



DAVID S. POTTRUCK  
HEALTH AND FITNESS  
CENTER  
PHILADELPHIA, PENNSYLVANIA



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September 4, 2002

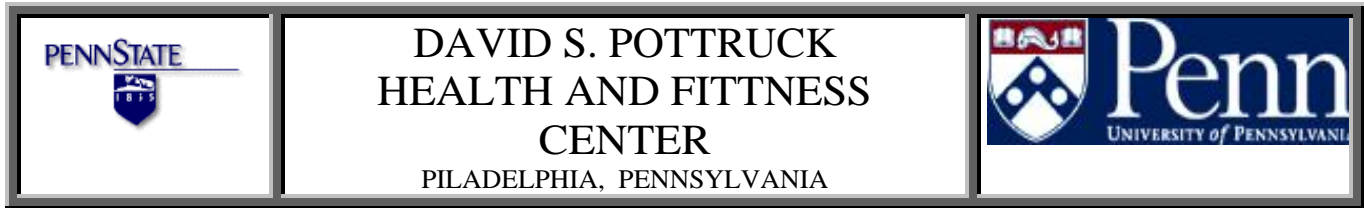
### **Initial Thesis Project Summary Report**

The David S. Pottruck Center at in Downtown Philadelphia, is a state of the art fitness center, adjoined to the Gimbel Gymnasium to create a multi purpose facility for the University of Pennsylvania Community. The 65,000 square foot building will cost \$20 Million, and will have many architectural features unique to the Penn campus.

Unlike the traditional brick Penn building, the exterior façade of the building will feature a terra cotta panel system that has never been used in the United States. The second floor is cantilevered 12 feet over the first, and each successive floor extends further away from the building. The main entrance is a four story atrium with granite tile floors, a curved glass ceiling along with glass curtain walls, and features a full four story stair case the length of the atrium. Beyond traditional exercise and aerobic facilities, the Pottruck Center will house a climbing wall, and a golf simulator. In order to fully integrate Gimbel Gymnasium and Natatorium with the Pottruck Center, the second level of each building will be connected by a bridge.

- University requires that the students be able to use the Gimbel facilities while school is in session.
- Temporary facilities will need to be constructed, as the main locker room for Gimbel will need to be demolition in order to build the Pottruck Center
- As the building rises out of the ground, the new structure must tie in with the existing Gimbel structure all the way up to the roof. Gimbel's brick façade will need to be removed in several places in order to tie the two buildings together.
- There is a large amount of asbestos in the Gimbel Gymnasium, both in the areas to be renovated and to be demolished.
- The terra cotta façade will be a learning experience, for the construction team, and German consultants will be needed.
- The university supplies the major utilities to the building from an outside source, so mechanical space needed in the basement is minimal, although there will be an emergency generator.
- The atrium is not designed to have air conditioning, a foreseeable risk to building comfort.

Sordoni Skanska Construction Company and the project team of Jim Faust, Michael Healy, Jeffrey Matthew, and Michael Penny has graciously supplied me with all necessary contract documents, specs, schedules, contacts, and budget items.



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September 3, 2002

### **The Pottruck Center as a Thesis Project**

As a Thesis project, the Construction of the Pottruck Center incorporates renovation and new construction, as well as an unfamiliar façade system, integrating the proper construction of these three elements gives this building a unique and challenging project. Many construction issues will arise from the major phases of the building:

- The building is located in the middle of Philadelphia, adding tight site constraints to an already difficult project.
- Constrained site conditions leave very little room for storing any material on site, monitoring and coordination of materials and deliveries, especially steel; will require careful planning and lots of communication.
- With a large amount of construction in the area, labor will be difficult to find at times.
- Demolition of the existing locker facilities attached to the Gimbel Gymnasium and Natatorium must be completed before construction of the Pottruck Center can begin.
- The university requires that fitness facilities be open and operational during the majority of construction, posing safety and constructability concerns.
- The structural system of the Pottruck Center must tie in the steel support of Gimbel
- Schedule will drive the construction, as the owner requires the building to be operational for the opening of the 2002 fall semester.

A terra cotta panel system, used for the first time in the United State will be both very difficult and highly observed as the construction takes place. The system has been in use for 20 years in Germany, but there are only a handful of examples of terra cotta panel systems in the U.S. to study, and none of them incorporate the same system as the Pottruck Center. The Panel combines insulation, the terra cotta front material, and the support system to keep the terra cotta in place. Adding to the difficulty of design and construction, the panel is not vertically oriented, but inclined so that the top of the panel protrudes further from the building than the bottom.

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