SteelStacks Arts & Cultural Campus: Reforging the Cultural Legacy of the Lehigh Valley

Keiko Tsuruta Cramer, ASLA
Principal, Landscape Architect, WRT
SteelStacks Arts & Cultural Campus

Reforging the Cultural Legacy of the Lehigh Valley
Can Arts + Culture be a springboard for economic development?

The regulatory hurdles and stakeholder engagement for a complicated brownfield redevelopment

How Can Underutilized cultural significance be re-imagined as public spaces and new identity for client and community

Unforeseen discovery during the construction and cost management
PROJECT BACKGROUND
• 1997 - Bethlehem Steel mill closes
• 1997 - Redevelopment planning begins + new flexible zoning established for site
• 2000 - TIF district formed
• 2003 - International Steel acquires entire 1,800 acre site
• 2007 – Sands Partnership acquires 120-acre site
1992

TIMELINE
PROJECT PROCESS + PHASING
Bethlehem Works Master Plan
Bethlehem Works Master Plan
Visitor’s Center
CAMPUS SITE PLAN_2013

CONCEPTUAL APPROACH:

In effort to preserve the integrity of the original Hoover Mason Trestle, the design approach has been to "tread lightly". All new walkways and planting bins will be supported by a new steel structure that clamps solely to the existing rail. Marked in painted color, the new walkway steel structure is clearly identifiable from the trestle structure below, floating lightly above, and allowing for a vibrant interpretation of old and new.

Respecting the linearity of the 1/2 mile long rail tracks on top of the Trestle, metal grating walkways are supported immediately above the tracks, embracing their parallel nature, and encouraging people to look down into the large bins below. These walkways are interrupted to introduce gathering spaces that frame views, directing your interpretive attention to items of historical importance. Finally, these spaces are buffered and enhanced by landscaping elements to allow for a complete experience that pays homage to the site as a historic landmark by treading lightly over the existing structure.

EXISTING PARALLEL TRACKS

INTERRUPTED PATHS ABOVE TRACKS

GATHERING SPACES THAT FRAME VIEWS

LANDSCAPING BINS

CONCEPT DIAGRAM
SYSTEM OF INTERACTIONS

Similar to the complex relationships between the Hoover-Mason Trestle and the entirety of the Bethlehem Steel plant, the addition of new architectural elements to the Trestle creates a three-dimensional and tectonic system of component interactions at a human scale. All elements are perched above the tracks, creating an archeological experience, treading lightly over the artifact below. The metal grating runs parallel over the existing rail tracks, encouraging people to look down into the bins below, while the zig-zag nature of the concrete decking focuses your view outwards, with the landscape serving as a means to both direct and shield specific views.

NEW WALKWAY ABOVE THE RAILS

EXISTING STRUCTURE REMAINS UNTouched BELOW THE RAILS

CATALOGUE OF SECTION TECTONICS + TYPOLOGIES

PLANTER + GRATING PARALLEL RELATIONSHIP

PLANTER + CONCRETE + GRATING COMPONENT INTERACTIONS

CONCRETE + PLANTER @ CANTILEVER

NEW WALKWAY CONSTRUCTION ABOVE THE RAILS

EXISTING STRUCTURE REMAINS UNTouched BELOW THE RAILS
COMPONENT TECTONICS:

Looking at the tectonics of the structures designed above the Hoover-Mason Trestle, perching the observer above the rails allows the observer to tread lightly through the steel stacks surrounding the walkway. At every point along the Trestle, one's focus is pulled above, below, and outward across the datum of the rail tracks. Coloring the vertical structural supports provides a distinct visual separation between the existing structure and the new construction. The new construction elements have vary in their vertical height above the tracks. The concrete gathering spaces which provide for specific views sit the highest above the tracks at +6.5’. The metal grating walkways that run directly over the tracks sit 1 step down from the concrete spaces at +6’, allowing your focus to be pulled down below the surface at the large bins below the tracks. Finally, the planting sits in a series of new bins below the paths that allow the landscape to grow up and around the walkways. The relationships between the tectonic components allows the viewer the most revealing interpretive experience of the site.
A WALK ON THE TREE

molten steel forms

ACCESS POINTS

INTERPRETATION

existing rail car steelworker names steel stacks overhead bins below rail tracks blower house + stacks KETTLE CAR A RT if ACT east - end of trestle east - end structure
ONE OF THE HARDEST JOBS IN THE WORLD
AD A V I N  A N G A M E R I C A

– PETE DIETRICH, TRUCK DRIVER

“THERE WAS A RIGGERS SHOP NEXT TO US, SO SOMETIMES THEY’D COME THROUGH. THE GUYS WERE ANGRY AND MEAN, WITH BEARDS AND RAGGED CLOTHES.”
– ERIC QUIMBY, NO. 2 MACHINE SHOP: FLOOR HAND

“I REMEMBER THE FIRST DAY I WAS ON THE JOB AND IT WAS SMOKY AND NOISY, IT WAS JUST INCREDIBLE. I ALMOST RAN OUT OF THERE, IT WAS LIKE A DUNGEON.”
– GUILLERMO LOPEZ, COKE WORKS: MILLWRIGHT


A STEELWORKER KNOWN AS A “PULLER OUT” SPENT HIS SHIFTS LIFTING HEAVY, RED-HOT CRUCIBLES OUT OF THE FURNACE AND ONTO THE SHOP FLOOR. HE WEARS WET LEATHER WRAPPINGS AND WOODEN SHOES TO PROTECT HIMSELF FROM THE INTENSE HEAT.

THE STRIKE IN 1941 BECAME SO VIOLENT THAT STRIKERS FLIPPED CARS OF POLICE BROUGHT IN TO MAINTAIN ORDER.

THIS 1914 PHOTOGRAPH OF A WORKER ILLUSTRATES THE EFFECTIVENESS OF SAFETY GLASSES AGAINST STEEL PROJECTILES.

HOT, LOUD, & DANGEROUS
I ALMOST WENT DOWN IN THE FIRE. IF BUDDY WAS STANDING RIGHT IN BACK OF ME, HE CAUGHT ME. OTHERWISE I WOULD HAVE BOTTLED IT UP, SURE THING. “IT WOULDN’T HAVE BEEN FOR MY OWN GOOD.”

WORK CONDITIONS IGNITE LABOR REFORM
STEELWORKERS OFTEN LABORED SIX OR EVEN SEVEN DAYS A WEEK IN LONG AND EXHAUSTING SHIFTS. ACCIDENTS WERE COMMON. OVER 500 MEN DIED ON THE JOB BETWEEN 1905 AND 1941. HUNDREDS, IF NOT THOUSANDS, WERE BADLY INJURED BY BURNING METAL, TOXIC GASES, AND FAST-MOVING MACHINERY. THE MEN WHO WORKED THESE DANGEROUS JOBS WERE DESPERATELY POOR AND MOSTLY IMMIGRANTS. FEW COULD AFFORD TO CHOOSE A SAFER OR EASIER JOB.

– FRANK FURRY, COKE AND ORE DUMPER

SIGNAGE MOCK-UPS


A STEELWORKER KNOWN AS A “PULLER OUT” SPENT HIS SHIFTS LIFTING HEAVY, RED-HOT CRUCIBLES OUT OF THE FURNACE AND ONTO THE SHOP FLOOR. HE WEARS WET LEATHER WRAPPINGS AND WOODEN SHOES TO PROTECT HIMSELF FROM THE INTENSE HEAT.

THE STRIKE IN 1941 BECAME SO VIOLENT THAT STRIKERS FLIPPED CARS OF POLICE BROUGHT IN TO MAINTAIN ORDER.

THIS 1914 PHOTOGRAPH OF A WORKER ILLUSTRATES THE EFFECTIVENESS OF SAFETY GLASSES AGAINST STEEL PROJECTILES.

HOT, LOUD, & DANGEROUS
I ALMOST WENT DOWN IN THE FIRE. IF BUDDY WAS STANDING RIGHT IN BACK OF ME, HE CAUGHT ME. OTHERWISE I WOULD HAVE BOTTLED IT UP, SURE THING. “IT WOULDN’T HAVE BEEN FOR MY OWN GOOD.”

WORK CONDITIONS IGNITE LABOR REFORM
STEELWORKERS OFTEN LABORED SIX OR EVEN SEVEN DAYS A WEEK IN LONG AND EXHAUSTING SHIFTS. ACCIDENTS WERE COMMON. OVER 500 MEN DIED ON THE JOB BETWEEN 1905 AND 1941. HUNDREDS, IF NOT THOUSANDS, WERE BADLY INJURED BY BURNING METAL, TOXIC GASES, AND FAST-MOVING MACHINERY. THE MEN WHO WORKED THESE DANGEROUS JOBS WERE DESPERATELY POOR AND MOSTLY IMMIGRANTS. FEW COULD AFFORD TO CHOOSE A SAFER OR EASIER JOB.

– FRANK FURRY, COKE AND ORE DUMPER

SIGNAGE MOCK-UPS


A STEELWORKER KNOWN AS A “PULLER OUT” SPENT HIS SHIFTS LIFTING HEAVY, RED-HOT CRUCIBLES OUT OF THE FURNACE AND ONTO THE SHOP FLOOR. HE WEARS WET LEATHER WRAPPINGS AND WOODEN SHOES TO PROTECT HIMSELF FROM THE INTENSE HEAT.

THE STRIKE IN 1941 BECAME SO VIOLENT THAT STRIKERS FLIPPED CARS OF POLICE BROUGHT IN TO MAINTAIN ORDER.

THIS 1914 PHOTOGRAPH OF A WORKER ILLUSTRATES THE EFFECTIVENESS OF SAFETY GLASSES AGAINST STEEL PROJECTILES.

HOT, LOUD, & DANGEROUS
I ALMOST WENT DOWN IN THE FIRE. IF BUDDY WAS STANDING RIGHT IN BACK OF ME, HE CAUGHT ME. OTHERWISE I WOULD HAVE BOTTLED IT UP, SURE THING. “IT WOULDN’T HAVE BEEN FOR MY OWN GOOD.”

WORK CONDITIONS IGNITE LABOR REFORM
STEELWORKERS OFTEN LABORED SIX OR EVEN SEVEN DAYS A WEEK IN LONG AND EXHAUSTING SHIFTS. ACCIDENTS WERE COMMON. OVER 500 MEN DIED ON THE JOB BETWEEN 1905 AND 1941. HUNDREDS, IF NOT THOUSANDS, WERE BADLY INJURED BY BURNING METAL, TOXIC GASES, AND FAST-MOVING MACHINERY. THE MEN WHO WORKED THESE DANGEROUS JOBS WERE DESPERATELY POOR AND MOSTLY IMMIGRANTS. FEW COULD AFFORD TO CHOOSE A SAFER OR EASIER JOB.
Welcome to the
HOOVER-MASON TRESTLE

LEARN ABOUT THE HISTORY OF BETHLEHEM STEEL

EXPLORE the TRESTLE