SPECIAL ISSUE

FOUND GROUND
Putting the city back together

UNDERPASS PARK
Lost and found in Toronto

OVER THE TRACKS
Nelson Byrd Woltz covers New York’s Hudson Yards

DALLAS IS HOOKED
Klyde Warren Park has changed the downtown landscape
A few years ago, Mary Pat McGuire, ASLA, became fascinated by the South Side of Chicago—or rather, with what was beneath it. She was flying back to the East Coast often, leaving from Midway Airport, and she started to notice “really interesting patterns along the coastline that looked like stripes, ridges along the shore. They were some kind of remnant,” she says, describing the landscape south of the city. “I just started to wonder, ‘What’s really going on here? What was this place?’”

McGuire, an assistant professor of landscape architecture at the University of Illinois at Urbana-Champaign, was already familiar with the South Side’s more recent history of white flight, shuttered industry, and disinvestment. Now, she became interested in the area’s geologic history, and how it might be put to work. The landforms she spied from the air prompted McGuire to look at early soil maps made by the U.S. Geological Survey. What she found were the ghosts of Lake Michigan’s shoreline: giant sand deposits, old dunes, just inches below the surface but as much as 25 feet deep, hiding beneath the surface of the city.

The discovery has spurred a multifaceted research project that rethinks the materiality of cities’ surfaces. McGuire sees the asphalt and concrete layer
that covers much of Chicago as a “hard scab” that obscures the area’s history and shunts water into an already overtaxed stormwater system. She wants to instead find ways to reveal, and eventually tap into, the naturally occurring soils and sand below. “We need to design at the level of the raindrop, and not be just thinking about the interceptor system,” she says. “[We need] to work back up to the surface of the city.” By mapping the sand deposits, McGuire hopes to identify ways these underground resources could be used for water infiltration and storage. “The University of Chicago and Chicago Medical Center sit over sand, and they’re very aware of that, but they don’t design with that soil in mind.”

If the city were to take advantage of its geology, the benefits could be far-reaching, says Steve Brown, the chief scientist at the Illinois State Geological Survey, part of the Prairie Research Institute at the University of Illinois at Urbana-Champaign. Urban flooding, coastal resilience, the water quality of the Great Lakes and the Gulf of Mexico—the ways cities like Chicago manage their stormwater affect each of these and more. What Chicago offers, Brown says, is the opportunity to think about how a city’s underlying geology should inform its strategies for dealing with water.

This spring, McGuire will continue her investigations, a collaboration with the Illinois State Geological Survey (ISGS) and archival research from the Geological Records Unit and Samples Library, University of Illinois. ISGS is conducting a soil survey of Cook County, she says, “so we’re hoping to get really good soil sampling in these areas.” She’ll also work with two graduate research assistants to identify impervious, flood-prone areas within the coastal sand belt. From there, they will identify specific parcels for pilot projects. She’s reluctant to speculate about a design intervention but expects it may involve a “vigorous” act of “creative destruction” of the impervious layer, in combination with efforts to make visible the city’s geologic history. “My sense is that there’s a kind of art-based practice that first takes place, just to get us to see the thing,” she says. “And then there may be an idea of what we want to do.”