

- Benner Pike Shops
- State College, PA
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## Executive Summary

This assignment focuses detailed analysis based on the information gathered on Tech 1. Detailed project schedule is created for the cost loading. One of the interesting features that Benner Pike Shops is that the schedules for each shop are different. Careful schedules are needed to be developed among the shops in order to avoid any safety issues or construction delays.

Site plans are then created based on the site plan developed in Tech 1. Different phases are verified in the drawings to show how the construction site is running during a specific phase. Critical phases included are: excavation, superstructure, and finish phase. These plans are useful when dealing with congestion issues, and efficiency. Problems that could not be seen from paper work could be found from the plans, and it is easy to check how efficient each process is going.

Detailed structural systems estimate was performed along with assemblies estimate. By performing estimate using different methods would be helpful to become familiar with the estimate systems and, it would give comparison between the two different methods. Structural system for the Benner Pike Shops is estimated which consists of foundation, slab on grade, columns, beams, and roof deck. Unit costs for entire system are calculated using square foot method to give general idea of material, labor, and equipment costs. For the assemblies estimate, exterior closure of the shops is estimated. The system will include exterior walls, windows, and doors. Items are lump summed in this process to get an estimate based on square foot unit. General conditions estimate is performed to give staffing costs, temporary costs, and equipment rentals through out the entire project. Any schedule savings could be proposed later based on G.C. savings calculation.