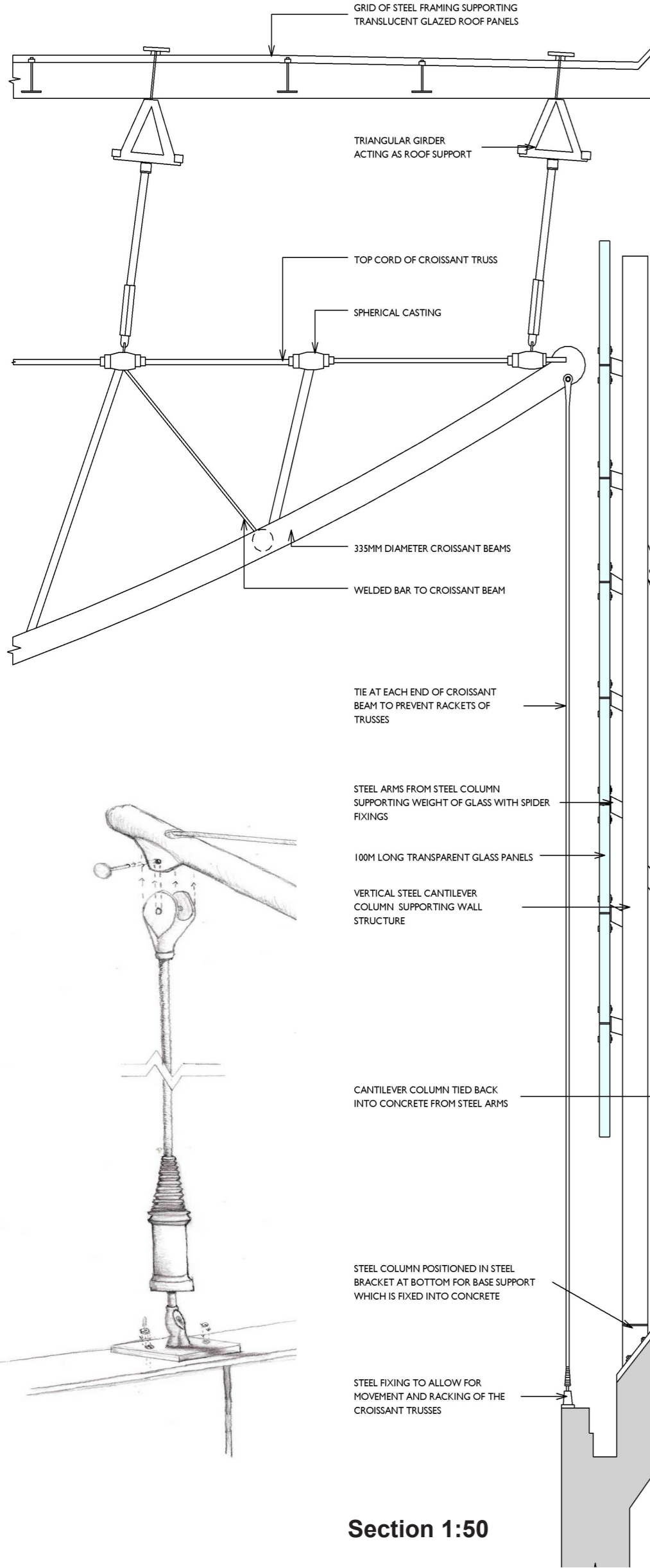


Vertical ties used at ends of croissants to prevent buckling effect. They vary from 5 m to 15 m depending on where they are located within the station. Most are fixed to concrete structure of the floor. They are steel cylinders containing slacked conical washers making the tie stiffer. Under extreme load the tie goes slack and the spring boxes which are placed to the bottom of the vertical ties to account for this change.

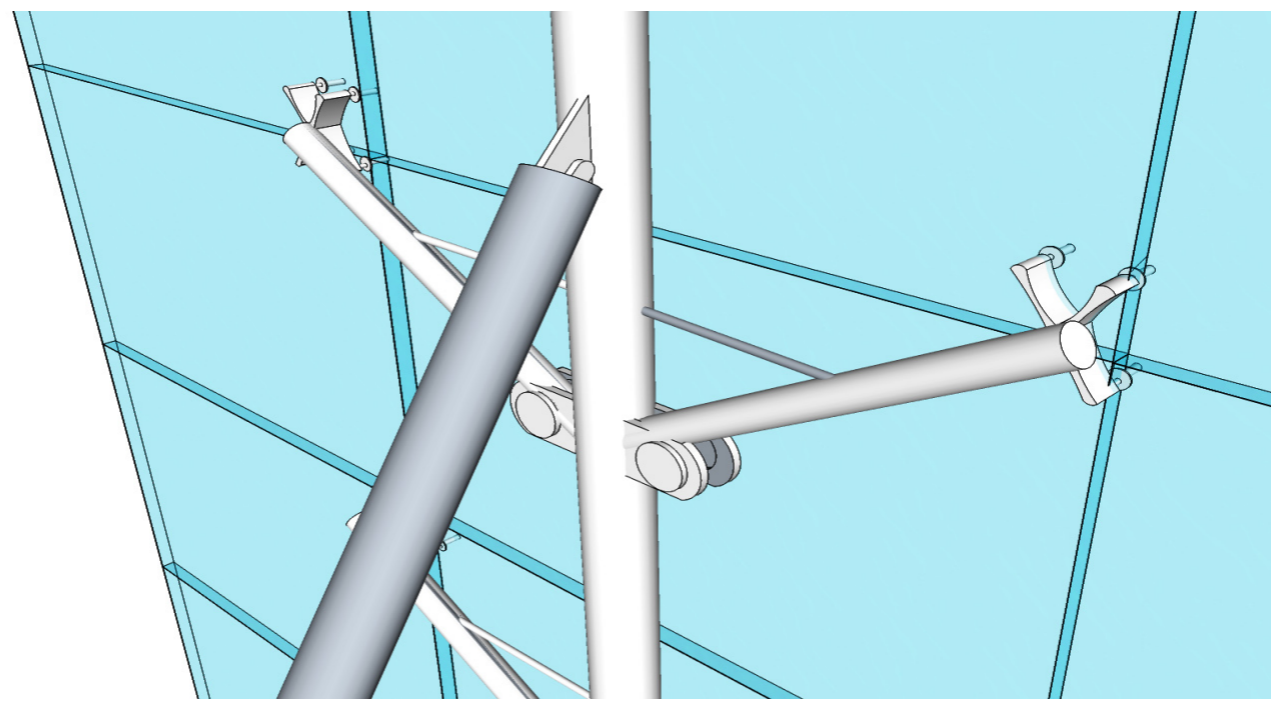


TGV-Station, Roissy

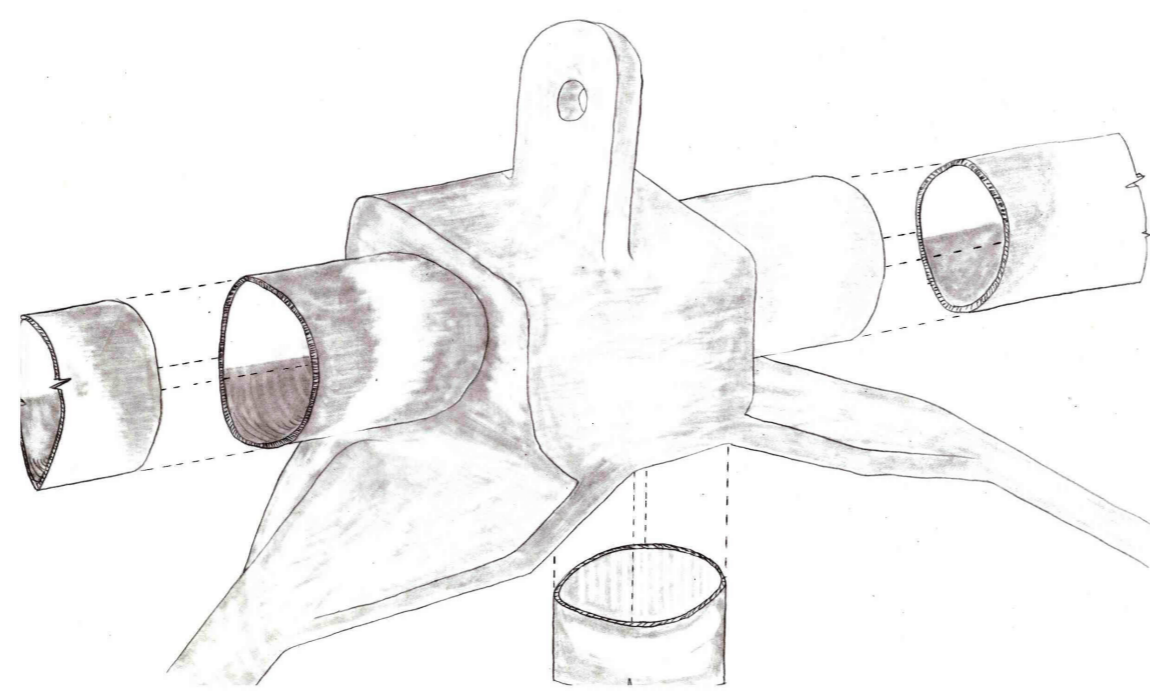
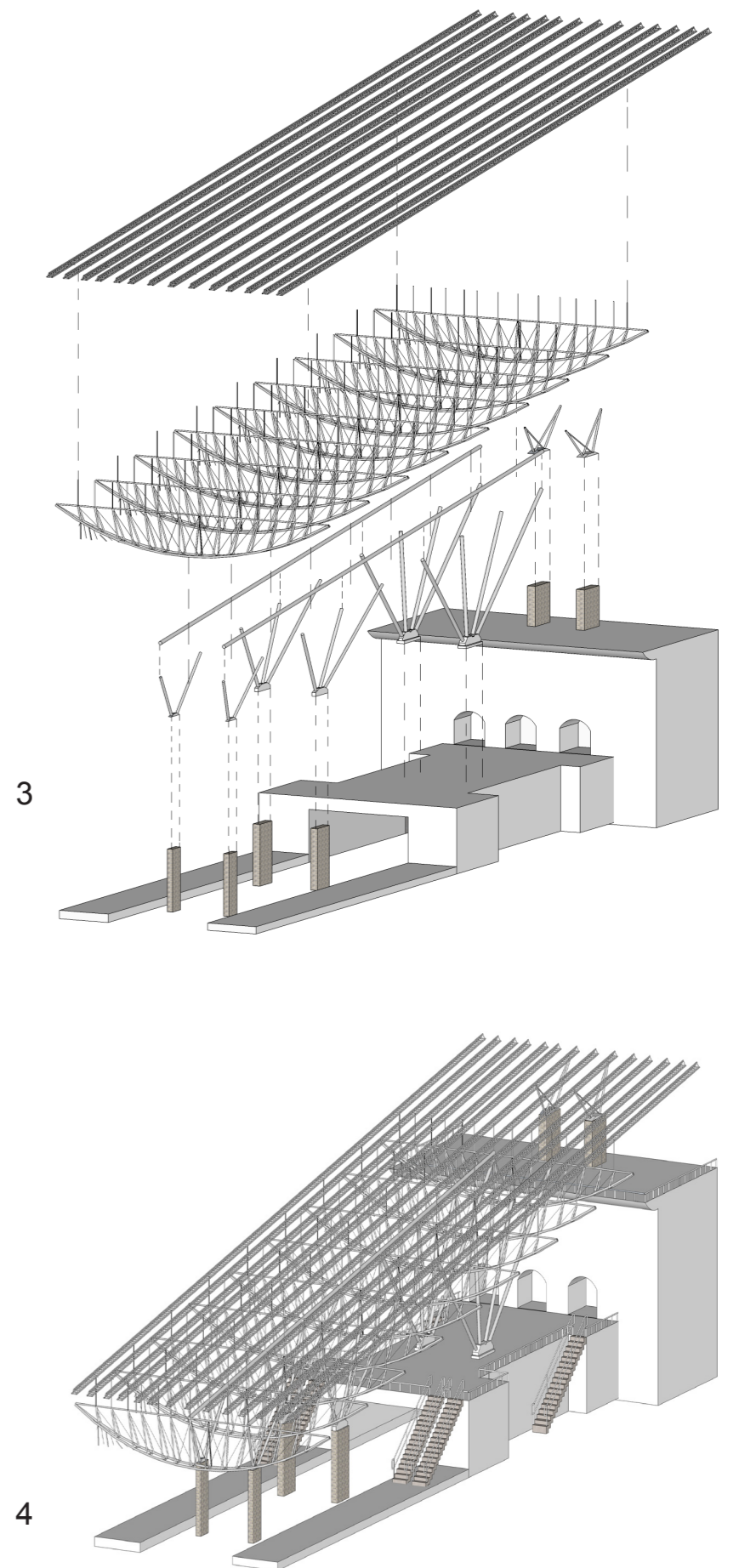
Peter Rice, Paul Andrea 1994



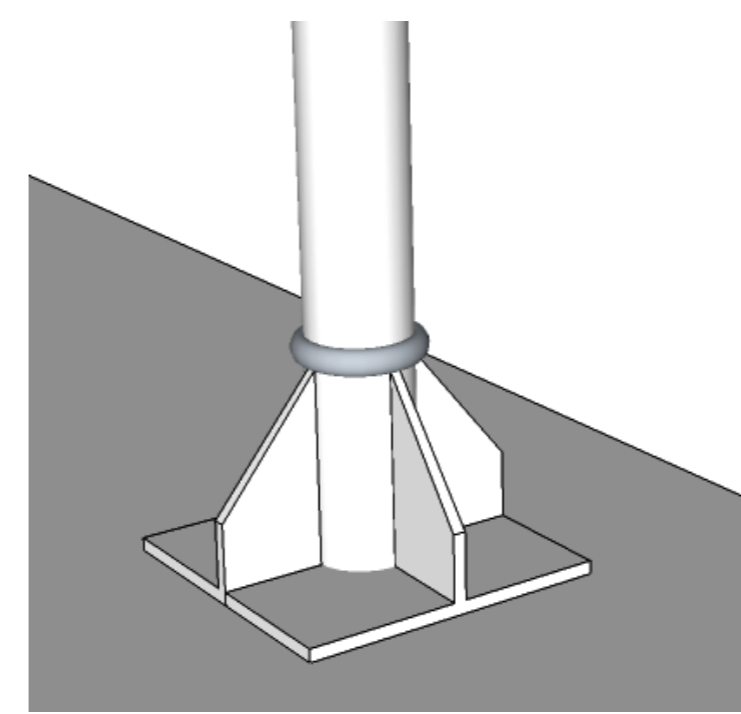
Detail A - Exploded Roof Structure Comprises of 8mm Float glass on 140mm I-Profile 'Nappe' System on 600mm deep triangular girder.



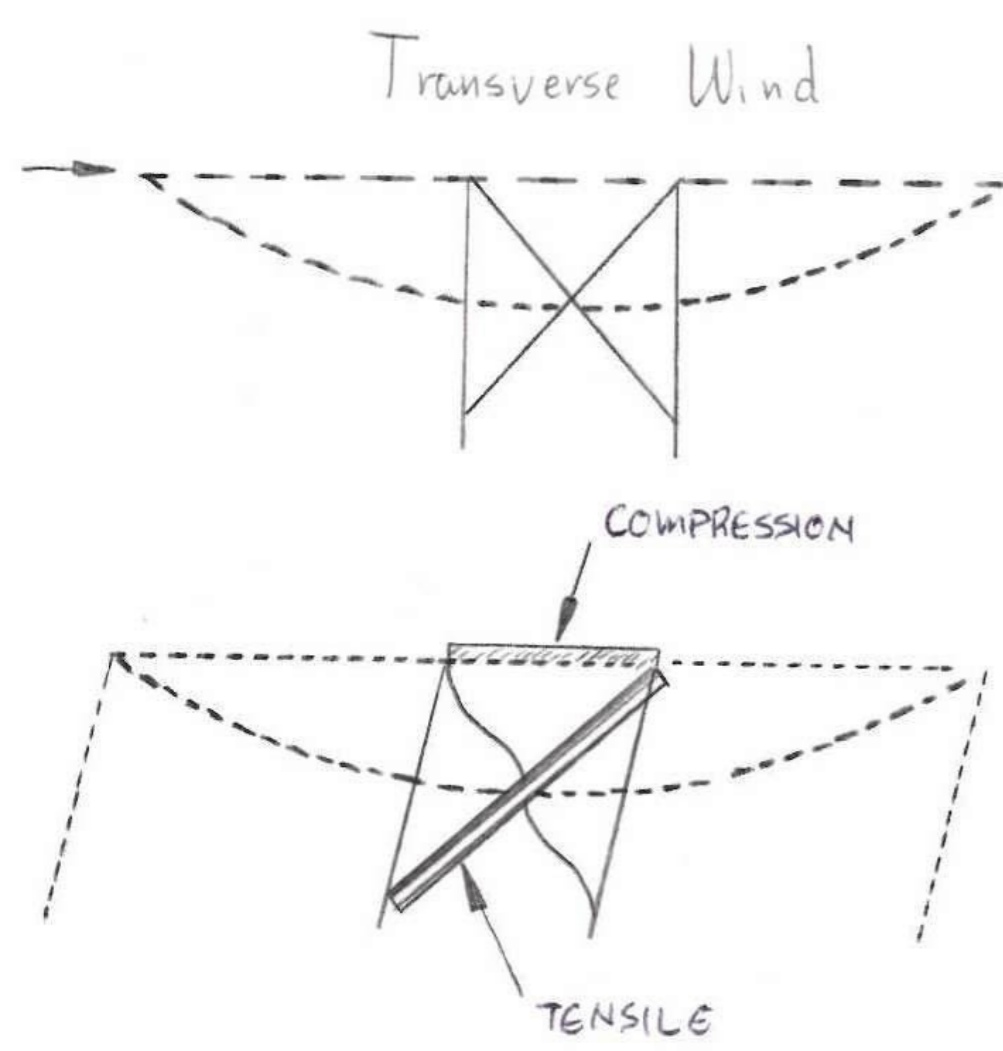
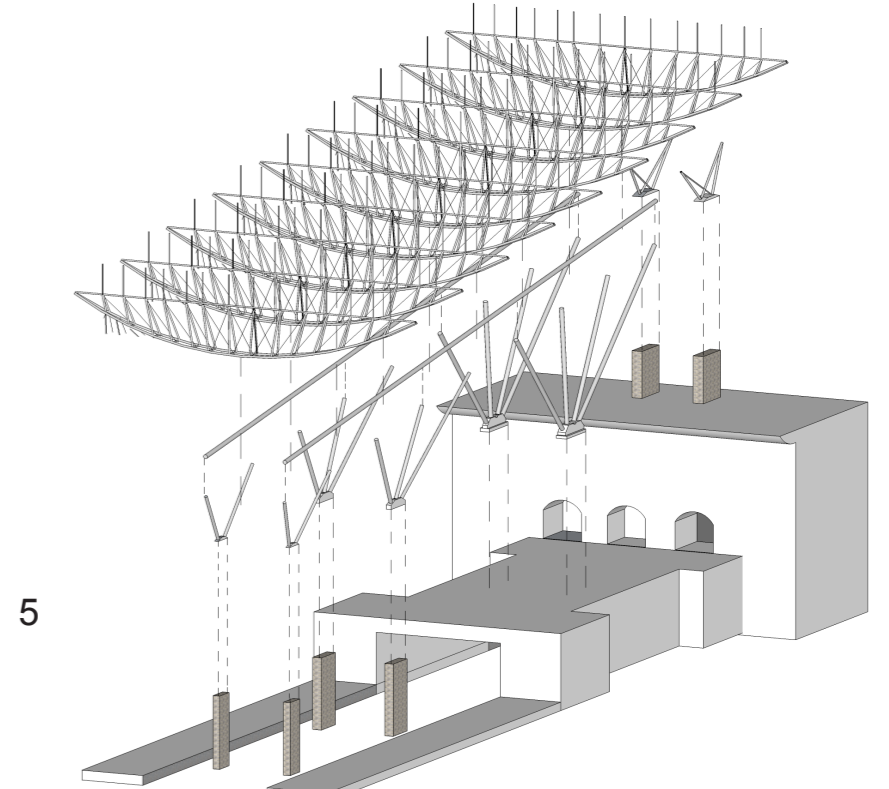
Detail B - Consists of 4.75M x 2.75M x 12mm Glass Bolted directly to the tips of arm brackets mounted onto cantilever post.



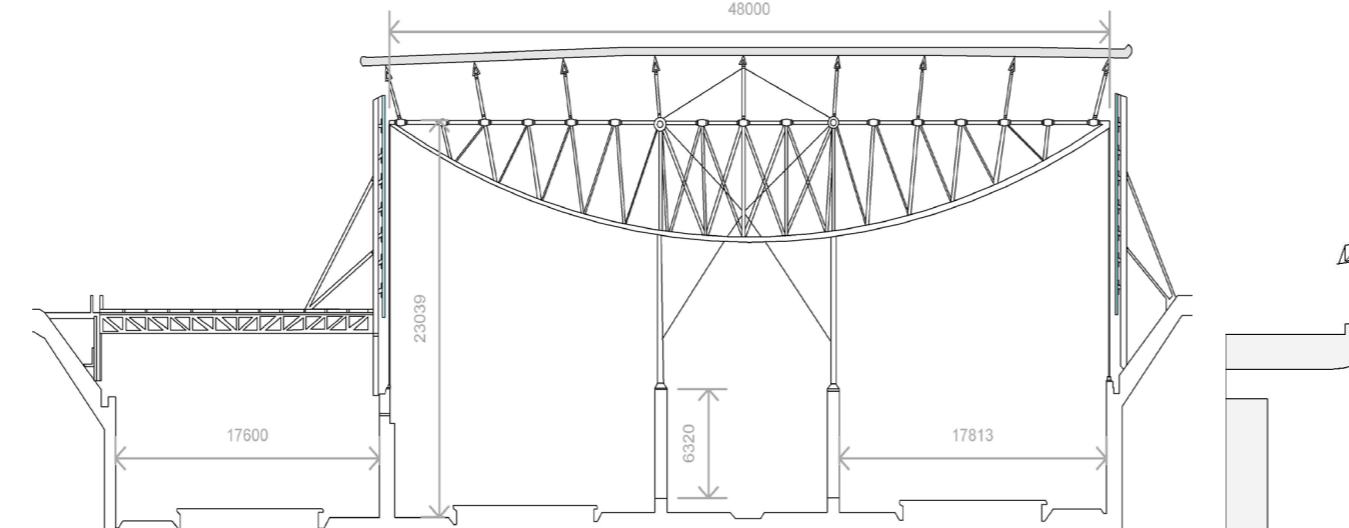
Detail C - Spherical cast steel joint of cross-section trusses.



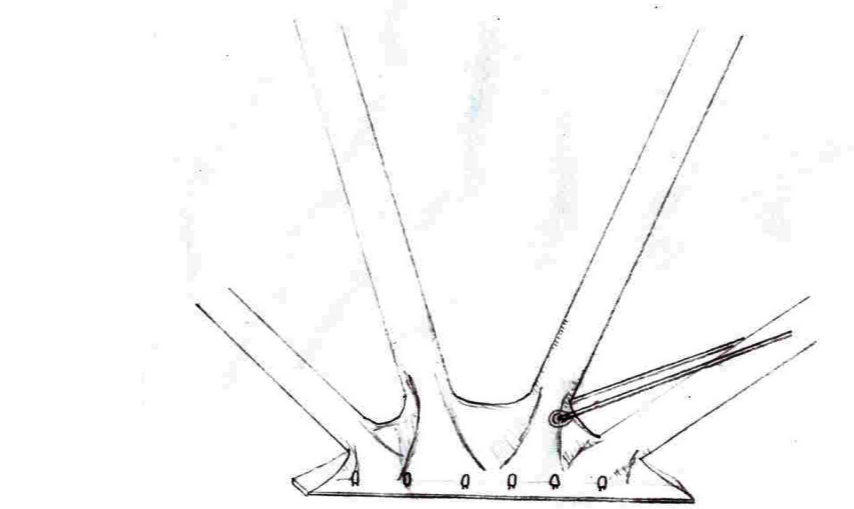
Detail D - Column connector for glass facade



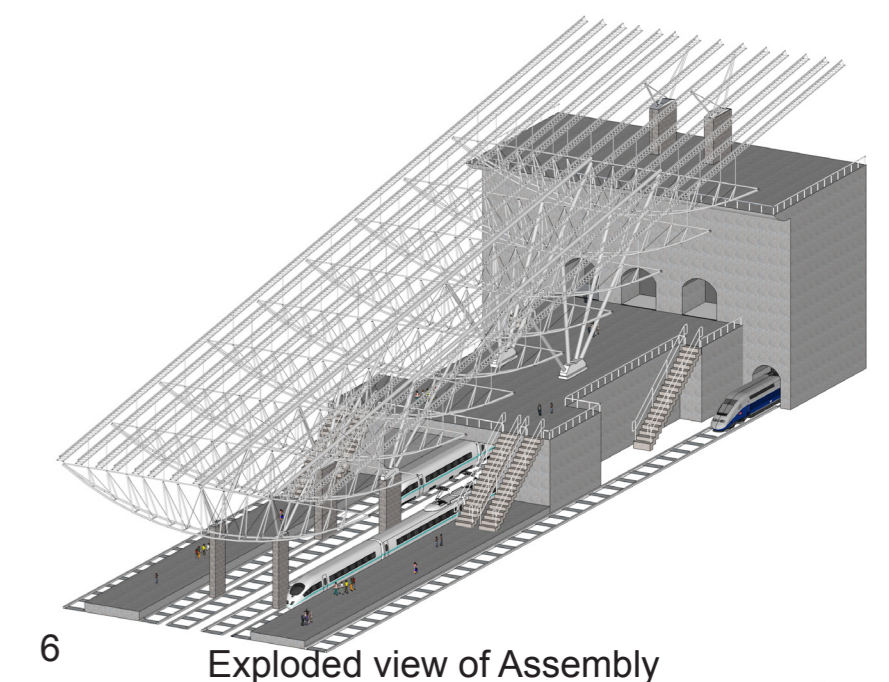
Structural analysis of primary structure under transfer and wind loads



Section through TGV Station



Pylon assemblies which are 450mm Radius circular hollow steel section fixed to concrete by pin joint connection covered by steel cast mould.



Exploded view of Assembly

CONNECTION & COLLABORATION: LESSONS FROM PETER RICE

3rd & 4th YEAR ARCHITECTURAL TECHNOLOGY 2013

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