



SOUTHERN AFRICAN INSTITUTE
OF STEEL CONSTRUCTION



Cadcon (Pty) Ltd

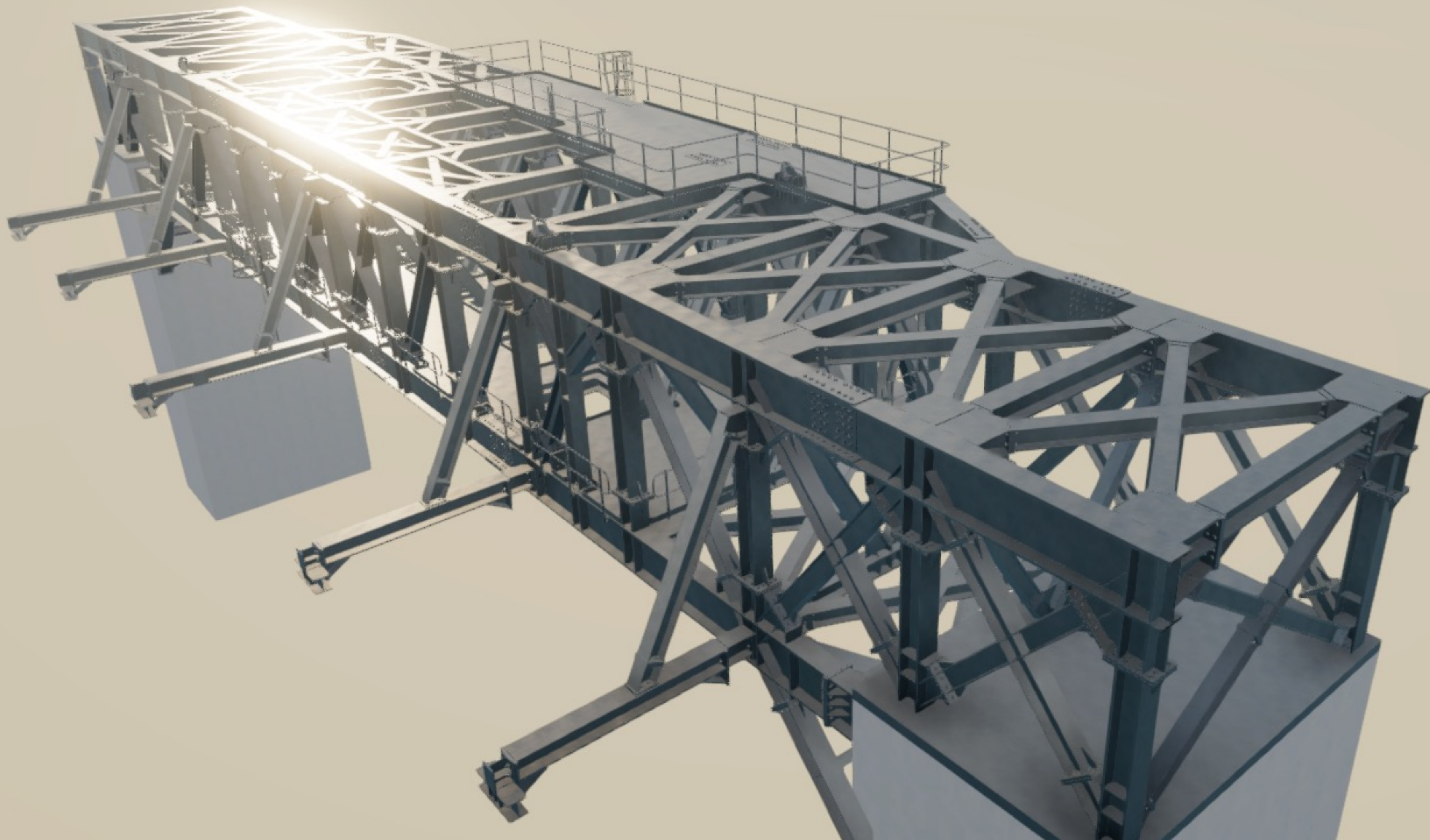
Redstone CSP

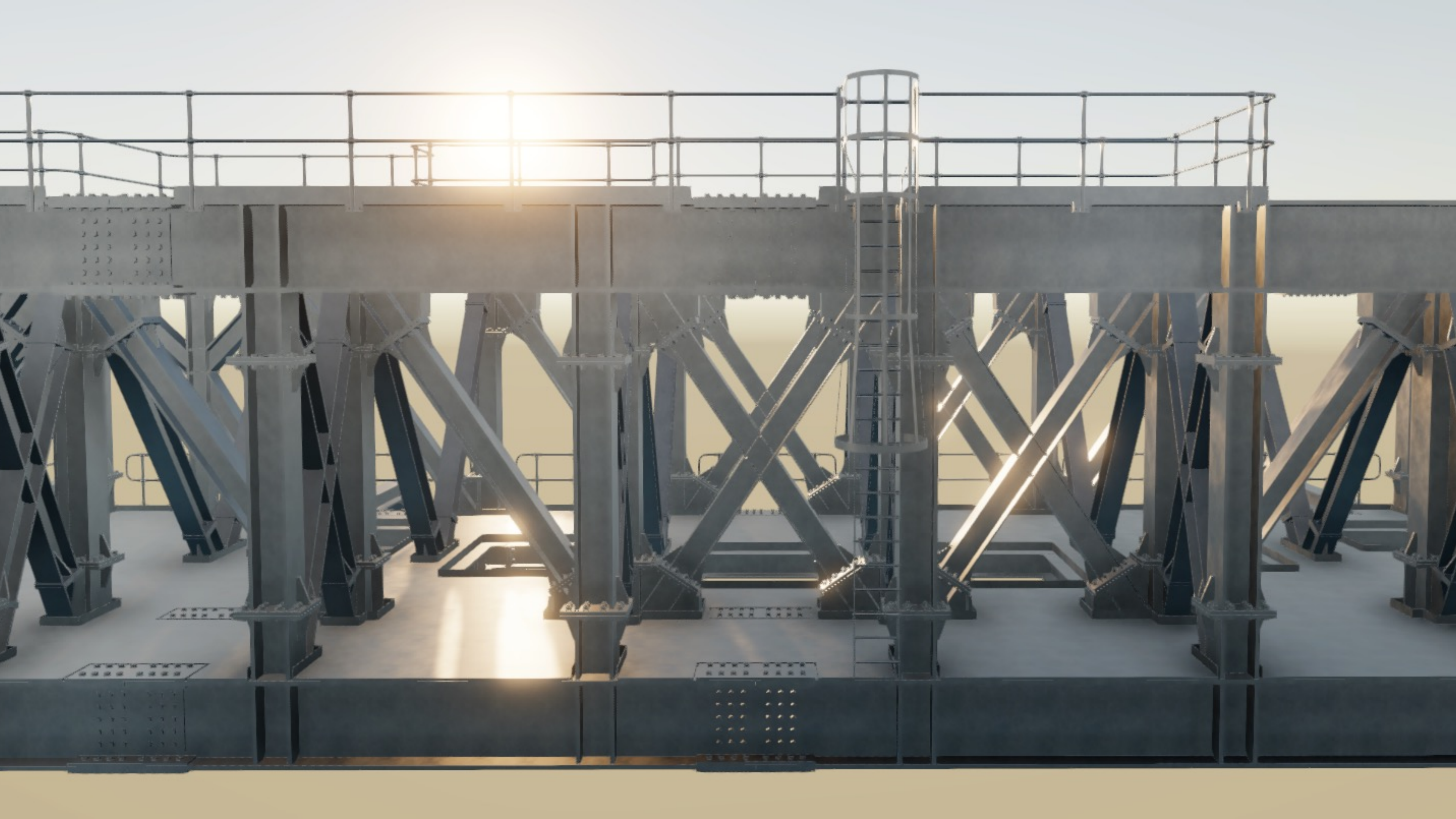
THE PROJECT BRIEF

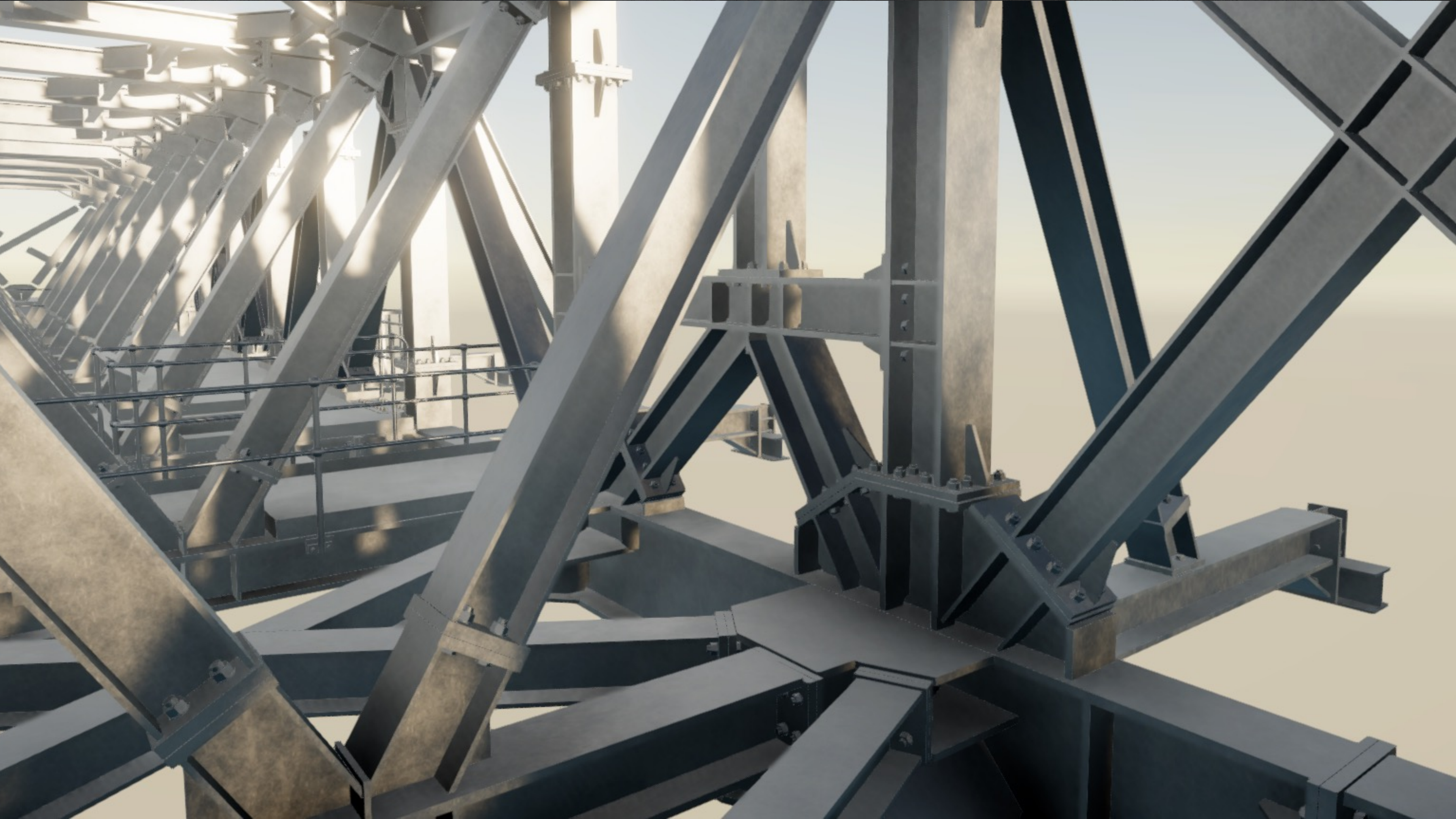
CLIENT: ACWA Power

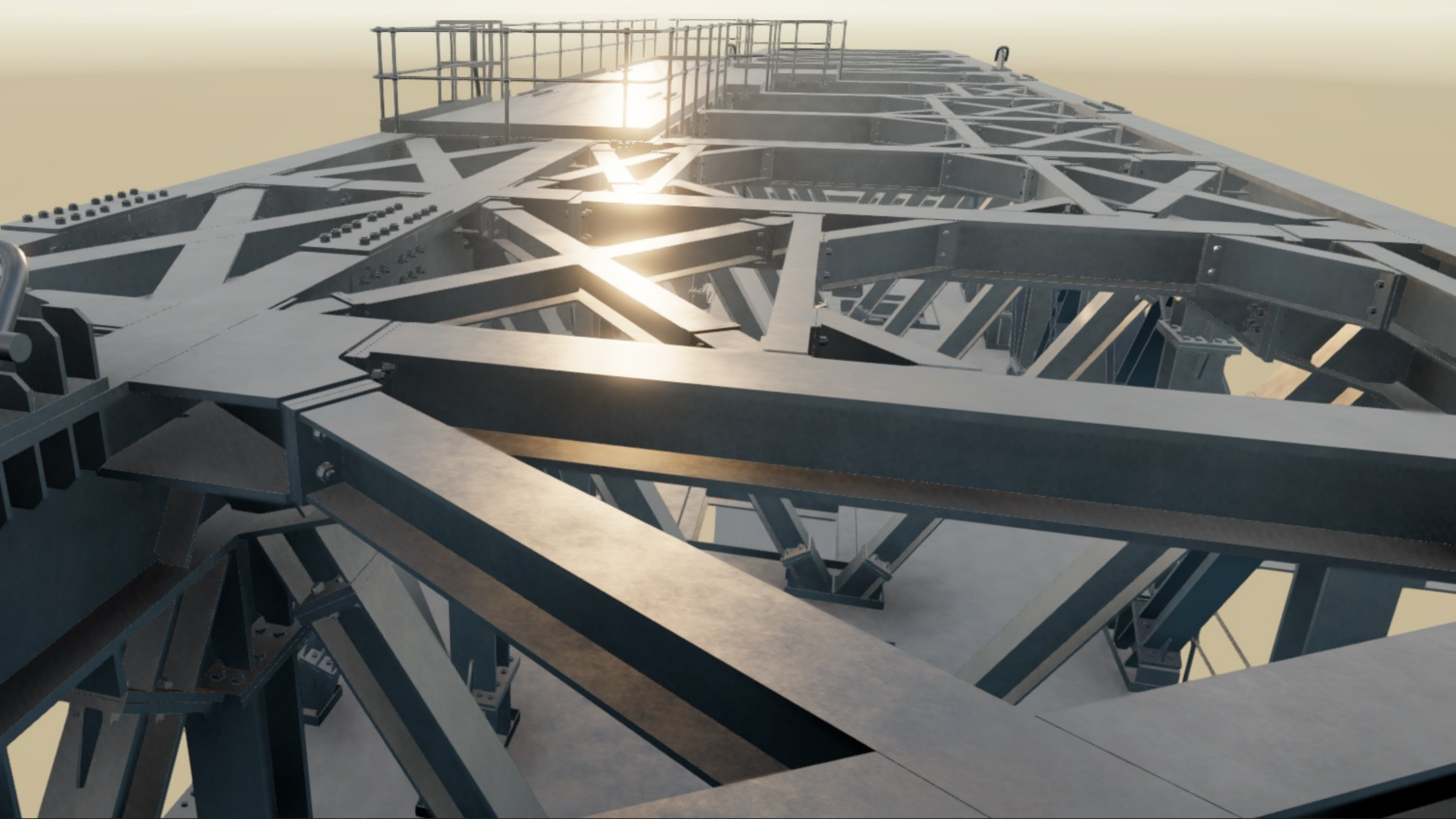
ENGINEER: SEPCOIII

MAIN CONTRACTOR: SEPCOIII

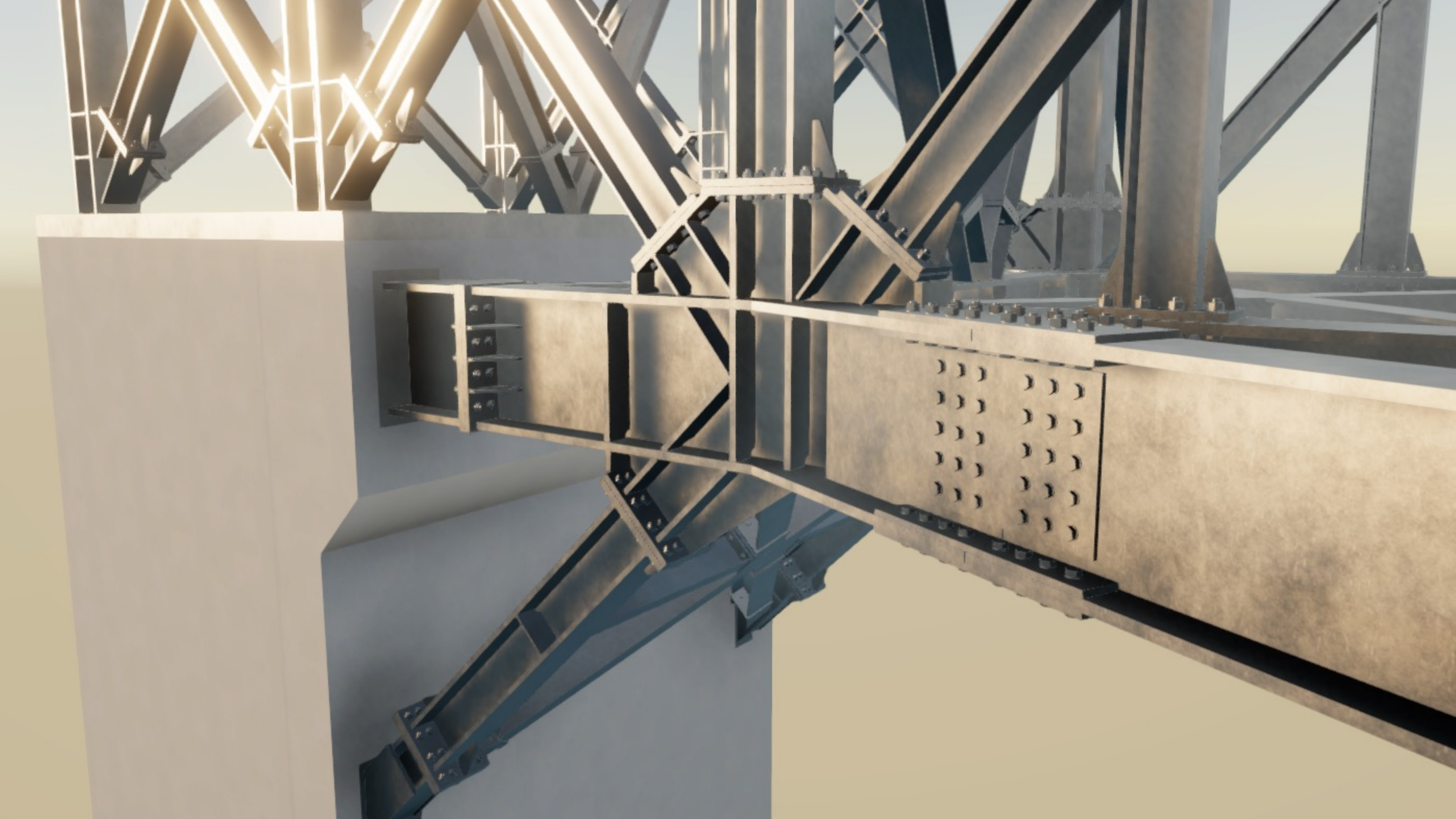


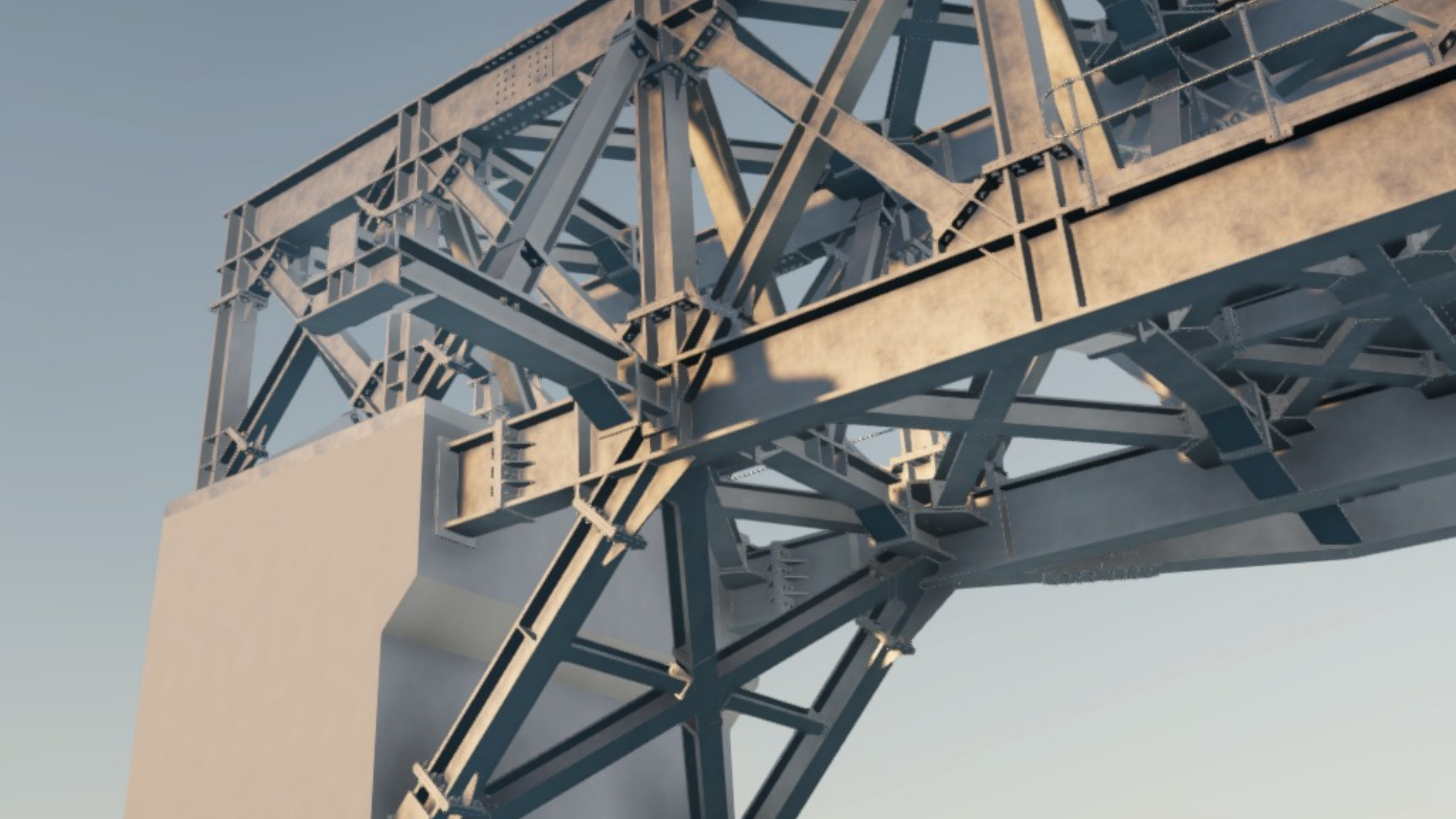




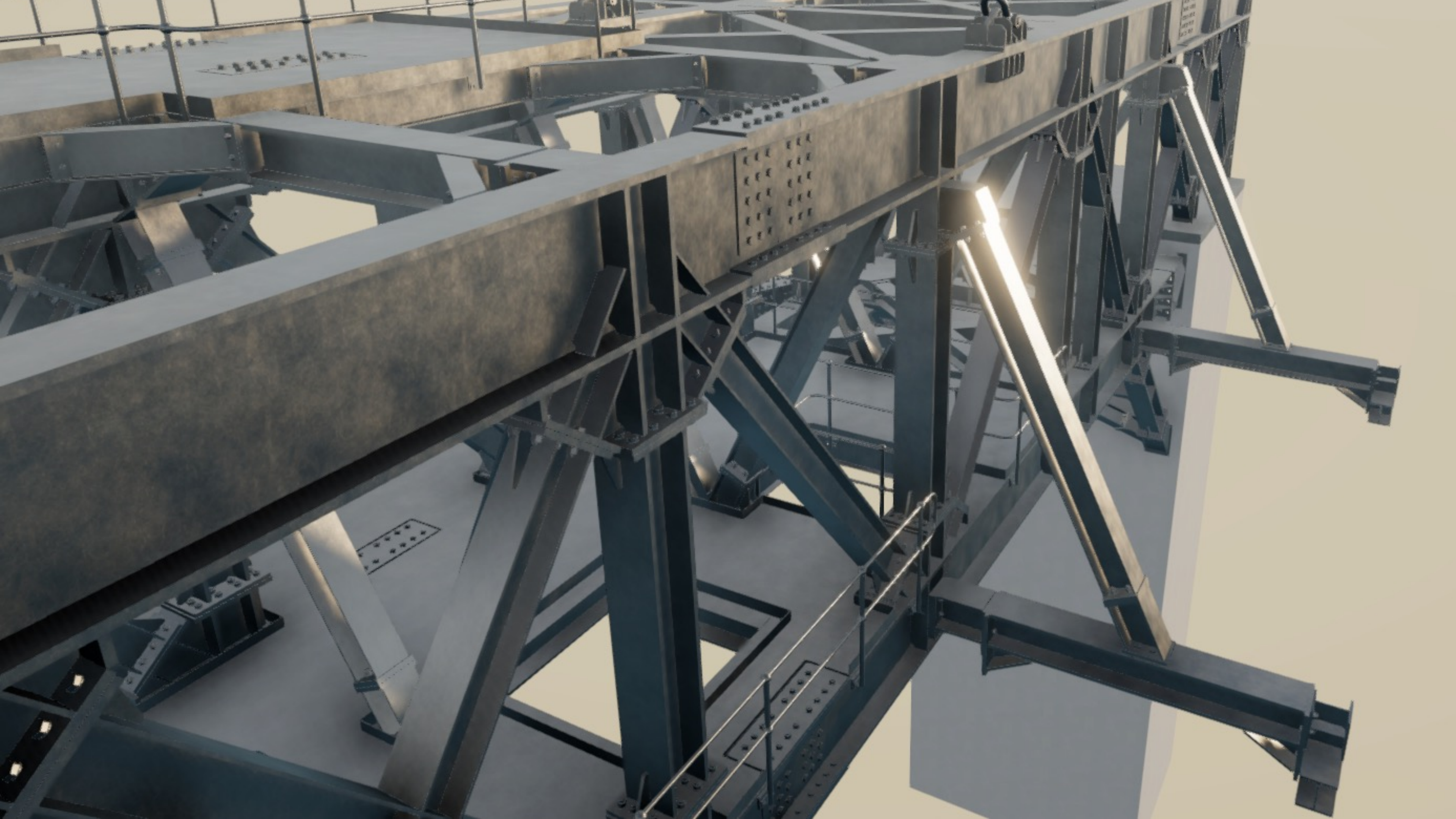




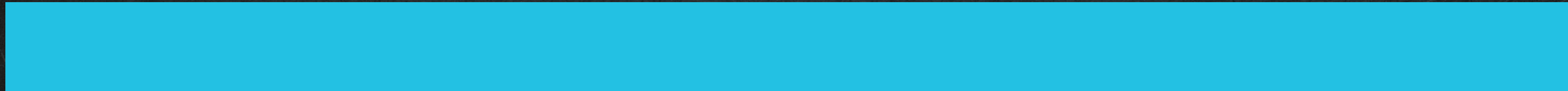








THE PROJECT OVERVIEW



PROJECT OVERVIEW

Located in Postmasburg, Redstone is a 100MW Concentrated Solar Thermal Power Plant able to store 12 hours of full-load energy which can supply over 200 000 South African homes during peak demand, even after the sun has set.

This is one of the largest investments in South Africa under the REIPP (Renewable Energy Independent Power Producer) Procurement Program.



PROJECT OVERVIEW

STRUCTURAL STEELWORK

Project Completed: 2024

Steelwork Completed: 2023

Tonnage: 3342,63t (Cadcon & SGS)

Profiles used: Plate Girders, UB, UC,



PROJECT OVERVIEW

STRUCTURAL STEELWORK

Structural Engineer: SEPCOIII

Steelwork Contractor: Cadcon (Pty) Ltd

Steel Detailer: Mondo Cane

Connection Design: EDS Engineering

Steel Merchant/s: Macsteel, BSI, Allied Steelrode



FABRICATION

STEELWORK CONTRACTOR: Cadcon (Pty) Ltd













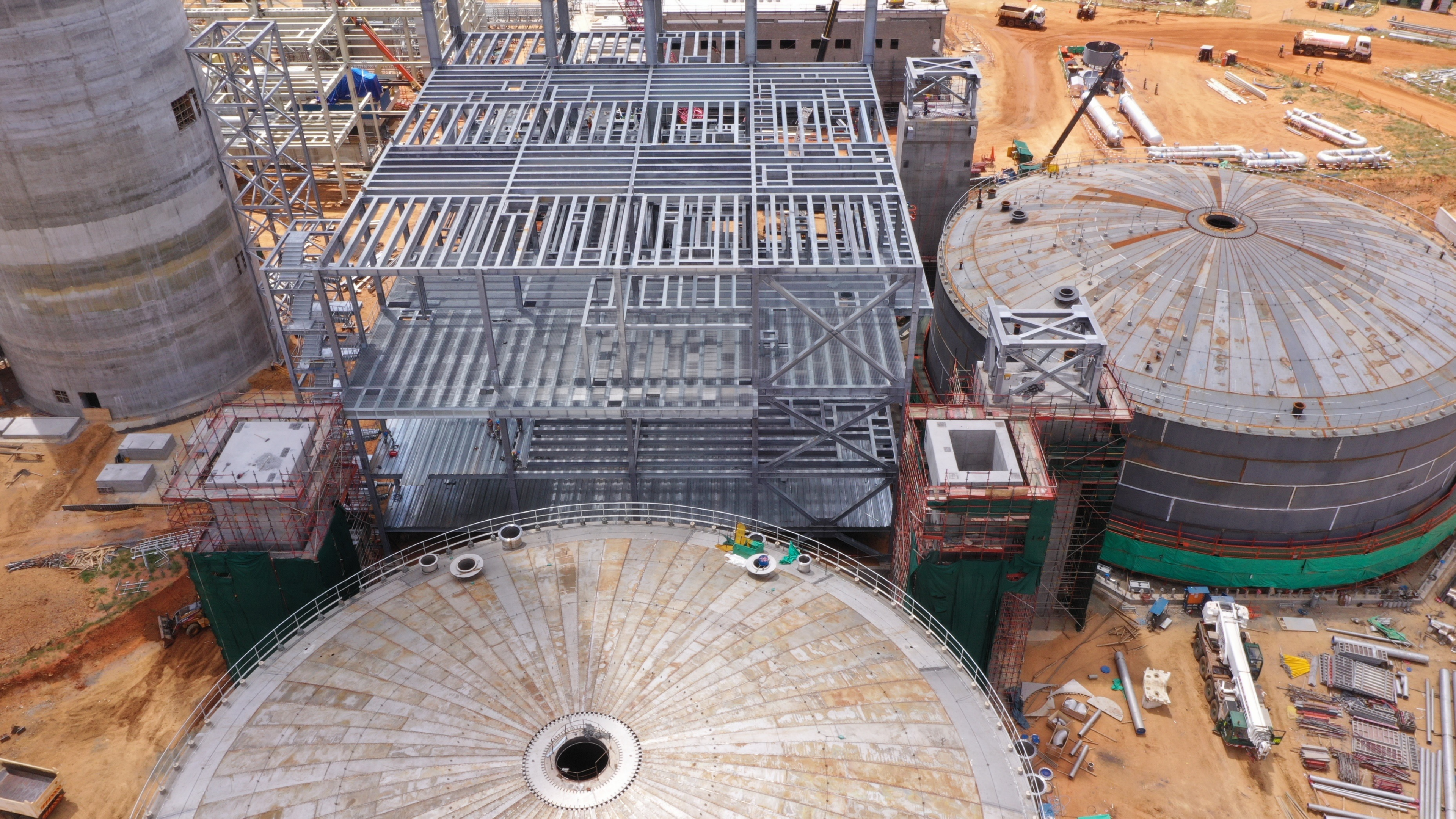
ERECTION / CONSTRUCTION / INSTALLATION

CONTRACTOR: Gauteng Structural Erectors

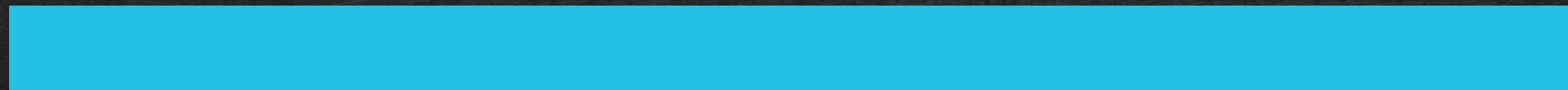








CHALLENGES AND SOLUTIONS

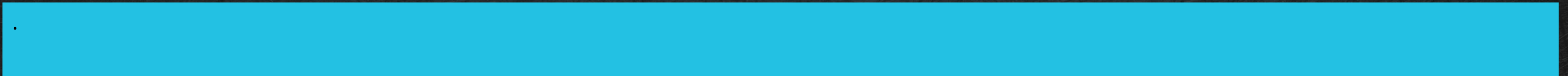


Challenges and Solutions

- * Material Unavailability meant that majority of the beams had to be fabricated from plate.
- Due to the magnitude of the sections, the trial assembly for the Hot & Cold Structures was carried out at our workshops prior to galvanizing.
- * All steelwork was galvanised, and we had to strategise the best way to galvanise the structure to avoid excessive galvanising pick-up.
- * Due to the bolt sizes and vibration experienced by the structures, all bolts were torqued by hydraulic machines



THE BENEFITS OF STEEL IN THIS APPLICATION



Benefits Of Steel

In this application

Due to the spans, in excess of 50m, steel was the only solution for these structures supporting pumps and mixers over the Hot & Cold Molten Tanks





WHAT WE'RE PROUD OF

