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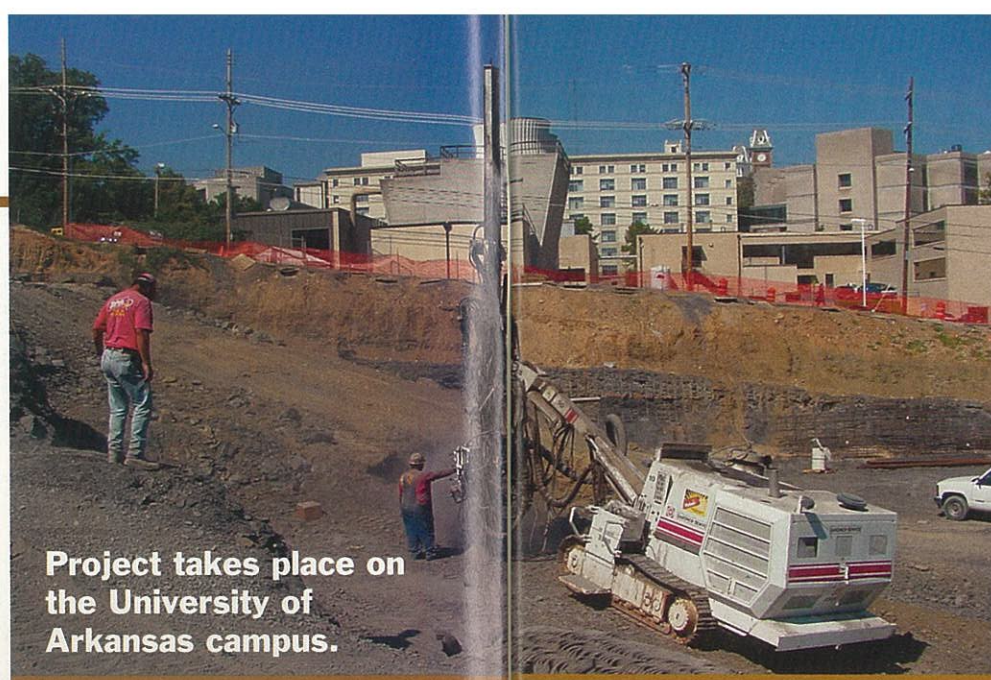


Precision Controlled Blasting

A/E Firm
Profitability Declines
RENTAL FOCUS:
Light On-Site Equipment

Precision Controlled Blasting

Project takes place on the University of Arkansas campus.



A few days after finishing the City Library Project for the city of Fayetteville, Dykon Blasting Corp. was contacted by Baldwin & Shell Construction Co., the construction managers for the University of Arkansas at Fayetteville, with a similar project. A multi-story parking facility had to be built in the heart of the University of Arkansas Campus, just across the street from the building that housed the Sam Walton College of Business.

Directly north of the new parking garage site was the University Physics Building. This facility contained laser research equipment that required precise alignment of instrumentation on the molecular level. East of the proposed site was a row of residential housing for students and on the south edge of the site was a three-story apartment complex only 45 feet from where the deepest cut on the entire project would be blasted.

precision controlled blasting could be performed, the university officials had to be convinced it could be done safely, economically and on schedule.

The Dykon Blasting Technical Team met with university officials to discuss the possibility and feasibility of lifting the university's ban on rock blasting for this project. Safety of the students and surrounding public were of the utmost concern for the university officials. Secondary were concerns of damaging university structures such as the Physics Department, the Mechanical Department and the Business College. The blasting could not compromise public safety, property or ongoing academic activities.

The building of this parking deck required the excavation of nearly 40,000 cubic yards of rock underneath an equal amount of dirt to level the building pad. Most of this material had to be hauled off-site. The enormous amount of rock excavation coupled with the timeframe requirements for the project made it uneconomical for mechanical breakage of rock.

Adding yet another level of difficulty to this already formidable project was the fact that since the inception of the University of Arkansas in the late 1800s, the use of drilling and blasting had never been permitted for rock removal on any project whatsoever. Before any

The cost of mechanical breaking of this rock in the strict timeframe drove the projected cost to amounts that threatened the feasibility of the parking deck altogether.

The first hurdle was to convince the University of Arkansas that the rock could be precisely drilled and blasted in a safe, timely and economical fashion. The second hurdle was to convince them that Dykon Blasting was the right choice to perform this landmark project. The third hurdle was yet to come. How was Dykon Blasting Corp. going to accomplish such a task? It became apparent after several meetings with the university officials and the general contractor, Baldwin & Shell, that precision controlled blasting of rock would be allowed on this project and that Dykon Blasting would be performing it.

The blasting had to be scheduled for optimum safety to the public, minimal

impact to the surrounding residents and university activities, not the least of which were ongoing laser research experiments being conducted in the physics lab. With this being the first precision controlled blasting ever allowed on university projects lower-than-standard ground vibration limits were imposed that reflected the university's concerns for safety to adjacent properties. All eyes were focused on the blasting phase of this project. Five seismographs were used to monitor ground vibrations in several directions from each blast. Extensive preblasting surveys were used to document the existing conditions to all structures within a predetermined radius of the project. Shallow cuts and small shots were used to minimize the ground vibrations. All the

site was secure and clear of all workers and pedestrians before initiating the final countdown to a blasting event.

The cooperation and tolerance of the general public and the university was remarkable. With this extraordinary support from the surrounding community, the university and all the on-site contractors, Dykon Blasting was able to complete the drilling and blasting successfully. The university, faculty, staff, and students were cooperative and supportive to an unparalleled level. A special thanks goes out to Northwest Excavating, Baldwin & Shell Construction Co., and Rick Hamilton, construction coordinator for the University of Arkansas, for their cooperation and support.

Rick Hamilton had this to say about the precision controlled drilling and blasting of this project after its completion:

"It has always been the policy of the U of A to not allow any blasting on our construction projects. Through a very sensitive program of education and communication with our faculty and staff, and a very conservative strategy in blasting, we were allowed to proceed with the blasting in construction. We were able to accomplish these portions of the construction with an absolute minimum of disturbances to the closely surrounding housing, colleges and classes. As you know,



shots were covered with blankets of heavy blasting mats to eliminate the possibility of flying debris posing a safety hazard to pedestrians and property. Dual train horns were utilized to warn of an impending blasting event. Personnel were stationed at all

access points and borders along the streets to watch for pedestrians. Radio contact on a private channel was maintained constantly with the blaster in charge so that he knew when the

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"Thanks to this good experience, blasting, with qualified firms such as yours, is now an option to large-scale University of Arkansas construction." ■

