

HAZLETON CAMPUS ACCESS PROJECT

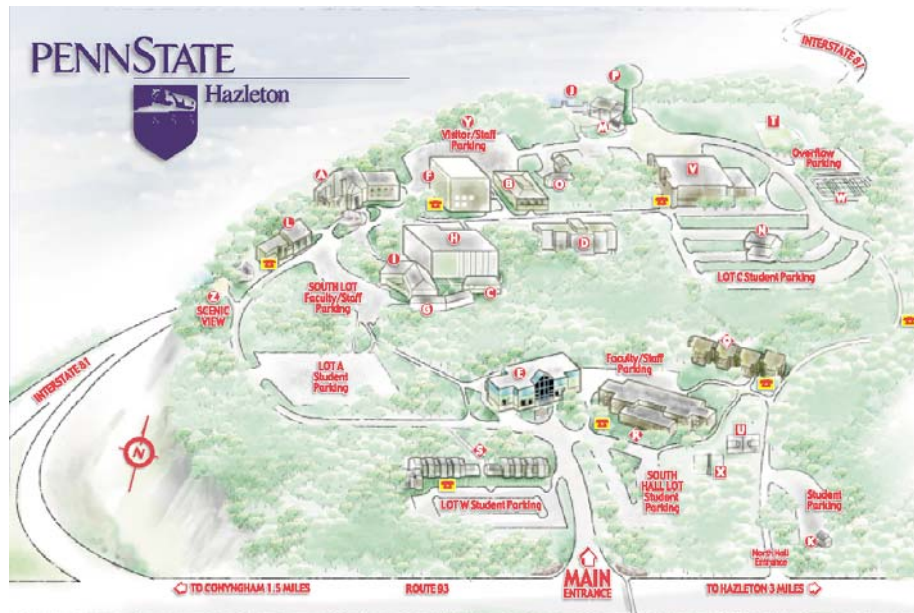


ED&G 100 Fall 2001

Sponsors: Penn State ADA Programs Office &
Office of the Assistant Vice President for Finance and Business

Project Overview:

Design a mechanical, manual, or service system that will provide access for people with disabilities and the non-disabled population from an area between the Highacres Cafe (E on map below) and residence halls up to a point near the Graham Academic Building (D) on the Penn State Hazleton campus.



Background:

The Penn State Hazleton campus (<http://www.hn.psu.edu/>) provides residence hall accommodations for 485 students. In addition, the Highacres Food Court not only provides meals for resident students, but for faculty, staff, and visitors. The foods building and residence halls are located near the main entrance of campus, at an elevation ranging approximately 1575' to 1600' above sea level. All other campus facilities are located at an elevation of approximately 1710'. Getting from the lower portion of campus to the upper part is accomplished by either walking directly up a steep pathway—which is not compliant with the ADA Accessibility

Guidelines (ADAAG) for slope and design—or directly on the main road, which is non-compliant for slope. Driving is an option but parking is limited. In order for the campus community to be able to access the facilities without having to drive, a solution that offers flexibility, convenience, ease of use, and accessibility for people with disabilities would be desirable.

Student Objectives/Deliverables:

Your team will design a solution to the problem posed above. All designs must be compliant with ADAAG. The target price for any solution is less than \$1 million total (initial and operating).

If a mechanical system is devised for moving people:

- It must be able to operate in all weather conditions.
- The design must be easy to operate and maintain and have minimal down-time.
- The design must be able to move people at a rate higher than what is required for current traffic needs and anticipated future needs.
- The design should be able to move people up and down the slope simultaneously.
- The design should begin as close to the Highacres Cafe as possible.

If a pathway or walkway design is proposed:

- The design must be easily maintained and useable in all weather conditions.

If a service system is proposed:

- It should be easily available, convenient to use, and at no cost to those people using the service.

Other systems

- Other systems and solutions may be explored, including hybrid systems.

Deliverables:

- Traffic analysis
- CAD drawings
- Projected costs (construction and operation)
- Scale model prototype
- Web reports documenting the traffic analysis, design, and projected costs

Materials Provided:

- Maps and topography plans of Hazleton Campus will be available in the 312 Hammond Design Lab
- IronCAD file of the campus topology
- ADA Accessibility Guidelines (ADAAG) available at: <http://www.access-board.gov/indexes/accessindex.htm>
- Video of usage patterns at Hazleton and user interviews
- A relief model of the campus *may* be available
- Website with project links for the design project: http://www.cede.psu.edu/design_projects/fa01/