



Neighborhood construction will surround Albuquerque's newest high school in coming years. Now it looms in splendid isolation on the valley slopes above Paseo del Norte and Wyoming Boulevard.

ALBUQUERQUE'S NEWEST HIGH SCHOOL CREATES ITS OWN NEIGHBORHOOD

by Edna E. Heatherington

Predicting the future growth of Albuquerque, La Cueva, the city's newest high school, stands almost isolated on the upper slopes of the Rio Grande Valley, far to the north and east of urban development. Like all the Albuquerque high schools, La Cueva is large, built to accommodate 2,500 students, and it dominates the scene on its 45-acre site. Within, it is like a small, self-contained town with several neighborhoods.

THE DESIGN PROCESS

The architects, Long and Waters and the Burns/Peters Group, united in a joint venture to design the school, and before it was completed merged in the firm of BPLW Architects and Engineers, Inc. The project

director and designers, Bill J. Waters and Ron Peters, and the project architects, Carol Meincke and Tyler Mason, worked from the beginning with a large committee made up of Albuquerque Public Schools administrators, teachers, and students. Some of the committee members moved into the new school, including the principal, Allen Crumm. A strong sense of participation and success has remained from the committee's work.

Albuquerque Public Schools, an owner with many years of experience, began the design process with standard APS criteria. Ron Peters attributes the individuality of the school to the fact that the architects were not required to adopt a complete, given floor plan, but instead worked with

modules such as the typical classroom types, gymnasium, cafeteria, and so on, and arranged them to suit the site and the requirements of the school as a whole.

SITE AND GENERAL LAYOUT

A strong element affecting design was the spectacular view: the Sandia Mountains nearby and the great vistas of valley, mesas, and distant mountain ranges spread out in every direction. The school is placed diagonally on the site to line up windows with the view of Sandia Crest. This worked out well with functional site planning, giving a south-facing entrance and rational access for buses to the pickup and dropoff area, good traffic flow for students bet-

ween buses and building, and separate access to other parking lots.

The slope is severe enough to create challenges and opportunities, with a 38-foot drop across the site and 14 to 18 feet across the building footprint. The approach to the main entrance is a drive from below to a level midway in the site, where a spacious pedestrian ramp leads from the parking lot, under a bright red space frame, to the doors opening into the "Commons" or central mall. From this level, grand staircases lead up to the second-level classroom wings extending to the east, and the entrances to the gymnasium on the west open on the gym's mezzanine, with the playing floor below.

From the gym to the west, the playing fields become a part of the open and sweeping views toward and beyond the river. Student parking lots are behind the building, on the east, but below the windows' outlook upward to the Crest.

The architects paid particular attention to integrating the design of site structures with the palette of the building: retaining walls repeat the ribbing and are the same grey color as the concrete building panels, and the large-diameter red tubing provides visual accents as well as seating in the school's outdoor areas.

THE BUILDING'S ASPECT

"High-tech" and "freestyle" are the words the designers use to describe the general concept of the building. The primary palette of materials is ribbed precast concrete panels painted charcoal gray, smooth white metal panels, and bright, Chinese red metal elements separating and accenting them. Dark tinted fixed windows and spandrel glass add more polish to the facades. Within and without, the red-painted space frame is a dominating decorative element.

Inside, gleaming metallic ceilings accent the administrative areas and the entrance to the performing arts center at the front of the commons, and glazed "storefronts" create special entries to the media center (library) and another activity center. The design committee wanted real windows and more of a storefront aspect, but on this side of the commons, an area separation required by the building code made compromise necessary.

In the two-story commons area, with the red space frame and red-framed clerestory windows above, a series of ornamental red, yellow, and orange banners were added during construction when it became clear that the funds allotted to contingencies would not be exhausted by change orders. A combination of off-the-shelf and specially designed lighting fixtures light the commons, and red linear tube lights which shine up and are reflected by the white ceilings accent pathways and patterned ceiling designs in corridors and inner



The entrance, projecting strongly forward to the approach driveway, is clearly marked by the red painted space frame which extends from the structural element also exposed and painted red inside the school's central mall. The frame and a forest of dark gray painted concrete columns also continue on the east to create a courtyard. The playing fields are below to the left in the photo.

Stair and courtyard: Courts illuminated by clerestories create inner neighborhoods surrounded by wings of classrooms. Second story hallways have views; the corner at the top of the stair is a pleasant spot to pause, look out, and survey the courtyard below. Second story classrooms have windows into interior courts.





The Commons: The red-painted, large diameter tubing which decorates and protects the planter area is also placed at a level to make it comfortable as seating. Specially designed red light fixtures crown dark gray concrete columns. The snack bar "storefront" is visible in the middle distance, and the clerestory windows beyond the main staircase.

courtyards. The cafeteria is lit with the same red tube lighting, placed on diagonals.

FUNCTIONAL LAYOUT

The campus of a high school such as La Cueva includes a large number of specialized areas. Besides the administrative offices, the media center, the cafeteria, and the gymnasium, there are such specialized groups of classrooms as those for arts and for sciences, language labs, large lecture halls, and the performing arts center. At La Cueva, wings or hallways of classrooms are grouped according to these special subjects.

It has become a notorious characteristic of American schools that they are windowless, and the user group on the committee put a very high priority and degree of insistence on the need for natural light and access to views. The administrators and managers did not quibble over windows, but permitted them. In response to this, all classrooms on the exterior have windows, and groups are arranged around interior courtyards so that natural light is brought into as many classrooms and circulation areas as possible. The inner courtyards around stairs are designed to capture mountain views. One member of the committee who is now on the school faculty remarked that the designers did a superb

job of making windows which do not look like windows: the implied goal was that windows which do not look like windows do not attract the idea of breaking them.

The concept for the commons emerged from the designers quizzing the student members of the committee about their favorite places for gathering and recreation. Shopping malls emerged as the important model, and the variety of school functions - media center, snack bar, gymnasium, cafeteria, performing arts center, student activities office, administrative offices - which form a core activity center of the school, offered themselves conveniently as a series of "shops" which could open from the central enclosed mall.

Contributing to the social comfort and usefulness of this central gathering place, the architects included benches and also designed the large-diameter, red-painted ornamental railings so that guardrails around planters and other incidental uses of this element become seating areas. Between the entrances to the gymnasium and the cafeteria, a "conversation pit" makes a small theater or meeting area with a glass block wall as a backdrop. The dramatically placed and staged stairs offer other points for pausing, visiting, and surveying the general scene.

Without adding to building cost, by simply paying attention to the need for openness and for pausing and gathering points, the public spaces of this school have been designed not just as corridors and exit routes but as true public communal spaces. Such design creates luxury and pleasantness, and yet uses no expensive finish materials, accomplishing the goal with concrete, plain benches, steel framing and hollow metal, and the glamor of paint. The feeling of comfort is evident despite the limited and high-contrast palette of matte charcoal gray, smooth white, and bright shiny red accents.

Another luxurious element, derived directly from the model of the shopping mall, is the open administrative office area at the main entrance. Carpeted waiting areas open immediately off the main doorway, with reception desks, warm lighting, and a polished metallic ceiling. This space did not require a fire-resistive separation wall, but does need to be securely closed off when the school is being used for other activities such as athletic events or an event in the performing arts center. Security grilles disappear during daily use and roll out to secure the administrative area at other times.

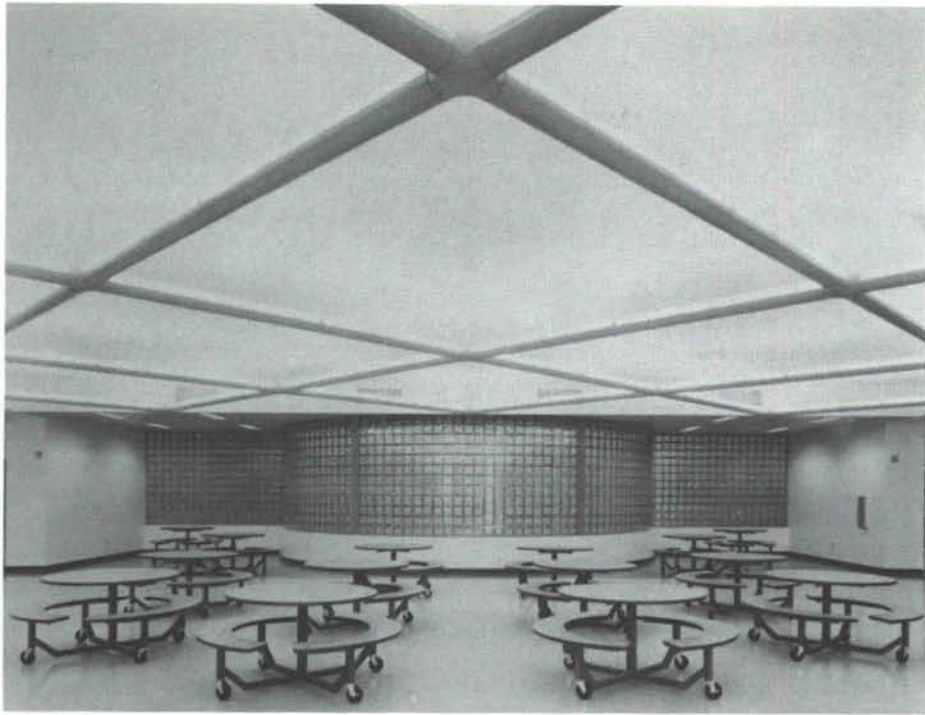
Another interesting detail of the design committee's contribution was the insistence of the students that the cafeteria tables should be round. In the final analysis, only some of the tables are round, but they are an important aspect of the cafeteria's ambience. The glass block wall between the cafeteria and the commons



From the commons, one enters the gymnasium's mezzanine level. On the opposite side, doors open to the playing fields on the lower side of the site, to the west.



Administrative areas open directly to the commons just inside the main entrance, during school hours. Carpeting and special seating, metal ceiling, and the specially designed reception counters give this area its own definition. Security grilles close the area off when other activities are going on after hours.



The glass block wall separates the cafeteria from the commons. The curve into the cafeteria accommodates a "conversation pit" seating and staging area in the commons. Red tube lighting diagonal to the plan of the room lights by reflection from the white ceiling. Round tables were one of the most important elements requested by the students on the design committee.

adds to the luxurious finish and pleasant light effects in both spaces.

The primary element of the media center is the main library, where the tone is set by the oak library furniture and the ceiling of diagonally placed deep coffers with square panel lights. A broad array of windows at the back gives a single librarian visual control of the entire room from the large production room within. Storage and other specialized media rooms are located behind these main spaces, with a back entrance to a lecture hall and another wing.

The performing arts center is located at the main entrance, across from the administrative offices, with its entrance marked by a continuation of the polished metallic ceiling.

THE SCHOOL'S NEIGHBORHOODS

The effect of a self-contained town of several neighborhoods is created within the complex of central stair wells, enclosed light courts, and squares of corridors. From the central commons, one progresses down a typical classroom hallway and emerges into another open plaza with a monumental stair, clerestory windows with a view of the Crest, and a lounging or

pausing area at the top of the stairs as well as the large open space on the lower level. The classroom wings, segregated according to special study areas, create a neighborhood quality in their vicinity. The plaza adjacent to the art wing, for example, is equipped with wall systems for the display of two-dimensional art work. Display cases create facades on interior streetscapes.

The natural light in the inner courts, the mountain views, and their two-story height, make them like outdoor plazas. The transition from a hallway into the courtyard creates a sensation of emerging from one place into another, almost like going from indoors to outdoors.

Outside, on the playing fields, in the walkways and patios, on the parking lots and roads, the big landscape around the school is a part of the experience of being there. At the end of the school day, some students hike away over the meadows, while others gather and get on the buses, and many more drive out in their trucks and cars. It will be interesting to see how the city's neighborhoods fill in around the large campus in coming years, and what its effect will be on its eventually urban or suburban surroundings.

E.E.H.

THE DESIGN AND CONSTRUCTION TEAM LA CUEVA HIGH SCHOOL

OWNER: Board of Education, Albuquerque Public Schools, Lilian Barna, Superintendent.

ARCHITECT, Phase I: Long and Waters, PA, in joint venture with the Burns/Peters Group, PA

CONSULTING ENGINEERS, Phase I:

Structural:
Bacchus Consulting Engineering

Mechanical:
Allison Engineering

Electrical:
Dean Powell/Coupland/Powell/Moran

ARCHITECT AND ENGINEERS, Phase II: BPLW Architects and Engineers, Inc.

CONTRACTORS: Phase I, Page and Wirtz; Phase II, K. L. House.

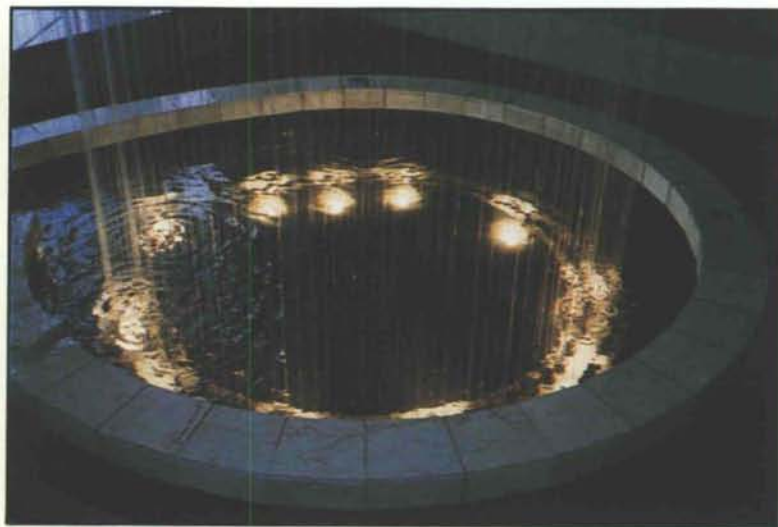
The building's structure is steel frame, with space frames, and specially designed trusses for the gymnasium. Heating, cooling and lighting are controlled by a computerized energy management system.

Final construction cost for both Phase I and Phase II was about \$70 per square foot.

PHOTOGRAPHS: Kirk Gittings/Syntax

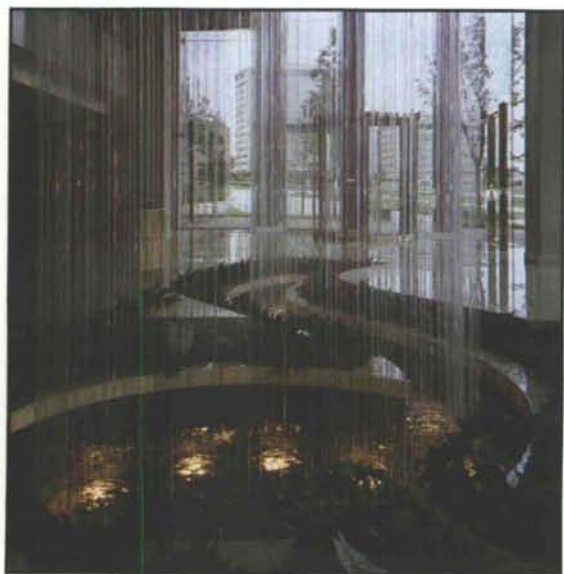
Edna E. Heatherington, CSI, CCS, has her own consulting firm, Heatherington and Schaller Information Management. She offers writing, specifying, and technical information management services to architects, engineers, and other construction industry clients.

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