

# ABSTRACT

**PROJECT NAME:** Mill 19, Phases A + B

**LOCATION:** Pittsburgh, PA

**ENTRY CATEGORY:** General Design

**PROJECT DESCRIPTION (100 words):**

Nested within the armature of a 1,300-foot-long historic steel mill along Pittsburgh's Monongahela River, two new buildings sit in the shadows of trusses clad with solar panels. The multi-phased adaptive reuse project is located within a 170-acre brownfield site that is being transformed into a highly sustainable, high-tech innovation district. The preserved steel frame of the Mill celebrates the history of labor and a regenerative future while providing new landscapes and experiences made from post-industrial remnants. A stormwater channel, immersive native planting, and public gathering spaces anchored by salvaged steel furniture re-imagine a public realm that celebrates industrial legacy.

# NARRATIVE

## CONTEXT

The quarter-mile long Mill 19 sits at the heart of Hazelwood Green, the City of Pittsburgh's largest riverfront development project and its last remaining large-scale brownfield. Nestled between the Monongahela River and the vibrant Hazelwood community spread across the adjacent hillside overlooking the site, Mill 19 is the catalytic economic development-focused transformation of the former Pittsburgh Jones & Laughlin Steel Company into a green, sustainable advanced manufacturing research center.

More than a century of steel workers toiled away on this very ground to provide the much-needed steel for the nation. The few traces of history that remain on the site (Mill 19, Roundhouse, Pump house, barge docks and rail lines) resonate with Hazelwood neighbors and remind new generations of residents that the inventive spirit and industrial scale of the steel yards endure. Now owned by Regional Industrial Development Corporation (RIDC), Mill 19 Phase A and B is home to manufacturing, research, and development tenants, with a focus on A.I., automation, and robotics.

## DESIGN

From the beginning, in collaboration with the architects, the design for the project set out to investigate, embody, and honor the Mill's industrial legacy. Early site investigations inventoried the textures, materiality, and character of the post-industrial site and structure through rubbings and clay impressions. The original Mill's metal walls and roof have been stripped away, intentionally revealing its underlying steel superstructure. The preserved and deconstructed exoskeleton reinterprets the former volume of the Mill, honoring the ghost of what was while positioning the structure as part of the landscape and providing new opportunities to gather, explore, and relax amidst wild disturbance-adapted gardens.

The South Porch anchors the southern end of the Mill within a large east-west "green finger", an open space component of the master plan that establishes a community connection across the entire site from the neighborhood to the Monongahela River. With the former loading dock converted into a large stage overlooking an adjacent plaza and a flexible open space, the South Porch hosts events and gatherings that serve the Mill 19 community as well as the broader development and Hazelwood neighborhood. A quarter-mile long loggia runs north from the South Porch, threading gathering spaces of different scales along the west façade of the Mill.

Vertical circulation and access to the buildings takes the form of dynamic yellow bridges, stairs, and overlooks that vertically stitch in and out of the exoskeleton to connect down to the loggia and provide spectacular views of downtown Pittsburgh and the Monongahela River.

## **NARRATIVE** *continued*

### **RESILIENCE**

Phases A and B showcase a range of sustainable measures to meet the goal of achieving LEED-NC v4 gold certification and near net zero energy usage. Alternative sources of energy, storm and wastewater management, carbon sequestration, and a resilient disturbance-adapted planting design are the key sustainable components of the project. The inability to infiltrate stormwater above contaminated soils in the southern end of the Mill was one of the site's most significant constraints that turned into one of its most productive assets. A 12' wide water channel flanks the entire western façade and is designed to handle 1.1 million gallons of rainwater through a sequence of wetland retention basins, infiltration gardens, and a below-grade cistern. The facility provides a 52% reduction in potable water use with rainwater reuse for cooling towers and building flushing.

Spontaneous plant species like sumac, black locust, quaking aspen, virginia creeper, chickory, ferns, and little bluestem form the backbone of an array of wild gardens. The planting design embodies the unruly and tenacious qualities of post-industrial landscapes, providing substantial ecological services that are low maintenance and low cost. The design aims to mix the aggressive disturbance-adapted species that store carbon at a faster rate, with slow growing native species that sequester high amounts of carbon over time such as London plane and Tulip trees.

### **MATERIAL STORIES**

Through a careful and sensitive process of inventorying, salvaging, editing, restraint, and innovation, the design for Mill 19 rejects erasure and integrates new elements made from remnants of the past. The original concrete floor slab was cut into a variety of sizes and re-deployed as stepped terraces, faux rail ties, and pavers as well as crushed into different scales of rubble to be reused as surfacing material. The exoskeleton was edited to remove dangerous pieces, create sufficient openings for emergency access, and windows for views. Salvaged steel members were re-imagined as custom furniture elements, retaining walls for terraces, and railings. The innovative re-use of on-site materials helped to meet a limited landscape budget.



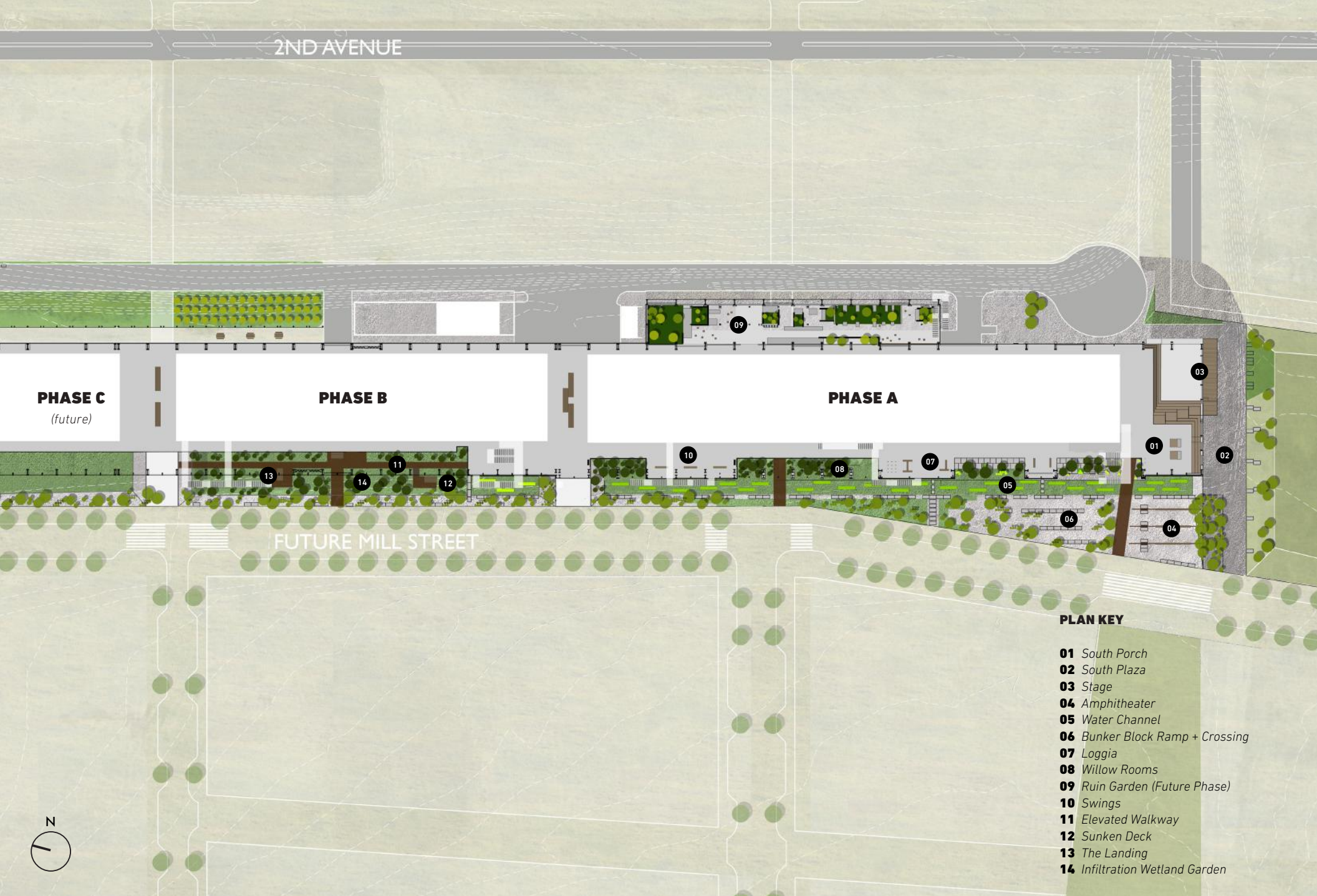
## INDUSTRIAL HERITAGE

Stories of J&L Steel (1884 to 1974) and LTV Coke Works (1974-1998) continue to echo through generations of Steel City residents. More than a century of workers toiled away on this very ground to provide the much-needed steel for the nation.



## EXISTING MAGIC

From the beginning, the design for the project set out to investigate, embody, and honor the Mill's industrial legacy. Early site investigations inventoried the textures, materiality, and character of the post-industrial site and structure through rubbings and clay impressions.



2ND AVENUE

**PHASE C**  
*(future)*

**PHASE B**

**PHASE A**

FUTURE MILL STREET

**PLAN KEY**

- 01** South Porch
- 02** South Plaza
- 03** Stage
- 04** Amphitheater
- 05** Water Channel
- 06** Bunker Block Ramp + Crossing
- 07** Loggia
- 08** Willow Rooms
- 09** Ruin Garden (Future Phase)
- 10** Swings
- 11** Elevated Walkway
- 12** Sunken Deck
- 13** The Landing
- 14** Infiltration Wetland Garden



**A PLACE FOR MEMORY AND ACTIVATION**

The design integrates the mammoth steel structure as part of the landscape, revealing the rich history while providing new opportunities to gather, explore, and relax amidst wild disturbance-adapted gardens.



## THE LEGACY OF MILL 19

Nestled between the Monongahela River and the vibrant Hazelwood community spread across the adjacent hillside overlooking the site, Mill 19 is the catalytic economic development-focused transformation of the former Pittsburgh Jones & Laughlin Steel Company into a green, sustainable advanced manufacturing research center.



## EXOSKELETON

The original mill's metal walls and roof have been stripped away, intentionally revealing its underlying steel superstructure. Beneath the exoskeleton, there will be a 264,000-square foot high-tech complex separated into three new buildings positioned as an assembly line of boxes down the center of the Mill.





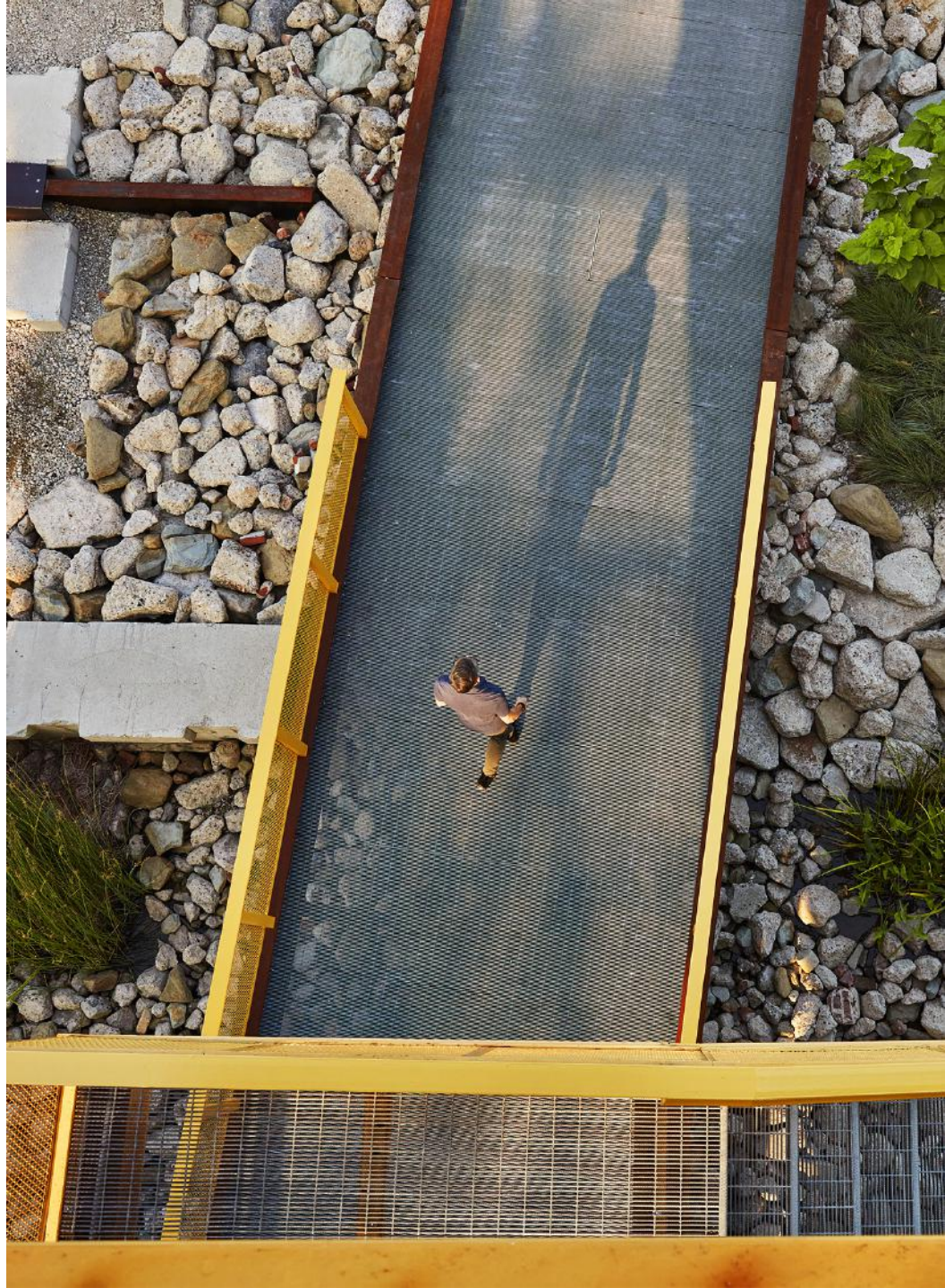
## SOUTH PORCH

With the former loading dock converted into a large stage overlooking an adjacent plaza and a flexible open space, the South Porch hosts events and gatherings that serve the Mill 19 community as well as the broader development and Hazelwood neighborhood.



## MANY EXPERIENCES

Vertical circulation and access elements take the form of dynamic yellow bridges, stairs, and overlooks that stitch in and out of the exoskeleton to provide spectacular views of downtown Pittsburgh and the Monongahela River.



## THE LOGGIA

A quarter-mile long loggia runs north from the South Porch, threading a range of public spaces along the west façade of the Mill. The loggia responds to the unique conditions of the exoskeleton to create furnished gathering spaces, stepped terraces, sunken sun decks, and floating walkways.



## MOVEMENT

The vertical circulation elements, the loggia, and the floating walkways move the body through a variety of conditions and provide experiences to climb, descend, hover, jump, cross, overlook, and hide.



## QUIET + AWE

The exoskeleton was edited to create sufficient openings for emergency access and windows for views. The seemingly monolithic façade is nuanced and unique from one bay to the next, inspiring a customized approach for how both the landscape and the loggia shift and weave through it.

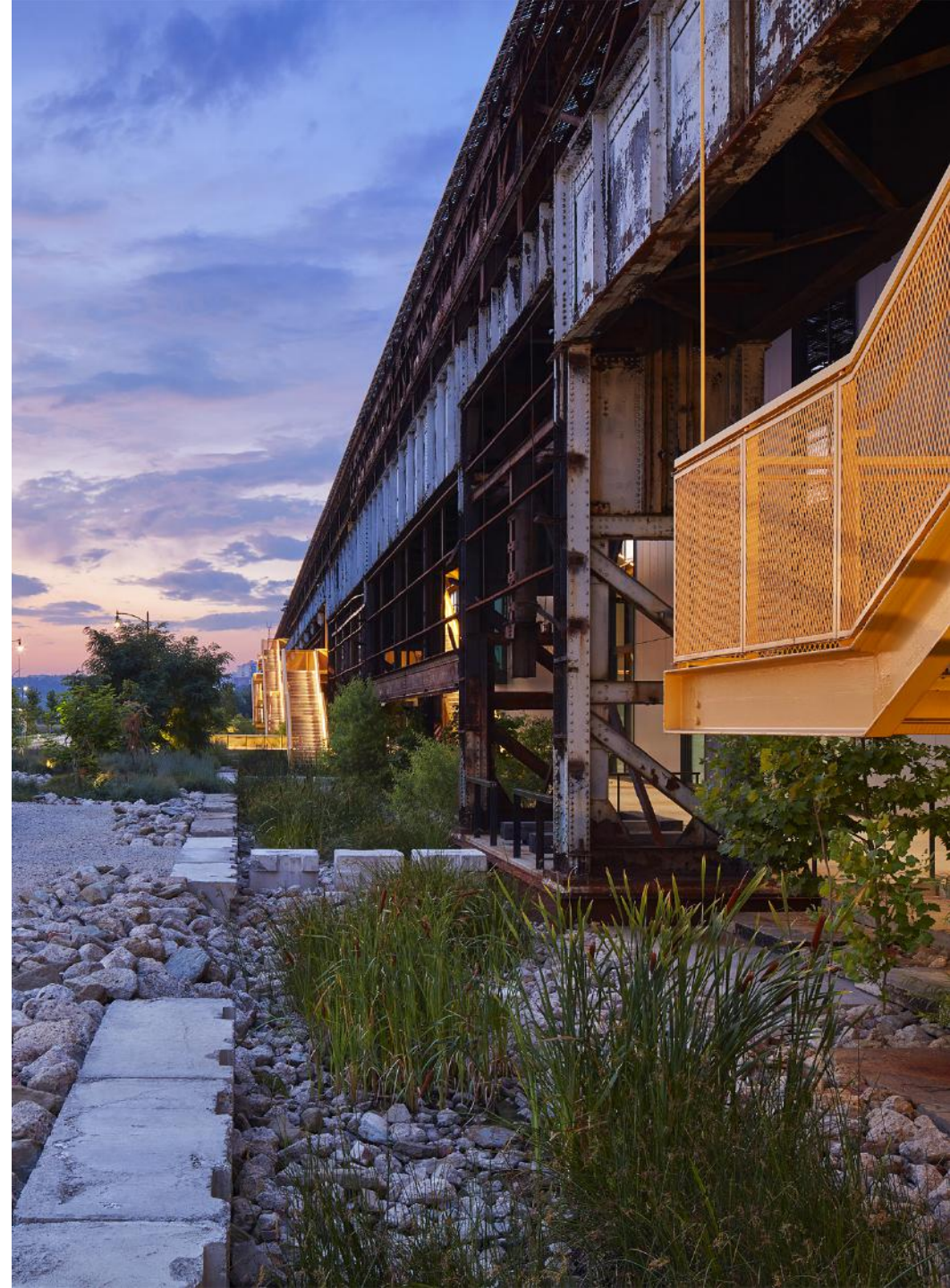
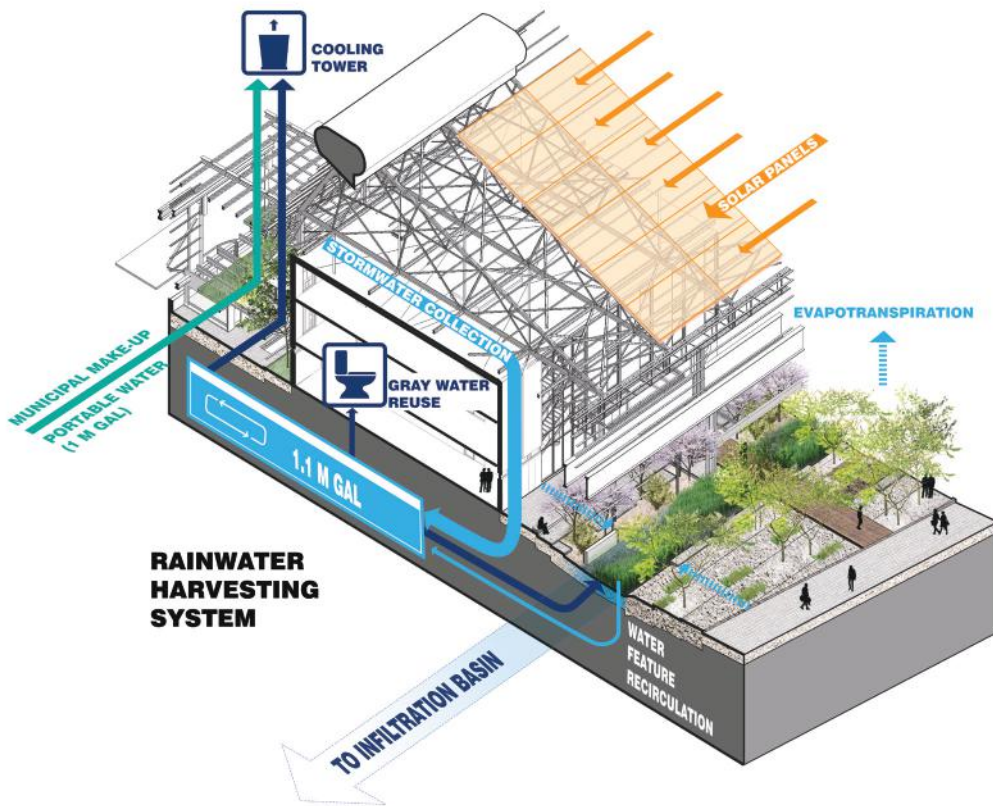


### **DISTURBANCE-ADAPTED PLANTING**

Simple interventions organize the ground plane, such as recycled concrete slab steps, straight lines of reclaimed bunker blocks, steel I-beam retained terraces, and an array of rubble surfaces. The ruderal aesthetic of the planting gently disturbs these elements, laying the groundwork for emergence and dynamic change over time.

# 52%

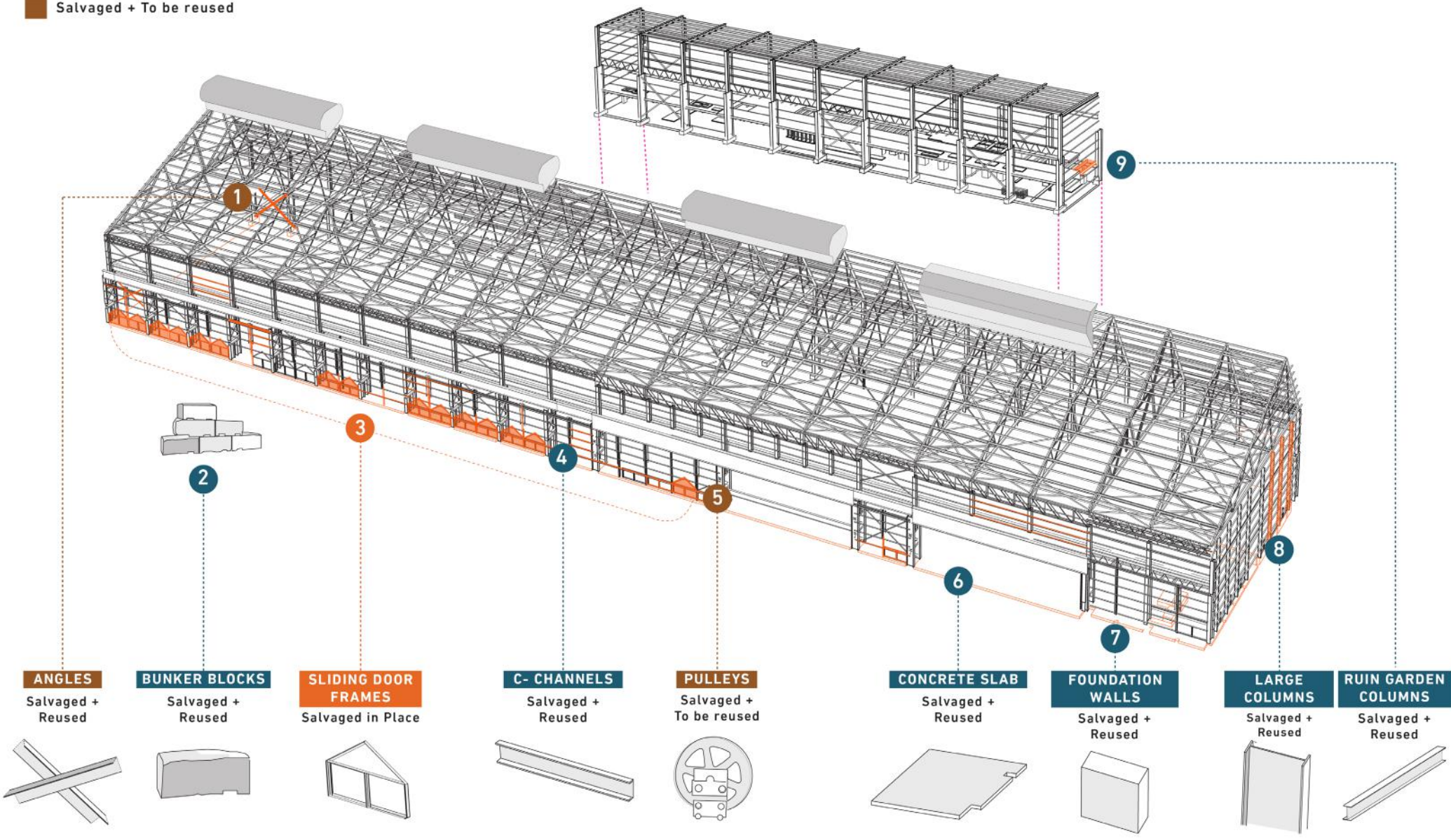
REDUCTION IN POTABLE WATER  
USE WITH RAINWATER REUSE  
FOR COOLING TOWERS AND  
BUILDING FLUSHING



## RESILIENCE

Phases A + B feature a range of sustainable measures to meet the goal of achieving LEED-NC v4 Gold certification and near net zero energy usage. Alternative sources of energy, storm and wastewater management, carbon sequestration, and a resilient disturbance-adapted planting design are the key sustainable components of the project.

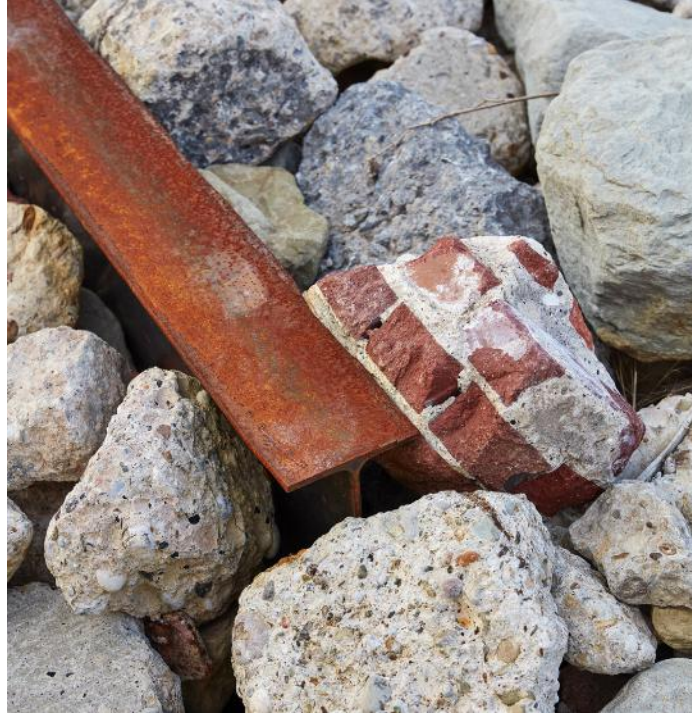
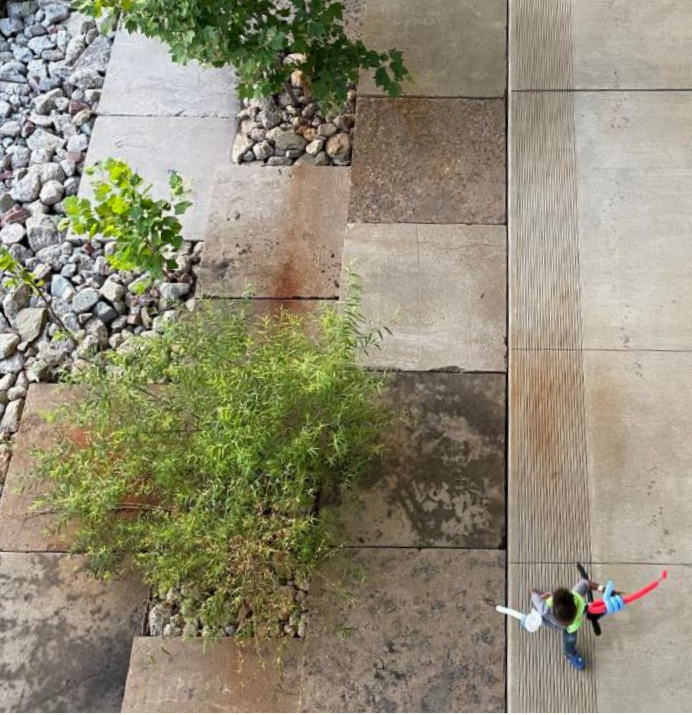
- Salvaged + Reused
- Salvaged in Place
- Salvaged + To be reused



**MATERIAL STORIES**

Through a careful and sensitive process of inventorying, salvaging, editing, restraint, and innovation, the design for Mill 19 rejects erasure and integrates new elements made from remnants of the past throughout the landscape.





## SALVAGE AND RE-IMAGINE

Salvaged steel members were re-imagined as custom furniture elements, retaining walls for terraces, and railings. Bunker blocks collected from across the site were used to frame and create bridges across the water channel. The innovative re-use of on-site materials helped to meet a limited landscape budget.



## A CATALYST

Owned by Regional Industrial Development Corporation (RIDC), Mill 19 Phase A and B is now home to tenants ushering in a new era of manufacturing, research, and development, with a focus on A.I., automation, robotics, and other innovations, including Carnegie Mellon University's Advanced Robotics for Manufacturing (ARM).