



Project Summary

Texas Department of Transportation

0-5335: Guidance on Mitigating the Impacts of Large Distribution Centers on Texas Highways

Background

Numerous distribution centers (DCs) have been built in Texas over the past 20 years. They serve retail, grocery, oil, motor vehicle, manufacturer, and other types of businesses. These DCs vary in size and associated truck traffic. Depending on the type of center and characteristics of roads providing access, a DC will have some level of traffic operational, safety, and pavement wear impact on those roads.

DC site selection often involves the site selector/developer/owner negotiating with local economic development agencies to identify potential sites and obtain best incentives. The Texas Department of Transportation (TxDOT) is typically brought into the process very late and is then asked to accommodate local agency and DC owner requests without having proper input.

This project provided TxDOT with an assessment of DC site selection and development process as it affects TxDOT. The project also developed tools, guidelines, and strategies for gaining early collaboration with DC interests and local agencies to plan the centers and their access roads and to fund improvements to state highways.

This project analyzed obstacles resulting in TxDOT not being involved earlier in the DC site selection process.

What the Researchers Did

Researchers:

- assembled background information on DCs, selection of sites, and how centers operate,
- interviewed representatives of DC companies, TxDOT districts in which existing DCs are located, and local agencies that have attracted DCs or were known to be seeking them, and
- conducted case studies to gain more insight to how Texas DCs were located, how access was handled – including improvements to state highways – and how DCs have impacted both traffic conditions and infrastructure conditions.

Research Performed by:

Texas Transportation Institute (TTI),
The Texas A&M University System

The University of Texas at El Paso (UTEP)

Research Supervisor:

Brian Bochner, TTI

Researchers:

Kay Fitzpatrick, TTI

William Frawley, TTI

Edwin Hard, TTI

Laura Higgins, TTI

Ryan Longmire, TTI

Dan Middleton, TTI

Curtis Morgan, TTI

Andrew Wimsatt, TTI

Ruey Long (Kelvin) Cheu, UTEP

Project Completed: 8-31-09

What They Found

Researchers made several key findings. First, no evidence was found that distribution centers result in accelerated deterioration of Texas highways. Damage originally attributed to DCs turned out to result from high volumes of overweight trucks from other types of facilities. Second, TxDOT concerns were confirmed that districts find out too late in the DC site selection process to be able to either influence site selection or complete improvements to meet DC opening schedules.

DC site selectors and local economic development agencies tend not to bring in any agency until there is something specific needed from them. DC site selectors and local economic development agencies prefer confidentiality until site negotiations and often financial incentives are tied down. TxDOT often is approached when an access permit is needed or after other negotiations are complete. This is usually too late to provide significant highway improvements by the opening date. Funding for such improvements was often not available from normal sources in the time available.

Researchers also found that DC site selectors could benefit from information that TxDOT can provide early in the site selection process and from other aspects of early TxDOT involvement in site selection. For example, TxDOT could help to identify areas served by truck-ready, underutilized interchanges, areas that are free of congestion on access routes, and areas served by interchanges and highways about to be upgraded.

The researchers developed guidelines and tools to help TxDOT demonstrate how TxDOT can benefit DC interests in terms of more accessible sites, fewer needed improvements, and more certainty of obtaining timely highway improvements if needed. These guidelines and recommendations will be contained primarily in a handbook.

What This Means

This project shows that TxDOT can help itself and help DC interests at the same time by becoming involved during the site selection stage. By helping site selectors find locations served by underutilized truck-ready access, TxDOT can remove the need for undue highway improvements – a saving to TxDOT and an avoidance of delay for the DC owner. However, for TxDOT to become involved early, TxDOT must demonstrate the benefits to DC site selectors, developers, and owners and also to local economic development agencies trying to attract these economic generators. Results from this project can help accomplish this early involvement. Districts and the Governor's Office of Economic Development will be important participants in achieving success of this effort.

For More Information:

Research Engineer - Duncan Stewart, TxDOT, 512-465-7403

Project Director - Gary Moonshower, TxDOT, 214-320-4489

Research Supervisor - Brian Bochner, TTI, 979-458-3516

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Research and Technology
Implementation Office
P.O. Box 5080
Austin, Texas 78763-5080
512-465-7403

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