Newton - Needham Street

Location:

Newton, MA

Client:

Northland Investment Corporation

Project Type:

Mixed-Use Redevelopment

Project Summary:

- Transportation Planning
- Conceptual Design
- Feasibility Study

Northland Investment Corporation retained Traffic Solutions to assist in the redevelopment of a former industrial site in Newton, Massachusetts. Traffic Solutions prepared site sizing studies and feasibility studies to assist Northland in the identification of the most appropriate land uses and development program based on the capacity of the surrounding roadway networks. Traffic Solutions assisted in efforts to identify potential offsite mitigation requirements as well as issues likely to be raised in the local and state entitlement processes.

Traffic Solutions conducted traffic analyses of the entire Needham Street corridor to determine constraints and opportunities in the development of the site. The entire corridor was modeled using SYNCHRO and other tools to evaluate intersection capacity and queuing characteristics. Extensive data was collected and tabulated to document existing conditions, including traffic volumes.

Trip generation projections were prepared to estimate the number of new trips various site programs would generate. Background trips were projected for a design year. Site generated trips were added to develop design hourly volumes for each development scheme.

The design hourly volumes for each potential development program were then analyzed to determine the effects of the project on critical nodes in the surrounding roadway network. Traffic Solutions identified development program limits based on existing system constraints. Summary recommendations were provided to identify likely mitigation requirements for the preferred development scenario.

Traffic Solutions also assisted Northland with the development of an urban design theme and access concept. Due to the congested nature of the Needham Street corridor, Traffic Solutions prepared conceptual designs of an innovative access/egress plan which capitalized on reduced interruptions in arterial flow through the use of a continuous flow intersection. The design also incorporated significant changes to area wide traffic flow, including the implementation of one-way street pairs and restricted turning movements.