



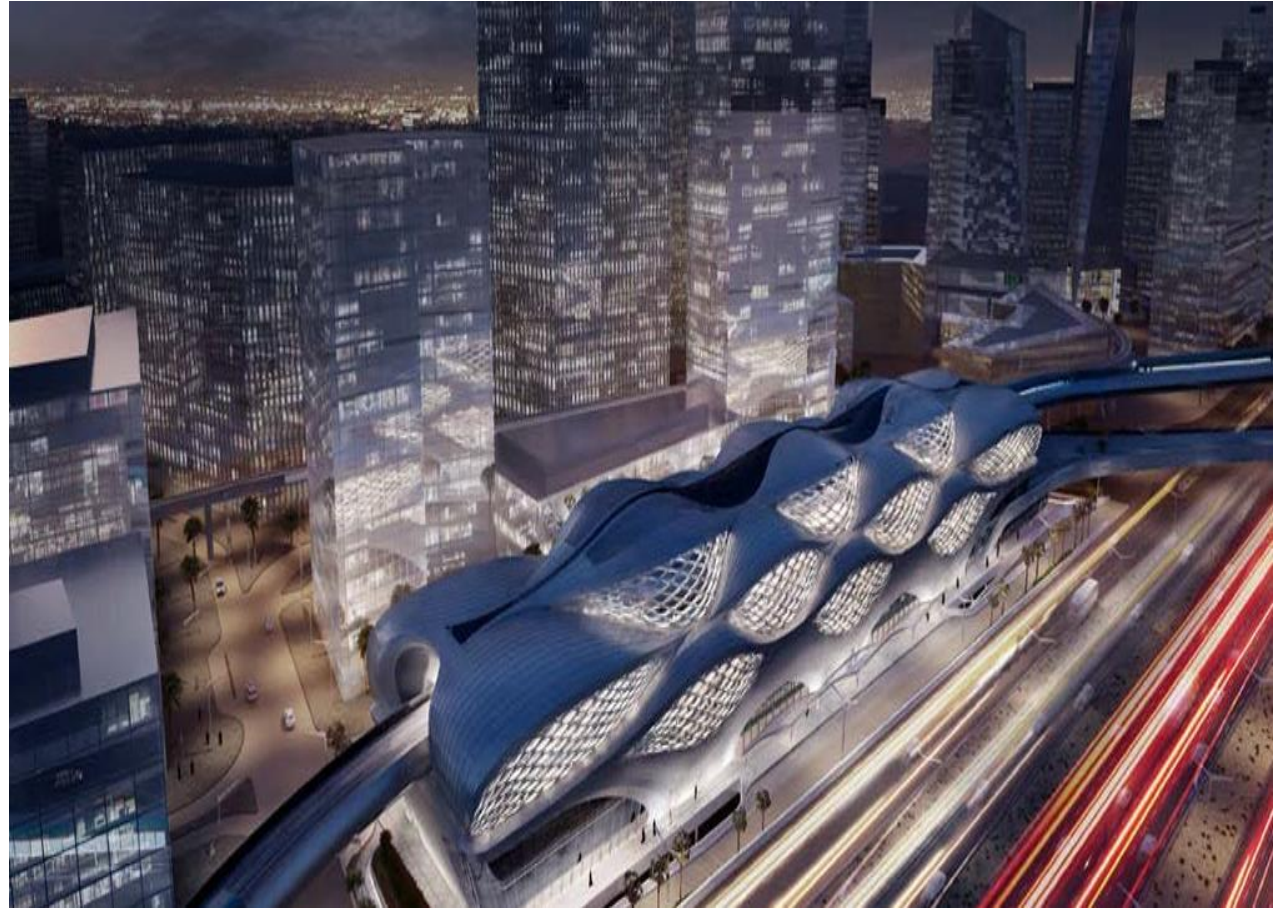
TRUST PRO CONTRACTING CASE STUDY

Building Riyadh's Lifeline - An In-Depth Analysis of the Riyadh Metro

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Abstract:

The Riyadh Metro is a rapid transit system currently under construction in Riyadh, the capital city of Saudi Arabia. As part of the King Abdulaziz Project for Riyadh Public Transport, this ambitious endeavor will consist of six metro lines, spanning a total length of 176 kilometers (109 miles) and featuring 85 stations. The project's estimated cost is a staggering \$22.5 billion. Once operational, it is expected to significantly enhance urban mobility, reduce traffic congestion, and promote sustainable transportation. The Riyadh Metro will be the second metro system in Saudi Arabia, following the Al Mashaaer Al Mugaddassah Metro line, which opened in November 2010. Its impact extends beyond the city, making it the fourth metro system on the Arabian Peninsula, the sixth in the Arab World, and the fifteenth in the Middle East.



Introduction:

The Riyadh Metro Project, initiated by the Saudi government, aims to alleviate traffic congestion, enhance connectivity, and promote sustainable urban mobility. Comprising six metro lines, the project spans 176 kilometers, connecting key areas of Riyadh. Our case study centers on the Orange Line, an 11-kilometer underground stretch that weaves through the heart of the city.

Objectives of the Project:

- 1. Enhanced Mobility:** The primary objective is to provide efficient, reliable, and accessible transportation for Riyadh's growing population. The Orange Line connects major landmarks, commercial hubs, and residential neighbourhoods, reducing travel time and promoting economic development.
- 2. Environmental Sustainability:** By encouraging public transit, the project aims to reduce private vehicle usage, thereby curbing air pollution and minimizing the city's carbon footprint.
- 3. Safety and Resilience:** Ensuring passenger safety during normal operations and emergencies is paramount. The project prioritizes robust fire protection systems to safeguard commuters and infrastructure.

About the Project:

Location

Riyadh City

Contractor appointed by Royal Commission for Riyadh City for Line 3 construction contract

ANM METRO | ArRiyadh New Mobility -

Nesma & Partners – We build – Larsen & Toubro Joint Venture

Sub-contractor appointed by ANM for the firestop system

Trust Pro Contracting



Technical Constraints:

The installation of firestop system posed several challenges:

- 1. Complexity of Design:** The heavy services needed to operate metro stations imposed a lot of complexity of the firestop design and installation due to congested services in tight spaces and heavy electrical.
- 2. Site limitations:** The heavy services and vast range of MEP services resulted in many areas with limited access to install the firestop system. This was solved by cooperation and creativity to install the system properly.



Project Execution:

The execution involved meticulous planning, collaboration among consortium partners, and adherence to safety protocols. The Orange Line now stands as a testament to engineering excellence, seamlessly integrating fire safety measures into its design.

In conclusion, the Riyadh Metro's Orange Line exemplifies how strategic planning, innovative solutions, and a commitment to safety converge to create a lifeline for Riyadh's residents and visitors. As the metro system continues to evolve, passive fire protection remains a cornerstone of its success.

