

RIM ROCK



by Andy Dufford

Best job site in the world

For the last two and half years my design firm, Chevo Studios, has been involved with improvements at Mather Point on the South Rim of Grand Canyon National Park. This has been a one-of-a-kind experience involving serendipity, organization, risk taking, careful planning and budgeting, plus a mountain of hard work by a great team of creative people, all resulting in a marvelous monumental stone environment for park visitors.

Mather Point is the first significant overlook for those visitors who enter the park at the south entrance.

The canyon receives an increasing number of visitors, now over 4 million a year, which the parking lot and access to the Mather Overlook were woefully under equipped to handle. Park staff and outside consultants had been working on a transportation plan and redesign for over 8 years.

The resulting plan proposed moving the roadway to protect the resource and provide visitors with a safe, auto-free experience along the rim. The removal of the roadway and rim side parking lot provided the opportunity to enhance canyon-viewing experiences. Highlights of the renovation

include a landmark plaza, an amphitheater on the rim, a vastly improved Mather Point overlook and a Visitor Center Plaza with integrated interpretive elements. Chevo Studios was exceptionally fortunate to have the opportunity with park staff, DHM Design, Federal Highway Administration and Fann Contracting on design and construction of all of these improvements.

The power of postage

In 2008, our studio created a series of stone sculptures of Missouri River endangered species adjacent to the midwest

headquarters of the National Park Service. The combination of interactive art and interpretation was a perfect match for our talents and I was eager to find more opportunities to contribute our skills to the mission of the parks. Unaware of the design effort that was taking place at Grand Canyon, I sent a booklet of our work to Vicky Stinson, the project manager. I knew her as a casual acquaintance, and the mailing was intended as an introduction and a conversation point to explore how Chevo Studios might get involved in other park projects. Normally, those cold mailings are akin to sending a message in a bottle. I often mail booklets out and follow up with phone calls and most times those efforts yield a polite "no." I was surprised when, only a week after my mailing, Vicky called me and said, "We're working on a huge project here at the Canyon and some of the things we want to do are in your book." A few days later I was at the offices of DHM Design introducing our work and skill set to the project landscape architects, and two weeks later I was at the canyon for an extended design charette.

Women of Stone

Inspired stonework has a long history at the park. Artist/architect Mary Coulter worked for Fred Harvey to create a series of visionary buildings that embody the spirit of the landscape. In particular, her designs for the Desert Watchtower and the Lookout Studio combine the rugged presence of desert stone with the patterns and construction principles of southwest tribal art and architecture.

Project manager Vicky Stinson and the Mather Point project team share a respect for that long-standing connection of stonework with the site and they recognized that renovation presented an opportunity to use stone in a way that would both blend into, and resonate with, the soul of the landscape.

Sites and Spaces

The scope of the project grew as our collaboration progressed. At the outset I was engaged to assist in developing buildable schematic designs for 1) a large interpretive plaza along the main access from the

parking areas, 2) an amphitheater on the rim and 3) an accessible trail on the Mather Point Overlook. As the design process developed, the park service expanded our role to include construction duties on all of the above as well as design/build services for a landscaping scheme with stone features and seating to redefine 4) the main visitor center plaza. Our work at the visitor center also included design and fabrication of interpretive and sculptural elements integrated into the landscape.

The first area of our involvement was midway between the visitor center and the Mather Point overlook. Here the design team envisioned a "Landmark Plaza" that would serve to orient visitors and create a place for groups to meet and rangers to give talks. The plaza would also introduce visitors to the eight associated Native American tribes that have connections with the canyon.

A big pile of rocks

The design team had also identified a material resource for creating the plaza: a sizable pile of Kaibab limestone slabs that were stripped off as overburden 30 years ago to open up a landfill in the park. Our initial task was to help develop a solid design and a construction plan for transforming that stone resource into a plaza space. An early trip to the pile revealed a stone workers dream: many slabs were over 10' in length and showed beautiful patterns of weathering. The character of those rocks begged for a place where they could be featured and appreciated.

Two challenging aspects of doing artistic stonework in a traditional construction setting are 1) enabling creativity and 2) meeting real-time construction schedules and budgets. In the case of the Landmark Plaza project, we met these disparate challenges by pairing a thorough inventory of the rocks available and an imaginative model making process. This allowed us to dream big and to anchor that dream in reality.

We started by unpacking the rock pile, making accurate measurements of each stone. These would be the core kit for articulating the space. Back in the studio, we made scale models of each stone and began to set those miniature stones on a scaled plan. The early models lacked design cohesion, but then, through my research I happened upon the geological concept of *imbrication*, the dynamic process by which the stones along a watercourse are arrayed as a result of flooding. I'd witnessed that phenomenon again and again in my years of canyon explorations. Simply put, stones are flipped downstream and stacked against their most adjacent downstream neighbor as the floodwaters push through the canyon. The result is elegant, organic and

