

Carriage House Children's Center

Pittsburgh, Pennsylvania

Architect

Moshier Studio

Carriage House Children's Center is a pioneer in the field of early childhood education, with Southwestern Pennsylvania's first infant and toddler program in 1974. The organization's entrepreneurial and risk-taking spirit has resulted in several major accomplishments over the last 35 years.

In 1985 Carriage House purchased the 113-year-old, 40,000-square-foot Wightman School Community Building and relocated in 1986. Since that time, Carriage House has overseen seven major renovations to the Wightman School Community Building transforming the building from a dilapidated, public school building that did not even meet fire and safety codes and was once considered for demolition, to one that is now gold certified by the U.S. Green Building Council and is registered with the National Registry of Historic Places.

The Wightman School Community Building is a multi-use facility where over 17,000 square feet of multipurpose and office space is leased to local non-profits, small businesses and other family-oriented groups. CHCC manages the entire building and operates the CHCC childcare program, which consists of ten classrooms between the lower level and the first floor. Administrative offices, conference rooms, and multiple tenant office spaces are located on the second floor. The third floor is home to a gymnasium and five music/dance studios.

In 2006 and 2007 Carriage House renovated the entire lower level of the building (9,720 square feet), which houses the infant and toddler programs, the kitchen, the boiler, and other storage and multi-use rooms. Carriage House also retrofitted many of the building's lighting and plumbing fixtures to meet LEED® criteria. Air conditioning was added to the first floor.

Extensive demolition of non-load bearing and bearing walls located all four classrooms (infants, young toddlers, toddlers, and one extra classroom) at the front of the building, where they each benefit from more natural

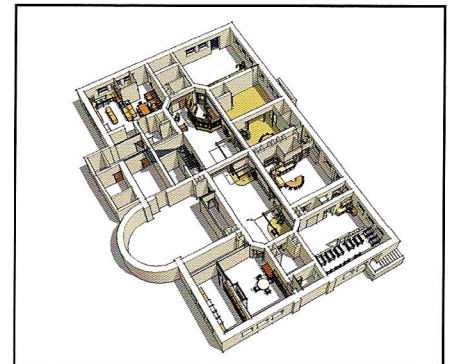


Photo Courtesy Linda Jeub

light. Spaces not used by children, such as the kitchen and the laundry room, have taken their place where the windows struggle to receive light. The center of the lower level has been opened up to create a large indoor play area that is subdivided for two groups to use at the same time. Access to daylighting and views have been opened to increase the amount of natural light in the center of the lower level. Two classrooms have unique entrances to this central space- two enclosed porches for the young toddlers and older toddlers. Preschool sized bathrooms have been located in two of the classrooms for children who are making this transition.

The new "green" kitchen has reach-in coolers, food storage areas, and the commercial dishwasher adjacent to the elevator for good delivery access, and for ease of sending prepared food up to the other classrooms. The kitchen is designed to comply with Energy Star ratings at 60 or above. The entire building is now rated as Energy Star 81.

All plumbing faucets and toilets are low-flow fixtures. With the exception of one teacher sink per classroom, all children's faucets are hands-free to promote healthy handwashing methods.



The new, lower-level classrooms have a suspended ceiling for acoustical control, as high as the bottom of the original beams, and not blocking the windows. Heated and cooled air is delivered from the individual heat pumps via exposed round ducts below the ceiling. All classrooms are equipped with individual thermostats.

On the first and lower-level indirect lighting illuminates the ceiling, giving off an impression of openness and more light output with less energy. T-8, daylighting systems have been installed throughout the lower-level. The lights are dimmable in all classrooms and are programmed to coordinate with the children's napping schedules.

**LEED®
Existing Buildings Gold**

Design Cost Data/November-December 2009

COMMERCIAL CM091140

Carriage House Children's Center

Architect

Moshier Studio
201 South Highland Avenue, #203, Pittsburgh, PA 15206
www.moshierstudio.com

Construction Team

Electrical Engineer:

Carlins Consulting
8005 Broadlawn Dr., Pittsburgh, PA 15237-4152

Mechanical Engineer & Commissioning Agent:

BDA Engineering
217 W. 8th Ave., West Homestead, PA 15120

General Contractor:

Jendoco Construction Company
2000 Lincoln Road, Pittsburgh, PA 15235

LEED Consultant:

Moshier Studio
201 South Highland Avenue, #203, Pittsburgh, PA 15206



Project General Description

Location: Pittsburgh, Pennsylvania

Date Bid: Dec 2005

Construction Period: May 2006 to Apr 2007

Total Square Feet: 40,000 **Site:** .75 acre.

Number of Buildings: One; 16 classrooms, seating capacity, 170.

Building Size: Basement, 10,000; first floor, 10,000; second floor, 10,000; third floor, 10,000; total, 40,000 square feet*.

Building Height: Basement, 12'; first floor, 16'; second floor, 16'; third floor, 32'; total, 76'.

Basic Construction Type: Renovation/Brick.

Foundation: Reinforced concrete. **Exterior Walls:** CMU, brick.

Roof: Membrane, slate. **Floors:** Concrete, wood.

Interior Walls: CMU, metal stud drywall.

Projected and/or Modeled Energy Usage KBTU/SF/yr: 55.



Photo Courtesy Linda Jeub

DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
PROCUREMENT & CONTRACTING	52,503	2.88	2.63	Permits, fees.
GENERAL REQUIREMENTS	289,974	15.92	14.50	Summary, price & payment procedures, administrative requirements, quality requirements, performance requirements.
CONCRETE	51,345	2.82	2.57	Forming & accessories, reinforcing, cutting & boring.
MASONRY	37,300	2.05	1.87	Unit, manufactured masonry.
METALS	37,180	2.04	1.86	Structural metal framing, fabrications, decorative metal.
WOOD, PLASTICS & COMPOSITES	133,562	7.33	6.68	Rough carpentry, finish carpentry, architectural woodwork.
THERMAL & MOISTURE PROTECTION	60,608	3.33	3.03	Dampproofing & waterproofing, thermal protection, weather barriers, roof & wall specialties & accessories.
OPENINGS	66,929	3.68	3.35	Doors & frames, specialty doors & frames, windows, hardware.
FINISHES	185,227	10.17	9.26	Plaster & gypsum board, tiling, ceilings, flooring, painting & coating.
SPECIALTIES	5,850	0.32	0.29	Information, exterior, other.
EQUIPMENT	55,901	3.07	2.79	Foodservice.
FURNISHINGS	1,559	0.09	0.08	—
PLUMBING	146,300	8.03	7.31	Piping & pumps, equipment, fixtures.
HVAC	504,000	27.69	25.20	Piping & pumps, air distribution, air cleaning devices, central heating, central cooling, central HVAC equipment, decentralized HVAC equipment.
ELECTRICAL	187,725	10.31	9.38	Medium voltage distribution, lighting.
ELECTRONIC SAFETY & SECURITY	5,000	0.27	0.25	—
TOTAL BUILDING COSTS	1,820,963	100%	\$91.05*	
EXISTING CONDITIONS	111,111			Demolition.
EARTHWORK	11,720			—
TOTAL	1,943,794			(Excluding architectural and engineering fees)

* Carriage House Children's Center renovation included 10,000 square feet on the first floor, and 10,000 square feet on the lower level. Other 20,000 square feet of structure not included in this renovation.

UPDATED ESTIMATE TO DECEMBER 2009: \$108.97 PER SQUARE FOOT

Regional Cost Trends

This project, updated to December 2009 in the selected cities of the United States.

EASTERN U.S.			CENTRAL U.S.			WESTERN U.S.		
	Sq.Ft. Cost	Total Cost		Sq.Ft. Cost	Total Cost		Sq.Ft. Cost	Total Cost
Atlanta GA	\$99.59	\$1,991,874	Dallas TX	\$99.59	\$1,991,874	Los Angeles CA	\$127.71	\$2,554,285
Pittsburgh PA	\$108.97	\$1,820,963	Kansas City KS	\$103.11	\$2,062,175	Las Vegas NV	\$116.00	\$2,319,947
New York NY	\$140.60	\$2,812,057	Chicago IL	\$125.37	\$2,507,417	Seattle WA	\$124.20	\$2,483,984

Subscribe to DCD and get immediate access to this project and over 1,300 more in the DCD Archives, a powerful cost modeling tool for conceptual estimating, cost validating, project feasibility, or budgeting.