



**EXTENDING THE FRONTIERS TOWARDS SMARTER TRANSPORTATION**

[www.trafquest.com](http://www.trafquest.com)



# ADVANCING MOBILITY

## EXTENDING THE FRONTIERS TOWARDS SMARTER TRANSPORTATION

TrafQuest is a UAE-based transportation and traffic technology company with expertise spanning a wide range of areas. TrafQuest provides professional consultancy services for both the public and private sectors in the fast-emerging MENA region covering all aspects of transport planning and management, intelligent transportation systems, traffic engineering and research. We deliver innovative solutions and wield the most advanced technologies to meet the safety and mobility needs of a modern surface transportation system.





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# TRANSPORTATION MASTER PLAN

## OVERVIEW

A Transportation Master Plan (TMP) aims at planning and developing an efficient and well-integrated transportation system for large-scale developments that consist of multiple plots. A TMP requires a context-sensitive approach that takes into consideration not only the vehicular traffic, but also the demand associated with the other modes of transport that is generated by the communities and lands served by the transport network. It seeks to balance the need to move people efficiently and safely along with other desirable design goals including environmental sustainability and the creation of vital public spaces.

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## TrafQuest's TMP services include:

-  Evaluating land use options
-  Defining the primary roadway network and right of way
-  Performing the transportation modeling using VISUM
-  Identifying and assessing public transport routes
-  Integrating the different modes of transportation
-  Developing parking, accessibility and circulation strategies and plans




## URBAN PLANNING

Land developments and transportation networks influence one another. Therefore, the regulatory framework in the UAE and Middle East emphasizes the integration of land use planning and transport solutions. TrafQuest offers comprehensive services in master planning and urban detailed planning including assisting in authority approvals. Our multi-disciplinary team provides the knowledge and expertise to deliver coordinated and holistic transport, infrastructure and urban planning solutions that include:

-  Master planning
-  Plot development guidelines
-  Feasibility studies
-  Infrastructure planning and cost estimating

## OTHER SERVICES

TrafQuest specializes in projects that build upon the broad-based technical and research skills in a wide range of fields including transportation engineering, traffic and road safety, transportation planning and policy, and simulation and modeling. In addition, the TrafQuest personnel has extensive experience in key areas, including:

-  Safety strategies and strategic plans
-  Technical outreach and consensus-building
-  Training and workforce development

## TRANSPORTATION MASTER PLAN (TMP)



## TRAFFIC IMPACT STUDIES

### OVERVIEW

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Traffic impact studies provide an important tool for assessing the transport-related impacts of new and redeveloped projects. They are crucial to maintaining an efficient transportation system through forecasting the travel demand, identifying potential problems and developing proactive and efficient solutions. As one of the most prominent consultants in the UAE, our team has both the proficiency and the caliber to carry out traffic impact studies for many of the most renowned projects in the UAE. Our comprehensive knowledge and vast experience with the local authorities' procedures enable us to provide fast and reliable services.

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## Our capabilities include:

-  Estimating trip generation and travel demand
-  Performing traffic analyses using the most advanced software and analysis methods
-  Identifying transport-related problems
-  Ensuring adequate, safe and efficient access and parking circulation
-  Proposing sound and feasible mitigation measures

The TrafQuest personnel has extensive expertise in the major industry tools used in conducting traffic impact studies including but not limited to:

-  PTV VISSIM and VISUM
-  SIDRA
-  Synchro and SimTraffic
-  Highway Capacity Software (HCS)

TrafQuest is pre-qualified with the Dubai RTA, Abu Dhabi DMAT, Sharjah RTA and Qatar Ashgal to conduct traffic impact studies for developments that generate traffic flows up to 30,000 vehicular trips during the peak hour of the day. Although different authorities have different criteria for classifying TIS requirements for developments, a TIS generally falls into one of the following four categories:

### Access Studies

Small-sized projects generating less trips in the peak hour than required for a traffic impact study.

### Traffic Impact Study - Level 1

Small-to-medium-sized projects generating typically 150 to 500 trips during the peak hour.

### Traffic Impact Study - Level 2

Medium-sized projects that generate typically 500 to 1,500 trips during the peak hour.

### Traffic Impact Study - Level 3

Large-sized projects that generate more than 1,500 vehicular trips in the peak hour. Traffic modeling is conducted as part of these studies.







# INTELLIGENT TRANSPORT SYSTEMS

## OVERVIEW

Over the recent years, Intelligent Transportation Systems have played an increasingly important part in boosting the efficiency of road networks and transportation services. TrafQuest not only recognizes the trends associated with this industry, but also embraces the evolution of ITS and believes in its transformative power. Our Team has extensive experience in conducting the following ITS services:

- Ⓞ ITS Planning
- Ⓞ ITS Design
- Ⓞ Electronic Toll Collection Consultancy Services
- Ⓞ ITS Operations and Management
- Ⓞ ITS Systems Engineering and Architecture
- Ⓞ Traveler Information Systems
- Ⓞ Integrated Transportation Payment Systems

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## ITS Planning

The key to a successful, city-wide ITS installation is having a comprehensive and detailed ITS architecture as well as ITS strategy and action plan. This paves the way for the development of an integrated, coordinated, multi-agency and multi-modal world-class intelligent transportation system. TrafQuest has a long experience in developing regional ITS architecture, coherent ITS master plans as well as ITS feasibility studies and evaluations. Furthermore, TrafQuest's experience in ITS Planning and Design extends over a wide range of ITS projects and systems such as studies of region-wide Advanced Transportation Management Systems (ATMS), Advanced Traveler Information Systems (ATIS), ITS operations, smart corridors, and Roadway Weather Information Systems (RWIS).

### ITS Planning & Design Objectives include:

-  Greater integration among systems and modes
-  Open and common standards as well as a shared framework
-  Service-oriented architecture
-  Increased customer services
-  Real-time information sharing
-  Demonstrable value for money

## ITS Design

TrafQuest provides innovative solutions using cutting-edge ITS technologies that offer comprehensive and cost-effective solutions for the ever-increasing transportation needs of local and regional agencies. This includes ITS field elements, transportation management centers, communication networks and traffic management systems.

## Electronic Toll Collection

TrafQuest has played a key role in the design and deployment of the Dubai Tolling System (SALIK) in addition to leading the design and construction supervision efforts for Abu Dhabi's road user charging system.

## ITS Operations and Management

TrafQuest provides top-quality Operations and Management (O&M) services, ensuring our clients get premiere systems carefully designed to meet their operational requirements. We also provide continuing support to operate, maintain and manage ITS systems.



# ROADWAY DESIGN AND SUPERVISION

## OVERVIEW

The design of roadways entails a process where several factors like physical requirements, available opportunities, design constraints and client's vision are given consideration in a meticulously balanced way to achieve desirable results. This requires a wide array of skills and resources to help the consultant produce sound, feasible and sustainable designs and overcome the different challenges in the process. TrafQuest boasts a highly talented, proficient and accomplished road design team that has enabled the successful delivery of numerous projects. Our road design services provide innovative works that incorporate cutting-edge solutions to overcome the challenges and complexities of the road projects, while collaborating with the other specialties.

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The range of experiences and skills possessed by our staff has been demonstrated in some of the most prominent projects not only in the United Arab Emirates, but also in other GCC and Arab countries.

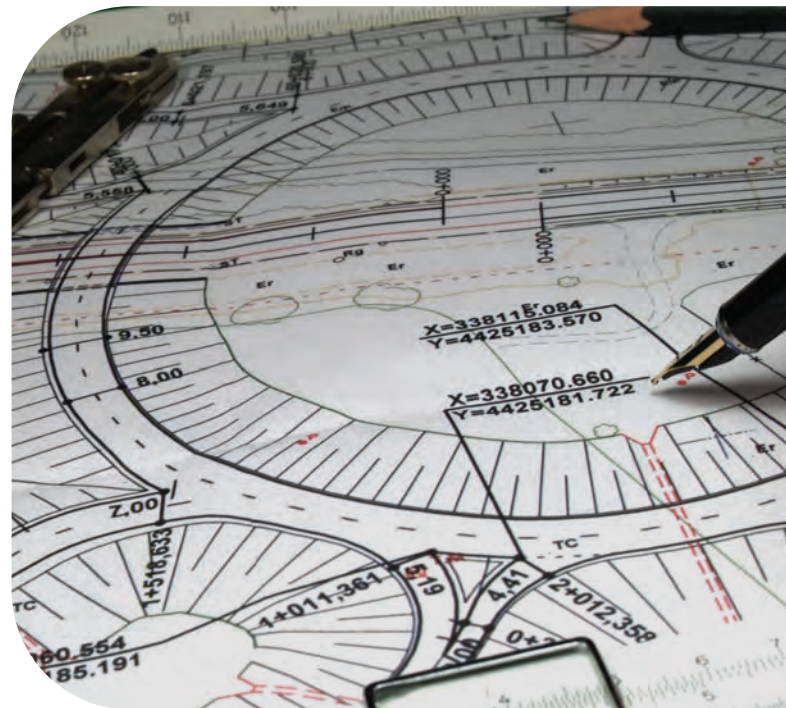
Our design team's expertise extends across all the road engineering and design stages from concept design to construction supervision. We make every effort to ensure that our design work manifests the highest standards of performance, safety and quality that keep our clients satisfied.



## Services

A high-quality design is inherent to a robust roadway network. Over the years, TrafQuest has shown its capability of providing safe, efficient, sustainable and cost-effective design works that earned us our clients' trust. TrafQuest is a pre-qualified Dubai Roads & Transport Authority consultant for the provision of roadway design services that include:

-  Rural and urban roads design and supervision
-  Design of at-grade junctions (signalized and un-signalized)
-  Design of grade-separated junctions (i.e. underpasses, overpasses and interchanges).
-  Design of traffic circulation plans and access roads
-  Design of parking facilities
-  Design of traffic control devices
-  Design of Landscaping and wayfinding signage
-  Design of pedestrians and cyclists facilities
-  Review and assessment of design works
-  Road safety audits





# TRAFFIC ENGINEERING SERVICES

## OVERVIEW

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Through the vast experience of its staff that covers the many transport engineering disciplines, TrafQuest has been capable of delivering a wide array of engineering services for public and private clients in the GCC region.

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## Transport Integration Studies

TrafQuest is considered one of the pioneers across the Emirate of Dubai to not only conduct the transport integration studies for some of the most prominent projects, but also help in developing the blueprints for such studies in the incipient stages. Transport integration studies aim at achieving better connectivity among the different modes of transport (metro, bus, marine, taxi, etc.) while promoting the use of efficient and clean modes through enhancing riders' experience.

This is done through conducting comprehensive surveys for the existing and future conditions, identifying the access and mobility issues experienced by pedestrians, cyclists and other road users, and proposing workable solutions and measures to enhance the inter-modal accessibility and connectivity based on the guidelines introduced in the Dubai Transport Integration Manual (DTIM).

## Transportation Safety Studies

TrafQuest's personnel has expertise in the key safety areas including crash prevention, speed management, roadway visibility, work zone safety and mobility, pedestrian safety and intersection safety.

## Parking Studies

TrafQuest has conducted numerous parking studies for some of the major developments, commercial/business centers and university campuses. As part of the parking study, TrafQuest performs demand and utilization surveys, projects future parking needs, identifies potential parking facility sites and recommends parking management solutions.

## GIS Design & Implementation

TrafQuest excels at providing innovative solutions for spatial data processing and GIS design. We have been involved in dozens of projects, each requiring a new and flexible approach and design.

## Other Services

TrafQuest also provides top-quality traffic engineering services that cover the following fields:

 Freeway Management

 Traffic Signal Design and Optimization

 Wayfinding Design

 Arterial Management

 Access Management




 Events Management





## ENGINEERING MANUALS

With the rapid development of infrastructure across the region, uniform and standardized manuals, guidelines and procedures have become critically important to assist transportation agencies in:

-  Enhancing the management, planning, design, construction, maintenance and operation of transportation projects and networks
-  Ensuring safe and uniform operational and structural capacity throughout the transportation network
-  Ensuring conformance to sustainability standards and environmental best practices

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The preparation of a top-quality engineering manual requires a unique blend of skills, the absence of which might lead to failure, poor quality, client dissatisfaction, wasted project resources and schedule overruns. These skills include:

-  Technical expertise
-  Professional writing
-  Experience with electronic format applications
-  Appreciation of the needs of the manual user
-  Project implementation logistics
-  Production capacity



TrafQuest's track record in manual preparation demonstrates the availability of the skills above as well as the in-house resources to produce quality engineering manuals. TrafQuest has worked extensively with the Department of Transport in Abu Dhabi as well as the Roads and Transport Authority in Dubai to develop nineteen (19) guidelines, specifications and engineering manuals that fall into a variety of engineering disciplines. Furthermore, our clients in this field come from multiple organizational divisions including Regulatory, Planning, Management, Design and Construction.

Through our experience, TrafQuest has perfected the engineering manual development process. We evaluate each manual individually to ensure that:

-  The necessary skills are in place
-  The necessary project resources are available
-  The project implementation logistics are orchestrated such that the preparation of a top-quality product is guaranteed

