

## **Robert L. Duffy High School**

*By Jessica Driver, Editor*

In terms of architecture and design, academic buildings across the valley tend to look the same. Two stories with brick, two stories with concrete, four walls and a window, high schools across the country mirror each other in size and concept. However, there is a new charter school under construction near downtown Phoenix that is breaking this mold. Robert L. Duffy high school, located at 2550 E. Jefferson Street is part of the Career Success School District, which is in its 10<sup>th</sup> year and has a total of six high schools and one K-12 elementary. Robert L. Duffy is purported to be a multi-dome charter school connected by an enclosed corridor system, setting it apart from almost every other school in Arizona.

Robert L. Duffy is just one of many community structures taking advantage of a revitalized architectural design known as dome technology. Due to the structural insulation and non-flammable construction materials, domes have long been considered one of the most efficient and structurally sound designs. A dome provides low construction costs and high-energy efficiency, at times ½ the cost of a conventional building of the same size, making it an ideal option for schools, especially in Arizona where effective cooling is at a premium. Dome Technology, an Idaho based company who specializes in this modern, concrete thin-shell design has been contracted to build these monolithic domes. Founded in 1976 by brothers Barry, David and Randy South, the initial dome shape is created by spraying polyurethane foam over an air form and then adding a continuous spray of concrete to finish the structure. Due to their strength and stability, these domes are able to withstand extreme wind and even tornadoes with no structural damage. As a result, Dome Technology has been contracted to build the concrete thin-shell for the aircraft rescue and firefighting facility or AARF at New Mexico's Space Port America, the world's first purpose-built commercial spaceport.

The Robert L. Duffy charter high school will house four structures painted to resemble four planets, Earth, Jupiter, Neptune and Saturn, giving the school a futuristic look. The Saturn dome will also house an indoor play area with free day-care for the school's young mothers. According to Dome Technology's website, these domes offer a nice alternative to traditional, square buildings as they allow for freedom in size and layout, a perfect fit for a non-traditional educational setting. In addition to the domes, the school's enclosed corridor system will connect 14 classrooms, an auditorium, a kitchen and eating area, a gymnasium, a weight room and administrative offices with new paved parking and retention areas. Conveniently located just south of the light rail station at 24<sup>th</sup> Street and Washington, the urban mass transportation of the light rail makes it possible for students from all over the valley to enroll at Robert L. Duffy.

While the Career Success school district remains forward thinking in architectural design, it retains the same policy in regards to academics and community awareness. The mission of every Career Success School is to educate students not only in reading, writing and mathematics but also in life skills and vocational preparation. In this economy it is important and practical that each

student prepare an individual career plan, making the transition from school to work a smooth one. In this way, every student will have the opportunity to participate in work based learning upon completing a resume, job application and career choice selection. As one student highlighted, the charter school system is beneficial as it gives more individualized attention to each child and dissuades the desire to act out and ditch class.

Also working with the Robert L. Duffy school is the construction firm Low Mountain Construction Inc., founded in 1992 and based in Arizona and Crandall Design Group, a Mesa based architectural firm. Engaged mostly in public works like schools, aquatic centers and mountain reserves, Low Mountain Construction estimates that the high school will be finished as early as August 2010, in time for the upcoming academic semester.