

قطر للبتروول
Qatar Petroleum



DEVELOPMENT PLANNING AND ENGINEERING DEPARTMENT
Development Engineering Section

**Guidelines for Development of Roads
by End-Users/Contractors**

QGL-CE-006



Guidelines for development of roads by End-users / contractors

QGL-CE-006

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1.0 OBJECTIVES

The objective of this document is to set out the general guidelines for the development and layout of roads, road crossings and culverts within Ras Laffan Industrial City.

2.0 SCOPE

The guidelines are applicable to End-Users/Contractors for layout and development of roads, road crossings and culverts within Ras Laffan Industrial City.

3.0 POLICY

It is the policy of QP-DC that:

1. All module roads, industrial roads, and roads in support services areas will be constructed and maintained by QP-DC.
2. Permanent access roads providing access to industrial plots and camps shall be constructed and maintained by End-Users/Contractors.
3. Temporary access roads providing access to temporary facilities such as lay down areas shall be constructed and maintained by End-Users/Contractors.

4.0 RELATED DOCUMENTS

Documents as listed below are provided by QP-DC to the End-Users/Contractors upon their written request.

It is incumbent to End-Users/Contractors to confirm that the latest revision of the Regulation / Guideline / Procedure / Document / Drawing is employed.

- Drawing No. **SK-RLC-00518** – Street Names at RLIC
- Drawing No. **SK-RLC-02640** – Ras Laffan Industrial City Gate Allocation and Identification
- Drawing No. **SK-RLC-03254** – Module Roads in Ras Laffan Industrial City

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- **QPR-RHT-REG-001** – Health, Safety and Environment Regulations
- **QPR-RHE-002** – Waste Management Procedure
- **QPR-RHT-007** – Risk Assessment Procedure
- **QPR-RIE-010** – Procedure for Use of the Consolidated Permit to Work for Ras Laffan Industrial City Common Areas
- **QRG-DC-004** – Procedure And Regulation Governing Requirements for CPW in QP Industrial Cities Common Areas
- **QGL-CE-009** – Design Guidelines for Road Pavement
- **QGL-CE-005** – Guidelines for Temporary Access Road Tie- in with RLC Main Roads
- **RLC Signboard Regulation Part-I** -Regulations for End-users, Tenants, QP and Non-QP Projects
- **QGL-CE-001** – Guidelines for Corridors and Corridor Crossings
- **QGL-CE-002** - Guidelines for End-User Technical Submissions to QP-DC
- **EQGL-RHS-101** – Security Philosophy and Guidelines Summary
- **QPR-DP-RHS-002** – Industrial Security Pass Guidelines for End-Users/ Main Contractors

Other related documents:

- Qatar Highway Design Manual (**QHDM**)
- Qatar Construction Specifications (**QCS**)
- Qatar Traffic Manual (**QTM**)
- **BS 5400: Part 2** – British Standard, Specification for Loads
- **BS 5400: Part 4** – British Standard, Code of Practice for design of Concrete Bridges
- British Ports Association – The Structural Design of Heavy Duty Pavement for Ports and Other Industries

5.0 DEFINITIONS AND ABBREVIATIONS

This section contains definitions/acronyms which must be clearly understood by the End-Users/Contractors.

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5.1 DEFINITIONS

Definition	Description
Approval	Agreement to proceed with specified activities.
Contractor	A party engaged by QP, QP-DC, Tenant, Investor or End User to perform work and/or services under a Contract or Service Order.
End User	A Company or firm that uses services, facilities and occupies QP-DC land for the purpose of manufacturing a product or providing a service to QP-DC or other tenants within QP-DC.
Guideline	Similar to a procedure but less prescriptive in nature. Contains general instructions / guidance to carry out a series of actions.
Industrial Roads	All roads excluding the module corridor roads within Industrial City (Ras Laffan) including the perimeter roads are covered under this category.
Module Corridor	Module Corridor Roads have been constructed to withstand a repetitive high load-bearing capacity arising as a result of transportation of wide range of heavy equipments, machinery from port to the End-User industrial plants.
Permanent Access Roads	Permanent Access Roads are paved and provide access to the industrial plots or camps of End-Users/Contractors.
Shall	A mandatory action
Should	A preferred course of action or activity
Temporary Access Roads	Temporary Access Roads provide access to temporary facilities such as Lay-down Areas of End-Users/Contractors.
	Temporary Access Roads can be paved or unpaved, are constructed for a limited period and shall be demolished after serving their purpose.
Will	An action to be followed

5.2 ABBREVIATIONS

Abbreviation	Definition
QP-DC	QP Directorate of Industrial Cities
CPW	Consolidated Permit to Work.
QNHD	Qatar National Height Datum
QHDM	Qatar Highway Design Manual
QCS	Qatar Construction Specifications
QTM	Qatar Traffic Manual

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6.0 PROCEDURES AND REQUIREMENTS


6.1 Guidelines for Access Roads Layout

The road network within QP-DC (Ras Laffan Industrial City) is as shown on drawing **No. SK-RLC-00518**. Following are the main considerations for layout of access roads by the End-Users/Contractors:

- i. Ras Laffan Avenue acts as the major spine in the road network. It extends from the main security gate MG-01 through the port gate PG-02 and continues to material offloading facility located inside the port.
- ii. Perimeter roads, which are industrial roads, provide access to the overall area. New industrial roads are constructed as and when required by QP-DC to ensure that access will be available for new industries.
- iii. All access roads require approval from QP-DC.
- iv. Direct access from Ras Laffan Avenue is discouraged and requires special approval.
- v. The portions of Ras Laffan Avenue and Hamad Street with battery limits as shown in the Drawing No. **SK-RLC-03254** have been constructed to a high load-bearing capacity according to the Guidelines for the Module Corridor Roads to withstand repetitive heavy loads coming through the port to the industrial plants. In order to ensure consistency for the Module Corridor Roads, the design of culverts, duct banks, any other structures and the movement of heavy loads by road is subject to design standards and load distribution restrictions given in **QGL-CE-009**.

6.2 Requirements for the Access Roads

- i. All access roads- permanent and temporary shall be constructed and maintained by End-Users/Contractors.
- ii. Industrial Plots shall be provided with at least two exits.
- iii. The emergency exit(s) shall be located considering On-Plot and Off-Plot high-risk areas. Exits shall be located so that at least one exit will be available in the event of an obstruction of the main exit during an emergency situation.
- iv. The access roads must be located to ensure efficient traffic flow.
- v. End-Users/Contractors shall comply with QP-DC policy of “No Left Turn” for side road traffic entering in to the main road, unless there is an intersection with traffic light signal and left turn provision.
- vi. A Traffic Study shall be conducted by the End-Users/Contractors at each new intersection which will be created and/or at the impacted existing intersection, and the new/existing intersection shall be designed/upgraded accordingly.

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- vii. In case traffic light signals are required at any intersection, the same shall be provided by the End-Users/Contractors.
- viii. Access Roads shall be provided with all road safety features such as road lighting, vehicle crash barriers, road markings, speed control measures, traffic signs etc.
- ix. The cost of construction / upgradation of the intersections, traffic light signals, road safety features etc. shall be borne by the End-Users/Contractors.
- x. End-Users/Contractors shall be responsible for operation and maintenance of the traffic light signals, road safety features etc.
- xi. Access Roads are not permitted to have direct access from the Ras Laffan Avenue.
- xii. Naming of all roads including Permanent Access Roads within Ras Laffan Industrial City is done by QP-DC. For the purpose of naming Permanent Access roads, End-Users/Contractors shall submit request to QP-DC.

6.3 Access Roads Crossing Services Corridors

In case the proposed Access Roads cross the service corridors for underground or aboveground utilities, pipelines and Storm Water drains, End-users/Contractors shall comply with the requirements of “Guidelines for Corridors and Corridor Crossings - **QGL-CE-001**” and “Guidelines for End-User Technical Submissions to QP-DC - **QGL-CE-002**”.

6.3.1 Access Roads Crossing Existing Assets

If the proposed Access Roads cross the existing facilities such as underground or aboveground utilities, pipelines or storm water drains, End-Users/Contractors shall obtain concurrence from the custodian of the facility. End-Users/Contractors shall provide duct bank, road culvert or any such structure to protect the existing facilities as agreed by custodian of the existing facilities and QP-DC. Construction of the duct bank, road culvert or any other structure as agreed shall be the responsibility of the End-Users/Contractors constructing/owning the access road.

6.3.2 Access Roads Crossing Future Underground Utilities, Pipelines and Storm Water Facilities

- i. If the proposed Access Roads cross either partly vacant or completely vacant Wet Utility Corridor, Power Corridor or future Storm Water drains, End-Users/Contractors shall provide allowance for the future underground utilities, pipelines and storm water facilities by constructing concrete duct bank, concrete box culverts or any other structure according to the requirements of QP-DC guidelines as referred above.

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- ii. In general, the requirements as mentioned at 6.3.2 above will not be applicable to the Temporary Access Roads. However, End-Users/Contractors shall submit their proposals of Temporary Access Roads to QP-DC, which will be reviewed by QP-DC on case-to-case basis.

6.4 Access Roads Design Criteria

- i. Roads shall be designed in accordance with the Qatar Highway Design Manual (QHDM).
- ii. Roads shall be constructed in accordance with the Qatar Construction Specifications (QCS).
- iii. Road markings, road signs, and safety barriers shall be in accordance with Qatar Traffic Manual (QTM).
- iv. The design criteria for road pavement and design loads at road crossing are covered in QGL-CE-009.

6.5 Temporary Access Roads Tie-In

End-Users /Contractors shall obtain approval from QP-DC for the point of access for the Temporary Access Roads and their Tie-in with QP-DC roads. End-Users /Contractors shall be responsible for construction and maintenance of the temporary access roads and access at tie-in points with QP-DC roads.

End-Users /Contractors shall demolish the temporary access road and reinstate the QP-DC road and access point to its original condition on completion of the project or after the intended purpose of the temporary access road as agreed by QP-DC has been achieved.

For the purpose of Temporary Access Roads Tie-In, End-Users/Contractors shall comply with the requirements of "Guidelines for Temporary Access Road Tie-in with RLIC Main Roads **QGL-CE-005**".

6.6 Requirements for Temporary Closures and Deviations of Roads

End-Users/Contractors shall employ construction measure which will avoid open road cutting and thereby road closure and deviation of traffic.

Full closure of any road within Industrial City is not permitted.

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In case road closure is unavoidable, End-Users/Contractors shall obtain approval from QP-DC for partial road closure along with traffic diversion plan. End-Users/Contractors shall comply with QP-DC requirements for temporary partial road closure. End-Users/Contractors shall reinstate the road and the affected nearby area to its original condition. End-Users shall prepare and submit the road reinstatement proposal for QP-DC review and approval prior to proceeding with construction via e-CPW.

6.7 Load Restrictions on Moving Heavy Loads by Road

The method(s) of calculating loads and load distribution for the transport of heavy items by road is set out in RLC Guideline **QGL-CE-009**.

6.8 Service Roads/Access Tracks in Services Corridors

End-Users/Contractors shall be responsible for the construction and maintenance of service roads/access tracks in Service Corridors to gain access to their facilities. End-Users/Contractors shall provide protection for the existing facilities crossing the service roads/access tracks in Services Corridors as agreed by custodian of the existing facilities and QP-DC.

6.9 Prohibitions on the Use of Undeveloped Roads/ Tracks

Vehicular movement on undeveloped roads/tracks within Industrial city is prohibited due to safety hazard and possible damage to the fragile desert ecosystem.

If, for reasons of work, End-Users/Contractors need to use undeveloped roads/tracks, approval shall be obtained from the QP-DC Infrastructure Department. Only after obtaining pre-approval shall the End-Users/Contractors be allowed to use the undeveloped roads/tracks.

6.10 Access Roads Handover Requirements

- i. Permanent Access Roads to industrial plots will not be taken over by QP-DC.
- ii. Permanent Access Roads to camps can be handed over to QP-DC on vacation of camps. End-Users/Contractors shall submit request for handover to QP-DC at least six months in advance of camp vacation. End-Users/Contractors shall submit the relevant 'As-built' documentation for the access road and shall hand over the access road in good and fit for the purpose condition.

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- iii. Temporary Access Roads will not be taken over by QP-DC unless agreed in writing with End-Users/Contractors.

7.0 RESPONSIBILITIES

7.1 End-Users

End-Users/Contractors are responsible for:

- i. Construction and maintenance of the Access Roads.
- ii. Protection of the existing facilities crossing the Access Roads.
- iii. Allowance for the future utilities through the Access Roads.
- iv. End-Users are required to adhere to these guidelines and requirements and to other stipulations which may be imposed by other regulation, procedure and guideline documents. DC will work with End-Users to the mutual benefit of both parties.

Design of any work shall comply with the requirements of latest standards or code of practice of British Standards and/or Eurocodes. If the End-Users wish to use alternative standards, the End-Users shall demonstrate compliance with the specified standards and obtain DC approval prior to proceeding further. In case of conflict between standards or code of practice, the most stringent one shall apply in concurrence of DC.

7.2 QP-DC

QP-DC is responsible for:

- i. Review and approval of End-Users/Contractors submissions related to access roads in compliance with these guidelines and QP-DC requirements.
- ii. Updating information included in this document.
- iii. Providing, upon written request, up-to-date documents and drawings as referred to in section 4.0.