



The columns at the high elevation used GFRC for light weight.



ADVANCED ARCHITECTURAL S.T.O.N.E

Project	University of Southern California
Location	Los Angeles, California
Architect	AC Martin Partners Architects
Contractor	Tutor-Saliba
Mason	R&R Masonry
Materials	Cast Stone, Architectural Precast, GFRC



VISION

TRonald Tutor Campus Center was designed as the heart of the campus of University of Southern California. It played an instrumental role in creating a social hub for the school. The vision was to use the new center as a catalyst for new thinking on a college campus where socializing used to happen only at the football coliseum.

The Center was designed to blend seamlessly with rest of the 50-60 year old USC campus. The project was comprised of several buildings, connected with an enclosed bridge, as well as several gardens and terraces for use by students, faculty, and administration.



Precast was used heavily in the design of the structure – from the base of the buildings, to stairways, terraces and garden ornamentation.



A cantilevered fountain at the base of the primary circular stairway contains the most interesting detailing in precast. The precast was the accent for other masonry products, creating the feeling of an amphitheater.



Stair trades were made using architectural precast. Each trade had a unique shape, size, and curve. The AAS team used different molds for each of these trades. The balustrades in the building have a unique design. They were made using cast stone.



Color variations for the project were very specific. Columns in this entry are green colored marble, the capitals above columns are marble, and the arches with their detailed design work are made using cast stone.



The structure to the left is a 60 year old building. The color matching ability of AAS technology and selection, as well as the combination of different materials with a uniform look, allowed new buildings to blend seamlessly with the surroundings.

PROCESS

The Advanced Architectural Stone (AAS) team worked very closely with Mr. Ronald Tutor and his team, as well as the architect for the project, AC Martin Partners Architects. With involvement right from the design phase, the AAS team was able to help designers select materials and aid in overall construction planning.

The project used marble, granite, Glass Fiber Reinforced Concrete (GFRC), architectural precast, and cast stone. The unique color requirements were achieved by using speckled black aggregate; the batch processing technology and mold making capability of AAS were instrumental in creating the products with so specific aesthetic requirements.

AAS used both dry cast stone and wet cast precast to maximize the functional advantages of the products. GFRC was also used in areas where lighter weight products were a requirement.

This project was completed in three separate production facilities. Color and texture was approved by the architect a year before the project began. Large control samples, on site visits to the

campus during construction, and daily production logs were all used to maintain consistency. This project was as much about quality control of color and texture as it was about any specific product.

The difficulty of this project related to the coordination between production plants and sequencing between wet, dry, and GFRC. The staging area at the job site was limited; therefore, different masonry materials needed additional identification and continual discussion with onsite personnel for proper installation procedures.

The use of three associated precast products were the unifying element of the project. These products also made this project unique and forward-looking. Coordination of differently produced precast products with GFRC was unusual and required a new level of communication with the production staff. The same visual appearance of all products was a true accomplishment.

This project required the AAS team to obtain a certificate of approval as a licensed fabricator from the City of Los Angeles.



RESULT

The project won the 2011 APA (Architectural Precast Association) Award for Excellence.

“Unless someone was told which pieces were made via the dry cast method or wet cast method, or by GFRC, I think it would be almost impossible for anyone to distinguish between the products,” says Tim Michaels, the AAS’ chief coordinator for the project. “The visual look was seamless, even though different production facilities and methods were used.”



Architectural trim around the entryway and the arch were custom designed using cast stone. The arches have unique green marble pieces. The arched shape had to fit in with the brick work that is all around them. The AAS team worked closely with the contractor and mason teams for a smooth installation that avoided any damage to complex, artistic cast stone pieces.