

Atlas Copco HB 10000:

KEEPING PEACE WITH THE NEIGHBOURS

New York Concrete was hired by Skanska USA for 45,000 cubic yards (~34,400 cubic meters) of bulk rock excavation on the future site of City University's Advanced Science Research Center. When complete, the center will occupy 400,000 sq. ft. (37,160 sq. m.) between two buildings that share a common basement.



From left to right:

Paul Maginn (Operating Engineer), John Triplett (Operating Engineer), John Russo (New York Concrete's Head of Operations), Joe Chiofallo (Operating Engineer) and Bobby Keane (New York Concrete's Site Superintendent).

Frank Forte, Skanska's project superintendent, has been on the site from the beginning. Drilling and blasting was Forte's recommended method for excavation from the start of the project. He was on site when the first test hole was drilled. "Originally, every expert agreed blasting would be the only way to break through the rock. We tried a smaller breaker in the testing phase, and it barely rattled the Manhattan schist and granite," said Forte. "But then, fortunately, we found something

extra-powerful to handle the project."

To investigate the breaker option, operator **John Triplett** and **John Russo**, New York Concrete's head of operations, traveled to Texas to observe a demonstration of the newly introduced HB 10000 model breaker from Atlas Copco. After Russo saw it in operation he knew it could be used for the Skanska job. He then worked with his local dealer, Hoffman Equipment Co.

Watch the HB 10000 on www.youtube.com/hb10000procare

NO ROOM FOR ERROR

Looking at this job, it first appeared perfect for blasting, with open space and a controlled area with no buildings within a hundred yards. But just on the edge of that perimeter is a neighboring science building with a nuclear imaging system doing electromagnetic testing with equipment that didn't have specifications as to what vibration it could handle. So, the tolerance spec for New York Concrete was no vibration.

To accommodate its neighbor, the excavated area had a 300 ft. vibration-free zone around it. Seismic equipment was set up to monitor the construction progress. *"Skanska is working very closely with the local community and client to make sure that everyone is happy with the way the project has proceeded,"* said Forte.

IMPACT ENERGY

The Atlas Copco HB 10000 breaker hits with 12,000 ft.lbs. of energy per strike – 400 times a minute. Forte said, *"It hits like a freight train. It's borderline unbelievable what that breaker can do."*

Currently the crew is two months into the four-month excavation phase of the project. *"We are right on schedule with the excavation,"* said Keane. *"The excavation is moving along smoothly."*

When John Russo estimated the job, he thought it might take three breakers to do it, but for much of the project two were all that was needed to keep up with the mucking excavator and articulated haul truck. *"The bulk of the work is being done with the HB 10000 on a Komatsu PC800 excavator,"* said Russo.

"NOTHING LESS THAN AMAZING"

The high productivity is a result of the HB 10000 and the skills of the operator. Excavator operator John Triplett has 26 years' experience of operating equipment in New York City. He is also a certified crane operator. He testified that the HB 10000 is nothing less than amazing. *"I have run every hammer there is, and this thing is really something – it's amazing. Plus, it allows me to trim within an inch."*

Triplett said, *"I am impressed with the performance of the breaker and shocked over the working tool life."* New York Concrete is using the Silver Line working tools provided by



Atlas Copco. They have two working tools; the second is on now, while the first was removed for sharpening.

12,000

ft. lbs. of energy per strike –
400 times a minute!

"SIX WEEKS ON THE FIRST POINT"

Triplett said of the rock's hardness, *"The rock is 40 to 60 ton and up to 80 in*

some spots. I was in 80 all last week and that's nasty stuff. I thought with a breaker that hits as hard as the HB 10000 we could go through one [working tool] a day, but I got six weeks on the first point and at least 15,000 yards."

When looking at production levels, Triplett said the HB 10000 will outperform the two other breakers on the job. *"This breaker will do double what our biggest breaker will do,"* said Triplett. On Triplett's best days, he said he has done 1,500 and 2,000 yards.

