…Fire? What Fire

AutoTURN is an essential software tool used to design roads, intersections, roundabouts, terminals and loading bays. The proven CAD-based turn simulation software also assists with any project involving vehicle access, clearances and maneuverability.

Fire officials in the City of New Brunswick, Middlesex County, New Jersey were recent recipients of AutoTURN technology, by Transoft Solutions (http://www.transoftsolutions.com/). LGA Engineering, Inc., a subsidiary of Birdsall Services Group, Inc. (http://www.birdsall.com/companies) was contracted by Devco/Keating to prepare a site plan for the Rutgers Public Safety Building and parking garage.

Currently under construction, the project consists of a 4-story, 76,000 square foot facility for the Security Division of Rutgers University on a 1.7-acre site. Also included are a 6-story, 385 stall parking garage and 4,500 square feet of retail space.

The project was designed, approved and under construction when, shall we say, a "flare-up" occurred. The project was designed to eliminate the entrance to a vacated, one-way street, Abeel Street, and a new access road was proposed. Closure of Abeel Street was required for construction to proceed. The city Fire Marshall would allow closure of the street only upon confirmation that emergency vehicles, specifically large, three-axle fire trucks, could operate on the narrow, temporary access road.

During the construction phase of the project, only 18 feet of the access road would be paved (after construction, the road would be widened to 32 feet). The Fire Marshall told the client that he would not allow the project to continue until the smoldering question of whether or not the access road could accommodate emergency vehicles was reconfirmed.

The client then called LGA Engineering asking how to put out this fire. LGA advised that, by using AutoTURN, they had the ability to confirm the accessibility of the fire truck through the access road. LGA proceeded, using limited fire truck specifications as provided by the Fire Marshall.[1]

[1] Vehicle templates included as part of the AutoTURN package are based on standard (AASHTO) North American emergency/custom vehicle dimensions and performance criteria. Vehicle types, however, vary by jurisdiction. So, AutoTURN allows the user to design a vehicle, based on their specifications.

The data provided was insufficient to design a fire truck in the AutoTURN program, so additional data was obtained from a local fire apparatus manufacturer, PL Custom Body and Equipment Company. LGA then designed a usable fire truck template by using this data with the tools provided in AutoTURN. They were able to use the parameters calculated by the program to draw the travel path on the access road. With some minor path adjustments as specified by AutoTURN, LGA determined that the vehicle could safely operate on the road, without contacting utility poles or, burning rubber wheels on curbs.

The plan was presented to the Fire Marshall for approval. According to Danny Seymour, Project Manager for LGA, "The Fire Marshall, needing absolute verification, had our client complete the temporary access road and then had his men run the truck through the access road. The truck acted as the software predicted and the project was allowed to proceed."

With the help of the AutoTURN software, LGA Engineering confirmed that emergency vehicles could use the access road. Consequently, additional plans and the subsequent approvals from various governmental agencies were not required. Many days, possibly weeks, were saved and the project was allowed to proceed on time.

As Danny states "AutoTURN was the only software considered for this project, and was the correct choice. It is straightforward and easy to use and has now been proven to be accurate. LGA Engineering depends upon AutoTURN and has used the software to complete a number of projects."

He happily reports that, for the Rutgers Public Safety Building project, no other major flare-ups have occurred.