

BELOW THE FOLD

TURNING AN IMMENSE LANDFILL INTO A PARK
POSES CHALLENGES OF COMMENSURATE SCALE.

BY JONATHAN LERNER

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ABOVE
Construction and treatment of the landfill's four mounds began in 1986 and was certified complete nearly 40 years later in 2022.



LEFT
Garbage on the Staten Island side; industrial clutter across Arthur Kill in New Jersey.

OPPOSITE
An aerial view of the landfill, around the time planning for the park began.

AROUND 1750, a cemetery was established on a slight rise at the far western edge of Staten Island. Perhaps the spot was chosen for its restful prospect over a salt marsh shoreline and the tidal strait separating New York from New Jersey. Or perhaps it was chosen because marshy edges, until recently, were considered of little use.

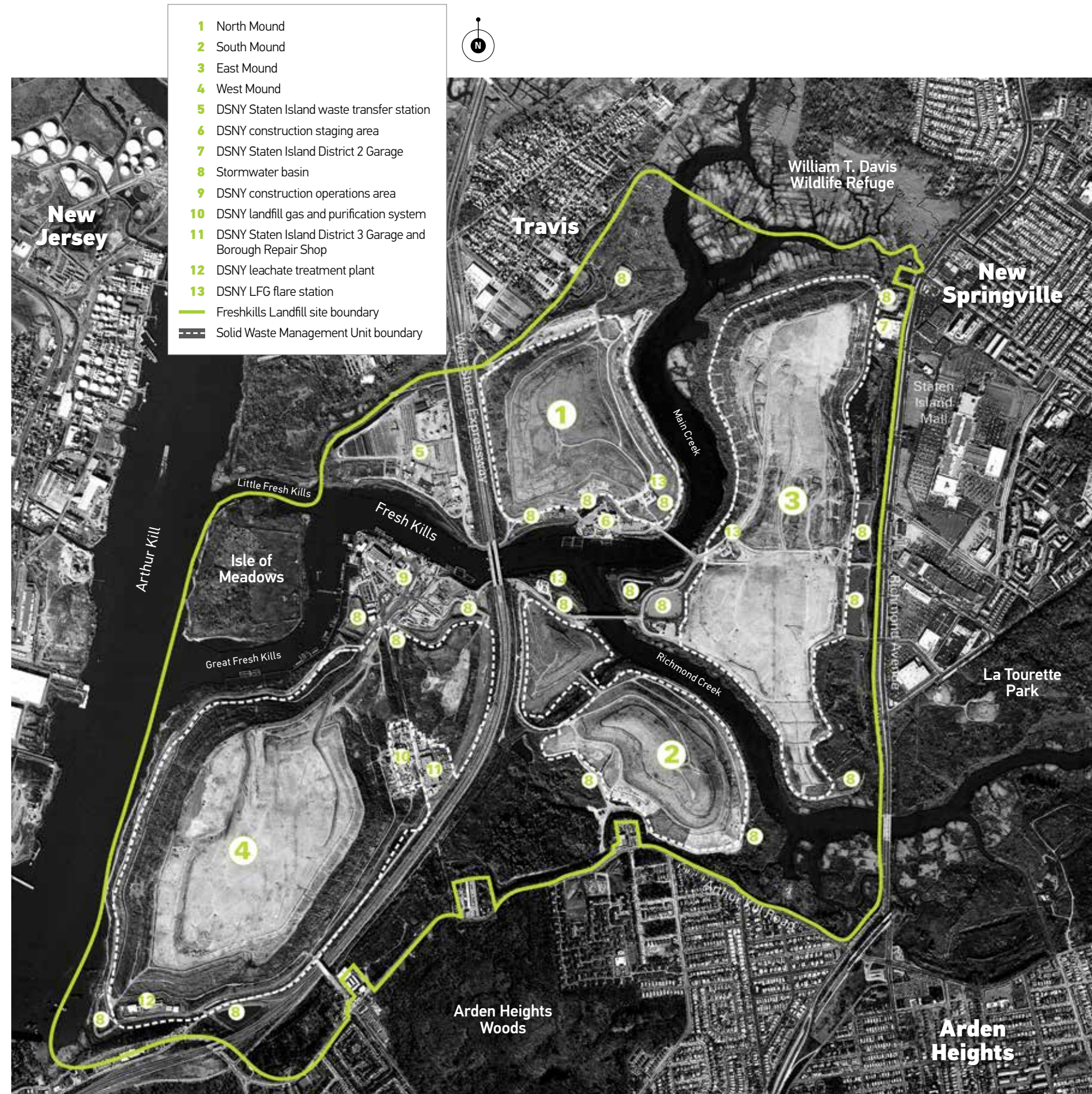
Only a few dozen headstones remain, eroded and broken. The view is ruined, too. Below is what locals call the boat graveyard, dozens of rusting, half-submerged ships and barges. To the west, the New Jersey bank is cluttered with industrial facilities. Just north, across a creek, is a long slope, blank but for grass cover, reaching a height of 225 feet. This is the largest of four mounds at one of the world's largest landfills, where 150 million tons of New York City garbage was dumped between 1948 and 2001.

Most of Staten Island's west coast is porous wetland. The area around a trio of tidal creeks flowing from a marsh and woodland ecosystem became known as Fresh Kills. (*Kill*, Middle Dutch for watercourse, is common in New York place names.)

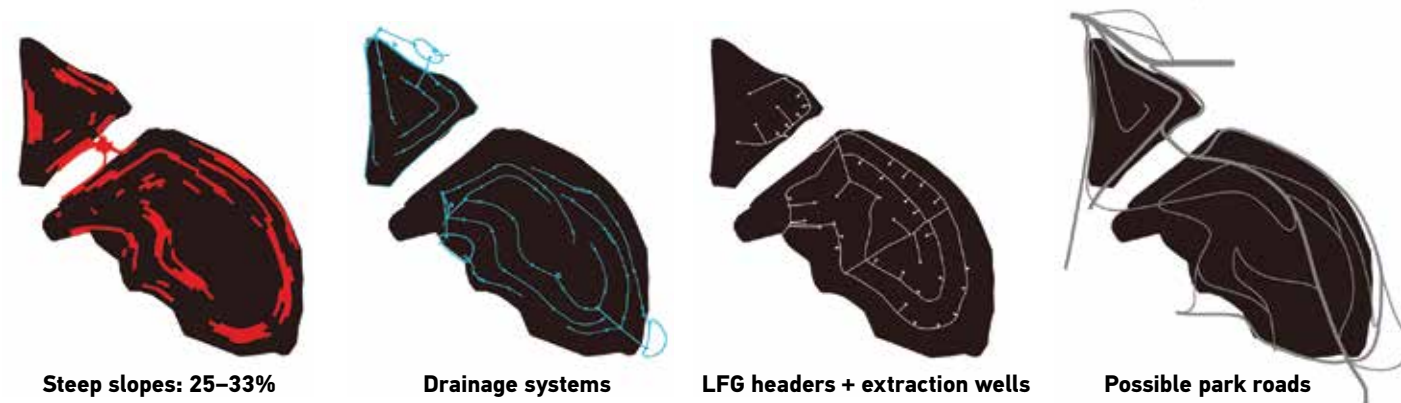
That is where the refuse was deposited, creating artificial land in the form of four huge mounds. Fresh Kills landfill closed in 2001 (it was briefly reopened to receive debris from the World Trade Center) and has since been capped. Now, it's being transformed into Freshkills Park. At 2,200 acres, it will be nearly three times the size of Central Park. Almost every aspect of the landfill's repurposing is of similarly great scale. That includes its construction timeline—originally envisioned to extend for three decades, but now behind schedule—as well as its ecological potential.

Staten Island is unique among New York City's boroughs for being primarily suburban in character. It is also the least densely populated, retaining significant area that is virtually unbuilt. Contiguous with or closely adjacent to Freshkills Park are another 4,000-plus acres of park and conservation land that are protected from development. This acreage is interspersed with a like amount of little-used (and unprotected) marsh, wetland, and forest. This vast combined sweep touches a couple of residential neighborhoods and contains some roads and a handful of industrial sites, some moribund. Freshkills Park sits roughly at its center.

RICHARD LEVINE/ALAMY STOCK PHOTO, THIS PAGE; FIELD OPERATIONS, OPPOSITE



PLANTING IMPLEMENTATION/WOODLAND PLANTING CONSTRAINTS

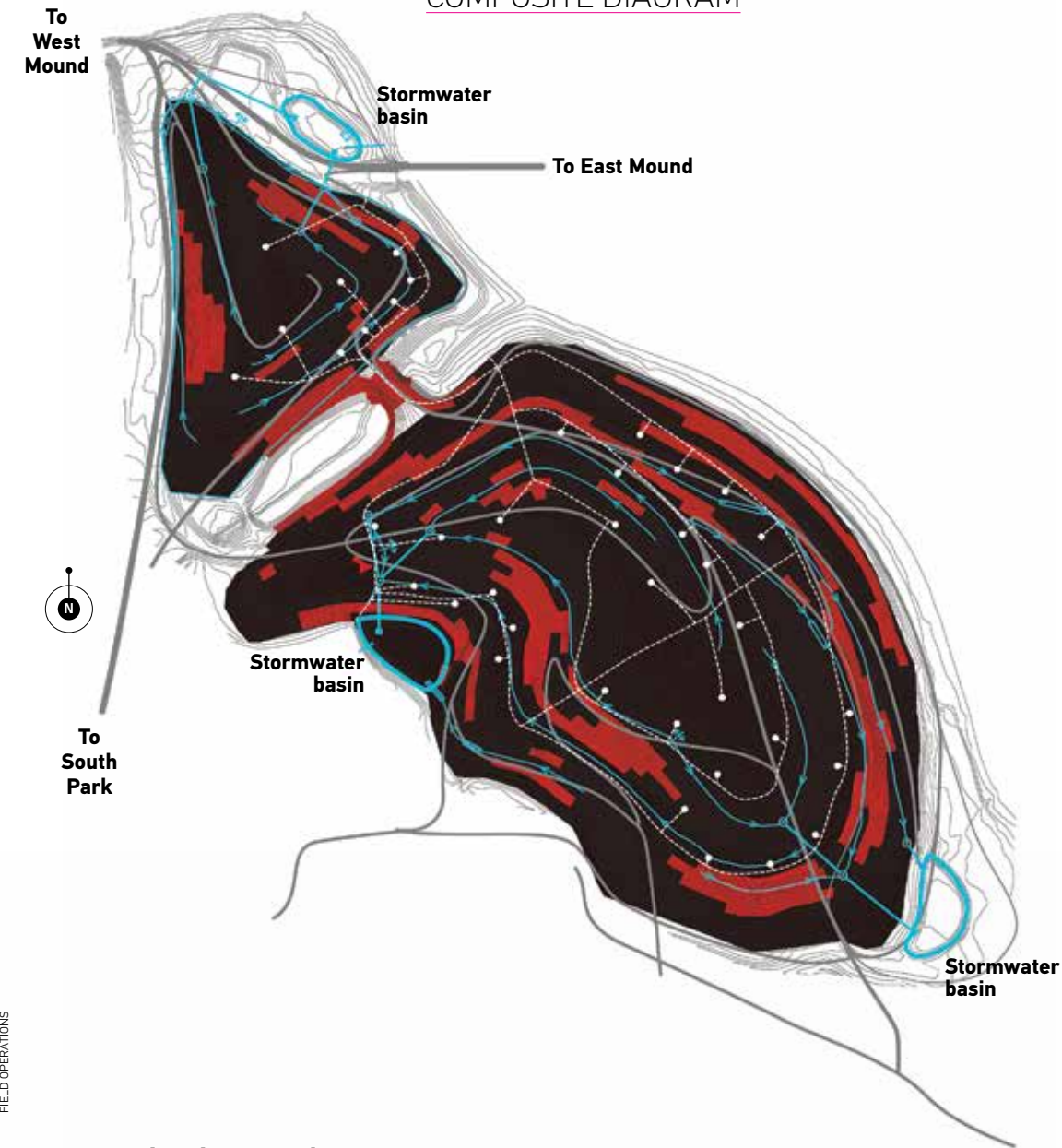


Renaturalizing the landfill could be pivotal in nurturing a connected, if not quite untrammelled, corridor of green infrastructure and wildlife habitat stretching up and down the island's 10-mile west shore and deep into its interior. The Freshkills Park draft master plan, produced by the landscape architecture firm Field Operations in 2006, expresses a vision of the park that is just as capacious and hopeful. But the complexities of the project are formidable. Among those are not only the magnitude and challenges of the site, but also multiple layers of jurisdiction and regulation that must be negotiated.

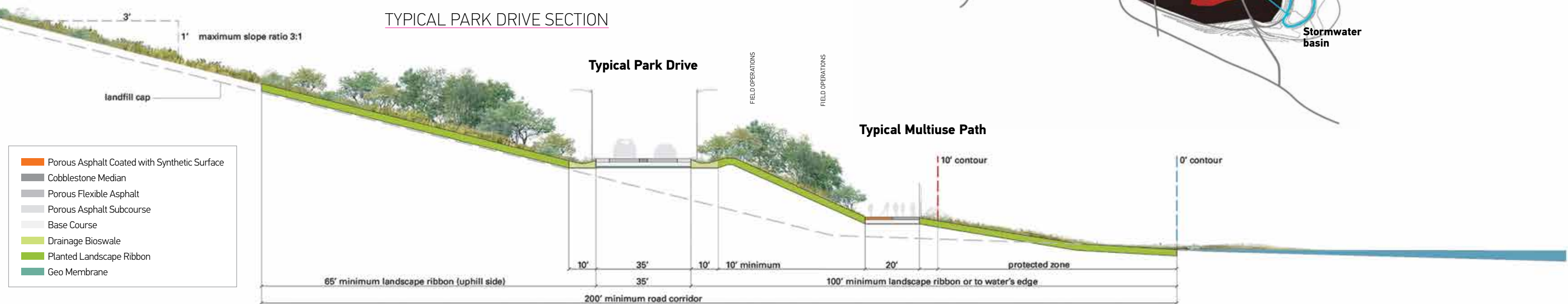
Three of the landfill mounds are naturally separated from one another by creeks, while the fourth is delineated by an expressway. Each mound has

its own dimensions, viewsheds, and adjacency to open water and developed areas—distinct conditions and opportunities. Closure, capping, and installation of systems to collect and treat the leachate and methane emitted by the mounds, and to mitigate against erosion, were conducted by the Department of Sanitation of New York beginning in 1986, on a separate timetable for each mound. Things moved slowly: This work was certified complete in 2022. During that time a few modest interventions, at the site's edges so they would not pose a risk of damage to any capped area, were carried out by the New York City Department of Parks & Recreation: the renovation of an adjoining, existing neighborhood playground; the construction of a 20-acre complex of sports






























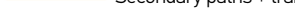

SOUTH MOUND COMPOSITE DIAGRAM



TYPICAL PARK DRIVE SECTION



SITE PLAN

	Low salt marsh		Bosque parking lot
	High salt marsh		Nonvehicular entrance
	Mudflat		Vehicular entrance to parking areas only
	Low tide		Vehicular entrance
	High tide		Ferry landing
	Wet woods		DSNY + Park Service entrance
	Swamp forest		Proposed interchange
	Dry prairie		Existing interchange
	Moist prairie		New park drive
	Successional meadow		New park drive – Alternate A
	Turf		New park drive – Alternate B
	Program concentrations		Secondary park drive
	Grove		Primary recreational path
	Sycamore bosque		Secondary paths + trails
	Proposed woodland		Lighting and media screens
	Existing woodland		

fields across a road from a residential area; and a 3.2-mile multiuse path along a busy boundary boulevard. These provide recreational opportunities to nearby communities, raising awareness of the park's advent. One other initiative was realized in that time, though then out of public sight: cleanup and wetland restoration along a prominent creek. But these projects hardly evoke Field Operations' imaginative plan for Freshkills as a whole.

Faced with a challenge so large, the firm chose to conceptualize the park in smaller, more manageable pieces. The master plan defines the four mounds as distinct parks within the park, called North, East, South, and West Park. They are, respectively, 233, 482, 425, and 545 acres. Where the four come together, a fifth area of 100 acres has been dubbed the Confluence. (The remaining 400-plus acres of the site were never dumped on by Sanitation, but nevertheless accumulated a scattering of

old appliances and other junk.) What is suggested for each of the four parks varies. But generally, what will be possible on the mounds are low-impact interventions along the lines of paths and art installations, and activities such as biking, kite flying, nature study, golf—and savoring the views, which include the Manhattan skyline. Dry lowland edges, however, off but adjacent to the caps, can accommodate parking, modest structures like restrooms, and sports fields. “These active recreation pieces set us apart from other landfill-to-park conversions,” says the landscape architect Adrian Smith, FASLA, the parks department's capital projects division team leader for Staten Island.

The Confluence is different. At sea level, it is where refuse-laden barges docked and their contents were transferred to trucks to be hauled and tipped onto the mounds. It is already largely paved and bulkheaded. The plan imagines it as an intensive activity center that could include boat launches;



FRESHKILLS PARK PROGRAM PLAN



a ferry landing; structures with large footprints like viewing stands and restaurant, market, and event spaces; plus, maintenance facilities, a visitor center, and waterfront promenades.

The Freshkills site remains the property of the Department of Sanitation. Part of it is still used: Staten Island's garbage is brought there, but these days it is containerized and sent by rail to South Carolina. The New York City parks department will develop and manage the site for public use. Sani-

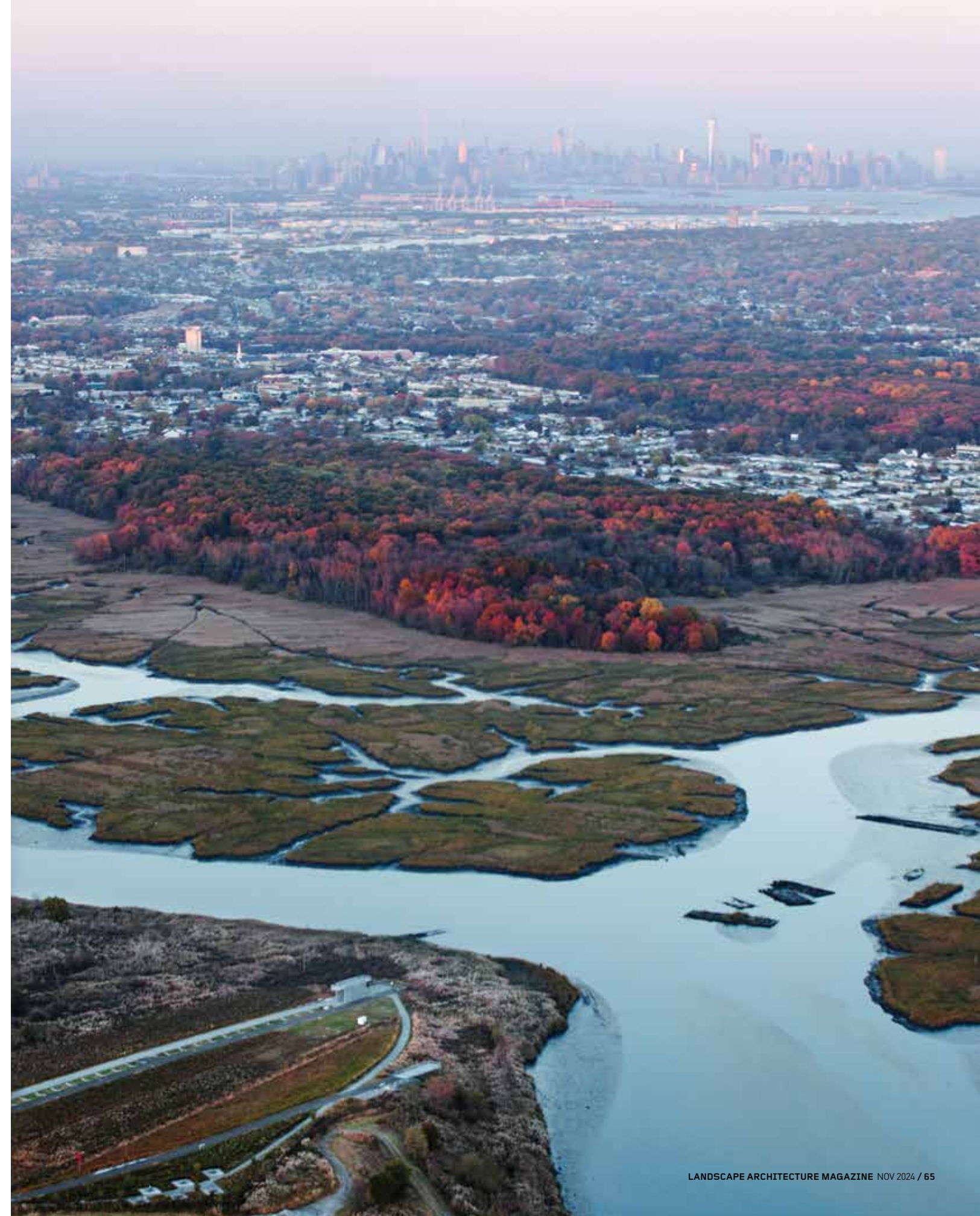
tation will remain responsible for environmental remediation and monitoring. The shared presence of Parks and Sanitation only begins to suggest the bureaucratic labyrinth of this project. "You're dealing with federal, state, and city levels. You have the wetland regulatory context, the coastal condition, the landfill issues, and then overlay all of the internal city reviews and approvals at every stage," says Andrew Deer, ASLA, New York City Parks and Recreation's senior project manager for Freshkills. Add to that the revolving door in the mayor's office:

ABOVE
High-intensity uses will be clustered off the capped mounds.

OPPOSITE
The Lower Manhattan skyline 14 miles away can be viewed from high points in the park.

FIELD OPERATIONS

MONA MIRVI/SUSTAINABLE PHOTOGRAPHY



PATHS AND TRAILS PLAN

- Multiuse Path
- Bicycle Path
- Pedestrian Path
- Hiking Trail
- Mountain Biking Trail
- Equestrian Trail
- Pedestrian and Bicycle Bridge
- Nonvehicular Park Entrance



FIELD OPERATIONS' PLAN OUTLINES MANY INTRIGUING DESIGN GESTURES.

BELOW
Freshkills Park's 2,200 open acres are in extraordinary condition.



Since the master plan's publication, the city is in its third administration. "The landscape architects that work on it are often surprised and flummoxed by the number of reviews and approvals required to make something happen," Deer says. Eloise Hirsh was Freshkills Park's administrator from 2006 to 2022. "All our work was characterized by hoops and barriers," she says. "But the plan organized the site in a way that was legible to the public and the government agencies."

The first project completed that is not on the Freshkills periphery is called North Park Phase 1.

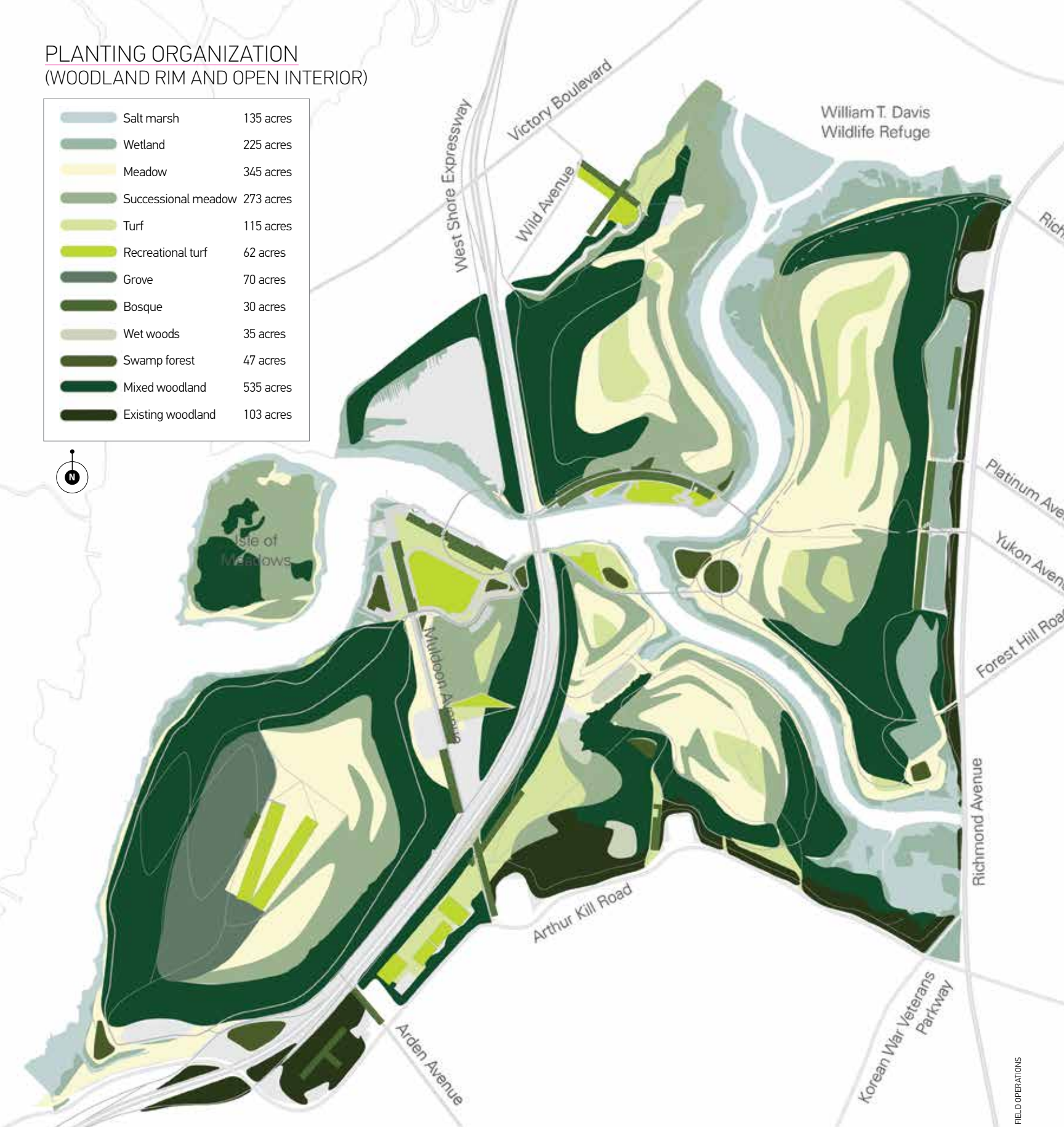
Opened in October 2023, it is 21 acres, less than 1 percent of the whole park's area. "It takes us around three years from the time we get funding to when we can rivet on a new project," Smith says. "Design usually takes about a year, procurement takes about a year, and most projects take about a year to construct." North Park Phase 1 "was a very different story," perhaps presaging timeline challenges to come. It took five years.

To get there, you drive through a chaotic node of industrial, commercial, and residential uses with an expressway interchange to a driveway that leads

FIELD OPERATIONS. LEFT: MONA MIRI/SUSTAINABLE PHOTOGRAPHY. RIGHT

PLANTING ORGANIZATION
(WOODLAND RIM AND OPEN INTERIOR)

Salt marsh	135 acres
Wetland	225 acres
Meadow	345 acres
Successional meadow	273 acres
Turf	115 acres
Recreational turf	62 acres
Grove	70 acres
Bosque	30 acres
Wet woods	35 acres
Swamp forest	47 acres
Mixed woodland	535 acres
Existing woodland	103 acres



ABOVE

The park is ideal for low-impact activities like kayaking.

OPPOSITE

A complex of forest, meadow, and wetland habitats is envisioned.

to a 75-car parking lot. The lot's car bays are separated by beds, each planted with several American sycamores. This design approach, which the plan calls a bosque, is the template for parking at Freshkills. North Park Phase I has restrooms with composting toilets, a few picnic tables, and solar-powered lighting. But it is little more than a half-mile corridor with a pair of parallel walkways, one gravel and one paved, into the park interior. Still, though narrow, it feels expansive and unconfined. To one side of the corridor is a shrubby wetland. To the other, the slope of the north mound rises gently, almost featureless. The only thing delineating the corridor from the vastness of the site, and areas where people shouldn't wander—the wetland and the capped mound—is black chain-link fencing. The paths split, one route ending at a low tower and the other at an ADA-accessible platform. From either vantage point there is a mesmerizing panorama of water and waving salt grass and distant trees. The creek and its verges probably looked like this centuries ago.

This is the location of that earlier wetland restoration. "It was a field of plastic bottles, there were tires," declares Tatiana Choulika, ASLA, Field Operations' project lead. The pathway "drags you from the city out into wilderness," she says. "It's super simple. It's like nothing. But at least it provides access, gives people a view of the scale of the place so that they understand. If we had built the walkway and people got out there and saw trashed-up wetland, the inspiration factor would be gone." While the master plan intends 330 acres, in aggregate, for active programming and the intensive uses suggested for the Confluence, the plan states that "the majority of the park—1,740 acres—is devoted to natural areas, including open water, salt marsh and freshwater wetlands, meadow and woodland." The time and resources needed to heal such a sprawling, denatured place are made explicit. The parkland, according to the plan, should "be understood and enjoyed in each phase of its development as a legible 'landscape in process,' designed to promote successional diversification

“MY GOAL WAS TO MAKE THE PARK INEVITABLE.”

—ELOISE HIRSH



LEFT
The paths of North Park Phase 1 lead to the wetland edge and a viewing tower.

over time.” That’s an inspiring idea, though it’s unclear how such readability might be achieved. Succession is already occurring on its own, though. Between them the capped mounds now provide 1,000 acres of grassland, rich habitat for birds and small mammals. Since the north mound was capped, in 1997, several volunteer trees have established themselves there—both desirable ones such as cottonwoods and varieties less so, like Callery pear.

“From wildlife corridors in adjacent green spaces,” says Deer, “we start to see species popping up that we hadn’t seen before”—red fox, diamond-back terrapin, and sparrow species of concern, for example—“noticeable larger mammals, reptiles, or birds that are studied and that people are watching closely. For every one of those there’s probably hundreds of smaller, less studied or acknowledged microorganisms, plants, and insects,” Deer says.

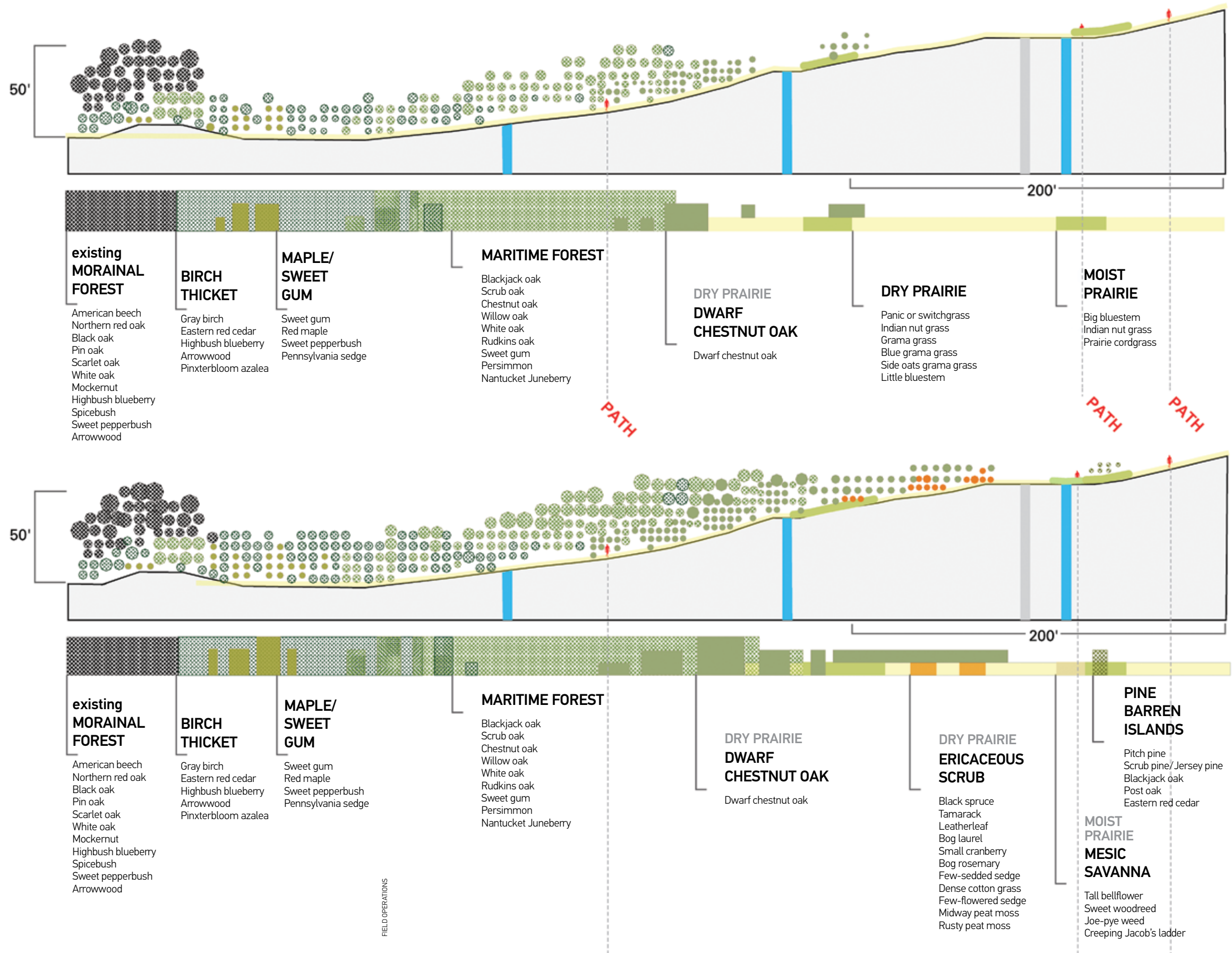
Field Operations’ plan outlines many intriguing design and rehabilitation gestures. There is the suggestion of borrowing agriculture-industry techniques, for example: Soil enrichment might be achieved through repeated strip cropping and plowing in of fast-growing plants. References to the site’s history could include exhibition of landfill machin-

ery, and floating gardens planted on former garbage barges. An installation for East Park, conceived by the artist Mierle Laderman Ukeles, would reveal the grid layout of the buried methane collection system using tiny mirrors by day and pulsing points of light at night. A September 11th monument proposed for West Park would consist of two huge but simple earth forms, the same dimensions as the destroyed towers, but as if laid on their sides and slightly tilted up. The 2001 terrorist attacks have a particular poignance on Staten Island, since 274 borough residents died in the attack and many first responders from there participated in the recovery efforts. Parkgoers could walk up these earth forms and find themselves at Freshkills’ highest point, with uninterrupted views in all directions.

The master plan proposed that the many discrete projects that will comprise the park be addressed in three 10-year phases, upon completion of a final environmental impact assessment. That was released in 2009. Understandably, the further in the future a proposed project was anticipated to happen, the less detailed description it received. Wisely enough, the conditional was liberally used—things “may” or “could” be done—even in describing the 25 “major projects” slated for the initial 10-year phase. Fifteen years later, only about a third of those first-phase projects have

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PROPOSED HABITAT
DIVERSIFICATION



RIGHT
The plan's long
timeline anticipates
habitat evolution.

been undertaken. Others are moving forward now, but at a similarly belated pace. Planning is underway for walking and bike trails in East Park. Development of a second sports field complex for South Park, and a more sweeping redo of that previously mentioned existing playground, are both in procurement. Planning has also begun for the park's internal road system.

Cars, inevitably, are baked into the vision of the park. Many planners and urbanists now urge the expansion of other modes of travel, and the roads that were features of many cities' Olmstedian parks—including in New York's Central Park, Piedmont Park in Atlanta, and Cherokee and Iroquois Parks in Louisville, Kentucky—have been closed to motor vehicles. So it is jarring to learn that seven miles of roads are contemplated, for circulation and "scenic driving experiences." These roads are intended to improve connectivity between areas outside the park as well as to allow visitors to get around within it. And the plan would hardly be possible without them. To create the Confluence, for instance, and enable numbers of people to attend events and enjoy the amenities there, it will require not only roads but a new "signature" bridge. The park is too big for most people to explore on foot or bike. And as the master plan acknowledges, "it is unlikely that a paradigm shift away from a highly car-dependent community will take place within the next 50 years on Staten Island."

Before anything was built, "my goal was to make the park inevitable," says Hirsh. "We were so conscious of how long it would take to build that we needed to develop love for it." Thousands attended annual open days and kayaking events. "Constituencies emerged," she says, or were

RIGHT
The viewing deck, though universally accessible, puts visitors at the same elevation as the bird tower.

cultivated, for example, among birding enthusiasts, photographers, and cyclists. Now the Freshkills Park Alliance, the park's nonprofit support group, hosts activities such as nature walks, citizen science projects, arts workshops, and school field trips. Current park administrator and Alliance President Mark Murphy says that the roads on the mounds left in place by Sanitation, with their switchbacks and elevation changes, make it "one of the best gravel-bike locations in the region"; an annual race on an 18-mile course attracts riders from as far away as the Carolinas. Murphy is setting up a certificate training program in park and trail maintenance to provide a "sellable skill" to at-risk youth. All this suggests that there are audiences for specialized activities at Freshkills that address particular needs and passions.

Still, despite being in the country's most populous city, Freshkills may never see the visitation levels of a typical urban park. (Staten Islanders are only 6 percent of the city's residents. For the other 94 percent, alas, the site is distant and difficult to reach, a destination to consider and plan for, not somewhere to go on impulse or with frequency.) But then, it never could be a typical urban park. Chouluka recalls being at the top of the north mound during one of the open days. "You could see a full forest, you could see a full wetland, the rivers, the Manhattan skyline, kids flying kites," Chouluka says. "A woman from a nearby neighborhood approached. She said, 'I grew up here, with all these smells. So where's the landfill?' And I said, 'You're standing right on it.'" ●

JONATHAN LERNER'S MEMOIR *PERFORMANCE ANXIETY: THE HEADLONG ADOLESCENCE OF A MID-CENTURY KID* IS OUT NOW FROM WIPF AND STOCK PUBLISHERS.

MONA MIRI/SUSTAINABLE PHOTOGRAPHY

