Operation and Maintenance of Electric Vehicles in the Central Business District, Quetta - under the Public Private Partnership Mode via DBFOM model

Balochistan PPP Authority

November 26, 2025

Project Objectives

- Reliable & affordable transport
- Traffic congestion reduction
- Environmental friendly and sustainable
- Social inclusion and safety (particularly for women and children)

The Project: O&M of EVs under PPP Mode

- The PPP project pertains to ‘Operation and Maintenance’ of the project only. Project Design is as follows:

Component	Description
Total Routes	03
No. of EVs Required	30 (22 operational, 08 backup fleet)
Vehicle Type	11-seater electric vehicles
Scope of Work	Operations, Fare Collection, Maintenance, HR, Customer Service, Security
Concession period	07-year

Project Technical Design under PPP

Total No. of EVs Required	22			Calculated as per the standard formulas, for the route lengths proposed
Backup Fleet	08			Added for better fleet management and efficiency of the service
Route Lengths	R1 2.6km	R2 3.7km	R3 3.5km	Providing operational buffer for schedule adherence
One-way travel time	R1 15.4’	R2 19.8’	R3 19’	This includes passenger boarding/alighting at stops.

Project Technical Design under PPP

Bus-Stops	R1 12 no	R2 18 no	R3 18 no	As per the route design
Total Trips per Day	875			Trips of all the EVs at all the 3 routes
Headway Time	05’			With the provision of change as per the operational requirement
Total Mileage Per day	2900 km			Mileage of all the EVs at all the 3 routes
Operating Hours	09 am to 09 pm			12 hours operations within the CBD
Fare per Passenger	20 Rs			The fare has been kept on a very minimum rate, for the facilitation of the public

Financial Strength & Viability

- Sustainable operational business model – No subsidy on the GoB
- Positive ROI (20-25%)
- Competitive fare structure benefiting commuters, fare at PkR 20 per passenger
- Multiple revenue streams: fares, carbon credits (as possible)
- Operational efficiency through electric propulsion
- Lower maintenance costs compared to conventional vehicles

EV Specification

EV Specification – Common Dimension and Capacity

Length: ~4.9–5.6 m

Width: ~1.5–1.55 m

Height: ~2.0–2.05 m

Passenger Capacity: 11 (Including driver)

EV Specification – Power Train and Battery

- Motor: 5 kW–7.5 kW (DC or AC)
- Battery System: Typically 48–96 V lead-acid or lithium, e.g., 12×6 V lead-acid or 72 V lithium pack
- Range (loaded): ~70–130 km
- Top Speed: 28–35 km/h
- Gradeability: ~15–30% incline

EV Specification – Steering, Brakes and HVAC

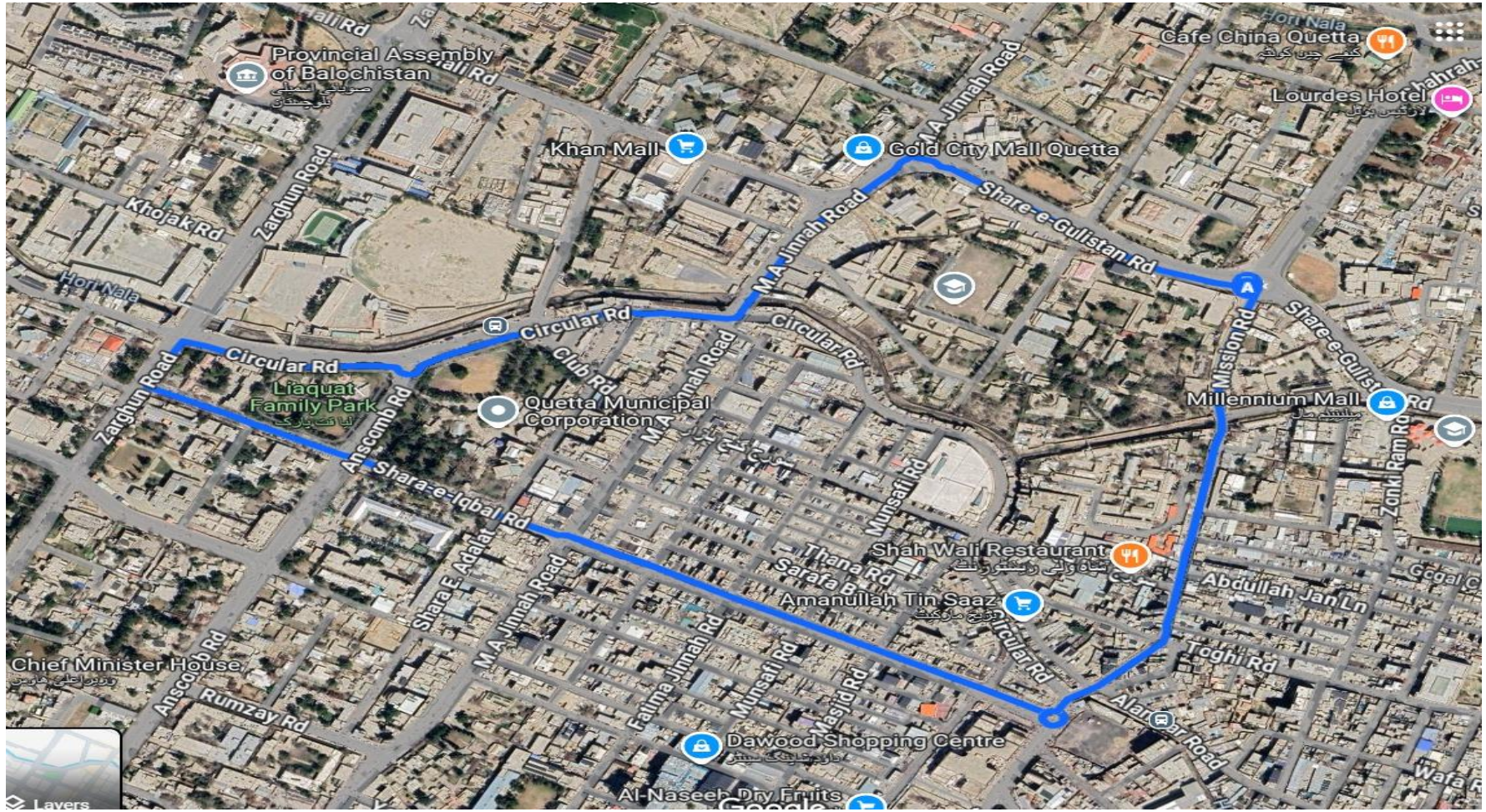
Turning Radius: ~5–7.5 m

Braking System: Four-wheel hydraulic brakes + parking brake

Equipped with roof-mounted electric AC units, capacity around 6.5–10 kW

Route Details

Route 1

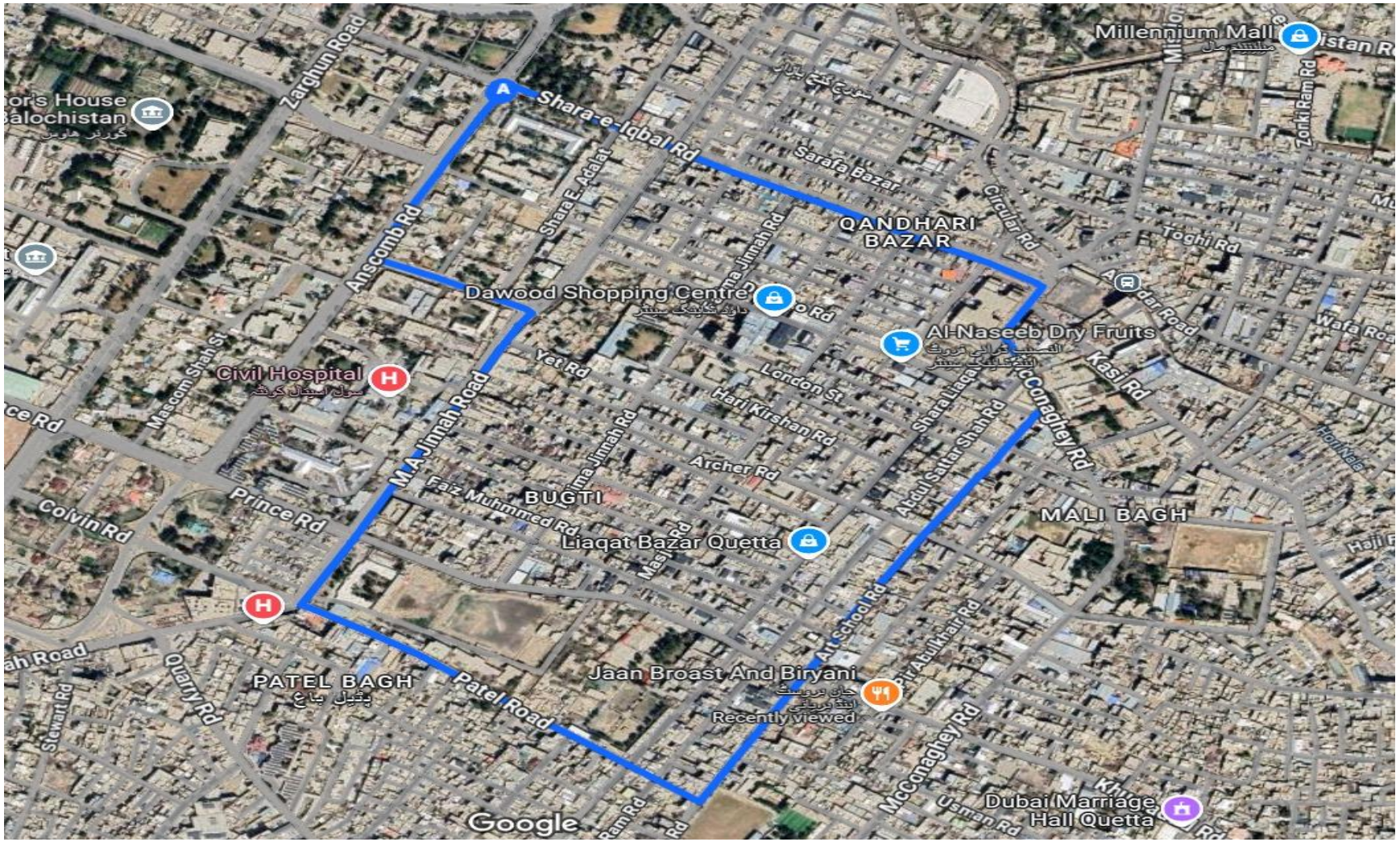

Provincial Assembly of Balochistan
Khan Mall
Gold City Mall Quetta
Cafe China Quetta
Lourdes Hotel
M.A Jinnah Road
Share-e-Gulistan Rd
Khojak Rd
Zarghun Road
Hori Nala
Circular Rd
Liaquat Family Park
Quetta Municipal Corporation
Anscomb Rd
Shara-e-Iqbal Rd
Club Rd
Mission Rd
Millennium Mall
Zonki Ram Rd
Munsafi Rd
Shah Wali Restaurant
Thana Rd
Sarafa Bazar
Amanullah Tin Saaz
Abdullah Jan Ln
Toghi Rd
Chief Minister House
Rumzay Rd
Fatima Jinnah Rd
Masjid Rd
Dawood Shopping Centre
Al-Naseeb Dry Fruits
Layers

Route 1

- 🚌 **Route 1 - Bus Stops**

1. Gold City Mall *(Starting Point)*
2. Mission Chowk *(IG Office)*
3. Barkat Medical
4. Meezan Chowk
5. Manan Chowk
6. Liaqat Park
7. Gold City Mall *(Return Point)*

Route 2

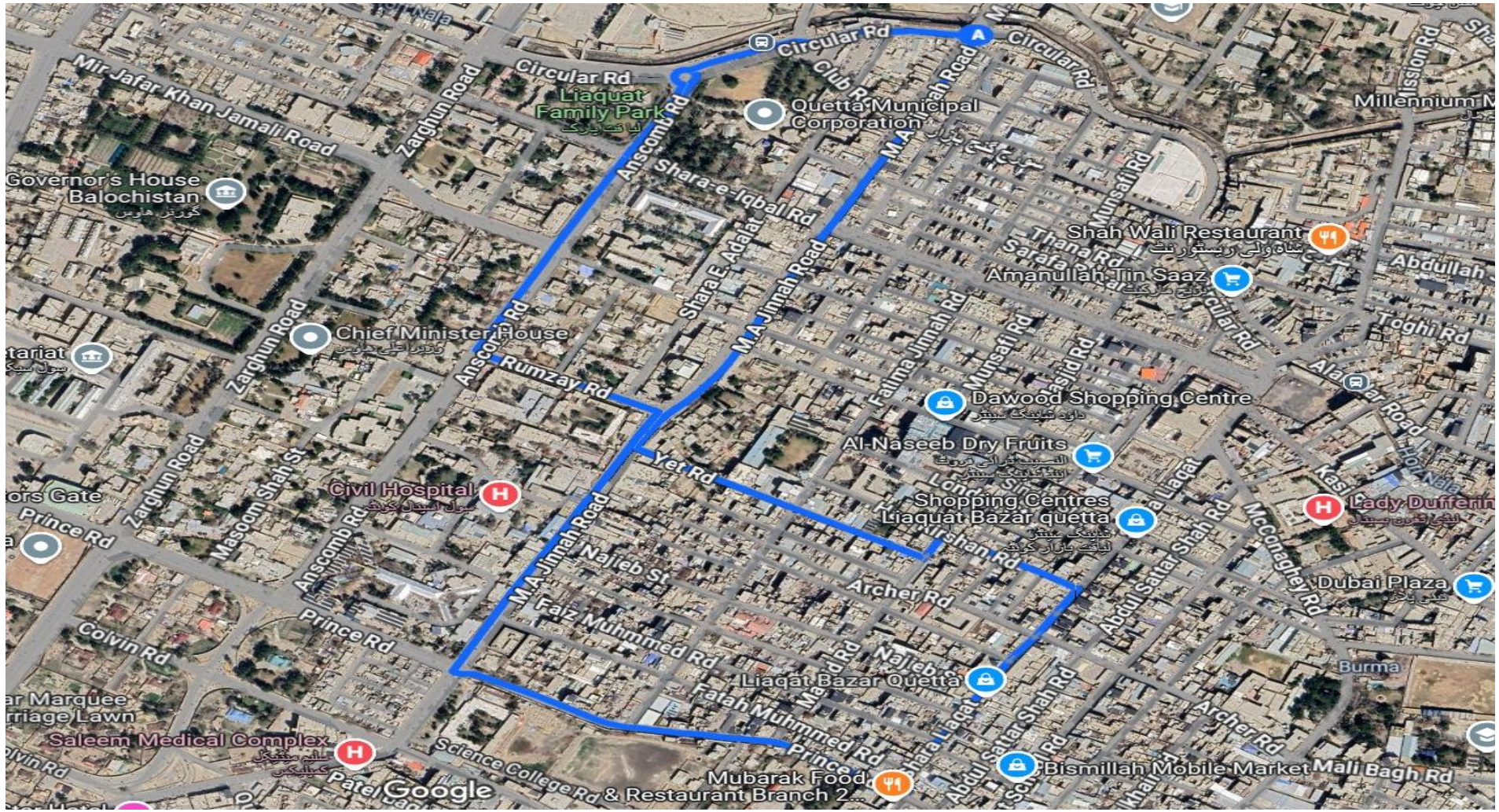

Millennium Mall
Zarghun Road
Shara-e-Iqbal Rd
Sarafa Bazar
QANDHARI BAZAR
Circular Rd
Toghi Rd
Anscomb Rd
Dawood Shopping Centre
Al-Naseeb Dry Fruits
Civil Hospital
Yet Rd
London St
Hari Kirshan Rd
Kasi Rd
McConaghey Rd
M.A Jinnah Road
Archer Rd
Faiz Muhmmed Rd
BUGTI
MALI BAGH
Prince Rd
Colvin Rd
Liaqat Bazar Quetta
Art School Rd
PATEL BAGH
Patel Road
Jaan Broast And Biryani
Recently viewed
Dubai Marriage Hall Quetta
Google

Route 2

- 🚌 **Route 2 - Bus Stops**

1. Liaqat Park *(Starting Point)*
2. Ramzay Road Stop
3. Science College
4. Gordat Singh Road
5. Rahat Hospital
6. City Police Station
7. Dr. Bano Road *(Fatima Jinnah Chowk)*
8. Islamabad Hotel *(Jinnah Road)*
9. Liaqat Park *(Return Point)*

Route 3


Circular Rd
Liaquat Family Park
Quetta Municipal Corporation
Anscomb Rd
Shara-e-Iqbal Rd
M.A Jinnah Road
Governor's House Balochistan
Chief Minister House
Zarghun Road
Rumzay Rd
Dawood Shopping Centre
Al-Naseeb Dry Fruits
Shopping Centres Liaquat Bazar quetta
Civil Hospital
Yet Rd
Najeb St
Archer Rd
Faiz Muhammed Rd
Fatah Muhammed Rd
Liaqat Bazar Quetta
Saleem Medical Complex
Mubarak Food & Restaurant Branch 2
Bismillah Mobile Market
Shah Wali Restaurant
Amanullah Tin Saaz
Dubai Plaza
Lady Dufferin
Millennium
Burma
Mali Bagh Rd
Prince Rd
Colvin Rd
Science College Rd
Google

Route 3

- 🚌 **Route 3 - Bus Stops**

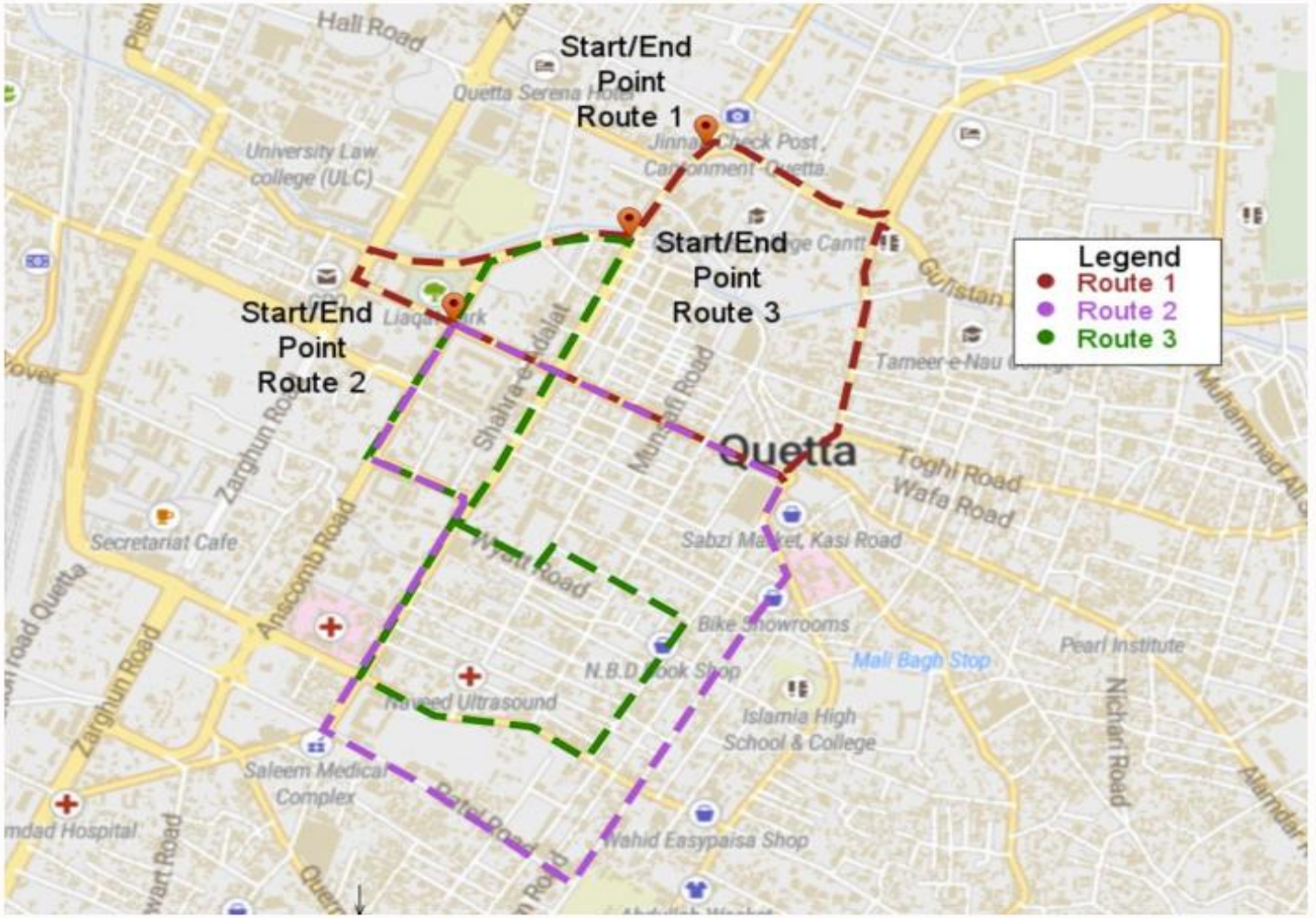
1. Regal Chowk *(Jinnah Road – Starting Point)*
2. Yet Road Chowk
3. Masjid Road
4. Archer Road Chowk *(Liaqat Bazar)*
5. Junction Chowk *(Prince Road)*
6. Science College
7. Anscomb Road
8. Liaqat Park
9. Regal Chowk *(Return Point)*

All Routes

All

3

Routes



Project Monitoring and KPIs

- KPIs to be designed and finalized at negotiation stage;
- Independent Auditor and Independent M&E Firm to assess the performance against KPIs
- Broad KPIs include:
  - Schedule Adherence
  - Service Reliability
  - Vehicle Availability
  - Cleanliness
  - Maintenance Compliance
  - Safety Performance
  - Customer Satisfaction
  - Revenue Collection

Route Mobility Analysis

Current status of Auto Rickshaw Operating On the 3 Routes

General Information on Rickshaws in Quetta

- As per the Regional Transport Authority (RTA) Quetta there are about 12,000 registered and 25,000-30,000 unregistered rickshaws.
- The Excise and Taxation department's data shows 14,875 rickshaws registered in Quetta.
- It is anticipated that there are about ~40,000 rickshaws in the city, including registered, unregistered rickshaws

Entry / Exit points In the Proposed Routes of EVs

The total number of entry and exit points identified on the routes are as follows:

- **Route 1:** 28
- **Route 2:** 45
- **Route 3:** 38

Existing Rickshaw and Passenger Volume on the Proposed Routes

The average number of rickshaws currently operating daily on each route is as follows:

- **Route 1:** 6,400/day Average Rider: 12,800
- **Route 2:** 12,600/day Average Rider: 25,000
- **Route 3:** 9,000/day Average Rider: 18,000

GoB Support

Government Support (PSDP Scheme)

- GoB has already designed a PSDP scheme, reflected in the PSDP and includes following components that may complement the project:

Bus Stops and markings

Electric charging Stations with Battery Swap Station

Road Infrastructure Improvement and Solar System

Regulatory Support

Potential Location for GoB to setup charging stations

The following location is proposed for installation of charging stations by GoB:

- Baldia Plaza Basement

Thank you