Moving Mountains of Earth for New Wal-Mart Distribution Center
Controlled Blasting Critical to Safety

**What:** Blasting and Earthmoving for a new Wal-Mart Distribution Center
**Where:** 1 mile west of Exit 80, Maine Turnpike
**When:** Daily
**Who:** Maine Drilling & Blasting, H.E Sargent, Inc.
**On-site contact:** Please arrange on-site access with Wayne Flagg, MD&B (207) 212-9682; Mike Light, H.E. Sargent, Inc.: 207-356-6020

LEWISTON, Maine – The drilling, blasting, digging and dozing continues from dawn to dusk, six days a week in a concerted, coordinated and choreographed ballet of heavy equipment. (For the first five weeks, crews worked two shifts, around the clock.)

That’s what it takes to move 1.8 million cubic yards of earth in a matter of months. It’s enough sand, dirt and rock to fill more than 138,000 conventional dump trucks.

The earth-moving operation, required primarily to level the site, is the first stage in the construction of a new Wal-Mart grocery distribution center that will serve 30 stores in the New England area, according to Mia Masten, community affairs for Wal-Mart.

When the project is complete, two buildings will total 900,000 square feet and cover twenty acres. The first phase, including the site work, roads and parking for the entire project, will culminate in the opening of the dry-goods distribution building a year from now. The second phase, a building to store refrigerated and frozen grocery items, is set for completion a year later. Five retention ponds are being constructed to capture run-off from the buildings and parking lots.

H.E. Sargent, Inc. is the general contractor for the $60 million project. Maine Drilling and Blasting is the sub-contractor.

As part of this massive “cut and fill” operation, Maine Drilling crews have been detonating two large blasts a day, reducing nearly 100,000 cubic yards of granite ledge to rubble, according to blast superintendent Tim Frazee. An average blast requires 2,500 pounds of explosives. Blasting is necessary to prepare the building site, excavate the retention ponds and trench for utilities.

“The goal is to control the energy we unleash,” said Frazee. “That means we have to do our homework to make sure that the vibration is kept to a minimum and the shattered rock is contained.”
“Safety is the primary consideration. And coordination is the key. We have all this equipment working close to us and sometimes a hundred people on the job site. So every time we blast we have to coordinate with the contractor and with security guards and communicate with hand-held radios to ensure that the area is secure.

One technique to limit vibration employs timing devices, so what appears to the naked eye as a single blast is actually a series of separate smaller detonations milliseconds apart. (The staggered nature of the “blast” can be dramatically captured with a motor-driven camera and displayed with slow-motion video.) In addition, crews are relying on more than 24 10,000-pound rubber mats, each 12-ft. by 24-ft. to cover and contain the resulting “fly-rock.”

Seismographs placed by Maine Drilling and Blasting crews next to existing structures record and document the impact of each blast, assuring blast neighbors that the resulting ground vibration is within acceptable and safe levels.

The equipment used on site has included 14 35-ton off-road rear dump trucks, six excavators, eight bull dozers, four loaders, six compaction rollers, a grader, back hoes and a 5,000-gallon water wagon used to suppress dust.

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Sources:
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