GREEN CASE STUDY | SOUTH HILLS RETIREMENT RESIDENCE

South Hills Retirement Residence

LEED for Homes Version 2.0

Certified GOLD

LEED Checklist — **Points**

	Earned	Possible
Innovation & Design	3.5	11
Location & Linkages	9	10
Sustainable Sites	14.5	22
Water Efficiency	5	15
Energy & Atmosphere	23.5	38
Materials & Resources	12	16
Indoor Environmental Quality	9	21
Awareness & Education	2	3

Earned 78.5 Points out of 136 Possible Points

Awards:

- **2012 Winner of the National Association of Home Builders 50+ Housing GOLD Award**
- **Platinum Award for Best American Living**
- **Charles L. Edson Award for Green Housing**

Project History and Timeline:

The former South Hills High School sat vacant and in disrepair for over 20 years until 2005 when a.m. Rodriguez Associates, Inc. responded to an RFP issued by the URA to look into possible reuses of the building for senior housing. After four years of planning, design and fundraising, the project began construction in June 2009, and opened as a retirement residence two years later. This monumental project involved the conversion of the former high school to 106 units of high-quality senior apartments - 84 of which are affordable and 22 which are offered at market-rate. The building's renovation into South Hills Retirement Residence is not only compelling as a successful example of adaptive reuse of an existing structure, but also because of the team's dedication to ensuring it would be a green building.

Strategies and Results:

- A cogeneration plant produces 65 kW of electric power each hour for use on site. Excess power is fed back into the grid and the building owner receives credit from the utility company.
- 440,000 btuh of hot water generated by the waste heat of the cogeneration plant is captured by a heat exchanger. This provides 100 percent of hot water needs for both domestic hot water and space heating.
- A large 27 kW photovoltaic solar array on the roof provides a substantial amount of additional electricity for the building, mitigating energy use during peak load hours.
- Fresh air is introduced directly to each unit on a cycled timer, eliminating unnecessary ductwork.
- All of the walls are insulated with an air infiltration barrier of spray foam and a thick insulation layer. The roof was insulated with spray foam insulation to a value of R-50.
- Solarban 70 was added to the windows. A curtain wall hangs where the auditorium once stood, providing deep daylight penetration into the space.
- The new materials in the building are low VOC, locally procured, and many have recycled content. Handrails from the original auditorium were salvaged and reused.
- Energy saved as a result preserving the building shell is equivalent to 5 gallons of gasoline per square foot or enough to power the building for 15 years.

Costs and Savings:

The financing structure for this project was very challenging and included eight different sources.

The Pennsylvania Energy Development Authority (PEDA) awarded the project a $500,000 grant to install a 27kW photovoltaic solar array and a 65kW co-generation turbine, both of which produce electricity on site and reduce operating costs to approximately $161,000 per year, from $237,000 for an ASHRAE-compliant building.

The project was initially awarded tax credits from the PA Housing Finance Agency (PHFA) in 2008 and then an additional allocation in 2009, which totaled $1.7M in annual credits— the most PHFA had ever awarded to one project. PHFA also awarded the project $1.5M of their PennHOMES soft funds.

The Board of Education spent $3.5M to demolish and abate parts of the building as well repair the school's roof, so that it could more easily be converted into the mixed-use facility that the Mount Washington community envisioned.

Project Type:
Mixed-Income Housing,
Adaptive Reuse

Dates of Construction: 2009-2011

Project Team

Developer/Owner:
a.m. Rodriguez Associates

Contractor:
Sota Construction Services, Inc.

Architect: Thoughtful Balance

Design Work:
Rothschild/Doyno Collaborative

Project Size:
163,000 sq. ft. affordable senior apartments
12,000 sq. ft. commercial space

Total Project Cost: $22.5 Million

Funding Sources:
$13.3M John Hancock Tax Credit Equity
$1.5M from the PA Redevelopment Assistance Capital Program (RACP State Funds)
$2.3M FHA Insured Loan (HUD)
$3.5M spent by Board of Education for remediation, selective demolition and stabilization

Total URA Financing:
$3M (DCED & HOME Funds)

URA
URBAN REDEVELOPMENT AUTHORITY OF PITTSBURGH

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