



For Panama Canal, a new era of trade is coming



A ship traveling from New York to Los Angeles and the Far East passes through the canal

By **David J. Lynch, USA TODAY** – 8/6/09

PANAMA CITY — Under leaden skies, mammoth yellow vehicles prowl an enormous gash in the earth. Excavators, bulldozers and loaders relentlessly carve the rippled black and brown ground, reshaping nature's handiwork.

There's no sense of drama or romance or history. Nothing to suggest this sprawling site is anything special.

But these workers are trying to improve upon one of the great engineering feats of history: the [Panama Canal](#). On the other side of a nearby rise, the refrigerated cargo ship [Cape Town Star](#), hauling fruit from [Ecuador](#) to [Russia](#), is easing through the canal's almost century-old Miraflores Locks.

Now, under a \$5.25 billion project, the canal authority is adding a third lane to the ocean-spanning waterway that will double its capacity and allow access to the world's largest cargo-carrying vessels.

"We are eliminating the restrictions the canal has imposed on the maritime industry. ... The capability you have here, you have nowhere else in the world," says Alberto Aleman, the canal authority administrator.

How much of an impact the bigger, better canal will have on global trade patterns remains to be seen. Roughly 65% of the goods sailing through the canal go to or from U.S. shores, and American ports and rail yards that compete with the canal will fight to retain as much business as they can. Cargo from Asia, for example, can reach U.S. markets either via the canal or by docking at a West Coast port and riding rail lines to inland destinations.

Shippers must balance myriad factors — fuel costs, type of cargo, time and distance — in calculating the best route for individual shipments. "It's possible to reach Chicago a lot of different ways," says Paul Bingham, managing director of global commerce and transportation for IHS Global Insight.

But Peter Keller, president at NYK Line, says the expanded canal will send a seismic shock through the business of transporting goods around the globe. Among the fallout: construction of larger vessels for bulk cargo, such as iron ore, and a tougher climate for American dockworkers seeking pay raises.

"Long term, the expansion of the Panama Canal will be a major change," he says.

The canal expansion — or *ampliación*, in Spanish — is among the largest construction projects in a recession-ravaged world, and it's moving forward mostly as planned. In July, canal officials awarded the project's largest single contract, for the design and construction of the new locks that will raise and lower ships in the canal. A consortium led by Spanish construction giant Sacyr Vallehermoso beat out two rivals for the job, including San Francisco-based [Bechtel](#).

The ambitious expansion, however, is occurring against a backdrop of unraveling globalization. With debt-laden U.S. consumers in retreat, fewer cars, appliances, toys and clothes are crossing the world's oceans. This year, overall trade is expected to fall 10%, according to the [World Trade Organization](#).

Augmenting the canal as world trade shrivels for the first time since [World War II](#) might seem like adding a spare bedroom just as the kids head off to college. Canal officials, however, say the global downturn has struck them only a glancing blow.

The canal handled 310 million tons of cargo in 2007, an amount officials hadn't expected to see until 2012 or 2013. Even during the worst recession in 80 years, shipments this year are expected to total 295 million to 299 million tons — less than 5% below the peak two years ago. Once an economic recovery kicks in, that total is certain to rise.

"We are quite confident that growth is going to return," says Francisco Miguez, the canal authority's chief financial officer.

'Unprecedented' engineering

When it opened in 1914, the canal revolutionized sea transport. For ships steaming between California and the East Coast of the USA, the canal — linking the Caribbean Sea to the north with the Pacific Ocean to the south — turned a 15,000-mile journey around Cape Horn into a relatively swift, 6,000-mile jaunt.

"The creation of the Panama Canal was far more than a vast, unprecedented feat of engineering. ... Apart from wars, it represented the largest, most costly single effort ever before mounted anywhere on earth," historian [David McCullough](#) wrote in his magisterial account of the canal, *The Path Between the Seas*.

The achievement, however, came at a terrible price. About 22,000 workers died in the original French-led effort of the late [19th century](#), largely because of rampant yellow fever and malaria in Panama's jungle. Several thousand more perished when, after the French failure, [President Theodore Roosevelt](#) launched the United States upon the task of digging a trans-isthmus canal.

Roosevelt midwived a separatist revolt against Colombia, which then governed the area, while American engineers diverted 21 rivers, forged a man-made lake and constructed locks of unprecedented size. The new country of Panama in 1903, formed with U.S. backing, then leased in perpetuity a 10-mile-wide canal zone to the U.S. government.

The canal builders' legacy can be found here in Building 721, in a nondescript room known colloquially as "the vault." Michael Kennedy, 60, an engineer at [CH2M Hill](#), an Englewood, Colo.-based firm that provides project management expertise to the canal authority, found information and inspiration in the yellowing blueprints and photographs.

He marvels at the intricate, hand-drawn specifications for prosaic components such as a 20-inch blind flange. "At that time, everything was done by hand. The science and engineering behind it just to get it done," he says, shaking his head in admiration.

Aleman, an engineer by training, credits his early-20th-century predecessors with achieving "a lot of firsts": Conquering jungle-borne diseases by eradicating the ubiquitous mosquitoes. Experimenting with new types of cement and cranes. Gathering a skilled, multinational workforce of Americans, [Spaniards](#) and West Indians and backing them under unforgiving conditions.

The current expansion, by comparison, is a relatively straightforward undertaking.

That the epoch-defining romance has drained from today's project is clear when Aleman cites contracting paperwork as the most "demanding" element. "We are engaged in a large construction project. It's known technology, proven technology. Nothing fancy," he says. "That's why I say those guys back then were phenomenal engineers."

Funded by higher ship tolls and \$2.3 billion in loans from multilateral development banks, the expansion includes dredging the existing channel to the depths needed for the largest cargo carriers. The centerpiece of the venture, however, is the pair of massive new locks at the Pacific and Atlantic canal entrances.

Today, the largest ships that can use the canal are the Panamax class, capable of carrying about 5,000 standard shipping containers. They squeeze through the waterway's 110-foot-wide locks with just 2 feet to spare on either side.

Wider, deeper and longer than the existing portals, the new locks will handle a class of superships known as post-Panamax vessels, the world's largest cargo carriers, which can haul more than twice as many containers. The canal's third lane is scheduled to open in August 2014, 100 years after the steamship SS Ancon became the first vessel to officially transit the canal.

Bombs, daggers, mud

The U.S. operated the canal and the surrounding canal zone as its own fiefdom until 1977, when it agreed to return the area to [Panamanian](#) sovereignty. On New Year's Day 2000, Panama finally assumed responsibility for operating the canal, amid widespread doubts about the abilities of local officials.

