

# Unusual Roofs Maintenance Access - Dubai Metro

## The Problem/Challenge

To establish an **appropriate means of roof surface and glazing cleaning** on 40 overground station roofs of iconic structural form in the hot Middle Eastern climate of Dubai.

## The Risks

**Falls from height and heat exposure** on curved metal roofs and glazed elevations above operational railway and busy 6-lane motorway adjacent.

## The Solution

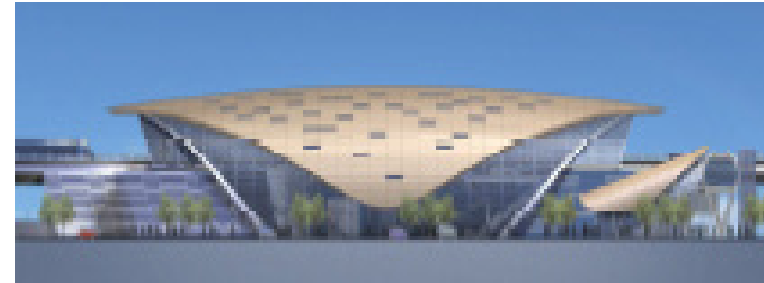
**Variety of roof access options analysed** including BMU's, cherry pickers and roped access, with possible use of roof cleaning sprinkler system. All discounted on grounds of impracticability and safety to operatives and road users. Design team and client agreed solution was a **purpose designed robotic system**.

## The Benefits

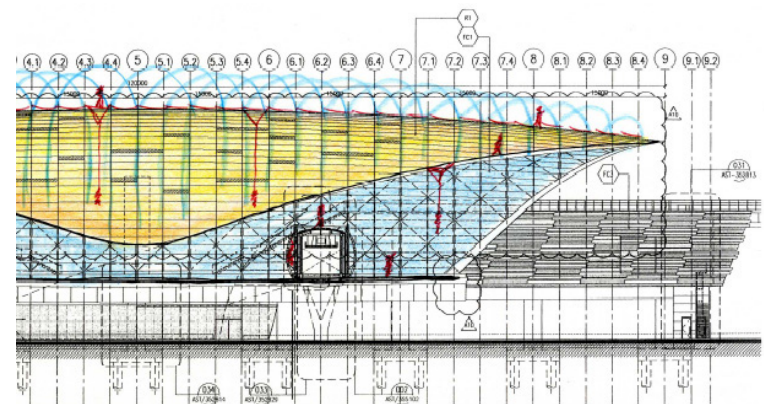
Man access to roofs eliminated for general maintenance purposes.

## Key Points

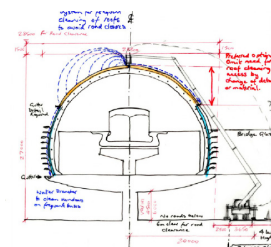
Details of **sun-shading devices** critical to allow passage of robot. Roof apex robot attachment system, **water supply** and mansafe fall restraint harness system to be developed in detailed design with specialist subcontractors.



Gold metallic curved roof 120m X 30m



Roped access +sprinkler options analysis



Cherrypicker option



Robotic system at top