Project Intentions
Early in 2007, CCSD announced a design competition for the new Elementary School Prototype and a challenge for the schools to use half the energy of a typical school of the same size, and cost 1/3 less than per square foot cost of existing schools.

A detailed program verification included incorporating A4LE (Association for Learning Environments) formerly, CEFPI (Council of Educational Facility Planners International) recommendations, addressing changes in local, state and national requirements, and confirming space requirements in the current program for anticipated curriculum.

Programming Requirements
Dr. Beverly Mathis Elementary School is the second re-site of Clark County School Districts’ Ruby Duncan Elementary School. The building is situated on a 10-acre site to take advantage of optimum solar orientation and interior daylighting. Vehicular and pedestrian traffic is separated and maintained in a clockwise flow to allow for safe drop-off and pick-up. Bus traffic is detached from the vehicular traffic to ensure a safe loading and un-loading zone. Age-based exterior playgrounds are placed strategically around the building to keep age groups together. Clean site lines aid in monitoring during and after school and help to ensure a safe campus.

As a prototype school, the building was programmed to satisfy a majority of the School Districts space needs. However, there are many various constraints and influences that each site brings to the table including odd shaped parcels, site topography, offsite utilities, site access, and neighborhood needs. Which is why a flexible school design was of most importance. Having classroom blocks that can be easily extended or subtracted made the school ‘fit’ the various neighborhood and school needs. Core or shared spaces remain in the central part of the plan allowing for easy access and pedestrian flow. In addition, the 10 acre sites are best suited to fulfill the exterior learning space, physical education, and playground space needs.

Cost Data
Construction Cost: $28.377M

Distinguishing Aspects
In addition to programming and functional tasks, CCSD and the stakeholders took time to look for design-driven solutions to issues such as multi-use spaces that could help reduce overall building area and creative adjacency arrangements that might enhance building flexibility. Added value features such as multiple exterior learning areas in the central courtyard, an outdoor amphitheater connected to the band room and flexible classroom arrangements - some with direct exterior access - provide a variety of options for teachers.
Building Performance

In addition to design features to enhance student and staff performance, such as daylighting, increased thermal control, and superior indoor air quality, we designed vitality and dynamism into 'standardized' spaces.

We also challenged ourselves and our engineers to exceed our past performance on energy conservation. Our design combines common sense passive solar design, natural daylighting, innovative on-site renewable energy generation and ground source geo-thermal heating and cooling systems.
Specified Material

While dozens of “copies” of this school might be built, we have designed identity schemes that will make each school unique, giving students a sense of ownership and individuality. Vibrant colors on the interior and exterior give a sense of individuality, energy and fun to each school.

Inspiration for each of the elementary school’s pallete is drawn from the Southern Nevada wildlife and outdoor environments.

Dr. Beverly Mathis Elementary School is based off of the ‘insects’ pallete.
[3] Learning Blocks

The layout is conceptualized as [3] linear blocks that contain different building functions. The linear programming style optimizes daylighting through ideal solar orientation. The courtyard acts as a buffer to separate the different building functions.
User Scale

The scale of each volume is proportionate to its function and reflects its user. The support and kindergarten blocks are [1] story volumes to welcome kindergarteners and visitors. The classroom block is a [2] story volume to reflect the older user group.

Entry Axis

A central axis provides access to the courtyard and classrooms. This axis divides the support block into two parts and aids in noise separation. One part of the support block contains noisy spaces - the multi purpose and music room, while the other part contains the quiet spaces - administrative offices.
Heart of Campus

The heat of the campus lies at the end of the entry axis. It contains the library, covered outdoor teaching spaces, and the main vertical circulation core.

The “Hug”

The classroom volume “hugs” the courtyard. This reduces the opening sizes at either end of the courtyard, thereby creating a secure campus.
Color

Vibrant color is used on both the exterior and interior to stimulate the minds of the students. The color palette is derived from the desert surroundings. Specifically, it’s inspired by an insect.
Site

The prototype form can be adapted to a variety of different site conditions. When adapting the prototype to a new site, the first consideration is maintaining optimal solar performance by orienting the long axis of the building east-west. For convenience, parking is located adjacent to the main entrance. The playgrounds and sports fields are located around the periphery of the building to act as a noise buffer.
Dr. Beverly Mathis Elementary School

Separating different types of circulation allows for a safer environment and allows for easier site access. In each re-site, bus drop off areas, parent drop off areas, and parking access are separated. The Dr. Beverly Mathis site posed a unique challenge since road frontage was limited. A private road “loop” was added around the site to provide a safe parent drop off location and minimize congestion along Arville St.

Ruby Duncan Elementary School

Three points of access are provided to the site and act as parent drop off areas. This reduces the traffic impact on W. Rome Blvd., the site’s only public street frontage. A dedicated bus lot creates a separate bus loading zone.

Don & Dee Snyder Elementary School

A parent drop off road acts as a link to complete a full “loop” around the site. This allows for efficient circulation, and avoids congestion on a particular street. Bus circulation is separated, and no parent drop off occurs in the parking lot.
Town Square

For centuries, the town square has been the center of villages. It is the central community space and acts as a place where people can gather to share ideas, enjoy the arts, and relax. The town square is the heart of Dr. Beverly Mathis Elementary School. The library, music room, and shared teaching classroom all “spill out” and become part of the town square.