

Section 1 — Contracted Scope

Provide a detailed description of your scope for this project (maximum of one page). Responses should include: type of construction; size of project; contract value; length of project; and percentage of labor that is self-performed.

Project Location

Clemson, SC

Waldrop's Role

Mechanical/Plumbing
Specialty Subcontractor
*Self-perform all HVAC, piping
and plumbing work*

Construction Value

\$3,225,488

Project Duration

-Demolition, Renovation and
Construction | 16 months
Aug. 2010 to Dec. 2011
-Renovation | 7 months
New Construction | 17 months

Building Size

90,000 sf new construction
60,000 sf renovated space

LEED Certification

Registered Gold

New HVAC System and Equipment

-Drilled 42 wells at average
depth of 500 ft. for water source
for HVAC system
-Installed 75,000 lf (14 miles) of
Uponor in-floor piping material
-Installed 3,188 lf (.6 mile) of
underground fiberglass duct
-1,400 lf under-floor Ecoflex
piping
-HVAC system separated into
8 radiant zones & 13 VAV zones

- 22 inline pumps
- 2 air handling units
- 6 water source heat pumps
- 48 VAV boxes
- 4 buffer tanks
- 4 fans

Percentage of Work Self-Performed

100% of HVAC demolition work,
installation of piping and
equipment, sheet metal
fabrication and installation
activities.

Subcontracted: Well Drilling,
Insulation, Building
Automation/Controls,

Merit Subcontracting

Subcontractor selections were
based on merit, along with
quality of the firm, in lieu of the
lowest bid.

Clemson University had a need to upgrade and expand its educational space for its students and faculty in the schools of architecture, construction science, and the visual arts. Lee Hall, the campus facility housing the three schools, was overcrowded and needed much improvement in order for the University to continue to attract students from around the country to their institution. Thus Clemson embarked on a building program to enhance not only the building; but, more importantly, the educational experience of the students studying there. Built in the 1950s, and updated in the 1970s, the building had served its original purpose well; however, it needed an extensive modern "facelift" and expansion to create a rejuvenated, open and accommodating learning space for its highly creative students studying these fields of endeavor.

The overall project was broken down into three phases in order to allow for renovation and construction activities to be scheduled with minimal disruption to ongoing activities in the building. Phases 1 & 2 focused on renovation of the existing Lee Hall. These phases included a complete refurbishment of the architectural finishes and spaces within the building, with limited upgrades to the mechanical and electrical systems. Phase 3 was designated for the new building expansion and incorporated a new 90,000 sf learning facility adjacent and connecting to the old Lee Hall building.

Designed for LEED Gold certification, the expansion features a glass exterior skin; open interior to encourage student/faculty collaboration; and natural lighting through the façade and skylight features. Through the use of geothermal wells, systems provide heating and cooling by radiating through the concrete floors of the energy-efficient building addition. They also provide tempered water that is distributed through 8 radiant zones throughout the building. Accommodations for solar HVAC and water applications at a later date were included in the construction of the facility.

Waldrop's mechanical/plumbing scope of work included new duct systems and refurbishment of equipment in Phases 1 and 2, along with a state-of-the art, European style, radiant cooling and heating system with an under-floor piping system. All plumbing systems and fixtures were designed around water conservation objectives established by the design team.