

10-Year Master Plan & Maintenance Management Plan for Roads, Dukhan Fields

Client

Qatar Petroleum (QP)

Scope of Work

Preparation of the 10-year Master Plan comprised:

- Traffic surveys/ studies
- Data collection and analysis
- Proposing new routes for all QP facilities; optimization of 317 km existing road network; reviewing existing roundabouts design & existing signage; checking current illumination and considering potential illumination for future roads
- Reviewing storm water drainage of existing roads
- Cost estimates and cost benefit analysis

Preparation of Maintenance Management Plan comprised development of plan and preventive maintenance procedures for:

- Road surface and roadside maintenance activities (road shoulder, sidewalks, medians, rest area and roadside facilities, animal fence, six animal crossing and erosion of slope)

- Drainage maintenance
- Traffic maintenance activities (including traffic signs, marking, reflector, rumble strip and speed humps)
- Structure maintenance activities (including 4 bridges, 11 underpasses, RC culvert, steel & aluminum structure, slope & embankment and crash barrier)
- Illumination maintenance
- Development of emergency maintenance plan (including flood control response, road incident and vandalism response, structural damage response and temporary crossing emergency installation)
- Development of Inspection Plan
- Development of road condition classifications scheme
- Development of road risk assessment procedure
- Recommendation of equipment/ tools and software programs for sustainable road maintenance activities

Location

Dukhan, Qatar

Qatar Petroleum (QP) entrusted ECG Engineering Consultants Group with developing the 10-year master plan and maintenance management plan for roads in Dukhan fields. The project site is located at approximately 80 km west of Doha with 65 km long and 12 km wide. Dukhan Fields approximately covers 767 km² and comprises oil and gas facilities along with supporting services and infrastructure.

The project included three main stages:

- Conceptual Design: producing Site Survey Report containing all information gathered.
- Preliminary Design: drafting the 10-year Master Plan of Dukhan Fields Roads Development and Roads Maintenance Management Plan.
- Detailed Design: developing a final copy of the 10-year Master Plan of Dukhan Road Networks and Roads Maintenance Management Plan.

