

# ARCHITECTURAL R E C O R D

## **Vivian and Seymour Milstein Family Heart Center**

A beautifully daylit infill addition between a hospital and an office building harvests precious space for diagnostics, treatment, and surgery.



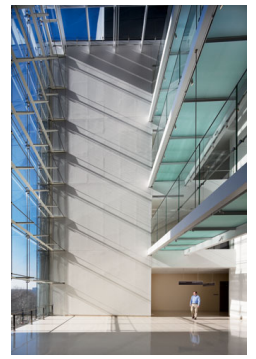
Vivian and Seymour Milstein Family Heart Center

Pei Cobb Freed & Partners Architects LLP

New York City, New York

The Milstein Family Heart Center's waiting rooms and ICU enjoy spectacular Hudson River views.

Image courtesy Pei Cobb Freed & Partners Architects LLP



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*October 16, 2010*

*Charles Linn FAIA*

# **Pei Cobb Freed & Partners**

## **New York City, New York**

NewYork-Presbyterian Hospital's dense web of mostly older buildings at its 20-acre campus in Upper Manhattan is not unusual for medical complexes constructed over many decades. Administrators and trustees balk at demolishing old facilities, and so with a nip here and a tuck there structures survive long past their original life expectancies, even as new space is desperately needed. The conundrum motivates these clients and their architects to scour the environs for sites they previously would never have considered.

### Program

Milstein Hospital is NewYork-Presbyterian's main inpatient facility. When it opened in 1988, its operating rooms were state-of-the-art, and over the years they have become some of the busiest in the U.S. More than 100 operations may be performed in its 26-room surgical suite in the course of a day.

Surgery and patient care have evolved at light speed since the building opened, thanks in part to new techniques developed in this hospital. Diagnostics machines and complex surgical procedures that would have been considered science fiction when the building opened are common today and continue to advance rapidly.

But to keep leading the way, Milstein needed new kinds of spaces — for example, hybrid operating rooms that could quickly change from noninvasive to invasive surgery if a patient had problems in the midst of a seemingly routine procedure. But where could it expand?

## Solution

The site of the new Vivian and Seymour Milstein Family Heart Center was carved out of a schist outcropping so large it was considered unusable until the real estate became too valuable to ignore. The addition fills a void between Milstein Hospital and the Herbert Irving Pavilion, an early 1960s vintage medical office building.

Patients and visitors can gain access to the Heart Center via its entrance on a side street, which is somewhat private and gives the center its own identity, or they can enter by way of Milstein Hospital's more public main lobby (considered the addition's first level) and through a compact but beautifully daylight four-story atrium. It is spanned by bridges on three levels, connecting Irving to Milstein.

The new facility packs a tremendous amount into a small space. A conference center with prefunction space, an auditorium and four meeting rooms, is located on the first level. Labs and radiology occupy the level below the conference center, and a cath lab is located on level two. Eight new operating rooms have been added on the third level, and diagnostics, such as echocardiograms, are performed on level four. On level five, 20 ICU rooms have been added. Functions on all these floors have been seamlessly integrated into the existing hospital, while its circulation was improved.

## Commentary

On the whole, hospital additions are more difficult to extract pleasing moments from than most building types. Obstacles range from woeful existing conditions to clients who resist spending money on frills like waiting rooms. The architects in charge of this project, Ian Bader, FAIA, of Pei Cobb Freed & Partners, and Chip Calcagni, AIA, of daSILVA Architects, were privileged to have generous donors and an enlightened client in NewYork-Presbyterian's senior vice president, Andria Castellanos. And they are to be commended for what they've made of it. The addition has earned a LEED Gold rating, and its exterior stands out like a jewel between two beige monoliths that were depressing at best. Innovations such as the cable-truss, double-walled facade that frames the south elevation bless the waiting rooms and conference center with spectacular views of the Hudson River. The glass bridges over the atrium are also more than eye candy. They reconcile the differences in floor heights between Irving and Milstein and can cut critical minutes of travel time between the buildings when a quick response to an emergency is required.

One of the huge challenges for these architects was anticipating how rooms not yet built could accommodate equipment not yet invented. Although their solutions are not visible to the eye, the firms devoted much attention to ensuring that the structural system as well as utility and data lines are adaptable enough to support what may be science fiction today, but commonplace in the near future.

Completion Date: January 2010

Owner: NewYork-Presbyterian Hospital

Total construction cost: \$140 million

Gross square footage: 165,000 sq.ft. (new construction), 40,000 sq.ft. (renovation)

**Architect:**

Pei Cobb Freed & Partners Architects LLP

88 Pine Street

New York, NY 10005

Tel: 212-751-3122

Fax: 212-872-5443

**People**

**Owner**

NewYork-Presbyterian Hospital

**Architect**

Pei Cobb Freed & Partners Architects LLP

88 Pine Street

New York, NY 10005

Tel: 212-751-3122

Fax: 212-872-5443

*Personnel in architect's firm who should receive special credit:*

Ian Bader FAIA LEED, Partner-in-Charge, Design

Michael D. Flynn FAIA, Partner, Technology

Alan Gordon AIA, Associate Partner, Management,  
Project Architect

Richard Cutter AIA, Associate Partner, Job Captain

Michael Lyon, Associate

Apisit Thanavuthiporn AIA LEED, Associate

Jenny Yoo, Associate

Jian Hei, Associate

Keunsook Suk LEED, Staff Architect

**Associate architect:**

daSILVA Architects

Charles L. Calcagni AIA, Principal

Anton Martinez AIA, Principal

Susan Romano

**Interior design:**

Pei Cobb Freed & Partners Architects LLP

**Products**

**Structural system**

Steel frame

**Exterior cladding**

*Masonry:*

*Infill / Replacement Brick:*

Watson town Brick Co. Vulcan Smooth w/ Iron  
Spots

Tri-State Brick & Building Materials

151 West 25th St.

New York, NY 10001

*Granite Wall Base & Paving Border:*

Chelmsford Grey Granite, Thermal Finish

*Fabricator:*

Fletcher Granite Co., Inc.

Westford, MA 01886

*Installer:*

Port Morris tile & Marble Corp.

1285 Oak Point Ave.

Bronx, NY 10474

*Moisture barrier:*

Henry Company

909 N. Sepulveda Blvd., Suite 650

El Segundo, CA 90245-2724

BK021 – Bakor Air Bloc 21

Blueskin SA (Self-Adhesive Air/Vapor Barrier  
Membrane)

**Landscape architect:**

Pei Cobb Freed & Partners Architects LLP  
Andre Morawski RA ASLA, Associate Partner,  
Landscape

**Engineer(s):***Structural:*

Thornton-Tomasetti  
Aine M. Brazil, Principal  
Michael J. Squarzini  
Ken Tuttle

*MEP:*

Syska Hennessy Group  
G. Venkata Ramu  
Ernie Brandusa  
Amedeo Moino

**Consultant(s):***Hospital Planning Programming:*

Medical Planning Research International  
Raymond Skorupa

*Project Manager:* Peter J. Romano &  
Company

*LEED Consultant:* EME Group Consulting  
Engineers

*Vertical Transportation:* Van Deusen & Associates

*Acoustical:* Cerami & Associates, Inc.

*Code:* Code Consultants Professional Engineers,  
P.C.

*Audio/Visual:* Center for Biomedical  
Communications / AV Services, Columbia  
University

*Specifications Writer:* Construction Specifications,  
Inc.

*Zoning/Expeditor:* Municipal Expediting Inc.

*Double walled façade:**Climate Wall Glazing and Support Hardware:*

Pilkington Planar by W&W

W&W Glass Systems, Inc.  
302 Airport Executive Park  
Nanuet, NY 10954-5285

*Exterior Vertical Glass:*

25 mm Laminated Glass (15mm Pilkington  
Optiwhite T-Plus, 1.52 PVB, 8mm Optiwhite H/S)

*Exterior Roof Glass:*

25 mm Laminated Glass (15mm Pilkington  
Optiwhite T-Plus, 1.52 PVB, 8mm Optiwhite T-  
Plus)

*Exterior Soffit Glass:*

25 mm Laminated Glass (15mm Pilkington  
Optiwhite T-Plus, 1.52 SGP, 8mm Optiwhite T-  
Plus)

*Interior Vertical Glass:*

44mm Insulated, Laminated, Tempered, Heat-  
Soaked Units (6mm Optiwhite T-Plus, 16mm air,  
10mm Optiwhite T-Plus, 1.52mm SGP, 10mm  
Optiwhite T-Plus)

*Pilkington Stainless Steel Hardware:*

Pilkington 902 glass support hardware in type 316  
stainless steel

Pilkington 905 glass support hardware in type 316  
stainless steel

Pilkington castings in type ASTM A890 grade 4A  
Duplex stainless steel with a fine grit blast, pickled  
and electro polished finish

*Climate Wall Support Trusses:*

TriPyramid Structures, Inc.  
59 Power Road  
Westford, MA 01886

*Surveyors:*

Lovell & Belcher Inc. City Surveyors  
Badey & Watson Surveying & Engineering, P.C.

**General contractor:**

*Construction Manager:* Bovis Lend Lease, LMB,  
Inc.

*Trade Managers:*

Taggart Associates Corp.  
KSW

**Photographer:**

Paul Warchol  
Phone: 212-431-3461  
Fax: 212-274-1953  
requests@warcholphotography.com  
warcholphotography.com

**Renderer:** Pei Cobb Freed & Partners Architects  
LLP

**CAD system, project management, or other**

**software used:** Autodesk, AutoCAD, 3D Studio Max

*Stainless Steel Rod Trusses:*

TPS horizontal support struts: type 304 stainless steel, ASTM A276 grade S30400, #4 linear finish  
TPS rods: ASTM A276 grade S30400 cold drawn  
Hardware: 304 stainless steel, ASTM A276 grade S30400, #4 linear finish  
Tensioning clevis assemblies: stainless steel at exposed surfaces, #4 linear finish  
Standard fasteners: 304 or 18-8 stainless steel  
Metric fasteners: grade A2-70 stainless steel

*Reynobond Aluminum Composite Panel System:*

4mm FR (fire rated) Reynobond aluminum composite panel, Pewter finish

*Supplier:*

Alcoa Cladding Systems  
555 Guthridge Court  
Norcross, GA 30092

*Fabricator:*

IDA International, Inc.  
200 Roosevelt Drive  
Derby, CT 06418

*Exposed painted steel support brackets:*

Painted with Duranar XL UC51713XL Pewter  
*Sealant:*

Dow Corning 795 silicone (grey)

*Motorized Fabric Shading Devices:*

*Manufacturer:*

Nysan Solar Control  
#1 115 28 Street SE  
Calgary, AB, T2A 5K4

*Installer:*

The DK Group  
10 E. 39th Street, Suite 1123  
New York, NY 10016

*PANEL SYSTEM (EXCLUSIVE OF CLIMATE WALL)*

*Reynobond Aluminum Composite Panel System:*

4mm FR (fire rated) Reynobond aluminum composite panel, Champagne Metallic finish

*Supplier:*

Alcoa Cladding Systems  
555 Guthridge Court  
Norcross, GA 30092

*Fabricator:*

IDA International, Inc.  
200 Roosevelt Drive  
Derby, CT 06418

*Exterior Wall Cavity Insulation:*

Roxul CavityRock 2" Thick

*Supplier:*

Roxul Inc.  
420 Bronte St. S., Suite 105  
Milton, ON L9T 0H9

**Roofing**

*Elastomeric:*

MM6125 EV Monolithic Membrane

*Supplier:*

American Hydrotech, Inc.  
303 East Ohio St.  
Chicago, IL 60611-3387

*Installer:*

Eagle One Roofing Contractor, Inc.  
18-60 45th St.  
Astoria, NY 11105

**Windows**

*Aluminum:*

EFCO, A Pella Company  
PO Box 609  
Monett, MO 65708-0609

## **Glazing**

### *Glass:*

#### *Storefront Entrance:*

Pilkington Optiwhite T-Plus (Laminated)

#### *Atrium Vertical Wall / Climate Wall:*

Pilkington Optiwhite T-Plus (Laminated, Insulated Units with 40% black frit dot pattern)

#### *Punched Windows:*

Oldcastle BuildingEnvelope Glass Insulating Glass Units with Sunguard SN-68 on #2 surface

#### *Canopy:*

Pilkington Optiwhite T (laminated with custom frit pattern)

#### *Skylights:*

Pilkington Optiwhite T-Plus (laminated, Insulated Units with 60% black frit dot pattern)

*Insulated-panel or plastic glazing: See panel system info*

## **Doors**

### *Entrances:*

#### *Glass & Stainless Steel Storefront Doors:*

J.E. Berkowitz, L.P.

One Gateway Boulevard

Pedricktown, N.J. 08067

#### *Glass & Stainless Steel Revolving Door:*

Crane Revolving Doors

924 Sherwood Drive

Lake Bluff, IL 60044

#### *Metal doors:*

#### *Hollow Metal Doors:*

Long Island Fireproof Door, Inc.

5 Harbor Park Dr.

Port Washington, NY 11050



*Wood doors:*

*Interior Wood Doors:*

Petersen Geller Spurge, Inc.  
32 Hickory Lane  
Hudson, NY 12534

*Fire-control doors, security grilles:*

Long Island Fireproof Door, Inc.  
5 Harbor Park Dr.  
Port Washington, NY 11050

*Upswinging doors, other:*

The Bilco Company  
P.O. Box 1203  
New Haven, CT 06505 U.S.A.

**Interior finishes**

*Acoustical ceilings:*

*Ceilencio Custom Acoustical Panel Ceiling System  
with Claro Finish:*

Decoustics Limited  
61 Royal Group Crescent  
Woodbridge, Ontario Canada L4H 1X9

*Suspension grid:*

*Acoustic Ceiling Tile:*

Armstrong World Industries  
2500 Columbia Ave. (17603)  
P.O. Box 3001  
Lancaster, PA 17604

*Cabinetwork and custom woodwork:*

Petersen Geller Spurge, Inc.  
32 Hickory Lane  
Hudson, NY 12534

*Paints and stains:*

Benjamin Moore & Co.  
101 Paragon Drive  
Montvale NJ 07645

*Paneling:*

*Wood Veneer Wall Panels:*

Petersen Geller Spurge, Inc.  
32 Hickory Lane  
Hudson, NY 12534

*Acoustical Wood Veneer Wall Panels:*

Madero (Solo M, Type 32 – 16mm thick FR NAUF  
MDF with figured Anegre quarter-cut and book-  
matched)

Decoustics Limited  
61 Royal Group Crescent  
Woodbridge, Ontario Canada L4H 1X9

*Special surfacing:*

Corian – Venaro White

Du Pont

E. I. du Pont de Nemours and Company  
1007 Market St.  
Wilmington, DE 19898

*Floor and wall tile:*

Daltile & American Olean Ceramic Tile

Public Toilets (walls & floors)  
Staff Toilets (walls & floors)  
Housekeeping (walls & floors)

Daltile Corporation  
7834 C.F. Hawn Frwy.  
Dallas, TX 75217

*Resilient flooring:*

Armstrong World Industries  
2500 Columbia Ave. (17603)  
P.O. Box 3001  
Lancaster, PA 17604

TOLI International  
55 Mall Drive  
Commack, NY 11725

*Special interior finishes unique to this project:*

*Travertine Walls & Floor:*

Mariotti Carlo & Figli s.p.a.

Via Tiburtina 287

00011 Tivoli Terme

Rome, Italy

*Epoxy & Venetian Terrazzo Flooring:*

D. Magnan & Co, Inc.

32 Cortlandt St.

Mt. Vernon, NY 10550

*Resilient Terrazzo Tile:*

Fritztile

500 N. Sam Houston Rd.

Mesquite, TX 75149

**Conveyance**

*Elevators/Escalators:*

*Elevators:*

City Elevator

45 Main St.

Suite 844

Brooklyn, NY 11201

*Elevator Cab Finishes:*

National Elevator Cab & Door Corp.

53-13 37th Ave.

Woodside, NY 11377

*Accessibility provision (lifts, ramping,  
etc.):Manufacturer:*

Services Industriels Savaria, Inc.

107 Alfred Kuehne Boulevard

Brampton, Ontario L6T 4K3 Canada

*Installer:*

Mobility Elevator & Lift Co.

4 York Ave.

West Caldwell, NJ 07006-6407

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**W.PA/Works Partnership Architecture**

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