



Lessons Learned from Platform (Mezzanine) Installations:

Providing Fast-Turnaround Workspace and Inventory Solutions

When it comes to reaping the benefits of a new work platform (mezzanine), the key to keeping Murphy's Law at bay is good planning and anticipation. But, for many platform (mezzanine) projects, lessons have been learned the hard way:

- Design integration is not given enough careful consideration (ex: base plate orientation, span not correlating with existing wall or column locations. Column bearing surfaces are of unequal height)
- Not enough contingency time is built into the construction time-line
- Life Safety and OSHAC considerations aren't thoroughly addressed.

When a large material handling system is planned for and then implemented as part of a *new* construction effort, everyone involved can thank their lucky stars.

This can be labeled a "best case" scenario, with ample time for planning and installation. More often than not, a client needs to integrate a new material handling system within an *existing* structure already in full operation.

Two common mistakes that can lead to "worst-case" scenarios when installing an add-on platform (mezzanine) are:

1. Putting the cart before the horse: Insufficient planning regarding how construction can impact daily operations can be costly.

A large east coast appliance company needed an efficient material handling solution built within its 500,000 square

foot warehouse to accommodate the company's imminent launch into the small-electronics market. The primary objective was to provide optimum efficiency, handling and delivery of small electronic goods to its customers arriving at a will-call location.

The warehouse space, initially set up to handle large carton items like refrigerators and washers, required space for an additional 10,000 electronic SKUs



Working under a tight three-week production deadline, a 14,000 sq. ft. custom wide-span platform (mezzanine) was designed and built over the facility's existing dock area with compliance to code and clearance requirements. The platform (mezzanine) span had to correlate with the building's column span of 44' and handle a load of 150 Psi.

To ensure public safety and uninterrupted customer service, the 44' span platform (mezzanine) was installed during the 3rd shift. The finished structure added 14,000 SF of floor space over the existing loading docks of the warehouse. The platform (mezzanine) was equipped with efficient storage and order picking with a high-speed conveying system.

The company's rush to market (i.e. cart before horse) imposed an urgency on the project's production schedule which could have resulted in costly mistakes, causing field modifications and the shutdown of several dock doors. This story had a happy ending; many cart-before-the-horse stories do not.

2. Underestimating existing building constraints:

Having the right team to help you plan work-arounds is critical.

A customer needed a new platform (mezzanine) built over their customer service floor to provide 2,800 SF of work space for new personnel and fourteen workstations. The customer also required a 48-hour project turnaround and 24/7 construction schedule.

There were other building constraints:

- existing columns were of unequal heights;
- the platform (mezzanine) had to accommodate facility trunk lines along with new wiring;
- and because it would be visible to the public, the work space had to blend with the overall interior design.

The following work-arounds were implemented. Trunk lines and workstation wiring were housed within a double floor (a 3-inch high hollow space) built onto the platform (mezzanine). The steel structure was given an attractive galvanized finish to complement the existing customer environment. All materials were carried in by hand to comply with OSHA safety regulations.

To summarize, insufficient planning and an unseasoned platform (mezzanine) installation crew can cause unnecessarily high project costs, delays and risk. Material handling problem solvers can steer the project around these pitfalls, but counting the bullets you managed to dodge is not the best gauge for project success. According to one engineer, “Figure out *all* the worst case and “what if” scenarios ahead of time, and plan accordingly.”



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