







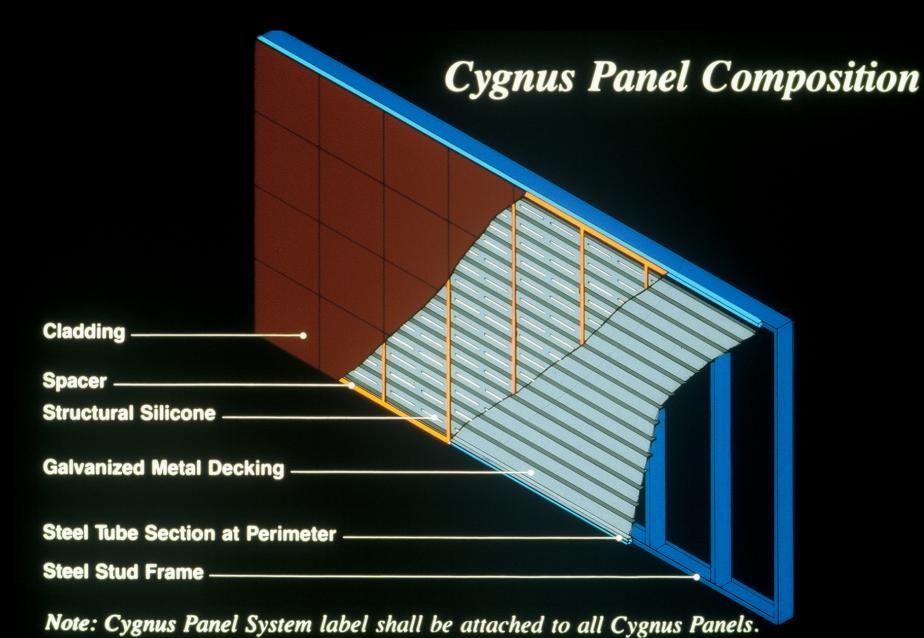
CYGNUS Panel System

#### Mission / Vision

- Unique, tested, patented exterior wall system
- Cost effective, green, durable, panelized
- Partners: Tom Obermeier, Aleksandr Sheykhet, Bill Loper, Gary Paoli
- System Origins
  - Desire to Install Large Tile on Exterior
  - Buchtal Kerion System
  - Panelization for Cost effectiveness
- Patents: 1986-2001
- Now: Cygnus 2010

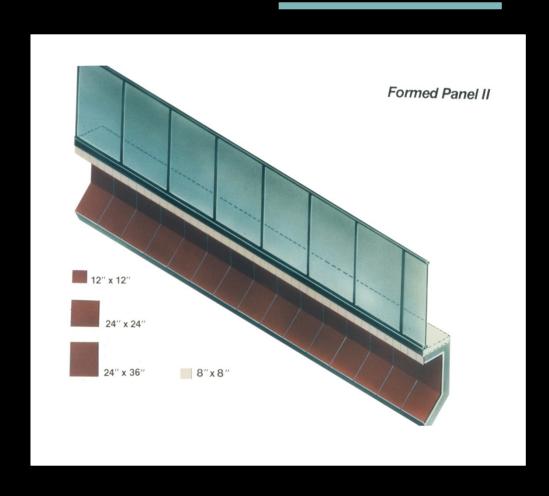




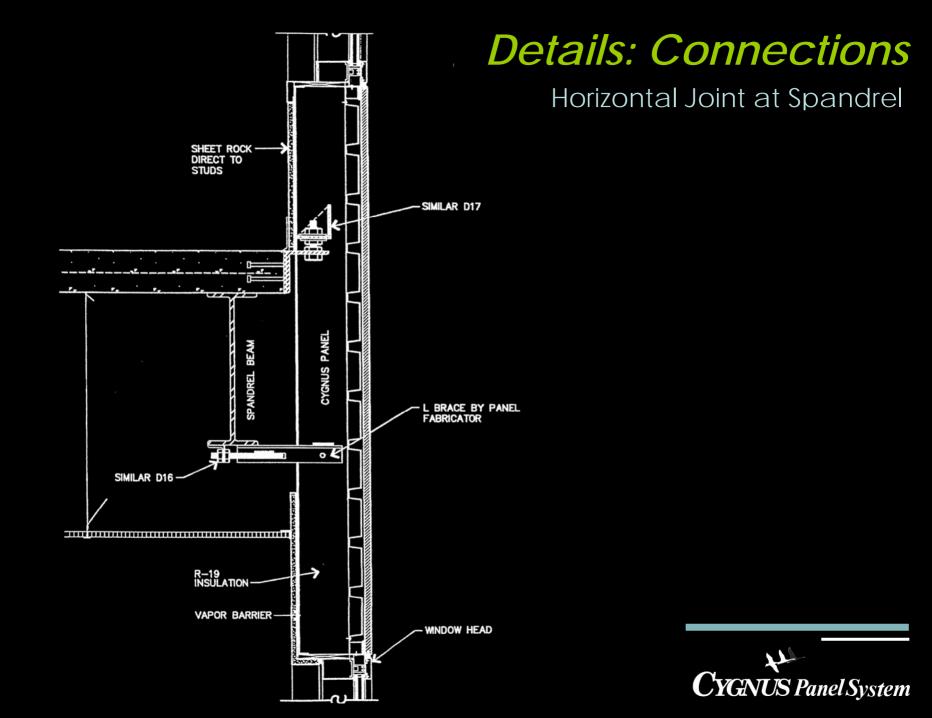


#### Cygnus Options

- Tile or Stone
- SurfaceWaterproofedSystem
- Rain Screen System
- Thermally Broken
   System
  - LEEDwall
  - Canada Wall

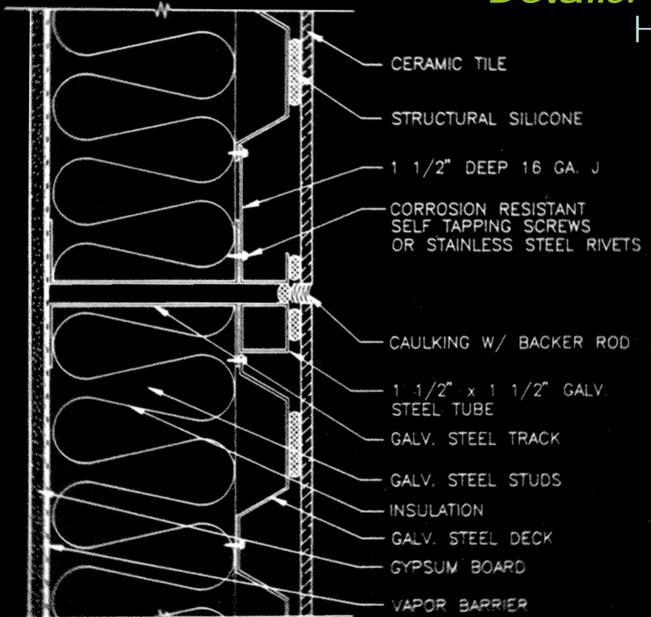






### Details: Connections

Horizontal Joint

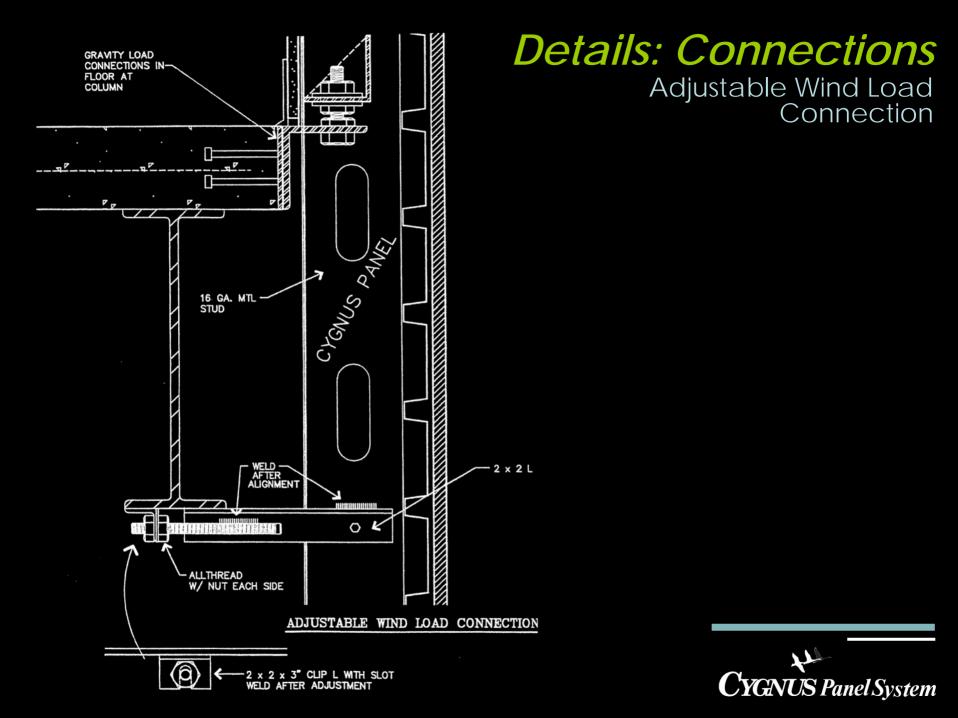


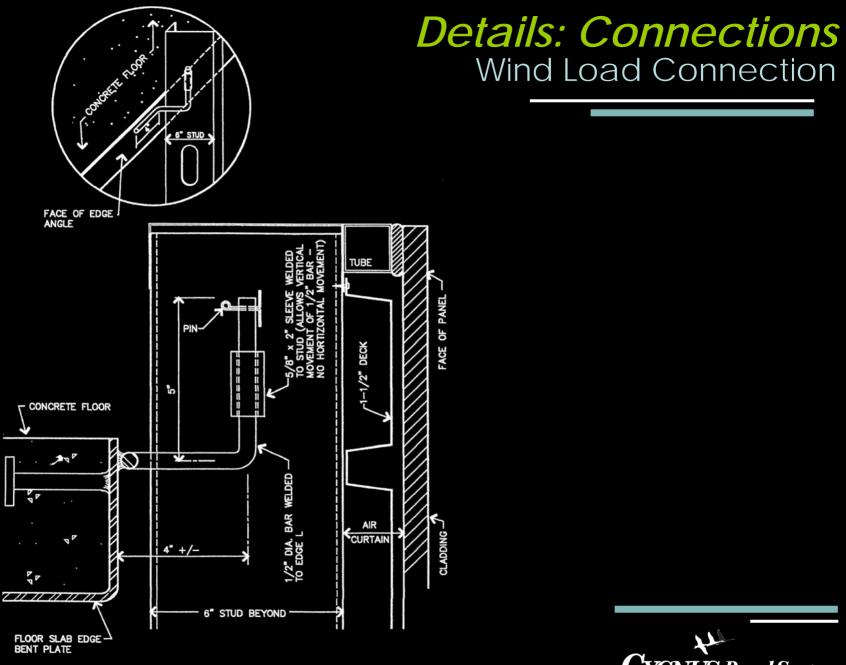


#### 1" insulating glass window sill 1 1/2x1 1/2" steel tube -1 1/2" galvanized metal deck (22 gauge) -5/8" gypsum board control joint adjustable hanger fire safing spandrel beam Lombara Izani granite - 3/4" -steel stud insulation windbrace structural silicone adhesive st. steel clip angles suspended ceiling-

## **Details: Connections**Spandrel/Glazing



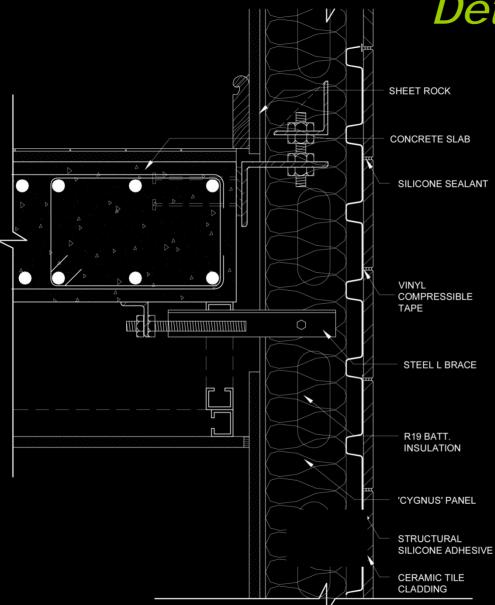






#### **Details: Connections** 2" +/- > Shear Panel 1-1/2" DECK SHEAR WALL CAULK -**CLADDING** --1-1/2" x 1-1/2" L DECKING -BENT P **←**3/8" TEE \_\_ PANEL SIZE VARIES





Details: Connections

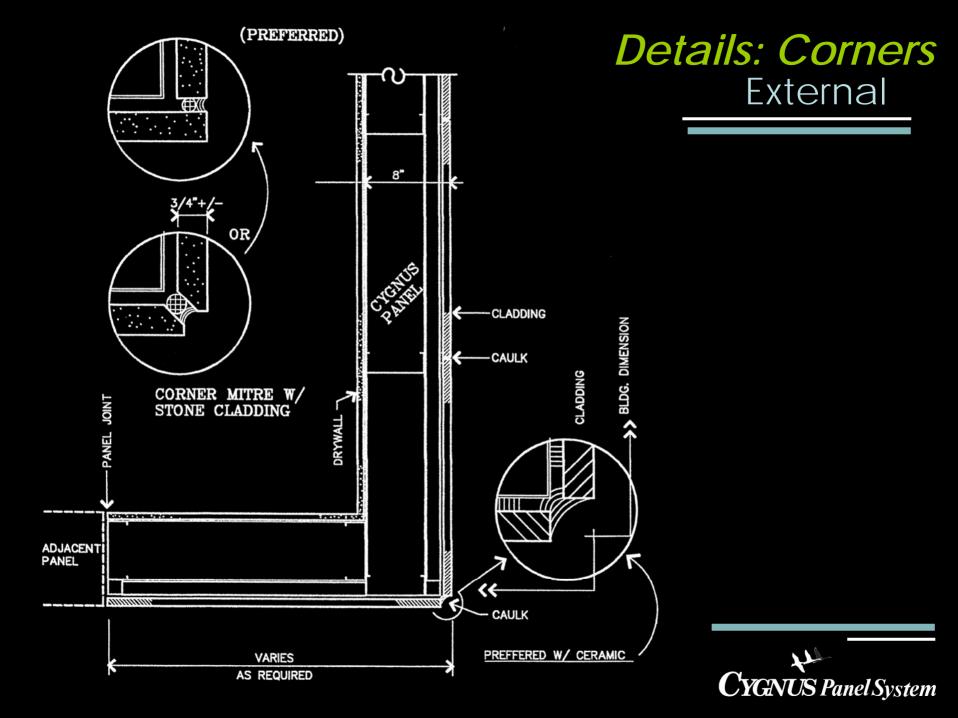
Concrete Floor

Attachment

#### -ADJACENT PANEL -PANEL JOINT RE: D3 **GRAVITY LOAD** -CONNECTION FOR VERTICAL ADJUSTMENT RE: D17 NOTE: GRAVITY CONNECTION AT COLUMNS, WIND CONNECTIONS AT CENTER OF PANEL. CHANNEL WIND BRACING SUSPENDED CLG-INSULATING GLASS (PUNCHED WINDOW) FRAMELESS WINDOW RE: D11 8-1/2" NOMINAL 3x3x1/4" PLATE W/ 13/16" HOLE -----PANEL JOINT RE: D3 PANEL TO PANEL CONNECTION: 3x3/4" BOLT -DEFLECTION CONNECTION CLADDING R-19-WELD VAPOR-BARRIER

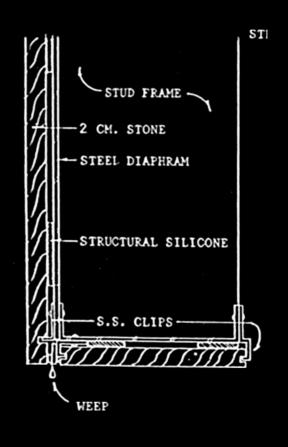
### **Details: Connections**Punched Window



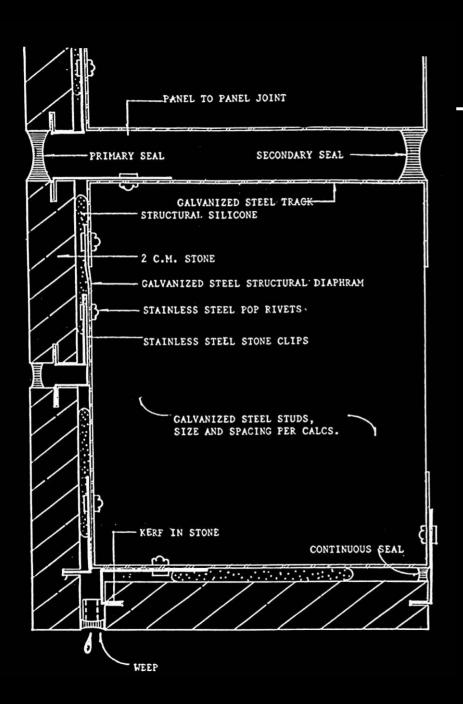


### STRUCTURAL STUDS-2 CH. STONE -DEAD LOAD ASSEMBLY GALVANIZED STEEL-DIAPHRAM IMBED STRUCTURAL SILICONE -ADJUSTING LOWER LATERAL LOAD BRACE -INSULATION S.S. CLIPS . WEEP -

## **Details: Connections**Section Details





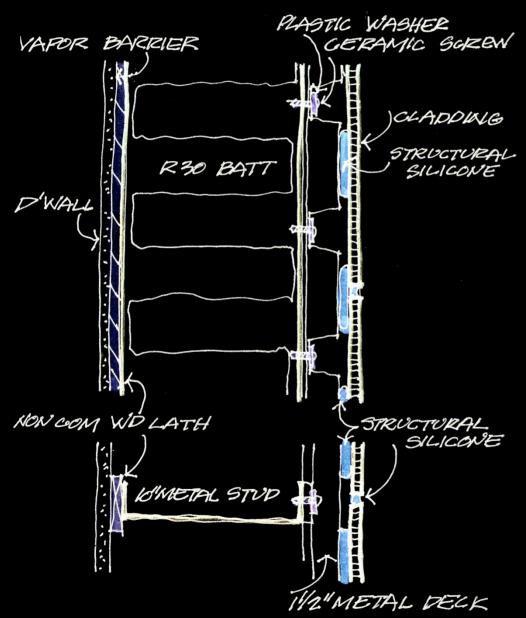


## Details: Corners Soffit Panel



### Details: Wall Section

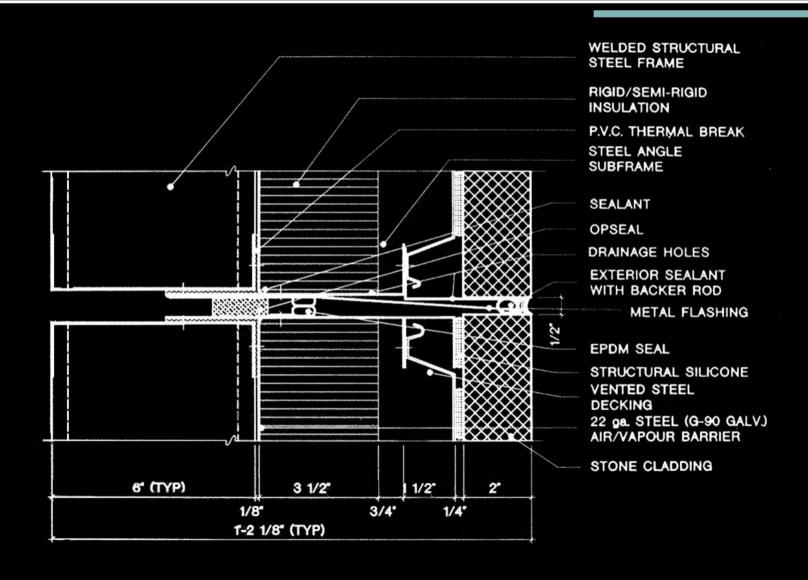
LEED Wall



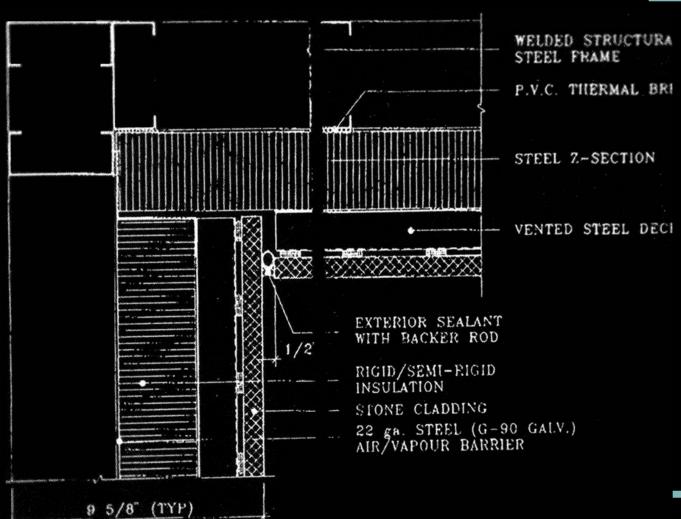


#### **Details: Joints**

#### Canada Wall: Rainscreen Drainage



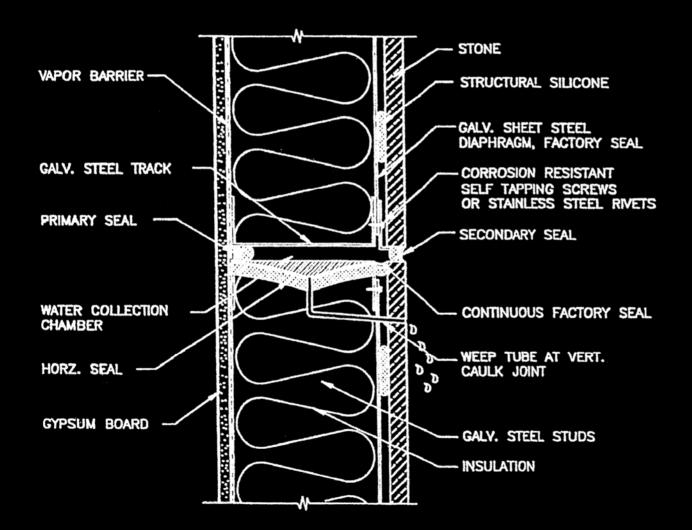
### **Details: Corners**Canada Wall



### **Details: Connections**Gutter Weep

#### COMPOSITE PANEL

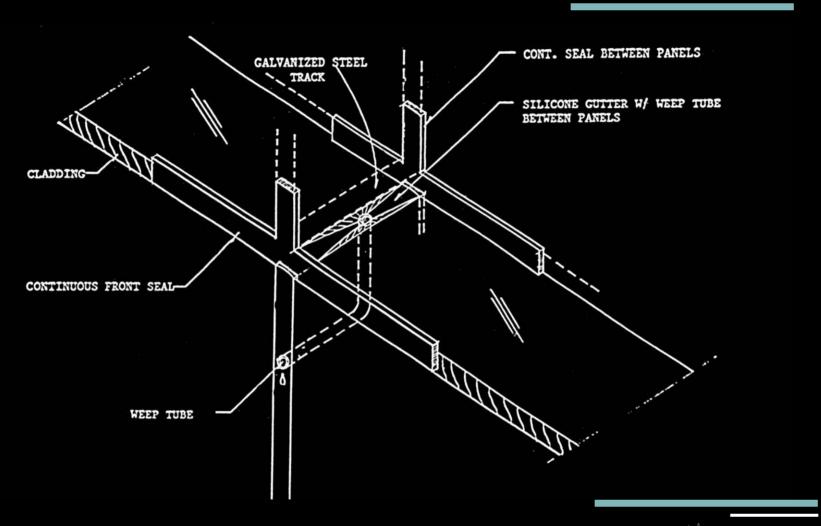
PANEL TO PANEL - HORIZONTAL JOINT GUTTER WEEP SYSTEM - COMPOSITE PANEL SECTION CUT BETWEEN ENDS OF SPANDREL PANELS



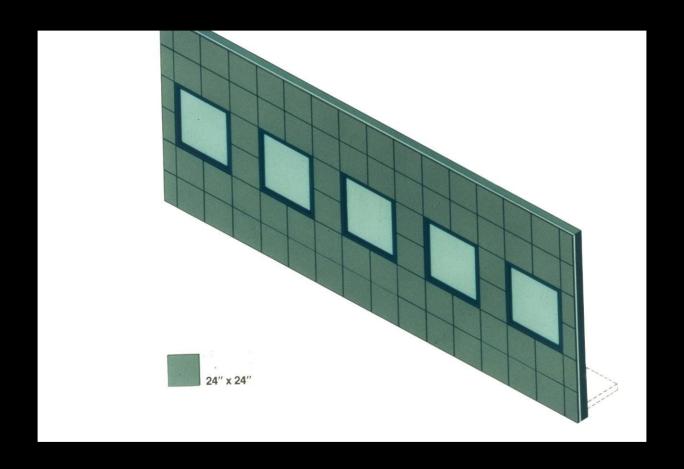


#### **Details: Joints**

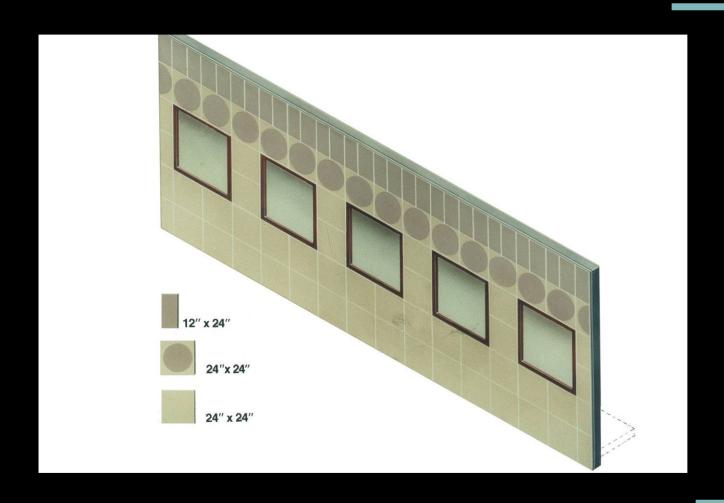
#### Secondary Water Barrier & Gutter Weep System



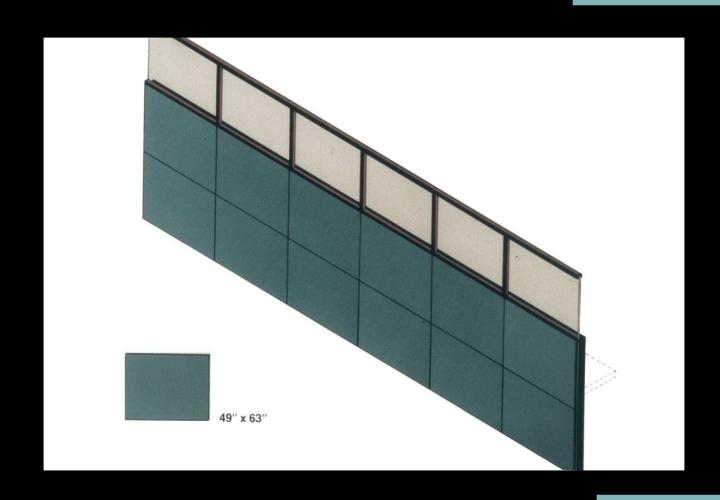
## **Details: Standard Panel Systems**Punched Window Panel



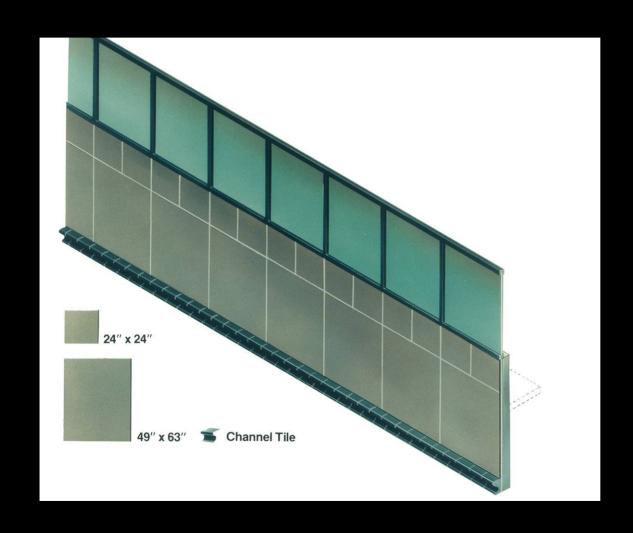
## **Details: Standard Panel Systems**Punched Window Panel



# **Details: Standard Panel Systems**Spandrel Panel

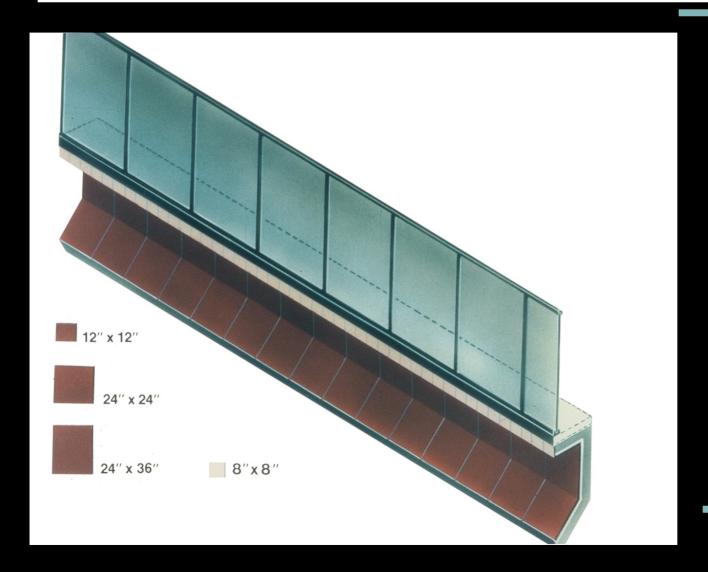


# **Details: Standard Panel Systems**Spandrel Panel

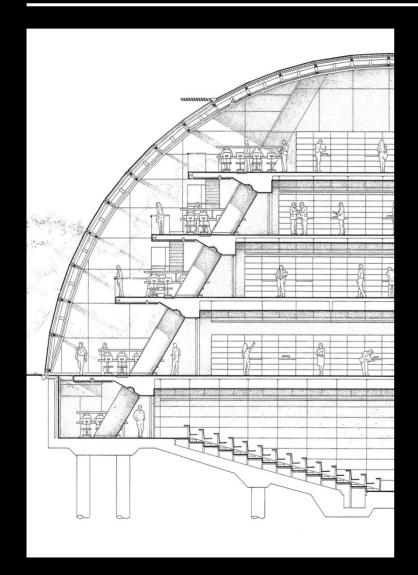




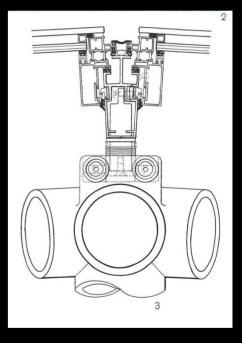
# Details: Standard Panel Systems Formed Panel



## Details: Alternate Silicone Applications Norman Foster: Faculty of Law, University of Cambridge







## Nissan Regional Headquarters & Training Facility Beaverton, Oregon

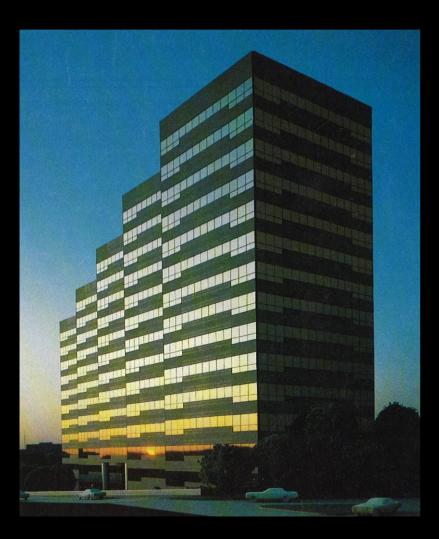








# *Uranga Towers*San Antonio, Texas





# National Air & Space Museum Washington D.C.









# IBM Branch Office Building San Diego, California









### Naval Intelligence Center Suitland, Maryland









# Russell Building Tacoma, Washington







### Pacific Centre Block 32 Tower

Vancouver, British Columbia



# Mayo Clinic/Group Practice Jacksonville, Florida









#### Jamboree Phase II A

Irvine, California









## *Team Disney - The Michael D. Eisner Building*Burbank, California









### Cobo Hall Detroit, Michigan









## University of Canterbury School of Law Christchurch, New Zealand









## AT & T Building Irvine, California









### 3M Canadian Head Offices

London, Ontario





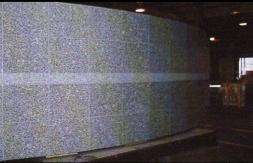




### *The Citadel* Denver, Colorado











## *TRW*Fairfax, Virginia





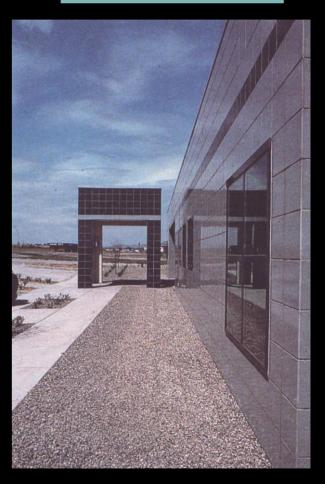


## Central Bank of Chapel Hills Colorado Springs, Colorado











### *Rio Vista Plaza* San Diego, California







## Ceramico Manufacturing Facility Auckland, New Zealand



#### FIG Garden Financial Center Phases I, II

Fresno, California







### Pasadena Gateway Pasadena, California





# Premier Building Bellevue, Washington





### 160 W. Santa Clara

Santa Clara, California





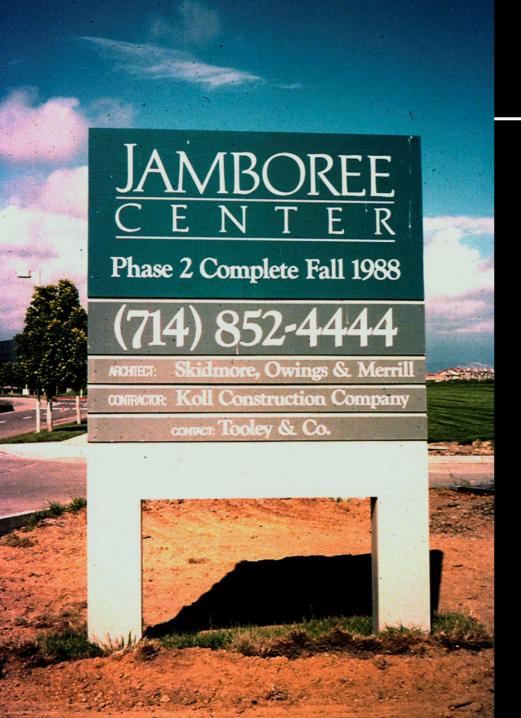


### Headquarters Park Office Complex Durham County, North Carolina









### Production Case Study: Jamboree Center

- Architect:
  - Skidmore, Owings & Merrrill
- General Contractor: Koll Construction Company
- Panel Manufacturer: Paoli Construction
- Owner: The Irvine Co.
- Building Address: 5 Park Plaza, Irvine, CA
- Description/Use: 20-Story Office
- Cladding: Travertine Marble













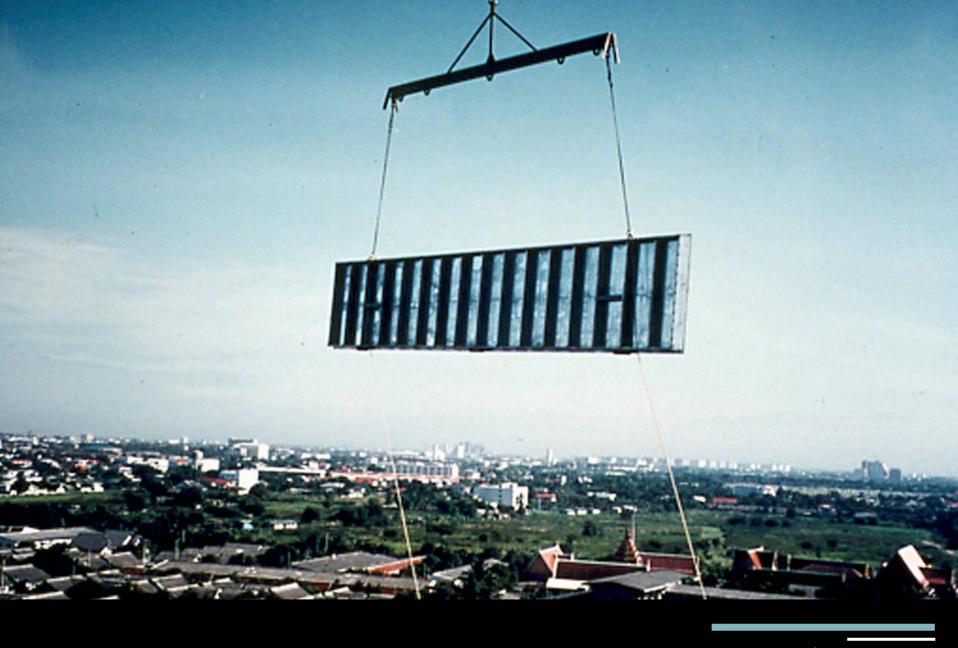




















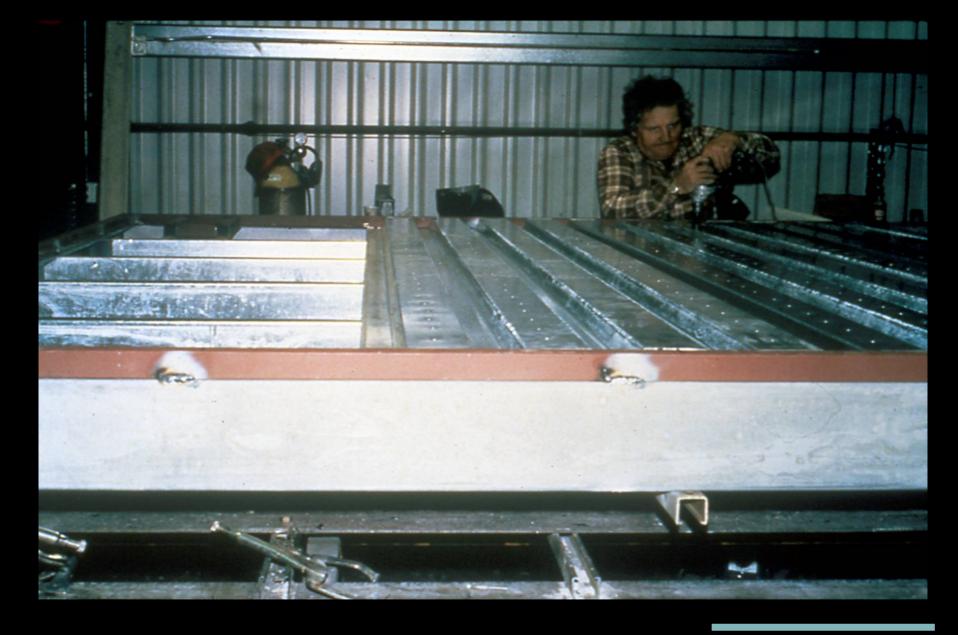




### Detailed Panel Fabrication

Nissan Headquarters Building Case Study

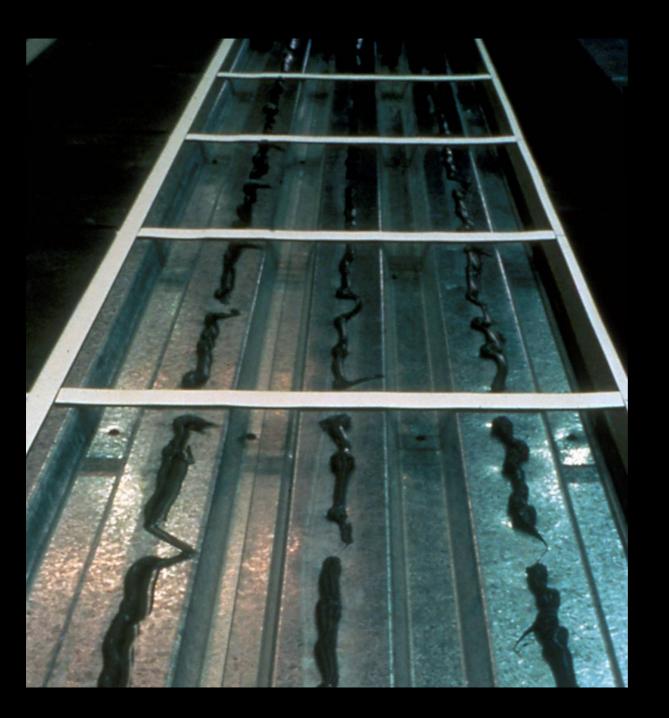




















#### Specifications & Testing

#### **Approved Laboratory Tests**

Construction Research Laboratory, Inc., Miami, Florida: September 20, 1982; December 10, 1985; February 12, 1987; October 19, 1987; November 30, 1987; November 16, 1989

Smith-Emery Company, Los Angeles, California: March 12, 1987; March 26, 1987

Construction Consulting Laboratory, Ontario, California: September 21, 1987

Building Research Association of New Zealand, Wellington, New Zealand: April 14, 1988

National Building Technology Centre, Sydney, New South Wales, Australia: December 23, 1987

#### **Tests Performed**

Air Infiltration by Static Pressure (ASTM E283)

Water Infiltration by Static Pressure (ASTM E331)

Water Infiltration by Dynamic Pressure (NAAMM TM-1-68T; AAMA TM-1-76)

Structural Performance (ASTM E330)

Thermal Cycling Test

Seismic Performance at 200% Design Displacement (1.42")

Fire Resistance Tests of Elements of Building Construction (AS 1530.4-1985)

#### **Code Approvals**

NER #313

Building Officials and Code Administrators International, Inc.

International Conference of Building Officials Southern Building Code Congress International, Inc.

#### Performance

The Cygnus Panel has passed all tests.

Results of the tests are available through Cygnus, Inc.

#### Cygnus 2010 Services

- Licensee Support
  - Marketing Material
  - Technical Data
  - Testing
  - Engineering & Design
  - Full Submittal Service
    - Shop Drawing
    - Manufacturing Data
    - No Samples
  - Bidding Assistance



#### **Highlights**

- The only panelized system to allow installation of the large size ceramic tile on building extension
- Economical way to erect maintenance-free stone & tile skin with shop controlled industrial process (more cost effective than curtain wall or clips)
- Energy efficient, thermally broken, environmentally conscious wall options
- Full support from licensor
  - Technical
  - Marketing
  - Pre-Construction, Construction Phase, Final Acceptance Assistance











