



Time and Schedule is Expensive in Elevator and Escalator Projects!

Most vertical transportation projects have a built in period of time for engineering and design for contractors to produce shop drawings for approval. In many pre-engineered applications, this is a minimal time frame with little impact on the fabrication and construction schedule.

However, in modernizations and custom new construction projects, special engineering, shop drawing, and the subsequent approval process can take months!

For these types of projects VTX has come up with a unique design solution that designs can accurately depict the actual conditions.

Smart Design

VTX has the ability to develop the initial design drawings (i.e. contract drawings) to be used as shop drawings. In turn, the contractor can submit the contract drawings to the sub contractors directly for fabrication and eliminate the typical 6-8 week review period for elevator contractor shop drawings.

This increased effort in planning and design assures the Owner that the specialized products will be built as they desire with no confusion, cost cutting, or setbacks. The Owner's approval of a particular layout, cab, or fixture, eliminates the shop drawing approval process, allowing the successful contractor to take the bid drawings directly to fabrication without delay or additional approvals.

An Even Playing Field

This approach also levels the bidding field to more completely assure the Owner that the bidders are pricing the project on the same product(s). The Contractor also benefits because the risk of manufacturing and design of these components is reduced from their interpretation of bid drawings and specifications to the designer. The contractor can take these bid drawings immediately after the Notice To Proceed (NTP) with confidence to manufacturing, knowing that the drawings meet the job requirements completely.

~Eliminates the typical six to eight week review period for elevator contractor shop drawings.~

Of course, this means that the initial survey and design must be accurate and detailed. When a decision to modernize an elevator system is made, a detailed survey of the equipment

and specific local conditions should be performed. VTX's approach relies heavily on an accurate survey of the existing elevator system which will serve as the backbone to an effective design.

When specific notes and sketches are developed in the field, along with an extensive equipment evaluation, the design process can be effectively implemented. VTX has found that when an accurate up front survey is performed, the traditional bid drawing package can be developed into a fabrication drawing package. The details developed based on these survey's leaves no unreasonable doubt as to what is to be replaced and what is to be rehabilitated.



Sean T. Steiner, Q.E.I.
Manager, Tech Center

Sean T. Steiner, Q.E.I., was recently named Manager for VTX's Technical Design Center. Based in the Philadelphia office, Steiner will be responsible for managing the design efforts, including drawings and calculations for elevator and escalator projects.

"We have seen tremendous growth and development in Sean that continues to be reflected by the positive comments received from our clients he supports," said Patrick Welch, President of VTX. "Sean has been a valuable asset to our organization providing consistent, thorough, and complete designs".

Sean has significant experience in design, modernization, maintenance, and project management for new and existing vertical transportation equipment. He develops standards for elevator and escalator designs, provides solutions for upgrading existing installations, conducts in-depth safety inspections to verify conformance with codes and special requirements, and assists clients and designers with the interpretation of official codes.

We sincerely hope that you find this information helpful in your day-to-day activities. Feel to email Sean directly at ssteiner@vtexcellence.com

In new construction applications, many custom installations may exist that require close coordination with other architectural and engineering disciplines. This same approach of developing vertical transportation bid drawings as complete fabrication drawings can save time, money, and confusion for all parties.

Time for a Change?

The next time you contemplate a fast track, time sensitive vertical transportation project, you may want to consider a change from the traditional bid drawing - NTP - Engineering - Shop drawing - Approval - Resubmit process to VTX's Smart Design: Bid-NTP-Fabricate. See figure presented below.

Our focus is simple, to deliver a smooth flow in the shop drawing process. Our process is a clear and precise design solution that can eliminate up to eight weeks from the typical shop drawing process. This process consolidates steps of traditional shop drawing, creating a more efficient use of time, and providing a solid design solution.



In past Code Corner columns, we have addressed a variety of issues of concern to our clients. For this issue, there are no "hot topics" related to the ASME A17.1 Code that have been published or decided on by the A17.1 Standards Committee. ASME has strict rules on publication of sub-committee work prior to final approval, so we cannot discuss proposed rule changes or interpretations until they are voted on and approved by the Standards Committee.

We can, however, share some recently approved interpretations with our readers that may be of interest and use in your facility.

- Escalator Safety Zone: The Code is clear that each landing of the escalator must have a "safety zone" of twice the width of the handrails plus eight inches, outward from the end of the newel. Inquiry 00-08 concerned an enclosed head house or exit doors within that safety

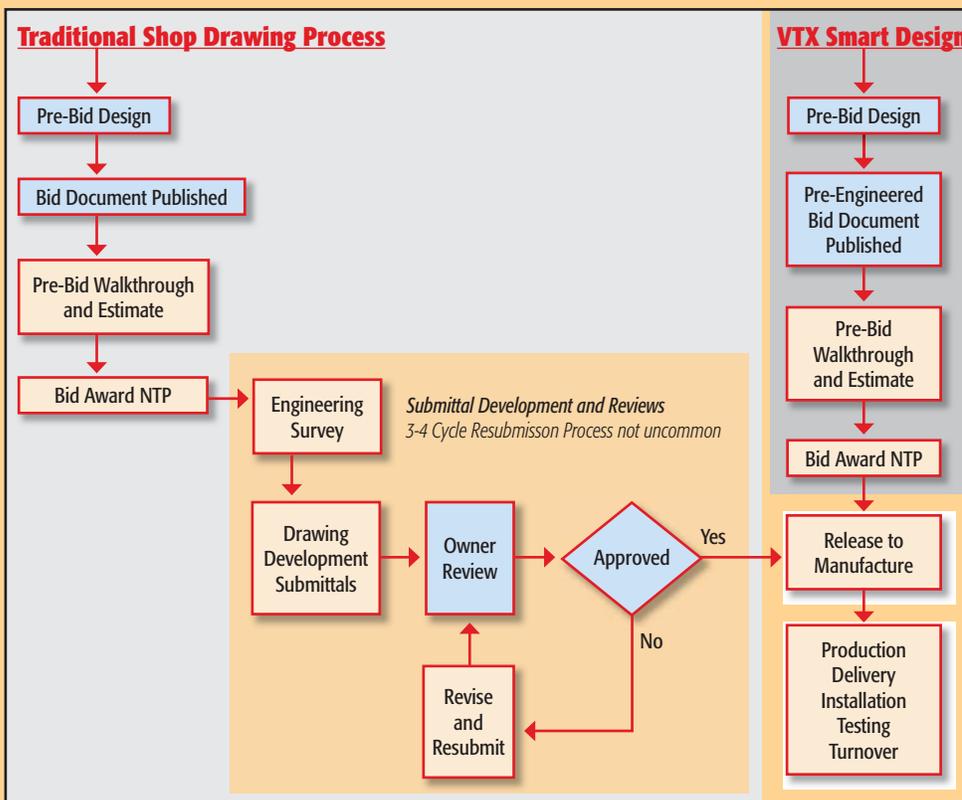
zone. If the exit doors have a panic bar that could not be locked, would they be permitted within that safety zone? A17.1 states, "If the doors can be closed while the escalator is operating and the open passage is less than the width between the centerlines of the handrails plus 8 inches".

The impact of this rule affects installation or replacement of escalators in existing structures. Often, newer escalators have more flat steps and are longer than the escalators being replaced. According to the Consumer Product Safety Commission study on escalator accidents, since the most common escalator accident is a loss of balance or fall (not the most serious, but the most common), the safety zone is a critical design element to remember when designing escalators in existing buildings. Keep in mind that A17.1 clearly stipulates, "These dimensions are absolute minimums and every consideration should be given to traffic patterns".

- Retroactive Requirements of ASME A17.1 Part 8: Inquiry 04-14 raises the question about retroactive upgrades for elevators installed or modernized before the date of the standard publication if no other work is being performed. This particular inquiry relates to inground hydraulic cylinders, but the A17.1 response will resonate to many other circumstances. It is clear that the intent of Section 8.6 includes requirements for ALL elevators and escalators in a retroactive manner.

Careful review of this section is highly recommended for Owners of elevators or escalators to understand and plan for the impact this will have on your facility. One example is the escalator step/skirt requirement also included in Section 8.6. This is another retroactive requirement that impacts every escalator installed regardless of the installation date.

VTX is actively involved in several ASME A17.1 Code sub-committees precisely because of the ever changing and evolving requirements of this Code. Please do not hesitate to send a request for interpretation directly to ASME if you have any questions regarding any requirements in any edition of the A17.1 Code. You may certainly contact us with any questions as well.



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