



Type: Traffic Circulation Analysis and Simulation Model

Project Name: Energy City Traffic Circulation Analysis

City: Lusail

State: Qatar

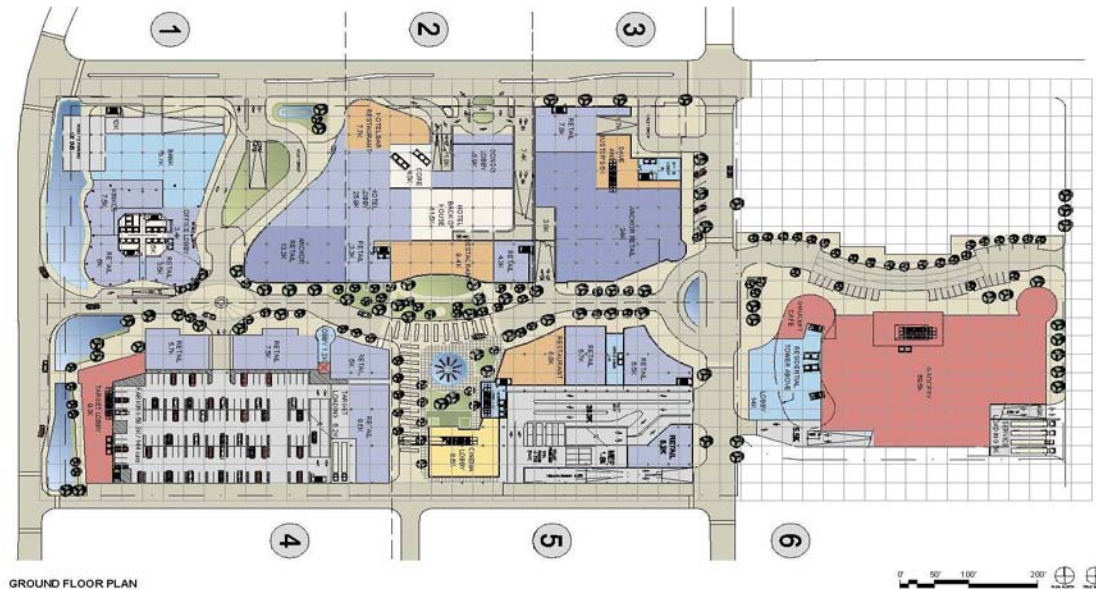
Client: ABS International

Features: We developed a traffic simulation model to determine the operational efficiency of the street network and parking garage access points. The model was designed to consider a single security checkpoint for the main parking garage.

Summary: DESMAN was retained by ABS International to provide conceptual planning, and design services associated with site access, circulation, servicing, and parking for the premier parcel in Qatar's planned Energy City (ECQ). The ECQ is the Arabian Gulf region's first hydrocarbon industry business centre. ECQ will provide a single point of access to markets and expertise and the Middle East home for global players in the hydrocarbon value chain. This hub of Energy City will consist of three major components including a data center, office tower, and International Mercantile Exchange with a trading floor. All will be connected by a central atrium with direct access to three levels of sub-surface parking.

DESMAN developed a traffic simulation model to analyze the operation of the Energy City street network and unique spiral design grid system. We specifically concentrated on the operation of Zone 39, which is planned to contain 1,815 parking spaces, a drop-off/pick-up driveway and a mix of office, retail and amenity space. We determined how effectively the parking garage access and drop-off/pick-up area would operate during peak periods. The analysis determined that a one-way secured ring road would provide adequate access through a single security check point.

**ICON Center Traffic Circulation Analysis and
Simulation Model**
Dallas, Texas



Type: Circulation Analysis and Traffic Simulation Model

Project Name: ICON Center Traffic Circulation Analysis and Simulation Model

City: Dallas

State: Texas

Client: ICON Partners, LLC

Features: In analyzing the circulation of traffic for the ICON Center mixed-use development simulation models were prepared for a number of layout concepts. The layout concepts included alterations to the street network, driveway locations and the implementation of a roundabout.

Summary: DESMAN Associates was retained by ICON Partners to assist in analyzing the operation of traffic at ICON Center in Dallas, Texas. ICON Center plans to be a mixed-use development with office, residential, retail, restaurant, entertainment, two above ground parking structures and one underground parking structure. Traffic simulation models were prepared for three different layout designs of the site. Each simulation analyzed the proposed access points to the site, to the garages, and the level of service of the intersections surrounding the site. This helped in determining what traffic mitigations are necessary, where to locate the garage access points, and if the internal traffic of the site would operate efficiently.

St. Mary's Hospital Two-Way Traffic Analysis and Simulation Model
Milwaukee, Wisconsin



Type: Traffic Simulation Model of Two-Way Traffic Network

Project Name: St. Mary's Hospital Two-Way Traffic Analysis and Simulation Model

City: Milwaukee

State: Wisconsin

Client: St. Mary's Hospital

Features: St. Mary's Hospital was considering converting the adjacent street network from a one-way to a two-way system. Traffic simulation models were developed which analyzed future growth on the campus with both a two-way and one-way traffic system.

Summary: The Milwaukee campus of Columbia/St. Mary's hospital undertook a master plan effort to plan for the proposed reconstruction and additions to the hospital campus. An extensive traffic impact analysis was conducted to assess the impacts of the planned additions and proposed access points on the adjacent traffic network. The traffic study included quantification of the existing traffic generation, an analysis of existing travel patterns, determination of the use of non-auto modes of travel, and an extensive analysis of "cut-through" traffic. Capacity analyses were conducted utilizing the practices of the *Highway Capacity Manual 2004*. Recommendations for traffic mitigation improvements were recommended for the surrounding traffic network to adequately support the projected traffic volumes.

To help improve access to the hospital a two-way traffic analysis was conducted to determine the traffic impacts of converting existing one-way streets to two-way streets. This included a traffic impact analysis of two-way streets with and without on-street parking. Utilizing Synchro software a traffic simulation model was prepared for the existing and future traffic scenarios. This was prepared as a visual aide to present the results of the two-way traffic study to the project team and City Alderman as part of the decision making process.