

## SUISSE TELEKOM HEADQUARTERS NORTON, VIRGINIA

Timothy M. Smith, *tsmith16@utk.edu*

The design problem called for a mixed-use facility housing a bookstore, a secure telecommunications relay facility with training and conference areas, and a private employee fitness center. The site is at the end of the main street in Norton just off the main highway, and is where a four-story hotel project was abandoned twenty years prior. The structural steel frame for the hotel was erected and construction halted at this stage, leaving the skeletal frame and an empty lot at the end of the axis of the main street in Norton. Norton began as a coal-mining town but has recently gained attention as a telecommunications hub after a national telecommunications firm located their TDD headquarters in Norton, making use of the fiber optic lines available in the area.

This design project complemented environmental control systems classes as a systems-based approach to the design solution. Additionally, German design standards for air and light availability were researched and implemented. The latest "Smart Building" technology was incorporated into this design, including multi-zone in-slab heating and cooling systems and computer controlled louvers on the exterior facade allowing air penetration and heat loss at a maximum of efficiency.

This solution utilized the existing frame as an ordering device. The modular grid of structural steel allowed an open work environment, and new designs of individual workspaces freed the space from the typical rows of office cubicles. A side atrium space relates to a new public space created to the east of the facility. Utilities and systems, the structural towers on the west side and the open duct systems just inside the east facade, were designed as objects in the field of columns, and the repetition of these elements along the periphery further defines the interior space.

Two subterranean levels house the mechanical systems and the health center. The bookstore is located on the north end of the ground floor with access from the main street. The secured ground floor entrance and the administrative offices for the telecommunications facility are located on the south end. Floors two-six are the open office space for the telecommunications relay center, with a conference area and training stations on the seventh floor.

Materials were selected by their adherence to the idea of the hi-tech workplace. The concrete towers and steel frame serve as the structure, while light gauge steel frame supports an intricate arrangement of thermal glazed glass panes. This skin reflects heat during the day while allowing light to radiate outward at night, creating a sculpture as a focal point at the end of the main street.

.....

Timothy Smith is a 4<sup>th</sup> year architecture student at the University of Tennessee College of Architecture and Design. Thomas K. Davis was the design studio instructor.

