

IPRO 307: Intermodal Solutions

Abstract

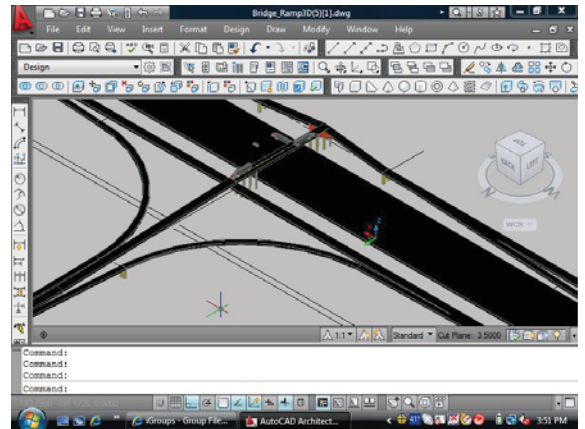
The Problem:

Chicago is a key rail hub, and congestion and infrastructure currently are major issues. Canadian National (CN) rail lines converge in Chicago from five directions. It has taken a CN Freight train longer to go from the North to the South side of Chicago than it does from Chicago to Winnipeg, Canada (approx. 860 miles).

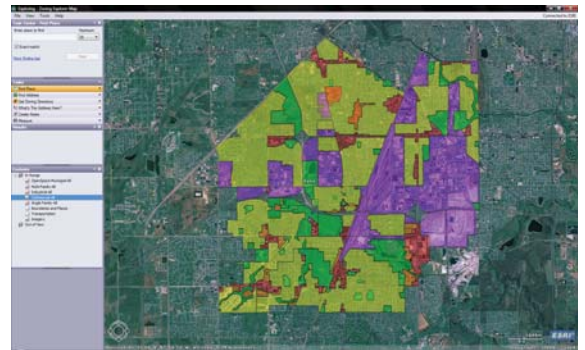
To alleviate this problem, CN has purchased the EJ&E right of way, which will reduce congestion in the Chicago-area rail network by taking CN trains off the central Chicago lines and moving them to an arc around Chicago. As part of these changes, CN is expanding and modernizing its intermodal yard in Harvey, IL.

Currently there is poor traffic flow into and out of the yards. Trucks carrying intermodal containers in and out of the yard must use 159th St and Halsted St to reach the highway, driving through narrow streets and residential and business neighborhoods

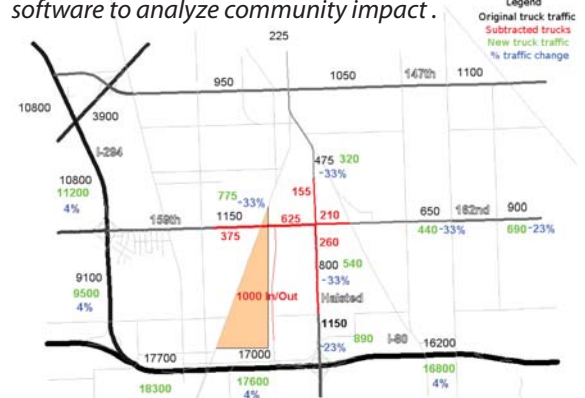
This IPRO attempts to improve the truck flow in and around this intermodal facility by designing a new entrance for trucks entering and exiting the yard. The design incorporates direct access from Interstate 294/80, which passes directly over the yard, allowing easy access to the yard and eliminating noisy truck traffic from neighborhood streets. In addition, frontage roads were studied as part of the solution, serving as a spark for community development.



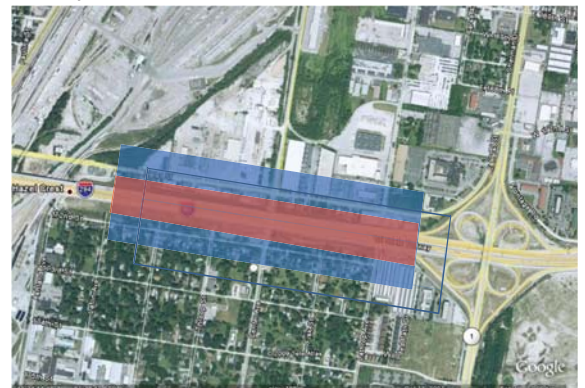
3D Modeling Cad was used to illustrate a solution.



A zoning map of the affected area was used in GIS software to analyze community impact.



A traffic impact study was conducted to analyze the impact on traffic flow.



Noise footprint studies were also conducted.



The Canadian National Intermodal Facility in Harvey, IL