

Why Tugboats Are Key to the \$19 Billion Overhaul of Kennedy Airport

Renovating one of the world's busiest airports is replete with engineering challenges, such as how to circumvent the area's overburdened roadways.



By Patrick McGeehan

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To turn New York City's outmoded Kennedy Airport into a collection of gleaming, modern terminals connected by smooth, untangled roadways, you must start with one of nature's most basic building blocks: tons and tons of rocks.

But J.F.K., set hard against Jamaica Bay and surrounded by dense neighborhoods and congested highways, is not the easiest place to deliver hundreds of truckloads of stone each day. So, the pathway to unlocking the future of international air travel in New York will be on the water.

Barges, pushed and pulled by tugboats, have started wending over a series of waterways, carrying the basic ingredients of the \$19 billion project that officials hope will transform the long-maligned airport. Overhauling J.F.K., one of the world's busiest airports, is replete with engineering challenges, like how to circumvent metropolitan region's overburdened roadways.

The journey these mounds of rocks and sand are taking is a daylong float down the Hudson River, through New York Harbor, under the Verrazzano-Narrows Bridge, past Coney Island and across the bay to a makeshift dock at the western edge of the airport.

In essence, they are arriving at the airport through a side door, not the front door.



Debris and construction materials are ferried to and from the airport on barges via a makeshift dock. Anna Watts for The New York Times

After trips as long as 125 miles from quarries as far away as Catskill, N.Y., the rocks do land in dump trucks, but those trucks stay on J.F.K.'s 5,000-acre campus rather than adding to the congestion on the roads of Southeast Queens.

Rick Cotton, executive director of the Port Authority of New York and New Jersey, which runs Kennedy, estimated that the scheme could eliminate as many as 300,000 truck trips to and from Kennedy over the course of the project. Those trips would have spanned 1.5 million miles, he said.

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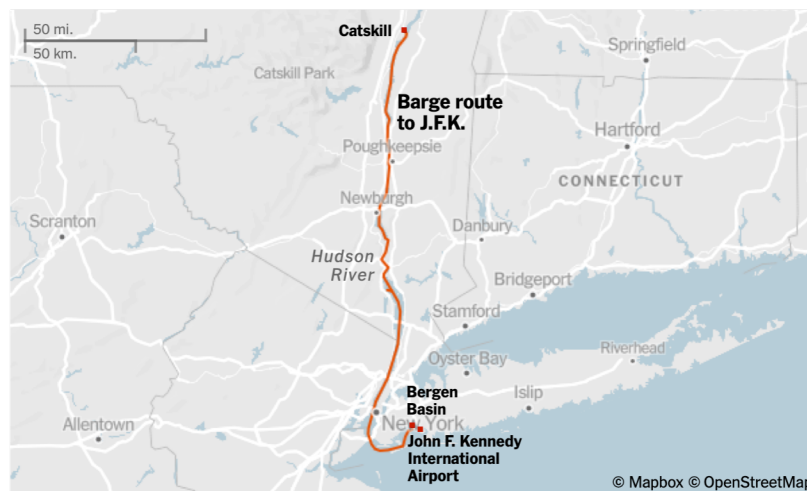
“The level of difficulty seemed huge, but the payoff also seemed huge,” Mr. Cotton said.

The Port Authority’s ultimate aim, Mr. Cotton said, is to transform the much-maligned Kennedy into “a world-class, knock-your-socks-off gateway to the United States of America.” Two massive terminals are being built to replace smaller ones that have been demolished. The Port Authority is also realigning the airport’s tangle of roadways and upgrading its electrical systems.

The project will require so much concrete that the Port Authority contracted with Modern Efficient Transport and Supply to set up a dedicated plant at the airport that could produce at least 720,000 cubic yards of concrete — enough to fill 218 Olympic swimming pools — for the builders.

The contract calls for the company, known as METS, to provide the concrete, crush some of the debris so it can be reused on site and ferry materials to and from the airport on its barges, including unusable debris from the demolition.

All the importing and exporting will happen around a pair of floating platforms that METS has set up in Bergen Basin, a forlorn tributary of Jamaica Bay.



By The New York Times

On a damp morning in late September, a barge piled with rocks — to be used for drainage — bobbed alongside a floating platform where the airport property met the water. It had been brought down the river from a quarry by one of three METS tugboats. The crews operating the tugs spend three weeks straight aboard them, between breaks, said Billy Haugland, chief executive of Haugland Group, a Long Island company affiliated with METS.

“They’re a breed of their own,” Mr. Haugland said of the mariners. “We have a wide range of personalities and industries that we’re navigating in.”

On the Bergen Basin platform, four workers in hard hats and orange life vests managed the operation. One of them sat in the cab of a towering green machine, topped with three American flags, whose articulated arm ended in a giant clamshell bucket.

The machine took bites off the floating pile and deposited them in a metal hopper on the platform. The rocks fell onto a conveyor belt angled toward the sky that would take them to another conveyor belt and then a third before they dropped into a truck on the shore.

Mr. Haugland's workers had only recently begun making the long hauls from up the Hudson. He said they could load and unload as many as four barges a day, each of which could hold more than the capacity of 150 trucks.

To make way for the mounds of rock and other materials that will come off the barges, the Port Authority cleared more than 12 acres that held dilapidated buildings and industrial equipment that were no longer needed at the airport.

"We're just getting started here," said Teresa Rizzuto, the airport's general manager. "Come back in two years and you'll see mounds and mounds."



Each barge can hold more than 150 trucks' worth of materials, Billy Haugland, chief executive of Haugland Group, said. Anna Watts for The New York Times

On outgoing barges, soil may go to a recycling facility on the New Jersey coast and metal to a scrapyard in Newark, Mr. Haugland said. He also hopes to find a taker somewhere upstate for asphalt millings, the remnants of torn-up roads, he said.

The first phases of the new terminals are scheduled to open in 2026. They are expected to be completed two to three years later.

Curbing additional traffic and pollution was the main reason the airport's managers chose to take this less-traveled path. But using barges across Jamaica Bay instead of trucks on the Van Wyck Expressway is not without its complications.

Last month, a tugboat could not reach the airport for the public unveiling of the barge operation because a storm was kicking up swells as high as seven feet in the bay, said Bill Haugland, whose company is operating the barges.

Mr. Cotton said he anticipated that the over-water delivery system might be less predictable than the alternative. But, he said, it fit with the agency's environmental goals and its desire to be a good neighbor to the communities that surround the airport.

Environmental activists said they had no objection to using all those waterways as a passage for barges laden with rocks or contaminated soil, so long as it was done carefully.

"Transport of materials by barge on the river is commonplace and almost always presents no problem," said John Lipscomb, patrol boat captain for Riverkeeper, a clean-water advocacy organization in New York. "It's a great way to keep a zillion trucks off the road."