Project Description and Data

The architect worked with the client on the development of a program, and an interactive schematic design for the 592 bed modern dormitory-style student housing for first time freshmen. An area-wide analysis provided for an integrated plan helping to organize existing and future housing projects in this residential district.

Building Community
Creating a cohesive community of students is at the heart of the design for the project. Creating community at ascending levels provides for differing social comfort levels, allowing for the choice of various scales of interaction.

The progression of community and their defining spaces:
Cluster of 5 rooms & bath
Floor community
Building community
Project community
Neighborhood
Window seat
Floor Lounge
Arcade and Entry court
Main Lounge & Courtyard
Large green Quad

The plan accommodates and encourages social interaction, balancing social accessibility and safety. Common spaces are carefully located with visibility as a goal; a place to see and to be seen. The sense of community provides a feeling of ownership, thus allowing students to value and preserve their residential facility.

Floor Plan Organization
The floor plan was organized based on the ideal ratio of 40 to 60 students per Resident Advisor. A prototypical cluster of five student rooms sharing a bathroom serves as the building block of the floor configuration. A window seat defines each cluster and provides daylight to the hallway with vistas at the end of the halls, establishing an open airy feel. The exterior glazing fenestration differentiates the window seat, providing a visual reference helping residents identify their cluster location.

Architectural Design
Activity levels and privacy within spaces translate into the architectural articulation of solid and voids. The energy of the exterior circulation to the main entrances carve an arcade in the building mass. Public spaces are located along this higher traffic path. Ground floor bedrooms are strategically placed beyond the reach of exterior circulation. The occupancy within the Main Lounge produces activity energy resulting in the most transparent space in the project. The roof billows overhead, tethered by columns. The transparent floor to ceiling glazing provides a veiled envelope independent of structure. Study rooms and lounges defining a floor community are the next most active spaces that are contained by glass walls, more engaged within the building structure. Window seats in glazed notches define a cluster community. The private bedrooms and bathrooms are articulated by smaller punched openings in the solid mass of the building.

Project Data:

*Building Area (sf)*: 155,000 sf
*Cost*: $30 M
*$194 per sf*
*Completion Date*: September 2010
*Location of Project*: Davis, CA
*Type*: New Construction
*Use*: Student Housing for First-time Freshmen
Contextual Site Plan

- a. dining commons
- b. student housing
- c. project green
d. student housing
e. student housing
- f. neighborhood green
Typical cluster of 5 rooms sharing bathroom
Program Articulation

- WINDOW SEAT
  - Center of Cluster
  - Corridor Daylighting
  - Natural Ventilation Intake

- FLOOR LOUNGE
  - Vertical Circulation
  - Natural Vent Stack/Exhaust
  - Center of Floor Community

- ARCADE
  - Expressed Circulation Energy
  - Path to Entry

- GROUND FLOOR RESIDENTIAL
  - Protected From Circulation
  - Bike Parking Depressed

- ENTRY COURTYARD

- BUILDING ENTRY

- RAIN WATER GARDEN
  - Retention of Peak Flows
Natural Ventilation

a. Prevailing winds
b. Negative pressure created by wind and roof form
c. Exhaust fan assist
d. Motorized louvers allow for exhaust
e. Anti-stratification fan/duct - balances heat between floors
f. The natural "stack" of stratified air draws air from each floor
g. Air intake below seat benches along halls
Floor Lounges and Study Rooms
Main Lounge

gathering space for project residents
Innovations
Daylight Harvesting
Motion Detector- ramp up/ dim down
Natural Ventilation System-
Window Seat- hallway daylight, cluster gathering area
Storm Drainage- percolation testing, swales, pervious concrete
Solar Water Heating

Sustainable Design
30% Water Saving Efficiency
Storm Water Detention and Treatment
Recycled Materials
On-Site Renewable Energy
Best Title 24 Energy Efficiency by 32%
LEED Gold

Design Concepts
Architectural Expression of Program
Building of Community- ascending levels and scales
Sheltering roof; also providing natural ventilation
Arcade- the building opens to circulation
Activity = Transparency
Natural Light in Corridors and Corresponding Natural Ventilation