

Imagine the impact
on the U.S. economy
if the New York Stock
Exchange and all
of the Wall Street
financial district lost
its telephone service
for weeks or months.
That was almost
a by-product of
the 9/11 terrorist
attacks on the World
Trade Center.



POWER IN

The building at 140 West Street in Manhattan houses the Verizon telephone switching station for more than 50% of New York City's telephone service. It sits across the street from ground zero. When the 50-story Seven World Trade Center (WTC) building toppled in the aftermath of the attack, power was cut to the Verizon building and much of lower Manhattan.

Seven WTC was built atop the main electrical substation feeding the financial district. A fire broke out in this substation, but it was not a priority for the overtaxed NYC fire department. They were busy rescuing people from the rubble of the collapsed twin towers. The substation fire burned out of control, shutting down primary power to the Verizon building.

STORY & PHOTOS BY MICHAEL DeFILIPPO

At first the back-up generators in the Verizon building kept the city's telephones running. But by Wednesday, Sept. 12, the lower three stories of 140 West Street filled with 29 feet of water. This knocked out the oil tanks and pumping equipment to the generators, forcing a shutdown of power to the building and telephones to the City.

This dire situation was compounded by the collapse of Seven WTC, which fell and was leaning against 140 West Street. Building Seven's television antennae had fallen from its roof and skewered Veri-

zon's telephone trunk line cable vault.

An advance team from Michael Mazzeo Electric Corp., a N.Y. Local No. 3 electrical contractor, responded to a call from Verizon to provide emergency power to 140 West Street.

"We were here Friday morning," recalled Mazzeo Electric General Foreman Donald Mazzeo. "We were supposed to be here Thursday, but were called back due to instability on the site. Fires were burning around us, the air was thick with smoke and dust, and Seven WTC was leaning against the building."

Mazzeo and an eight-man crew had stepped into a war zone.

"The building was filled with fumes from the overflowing fuel," described Bruce Edwards, Mazzeo's foreman on this project. "We didn't know if there was asbestos in the air. We were here with respirators and asbestos equipment to try to protect ourselves. It was a very bad environment."

The building's owner was not sure if the structure was salvageable, since it had been rocked by the impact of the 50-story skyscraper. Not only was it destabilized ▶

NUMBERS

HOW NYC'S ELECTRICAL INDUSTRY CAME TOGETHER TO HELP THE STOCK MARKET SURVIVE

from above, but it was also threatened from below. The WTC complex's underground seawall had cracked when the towers collapsed. Water from the Hudson River was leaking in, and threatened to undermine the site.

The electrical contractor's first task was to provide temporary power from portable generators. This provided light so the engineers and architects could determine if the building was worth saving.

These generators needed wire, and lots of it, to feed power in to the building. Mazzeo contacted Linda Reid, account manager for Gallant & Wein, a wire and cable distributor in Long Island City, N.Y., with an unusual order.

"We ordered 40,000 feet of welding wire for our first delivery on Friday," said Mazzeo. "Welding cable worked well for that application. It is flexible and light but holds more amperage than standard cable. It takes a lot of abuse. If we didn't have the cable we wouldn't have had the power, and Gallant & Wein jumped through hoops to get it to us."

The first call from Mazzeo depleted the distributor's entire stock of welding wire. Reid had to pull from several sources in and outside of the New York Metropolitan area, because the 40,000-foot order was just the first stage of a final tally of 88,000 feet of welding wire needed for temporary power.

"I was getting calls day and night on my cell phone for materials," said Reid. "I also had the home and cell phone numbers of all of my vendors. We fed the job around the clock. I got tremendous support from all of our manufacturers."

"Linda outdid herself on this project," added Mazzeo. "One night I called her at 10 o'clock for another 40,000 feet of cable and she got it right away."

The electricians worked in some of the most adverse conditions imaginable. They were outfitted with respirators because the air was so foul. Air quality on different floors was a key topic at the daily safety meetings. Electricians partnered up so everyone was accounted for at all times. A flag system was instituted to alert workers coming on shift or returning from break of the building's safety status. Steelworkers extracted Seven WTC's structure from the outside while the electricians worked inside.



Temporary wiring running to 140 West Street.

This rattled the building and forced eight evacuations of 140 West Street. All of the electricians had to quickly assemble at designated posts for a head count after an evacuation. "There would be one blast from a horn, then the Army screamed for us to evacuate," said Mazzeo. "That was the craziest time."

Edwards oversaw the task of bringing power to the building's panels for temporary light. Then the Verizon representatives evaluated which floors needed power. "We would run wires from a generator to the splice box and hook up temporary

power to that floor," said Edwards. "The entire building ran off generators for about five weeks. Con Ed [the New York utility] was able to provide power to Barclay Street first. They gave us service, so we tried to transfer the normal loads over to the central office. We kept the generators as a back up, because they were still unstable with transformer fires and random fires. We lost Con Ed a couple times when they first gave us power."

The electricians ran the welding wire up the outside of the building to provide power to key floors, often pulling by hand. ▶

"It was primitive, but it worked," said Edwards. "We worked around the clock to get the telephone service to Wall Street working by Monday, the 17th of September."

"On Monday, Wall Street was up and running," said Mazzeo. "Verizon's management gave us a round of applause, which was great after a weekend of them yelling at us."

Mark Zanone, purchasing agent for Mazzeo Electric, selected four local electrical distributors to supply this project. Gallant & Wein joined Kennedy Electric Supply, Midtown Electric Supply, and Schwing Electric in providing the staggering quantities of material needed to restore power to Verizon's telephone network. "These are the most reliable local distributors and they are all fairly large. If they ran out of something or it wasn't in stock, they would have it to us next-day UPS," said Zanone.

In the early stages of response the security zone around the attack site extended out to Canal Street on the north, a distance of almost 20 city blocks. After about the first month this security zone was condensed into Chambers Street, about eight blocks from the site.

"At points we would have to take the distributor's truck, unload it, and drive it back out of the security zone," noted Edwards.

Delivery drivers were given photo I.D. passes by Verizon which allowed them to make deliveries inside the security zone.

"Just getting a tractor trailer in or out of here was a nightmare," recalled Mazzeo. "They not only searched every shipment, they searched our personal bags every time we walked in or out."

Midtown Electric modified its packing procedures in acknowledgement of the heightened security. Order packers were instructed not to tape the packed boxes, allowing Army inspectors quicker searches of the cargo. Kennedy Electric shrink-wrapped skids of material and loaded them onto flatbed trucks.

Schwing Electric had the greatest distance to cover on its delivery runs. Its Farmingdale, Long Island, headquarters is 40 miles from Manhattan, so a separate truck and driver were dedicated to this

continued on page 34

INDEPENDENT RESPONSE



Electricians from Michael Mazzeo Electric Corp. examine a transformer at the EPA decontamination station.

Pullizzi found himself locked into the strictures of national distribution contracts before, and admits they have their place, but not in an emergency situation.

"If you are buying bulbs for a building's lighting retrofit scheduled in four months, maybe the national contract will give you a low price. National contracts were instituted by large corporations and their bean counters because they can see a certain savings over a shopping cart of goods put out to bid," said Pullizzi. "But when you have to put a building back together and restore telephone service to most of New York City, it won't work."

Pullizzi believes that some corporate buyers are out of touch with the reality of even a typical construction job. There are many variables in a work schedule which impact the cost effectiveness of a national distribution contract where there is no local sales rep or stocking facility.

"We don't use the same pieces of material every day on a job," he said. "They don't see how much money we are losing by not having the installation completed on time."

Bill Burgeleta, superintendent for Michael Mazzeo Electric Corp., agreed. "As contractors, we are pressured to finish a job on time," said Burgeleta. "When we order from a national distributor over a local one, they might tell us the part is coming across the country from a distribution facility in Seattle and it will arrive in a week. Then we have to dig around locally because we need the parts tomorrow."

The four electrical distributors involved in supplying Mazzeo Electric in its push to restore power to Verizon's switching station all agree that the levels of service they provided on this project were uncommon, but not impossible. Employees from top to bottom at these supply houses

continued on page 34

Some of the value-added distinctions which make independent electrical distributors the channel of choice for electrical supplies include customer service, flexibility, breadth of inventory, and personal relationships. These concepts were tested and proven true in the response to restore power to the Verizon building at 140 West Street in Manhattan.

Jack Pullizzi, a consultant with M&E Engineers Inc. worked for Verizon on this project, and believes that the local relationships between the distributors and contractors was the key element to the success of this project.

"This is the only way to run a business," said Pullizzi. "If you were to use national contracts or large contracts for specialized materials like wire and connectors that we needed immediately, we would have had to wait two to three days to receive shipment. Only local, independent distributors have the service structure in place and the experienced people with communication skills to flex with this situation."

project, as mixing other customers' orders in with 140 West runs would slow the critical delivery process.

Making adjustments

Curtis Young Sr. was the branch manager for Kennedy Electric's Tribeca branch when disaster struck the WTC. He has vivid memories of his company's response to the disaster.

"On our first days of delivery I saw debris falling, fires, shoes in the street,

paper, and dust everywhere—it was chaos," said Young. "We couldn't get our trucks close enough, so we unloaded the trucks onto hand trucks and walked in the material. I wrote my social security number and blood type on my forearm in magic marker, just in case something happened to me. We loaded our trucks with water, sandwiches, underwear, towels, dust masks, and other items for the rescuers. We drove in as close as possible, then walked the rest of the way to pass the stuff out."

Kennedy was in the process of closing its Tribeca branch when the attack came. Afterward, the company decided to reopen the branch and stock it with emergency items—first aid kits, gloves, bottled water, flashlights, and batteries. All of the distributors extended their daily and weekend hours and made themselves available on a 24/7 basis.

"The first few weeks, the supply houses gave us a direct line—not open to the public—where we could call seven days a week," said Bill Burguleta, Mazzeo superintendent. "This job could not wait."

Mike Madden, assistant sales manager for inside sales at Kennedy Electric, refers to the quantity of products ordered and delivered by Mazzeo as "massive."

"They called us for everything electrical, plus we provided them with lots of safety equipment, like dust masks, asbestos suits and masks, and Motorola UHF radios," said Madden.

Joe Pace of Midtown Electric recalled an order which contained a call for 15,000 feet of Romex as being typical. "We had a terrific inventory and in two days we were able to replenish it," said Pace.

Joe Pastos, purchasing manager for Schwing Electric, was charged with not only providing quantity items—like 15,000 feet of underground feeder cable and PVC pipe—but also locating and expediting custom items.

"We had to find 12 quartz infrared portable heaters for the EPA decontamination shower facility which Mazzeo wired," said Pastos. "Usually it takes four to six weeks for this order, but we had to have the manufacturer get it to us in one week."

In addition to providing temporary power to the Verizon building, Mazzeo worked on a number of side projects related

to the 140 West building and the WTC.

Verizon established a staging area for its contractors on a nearby parking lot—which came to be called Verizon City—where the owner, contractors, and consulting engineers parked their trailers. Mazzeo had to supply power to this area as well. Initially there were 10 generators supplying power to Verizon City. The temporary pipe chases were run underground and paved over. The entire area was hooked up in one week.

"We did not know how long we would be here, so we decided to go underground with the wiring in case it was a tough winter," said Mazzeo. "Telephone cable has to have compressed air pumped through it to keep it dry, so we had to build a temporary compressor system for the dehydrator. This required another generator and more cable on the parking lot."

One month into the disaster, the Environmental Protection Agency (EPA) decided to erect a decontamination station for people working on the site. This prefabricated "tent" is 250 feet long, 120 feet wide, and 50 feet high. Inside are boot washers, showers, and a rest area for the workers. Mazzeo installed the generator power, transformer, lighting, and heaters for the showers. The company had 15 men working on this project, and it was completed in 30 days.

One project which Mazzeo wired at the ground zero site was not critical to any rescue or commercial operation, but it was important to the spirit of those involved in this project. Electricians wired a Christmas tree, which the trades put up on the site. People sent in 7,000 ornaments for decoration. Among them were 16 angels representing the 16 members of IBEW Local 3 who died in the terrorist attack.

There were no blueprints to read on this job. No estimates, no bids, no negotiation. The contractors and distributors drew on their years of experience in building and supplying to meet this test. Many of the electricians, like Mazzeo, helped to build the WTC. "We were never educated to do this type of work," said Mazzeo. "Everything we knew just came to the forefront during this crisis."

The successful execution of the staggering tasks facing the electrical contractor

INDEPENDENT CONTINUED

pitched in to help get the job done.

Mark Zanone, purchasing agent for Mazzeo Electric, recognizes the exemplary service he received from his suppliers on this project.

"Normal delivery from Midtown Electric is next-day early a.m.," said Zanone. "If we called Salesman Joe Pace at 7 a.m. with an order he would have it for us within an hour. If they or the other three suppliers we dealt with ran out of something or did not have it in stock, they would have it shipped by UPS the next day."

"Sometimes we will put a warehouseman on a subway train with a delivery if they need it," said Timothy Gold, Midtown vice president and sales manager. "What differentiates us as an independent from the national distributors is our service and breadth of inventory."

"Other companies don't let their salesmen order material, they have to go through the purchasing department's, added Salesman Mike Madden of Kennedy Electric. "If we did not have the item in stock I just took a purchase order number, ordered it, and had it shipped next-day UPS." ◆



Timothy Gold of Midtown Electric

and the four distributors brings a mixture of pride and pain to those involved in this project—while they are proud of their success, they wish the situation never arose.

This accomplishment has been overlooked by the mainstream media, given the

loss of life from the attack, the Anthrax outbreak, and the subsequent military response in Afghanistan. But had they failed to restore power to 140 West Street, and not brought Wall Street's telephones back on line, the nation and world might

now be dealing with an even worse stock market crash. ◆

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NEW YORK AFTER 9/11

The attack on the WTC has made some profound changes in the businesses and lives of electrical distributors in New York City.

Some, like Midtown Electric Salesman Joe Pace and Kennedy Electric Salesman Mike Madden, lost close personal friends in the disaster. Those losses can never be replaced. Others, like executives Timothy Gold of Midtown and David Weinstein of Kennedy, have lost a large customer base and must find ways to replace them.

"The whole marketplace lost business," said Gold. "There must have been hundreds of electricians who reported to work down here every day. A lot of business was lost with this section of Manhattan being shut down. Unfortunately a lot of companies have made a jump to New Jersey in the wake of the tragedy and they might not come back to New York."

Kennedy Electric had one of its delivery trucks customized to fit in the loading dock of the WTC. That truck was crushed while making a delivery on September 11. Fortunately the driver escaped, as did the two electricians who went to meet the delivery. Sadly, 16 members of IBEW Local 3 and four members of Local 1212 broadcast engineers perished in the attack. A strange twist of fate occurred when the Kennedy delivery truck was 20 minutes late. The two electricians who went down to meet it were the only members of that crew who survived.

"There was ongoing renovation on millions of square feet of office space in the twin towers," said Weinstein. "We supplied that building every day. All the buildings in the perimeter of the Trade Center are vacant. We had four trucks servicing downtown, the Lower East Side, the Trade Center and the West Side. Now we are down to one truck on one route."

While the staggering volume of material needed to

supply the renovation of the 140 West building has given all the distributors a spike in their sales, there is no joy in the constant reminder of the terrorist attack.

"We are keeping order pickers later," said Joe Patsos of Schwing Electric. "The truck that is handling this area is the first to go out every day. That truck did not exist before. This is a run we have created just to service this project."

Everyone looks toward the eventual renovation of the surrounding buildings and the eventual rebuilding of some commercial structures on the site where the twin towers once stood. But that may be years away, as the clean-up of the site is still ongoing.

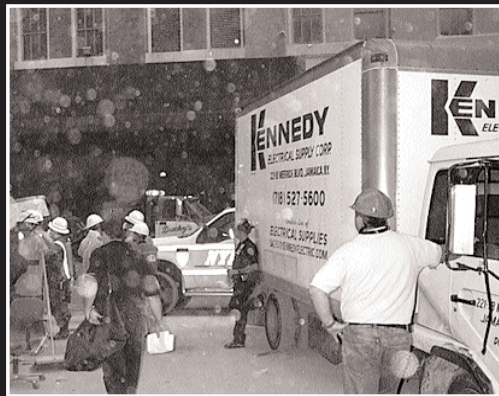
Kennedy now focuses on its branches outside of Manhattan as outlets for new business. Salesmen have been added at the branch level and the company is looking for growth opportunities in Rocklyn County, Northern New Jersey, and the Hudson Valley. Its Tribeca branch, only five blocks from the WTC, is officially closed.

"The stench was unbelievable," said Weinstein. "Our branch manager had 'Trade Center Cough.' Downtown Manhattan was always a difficult place to do business. It was rendered more impossible than ever before. We couldn't get deliveries promptly with all the security checkpoints."

Gold believes that the tragedy will provide a new market niche for his company. "Security and life safety will be a niche for us," he said. "Electrical contractors will gravitate into this market like they moved into datacomm. The instal-

lation of card readers, palm readers, ccd cameras, and other security and fire systems will likely be part of the building's electrical package. We plan to supply these items."

The attack of September 11 also affected how Midtown conducts business. "We have developed a lot of communication, both internally and externally," said Gold. "We have been asking customers what kind of material they need us to stock and what kind of services they require. We want them to be successful and we want to be a part of whatever redevelopment takes place down here." ◆



Kennedy Electric workers delivering supplies to help restore power.