

DIRIYAH GATE ROYAL INAUGURATION

Historic Diriyah
November 2019

Case Study

A build overview and technical
information guide.



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DIRIYAH GATE ROYAL INAUGURATION



All Events Services focus on supplying temporary structures that provide safe, practical and aesthetically pleasing solutions to our client's concepts. Our design solutions can often be challenging and can take time working alongside the client to create the best structures for the event.

AES often relish in these challenges and working with Executive Visions Inc (EVI), on the Diriyah Gate Inauguration project in 2019, was no exception. From our first meeting with EVI it was clear that the sheer scale and grandeur of this venture was to be challenging.

The show, a film depicting the story of Saudi Arabia, was projected on the ruins of the palace in Historic Diriyah. The location was painted with a striking display of cinematic projection mapping to tell the visual story of the kingdom's history. Nearly 7 billion pixels of content per second were projected, eclipsing 8 trillion pixels total for the show. To complement the visual story, the Prague Symphony Orchestra performed an original soundtrack alongside the film.

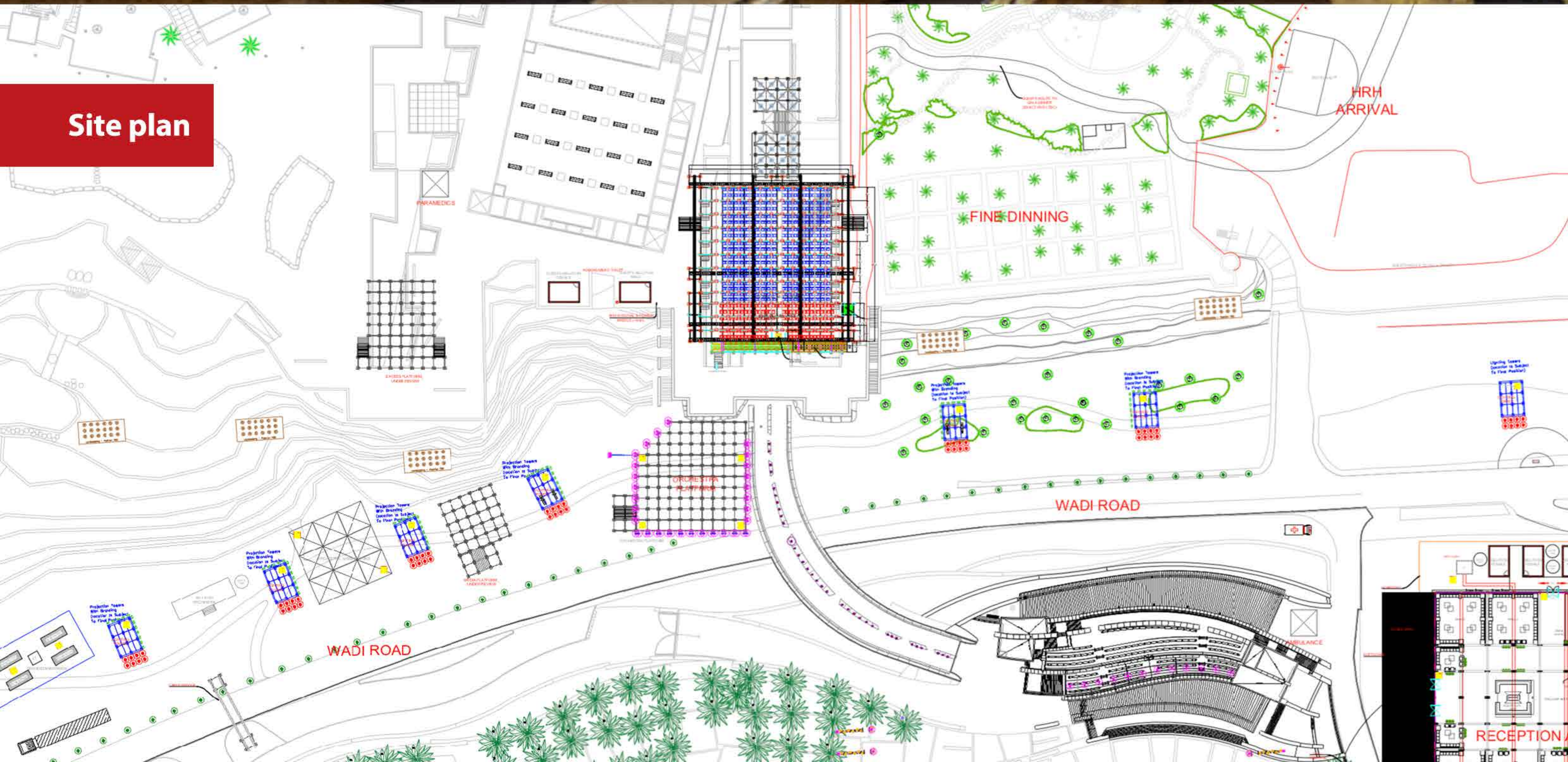
The epic one-night opening ceremony was granted and attended by His Majesty King Salman and HRH Crown Prince Mohamed Bin Salman Al Saud, to celebrate the archeological restoration of the UNESCO World Heritage Site in Diriyah.

EVI describes taking on the project as, "the focal point...and fulfillment of the dream would require a complex, multi-fold initiative involving the highest levels of talent in creative development, technical engineering and mega-scale project leadership."

Historic Diriyah



Site plan



AES SUPPLIED:

Covered Royal & VVIP tiered seating grandstand approx. 800 PAX

Elevated FOH with underworld deck to rear of seating

Three levelled projection tower - 8m x 8m @ 20m high

Raised orchestra platform – 20m x 20m @ 7m high

8 x Lighting towers – 4m x 6m @ 6m high

Raised tiered media platform

Tiered VIP guest platform – 12m x 16m deck

2 x heavy duty power platforms

1 x cable road arch – 16m clear span

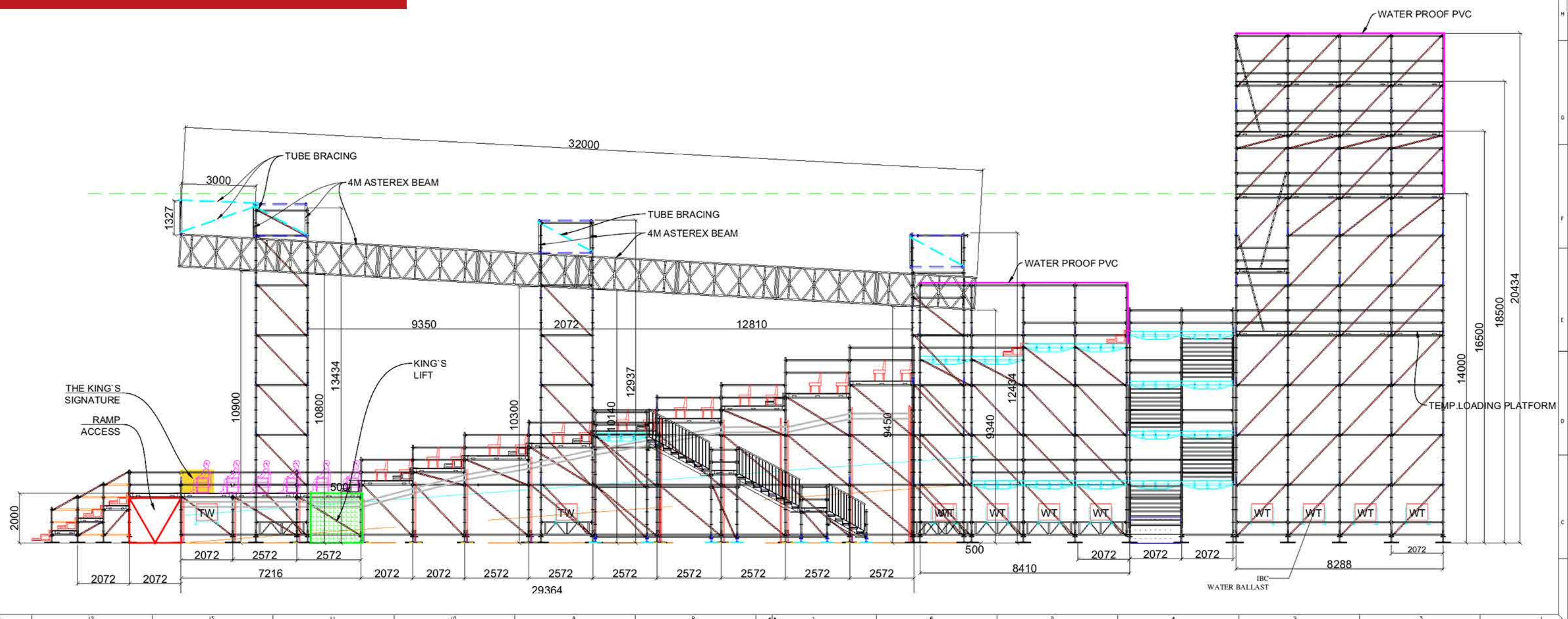
180m Scaffold wall

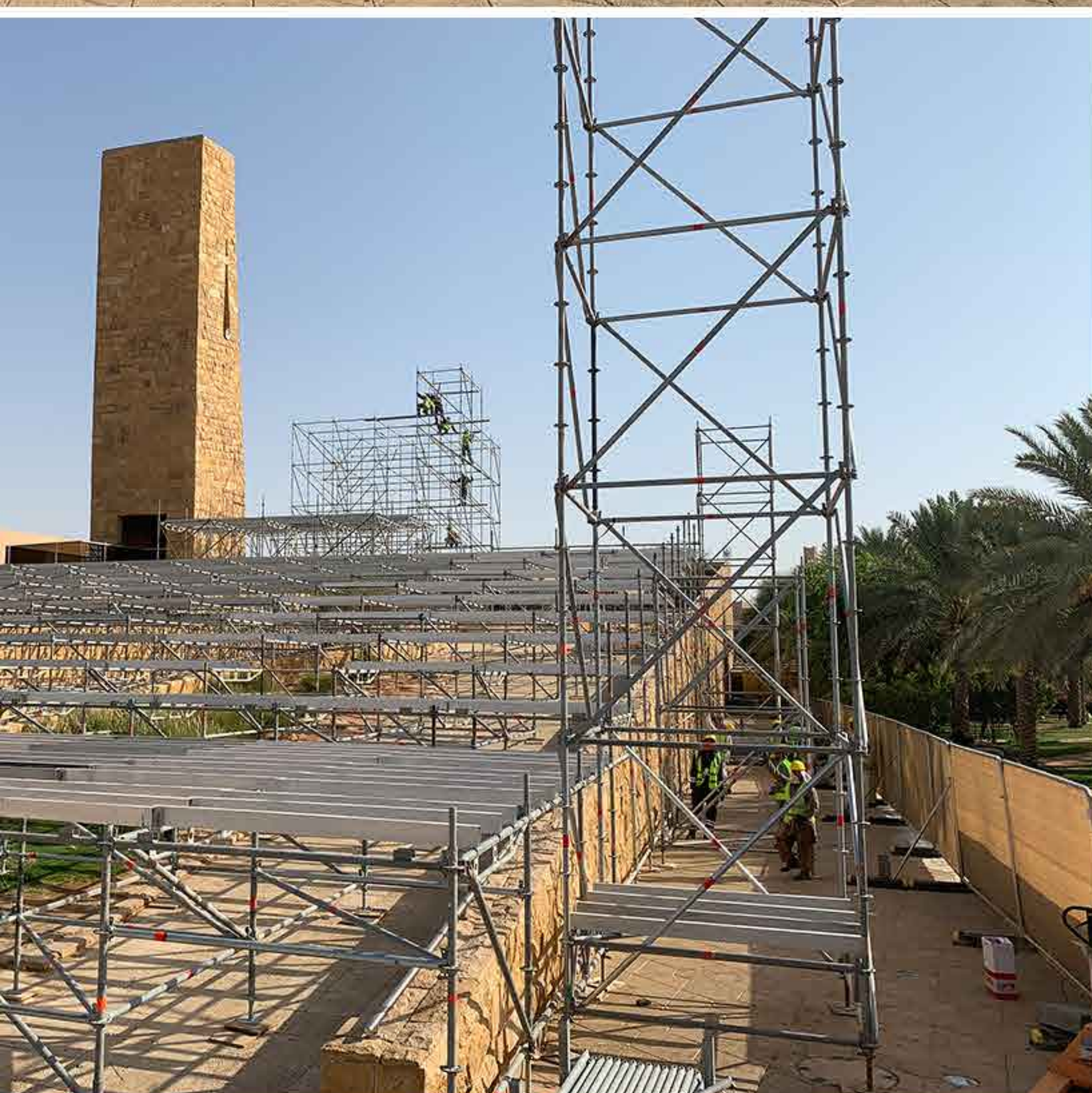
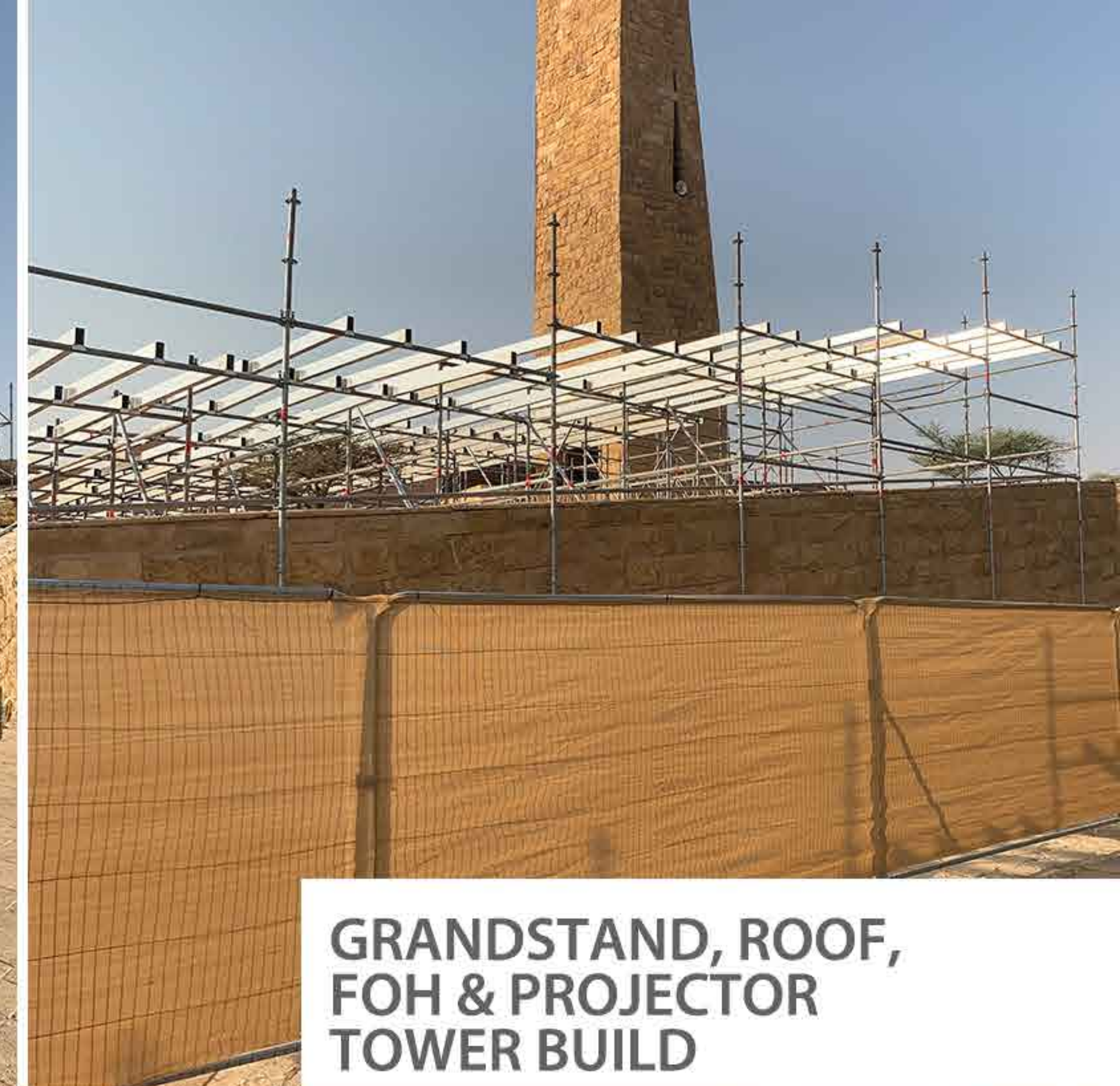
1,200 m of fencing

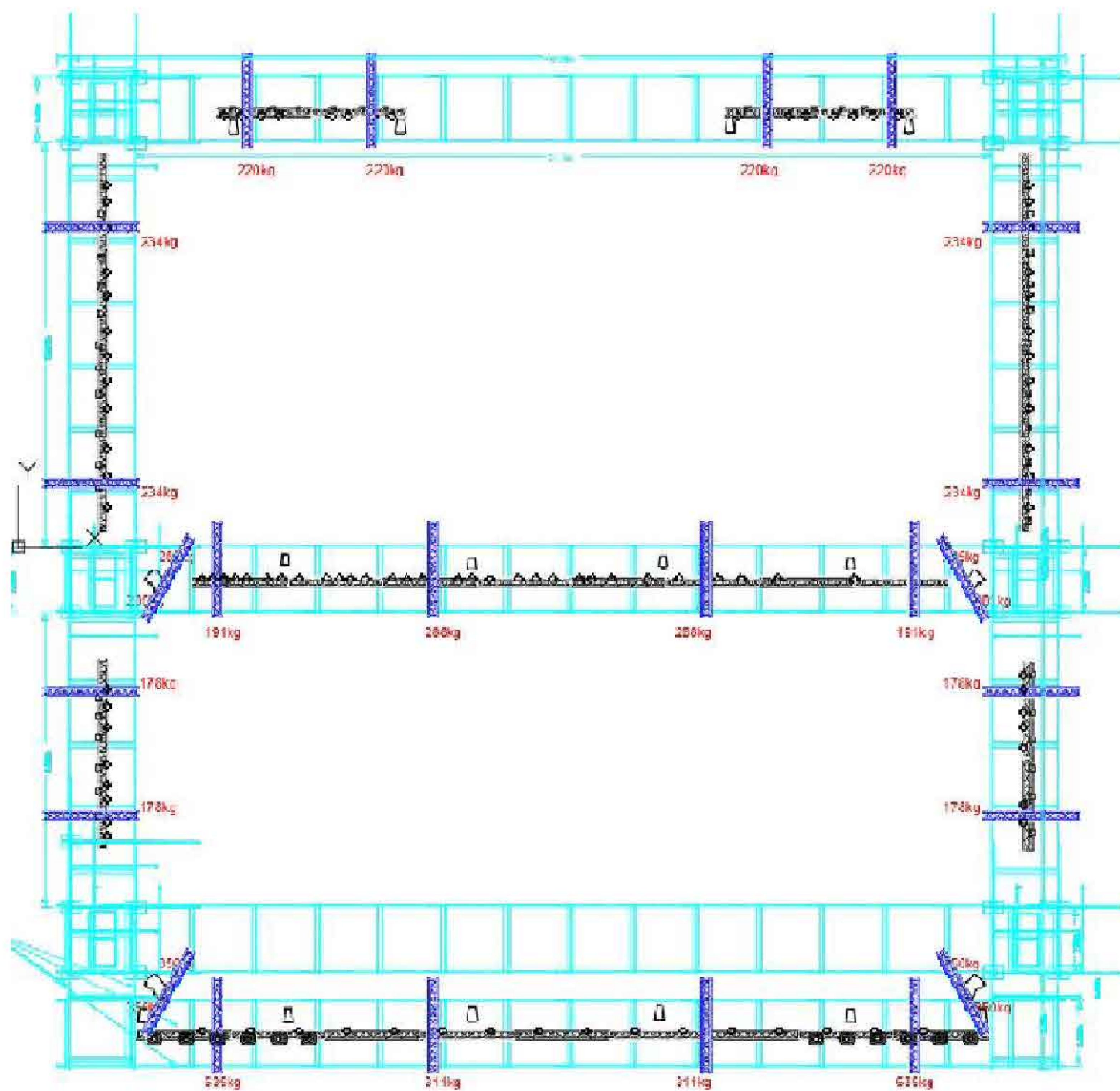
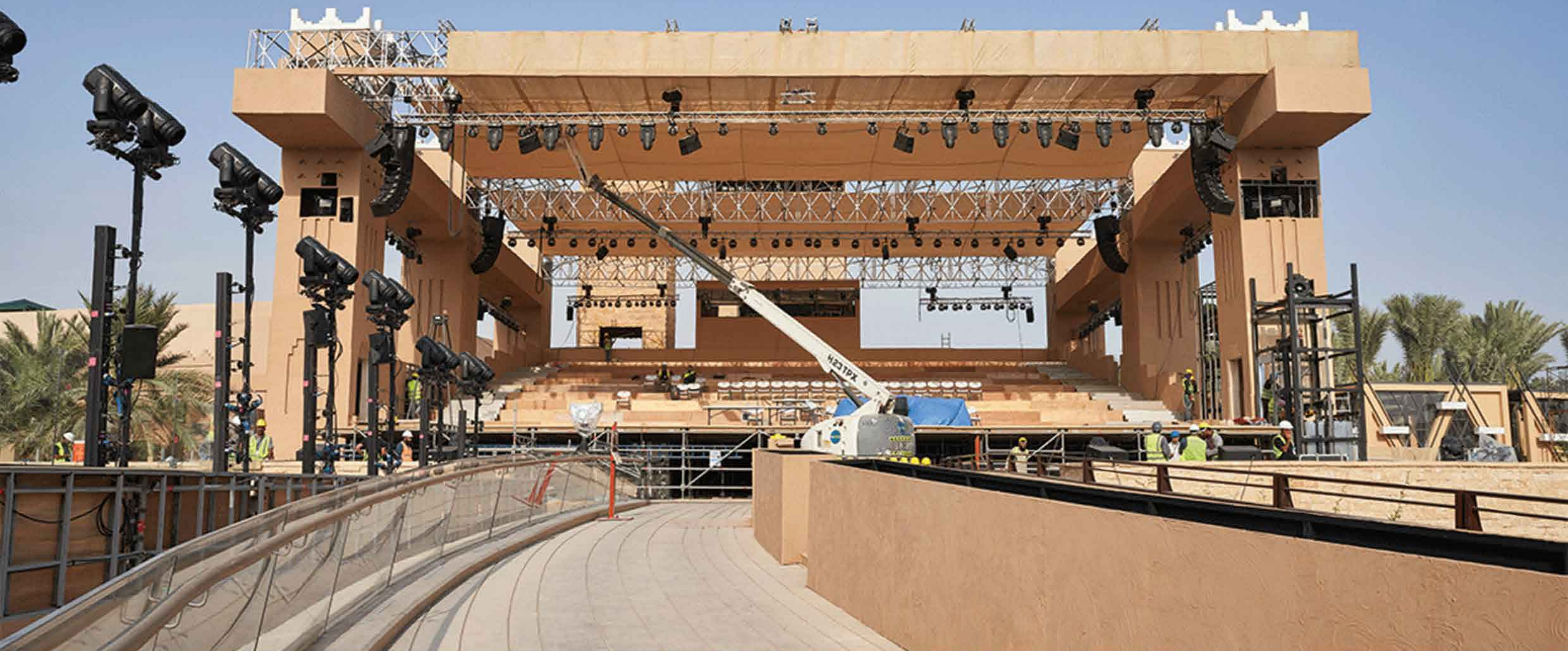


His Majesty King Salman and HRH Crown Prince Mohamed Bin Salman Al Saud in attendance

GRANDSTAND, ROOF, FOH & PROJECTOR TOWER PLAN







AES BEAM ROOF

Restricted access to the grandstand location
Small plant only - No cranes

Chain hoists and temp towers used to erect
beams between roof towers

Clear width span distance
27.26m

Roof depth front to back
32m

Rigging points/loads

Rear Span - 4pts / 880kg
Mid Span - 6pts / 2,098kg
Cantilever Span - 6pts / 2,592kg
L & R side beams - 8pts / 1,648kg

Total - 24pts / 7,218

Royal & VVIP grandstand

192 PAX Royal seats

606 PAX VVIP seats

30m x 24m footprint on multi-level / sloped terrain

27m clear span roof beams @ 10m high clearance, with weatherproof with fabric cover

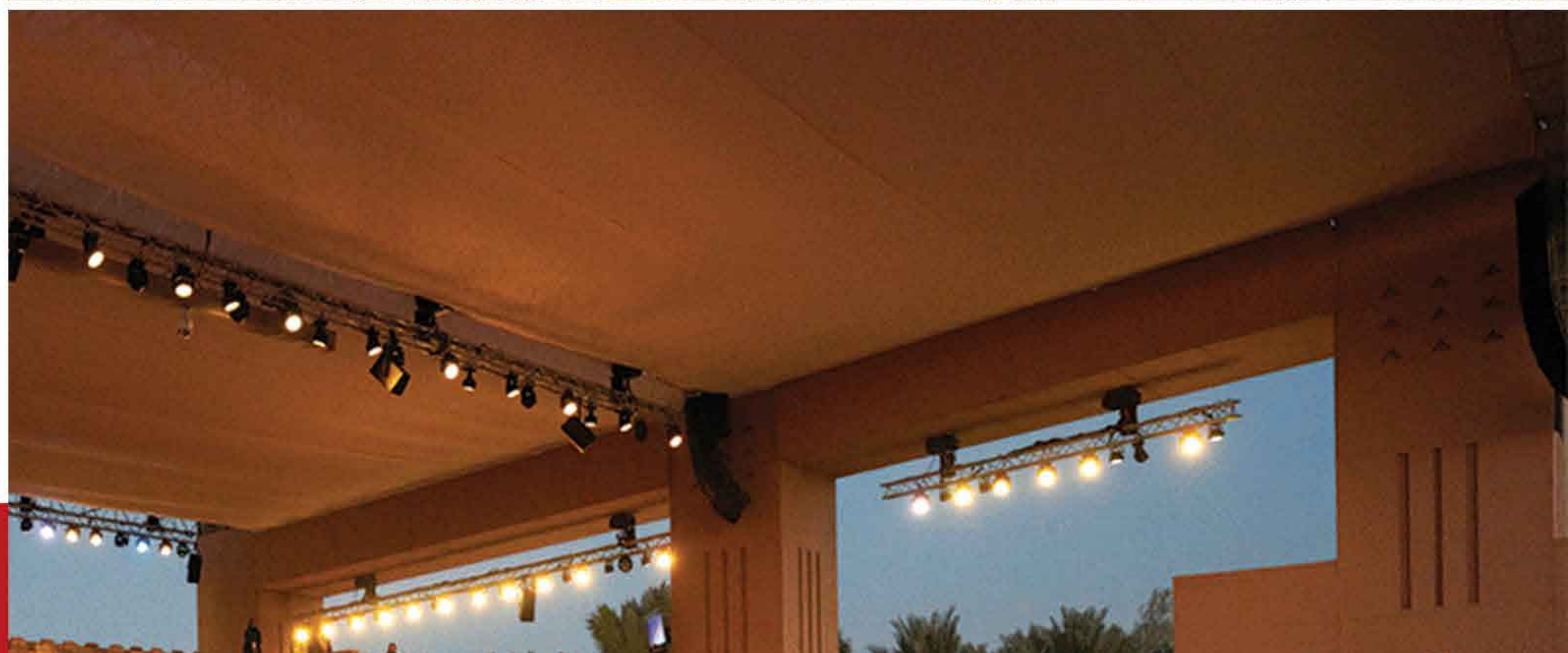
8T (UDL) rigging capacity in roof

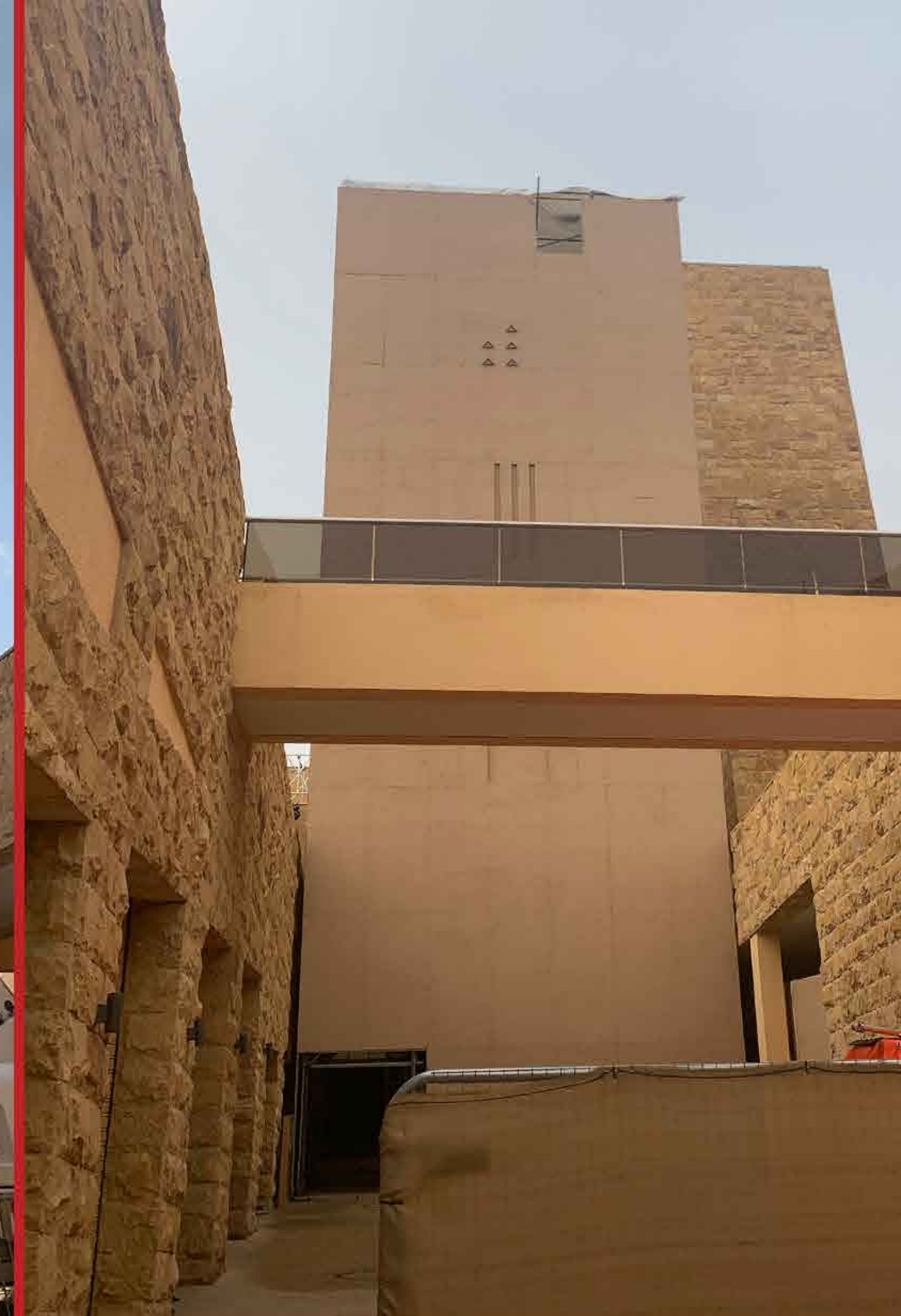
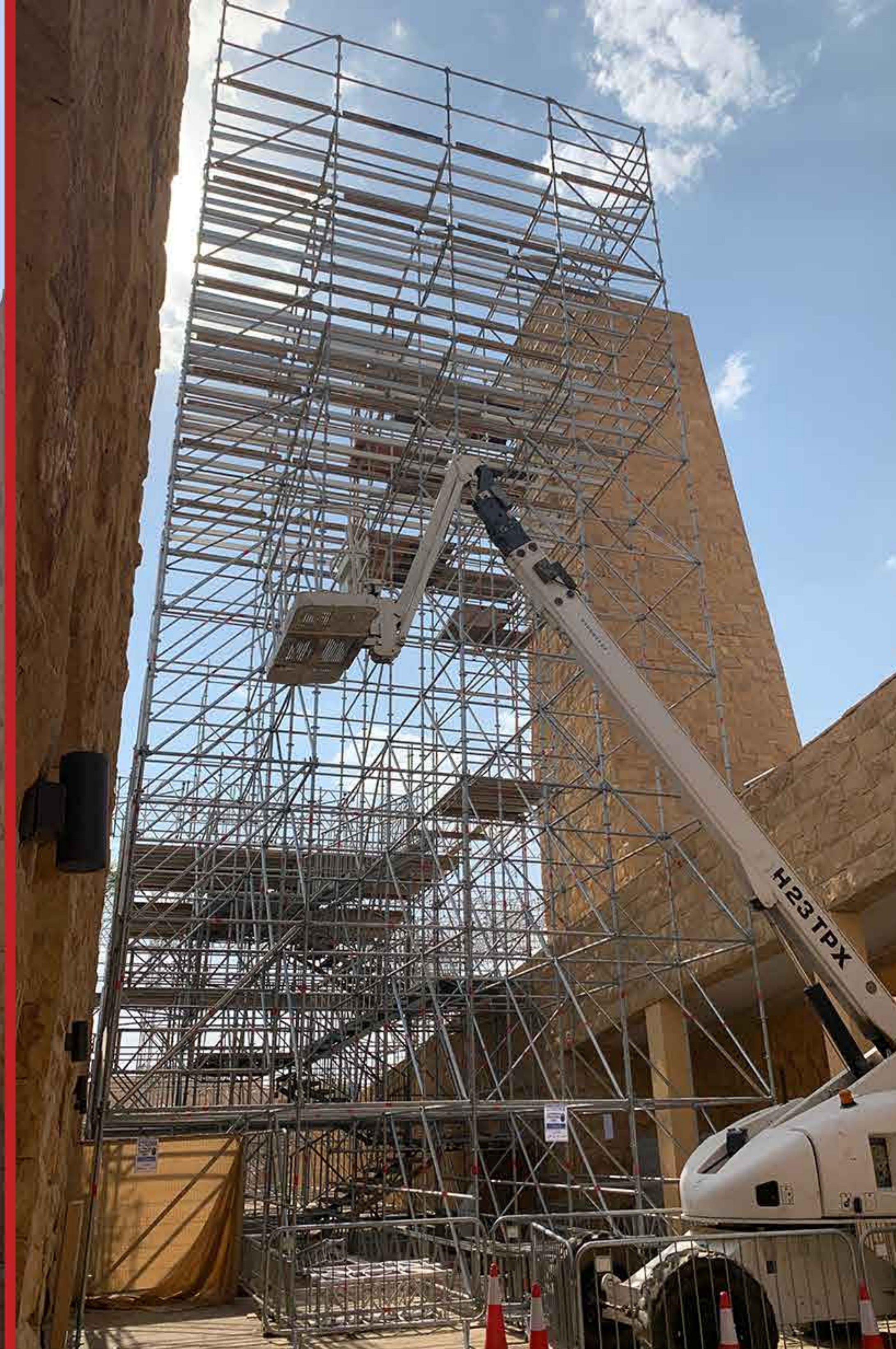
Royal elevator installed

Royal ablution unit installed

Multiple staircases and ramp access

Structure clad using metal frame and decorative plaster to replicate palace stone work.





Projection & Light Tower

8m x 8m @ 20m high

Projector platforms built at 14m, 16m & 18m high levels

Loading dock platform built at 12m height

Projector levels weather protected by vinyl covers

Internal ply cladding installed to provide AC climate control for projectors levels

Tower externally clad with decorative plaster finish

24T of water ballast required for structure



Orchestra Platform

Prague Symphony
Orchestra

400 sq.m raised deck

Multi-levelled
musician risers

Handrail and lighting
columns installed on
perimeter





Projection Towers x 8

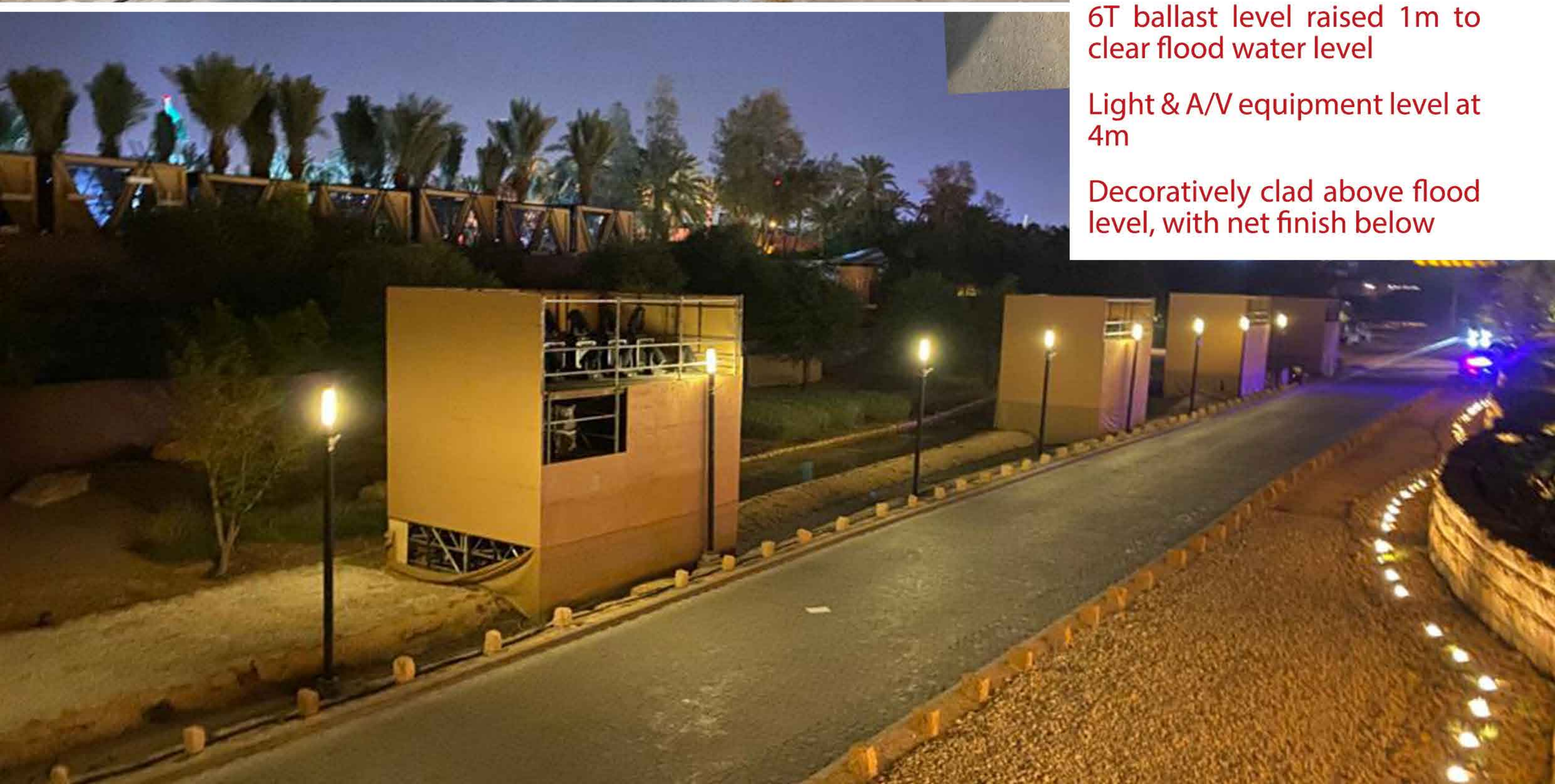
Installed alongside the lower road to position lights the full width of the site

6m x 4m @ 6m high

6T ballast level raised 1m to clear flood water level

Light & A/V equipment level at 4m

Decoratively clad above flood level, with net finish below



Generator Platforms

With the production team installing over 4,000 light fixtures, the demand for power was extremely high.

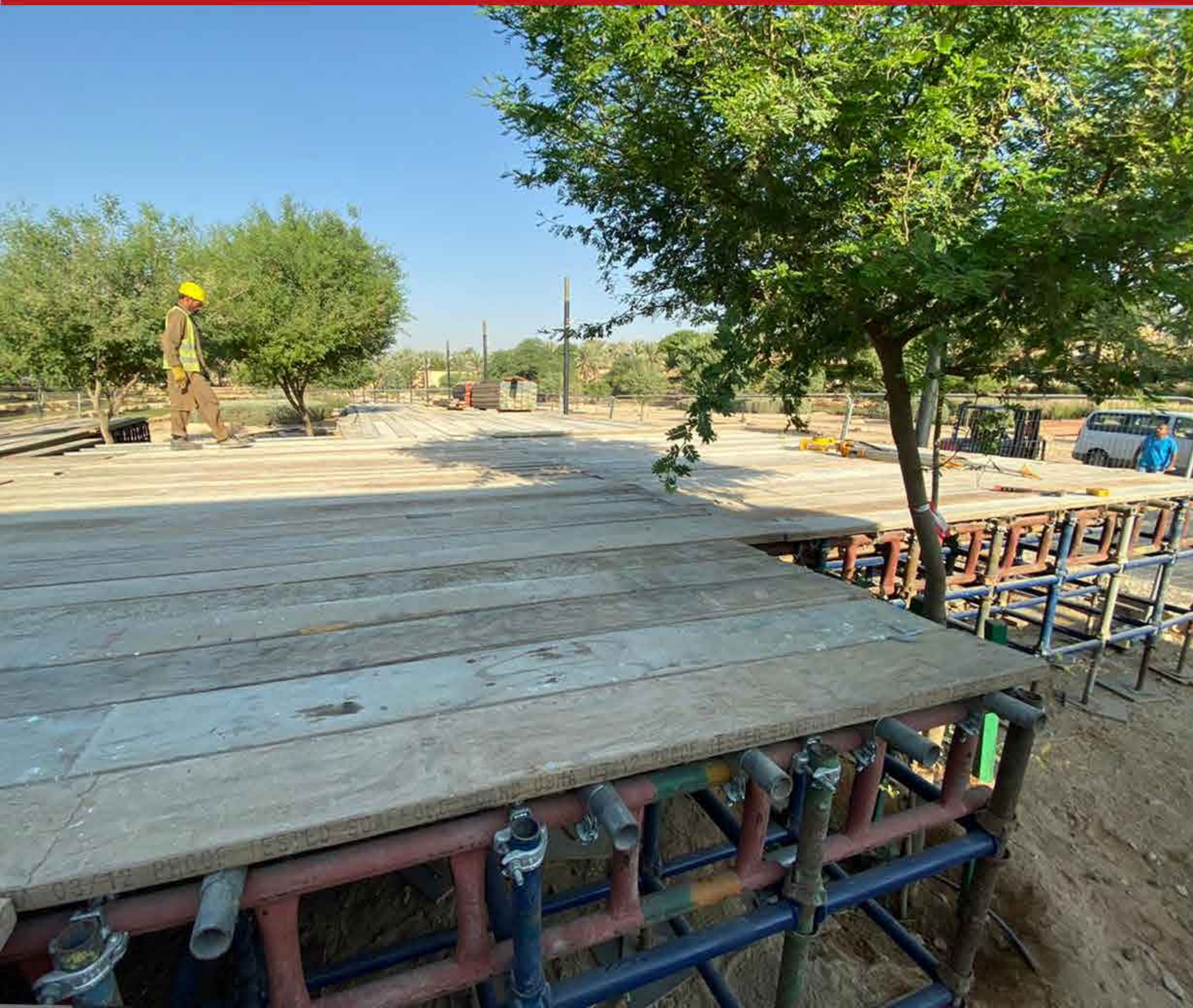
To keep the large number of generators and fuel tanks hidden from the spectators view, the power farms were situated in the lower wadi roadside.

Due to the risk of flooding in this area, AES were tasked with installing 2 large raised power platforms.

Using a 50cm scaffold grid design, two reinforced platforms were required to support up 135T in total, raised 1m above the flood levels.

Power Platform 75T load
14m x 14m @ 1m

Power Platform 2 60T load
15m x 6m @ 1m







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www.aes.ae info@aes.ae
(+971) 4 321 5599

Street 18, Al Quoz Industrial Area 1, 333986 P.O BOX
Dubai, United Arab Emirates