

STA

T A N D I N G A L L

The 9/11 Memorial's urban forest is rooted in much more than soil.



It's raining in Lower Manhattan. It's a cold rain, the kind that makes you want to stay in bed. Yet at the 9/11 Memorial, visitors are pouring into the outdoor plaza just as steadily as the drops above. They have far more important things to think about: their loved ones. Some visitors gaze, mesmerized, upon the memorial's two waterfalls. With their fingers, others gently trace the names of family and friends whose names are carved here. 🍀 Across the plaza, Wayne Dubin, 52, sports a short gray beard, a red and black windbreaker and khaki pants. The vice president and division manager at Bartlett Tree Experts has worked in the tree care business for 23 years. He knows his trees. 🍁 The veteran arborist looks out at the rushing water and the landscape beyond. He sees the two one-acre voids where the World Trade Center once stood. And he's acutely aware of the thousands of victims' names emblazoned in bronze before him. 🍀 "The trees bring life to the plaza," he says weightily. *"The trees bring life to the plaza."* On the burial ground of nearly 3,000 people, that life means a lot. ▶

PHOTOS BY: BETH GERACI

BY BETH GERACI SENIOR EDITOR



STILL STANDING

► *After its miraculous recovery, the Survivor Tree continues to thrive and inspire.*

Stories about heroism and hope on 9/11 abound. But perhaps none is more inspiring than the well-known story of the Survivor Tree.

The pear tree was the only thing to be found alive in the World Trade Center rubble. It was crushed at the bottom of the pile. But it was alive.

Ten years later, the Survivor Tree holds a special place at the 9/11 Memorial.

“That tree represents the strength of New Yorkers,” said Wayne Dubin, who is responsible for the tree’s day-to-day maintenance.

“There were multiple opinions as to whether the Survivor Tree should be on the plaza,” recalled Mark Merit, chief operating officer of Environmental Design, which was deeply involved in restoring, transporting and installing the Survivor Tree at the 9/11 Memorial. “Ron Vega is the godfather of the Survivor Tree. Without his personal ‘I’m going to make this happen,’ that tree would not have been on the plaza.”

Vega, the 9/11 Memorial’s director of design, was deeply involved in the 9/11 recovery efforts from the very beginning. One day on the pile, he heard about the tree’s discovery, and he never forgot it.

Years later, when the 9/11 Memorial was in the planning stages, “I remembered about the Survivor Tree. I remembered about this legend, this story about a tree coming out of the debris field,” he said in an interview with the Discovery Channel. “And on a site that had so much death, this was the one breath of life that came out of it. I had to make sure that we had a place for it on the plaza.”

The tree was badly injured. For nine years, the New York City Parks Department nursed it back to health at Brooklyn’s Van Cortlandt Park. The efforts were going well. Until, that is, 2010, when a major wind storm blasted the East Coast.

Again, the Survivor Tree was knocked over. Its future looked grim.

“When it blew over, it cracked all the roots on one side of it,” said Merit, whose team got involved with the tree’s restoration after that storm. “It had a compromised root system, a very tricky operation.”

But the team brought in equipment to right the tree and cultivate the root system. Within nine months, it was sprouting new growth.

In the end, Environmental Design transported the 25,000-pound load to the 9/11 Memorial and lowered it into its honorary spot.

Today, the Survivor Tree is in full bloom. — BG

For them

“The project’s a huge, huge emotional and physical success,” says Ron Vega, the memorial’s director of design and construction. “It’s healing for everybody who comes, the victims’ families especially. Those who have no proof of death, this is their final resting place. And when people come to visit, they feel like it’s the place they have to come to say goodbye.”

Vega serves as the liaison between the memorial’s owner, consultants and construction teams, overseeing the 9/11 Memorial project.

“He’s the band on the deck of the Titanic,” Dubin says of Vega. “He just keeps playing.”

It’s no wonder. Vega is immersed in the 9/11 Memorial, professionally, emotionally and physically. And he never loses sight of its mission.

“The only reason I got involved was to help people have a place to say ‘goodbye’ to their loved ones,” he says. “I just met someone who lost her husband in the attacks, and you would have thought it was just yesterday. She was so appreciative.”

Shade and solace

It’s the people — both those who live on and those who live only in memory — who make the project so special, says Dubin, who is charged with overseeing the care of the more than 400 swamp white oak trees that are part of the 9/11 Memorial. “It’s an honor to in some small way be involved in paying tribute to all the people who lost their lives, and their families trying to cope with a loss that is very hard to reconcile.”

Trees were not in
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Ron Vega insisted that the Survivor Tree occupy a special place at the memorial.





Swamp white oak trees rise between the 9/11 Memorial and the future entry of the 9/11 Museum (above); Visitors walk among the trees last fall (left).

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the original plans for the memorial. But when the landscape architects at Berkeley, CA-based Peter Walker and Partners (PWP) joined the memorial's designer, Michael Arad, during the final design stage, they insisted on the trees to provide shade on the scorching plaza.

Since then, the trees have come to embody far more than a plot of land. They signify renewed life in a place left jarringly bereft of it.

Ultimately, the landscape architects' design calls for 416 custom-grown mature trees at the memorial. So far, 225 swamp white oaks have been planted there, and another 191 will join them by next year's end.

The trees will spread laterally, and

over the next 10 years, the branches will spread to touch each other. "You'll get a full tree canopy, so you'll come here and there'll be some relief from the sun," Dubin says.

The landscape architects mandated that the trees' leaves be 10 feet off the ground — high enough for visitors to walk beneath. They also wanted the trees to be uniform in height and have top growth. That meant the trees had to be pruned excessively.

"There was *a lot* more to these before we did such aggressive elevation work," Dubin says.

But despite the hard work, "the trees aren't the focus here," Dubin says, his voice rising. "The memorial is the focus. We're here for the trees." He points behind him to the names carved in the memorial. "But *that's* the focus. I don't think people think for a second about what goes into it."

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A special motivation

In fall 2006, it was business as usual for the folks at Environmental Design, a 35-year-old, Houston-based tree moving company that has built its reputation on efficiently moving trees everywhere from the United States to Australia.

Business as usual, that is, until Environmental Design Chief Operating Officer Mark Merit got word: The 9/11 Memorial tree contract was theirs.

What was special, Merit says, is “what you felt when you were out working on it. A lot of people involved in the 9/11 Memorial were first responders. A lot of folks you deal with in the Port Authority are people who lost almost all their coworkers. So you run into people who aren’t just there to do a job. They’re there because they have a personal stake in it.”

Environmental Design is responsible for the trees from when they arrived in late 2006 until they’ve been on the plaza for two years.

The company partnered with Bartlett Tree Experts on the project so Environmental Design could focus on moving the trees and Bartlett on maintaining them.

Any way, any how

Merit was keeping his cool. He had just learned the streets surrounding the memorial — the same ones Environmental Design planned to use to crane the trees down — offered little or no access to the site.

“The crane areas got designed out along the way,” Merit says nonchalantly. The original plan “just didn’t happen. It made for fun, that’s for sure.”

To compensate, Environmental Design custom built a transporter to drive trees onto the plaza. The com-

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Quentin Hastings, owner-operator,
Hastings Landscaping – Bristow, VA

Q: What kind of landscaping do you do?

Hastings: We specialize in residential and commercial landscaping all over Northern Virginia. In the winter, we also plow snow, mostly commercial properties with large parking lots.

Q: What kind of equipment do you use to run your business?

Hastings: We have six heavy-duty diesel pickup trucks, a large dump truck, eight lawn mowers, nine trailers and a Bobcat excavator.

Q: What are the most important factors that have contributed to your success?

Hastings: I am very diligent when it comes to maintaining my equipment. I check the fluids and tire pressures every day, wash the trucks every week, and, just like my father recommended, I always use Mobil Delvac to protect my equipment no matter what season.



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COVER STORY

plicated project took nine weeks to complete, but the company was willing to do anything to make the memorial's opening a success.

"That was an important day for everybody," Merit says.

Owning it

"Look at this tree," Dubin says. He's pointing to a slight discoloration near the base of its trunk. "Two days before the opening, somebody ran into this tree with a rolling cart, tore off a huge section of bark."

Bartlett rushed to repair it, "and I'd say 99% of the people walk by and never even notice this happened," Dubin says proudly. "Nobody's going to notice that."

Except Dubin, who notices every detail about the trees. He feels a deep responsibility for all of them.

"These are my trees," he exclaims.



"I'm taking care of 'em. Leave 'em alone. It's a tough enough environment without any help, or hindrance."

Given the deep sentiment behind the memorial, the pressure to keep the trees healthy is immense.

"Make them all do well. Don't let any of them die. Under any circumstances. Ever," Dubin says.

"Let's say for example this tree right here died," he continues, crouching down to the base of the tree. "They'd

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Environmental Design workers load two swamp white oak trees onto a flatbed truck at the New Jersey holding yard (left); The team lowers a tree down onto the 9/11 Memorial to be planted (above).

have to pull up all this stone work. They'd have to disconnect the irrigation system. And then they'd have to figure out some way to get a piece of equipment in here — because this tree weighs about 30,000 pounds — and pull this one out. And put a new one in. It would cost tens of thousands of dollars just to replace one tree.”

Underground

“There is pretty much irrigation underneath everywhere you walk when inside the memorial grounds,” says Kelco Landscaping and Construction manager Jeff Sausele, who oversaw the memorial irrigation project.

That's because the memorial is actually a 6-foot-tall rooftop garden, built atop the 9/11 Museum and a train station more than 70 feet below street level.

An unprecedented 30 miles of irriga-

tion pipes run through the property, and more than 40,000 tons of soil lie buried beneath the plaza to sustain the trees' growth well into the future.

“Rooftop irrigating is based on trying to use as small an amount of water as needed for the landscaping to survive,” Sausele says. “99% of it is done with drip irrigation. That irrigation drip pipe is all over the site... underneath everywhere the public walks in the memorial.”

The water used to irrigate the plaza comes from harvested rainwater captured in tanks underground. It's regulated by two smart controllers — one for the north pool and one for the south pool.

Kelco, known for its high profile landscaping contracts around New York, also is responsible for the plaza's landscape maintenance. But it's the extensive irrigation system that is most crucial to the memorial's ecological health.

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COVER STORY



In warmer months, the swamp white oak trees on the memorial's large plaza bring a lushness to the site (above); Jeff Sausele of Kelco Landscaping (right) and his foreman, Mike Keller, oversaw the memorial's irrigation project.



With various teams striving to meet the same deadline for the memorial's 10-year anniversary opening, the site "was a controlled chaos" for Sausele and his 11-person team.

"There were no staging areas, so material needed to be brought in weekly," Sausele says. "The fact that most of my pipes are in 3-foot tunnels throughout the whole site, it was just a tough, crowded work site that had no room for error, and that deadline of 9/11/11 was not changing."

Behind the scenes

It's about an hour's drive from downtown New York to the holding yard in Millstone Township, NJ, a rural area 55 miles southwest of New York City. The township is rich in history, having served as a covert outpost for the Continental Army during the Revolutionary War.

Dubin turns onto a winding road

PHOTO BY: JOE WOOLHEAD (MAIN); JEFF SAUSELE



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that cuts through farmland, draped in the day's mist. His is the only car on the two-lane road.

When we finally pull into the 12-acre holding yard, we're greeted by the striking sight of 240 swamp white oak trees, each held in its own 7-and-a-half-foot by 9-foot yellow pine box, encased in white insulation.

Merit knows the sight well. After all, he and his team built it. The trees are grown in boxes to ensure their root systems stay intact as the trees are transported to and installed at the memorial.

Environmental Design began building the nursery in March 2007, loading onto flatbed trucks trees from New York, Maryland and Pennsylvania in tribute to the places where the attacks took place.

"We moved all told close to 600 trees into that nursery and there was not a single problem," Merit says proudly.



The sight of the more than 200 trees at the holding yard is "eye-popping," Wayne Dubin says.

place," he explains. "You get this 'aha' moment and you

Completing the picture

At the far end of the plaza stands a chainlink fence. Beyond it, cranes rise into the air and construction workers are engrossed in building out the plaza. A jackhammer pounds nearby, but the soothing gush of the memorial's waterfalls mutes the noise.

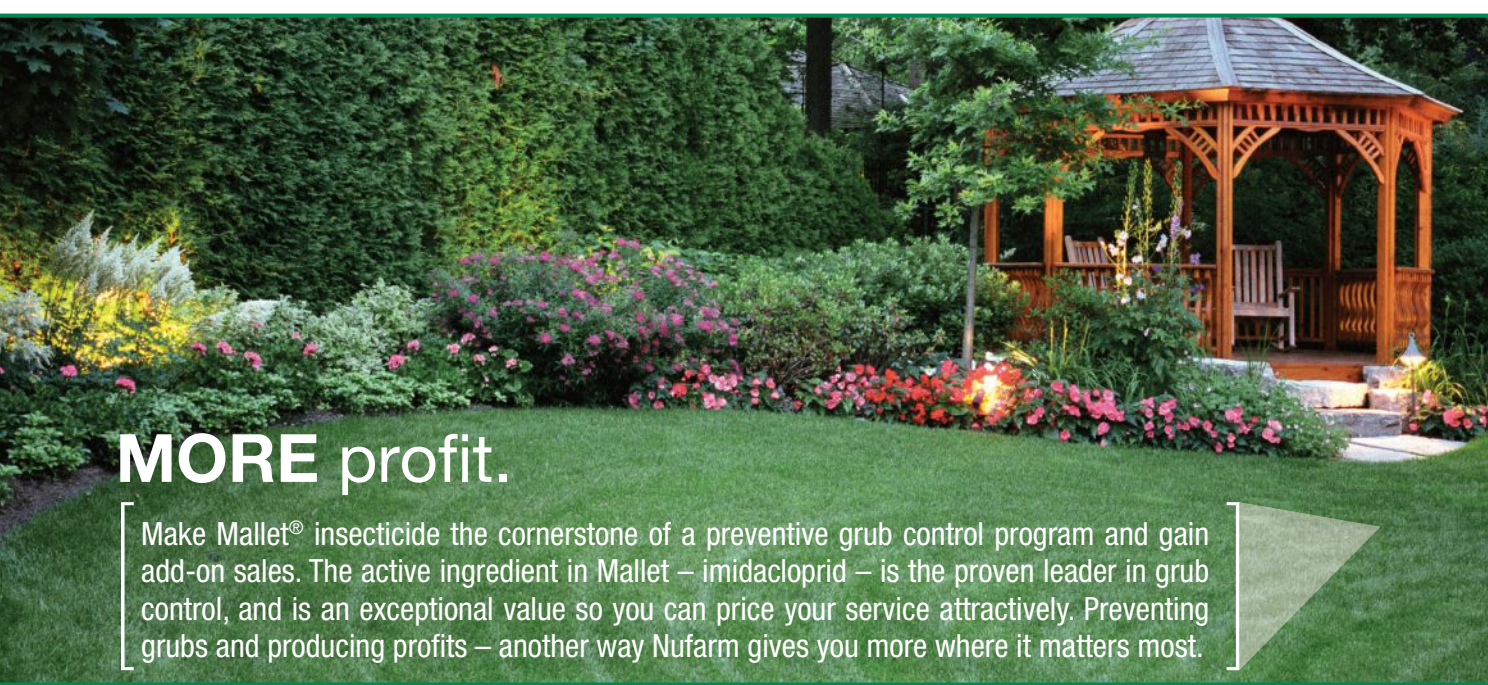
The makeshift entrance where visitors enter the memorial today was never intended to be an entrance at all, Vega says. "The true intention of the design is that you go through the museum first and then finally get to know the people who have it as their last resting

open up to the authentic original."

Despite the ongoing work, the plaza has come a long way from its beginning, when every square inch of it was filled with gravel, concrete, rebar, dirt and tool storage.

"We still have another two acres to build," Vega says. "But it's so beautiful, you don't realize you're coming in through the bathroom window. That's the success of it. You get to experience all the victims' names and hear the rustling of the trees and the rushing of the water. It's a tremendous accomplishment." **LM**

PHOTO BY: BETH GERACI



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