

2.3. Assemblies Estimate

2.3.1. Brief Overview

A fast and effective estimate needed for the planning phase of a project is a “Systems” or “Assemblies” estimate. The Assemblies method is a sequential approach to estimating, which represents how the building is to be constructed. One great advantage of an Assemblies estimate is the ability to substitute one system for another during design development with the ability to quickly determine the cost difference between the two systems. An Assemblies estimate does not require much detail, but estimators must have a firm working knowledge of construction materials and methods used. An Assemblies estimate is best used as a budgeting tool in the planning stages of a project because the accuracy of the estimate is typically plus or minus 15 %.

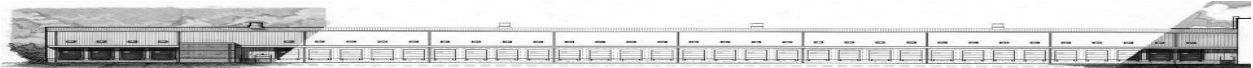
2.3.2. Substructure & Foundation Assemblies Estimate

	Concrete Required (CY)	Local In-Place Cost (\$/CY)	Total Cost	Cost per Sq. Ft. (\$)
Column Footings	3087	\$250	\$771,785	\$1.62
Column Piers	206	\$300	\$61,880	\$0.13
Wall Footings	236	\$250	\$59,110	\$0.12
Walls	417	\$300	\$125,131	\$0.26
Slab on Grade	7639	\$200	\$1,527,778	\$3.22
Total Foundation & Substructure Cost			\$ 2,545,683	\$5.36

2.3.3. Assumptions

The Hagerstown Hub is currently in construction, rendering an Assemblies estimate non-feasible. The design of the foundation system and the site conditions led to the non-typical column and pier footing shapes. These shapes are not in the Assemblies estimating book. The load design of the footings was not available making an Assemblies estimate extremely difficult. Industry members were contacted and a more useful estimate was developed using local in-place costs. The estimate developed accounts for all local material and labor conditions.

- The local in-place costs are current costs for Hagerstown, MD
- In-place costs include all labor and materials required to complete the specified task



- All quantities include 10 % for waste

For a detailed estimate, the owner requested a comparison of the superstructure systems. FedEx wants to know the relative costs for constructing the same building using precast concrete or tilt-up.