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## Communities Must Evolve With Our Changing Warehousing Market

All warehouses are not created equal and the same is true for their impact on the community.

As the age of online shopping and overnight delivery ushers in a new breed of warehouses, it's important that municipalities update their planning and zoning regulations to differentiate among the rapidly expanding types of warehousing that help make the Lehigh Valley one of the nation's fastest-growing corridors for freight and goods movement.

It has never been more important, as companies in the region propose taller, automated warehouses designed to get product in an out more quickly, prompting even the Institute of Traffic Engineers (ITE) to recently update its traffic projections by adding several new categories of warehouses. The ITE has for four decades been the international authority on projecting traffic generated by types of development.

"Zoning that says 'warehouses go here' doesn't work anymore because it's not specific enough," said Brian Hite, LVPC Senior Planning Technician. "We now have six different warehousing designations with vastly different impacts on the community."

For example, a standard 500,000-square-foot warehouse – not uncommon the Lehigh Valley – can be expected to generate about 870 vehicle trips per day, with about 300 of them being trucks or tractor-trailers, according to the latest ITE Manual.

Yet, a high cube fulfillment and sorting warehouse of the same square footage can expect a lot more vehicles at 3,220 vehicles a day, but far fewer trucks at 95.

Conversely, a 500,000-square-foot high cube cold storage warehouse can expect fewer total trips at 1,060, but with nearly quadruple the truck traffic at 375.

High cube is the new trend warehouses that can be as tall as 18 stories – four to five times the height of a traditional warehouse - with intricate racking systems that are filled and unfilled by robotic forklifts that keep traffic moving through the facility quickly.

What type of warehouse is being built or retrofitted makes a difference in how a municipality assesses whether its bridges and roads can handle the proposed traffic, whether other infrastructure such as water, sewer and electric are in place and whether trucks routes, onsite truck parking and driver amenities are going to be needed, Hite said.

It also affects whether a structure is compatible. A 180-foot-tall high cube warehouse has a dramatically different impact on a community than a one that covers three times as much footprint, but is under 40 feet tall.

Even the ITE will likely have to evolve again, because it is still using square footage to base projections for tall high cube warehouses in which total volume to the ceiling is more relevant.

Ultimately, it all determines what a community expects from a developer, but without updated planning and zoning regulations that address these new warehousing trends, a municipality may not have the leverage to enforce its recommendations.

Some larger municipalities have already made changes, but the market is evolving so quickly, more amendments will likely be needed. Many others, including many small communities without full-time planning departments, are finding it difficult to keep up.

Hite also notes that there's more to consider than what a developer or company plan to do in the near future. A municipality has to assess long-term impacts on the community, and whether the costs of maintaining or enhancing the infrastructure to handle the new traffic is worth the short-term growth of tax revenues and jobs.

"That's why we recommend a long-term assessment of not only those costs, but the options of what could happen at that facility if a different user moves into that building in eight or ten years," Becky Bradley, LVPC Executive Director, said. "Many of these building leases are less than 10 years long. You have to take the long view when looking at developments of these sizes. It may be important for these structures to be able to transition to other uses down the road."

The LVPC recommends that all municipalities consider updating their planning and zoning regulations. They can seek LVPC advice and resources, such as its High Cube and Automated Warehouse Community Guide at <https://lvpc.org/c-guides---model-regs.html>.

Anyone with questions can call the LVPC at 610-264-4544.

More information about planning and development issues is available at [lvpc.org](http://lvpc.org).