

## 3B2 Western Station



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# 3B2 WESTERN METRO STATION



## **Project Brief:**

Client: Arriyadh Development Authority (ADA).

Location: Asswaidi Al-Gharbi, Riyadh, KSA.

In an era of revived interest in downtown and car-less transit, Ar Riyadh Metro Western Station is much more than a place to board a train. The goal of design an intermodal transit hub that appeals to non-transit users. This new iconic nexus links buses and the city's light rail system, it is home to a vegetables market place, and it embodies the culture of the city and create real-estate value at the same time. The design concept of the station building is a modern interpretation of the “desert sand dunes”, where a cluster of dune shaped, earth colored structures emerges from the site creating opportunities for station entries, light penetrations and pedestrian shading. The general orientation of the dunes is related to pedestrian approach and urban vantage points. An area that was once an open-air vegetables market now has a sense of arrival and event that is spurring development for blocks. The new station will take that one step further in the design of its outdoor gardens, which celebrates entertainment and light rail simultaneously. Skateboarders and garden visitors will enjoy their activities as elevated trains pull in and take off over the gardens, effectively becoming almost like a "performance". Visitors will experience hustle and bustle broken up into a series of high quality spaces Iconic spaces will draw the tourist as much as the commuter. Use by non-transit riders is what adds that extra level of vibrancy to the open transit principles of design.

Combining a state-of-the-art transit station with complementary mixed-used development and year-round public space, the station will create a new emblem of civic identity and community pride in its mix of uses. Ultimately it will create the first of a new generation of facilities to truly integrate transit and culture. It will draw commuters, tourists, shoppers, and casual observers.



3B2 Western Station is one of the iconic stations of the Riyadh Metro Project. The project includes:

- Above ground Metro Station.
  - Bus Station.
  - Underground park & Ride Facility.
  - Mosque.
  - This station will be surrounded by a hierarchical landscape, which will be a combination of natural and artificial elements.
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- ❖ Gross area of this project: 107,000 m<sup>2</sup>.
  - ❖ Starting Date: June 2015.
  - ❖ Completion Date: September 30<sup>th</sup> 2018.



- **Above ground Metro Station / BRT :**

An on-site set-down land has been provided for both the Metro/ BRT (Bus Station) building and the future Market building. This is intended for use by private motor vehicles and possibly taxis. The problem with on-road set-down causing congestion is well known in the city so this facility is seen as essential. Both these facilities will require careful policing to prevent extended waiting/parking and/or double or triple parking causing congestion and back-log on the entry ramps. We recommend that during peak periods, that a manned barrier entry system is used. 'Tire Killer' devices should be installed at the exit lane. The need for crash rated barriers for use when required at the entry point may be considered. The Phase 1 design retains both on-site set down lanes. On-road set-down bays serving the Metro/BRT Set-down lanes are provided for private vehicles and taxis on the north and south roads at the site perimeter. The location of on-road set-down lanes serving both the Metro has been agreed and frozen. Set-down lanes were relocated to mitigate the risk of conflicting vehicle movements between the set downs and adjacent intersections. The proximity of set-down lanes to pedestrian crossings and associated sightlines was also considered in terms of pedestrian safety. Control of unsafe parking/stopping in the proximity of crossing will remain an operational issue for the authorities.

Acceleration and deceleration lanes were removed as these would likely be used for unsafe parking or set-down resulting in increased risk of conflicting vehicle movements. The Phase 1 design retains the on-site set down lane serving the Metro Station.



**Ariel view of Metro/BRT**



**Metro Station Concourse – General view**



**Metro Station Concourse looking towards the ticket barriers**



**Metro Station - Platform level – General view**



**Feature shading structure**



**Feature shading structure**



**Feature shading structure**

























































- **Underground park & Ride Facility:**

Current design:

- 564 spaces for park and ride.
- 158 spaces for car park at grade level.

This equates to a total of 722 spaces, which meets therefore the original program requirements associated to phase 1.

The main volume of the lobby is well lit and legible, providing a welcoming sense of entrance to the Metro for Park and Ride customers. Entrance areas are set back, glazed and provide open views into the lobbies as best possible given the highly onerous fire resistance requirements for the doors. Functional aspects including pedestrian flow, ticket machine locations, retail spaces, provision for advertising and signage, MEP servicing, smoke control and fire separation and resistance have been considered and factored into design.





**Basement Entrance Lobby**



**Aerial view towards the car park and service building**

















































DP-21  
STATION-3B2  
40123V-3PL-4W-60Hz







































- **Mosque:**

The Mosque floor plans on two levels have been developed to accommodate the main prayer spaces, residential spaces and necessary support spaces including washrooms and ablutions. Integration of MEP spatial allowance for ducts, conduit etc. and structural spatial requirements have been accommodated. The current proposal reflects the requirements of building code and the Fire and Life Safety Consultants report with floor, partition and ceiling systems determined on the same basis. The Mosque is interconnected by (fire separated) stairs to the basement car park. In the market and BRT, one level of accommodation is provided.



**Mosque**



**Mosque Main ground floor space**

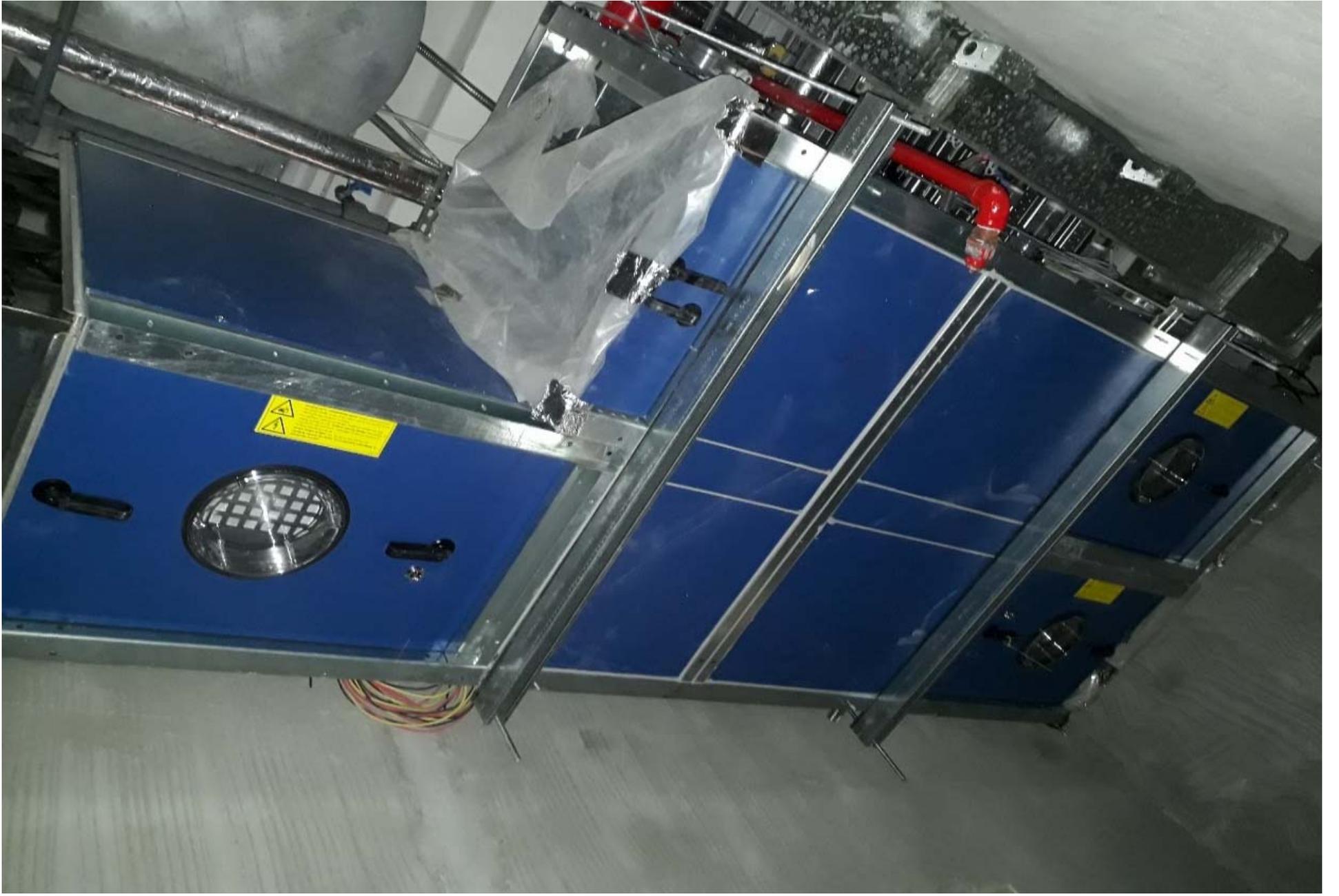












- **Landscape:**

The intent is to provide a heavily landscaped, calming, contemplative and introspective space for seniors and those seeking respite from the noise of the city. The central portion is shaded from above by a feature trellis structure - this also partially masks the concrete viaduct above the garden. The space should be discretely monitored and policed to deter anti-social behavior. It is felt that this is a more complimentary use to the adjacent Mosque. This garden is now designed and detailed, and planting species defined.



**Aerial view rendering of Sensory garden**



**PV shading structure for car parking**







