

**Last of the Blasts:
Celebrating the Carrie Furnaces' legacy through creative adaptive reuse**

by

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A REPORT

submitted in partial fulfillment of the requirements for the degree

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ABSTRACT

The United States holds a rich industrial history that is still seen today from architecture and the sites that hold them. Most of these sites have already been demolished, but a small number do remain. For those that remain, they are vacant, underused and most likely a brownfield. These sites have the opportunity to be used by people again as outdoor public spaces. Pre-World War II industrial factories hold a piece of the history of the United States and can be given to the people once more. This report focuses on the Carrie Furnaces, a longstanding steel production factory in the suburbs of Pittsburgh, Pennsylvania. The site represents Pittsburgh's steel production era of the late 1800s and early 1900s and has become local, national and international artists' inspirations since the early 1990s. After the furnaces became a designated National Historic Landmark, a rich 20-acre landscape is left that surrounds the beautiful industrial architecture.

Through the use of precedent studies, interviews and site inventory, a well-versed projective design will be produced. This report will analyze five industrial landscape precedents based on project scale, designer, previous use of the site, contamination history and more. The interviews will take place with two individuals who have worked on and with the Carrie Furnaces for the past 20 years. This report will gear questions towards understanding their personal experiences with the site and their hopes for the future. A thorough site inventory and analysis will be conducted, exploring existing conditions at the regional and site scale. Site analysis at the site scale will include site identity, site inventory, diagramming and opportunities, and constraints. From utilizing these methods, a projective design can show the future growth of the Carrie Furnaces through programmed spaces and economic opportunities that bring the history and space back to the people of suburban Pittsburgh.



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Figure 1.0: Looking up into the furnaces (Voigt, 2018)

TABLE OF CONTENTS

Chapter 1: <i>The Project</i>	[1]
Chapter 2: <i>The Background</i>	[9]
Chapter 3: <i>The Methodology</i>	[27]
Chapter 4: <i>The Findings</i>	[39]
Chapter 5: <i>The Design</i>	[133]
Chapter 6: <i>The Conclusion</i>	[151]
<i>Appendices</i>	[159]

LIST OF FIGURES

Figure 1.0: Looking up into the furnaces
Figure 2.0: Deer graffiti on iron ore elevator
Figure 3.0: Giant claw stands idle
Figure 3.1: Project matrix diagram, inspired from the book “Knowledge is Beautiful” by David McCandless
Figure 3.2: Timeline of the Carrie Furnaces, facts and dates sourced from the Western Pennsylvania Brownfields Center
Figure 3.3: Map showing the greater Pittsburgh area with the project site in view
Figure 3.4: Map showing a closer view of the project site
Figure 3.5: Map showing the project site
Figure 4.0: Student welding project
Figure 5.0: Iron ore train
Figure 5.1: Gas Works Park
Figure 5.2: Old structure still standing at Gas Works Park
Figure 5.3: The SteelStacks and the bridge to the Hoover-Mason Trestle at night
Figure 5.4: View looking out from the bridge
Figure 5.5: View looking out over the East River with the newly-opened Domino Park in the foreground
Figure 5.6: With new recreation spaces in the foreground, the old Domino Sugar Refinery still stands tall
Figure 5.7: Entrance to the elevated sky-walk at Wynyard Quarter
Figure 5.8: A look at the silos with a festival down below
Figure 5.9: Looking over the new landscape to see the remnants of the steel production era at sunset
Figure 5.10: One of bridge entrances to the site with old pipes from the factory used as art installations
Figure 5.11: Map showing the project site’s surrounding elements

Figure 5.12: Map showing the topography on and around the site
Figure 5.13: Map showing the slope degrees on and around the site
Figure 5.14: Map showing the hydrology systems around the site
Figure 5.15: View showing the flood retaining wall
Figure 5.16: Map showing the project site within the greater 168 acres
Figure 5.17: Map showing the project site
Figure 5.18: The National Historic Landmark document shown in map form
Figure 5.19: Site plan of the Carrie Furnaces showing the photograph locations of the eight photographs on the following page
Figures 5.20 - 5.27: Photographs 1-8 of the site
Figure 5.28: Site plan of the Carrie Furnaces showing the photograph locations of the eight photographs on the following page
Figures 5.29 - 5.36: Photographs 9-16 of the site
Figure 5.37: Site plan of the Carrie Furnaces showing the photograph locations of the eight photographs on the following page
Figures 5.38 - 5.45: Photographs 17-24 of the site
Figure 5.46: Site plan of the Carrie Furnaces showing the photograph locations of the eight photographs on the following page
Figures 5.47 - 5.54: Photographs 25-32 of the site
Figure 5.55: Site plan of the Carrie Furnaces showing the photograph locations of the eight photographs on the following page
Figures 5.56 - 5.63: Photographs 33-40 of the site
Figure 5.64: Site plan of the Carrie Furnaces showing the photograph locations of the eight photographs on the following page
Figures 5.65 - 5.72: Photographs 41-48 of the site
Figure 5.73: Site plan of the Carrie Furnaces showing the photograph locations of the eight photographs on the following page
Figures 5.74 - 5.81: Photographs 49-56 of the site
Figure 5.82: Map showing an inventory of the existing trees

Figure 5.83: Sycamore
Figure 5.84: American Elm
Figure 5.85: Staghorn Sumac
Figure 5.86: Tree of Heaven
Figure 6.0: The Carrie Deer, constructed by guerrilla artists in 1997
Figure 6.1: The new entry and entry sign to the Carrie Furnaces Industrial Park
Figure 6.2: The Carrie Furnaces Industrial Park concept plan
Figure 6.3: The Carrie Furnaces Industrial Park site plan with legend
Figure 6.4: Existing photograph
Figure 6.5: Proposed rendering
Figure 6.6: Existing photograph
Figure 6.7: Proposed rendering
Figure 6.8: Existing photograph
Figure 6.9: Proposed rendering
Figure 6.10: Existing photograph
Figure 6.11: Proposed rendering
Figure 7.0: A life-size rocking horse made of steel
Figure 8.0: The Steel Worker mural, painted on the graffiti wall by Daily Letters



Figure 2.0: Deer graffiti on iron ore elevator (Voigt, 2018)

CHAPTER 1:

The Project

1. INTRODUCTION

Located in suburban Pittsburgh, Pennsylvania, just outside of the small town of Rankin, stands the Carrie Furnaces. After being constructed in 1881, the factory produced iron ore for the Homestead Works across 168 acres of industrial riverfront land. Today, only Furnaces 6 & 7 remain and have become a beacon of historical significance to the greater Rankin and Pittsburgh area. The existing facility has been named a National Historic Landmark and continues to give building tours, host concerts and teach classes about iron ore to students. For this report and future projective design, this report will be focusing on 20 acres of the site that include Furnaces 6 & 7.

As the Carrie Furnaces have remained standing over the last several years, they were given the title of National Historic Landmark. National Historic Landmarks, or NHL, are nationally significant historic places that have exceptional abilities to illustrate and interpret American cultural heritage (National Park Service 2018). The Carrie Furnaces were given this title officially on September 20, 2006. This title can apply to not only structures but sites as well. Though, the Carrie Furnace structures are what is protected under this title. From extensive research, the land around the buildings are open for interpretation and can have a future design. As the report continues, a discussion in further detail will show the landscape architect's role with NHLs, designing on brownfield and vacant sites and how to preserve that history.

Historic sites, specifically pre-World War II industrial factories, contain a piece of what pushed the United States into present times. These sites hold stories and historical significance that show America's past. It is important as landscape architects to use design skills and knowledge to enhance historic sites in the United States better and make them usable spaces again. That is what this report and proposal are aiming to do, create a better understanding of the Carrie Furnaces and the National

Historic Landmark's limitations for landscape architects and ultimately propose a landscape design for the Carrie Furnaces that promotes economic growth through programming and landscape design strategies.

1.1 THE SPARK OF THE PROJECT

The personal fascination with industrial architecture stemmed from an early age. I grew up in the suburbs of Kansas City, about a 30-minute drive south. There were those special days when the whole family would load up and drive downtown for some once-in-a-lifetime reason. Kansas City is rich with stock yard history, and many of those buildings exist today. Staring out of the car window, deteriorating brick giants stare back at you with a historic beauty about them. They instantly caught the attention of my younger self and a quiet appreciation began to grow. There is a certain beauty about these historic vacant buildings that could be applied to the land around it.

In May 2018, I traveled to Germany to explore the coal mining and steel production region and what the country has done to not only preserve this history but make these places usable again. Amazing, grand scale landscape architecture projects grew from this mission that Germany had created. And they were meeting their goals. My inspiration flourished from here as I constantly asked myself questions like, "The United States has similar architecture but has anything been done?" and "What if a landscape architect took control of a project like this?". Upon further research I discovered the Carrie Furnaces, an iron ore smelting factory on the outskirts of Pittsburgh, Pennsylvania. I was instantly drawn to this place to research and design the landscape surrounding it.

1.2 PROJECT DEFINITION

The Carrie Furnaces, once known for their iron ore smelting, remains as an iconic entity on the Pittsburgh skyline. Although it is relatively known by surrounding local communities, Allegheny County still recognizes it as "vacant land". The approximate 20 acres that surround the Furnaces is enclosed by a chain-link fence and tours by appointment is one of the only ways for the public to access it. Concerts and other large-scale events happen here, but only on open land with no programming or design principles applied to gain the full access and potential that the site has. The Carrie Furnaces can be opened to the public and become an outdoor historic gallery that has more meaning to the community. Through precedent studies, interviews and site analysis, a schematic design for the Carrie Furnaces can evoke a public landscape park that meets the needs of the programs and enhances the history.

1.3 WORK AND DESIGN PROCESS

The goal of this report and project is to propose a schematic design that promotes history, increases programmed use and makes the space available to the public. Precedent studies will be analyzed in terms of size, current use and other relevant factors. Interviews will be conducted with two individuals who have 20 plus years' experience working with the Carrie Furnaces, asking questions related to what they want for the future of the site. A thorough site analysis will be conducted to highlight different areas of the Carrie Furnaces that can serve as opportunity or constraints. From this data, rigorous design meetings and charrettes with the report committee will take place to develop a schematic design for the Carrie Furnaces. In the end, a projective design will be proposed and discussed in further detail later in the book.

1.4 GOALS AND ANTICIPATED OUTCOMES

This report has three main anticipated outcomes that will potentially be achieved by implementing precedent studies, interviews and site inventory and analysis. First, this report hopes to gain a better understanding of our National Historic Landmarks and the process a landscape architect must go through to enhance these sites for public use and historic preservation. Second, to develop a better physical, cultural and social connection between the Carrie Furnaces and the surrounding communities of Rankin, Munhall, and Swissvale. Third, to tell the story of the Carrie Furnaces not only from the remaining structures but through the landscape that promotes a historic exterior place of gathering and growth of the economy.

1.5 WHAT TO EXPECT

This final Master's Report aims to inform the reader of the main design goals for *Last of the Blasts* – to gain a better understanding of our National Historic Landmarks and the process a landscape architect must go through to enhance these sites for public use and historic preservation; to develop a better physical, cultural and social connection between the Carrie Furnaces and the surrounding communities of Rankin, Munhall, and Swissvale; to tell the story of the Carrie Furnaces not only from the remaining structures but through the landscape that promotes a historic exterior place of gathering and growth of the economy.

The layout for the project, goals and anticipated outcomes will be outlined in *Chapter 1: The Project*. The intent for this chapter is to give basic information about why this site was chosen and the type of work that will go into it to make this report successful. *Chapter 2: The Background* will discuss the Literature Review that was previously completed in the Proposal submitted in Fall 2018.

The Literature Review will address topics including the history of the Carrie Furnaces, brownfields and vacant land, and historic design in the landscape. This chapter will build a strong base for the project, providing factual information that will help the design. *Chapters 3 and 4: The Methodology and Findings* will cover the methods used that will give this report results to create stronger design moves for *Chapter 5: The Design*. This chapter will lay out design decisions that were based on the results from the methods, only showing a schematic design option. *Chapter 6: The Conclusion* will show what was learned throughout this report and project and how this information can be used for landscape architects in the future. This report and project aim at providing a thorough understanding of the background, proposing a design solution and applying what was learned in the future of landscape architecture.

1.6 RESEARCH QUESTION

How can landscape design at the Carrie Furnaces enhance the history and build upon the future through programming, economic growth, and landscape design strategies?



Figure 3.0: Giant claw stands idle (Voigt, 2018)

CHAPTER 2: *The Background*

2. THE BACKGROUND

The focus of this chapter is to provide information that explains the history and location of the site. The background, or literature review, will reference multiple books, articles and government papers to create a strong base for this report to build off. The background will cover the following topics:

- The History
- The Carrie Furnaces
- Brownfields and Vacant Land
- National Historic Landmarks
- Designing Landscapes of History
- The Project Site

These topics inform design principles and create a better understanding of the site as this report and project moves forward. A rich knowledge of the history of the site and surrounding context helps landscape architects in designing a better sense of place for the local communities. These topics will help with the collection of data to create a realistic design for the Carrie Furnaces.

2.1 PROJECT MATRIX

The project matrix (Figure 3.1) gives an overview of the elements that make up the final goal for this project. This master report is made up of four elements: research, story, visual and design. Where each section crosses into the other, a characteristic that makes up a part of the report happens there. For example, when “research,” “story” and “design” come together, a timeline needs to be created. Each characteristic plays an integral part in creating a projective design, appearing where all four elements come together.

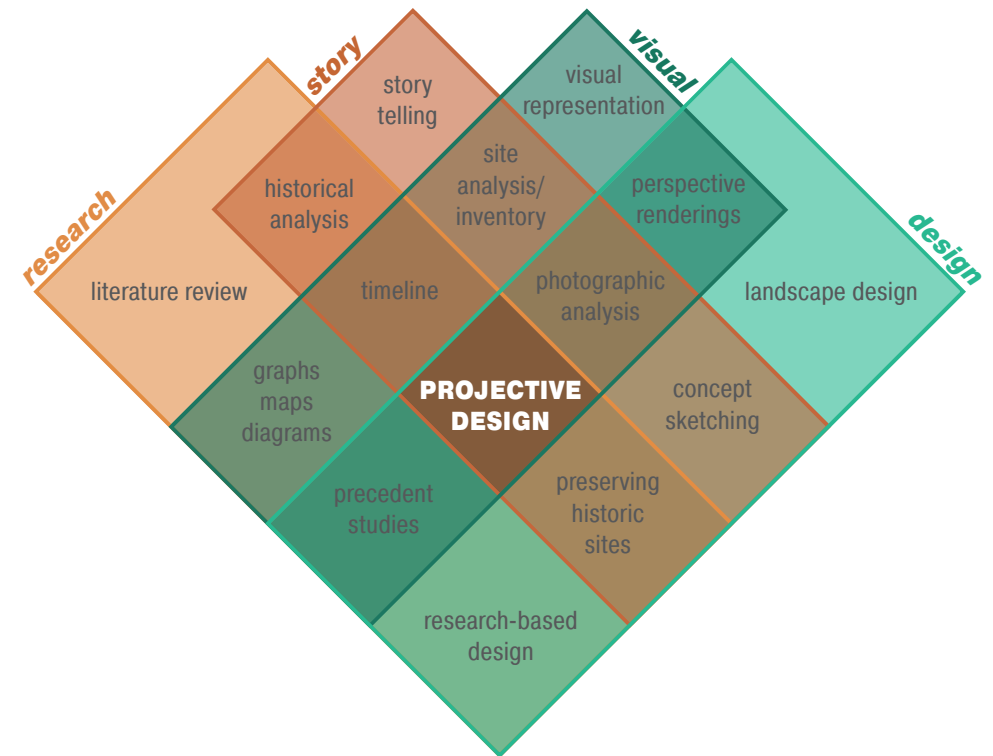


Figure 3.1: Project matrix diagram, inspired from the book “Knowledge is Beautiful” by David McCandless (2014), created by Emilee Voigt

2.2 THE CLAIM

This specific site, the Carrie Furnaces, is not being used to its fullest potential. These historic sites, best known for their pre-World War II architecture, have a numerous amount of untapped land. They do use the site currently for events like tours of the factory and concerts. But the site could have more potential if it was designed with programmed spaces that could accommodate more events/people and ultimately raise the economy and visitation to the area. But, why has a landscape architect not stepped in yet? What are the barriers that a landscape architect must go through to get to a finished project on this site and others like it?

2.3 INDUSTRIAL HISTORY IN PITTSBURGH, PENNSYLVANIA

Pittsburgh has a strong reputation for iron and steel production, especially in the late 1800s. At one point, Pittsburgh was even considered the powerhouse of European and American iron production. With blast furnaces going up left and right across Pittsburgh, advances in technology and the process for iron and steel production were changing the industry for the better. Many practices that were perfected in Pittsburgh in the late 1800s defined iron and steel making in the modern-era. During this time, "Pittsburgh can be considered a 'technological hearth' of the American iron industry, a locus of technological innovation from where new methods diffused to other areas" (United States Department of the Interior 2006). This was also the time and region where evolutions in the design of blast furnaces were changing, especially with two World Wars on the near horizon. In 1896, a well-known engineer stated:

"The evolution of the blast furnace, especially the American blast furnace, during the last third of the century has indeed been radical,

making the question of getting the material to the furnace and the product away from it promptly, cheaply and regularly – the problem once satisfactorily solved by the cart or sled, the wheelbarrow and manual labor – one of great difficulty and grave importance" (Axel Sahlin 1897).

As the early 1900s were approaching, Pittsburgh began to see the shift from human-operated machinery to mechanized operations. Times were changing, but the rich history of Pittsburgh's industrial past still remains today and should remain for years to come (United States Department of the Interior 2006).

2.4 HISTORY OF THE CARRIE FURNACES

The Carrie Furnaces were not always located in Pennsylvania. The original furnaces were constructed in Ohio in 1884. The site, where the Carrie Furnaces are located today, was built in 1881 and would become the future home of Blast Furnaces 6 & 7. Andrew Carnegie, the famed industrialist and business tycoon of the late 1800s, purchased the furnaces in 1898 and relocated them to the Homestead Works complex in Rankin, Pennsylvania. The Carrie Furnace site produced iron, which was then sent across the Monongahela River to the Homestead Works where steel was produced. The site continued to operate and produce iron for the next 80 years, up until 1978 when the furnaces ultimately shut down. At the time, the site was owned by the Park Corporation, a privately-owned company that managed industrial steel and electrical sites. In 2005, Allegheny County purchased the site from the Park Corporation. The Carrie Furnaces remain under the ownership of Allegheny County and were named a National Historic Landmark (NHL) in 2006.

The total site is 168 acres, with 135 acres located north of the iron transporting bridge and the remaining 33 acres located to the south of the bridge. The 33 acres were not originally a part of the Carrie Furnaces site

but were later purchased by Allegheny County. The site has been identified as “difficult to access” because of railroad tracks and roads that surround the site and make it difficult to navigate. An active rail line splits the Carrie Furnace site from the surrounding towns of Rankin, Swissvale, Whitaker, and Munhall and makes pedestrian access almost near impossible. As for vehicular access, a long stretch of road connects to the main road, but there is no “main entrance” and makes finding the site difficult for locals.

Figure 3.2, shown on the following page, graphically represents the broad timeline of the Carrie Furnaces. The timeline begins with the original construction of the furnaces up to its nomination for the National Historic Landmark.

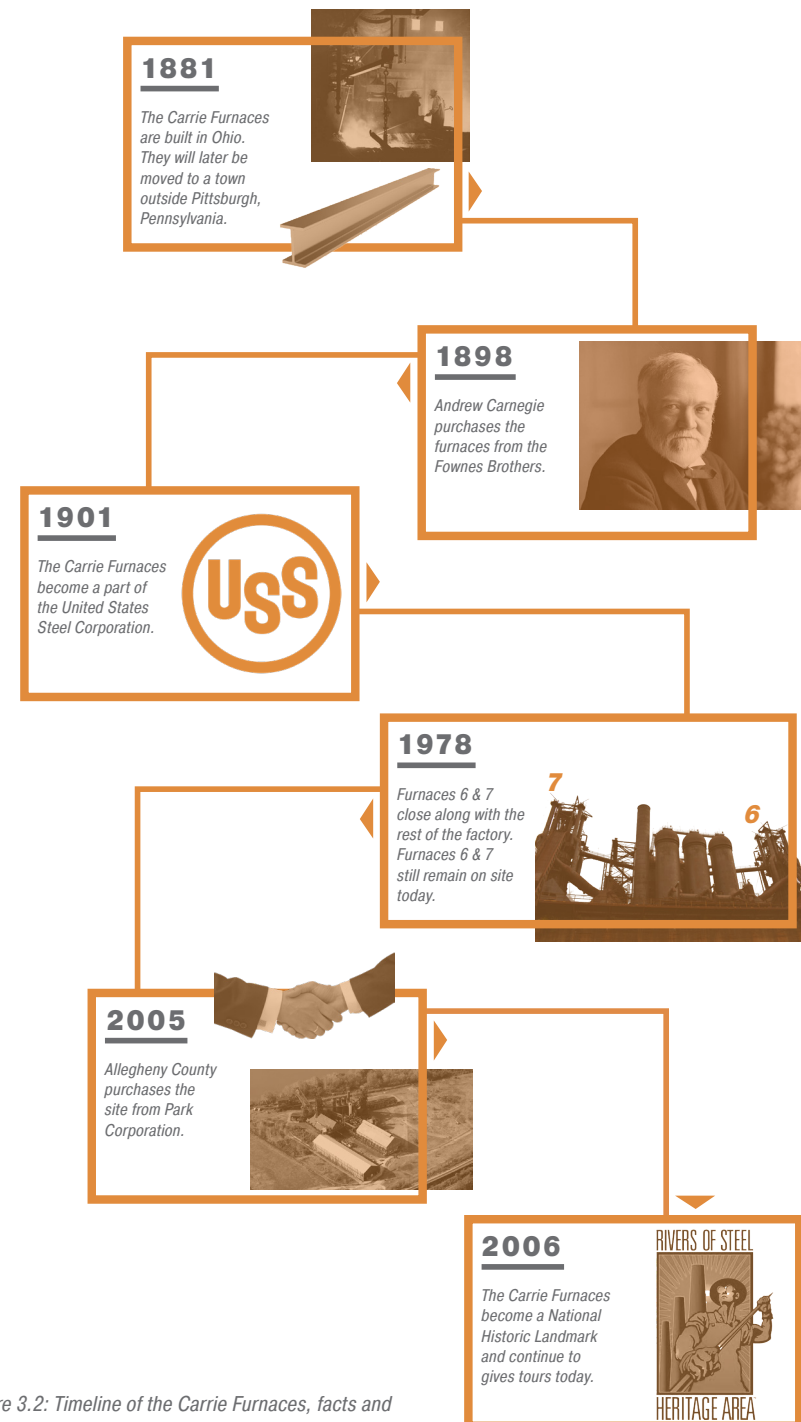


Figure 3.2: Timeline of the Carrie Furnaces, facts and dates sourced from the Western Pennsylvania Brownfields Center, created by Emilee Voigt

2.5 BROWNFIELDS AND VACANT LAND

The term “brownfield” is not new to the United States. The word originated in the early 1990s when researchers noticed how normal frameworks that were designed to help the environment were hindering the cleanup process for industrial sites (Hollander 2010). This term is “abandoned, vacant, derelict, idled or underutilized industrial or commercial property in the urban area with an active potential for redevelopment, where redevelopment is complicated by real or perceived environmental contamination, building deterioration/obsolescence, and/or inadequate infrastructure” (Niagara Falls Brownfield Redevelopment Strategy 2006). Hollander (2010) lists all of the most common types of brownfield sites including light-industrial factory sites, metal-plating factories, and steel production factories. These types of sites can be cleaned, and a lot of benefits come from brownfield rehabilitation. These benefits include preserving open space, reducing greenhouse-gas emissions and the reinvestment in urbanized communities. Currently, there are about 500,000 brownfield sites in the United States, with the greatest prevalence coming from post-industrial zones (Hollander 2010).

In relationship to the Carrie Furnaces, the term “brownfield” was used quite regularly as the site was a designated brownfield. The immediate surrounding land to the furnaces was severely contaminated with sulfates and polychlorinated biphenyl or PCBs. Gasoline storage tanks that were stored above and underground were removed in 1994. The Environmental Protection Agency or EPA conducted a Phase 1 environmental assessment of the land in 2007. Phase 2, conducted in 2011, uncovered other major contaminants like petroleum, iron residue and asbestos. To proceed with cleanup, the topsoil was removed and replaced with clean soil. In addition to the title of “brownfield,” the Carrie Furnaces are also a designated vacant site. The following section will explain in further detail the characteristics of a vacant site and what this means for the Carrie Furnaces.

Vacant land can come in all forms, shapes, and sizes. They can be seen as an old, abandoned factory surrounded by a chain-linked fence or a parking lot in between two office buildings. The word ‘vacancy,’ regarding land, does not have to mean that the site is completely barren, just that it is underutilized. In the book *Terra Incognita* (2004), urban economist Ray Northam classifies vacant land into five types:

- 1. Remnant Parcels: These parcels are small in size, often irregular in shape and have not been developed in the past.*
- 2. Parcels with Physical Limitations: These parcels are unbuildable due to major physical constraints such as steep slopes or flood hazard locations.*
- 3. Corporate Reserve Parcels: This land is held by corporations for future expansion or relocation (typically local firms such as utility companies).*
- 4. Parcels Held for Speculation: This land is owned by corporations, estates or single parties in anticipation of a profitable, market-rate sale at a later time, and is frequently found in transitional areas.*
- 5. Institutional Reserve Parcels: These tracts of land are set aside by public or quasi-public entities for future development, given need, and funding.*

The Carrie Furnaces fall best under Type 4: Parcels held for speculation. The site is currently owned by Allegheny County, after buying the land and furnaces from the Park Corporation in 2005. The city also has plans to convert the open land on the site south of the furnaces into a mixed residential and light industrial area. Michael Pagano, the co-author of *Terra Incognita*, continues to describe vacant land as sites that occur in odd shapes and are wedged in uncomfortable locations. If these sites are in view of city officials, these sites are most likely described and promoted to the public as being in the wrong location. The Carrie Furnaces are located on an odd-shaped tract of land and are physically separated from neighboring communities by two rail lines and a dense tree line. With these physical stipulations, the site’s title of “vacant” is understandable, but also reversible.

With a base understanding of iron production history, brownfields and vacant land, a landscape architect's role can now properly be introduced. The Carrie Furnaces obtained a special title in 2006, "National Historic Landmark." This title comes with restrictions on what can and cannot be done to the existing structure, but what about the surrounding landscape?

2.6 DESIGNING LANDSCAPES ON BROWNFIELDS

The United States has policies in place for brownfields and how to approach them regarding clean up and future redevelopment. As times change, so do the definitions of brownfields, standards and the policies that accompanying them. With policies being set to create rules and boundaries, it also establishes three main ideas: "legal liabilities for contamination, financial support for redevelopment and related research, and brownfield design practice" (Erdem and Nassauer 2013). All states began enacting their brownfield laws; most were specific to a site by site basis depending on the context of the site within the state. In 2002, the first federal brownfield law was passed. The Small Business Liability Relief and Brownfield Revitalization Act, overseen by the Environmental Protection Agency (EPA), "offered competitive incentive grants to state, local, and tribal governments for planning, site assessment, and remediation, and to engage affected communities" (Erdem and Nassauer 2013). The grant programs that were set in place encouraged states that brownfield redevelopment happens in a larger context setting that pushes for a greater focus on multifunctionality and sustainability. With these policies in place, design restrictions and opportunities have surfaced for the redevelopment of brownfields.

Certain ideas need to be considered by landscape architects before taking on brownfield redevelopments. One overarching dilemma and ethical

challenge for landscape architects is residual contamination. Residual contamination is defined across multiple references as "contamination that remains on a site even after a cleanup process has occurred" (Erdem and Nassauer 2013) (Meyer and Vanlandingham 2000). The laws and policies in place say that a certain number of contaminants must be removed during the cleanup process. In 2011, the Environmental Protection Agency removed major contaminants from the Carrie Furnaces site including petroleum, iron residue and asbestos. It is assumed that residual contaminants are there. For landscape architects and the purpose of this report, an ethical dilemma is very apparent. It is easy for landscape architects to design something that appears clean and healthy because people will assume that it is safe and ready for public use (Meyer and Vanlandingham 2000). For the future of this report and projective design, there will be an effort put forth to combine aesthetically appealing design with the health of humans and wildlife.

2.7 NATIONAL HISTORIC LANDMARKS

When the Carrie Furnaces received their title of National Historic Landmark, they fell into the category of property "district." The committee looked at all of the resources located in this district and determined what was contributing and noncontributing. They looked at four categories: buildings, sites, structures, and objects. "Sites," labeled as one, was placed in the "noncontributing" category, further showing that even though the site is recognized, it does not contribute to the NHL title (United States Department of the Interior 2006).

An opportunity for landscape architects has surfaced, and a site enhancement for the Carrie Furnaces can take place. There will have to be detailed conversations between the property owner, the landscape architect, and the committee with the National Historic Landmark about the preservation of the site's integrity and historical significance.

2.8 DESIGNING LANDSCAPES OF HISTORY

History is an important aspect of not only our lives but our landscapes as well. Humans have used the land to build, farm, come together, share and many more. The Carrie Furnaces contain an important part of United States history that should be preserved and maintained. The steel industry during pre-World War II times was a manufacturing and technological powerhouse. Advances in steel production technology during this time were recreating the future of steel production and making this time an industrial hub (United States Department of Interior 2006). Today, the Carrie Furnaces remain as a physical and cultural beacon among the suburban Pittsburgh landscape. Pre-World War II industrial history is a specific niche of the historic and design world and remains highly significant to not only the local communities but the American public as well. The structure itself is important, but the landscape that held the ore and carried the trains plays an equally important role.

Preserving history while enhancing public space will be one aspect of the projective design of the Carrie Furnaces. First, there needs to be a general understanding of why it is important to preserve this American history. With historic preservation comes a sense of identity. In the book *The Power of Place*, author Dolores Hayden says, "Identity is intimately tied to memory: both our personal memories (where we have come from and where we have dwelt) and the collective or social memories interconnected with the histories of our families, neighbors, fellow workers, and ethnic communities" (Hayden 1995). The Carrie Furnaces have become a part of the community identity. When the site first shut down, artists began to break in and create art out of materials found on site, like the famous Deer Head that has survived for the last 25 years.

2.9 THE PROJECT SITE

The site chosen for this report and project is the Carrie Furnaces. The Furnaces are located just outside of Pittsburgh, Pennsylvania in a borough called Rankin. The Carrie Furnaces were chosen to be the focus of the project for three reasons: 1) because the blast furnaces located on the site are among the last of their kind in the world, 2) the site contains a large amount of under-utilized land, and 3) the site is currently fenced off from the public but has the opportunity to become a publicly-accessed park year-round.

The Carrie Furnaces site, which is 168 acres total, is owned by the Redevelopment Authority of Allegheny County (RAAC). The specific area this report looks at is 20.2 acres, containing the Carrie Furnaces themselves, which is currently leased by the Steel Industry Heritage Corporation. The Steel Industry Heritage Corporation is more commonly known as Rivers of Steel, a non-profit organization that maintains the site and provides tours of the site and structures. Located along the Monongahela River, the 20.2 acres sits adjacent to a natural, forested riverfront edge that is owned by Allegheny County but governed by the Army Corps of Engineers (Baraff 2019).

The Rivers of Steel organization has a hope that the Carrie Furnaces can be more open to the public and become a year-round asset to the surrounding Pittsburgh and Rankin community (Baraff 2019). This report will show the future possibilities for the Carrie Furnaces in its relationship to becoming a publicly-accessed park that provides year-round programs and utilizes historic preservation strategies.

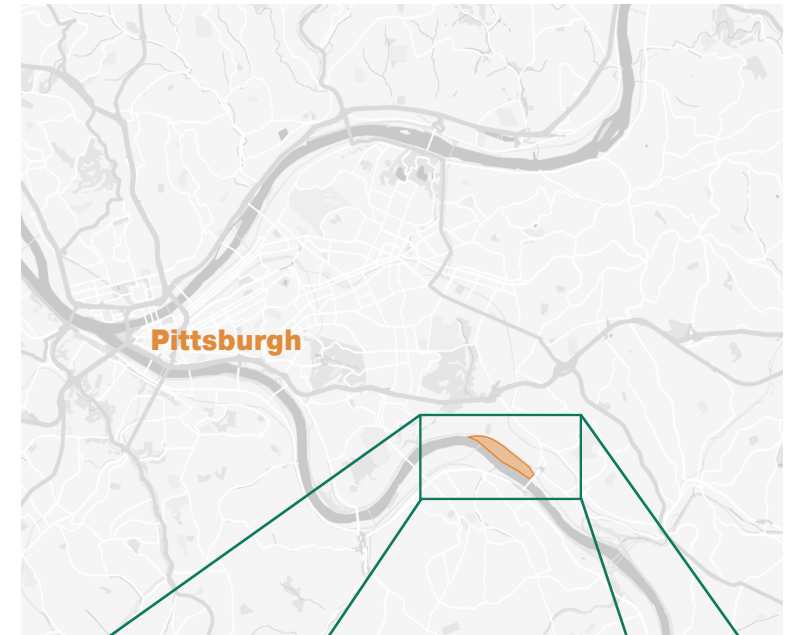


Figure 3.3: Map showing the greater Pittsburgh area with the project site in view, created by Emilee Voigt

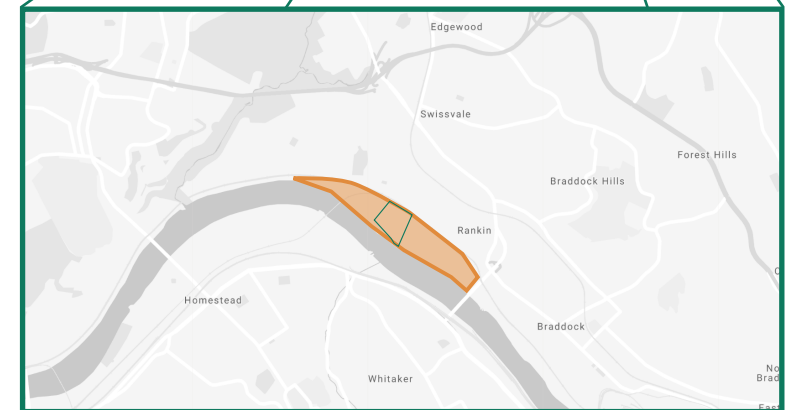


Figure 3.4: Map showing a closer view of the project site, created by Emilee Voigt



Figure 3.5: Map showing the project site, created by Emilee Voigt



Figure 4.0: Student welding project (Voigt, 2018)

CHAPTER 3: *The Methodology*

3. THE METHODOLOGY

This chapter will further explain the methods that will be used to collect data for this report and project. “Methodology,” for this report, is the overarching term used for the system of methods. “Methods,” for this report, are the ways of procedure that are used to collect the data. For this report and project, the methods being used are precedent studies, interviews, site inventory and analysis, and projective design. The precedent studies, interviews and site inventory and analysis will be used to help better inform the projective design.

3.1 PRECEDENT STUDIES

For this method, this report and project will attempt to understand how past sites, similar to the Carrie Furnaces, underwent the design process by landscape architects while keeping the historic culture. For this method, sites that are “similar” to the Carrie Furnaces are defined as “sites that hold the same period of historical significance along with architectural style and underwent a form of landscape transformation.” The precedent research that will be conducted will collect both programmatic and aesthetic characteristics that will be used to design a site at the Carrie Furnaces. Precedents also needed to meet a list of criteria that were created to give better reasoning as to why they were specifically chosen. The criteria is:

- *The previous use of the site must be industrial in nature.*
- *Original structures remain on the site.*
- *The site or structures have a historic designation.*
- *The site is publicly used today.*
- *Located in an urban context.*

The five precedents that were chosen needed to meet at least 3 of the 5 criteria in order to be explored further. Each precedent was then studied in terms of:

- *Name*
- *Location*
- *Project Scale*
- *Designer*
- *Client/Owner*
- *Designation*
- *Previous Use*
- *Design Approach*
- *Development Funding*
- *Regional Significance*
- *Historic Preservation Strategies*
- *Landscape Design Features*
- *Strategies for Carrie Furnaces*

The following five sub-sections are dedicated to giving a brief description of the projects that were chosen. In *Chapter 4: The Findings*, the projects will be discussed in further detail and fill in the blanks of the terms that were set above.

3.1.1 GAS WORKS PARK

Located in Seattle, Washington, Gas Works Park is still recognized as one of the earliest post-industrial sites to go through a transformation into a public park. The designer, Richard Haag Associates, achieved this transformation through the processes of remediation and reclamation. This project is one of the earliest models for brownfield landscape design, utilizing clean up practices that did not deposit the waste from the site to a landfill. The park is 20.5 acres and projects 400 feet into Lake Union with 1,900 feet of shoreline. Haag wanted to share a new narrative of the site with future visitors. The narrative of the park, “lies in its development

of the idea of adaptive reuse of degraded landscape as public space, not merely ameliorating polluted land but transforming the place to serve the public” (Way 2013). The site is rich with monolithic buildings that unearth Seattle’s industrial past, complete with a landscape of rolling hills and walkable paths. On a site like this one, it was important to not only understand what happens above the surface but also below the surface.

3.1.2 BETHLEHEM STEELSTACKS ART + CULTURAL CAMPUS

The precedent most closely related to the Carrie Furnaces is the SteelStacks Arts + Cultural Campus located in Bethlehem, Pennsylvania. The site sits at 9.5 acres, and the old Bethlehem Steel mill site closed its doors in 1997. SteelStacks had already been a brownfield site for numerous years, and the city took on early planning efforts to decide what to do with it. The city knew they wanted to preserve and enhance the current standing steel stacks on the site, but the backlash from the community members made it almost impossible. After teaming up with a non-profit arts group, the project moved forward with WRT Design developing the final master plan for the site. Their design created a site, seen poorly by the community, that brought life back to Bethlehem. They created a lawn for concerts and performances, shops and restaurants for families and office buildings constructed from existing buildings. Fit with an industrial backdrop for the site, “SteelStacks has become a source of community pride -- the place where residents take visitors to show off the cultural assets of the city” (Urban Land Institute 2015).

3.1.3 DOMINO PARK

Domino Park, one of the newest additions to the New York City landscape, provides a balance of history and the future. Designed by James Corner Field Operations, who also designed the High Line, this 6-acre park stretches along the East River in Brooklyn (Field Operations 2018). The park marks the site of the Domino Sugar Refinery, which was built in 1856 and produced more than half of all sugar in the United States. The site and remaining buildings are protected by the New York City Landmarks Preservation Commission (LPC), which is responsible for preserving and protecting New York City’s historic buildings (LPC 2018). More phases of this park are still to come, along with five more additional acres (Domino Park 2018).

3.1.4 WYNYARD QUARTER

The Wynyard Quarter, located in Auckland, New Zealand, is one of the most recently completed brownfield renewal projects. The site was an old shipping yard, home to the fish and oil industry. The entire project was about preserving the shipping industry history that is special to Auckland and the Auckland residents. Wraight + Associates and Taylor Cullity Lethlean were the head design firms on the project, creating a place for the modern era with splashes of history spread throughout. Interactive civic spaces, walkable areas and culinary experiences fill the space that was once not fit for people. As construction began, old remnants of Auckland’s past were resurfaced and utilized in the new design. Industrial business still takes place here, but it is expected that all industrial activity will be gone by 2026. “What’s left behind will be the Wynyard Quarter’s next highly contested space for development – and the next chapter in the story of its waterfront, from the slick to the grit and beyond” (Leigh 2017).

3.1.5 WESTPARK

In May 2018, I had the opportunity to travel to Bochum, Germany and attend a week-long conference about structural change and brownfield recycling. Bochum is located in an area of Germany known as the Northrhine-Westfalia. The area is best known for their coal and steel production during pre and post-World War II, and most of those buildings and factories remain today. Because of the high amounts of coal and steel production, Bochum and the surrounding cities are extremely polluted. The local government decided it was time to improve and utilize these areas to increase tourism. Since 1980, 189 brownfield sites have been given new uses in the area, most of them are public parks. One park in particular, Westpark, relates the closest to how I want to approach my future design of the Carrie Furnaces. This park was built originally for steel production during the late 1800s and has since then been protected as a historic building and site. Today, it serves the surrounding community as a public park and entertainment space, preserving the history of the region and boosting the economy.

3.2 INTERVIEWS

This report will conduct two interviews with two individuals who have close relations with the Carrie Furnaces. Ron Baraff, the Director of Historic Resources and Facilities, has over 20 years of experience with the Carrie Furnaces. Adam Piscitelli, a tour guide for the Carrie Furnaces, has been a volunteer for over 5 years. The plan is to interview the two individuals separately through a phone call, conversational style format, and find out more information about the Carrie Furnaces in terms of past, present, and future. Baraff and Piscitelli will also act as additional verbal historic resources. Questions will involve intended uses for the site, what the Carrie Furnaces mean to the surrounding community and their opinions on what they would like to see the site become. From the answers received, a design created for the Carrie Furnaces will answer not only the research question but will also meet the needs and interests of the people who work there and interact with the site daily.

In *Chapter 4: The Findings*, each interview will feature important direct quotes from Baraff and Piscitelli that will help push the project forward. Then, common themes will be developed over similar answers that Baraff and Piscitelli had. For example, one theme will be “People” and both interviews will be analyzed and show where similarities and differences occur between the two individuals. From this data, accurate design decisions can be made that not only answer the research question but provide a realistic human perspective.

3.3 SITE INVENTORY AND ANALYSIS

The Carrie Furnaces show multiple opportunities and constraints, where a series of site analysis studies will take place. Site analysis will happen at the site and regional scales. Most of the data will come from GIS and Google Earth. The maps and diagrams that will come from this data will visually show the surrounding context and will share the same graphic qualities. The purpose of this method is to inform the design decisions for the site directly. With the study of the Carrie Furnaces at the site scale, a better understanding of the specific existing conditions and site amenities readily available on the site will be seen. This site analysis will include:

- *Site Identity*
 - *To show existing building structures, the size of the site, vehicular and pedestrian access, primary views and location within the region.*
- *Site Inventory*
 - *To show the current conditions of the site through on-site photography.*
- *Vegetation*
 - *To show existing vegetation and specific present plant species.*
- *Development*
 - *To show immediate surrounding zoning areas.*
- *Program*
 - *To show how and when the site is used.*
- *Opportunities and Constraints*
 - *Through a combination of information found through not only the site inventory and analysis but also the interviews and precedent studies, the opportunities and constraints will be expressed through writing.*

3.4 PROJECTIVE DESIGN

For the fourth and final method, the report will propose a landscape design for the Carrie Furnaces that meets expectations from the results of the research, blends well with the future proposed development south of the Carrie Furnaces and follows guidelines set by the National Historic Landmark committee. For the 20.2 acres that this report will be looking at specifically, it will undergo multiple iterations and rounds of design and critiques. Along the way, keeping the two professionals who were interviewed involved in the design process will give an insider's perspective on the design that will keep the personality and integrity of the site. Major professor Amir Gohar, committee members Blake Belanger and Huston Gibson, will also have a big hand in the design in making sure the most practical and sustaining design is applied. When conceptual design comes to an end, this report will develop high-quality renderings of the design along with accompanying diagrams to further explain the connection of landscape, history and economic growth.



Figure 5.0: Iron ore train (Voigt, 2018)

CHAPTER 4: *The Findings*

4. THE FINDINGS

The following chapter will further explain what was discovered during the method analysis. Each method will begin with a summary to introduce the in-depth information that is to come. The information collected for each method will be further explained and then an analysis will be conducted. The analysis will vary between each method, but most of what was analyzed will be placed into groups or themes. These themes are where multiple ideas or concepts are shared across multiple sources. The information from these themes will be used to help influence the project design, which will take place in *Chapter 5: The Design*.

4.1 PRECEDENT STUDY SUMMARY

This section looks at five different projects from around the globe but were chosen under certain circumstances. The precedents had to meet 3 of the 5 criteria in order to be considered for the next steps. Those criteria were:

- *The previous use of the site must be industrial in nature.*
- *Original structures remain on site.*
- *The site or structures has a historic designation.*
- *The site is publicly used today.*
- *Located in an urban context.*

After the precedents were chosen, each precedent was studied in terms of:

- *Name*
- *Location*
- *Project Scale*
- *Designer*
- *Client/Owner*
- *Designation*
- *Previous Use*
- *Design Approach*
- *Development Funding*
- *Regional Significance*
- *Historic Preservation Strategies*
- *Landscape Design Features*
- *Strategies for Carrie Furnaces*

This section will go on to further explain and analyze what was found from this information. Similar themes will be discovered throughout this process that the precedents share and can be used in this project's projective design.



Figure 5.1: Gas Works Park (TIA International Photography)

PRECEDENT 1. GAS WORKS PARK

<i>Location</i>	Seattle, Washington
<i>Project Scale</i>	20.5 acres
<i>Designer</i>	Richard Haag Associates
<i>Client/Owner</i>	Seattle Parks Department & City of Seattle
<i>Designation</i>	National Register of Historic Places, 2013
<i>Previous Use</i>	Coal gasification plant
<i>Design Approach</i>	The radical nature of the park lies in its adaptive reuse of waste landscapes, not merely ameliorating contaminated land but transforming it to serve the public. Although officials and residents called for the remains of the industrial plant to be removed, Haag convinced the public to retain elements of the industrial apparatus and, more importantly, to retain and treat the polluted soils (Thaisa Way).
<i>Development Funding</i>	Land & Water Conservation Fund



Figure 5.2: Old structure still standing at Gas Works Park (TIA International Photography)

PRECEDENT 1. GAS WORKS PARK

Regional Significance

The park sits across Lake Union from downtown Seattle and was once a degraded landscape. The city pushed to tear down the coal gasification plant, when Richard Haag stepped in with ideas on how to preserve the site and give it back to the people. When the project was finished in 1976, it was an instant success and became a signature attraction for the city of Seattle. It is now considered one of the earliest post-industrial sites to be transformed into a public park.

Historic Preservation Strategies

The original coal gasification plant is still standing, but is surrounded by a chain-link fence. Scattered throughout the park are miscellaneous pieces and parts from the original plant, creating a historic landscape that allows visitors to find the history.

Landscape Design Features

Large lawn spaces for free programming, winding paved paths to the top of a large earthwork hill appropriately name “The Great Mound”, small paved plaza areas, visitor center/restrooms, children’s playground.

Strategies for Carrie Furnaces

A large lawn would be ideal for the Carrie Furnaces so they can continue their large programmed events like: concerts, car shows, festivals, etc. Adding small berms could add some definition to the site. The site has preserved a lot of original equipment that can be scattered throughout the site.



Figure 5.3: The SteelStacks and the bridge to the Hoover-Mason Trestle at night (Halkin | Mason Photography for WRT Design)

PRECEDENT 2. STEELSTACKS

<i>Location</i>	Bethlehem, Pennsylvania
<i>Project Scale</i>	9.5 acres
<i>Designer</i>	WRT Design
<i>Client/Owner</i>	ArtsQuest, PBS39, Bethlehem Redevelopment Authority, and Sands Casino Resort
<i>Designation</i>	Named one of the most endangered historic sites in the country by the National Trust for Historic Preservation, 2004
<i>Previous Use</i>	Steel manufacturing plant
<i>Design Approach</i>	Large areas of existing building foundations were removed, exchanging impervious cover for pervious, and minimizing the generation of stormwater runoff. Plantings were brought to the site where none existed beforehand, increasing the site's biomass, and a low level of illumination was accepted as a way to minimize energy consumption. Socially, the project has engaged the local community, offering a "town green" for future uses that will bring new urban life to the heart of Bethlehem in support of regional development initiatives. (WRT Design)
<i>Development Funding</i>	TIF funding, government grants, philanthropic donations, non-profit funds, and private investment



Figure 5.4: View looking out from the bridge (Halkin | Mason Photography for WRT Design)

PRECEDENT 2. STEELSTACKS

Regional Significance

SteelStacks lies in the Rust Belt of the United States, the area best known for their industrial production in the 1800s and early 1900s. The town of Bethlehem strongly relied on the steel industry to provide jobs. Today, former workers and their predecessors hold strong connections to the site.

Historic Preservation Strategies

The original blast furnaces still remain and are some of the oldest blast furnaces standing in the world. The designers included a plentiful amount of signage throughout the site to share the history and stories of the furnaces.

Landscape Design Features

Picnic grove, children's playground, concert pavilion with accompanying lawn seating, elevated bridge walkway that allows closer access to the blast furnaces, scattered plaza spaces, parking, visitor center, lighting design.

Strategies for Carrie Furnaces

Signage will be important for the Carrie Furnaces, not only on-site but for directional purposes as well. Large areas for seating would appeal to families and the older generation, the current main visitors to the site. Pathways that allows visitors to get close but not touch could help visitors better understand the history.



Figure 5.5: View looking out over the East River with the newly-opened Domino Park in the foreground (Daniel Levin 2018)

PRECEDENT 3. DOMINO PARK

<i>Location</i>	Brooklyn, New York
<i>Project Scale</i>	6 acres
<i>Designer</i>	James Corner Field Operations
<i>Client/Owner</i>	Two Trees Management
<i>Designation</i>	Protected landmark under the Landmarks Preservation Commission
<i>Previous Use</i>	Domino Sugar Refinery
<i>Design Approach</i>	The park is a tribute to the diversity and resiliency of generations of Domino workers, their families and their neighborhood. The new waterfront park will offer a wide range of active and passive uses and will reconnect the neighborhood to the riverfront (James Corner). “Domino Park will hopefully serve as a living, breathing tribute to thousands of Domino workers, their families and the rich tapestry of history that defines this New York community,” says Two Trees head Jed Walentas.
<i>Development Funding</i>	Privately funded



Figure 5.6: With new recreation spaces in the foreground, the old Domino Sugar Refinery still stands tall (Scott Lynch 2018)

PRECEDENT 3. DOMINO PARK

Regional Significance

The Domino Sugar Refinery provided numerous jobs for the neighborhood of Williamsburg in Brooklyn. It also provided growth to the Brooklyn waterfront and helped establish New York as an industrial powerhouse.

Historic Preservation Strategies

Old pieces of equipment were discovered and placed throughout, some were even painted the park's signature turquoise color. Children's playgrounds on-site resemble the sugar refining process and teach kids in a fun and playful way.

Landscape Design Features

Areas for sports like sand volleyball and bocce ball, lawn, movable seating elements, outdoor historic gallery, children's playgrounds, interactive water fountain, paved walking paths.

Strategies for Carrie Furnaces

Areas for recreational elements could be possible and provide a year-round factor to the Carrie Furnaces. But, ideally, the historic gallery and children's playgrounds would work best in this location and purpose.



Figure 5.7: Entrance to the elevated sky-walk at Wynyard Quarter (Simon Devitt for Taylor Cullity Lethlean 2017)

PRECEDENT 4. WYNYARD QUARTER

<i>Location</i>	Auckland, New Zealand
<i>Project Scale</i>	91.4 acres
<i>Designer</i>	Wright + Associates & Taylor Cullity Lethlean
<i>Client/Owner</i>	City of Auckland
<i>Designation</i>	N/A
<i>Previous Use</i>	Industrial and maritime shipping yard
<i>Design Approach</i>	At Auckland's Wynyard Quarter redevelopment these conventions are challenged in a development that anticipates transforming a forlorn industrial and maritime precinct into a mixed-use precinct. Underpinning the design are two key moves: retention and enhancing of fishing and maritime industries form the focus of new public experiences; and, interpreting the site's peculiar archaeology of patterns and materiality to inform a new public landscape (Taylor Cullity Lethlean).
<i>Development Funding</i>	Private funding, Auckland Regional Holdings, and Auckland City Council



Figure 5.8: A look at the silos with a festival down below (Simon Devitt for Taylor Cullity Lethlean 2017)

PRECEDENT 4. WYNYARD QUARTER

Regional Significance

For decades, this port in Auckland was the main hub for shipping freights and large boat docking. Fishing and shipping were the main jobs for the residents of Auckland, and many still live there today. The Quarter was rehabilitated to bring these people back to the water while promoting business development.

Historic Preservation Strategies

Many of the old structures on-site were demolished, but certain features still remain. The designers integrated the old rail lines that used to run through the site into the paving pattern. Upon excavation, old boat pieces were found and placed throughout the site.

Landscape Design Features

Kayak docking, plaza spaces, lawn, seating areas, buildings and lots for business development, public art, elevated bridge walkway, richly planted areas.

Strategies for Carrie Furnaces

A majority of the square footage on the Wynyard Quarter is dedicated to development and future development. With the land adjacent to the Carrie Furnaces being sold for development, it will be important to have similar materials and plants that connect the two sites.



Figure 5.9: Looking over the new landscape to see the remnants of the steel production era at sunset (Voigt 2018)

PRECEDENT 5. WESTPARK

<i>Location</i>	Bochum, Germany
<i>Project Scale</i>	56.8 acres
<i>Designer</i>	Danielzik + Leuchter, Landscape Architects
<i>Client/Owner</i>	NRW.Urban & City of Bochum
<i>Designation</i>	Industrial Heritage Site
<i>Previous Use</i>	Steel production plant
<i>Design Approach</i>	Until the mid-1980s iron and steel were smelted at this site. After decommissioning the works, an industrial wasteland terraced from railway embankments and dumps was left behind. Retaining walls and slag mountains planted with spontaneous vegetation shaped the picture. The park design prepares the topography with sharp edges. At the top level of the park, visual relationships are created outwards into the city quarters and the landmarks of the region. Inwards, the view is directed towards the park center: the "Jahrhunderthalle" (Danielzik + Leuchter).
<i>Development Funding</i>	Government funding



Figure 5.10: One of bridge entrances to the site with old pipes from the factory used as art installations (Voigt 2018)

PRECEDENT 5. WESTPARK

Regional Significance

This steel production plant not only has meaning for the city of Bochum, but the entire Northrhine-Westphalia region. This region of Germany is known for their industrial-fueled development, especially during World War II. The Bochum residents adore this place, as many have seen its shift from industrial production to artistic performances.

Historic Preservation Strategies

The main buildings used for steel production remain on-site and are used to their fullest advantage. The interiors have been transformed into a visitor center, café, performance stage, and much more. Similar styles from the buildings, like rusted metal for example, were brought into the landscape to make it one entity.

Landscape Design Features

Richly planted areas, bike and walking trails, lawn for sitting or concerts, engineered creek, graffiti wall, seating areas.

Strategies for Carrie Furnaces

The landscape around the steel production plant is almost untouched, but designed in a way that allows for open programming and clear movement through the site. This similar strategy could fit in well at the Carrie Furnaces.

4.2 PRECEDENT STUDY FINDINGS

Design Trends

Historic Preservation

Funding

Adjacent Development

The colored bands to the left represent themes that were discovered in all the precedents and that are needed for the projective design of this project. These four themes were chosen because they were seen throughout all five precedent studies. This report will explore each theme individually and what each precedent has to offer. There are similarities and differences that are important to this project in understanding what can be useful for the Carrie Furnaces. This is analysis that the author has discovered from the extensive research of these projects. The analysis will be written in a bulleted list format, in order to keep the ideas moving quick without extra fluff. At the end of this chapter, opportunities and constraints will be expressed in written form and will then be considered for the projective design of the Carrie Furnaces.

Design Trends

Similar Trends

- Open lawn space for different programs
- Planted areas with native species
- Public art installations
- Plenty of seating (benches, cafe tables and chairs, etc.)
- Children's playgrounds
- Visitor centers/on-site museums

Unique/Different Attributes

- Gas Works Park: The park is a large area of grass meant for open programming while the others have very specific design moves that serve a purpose.
- SteelStacks: This park took a large focus on the environmentally-driven side of landscape design (strategic planting, stormwater runoff understanding, etc.).
- Domino Park: The design took a very modern approach as apposed to its counterparts.
- Wynyard Quarter: The design provides direct physical access to the water for recreational use.
- Westpark: The park had a strong focus on using not only the landscape but also the interiors of the remaining structures.

Historic Preservation

Similar Trends

- Using found materials and pieces of equipment from the former use of the site and placing them in the landscape
- Keeping existing structures on site
- Similar materials from the structures being used in the landscape
- Landscape design strategies that embrace and enhance the former use of the site

Unique/Different Attributes

- Gas Works Park: The equipment on the site was found in that same position when the project first started construction.
- SteelStacks: They emphasized lighting design on the structures themselves, giving the structures life again.
- Domino Park: They painted some of the old equipment a bright color, showcasing the history through art.
- Wynyard Quarter: They found a lot of old shipping equipment during the initial phase of construction and turned them into art sculptures for the site.
- Westpark: They had the interiors of the structures get up to code so they can be used for concerts and events.

Funding

Similar Trends

- Most have some sort of government funding, whether it is local or national funding
- Only SteelStacks and Domino Park had private funding involved
- SteelStacks was the only precedent where TIF funding was involved (tax increment financing)

Adjacent Development

Similar Trends

- Most of these precedents are located in an urban context around a downtown
- Projects like Wynyard Quarter are still creating development adjacent to the site consisting of businesses and residences
- Domino Park is about to undergo an entire residential development project directly adjacent to the park, increasing pedestrian foot traffic

4.3 INTERVIEW SUMMARY

Two separate interviews were conducted for this research. Adam Piscitelli and Ron Baraff were interviewed, each at different times and days. Piscitelli and Baraff bring a rich knowledge of the history and the site itself and were able to act as verbal historic resources. This report needed not only factual information, but personal ideas and opinions of the future from those who interact with the Carrie Furnaces almost every day. I kept the interviews to two people in order to keep opinions contained and not get out of control. Also, I have been in contact with Piscitelli and Baraff for the past several months and I trust their judgment and opinions.

As previously mentioned, the two interviews occurred at different times and on different days, both conducted over the phone. The phone calls were recorded for further documentation and the full interviews will be available in the Appendices. Each interview lasted about 30 minutes and each interview consisted of the same 12 questions. The reason only 12 questions were asked is because the questions provided a well-rounded set of topics to touch on including their roles, tour trends, history, landscape design, development, and the future of the Carrie Furnaces.

The following section will pull key ideas and comments from each interview. Then, the interview findings will show similar themes mentioned throughout each interview and how the findings can be used in the projective design for the Carrie Furnaces.

INTERVIEW 1. ADAM PISCITELLI

WHEN: February 4, 2019

DURATION: 28 minutes

1. How long have you worked at the Carrie Furnaces? Can you tell me about your role, responsibilities, what your day-to-day operations are like, etc.?

"Well, I've been a tour guide since 2014, and there are probably about 10 or 15 of us and we give the tours on the weekends, from April through probably around October, late October. My duty is to take people on a tour through the facility and explain to them the various steps and processes that go into making iron at the furnace and how they did it. It's a 2-hour tour and we have stops that we have to make, to hit the high points, but our tours aren't structured. We're allowed to personalize them, which is nice. We are given research materials for this."

"We aren't locked in to a structured tour like a lot of places are."

2. Can you describe what the Carrie Furnaces mean to the surrounding community? Describe the "feel" or "atmosphere."

"Well, it means different things to different people. For the older generation, like my father's generation that worked there, it was a factory. They made a living. And people like me, I worked in the mill when I was in college, it was a summer job. For the younger

generation, it's like they're detached from it. The mills are gone, they don't see the impact, they don't see the buildings and they don't see the trains and everything. They don't see the industry happening on a daily basis. They're just not tuned in to it. It's "just an old mill site". Which is why when they come for tours, it's really nice to see the younger generation go "Oh they did that here!"

"It was in the background of our life. It was just what we did. For a lot of people in the area, it represents our heritage."

"Everything in Homestead, you know, 99% of what was left of the Homestead Works has been knocked down. And when they were getting ready to tear down the Carrie Furnaces, it was the last piece of the complex they were working on because it was across the [Monongahela] river. And some of the people, the historical society here were like "Woah, wait a minute, wait a minute. You can't tear everything down, this is our heritage, this is what we did." So, they got a committee together and they worked on getting it preserved."

3. Now that the Carrie Furnaces are open for tours, what types of trends do you see attending? Meaning: do the tour groups consist of families, couples, groups, etc.?

"We do a lot of school field trips. Our marketing department reaches out to schools, especially in the spring, right before school is over in the spring semester. But for the most part, it's pretty mixed. We

get a lot of retirees, we've had tour buses for retirees that come through, I've done a couple of those. We have a lot of retirees that used to live in the area, they came back and want to see what it [the Carrie Furnaces] looks like now. A lot of families and some millennials. We are getting more and more now [millennials], our marketing department has done a really good job of promoting tours.

“The millennials are the ones that come down with a real sense of wonder.”

“Especially when they get into a furnace and they stand right next to it and they see how big it is and they get a feel for the scope and the power and the massive industry that went on there, it's like they're almost overcome, they say “We had no idea it was like this”. It [the industry] was like this, people worked here, people died here.”

4. It is my understanding that the Carrie Furnaces have also hosted events, can you describe the types of events that have been hosted before?

“Well, a couple years ago we had American Ninja Warrior here. They set up their stage and course right in front of the furnace and they had a lighting company come in and light up the furnace behind it with different colored lights. You know, they shot it in the evening, it was pretty dramatic, it was pretty cool looking. We had that [American Ninja Warrior] and we've had a couple two-day music festivals called Tribal Music Fest. They have people like music corporations and churches, people like that. Plus, we've had some

cultural events like the Pittsburgh Ballet. The Bach Choir came in and did a concert, Pittsburgh Symphony I think has been down there.

“But we also do weddings, it's a very popular spot for weddings now. They get married under the Carrie Deer.”

“We have a big annual car cruise there, which is really popular because the motorheads like to come down and that's right up their alley. “Iron, steel and grease? Okay, we're in!” So, that's very popular, it's called the “Steel Town Shake Down”, we have that annually. And we also do a beer fest here, a beer tasting. And we have our own annual Festival of Combustion. We have different artists and different tradesmen come in and set up in the courtyard and we have glass blowing, blacksmiths, a real family affair. The main attraction is we have a mini-blast furnace set up and we have a crew of people that come in that know how to pour iron and we actually make iron during the Festival of Combustion, with scrap iron and coke and a little mini-blast furnace and we pour iron into molds.

“The kids really love to see iron being poured out of this furnace.”

5. When events happen, where are they usually set up on the property?

“Festival of Combustion is usually outside, in that courtyard area between the two big buildings. The beer tasting and the concerts are usually in the AC Powerhouse, which we didn't go into because this year we weren't allowed to take tours in there because the building wasn't up to code. But we had to have panic bars on the doors, so we are in the process of getting that fixed, but usually you have events inside the AC Powerhouse because it's so big. You know, we've had the Bach Choir in there and other kinds of events in there.”

6. Are you familiar with the industrial development that will be happening adjacent to the Carrie Furnaces? Describe what you know and any opinions you have.

“I know they finished all the grading about a year and a half ago and they were going to put it up for bid, for sale, and the Amazon thing came up and Pittsburgh was on the list. That was one of the sites they were considering. So, nothing happened last year because everybody was sitting on Amazon. Now it's up for sale and they're promoting it and they're trying to get some light industry in there. No retail, no shopping, it's going to be light industry. Which will be good, because they need some money down there. Intact space, because right now it's just a brown field.”

7. Do you think this new development will have any effects (good or bad) on the Carrie Furnaces? Is there anything you are concerned about?

“I think it will be good. I'm sure some people will complain about it, they'll

find something to complain about. I think it'll be good just because it's going to bring in some more money and more people down that way. “

*“It's going to be better than it is now,
which is nothing.”*

8. Are there any challenges that the Carrie Furnaces are facing currently?

“The biggest one that I see, from my standpoint, is maintenance. We just need money. They are always looking for money: federal money, state money, whatever they can. They are just looking for money to repair it, it [the buildings and structures] needs to be sandblasted and painted at some point or it's going to fall down. That's the biggest thing I see, I'm sure there's other things that are more important. But, they've done things over the years. Like the AC Powerhouse had a new roof put on it. And we had to have part of that draft stack, like 60 feet of that tall draft stack taken down last year because it was collapsing. So, there was a lot of money spent on that to repair that.”

*“That's probably the main challenge for
the Furnaces right now, trying to find
some money to get it maintained.”*

9. With the statement of “National Historic Landmark” to the title in 2006, did you notice an increase in media attention or tours?

“Yes, they started marketing it more, and that’s when I first found out about the tours. Up until then, we knew they saved it [Carrie Furnaces] but nobody was going there because there were no tours. Then, they started advertising that they were going to start tours, and I think that’s when I went on my first tour there, in 2007. It [the tours] was real basic back then, but yes I did notice there was an uptake in the marketing end of it. Just promoting the tours.”

10. With the “National Historic Landmark” title, meaning certain structures on the site cannot be altered or changed, would you like to see alterations made to the landscape? (i.e., native plantings, installed art sculptures, etc.)

“Oh yeah, we have some of that going on now. There’s one section of it to the left of the AC Powerhouse, it’s called the “Iron Garden”. That area there, there’s a couple acres of it, they just let it go and let nature reclaim itself. It’s pretty interesting, but over the years it shows how nature reclaims the land and how the first generation of bushes come up and die and then second and third. Each generation of growth down there just keeps adding on and changing the landscape. That’s pretty cool right there. And there’s some sculptures in there, big stones to sit on. There’s also some other sculptures that are peppered around there other than the Carrie Deer. I would like to see even more.”

“I would like to see paths and benches. Because right now, walking wise, the area is pretty rough.”

“Elderly people really have trouble navigating because they’re stepping on rocks and climbing up rusty ladders and things like that.”

11. In your opinion, would a designed landscape (designed space for concerts, paved pathways, places for sitting) that was open to the public, similar to SteelStacks in Bethlehem, PA, be feasible at the Carrie Furnaces?

“I think it could be, yeah, I think that’s the long-term goal. You know, have a little visitors center there with actual bathrooms and running water. That would be nice. But, yes, that’s the long-term goal down there.”

12. What do you enjoy most about your job working for the Carrie Furnaces?

“Meeting people and educating them. About 99% of the people that come down there have no clue what it was like. Even the locals that lived within proximity of it, had no idea what the inside looked like because you couldn’t take a tour of it. My father worked here but I was never allowed in and I always wondered what it looked like. And the people who worked at the mill want to come down and see it, so that’s nice. Occasionally, we do get some guys that actually worked there. But probably the best part of it is the younger kids. At first they are kind of

like “ehhh” and then they start seeing equipment and they start to get an idea of how big and dangerous it was, you know, they really get into it.”

“That’s the part I like best, is just being able to let people know what actually happened here and educating them about the heritage of the area.”

“And they always say “Wow, this is so cool we had no idea, we are going to tell our friends, we had no idea this was like this.” Yeah, so that’s why I do it.”

INTERVIEW 2. RON BARAFF

WHEN: February 6, 2019

DURATION: 34 minutes

1. How long have you worked at the Carrie Furnaces? Can you tell me about your role, responsibilities, what your day-to-day operations are like, etc.?

“Sure, so I have worked for Rivers of Steel since 1998. Now, we didn’t have a site yet, but we were already looking towards attaining it [the Carrie Furnaces]. One of the reasons I was hired was, not just to set up the museum archives division, but to also work on the National Historic Landmark nomination for the Carrie Furnaces.”

“I’ve been there since ’98, and my actual title is ‘Director of Historic Resources and Facilities’, so I oversee the museum, the archives and all of our historic properties which include, obviously, the Carrie Furnaces.”

“The day-to-day is dealing with structural issues on the site, big issues on the site, interpretive issues on the site. Structural issues but also tourism, developing tours and documenting the site,

etc. And there’s a list of other things, including cutting the grass.”

2. Can you describe what the Carrie Furnaces mean to the surrounding community? Describe the “feel” or “atmosphere.”

“Well, we will just focus on the Carrie Furnaces because Rivers of Steel is a much larger entity, it stretches over 8 counties. As far as the Furnaces go, it’s not like the other properties we have. It’s really central, in that for 100 years that site was the economic driver for the region. It was the source for employment for all the communities around there. It became the number 1 employer for that part of the Mon [Monongahela] Valley.”

“It defined that region and gave the people in that region work, so they closely identify with it.”

“And when things closed down in the 80’s and buildings were torn down, there was a loss of identity. More importantly, the last of the ability for that site to be the economic driver. And our involvement, and one of the big reasons we wanted to preserve the site, isn’t just because it’s so historically important, from a technological standpoint and from a standpoint of defining the region, but it was also really important because it can be that economic driver for the region again. So, by promoting tourism, by bringing in events, by being there.”

“What we are doing on that site is bringing people into the community, it is hopefully spurring further investment within the communities. It’s helping to redefine that identity and that connection back to place.”

3. Now that the Carrie Furnaces are open for tours, what types of trends do you see attending? Meaning: do the tour groups consist of families, couples, groups, etc.?

“It is really across the board. When we first started doing public tours in 2005, primarily what we were seeing were folks who were directly connected to either that site or the industry. It was retirees or the families of the workers. It wasn’t something that was regional, it was very, very localized. What had happened over the past 14 or 15 years, and even more so over the past 5 years, is a great change in that demographic. So, rather than being primarily older guys, it’s now much younger. People who are coming, lots of families and school groups, but it’s also people who are new to the region. You know, millennials.”

“Folks who have no direct connection back to the industry, but are fascinated

by the aesthetic of it, fascinated by the history of it, fascinated by the ‘Industrial-Chic’.”

“They are drawn to that site and they want to know more about it. That’s kind of where it’s skewing from. You know, typical Saturday tour, we’ll have some local folks but we’ll have even more folks who are from all over the country. They are coming to Pittsburgh for tourism and destination, with the Carrie Furnaces being at the top of their list. Because it defines this region and it’s something you just don’t see anywhere else.”

“In some ways, it’s other-worldly.”

“Until you are standing there, you can’t really grasp the size of it, the magnitude of it, and what it was like when it was running. The demographics have definitely changed, it has widened a great deal. Which is what we anticipated, maybe not at this speed in which it has happened over the past few years. But that’s because of the changing of this region into a tourist destination.”

4. It is my understanding that the Carrie Furnaces have also hosted events, can you describe the types of events that have been hosted before?

“Yeah, we’ve done a number of different types of events there, ranging from television shows to concerts to weddings to our own events. So, you know, kind of the smaller end of things for folks is to get married

there. And we knew it would happen eventually, but it really took off about 4 years ago. And the site has become one of the top destinations in this region for that kind off off-the-beaten-path wedding. So, gosh I mean we probably already have 8 weddings booked for this coming year and I'm sure there is a lot more to come. But it's becoming that kind of "go to" place for weddings. We have had television shows such as American Ninja Warrior and that draws crowds in. Obviously, we've had television shows and movies shot there, but those aren't so much "attended", but those are something that does a great job of promoting the site. When Hollywood comes to shoot, like when 'Out of the Furnace' is shot there and people all over the world see it, people say "Wow, what is that and I want to go see it." We've had a few concerts there, kind of smaller, intimate ones. We had the Tribal Festival that we hosted for 2 years, which had 15,000 people."

"It's amazing, and 15,000 people feel like a lot when they are coming in and out, but once they are all on site, I really thought it would be more people."

"It's wonderful exposure for the site, but also a good test for the site. It's the "Can it be used in that manner?" It's something we discussed and something we hoped for, but by actually bringing a concert in, like Tribal was a 3-day concert with about 30 bands, but it was a real test for the site. Can it hold that amount of people? Does it work well? And it worked exceedingly well. So, there's that. And we do car shows

and we have our own events, which the biggest one that we host is the Festival of Combustion, which we do the last weekend of September every year. It's a festival based on "hot art", which is casting iron on-site and glass blowing, pottery, welding, things along those lines. And we get a few thousand people to come to that, and it's growing each year. So, those types of events are not just bringing in numbers for that day but creating a culture where this is now a destination. People know that you can go there and do more than have a tour and take part in one of these events or show or whatever it might be. We have Quantum Theater, which is an internationally known but locally based theater company. They draw thousands of people to their shows, and they will be there [the Carrie Furnaces] for a month doing 'King Lear'."

"Really what it comes down to for us is we are really focused on staying outside-the-box and having a willingness to try different things and try different events and to see what works and what doesn't work."

5. When events happen, where are they usually set up on the property?

"We kind of impose these areas on the site, we create these areas. But the main places are the central courtyard, it's very maintained and can fit a couple hundred to a couple thousand people, and you

can fit a big or small event there. For the larger shows, they are in the western courtyard. It's the big field when you first come in. So, that's where American Ninja Warrior was. And we started being able to use that area when American Ninja Warrior came because there was a fence there and they didn't want the fence. So, they asked if we could pull the fence down and our property extended further than the fence line. So, because they did that, now we have more room to host these kinds of larger events. And the third place that people use quite a bit is the AC Powerhouse, which you probably didn't go into when you were there. That's the big interior space."

6. Are you familiar with the industrial development that will be happening adjacent to the Carrie Furnaces? Describe what you know and any opinions you have.

"Yeah, on both sides of us [the Carrie Furnaces site], actually. It's owned by Allegheny County Redevelopment Authority, who about 3 weeks or a month ago finally put a request for proposals out, so there are folks coming in now to look at the property and put in bids. The goal is light industrial, warehousing, entertainment space, that sort of thing. Something that can provide jobs, tax based, for the communities."

7. Do you think this new development will have any effects (good or bad) on the Carrie Furnaces? Is there anything you are concerned about?

"Well, I guess you can hope for good neighbors. What's nice is we [Rivers of Steel] have a very nice relationship with Allegheny County and the county is very, very supportive of what we do on the site and understanding that this site is important and

needs to be maintained. It [Carrie Furnaces] is actually not being marketed with the rest of the site, which is nice. We are protected. And they are consulting with us or we are consulting with them, I should say, on who comes in, so it would be a good fit. It could be office spaces, I don't know, maybe something more. "

"The idea is to encourage whoever is coming in to create green spaces throughout their development that can tie back into what we are doing."

"The goal is to marry the developments as much as possible so that you don't have this great hole left. The goal is to integrate everything together and have them be complimentary."

8. Are there any challenges that the Carrie Furnaces are facing currently?

"One of the biggest challenges is dealing with the code work. And it isn't anything that what we were using was placing anyone in danger, actually not at all. However, the local municipalities, for years, weren't paying any attention to what was down there. It really wasn't a big deal to them. And they saw numbers grow, they saw people coming in and spending money and realized that they had a responsibility to make sure things were done properly, but they also saw an opportunity to bring in much needed income for their borough. So, a couple years ago they imposed an amusement pact, a 5% amusement

pact. So, every ticket that is sold, whether it's a tour or one of the events, they get 5%. Which is fine. And then they started adding programming fees, and it's a bit of a money grab in some situations.

The code work is something that has been a struggle because we had already put in some light safety and then they insisted we needed more. So, we did that and then they came back to the table and said now we need even more work done. They say it's a fire hazard, yet the building is made out of brick, which doesn't burn. Some of it is political, some of it is just the reality of doing business within a borough. But we have reached an agreement, as long as we finish what we are doing, which is adding some doors and a couple of other stairwells, then we should be good. That's been the biggest external challenge. You know, funding is always an issue."

"Doesn't matter what historic site you go to, funding is always an issue. It's just how it is."

"And this goes back to the question about events, you have to have events because you cannot survive as a historic site alone. Externally, we just have to make sure everyone is working together."

"Internally, every day is a challenge, in that it's 112-year-old structures that are

made out of steel and concrete. Once you stop using them for their functioning purpose, they start to deteriorate."

"So, we are constantly having to go around and reassess the site, make decisions on what takes priority. So, it's a constant struggle with that."

9. With the statement of "National Historic Landmark" to the title in 2006, did you notice an increase in media attention or tours?

"Well, yes and no. In 2005, we were first allowed to do tours, but we didn't have control of the site yet. In 2006, it's the second year we were doing tours and finally after 10 years and many, many, many revisions, we achieved an NHL status. Was there a bump? Yes. Was it a huge bump at the time? No, but that's because we were so new as an attraction, people just didn't know. If the same thing happened now, there would be a much bigger bump for it. Because the profile is much bigger for the site."

"But what it [National Historic Landmark status] did do, beyond adding a layer of protection, it gave us a level of credibility and marketability."

Then we were able to market this as not only a local attraction, but something of national significance.”

10. With the “National Historic Landmark” title, meaning certain structures on the site cannot be altered or changed, would you like to see alterations made to the landscape? (i.e., native plantings, installed art sculptures, etc.)

“We are actually doing that already, and I’m sure you saw some of it. We are allowing these plants to grow naturally and to thrive. So, looking forward we will keep making adjustments to the site and opening other areas up. Adding seating and other amenities to make it a usable portion to the site. In addition, I hope within the next 3 years there is more infrastructure on-site, I mean keep in mind, we didn’t even have electricity there until about 2 years ago. We had solar power, but it was very limited. With us being on grid power now, that has allowed us to expand with more expansion on top of that. There is no running water and there is no direct sewage link on that site. So, once all of that happens, then we can add a visitor center and other amenities that can accommodate more people.”

11. In your opinion, would a designed landscape (designed space for concerts, paved pathways, places for sitting) that was open to the public, similar to SteelStacks in Bethlehem, PA, be feasible at the Carrie Furnaces?

“Well, I guess that depends on what happens with the rest of the site. The difference between our site and Bethlehem is that we interact with the physical site, as in Bethlehem, the structures really serve as a backdrop to the development. Whereas with us, the structures itself are something you can move through and interact with. So, so they’ve had all of this casino money come in through the years, but I hear they are having some problems now. They are changing owners again and fighting over access to the site and all of those fun things that go with that. But there is infrastructure there that would be highly beneficial to us, if a similar thing happened.”

“As long as we never lose sight on what these furnaces are and what they mean. Because at its core, it is always going to be a historic site. And it needs to be nurtured and treasured and used in that manner.”

12. What do you enjoy most about your job working for the Carrie Furnaces?

“The challenges, to be honest with you. I love working with the people, I love hearing people from all over the world, but I also love that challenge of keeping the history alive and keeping a site that is just so important to the story of this country and moving forward. And finding new and

inventive ways, whether it be through the artwork or the events, to make it attractive and bring people in. That's really the most satisfying thing, is that we went from a point of a derelict old mill to people realizing that it's a treasure and something that needs to be preserved."

"It is, as you say, 'on the map', and we are in a unique place in this region where we can really make a difference."

4.4 INTERVIEW FINDINGS

People

Events

Landscape

Similar to section 4.2 *Precedent Study Findings*, the colored bands to the left represent themes that were discovered in both interviews and that are needed for the projective design of this project. These three themes were chosen because they were repeatedly discussed in both interviews. This report will explore each theme individually and what each interview had to offer. There are similarities and differences that are important to this project in understanding what can be useful for the Carrie Furnaces. At the end of this chapter, opportunities and constraints will be expressed in written form and will then be considered for the projective design of the Carrie Furnaces.

People

Similar Trends

- 'Baby Boomers' - primarily those who have a direct connection to the Carrie Furnaces, this trend was high when the site first opened for tours in 2005
- 'Millennials' - recent rise in this generation for the social media "likes", this trend grew quickly over the past few years and is expected to keep rising
- 'Gen Z' - mainly school field trips

Events

Similar Trends

- Events mainly happen during the summer months
- Events range anywhere from concerts to car shows to festivals about iron smelting
- Rivers of Steel would like to keep these existing events but are open to trying new ones and see if it works with the site
- Open to finding events that allow the site to be accessed year-round
- Weddings have become the most popular small event because of the site's "off-the-beaten-path" look

Landscape

Similar Trends

- Paved paths
- Areas for seating/proper seating elements
- Art sculptures
- Visitor center/museum
- Restrooms
- Native planting areas
- Inter-connected green space with incoming development

4.5 SITE INVENTORY & ANALYSIS SUMMARY

The following section will look into the Carrie Furnace site, a 20.2-acre tract of land located within a total of 168 acres. This section will analyze six categories that will show in further detail what makes up the site:

Site Identity

To show existing building structures, the size of the site, vehicular and pedestrian access, and location within the region.

Site Inventory

To show the current conditions and primary views of the site through on-site photography.

Vegetation

To show existing vegetation and specific present plant species.

Development

To show immediate surrounding zoning areas.

Program

To show how and when the site is used.

Opportunities and Constraints

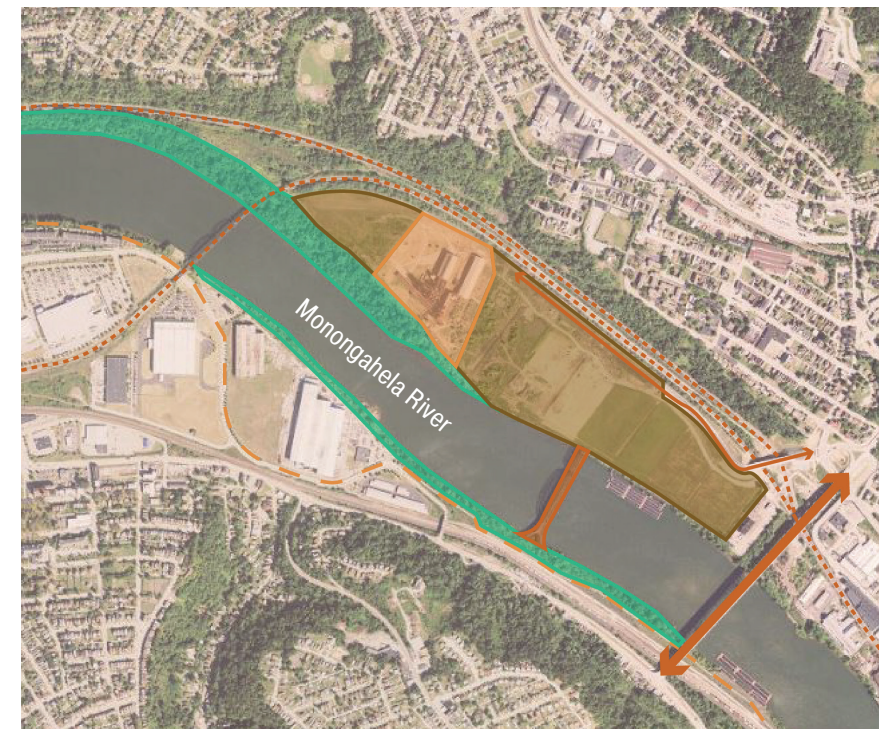
Through a combination of information found through site identity, site inventory and diagramming, the opportunities and constraints will be expressed through writing.


Mapping and diagramming will be primarily used to simply show how the site and surrounding land works. The Site Inventory sub-section will be a photographic walk-through that a pedestrian would take on tours. At the end of the chapter, the Opportunities and Constraints sub-section will cover not only the Site Inventory & Analysis section, but also the Precedent Studies and Interviews sections.

4.5.1 SITE IDENTITY

Site identity focuses on not only on the project site itself, but surrounding context as well. The identity and further understanding of the site help influence design rationale in the creation of a projective design, which will be shown in *Chapter 5: The Design*. This sub-section will explore the topography of the site along with the surrounding characteristics that directly and indirectly affect the Carrie Furnaces site. This sub-section will be presenting this information through maps. Along with the documentation of the land itself, a map was created to concisely show the National Historic Landmark nomination to understand which structures are protected.

Figure 5.11: Map showing the project site's surrounding elements, created by Emilee Voigt



-  Project site
-  Riverfront land owned by Allegheny County but governed by the Army Corps of Engineers
-  Future trail bridge
-  'Main Pad' for future light industrial development
-  Rankin Bridge
-  Clara Street
-  Great Allegheny Passage: A 150-mile dedicated multi-purpose trail beginning in downtown Pittsburgh and ending in Cumberland, Maryland
-  Active railroads

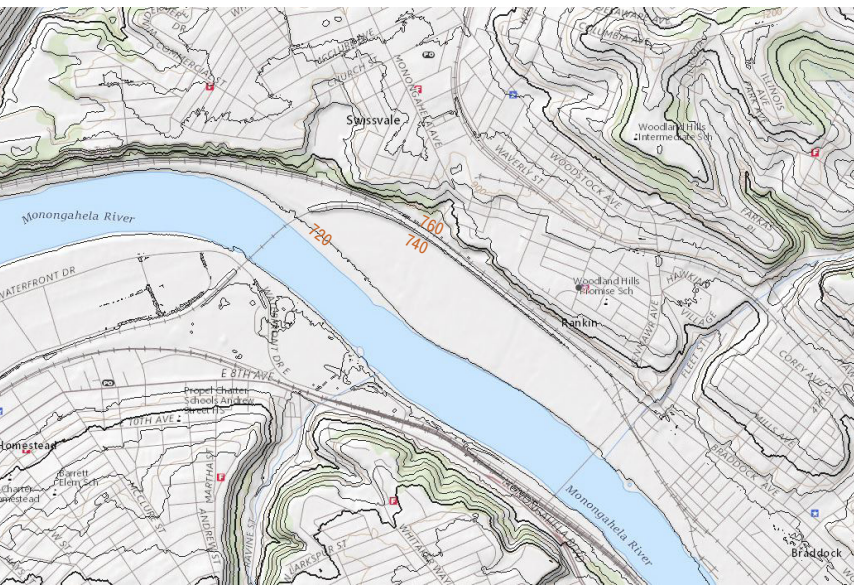


Figure 5.12: Map showing the topography on and around the site, USGS

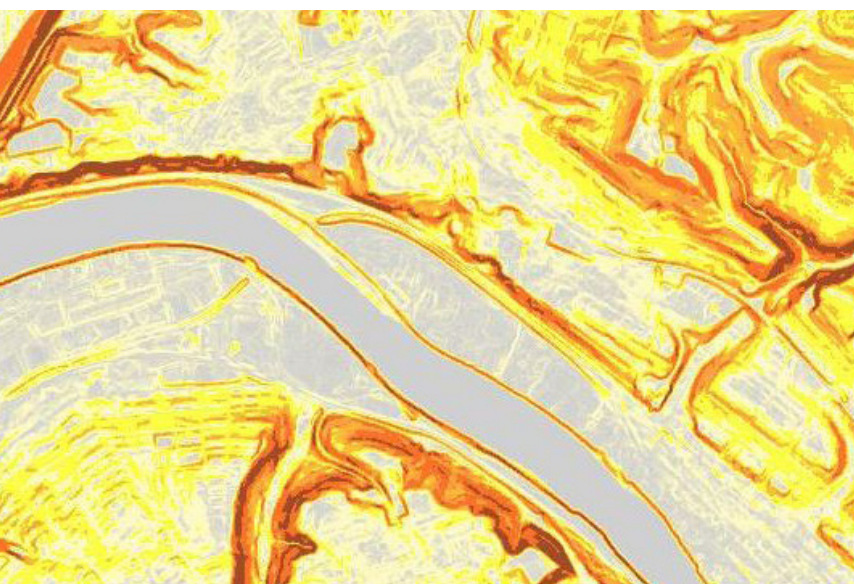


Figure 5.13: Map showing the slope degrees on and around the site, USGS

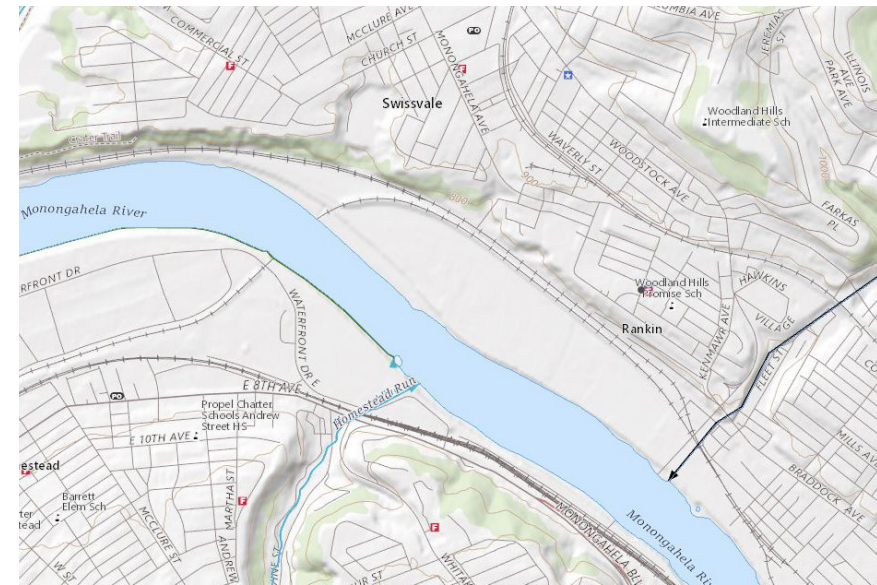
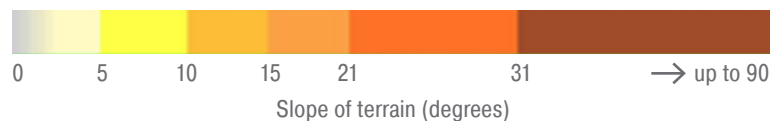


Figure 5.14: Map showing the hydrology systems around the site, USGS



Figure 5.15: View showing the flood retaining wall, taken from Google Earth

The image above shows a flood retaining wall, about 20 feet tall. This wall does not extend to the Carrie Furnaces site, as that area is still a natural riverfront edge. There are plans for the future, as new development begins to make its way in, for that natural riverfront edge to take on the same retaining wall as the rest of the 168 acres. For now, there is no direct physical access to the Monongahela River.

The topography of the site is nearly flat, contradicting the surrounding Pittsburgh land of steep slopes and hills. Along with the topography, the ground and soil are extremely rocky and make pedestrian navigation of the site very difficult, especially for the aging population.

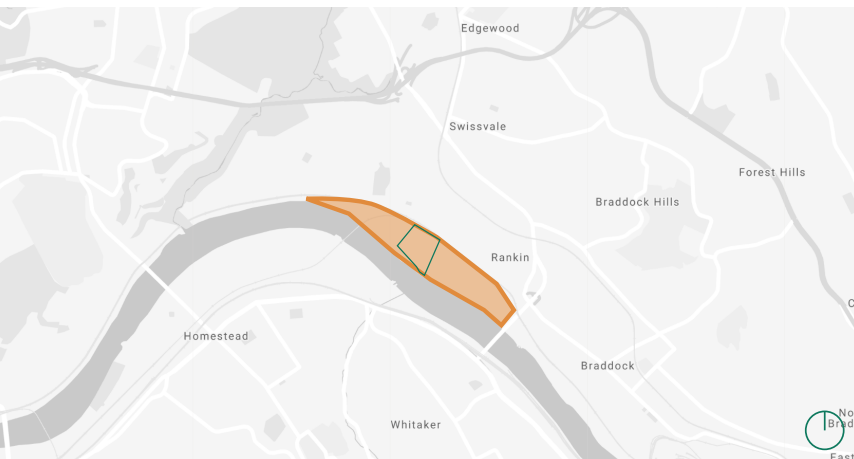


Figure 5.16: Map showing the project site within the greater 168 acres, created by Emilee Voigt

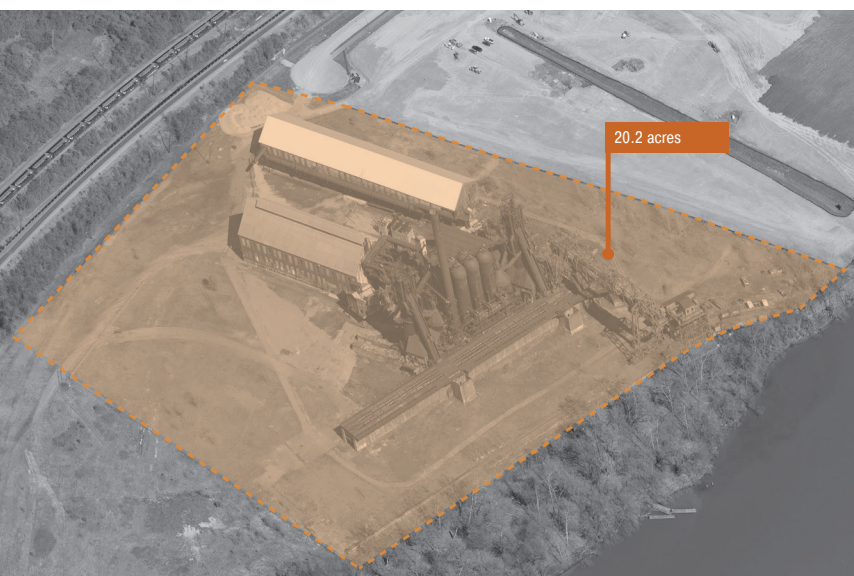


Figure 5.17: Map showing the project site, created by Emilee Voigt

In total, the site is 168 acres. The land is owned by the Redevelopment Authority of Allegheny County (RAAC), but the 20.2 acres that contain the Carrie Furnaces are leased by the Steel Industry Heritage Corporation (Rivers of Steel).

Rivers of Steel is a non-profit organization. They run and maintain the site. A fence has been placed by the Rivers of Steel organization that outlines the 20.2 acres.

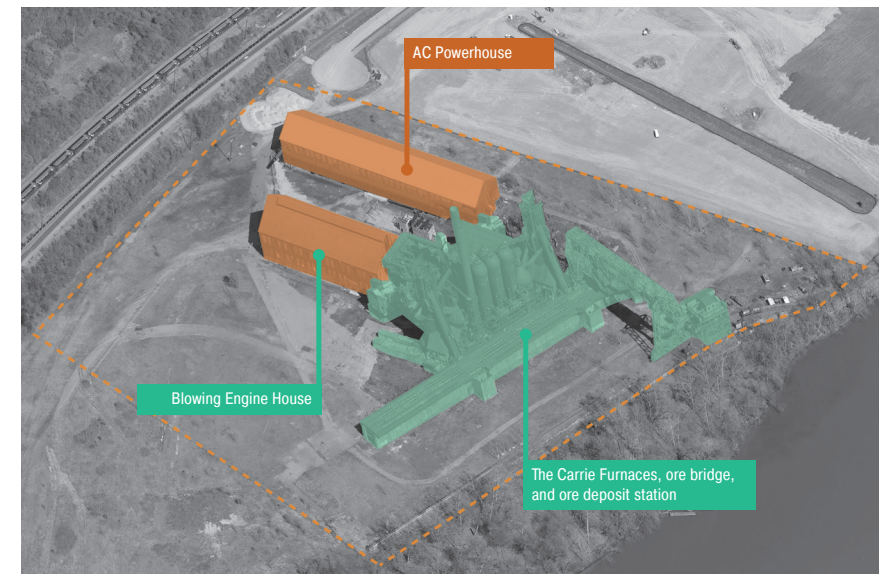


Figure 5.18: The National Historic Landmark document shown in map form, created by Emilee Voigt

AC Powerhouse

**Non-contributing*

There are no restrictions on a construction buffer, but Rivers of Steel will always keep site-lines open and will not interfere or impinge the historic structures.

Blowing Engine House

**Non-contributing*

Both the Blowing Engine House and AC Powerhouse are important examples of early 20th century industrial architecture, but are considered non-contributing resources.

The Carrie Furnaces, ore bridge, and ore deposit station

**Contributing*

These structures are protected under the National Historic Landmark (NHL).

**Non-contributing: The structures can be touched and altered*

**Contributing: The structures cannot be touched or altered*

4.5.2 SITE INVENTORY

This sub-section will document a typical tour on the site, seen through the eyes of a tourist. When the author visited the Carrie Furnaces in October 2018, she took photographs that documented the specific tour route she was given. Each tour guide is allowed to structure the tour route how they see pleasing, so no single tour is the same as the next. The photographs visually show how the author experienced the site and the major views she saw along the way.

In order for better understanding, this sub-section will communicate best through serial vision. Serial vision, the idea best explained through Gordon Cullen's book *Townscape*, is the progression of travel through a site and visual stimulations are made at key points (Cullen 1961). Those key points are represented through each photograph. Every eight photographs are accompanied by a site plan, showing the number of the photograph and where that photo is taken. In addition, each photograph is accompanied by a couple sentences explaining what is being shown and any further analysis.

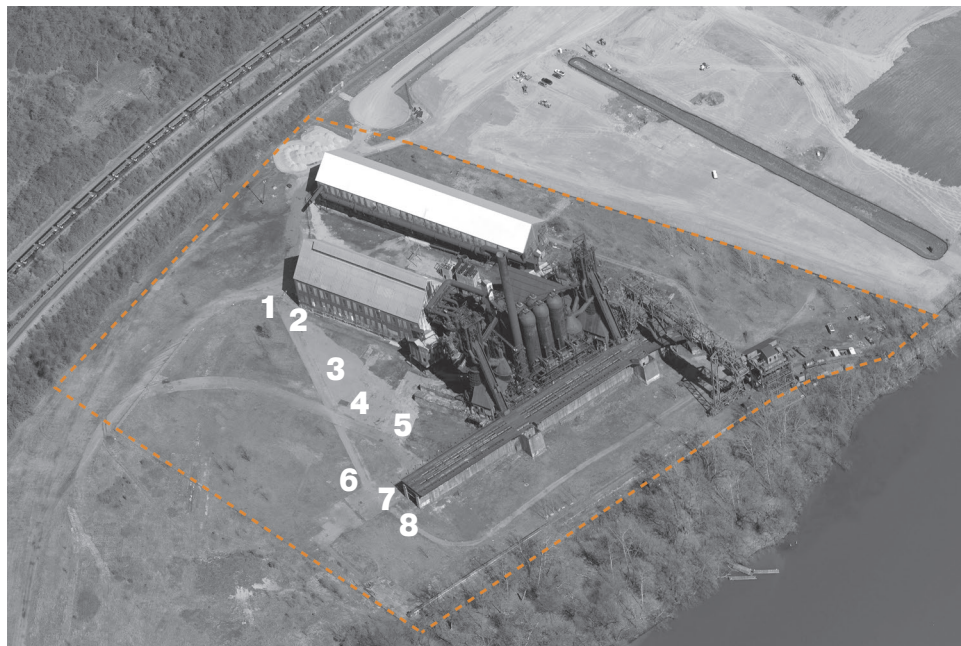


Figure 5.19: Site plan of the Carrie Furnaces showing the photograph locations of the eight photographs on the following page, created by Emilee Voigt



The view when your tour begins, looking out into the open area where larger events have taken place. Terrain is flat with gravel paths for people.



A pedestrian's first look at Furnace 7 when coming from around the corner of the Blowing Engine House (structure to the left).



One of the primary views on the site. Concert stages are set up here and audiences stand where the photographer is and continue behind.



More of a central view of the previous picture with a better focus of Furnace 7.



A close up view of old concrete foundation that has become the new home of native grasses. The foundation is about 15 feet tall.



Standing near the beginning of the ore bridge looking into the cluster of structures and piping. The Carrie Deer pokes its head out.



This was the path that ore deposit trains would take to drop off the iron ore. It is protected under the National Historic Landmark nomination.



The view just around the corner of the ore bridge. A glimpse of the graffiti wall in the distance. This area has let native grass species and trees grow naturally.

Figures 5.20 - 5.27: Photographs of the site by Emilee Voigt

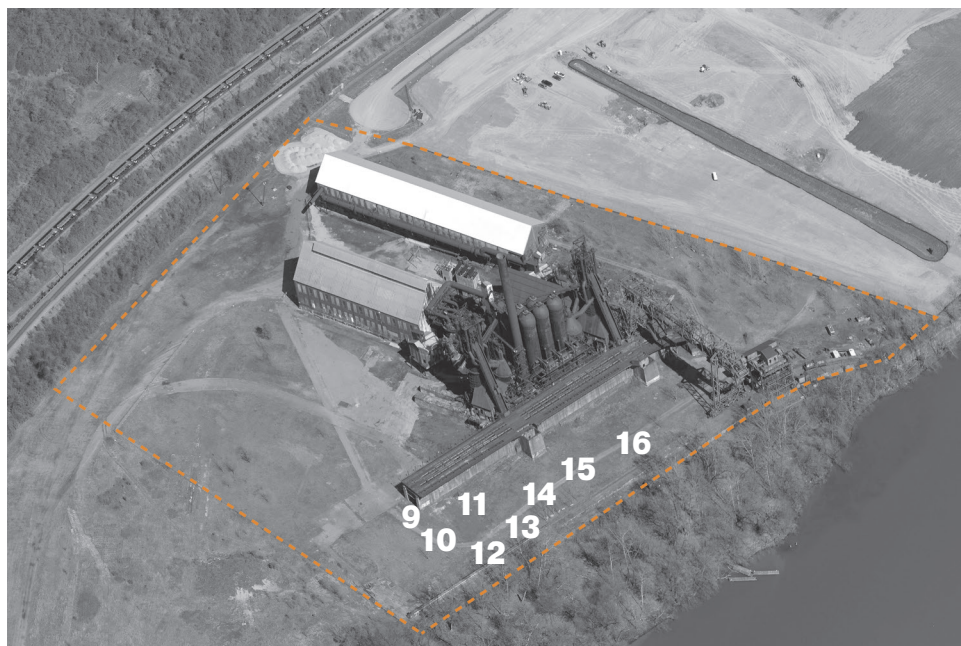


Figure 5.28: Site plan of the Carrie Furnaces showing the photograph locations of the eight photographs on the following page, created by Emilee Voigt

Figures 5.29 - 5.36: Photographs of the site by Emilee Voigt



Looking into the ore bridge. The tour, later on, will take you down this entire bridge to learn about the various jobs that took place there.



This area used to be an ore storage yard. The terrain is very rocky and numerous orange cones are scattered throughout to warn visitors of holes.



Still on the tour path, but with a better view of the graffiti wall to the right. The wall is there specifically for graffiti artists from all over the world.



A look back at the rest of the graffiti wall. Once a piece fades and disappears, a different artist is commissioned to take that spot.



Some artists produce their own work with their style and others pay homage to the Carrie Furnaces themselves.



A better glimpse of the types of trees growing on the site. These sycamores grew naturally and the maintenance team decided to let them be.



The main view on the site that tourists specifically come to see, with Furnace 7 on the left and Furnace 6 on the right. They are some of the last standing blast furnaces in the world.



Looking at the area just below the Furnaces. Open green space that is mowed on a regular basis. An orange cone in the foreground signals a hole and for visitors to move around.

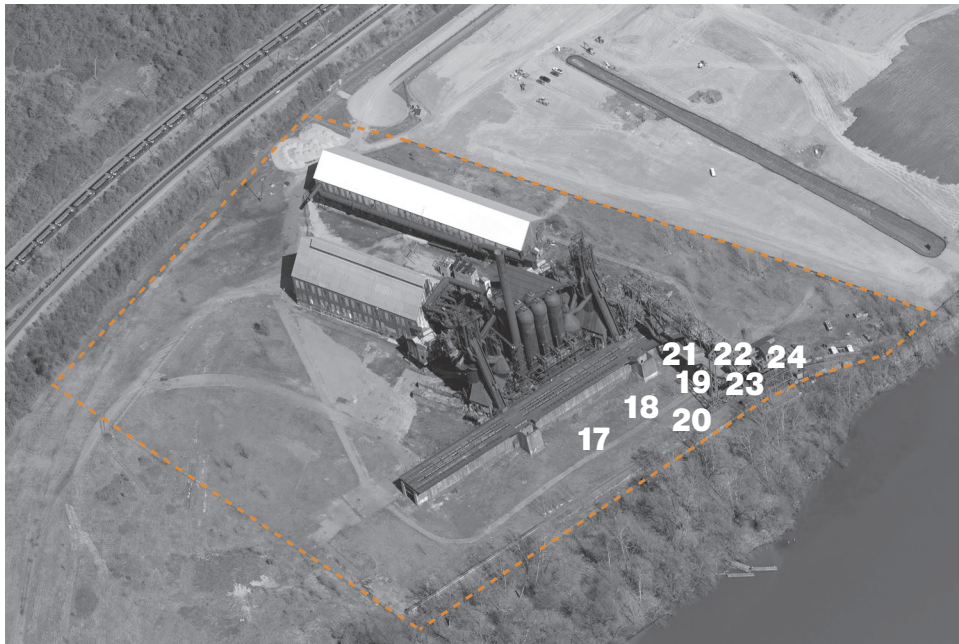


Figure 5.37: Site plan of the Carrie Furnaces showing the photograph locations of the eight photographs on the following page, created by Emilee Voigt



17
The main view of the furnaces themselves. This view is the most seen in photographs.



18
Looking past a Sycamore tree to an old piece of iron smelting equipment. Different pieces have been placed throughout the site.



19
A giant claw still stands, after lifting and carrying iron ore for years. The claw is about 7-8 feet tall.



20
A closer look at the graffiti wall as we begin to enter the iron ore deposit station.



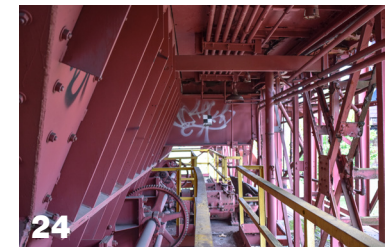
21
A look back at the end of the iron ore bridge and some leftover graffiti from years ago.



22
A full look at the iron ore deposit station before the tour enters.



23
Two painted deer remain on the iron ore deposit station. Artist unknown.



24
Inside the iron ore deposit station. The station is up to code so tourists can go up and in.

Figures 5.38 - 5.45:
Photographs of the
site by Emilee Voigt

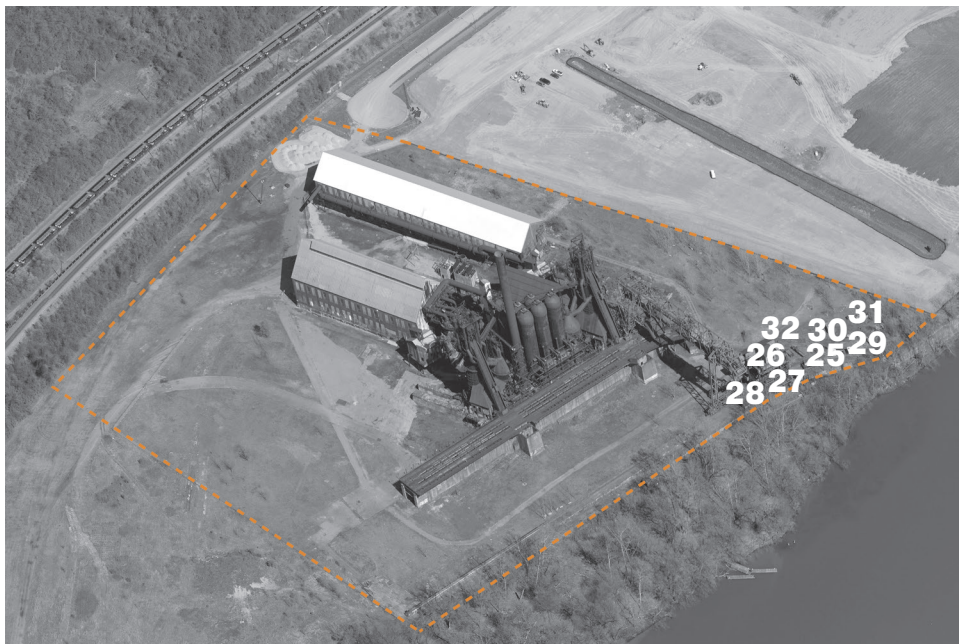


Figure 5.46: Site plan of the Carrie Furnaces showing the photograph locations of the eight photographs on the following page, created by Emilee Voigt



Inside the iron ore deposit station looking out over a remaining train car that would deliver the iron ore.



Hanging equipment inside the iron ore deposit station.



Looking up inside the iron ore deposit station.



Looking out of the iron ore deposit station. Railroad tracks used to continue on into the distance.



Native grasses and shrubs are growing back on their own around the train car.



Looking out over the area of land where welding classes for local students are held.



A wider look at the area of land where welding classes take place.



The grove of trees in the distance shows the entrance to The Iron Garden.

Figures 5.47 - 5.54: Photographs of the site by Emilee Voigt

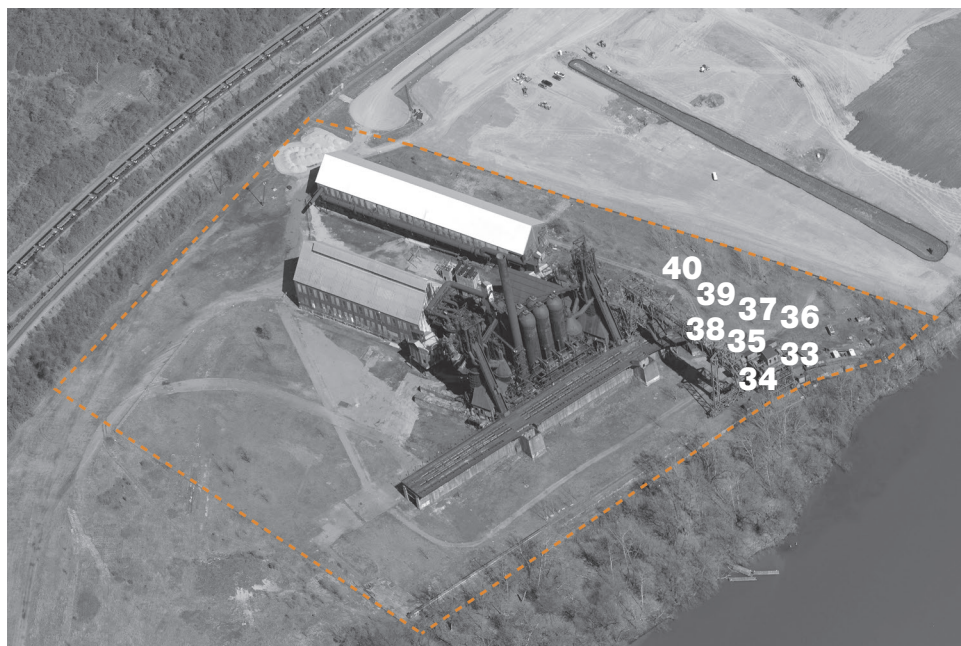


Figure 5.55: Site plan of the Carrie Furnaces showing the photograph locations of the eight photographs on the following page, created by Emilee Voigt



Looking through a part of the deposit station to see a part of the iron ore bridge.



One last look inside the iron ore deposit station.



Native grasses, trees, and shrubs have found their way back to this area. A welding project stands in the foreground.



A more central view of the welding area. Behind the row of trees lies the future site for light industrial development.



A welding project (balanced by a coffee mug) begins the entrance to The Iron Garden.



One last look down the iron ore bridge before entering the bridge itself.



The only path through The Iron Garden is becoming overgrown.



One of a few signs seen on the site, explaining the difference between Tree of Heaven and Staghorn Sumac.

Figures 5.56 - 5.63: Photographs of the site by Emilee Voigt



Figure 5.64: Site plan of the Carrie Furnaces showing the photograph locations of the eight photographs on the following page, created by Emilee Voigt



The view when the tour exits the iron ore bridge, back at the beginning.



The wide, open expanse that is and can be used for large events like concerts, car shows, festivals, etc.



Looking back down the Blowing Engine House (right) to where the tour first began.



Sculptures by local artists made entirely out of solid steel. They are not moving any time soon.



The Carrie Deer, constructed by guerrilla artists in 1997. It is an iconic piece of art for the Pittsburgh community.



Looking up to Furnace 7 and trying to understand the magnitude and size of the structure.



The main pipes and tubes, that were in production for a numerous amount of years, still remain today.



Looking into more pipes and tubes, understanding the process of smelting iron.

Figures 5.65 - 5.72: Photographs of the site by Emilee Voigt

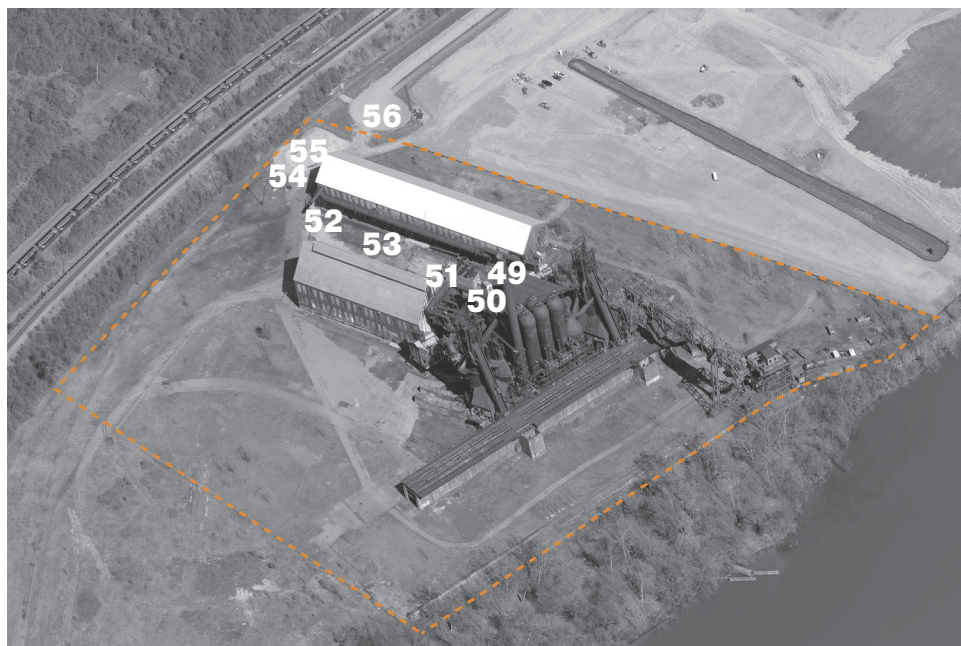


Figure 5.73: Site plan of the Carrie Furnaces showing the photograph locations of the eight photographs on the following page, created by Emilee Voigt



Looking into the Courtyard, typically where small festivals and events are held.



This view is primarily used for movies and TV shows. This area should be kept at its current state.



Art sculpture created out of steel to look like a large-scale rocking horse.



Towards the end of the Courtyard, old graffiti is still visible on the AC Powerhouse.



Looking back down the Courtyard. The area is primarily filled with gravel and concrete slabs.



The United States Steel logo still hangs proudly on the AC Powerhouse, even though Allegheny County owns the property.



Outside of the fence, one can see both the AC Powerhouse (left) and Blowing Engine House (right).



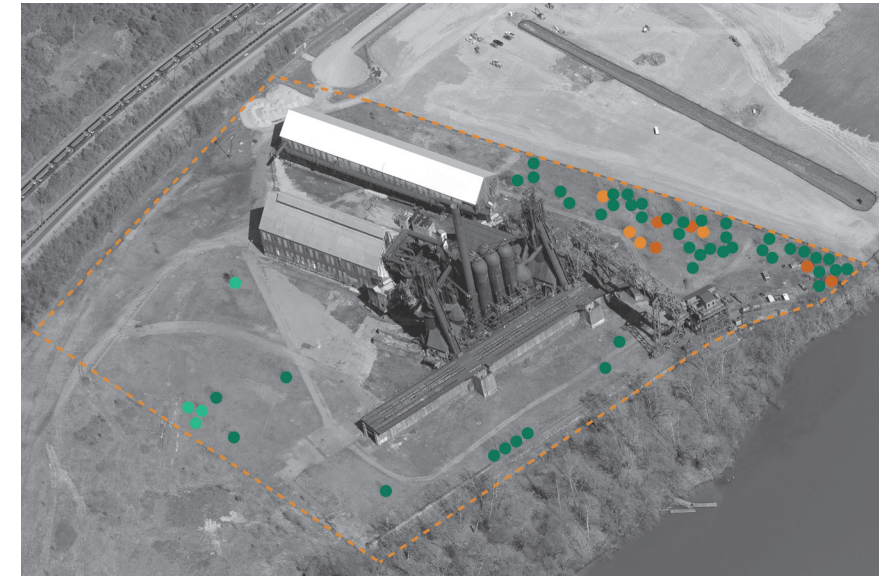
Looking back to the site, with the Furnaces on the right and the proposed development site to the left.

Figures 5.74 - 5.81: Photographs of the site by Emilee Voigt

4.5.3 VEGETATION

Over the past several years, the Rivers of Steel team has let the site naturally grow plants. What ever pops up, they let it grow. The site is already rich with diversity, but there are 4 main species that appear the most: Sycamores, Elms, Staghorn Sumac, and Tree of Heaven. It is noted that Tree of Heaven is not native to this area and is in fact an invasive species, so termination of this plant will need to begin immediately. These trees and shrubs will help shape a plant palette for the projective design, along with native grasses and wildflowers. The Rivers of Steel team has a strong desire to keep native plants on the site, so using existing trees and shrubs will help the design and please the team.

Figure 5.82:
Map showing an
inventory of the
existing trees,
created by Emilee
Voigt



● Sycamore ● American Elm ● Staghorn Sumac ● Tree of Heaven

Pittsburgh, Pennsylvania is located in hardiness zone **6a**, the same zone as Manhattan, Kansas. The Rivers of Steel team has a strong desire to let native plants grow on the site.

The most common trees seen on the site are Sycamores and Elms. Native grasses and wildflowers are similar to Kansas.



Figure 5.83: Sycamore



Figure 5.84: American Elm



Figure 5.85: Staghorn Sumac



Figure 5.86: Tree of Heaven

Figure 5.83 - Figure
5.86: Images of
the 4 main existing
species on site.

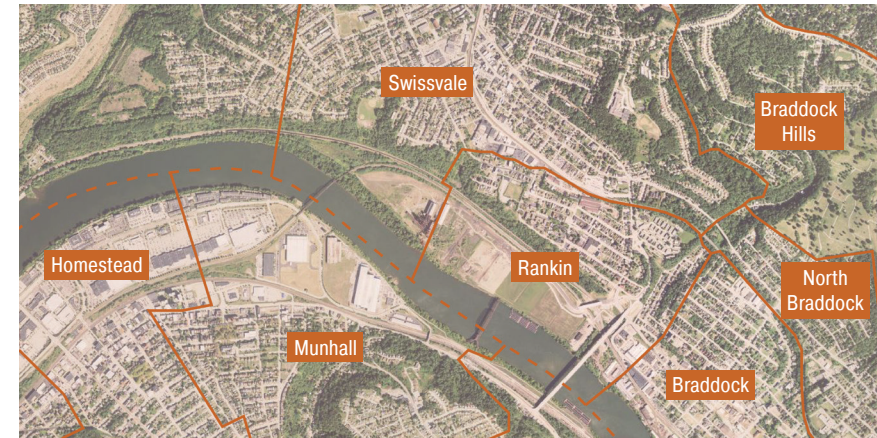
4.5.4 DEVELOPMENT

The Carrie Furnace site only makes up 20.2 out of 168 acres. The remaining acreage is up for sale by Allegheny County, as a Request for Development Proposals (RFDP) was made public earlier this year. The RFDP takes note at two comprehensive plans: 1) the Edgewood Rankin Swissvale Comprehensive Plan and 2) Allegheny Places: Allegheny County's Comprehensive Plan. Both have similar goals and objectives that they would like to see take place at the Carrie Furnaces Redevelopment site. The goals combine the Carrie Furnaces and the redevelopment land so that it becomes one, cohesive site again. Some of those goals include:

- Creating open spaces and restoring the natural habitat
- Planning to successfully integrate the historic heritage-oriented components with tax producing components
- Former brownfields are transformed into attractive destinations for residents, businesses, and visitors
- Extensive greenways connect our communities with parks, trails, riverfronts, and other natural amenities

It is important for this project and design to listen to what the surrounding communities want out of this land. Through this project's projective design, these goals will be highlighted through landscape design and allow this site to become whole once again.

Figure 5.87:
Map showing
the surrounding
boroughs, created
by Emilee Voigt



These are the surrounding boroughs, or neighborhoods, adjacent to the Carrie Furnaces.

The boroughs of Edgewood (north of Swissvale), Rankin, and Swissvale have a multi-municipal comprehensive plan (2008).

Allegheny County's comprehensive plan, *Allegheny Places (2008)*, has similar goals and priorities for the Carrie Furnace Redevelopment Site.

Figure 5.88:
Map showing the
surrounding zoned
areas, created by
Emilee Voigt



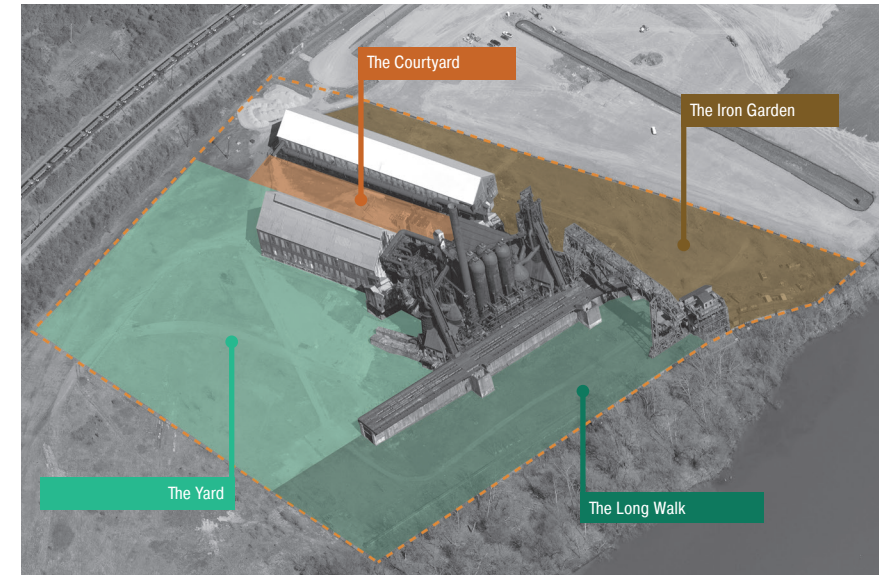
- Industrial
- Vacant
- Residential
- Commercial

4.5.5 PROGRAM

The map on the following page graphically represents the existing programs on the Carrie Furnaces site. The site has been split into four quadrants and are accompanied by a list of the existing programs that occur in that area. The quadrants have been given names like The Courtyard, The Yard, The Long Walk, and The Iron Garden. The Courtyard consists of smaller events like art shows and the Festival of Combustion. The Yard holds larger scale events like concerts and car shows. The Long Walk is ideal for photographers and one-on-one time. The Iron Garden is a richly planted area where local artists and students can exhibit their iron sculptures.

The author does not intend to get rid of any of these programs, but simply show that other programs can be added to allow the park to be accessible year-round. All of these programs happen in the warmer spring and summer months, limiting what can be done. But adding events like ice skating or a holiday light showing can allow this site to be remembered and accessed every month of the year.

Figure 5.89: Map showing the existing programming on site, created by Emilee Voigt



The Courtyard

Tours
Art shows
Festival of Combustion
Weddings
Film & TV show shootings

The Yard

Tours
Car shows
2-day music festivals
American Ninja Warrior
Pittsburgh Ballet & Symphony
Theater productions

The Long Walk

Tours
Weddings
Photographers' playground
Graffiti art wall

The Iron Garden

Tours
Welding classes
Photographers' playground

4.5.6 OPPORTUNITIES & CONSTRAINTS

Opportunities

- The interiors of the AC Powerhouse and Blowing Engine House can be altered, creating options for an indoor performance space, museum, or visitor center.
- Since there are no formal plans for the adjacent development yet, this project can set the stage for how paths connect the spaces, etc.
- There are no buffer zones for construction on-site that happens near contributing and non-contributing structures, but Rivers of Steel would like to keep the area where the structures meet the ground open and visible (ie. not planting plants up against the structures).
- Clara Street, about 1,000 feet in, is open for change. This poses an opportunity for signage and an extension of that road to a formal parking area for the Carrie Furnaces.
- An even more diverse set of programs can be introduced that can help the Carrie Furnaces become a year-round public place of gathering.

Constraints

- Two railroads and a steep slope separate the Carrie Furnaces from the nearest community, making direct pedestrian access difficult.
- The site is incredibly rocky, which has posed current problems, like holes, and tourists have difficulty walking.
- The site currently does not have running water or on-site restrooms.
- The adjacent riverfront land is owned by Allegheny County but governed by the Army Corps of Engineers, limiting what can and cannot be done with that area.
- The site is secluded and the roads leading up to it are confusing and make it difficult for even locals to know the Carrie Furnaces are there.



Figure 6.0: The Carrie Deer, constructed by guerrilla artists in 1997 (Voigt, 2018)

CHAPTER 5:

The Design

5. THE DESIGN

This chapter will dive into the projective design for the Carrie Furnaces. The design has taken knowledge gained from the methods and their further analysis. The chapter will walk through the design process and explain how certain concepts came to be. There are four main design goals that this design hopes to achieve:

- 1) Introduce simple design strategies that can allow the Carrie Furnaces to be accessed day-to-day,
- 2) Preserve the history by integrating past elements,
- 3) Introduce new programs that promote year-round access, and
- 4) Design with the anticipated future of the site and adjacent development to create one cohesive space.

The following sub-sections will show and explain how these goals are being met through writing and renders of specific view on the site.

Welcome to the Carrie Furnaces Industrial Park.



Figure 6.1: The new entry and entry sign to the Carrie Furnaces Industrial Park, created by Emilee Voigt

5.1 GOALS - STRATEGIES - OUTCOMES

The purpose of this “Goal Matrix” is to allow the designer to think more deeply and critically about this project. The matrix, shown on the following page, lays out the goals, strategies, and outcomes for this project. There are 4 main goals that are accompanied by strategies. The strategies are the ways a designer will achieve that goal. Once the strategies have been decided, the expected outcomes are listed, which are the ending result of applying a strategy to a goal. The reason for this matrix is to simplify the Carrie Furnaces project and show clearly and concisely what needs to be done in order to achieve the goals and answer the research question.

GOALS	STRATEGIES	OUTCOMES
<i>What is important for this project?</i>	<i>How will you achieve these values? Which strategies will you apply to achieve these values?</i>	<i>What outcomes are you expecting?</i>

GOALS	STRATEGIES	OUTCOMES
<i>Introduce needed design strategies</i>	<ul style="list-style-type: none"> • Safe, ADA accessible pathways (paved) • Areas for seating along the paths • Proper entry signage 	<ul style="list-style-type: none"> • The site becomes a place of gathering for everyone
<i>Integrate past elements</i>	<ul style="list-style-type: none"> • Preserve and conserve the history • Reintroduce old blast furnace equipment • Re-purpose old layouts from the original site plans 	<ul style="list-style-type: none"> • The story of the site is told through the landscape • Celebrate the significance to the surrounding communities
<i>Promote year-round access</i>	<ul style="list-style-type: none"> • Introduce new programs that can occur in colder months • Taking the fence down and allowing public access 	<ul style="list-style-type: none"> • The site becomes a year-round public park and event space
<i>Create a cohesive space</i>	<ul style="list-style-type: none"> • Connect paths with the adjacent development spaces • Extending Clara St. to reach the farthest plot of land • Allow trails to extend across the Monongahela River 	<ul style="list-style-type: none"> • The Carrie Furnaces fit in with the new development and vice versa.

5.2 THE CARRIE FURNACES INDUSTRIAL PARK CONCEPT PLAN

All 20.2 acres of this project site holds history and meaning. The site ran as an iron smelting factory, providing jobs for many people in the surrounding communities. This place still means something to those people and the generations after. The design addresses needs that were expressed during the interviews and site analysis such as paved paths, seating, and native vegetation. The primary path (represented in orange) takes guests around the entire site, something that was not available before. The paths are inspired by the old rail lines that ran all over the Carrie Furnaces site, carrying iron ore on to the site and taking the melted product across the Monongahela River. Seating on the site is inspired from the iron ore itself, acting as boulders for seating or play. Native vegetation fills the site, creating natural shade and creating different experiences of open space and intimate settings. This design aims at celebrating the past, embracing the present, and building the future of the Carrie Furnaces Industrial Park.

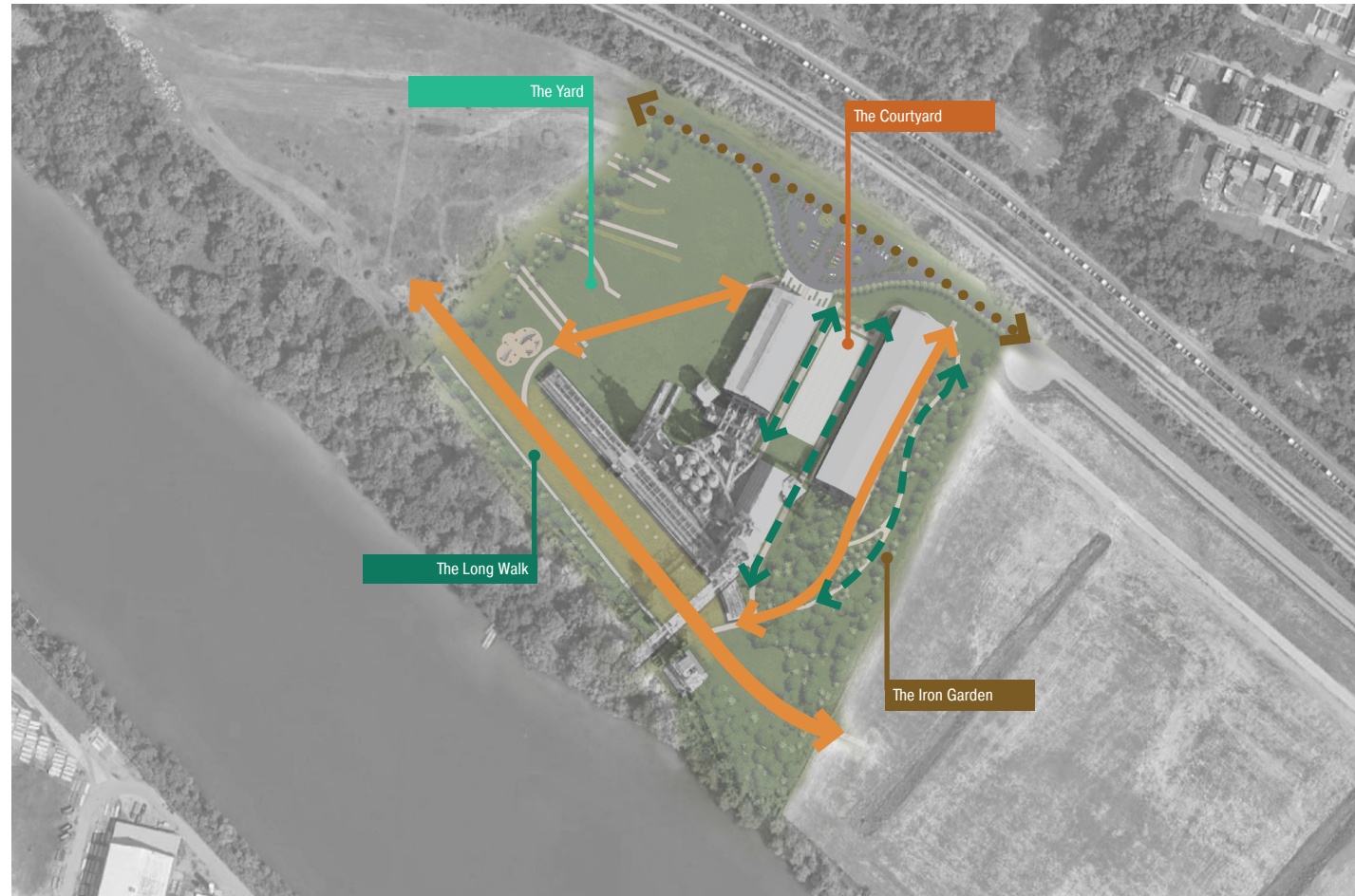


Figure 6.2: The Carrie Furnaces Industrial Park concept plan, created by Emilee Voigt

LEGEND

- 1 New parking lot
 - 2 Inspired rail paths, some with plantings in between
 - 3 Lawn space for larger events
 - 4 Natural playground
 - 5 Main path to connect future adjacent development
 - 6 Outdoor artifact gallery
 - 7 Highly vegetated area
 - 8 Secondary trails
 - 9 Multi-purpose plaza
-
- 1 Blowing Engine House
 - 2 AC Powerhouse
 - 3 Carrie Furnaces



Figure 6.3: The Carrie Furnaces Industrial Park site plan with legend, created by Emilee Voigt

5.3 INTRODUCING SIMPLE DESIGN STRATEGIES

The design for the Carrie Furnaces Industrial Park has introduced simple design strategies that allow the site to be accessed by any individual of any ability. Concrete, paved pathways run around and through the site, creating a walking loop that allows the entire site to be seen. Pathways go in and out of highly vegetated areas, providing different experiences along a single path. Seating was a big concern for the Rivers of Steel staff, as the site is very large and contains a lot of walking without areas to stop and rest. As shown in the proposed view on the following page, seating throughout the site will take the form of large ores. Inspired by the initial stage of an iron ore's life, these ores serve seating needs and can also be explored and played on by anyone of any age. The Carrie Furnaces Industrial Park will also contain new signage, inspired by simple geometry and the rusty texture and color of the surrounding furnaces and structures.



EXISTING

Figure 6.4: Existing photograph, taken by Emilee Voigt



PROPOSED

Figure 6.5: Proposed rendering, created by Emilee Voigt

5.4 INTEGRATING PAST ELEMENTS

The Carrie Furnaces site has established roots in the greater Pittsburgh area. This place means something to the people who live here. The design made this a priority, preserving the history of place and enhancing the heritage through landscape architecture. The site is filled with elements that used to contribute to the iron smelting practice. This design aims to reuse those items and put them on display in an outdoor gallery. Featured primarily on The Long Walk, these elements are shown in a field of native grasses and wildflowers. Guests can move off the paved path and get a closer look at the equipment that made this site functional for so many years. In addition to the outdoor gallery, the paths will take on the form of rail lines that used to cover the entire landscape. In between the rail lines, concrete will be poured to create a flat, stable path for guests to use. These pathways take guests all over the site to experience the standing structures.



EXISTING

Figure 6.6: Existing photograph, taken by Emilee Voigt



PROPOSED

Figure 6.7: Proposed rendering, created by Emilee Voigt

5.5 PROMOTING YEAR-ROUND ACCESS

The Carrie Furnaces site is currently open and used during the months of April through October, depending on cooperative weather. For the current programming, it only promotes summer events and activities because of the large amounts of outdoor programs. By promoting year-round access, the site becomes a permanent asset to the community, providing a place for people to gather and enjoy themselves at any time of the year. Shown in the proposed view on the following page, converting the Courtyard Plaza into an ice rink during the colder months and then back to a multi-purpose plaza during the warmer months is just one option for promoting year-round access. There is an untapped niche of cold month events that could bring more public awareness to the area and bring an economic boost to Rivers of Steel and the surrounding community.



EXISTING

Figure 6.8: Existing photograph, taken by Emilee Voigt



PROPOSED

Figure 6.9: Proposed rendering, created by Emilee Voigt

5.6 CREATING A COHESIVE SPACE

With new development coming in the next few years on both sides of the Carrie Furnaces site, it is important to design a space that connects all three instead of making three separate sites. The Carrie Furnaces Industrial Park design features paved pathways that reach the Hot Metal Bridge to the southeast and the land to the northwest. This design move is also keeping in mind that on the other side of the Monongahela River, the Great Allegheny Passage trail system runs adjacent to the river, giving an opportunity for more pedestrian access. This design also takes a look at Clara Street, the main vehicular access on and off the site. Clara Street currently ends just before reaching the Carrie Furnaces site. The design proposes an extension of that road to reach the northwestern side of the site, with an adjacent parking lot for the Carrie Furnaces Industrial Park.



EXISTING

Figure 6.10: Existing photograph, taken by Emilee Voigt



PROPOSED

Figure 6.11: Proposed rendering, created by Emilee Voigt



Figure 7.0: A life-size rocking horse made of steel (Voigt, 2018)

CHAPTER 6: *The Conclusion*

6. THE CONCLUSION

As the report and project comes to an end, it is important to reflect on what this report means for the author, the field of landscape architecture, and the future for the Carrie Furnaces. This report focused on a very specific niche, shining the light on the few remaining pre-World War II industrial sites in the United States. This chapter hopes to share the outcomes that came from the research and projective design itself. Future research and a reflection of the project will be discussed in order to help pave the way for the future of the Carrie Furnaces Industrial Park.

6.1 PROJECT SIGNIFICANCE

A project, like the Carrie Furnaces, is one unlike any other. It covers a very specific niche of American history and the infamous industrial past of Pittsburgh, Pennsylvania. The Carrie Furnaces contain two of the last remaining blast furnaces in the world, yet the site itself is completely blocked off from public access. We, as landscape architects, have the chance to recreate this site again. History, people, and landscape collide to keep this heritage alive well into the future.

This type of project opens a new door to historic preservation for landscape architects. Projects like these are generally seen as a risk to most firms. Designers are dealing with high stakes liability, coding issues with remaining structures, contaminants in the soil, historic activist groups, etc. As all of those components are important, the hardest part is getting started. Historic preservation projects will be more of a reality in the coming few years, where opportunities for landscape architects will be more apparent. A project, like the Carrie Furnaces Industrial Park, can further pave the way for landscape architects and historic sites. This project had one overall goal, to answer this research question: *How can landscape design at the Carrie Furnaces enhance the history and build upon the future through programming, economic growth, and landscape design strategies?* The Carrie Furnaces Industrial Park design answers this question through its four design goals: 1) *Introduce simple design strategies that can allow the Carrie Furnaces to be accessed day-to-day*, 2) *Preserve the history by integrating past elements*, 3) *Introduce new programs that promote year-round access*, 4) *Design with the anticipated future of the site and adjacent development to create on cohesive space*.

6.2 LIMITATIONS

For how much information and graphics were collected and created, there were several limitations that occurred. Time is always a determining factor in how much work can be produced, but this was a rather quick semester for research and a projective design. Also, with the location of the Carrie Furnaces being in Pittsburgh, Pennsylvania and the author residing in Manhattan, Kansas, extensive research was not possible. The author's visit in October 2018 only shed a thin light on the history, heritage and prospective opportunities of the Carrie Furnaces. In a perfect world, the author would be on-site almost every day, but the Carrie Furnaces was not chosen for its location. It was chosen for its clear opportunity for becoming a publicly accessible site for the Pittsburgh community.

There are limitations with the research and the projective design itself. With the research, interviewing only two people can leave out a lot of information and opinions. The author stands by her decision of interviewing two people, but for future research of this project there must be more than two people interviewed. In addition, the scale of the project in relationship to the author was a lot more than she anticipated. In the future, if one person were to take on this project, it would be best to focus on a much smaller area within the site. Either way, identifying these limitations will only make the future of project at the Carrie Furnaces stronger.

6.3 FUTURE RESEARCH

The background and literature review for this project attempts to synthesize historic design, brownfield design, the iron smelting history of Pittsburgh, and the National Historic Landmark nomination process. Any one of these topics could be explored further in their own individual research. Future landscape architecture students could do a combined thesis with architecture and interior architecture students to design the interiors of the Blowing Engine House and the AC Powerhouse. In addition, more inclusion of the surrounding residents and communities, through survey format, could uncover even more information.

The future is bright for the Carrie Furnaces and the opportunity to become a historic public park. And that future seems more and more possible every day. With interviewing Adam Piscitelli and Ron Baraff, both expressed their own interests in seeing that opportunity for the site achieved. The Rivers of Steel team is hopeful for the reimagination of the site into a park, especially as new development begins to make its way into the area. The future for this research could travel down a variety of different paths, involving architects, interior architects, landscape architects, historians, environmental biologists, brownfield specialists, and many more.

6.4 PROJECT REFLECTION

After the extensive research and projective design, a vision for the Carrie Furnaces Industrial Park has come to life. This report began in the fall of 2018 and has completely transformed from its initial beginnings. Celebrating the legacy of pre-World War II industrial factories through landscape design is a topic the author was very passionate about so a lot of heart went into not only the project but the book as well.

It's easy to sit here after the project is done and have perfect 20/20 hindsight, but there are a few pros and cons to this project that could have changed it completely. First, with the author being in Manhattan, Kansas and the project site in Pittsburgh, Pennsylvania, the "Site Inventory and Analysis" section could have gone more in depth. In addition, the author could have spent more time on the site and with the Rivers of Steel staff, revealing more information that could have led to an even better design. However, the site was chosen for its legacy and the future potential it possesses, not its location in relationship to the author. Plus, with other notable projects similar to this one, like Gas Works Park and SteelStacks, the Carrie Furnaces Industrial Park brings a long overdue legacy celebration to one of the most infamous industrial cities in the world.



Figure 8.0: The Steel Worker mural, painted on the graffiti wall by Daily Letters (Voigt, 2018)

APPENDICES

APPENDIX A | REFERENCES

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APPENDIX B | IMAGE REFERENCES

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Figure 2.0: Voigt, Emilee. (2018). *Deer graffiti on iron ore elevator*. Photo.

Figure 3.0: Voigt, Emilee. (2018). *Giant claw stands idle*. Photo.

Figure 3.1: Voigt, Emilee. (2018). *Project matrix diagram*. Adobe Illustrator.

Figure 3.2: Voigt, Emilee. (2018). *Timeline of the Carrie Furnaces*. Adobe Photoshop, Adobe Illustrator. Facts and dates sourced from the Western Pennsylvania Brownfields Center.

Figure 3.3: Voigt, Emilee. (2019). *Map showing the greater Pittsburgh area with the project site in view*. Google Map Style Wizard, Adobe Illustrator.

Figure 3.4: Voigt, Emilee. (2019). *Map showing a closer view of the project site*. Google Map Style Wizard, Adobe Illustrator.

Figure 3.5: Voigt, Emilee. (2019). *Map showing the project site*. Google Earth, Adobe Illustrator.

Figure 4.0: Voigt, Emilee. (2018). *Student welding project*. Photo.

Figure 5.0: Voigt, Emilee. (2018). *Iron ore train*. Photo.

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Figure 5.9: Voigt, Emilee. (2018). *Looking over the new landscape to see the remnants of the steel production era at sunset*. Photo.

Figure 5.10: Voigt, Emilee. (2018). *One of the bridge entrances to the site with old pipes from the factory used as art installations*. Photo.

Figure 5.11: Voigt, Emilee. (2019). *Map showing the project site's surrounding elements*. Google Earth, Adobe Illustrator.

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Figure 5.14: USGS. (2019). *Map showing the hydrology systems around the site*. Accessed on March 3, 2019 from: <https://viewer.nationalmap.gov/advanced-viewer/>.

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Figure 5.16: Voigt, Emilee. (2019). *Map showing the project site within the greater 168 acres.* Pictometry, Adobe Illustrator.

Figure 5.17: Voigt, Emilee. (2019). *Map showing the project site.* Pictometry, Adobe Illustrator.

Figure 5.18: Voigt, Emilee. (2019). *The National Historic Landmark document shown in map form.* Pictometry, Adobe Illustrator.

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Figure 5.82: Voigt, Emilee. (2019). *Map showing an inventory of the existing trees.* Pictometry, Adobe Illustrator.

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Figure 6.1: Voigt, Emilee. (2019). *The new entry and entry sign to the Carrie Furnaces Industrial Park*. Google Earth, Lumion, Adobe Photoshop.

Figure 6.2: Voigt, Emilee. (2019). *The Carrie Furnaces Industrial Park concept plan*. Google Earth, Lumion, Adobe Photoshop.

Figure 6.3: Voigt, Emilee. (2019). *The Carrie Furnaces Industrial Park site plan with legend*. Google Earth, Lumion, Adobe Photoshop.

Figure 6.4: Voigt, Emilee. (2018). *Existing photograph*. Photo.

Figure 6.5: Voigt, Emilee. (2019). *Proposed rendering*. Lumion, Adobe Photoshop.

Figure 6.6: Voigt, Emilee. (2018). *Existing photograph*. Photo.

Figure 6.7: Voigt, Emilee. (2019). *Proposed rendering*. Lumion, Adobe Photoshop.

Figure 6.8: Voigt, Emilee. (2018). *Existing photograph*. Photo.

Figure 6.9: Voigt, Emilee. (2019). *Proposed rendering*. Lumion, Adobe Photoshop.

Figure 6.10: Voigt, Emilee. (2018). *Existing photograph*. Photo.

Figure 6.11: Voigt, Emilee. (2019). *Proposed rendering*. Lumion, Adobe Photoshop.

Figure 7.0: Voigt, Emilee. (2018). *A life-size rocking horse made of steel*. Photo.

Figure 8.0: Voigt, Emilee. (2018). *The Steel Worker mural, painted on the graffiti wall by Daily Letters*. Photo.

APPENDIX C | INTERVIEW MATERIALS

Interview materials included:

- IRB Approval Letter
- Interviewee Questions
- Interviewee Signed Consent Form
- Interview Transcript

TO: Dr. Amir Gohar
Landscape Architecture/Regional and Community Planning
3004 Seaton Hall

Proposal Number: 9599

FROM: Rick Scheidt, Chair
Committee on Research Involving Human Subjects

DATE: 01/09/2019

RE: Proposal Entitled, "Unearthing Forgotten Spaces: Bringing Industrial Land Back to Life"

The Committee on Research Involving Human Subjects / Institutional Review Board (IRB) for Kansas State University has reviewed the proposal identified above and has determined that it is EXEMPT from further IRB review. This exemption applies only to the proposal - as written - and currently on file with the IRB. Any change potentially affecting human subjects must be approved by the IRB prior to implementation and may disqualify the proposal from exemption.

Based upon information provided to the IRB, this activity is exempt under the criteria set forth in the Federal Policy for the Protection of Human Subjects, **45 CFR §46.101, paragraph b, category: 2, subsection: ii.**

Certain research is exempt from the requirements of HHS/OHRP regulations. A determination that research is exempt does not imply that investigators have no ethical responsibilities to subjects in such research; it means only that the regulatory requirements related to IRB review, informed consent, and assurance of compliance do not apply to the research.

Any unanticipated problems involving risk to subjects or to others must be reported immediately to the Chair of the Committee on Research Involving Human Subjects, the University Research Compliance Office, and if the subjects are KSU students, to the Director of the Student Health Center.

CONSENT TO INTERVIEW

Interview Questions

1. How long have you worked at the Carrie Furnaces? Can you tell me about your role, responsibilities, what your day-to-day operations are like, etc.?
2. Can you describe what the Carrie Furnaces mean to the surrounding community? Describe the “feel” or “atmosphere.”
3. Now that the Carrie Furnaces are open for tours, what types of trends do you see attending? Meaning: do the tour groups consist of families, couples, groups, etc.? Are the number of visitors each year documented? Is that number accessible to the public?
4. It is my understanding that the Carrie Furnaces have also hosted events, can you describe the types of events that have been hosted there?
5. When events happen, where are they usually set up on the property?
6. Are you familiar with the industrial development that will be happening adjacent to the Carrie Furnaces? Describe what you know and any opinions you have.
7. Do you think this new development will have any effects (good or bad) on the Carrie Furnaces? Is there anything you are concerned about?
8. Are there any challenges that the Carrie Furnaces are facing currently?
9. With the statement of “National Historic Landmark” to the title in 2006, did you notice an increase in media attention or tours?
10. With the “National Historic Landmark” title, meaning certain structures on the site cannot be altered or changed, would you like to see alterations made to the landscape? (i.e., native plantings, installed art sculptures, etc.)
11. In your opinion, would a designed landscape (designed space for concerts, paved pathways, places for sitting) that was open to the public, similar to SteelStacks in Bethlehem, PA, be feasible at the Carrie Furnaces?
12. What do you enjoy most about your job working for the Carrie Furnaces?

Researcher: Emilee Voigt, ervoigt@ksu.edu

Institution: Kansas State University

Project Title: Unearthing Forgotten Spaces: Bringing Industrial Land Back to Life

The purpose of this open-ended interview is for research purposes and to gain a better understanding of the history and background of the Carrie Furnaces. Also, this report would like your view on the future of the site and where you would like to see it go. The focus of this Master’s Report is brownfield industrial sites that served a manufacturing purpose in the past, and the project that will stem from this will use the Carrie Furnaces as the site for a hypothetical, projective historic landscape design. The answers provided from this interview will help inform the projective design. The answers from this interview will be included in the report, your name will not be included, but your professional role will be included. The interview is expected to last between 30 minutes and 1 hour, being conducted in a conversational style. The interview will be recorded and used for my reference only, and certain portions will be written down. Your participation is completely voluntary, and you are free at any time to withdraw from the interview. By signing this form, you are indicating that you have read and understood this form and are willing to participate.

Participant Name: Adam Piscitelli Jr.

Participant Signature: Adam Piscitelli Jr.

Date: 2-5-19

You are free to contact me the researcher, or the Kansas State University IRB contact listed below at any time if you have any further questions about this report. A copy of my final report will be sent to you upon completion. Thank you for participating!

Kansas State University IRB Contact: Rick Scheidt, Committee Chair – rscheidt@ksu.edu

CONSENT TO INTERVIEW

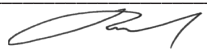
Researcher: Emilee Voigt, ervoigt@ksu.edu

Institution: Kansas State University

Project Title: Unearthing Forgotten Spaces: Bringing Industrial Land Back to Life

The purpose of this open-ended interview is for research purposes and to gain a better understanding of the history and background of the Carrie Furnaces. Also, this report would like your view on the future of the site and where you would like to see it go. The focus of this Master's Report is brownfield industrial sites that served a manufacturing purpose in the past, and the project that will stem from this will use the Carrie Furnaces as the site for a hypothetical, projective historic landscape design. The answers provided from this interview will help inform the projective design. The answers from this interview will be included in the report, your name will not be included, but your professional role will be included. The interview is expected to last between 30 minutes and 1 hour, being conducted in a conversational style. The interview will be recorded and used for my reference only, and certain portions will be written down. Your participation is completely voluntary, and you are free at any time to withdraw from the interview. By signing this form, you are indicating that you have read and understood this form and are willing to participate.

Participant Name: Ron Baraff

Participant Signature: 

Date: 02/06/2019

You are free to contact me the researcher, or the Kansas State University IRB contact listed below at any time if you have any further questions about this report. A copy of my final report will be sent to you upon completion. Thank you for participating!

Kansas State University IRB Contact: Rick Scheidt, Committee Chair – rscheidt@ksu.edu

Interview with Adam Piscitelli

February 4, 2019

3:30pm CST

Emilee Voigt (EV) - Interviewer

Adam Piscitelli (AP) – Subject

**Interview begins, 3:30pm CST*

AP: Hey Emilee, how are you doing?

EV: Hi Adam, how are you?

AP: I'm great.

EV: Perfect, thank you so much for doing this.

AP: Oh, you're welcome.

EV: This will definitely help all of the stuff I have to do for this project, it's definitely going to help a lot.

AP: Okay, just as long as you understand that I am giving you my personal opinion, I don't speak for Rivers of Steel or anything. I mean, I'm not qualified to, you know, do anything like that.

EV: Yeah, yeah that's perfectly fine. Any personal experience or thoughts if you're like "Huh, I kind of wish we had, you know, if there were more places to sit around here." It's more things along that line.

AP: Yeah, okay.

EV: Okay, so I'm just going to run through the questions and then obviously when we come to ones where you're like "That's out of my scope, I can't really answer that," just let me know and then we'll move on to the next one.

AP: Sure.

EV: Perfect. Okay, so, for my first one I say, "How long have you worked at the Carrie Furnaces?", but in your case, how long have you been a volunteer there?

AP: Since 2014, 2014 was my first year.

EV: Sweet, so can you tell me just a little bit about your role and responsibilities that you have as a volunteer?

AP: Well, I'm a tour guide, and there is probably about 10 or 15 of us and we give the tours on the weekends, from April through probably around October, late October. My duty is to take people on a

tour through the facility and explain to them the various steps and processes that go into making iron at the furnace, how they did it. It's a 2-hour tour and we have stops that we have to make, to hit the high points, but our tours aren't structured. We're allowed to personalize them, which is nice. So, we are given research materials and we have high points that we have to hit so "stop here", and what this did, and what that did, and how they did it, because then we can personalize it however we want. We aren't locked in to a structured tour like a lot of places are.

EV: Yeah, totally, that's awesome. So, just with your personal experience and living and actually being from the area, could you describe what the Carrie Furnaces mean to the surrounding community or maybe if it has created this kind of "feel" or "atmosphere"?

AP: *Well, I mean, it means different things to different people. The older generation, like my father's generation, that worked there, I mean, it was a factory. It was just, it was a steel mill, you know? They made a living. And people like me, I worked in the mill when I was in college, it was a summer job. So, it was just always there, it was in the background of our life. It was just what we did. It's just what you did here. Everybody's dad worked in the mill. For the younger generation, it's like they're detached from it. The mills are gone, they don't see the impact, they don't see the buildings and they don't see the trains and everything. They don't see the industry going on a daily basis. So, they're kind of, um, I don't want to say "clueless", but they're just not tuned in to it. It's "just an old mill site". Which is why when they come for tours, it's really nice to see the younger generation go "Ohhhhh they did that here!" so that's one of the nice things about it.*

EV: Yeah, yeah

AP: *I mean, for a lot of people here in the area, it represents our heritage. Everything in Homestead, you know, 99% of what was left of the Homestead Works has been knocked down. And when they were getting ready to tear down the Carrie Furnaces, it was the last piece of the complex they were working on because it was across the [Monongahela] river. And some of the people, the historical society here were like "Woah, wait a minute, wait a minute. You can't tear everything down, this is our heritage, this is what we did." So, they got a committee together and they worked on getting it preserved. Did I forward you that PDF of all the documents?*

EV: Yes, yes you did.

AP: *Okay, that's what they [committee] came up with, after a couple years of research. They came up with that document and presented it to the historical society and I guess they got it approved. Which is nice, and there were a handful of people looking out for the cultural heritage of the community here, and that's why it [Carrie Furnaces] was saved. Otherwise, it would have been plowed over and sold for scrap to China, like the rest of it was.*

EV: Yeah, that's awesome. I read through that whole document, I mean like, all 60 pages of it and it is so fascinating. And it's preserved and it's still here and nobody can touch it. I mean, it's awesome that it won't be torn down.

AP: *Yeah, we're happy about it.*

EV: Let's see, so now that, you know, tours are obviously conducted there and you're one of the tour guides, what types of trends do you see with attendance? Is it primarily, like, groups of families or couples or maybe school field trips?

AP: *We do a lot of school field trips. Our marketing department reaches out to schools and I've done several field trips for schools, especially in the spring, right before school is over in the spring semester right before the kids get out, we'll do a lot then. But for the most part, it's pretty mixed. We get a lot of retirees, we've had tour buses for retirees that come through, I've done a couple of those. We have a lot of retirees that used to live in the area, they came back and, you know, they just want to see what it looks like now. A lot of families and some millennials. We are getting more and more now [millennials], our marketing department has done a really good job of promoting tours. The millennials are the ones that come down with a real sense of wonder, it's like "woah". Especially when they get into a furnace and they stand right next to it and they see how big it is and they get a feel for the scope and the power and the massive industry that went on there, it's like they're almost overcome, they say "We had no idea it was like this". It [the industry] was like this, people worked here, people died here.*

EV: Yeah, I remember when I took the tour and I was like, I'm from Kansas and I grew up in Kansas and we don't have anything like that here, it's amazing.

AP: *Yeah, when you think about the structure and all that steel that's put together, and just how they put that together and how they figured it all out, it's amazing.*

EV: Yeah, absolutely. Umm, let's see. I know from my personal understanding and the research I've done so far, it seems like the site has also been able to host events like concerts or anything like that. Could you maybe try and describe some of the types of events that have been hosted there?

AP: *Well, a couple years ago we had American Ninja Warrior here.*

EV: Oh, cool!

AP: *Yeah, they set up their stage and course right in front of the furnace and they had the lighting company come in and light up the furnace behind it with different colored lights. You know, they shot it in the evening, it was pretty dramatic, it was pretty cool looking. We had that [American Ninja Warrior] and we've had a couple music festivals here, a couple two-day music festivals called Tribal. Tribal Music Fest, it's a local company that has big name musicians come in. Most of them I'm not familiar because I'm old. Yeah, they have people like music corporations and churches, people like that. And people like, Moby, Moby was here. Yeah, they have a lot of different things. Plus, we've had some cultural events like Pittsburgh Ballet, they did a thing here a couple years ago. The Bach Choir came in and did a presentation, Pittsburgh Symphony I think has been down there - I'm not sure though, I wasn't there for that one. But we also do weddings, it's a very popular spot for weddings now. They get married under the Carrie Deer, you remember the deer sculpture?*

EV: Yes, yes.

AP: *Yeah, they get married under the Carrie Deer there. And, uh, what else have we had there? American Ninja Warrior, we have car cruises. We have a big annual car cruise there, which is really popular because the motorheads like to come down and that's right up their alley. Iron, steel and grease? Okay, we're in! So, that's very popular, it's called the "Steel Town Shake Down", we have that annually. And we*

also do a beer fest here, a beer tasting. Different vendors set up their booths and you pay an admission fee and you get a little glass and you go around and do beer tasting, which is pretty cool. And we have our own annual Festival of Combustion. We have different artists and different tradesmen come in and set up in the courtyard there, that area between the two buildings and we have glass blowing, blacksmiths, a real family affair. We have silk screening, there's a lot of artists that come down there. The main attraction is we have a mini-blast furnace set up and we have a crew of people that come in that know how to pour iron and we actually make iron during the Festival of Combustion, with scrap iron and coke and a little mini-blast furnace and we pour iron into molds and it's really cool. The kids really love it. To actually see iron being poured out of this furnace and we sell 12" by 12" sand scratch pads where you can scratch in a design and then you pour the iron in to it and it makes the design, it's a mold. So, you can make your own mold, your own design, and when it cools off the next day you can come back down and pick it up. So, that's pretty cool.

EV: Yeah, that's amazing.

AP: *Yeah, that's a big deal, the Festival of Combustion is probably my favorite thing.*

EV: Yeah, and I think it had just happened, did it happen in October?

AP: *September.*

EV: September, okay.

AP: *End of September.*

EV: Gotcha. That's awesome. Well, with these different kinds of events, do they usually all kind of get set up in the same area on the property or based on what type of event it is it kind of finds its own place?

AP: *Yeah, Festival of Combustion is usually outside, in that courtyard area between the two big buildings. The beer tasting, and the concerts are usually in the AC Powerhouse, that big building to the left if you're looking at it from the parking lot, which we didn't go into because this year we weren't allowed to take tours in there because the building wasn't up to code, I don't know if I told you that during your tour? But we had to have panic bars on the doors and stuff, so we are in the process of getting that fixed, but usually you have events inside the AC Powerhouse because it's so big. You know, we've had the Bach Choir in there and different kinds of events in there.*

EV: I know that there's plans for that lot that's adjacent to the Furnaces, I'm not sure if you can answer this but I know that there's some sort of development that I think is planning on happening there, but I just didn't know if you knew anything about that?

AP: *I know they finished all the grading and that stuff about a year and half ago and they were going to put it up for bid, for sale, and the Amazon thing came up and Pittsburgh was on the list. So, that was one of the sites they were considering. That was one of the sites that was offered. So, nothing happened last year because everybody was sitting on Amazon.*

EV: Oh, I see, okay.

AP: *So, now it's up for sale and they're promoting it and they're trying to get some light industry in there. No retail, no shopping, it's going to be light industry. Which will be good, because they need some money down there. Intact space, because right now it's just a brown field.*

EV: Yeah, absolutely. Do you think with this new development, like once someone actually buys this [the adjacent land] and starts developing, do you think there's going to be any effects, good or bad, on the Carrie Furnaces, with it being so close?

AP: *I think it will be good. I'm sure some people will complain about it, they'll find something to complain about. I think it'll be good just because it's going to bring in some more money and more people down that way. It's going to be better than it is now, which is nothing. So, you'll get some people and get some traffic down there and start generating some revenue.*

EV: Yeah, I remember when I was there, and my Uber drivers and my Lyft drivers had no idea that, like that road is what led to the Carrie Furnaces. And I was like "It's back here!"

AP: *"Yeah, just keep driving, I know where I'm going!"*

EV: So, I know this next question is more, I think probably for those who have worked there, like a "Ron Baraff" kind of question, but are there any challenges the Carrie Furnaces are facing currently?

AP: *The biggest one that I see, from my standpoint, is maintenance. You know, keeping it up. We just need money. They are always looking for money: federal money, state money, whatever they can. They are just looking for money to repair it, it [the buildings and structures] needs to be sandblasted and painted at some point or it's going to fall down. That's the biggest thing I see, I'm sure there's other things that are more important. But, they've done things over the years. Like the AC Powerhouse had a new roof put on it. And we had to have part of that draft stack, like 60 feet of that tall draft stack taken down last year because it was collapsing. So, there was a lot of money spent on that to repair that. But, that's probably the main challenge for the Furnaces right now, trying to find some money to get it maintained. But, Ron would know more about that.*

EV: Oh yeah, absolutely. I'm set to ask him these same questions on Wednesday. Getting two different perspectives and compiling as much information as I can. Let's see, so this next one is: back in 2006, which I know this is before you started volunteering and everything, but they [Carrie Furnaces] got their official title of being a "National Historic Landmark," did you notice an increase in media attention or attention in general?

AP: *Yes, they started marketing it more, and that's when I first found out about the tours. Up until then, we knew they saved it [Carrie Furnaces] but nobody was going there, there was no tours. Then, they started advertising that they were going to start tours, and I think that's when I went on my first tour there, in 2007. It [the tours] was real basic back then, but yes I did notice there was an uptake in the marketing end of it. Just promoting the tours.*

EV: So, with this "National Historic Landmark" title, in the document I had read, it basically means that there are certain structures on the site that can't be touched or altered or anything like that. In your opinion, would you like to see alterations made to the surrounding landscape? For example, it could be native plantings are introduced or maybe permanently installed art sculptures or anything like that.

AP: Oh yeah, we have some of that going on now. There's one section of it to the left of the AC Powerhouse, it's called the "Iron Garden". That area there, there's a couple acres of it, they just let it go and let nature reclaim itself. It's pretty interesting, one of the guys that knows all about it has tours, you could ask Ron about it too, but over the years it shows how nature reclaims the land and how the first generation of bushes that come up and die and the second and third. Each generation of growth down there just keeps adding on and changing the landscape. That's pretty cool right there. And there's some sculptures in there, big stones to sit on, there's also some other sculptures that are peppered around there other than the Carrie Deer. I would like to see even more. I would like to see paths and benches. Because right now, walking wise, the area is pretty rough. Elderly people really have trouble navigating because they're stepping on rocks and climbing up rusty ladders and things like that.

EV: So, in your opinion, do you think a designed landscape, so a designed space that would better suit concerts or the cruising car event that happens or paved pathways and places to sit and part was open to the public, similar to the SteelStacks that are in Bethlehem, do you think that could be feasible in the future for the Carrie Furnaces?

AP: I think it could be, yeah. You can talk to Ron about this, but I think that's the long-term goal. You know, have a little visitors center there with actual bathrooms and running water. That would be nice. But, yes, that's the long-term goal down there. But they are looking for the money.

EV: So, this is just the last question but what do you enjoy most about your job volunteering at the Carrie Furnaces?

AP: Meeting people and educating them. About 99% of the people that come down there have no clue what it was like. Even the locals that lived within proximity of it, had no idea what the inside looked like because you couldn't take a tour of it. You know, my father worked here but I was never allowed in and I always wondered what it looked like. And the people who worked at the mill and want to come down and see it, so that's nice. Occasionally, we do get some guys that actually worked there, so we get some of those guys. But probably the best part of it is the younger kids. At first they are kind of like "ehhh" and then they start seeing equipment and they start to get an idea of how big and dangerous it was, you know, they really get into it. So, that's the part I like best, is just being able to let people know what actually happened here and educating them about the heritage of the area. And they always say "Wow, this is so cool we had no idea, we are going to tell our friends, we had no idea this was like this." Yeah, so that's why I do it.

EV: Yeah that's so awesome. But, those are all of my questions but thank you so much for doing this again.

AP: Yeah, you're welcome. It's no problem.

**Interview ends, 3:58pm CST*

Interview with Ron Baraff

February 6, 2019

1:00pm CST

Emilee Voigt (EV) – Interviewer

Ron Baraff (RB) – Subject

**Interview begins, 1:00pm CST*

RB: Hello Emilee, how are you?

EV: I'm doing good, and yourself?

RB: Pretty good.

EV: Awesome, thank you so much for doing this.

RB: Yeah, no problem. Ready whenever you are!

EV: Awesome, perfect! So, it's like 12 questions and will maybe take about 30 minutes at the most. If I get to a question where you're like "I don't have the authority to answer that or that's out of my scope, so I can't really answer that right now", just let me know and we can skip it and move on to the next one.

RB: Okay.

EV: Sweet, okay, so for the first question: how long have you worked at the Carrie Furnaces and can you tell me a little bit about your role and responsibilities and what your day-to-day operations look like?

RB: Sure, so I have worked for Rivers of Steel since 1998. Now, we didn't have a site yet, but we were already looking towards attaining it. One of the reasons I was hired was, not just to set up the museum archives division, but to also work on the National Historic Landmark nomination for the Carrie Furnaces. So, I've been there since '98, and my actual title is "Director of Historic Resources and Facilities", so I oversee the museum, the archives and all of our historic properties which include, obviously, the Carrie Furnaces. And, you know, day-to-day is dealing with structural issues on the site, big issues on the site, interpretive issues on the site. Structural issues but also tourism, developing tours and documenting the site, etc.

EV: Gotcha, perfect.

RB: And there's a list of other things, including cutting the grass.

EV: Yeah, sounds like a very busy day, every day.

RB: Yeah, it pretty much keeps me busy. It's good.

EV: Sweet, perfect. So, I'm just going to move on to the next one. Can you describe what Rivers of Steel, or just the Carrie Furnaces in general, mean to the surrounding community? Maybe if there is a "feel" or an "atmosphere" the site has generated?

RB: *Well, we will just focus on the Carrie Furnaces because Rivers of Steel is a much larger entity, it stretches over 8 counties. As far as the Furnaces go, it's not like the other properties we have. It's really central, in that for 100 years that site was the economic driver for the region. It was the source for employment for all the communities around there. It became the number 1 employer for that part of the Mon [Monongahela] Valley, so it was that economic driver. It defined that region and gave the people in that region work, so they closely identify with it. And when things closed down in the 80's and buildings were torn down, there was a loss of identity. More importantly, the last of the ability for that site to be the economic driver. And our involvement, and one of the big reasons we wanted to preserve the site, isn't just because it's so historically important, from a technological standpoint and from a standpoint of defining the region, but it was also really important because it can be that economic driver for the region again. So, by promoting tourism, by bringing in events, by being there. What we are doing on that site is bringing people into the community, it is [hopefully] spurring further investment within the communities. It's helping to redefine that identity and that connection back to place.*

EV: Yeah, perfect. And kind of pinballing off of tourism and everything, now that tours are conducted there, what types of trends have you noticed? As in tour groups, is it consisting mainly of families, or is it school field trips, or just couples?

RB: *So, it really is across the board. When we first started doing public tours in 2005, primarily what we were seeing were folks who were directly connected to either that site or the industry. So, it was retirees or the families of the workers. It wasn't something that was regional, it was very, very localized. What had happened over the past 14 or 15 years, and even more so over the past 5 years, is a great change in that demographic. So, rather than being primarily older guys, it's now much younger. People who are coming, lots of families and school groups, but it's also people who are new to the region. You know, millennials. Folks who have no direct connection back to the industry, but are fascinated by the aesthetic of it, fascinated by the history of it, fascinated by the 'Industrial-Chic'. They are drawn to that site and they want to know more about it. So, that's kind of where it's skewing from. You know, typical Saturday tour, we'll have some local folks but we'll have even more folks who are from all over the country. They are coming to Pittsburgh for tourism and destination, with the Carrie Furnaces being at the top of their list. Because it defines this region and it's something you just don't see anywhere else.*

EV: Oh yeah, definitely true. And I'm from Kansas and I grew up in Kansas and you just don't see anything like that. That type of industry didn't make it to the Midwest. It's all about farming here.

RB: *Yes, exactly. In some ways, it's other-worldly. Until you are standing there, you can't really grasp the size of it, the magnitude of it, and what it was like when it was running. So, the demographics have definitely changed, it has widened a great deal. Which is what we anticipated, maybe not at this speed in which it has happened over the past few years. But that's because of the changing of this region into a tourist destination.*

EV: Do you guys document, per year, how many tours or how many people visit the site every year?

RB: *We do and we try to capture as much of the demographics as possible. I don't have that on-hand but if you need it, I can certainly get it for you.*

EV: That would be awesome if you could.

RB: *Yeah, just remind me later and I'll do that. I'm not at the office right now, but I'm happy to get that for you.*

EV: Yeah, that would be awesome. Let's see, we can move on to the next question, which it's my understanding that the Carrie Furnaces have hosted events in the past and if you could describe some of the types of events that have been there and maybe if you're looking to expand to different types of events?

RB: *Yeah, we've done a number of different types of events there, ranging from television shows to concerts to weddings to our own events. So, you know, kind of the smaller end of things for folks is to get married there. And we knew it would happen eventually, but it really took off about 4 years ago. And the site has become one of the top destinations in this region for that kind off off-the-beaten-path wedding. So, gosh I mean we probably already have 8 weddings booked for this coming year and I'm sure there is a lot more to come. But it's becoming that kind of "go to" place for weddings. We have had television shows such as American Ninja Warrior and that draws crowds in. Obviously, we've had television shows and movies shot there, but those aren't so much "attended", but those are something that does a great job of promoting the site. So, when Hollywood comes to shoot, like when 'Out of the Furnace' is shot there and people all over the world see it, people say "Wow, what is that and I want to go see it." We've had a few concerts there, kind of smaller, intimate ones. We had the Tribal Festival that we hosted for 2 years, which had 15,000 people. It's amazing, and 15,000 people feel like a lot when they are coming in and out, but once they are all on site, I really thought it would be more people. So, it's wonderful exposure for the site, but also a good test for the site. It's the "Can it be used in that manner?" It's something we discussed and something we hoped for, but by actually bringing a concert in, like Tribal was a 3-day concert with about 30 bands, but it was a real test for the site. Can it hold that amount of people? Does it work well? And it worked exceedingly well. So, there's that. And we do car shows and we have our own events, which the biggest one that we host is the Festival of Combustion, which we do the last weekend of September every year. It's a festival based on "hot art", which is casting iron on-site and glass blowing, pottery, welding, things along those lines. And we get a few thousand people to come to that, and it's growing each year. So, those types of events are not just bringing in numbers for that day but creating a culture where this is now a destination. People know that you can go there and do more than have a tour and take part in one of these events or show or whatever it might be. We have Quantum Theater, which is an internationally known but locally based theater company. They draw thousands of people to their shows, and they will be there [the Carrie Furnaces] for a month doing 'King Lear'. So, really what it comes down to for us is we are really focused on staying outside-the-box and having a willingness to try different things and try different events and to see what works and what doesn't work.*

EV: Yeah, absolutely. So, with those types of events, are there specific areas on the property where they get set up? Because I know I had talked to Adam [Piscitelli] a couple days ago and he had said the Festival of Combustion usually happens in that courtyard area. So, for concerts, where do those usually get set up?

RB: *So, we kind of impose these areas on the site, we create these areas. But the main places are the central courtyard, it's very maintained and can fit a couple hundred to a couple thousand people, and you can fit a big or small event there. For the larger shows, they are in the western courtyard. It's the big field when you first come in. So, that's where American Ninja Warrior was. And we started being able to*

use that area when American Ninja Warrior came because there was a fence there and they didn't want the fence. So, they asked if we could pull the fence down and our property extended further than the fence line. So, because they did that, now we have more room to host these kinds of larger events. And the third place that people use quite a bit is the AC Powerhouse, which you probably didn't go into when you were there. That's the big interior space.

EV: Gotcha, I don't think I went in there back in October because Adam said it wasn't up to code or something like that.

RB: *Yep, we are doing work on it. Pretty much as we speak.*

EV: Yeah, I just love showing people the pictures I took while I was there because a lot of my friends have never left the state of Kansas and then you show them just these huge industrial giants and they are blown away because they have never seen anything like it before.

RB: *Right, and even folks who grew up here haven't really experienced anything beyond that site.*

EV: Yeah, I bet. So, I know that large lot of land that's adjacent to the Carrie Furnaces is set aside for some sort of light industrial development? Do you have any comments about that?

RB: *Yeah, on both sides of us [the Carrie Furnaces site], actually. It's owned by Allegheny County Redevelopment Authority, who about 3 weeks or a month ago finally put a request for proposals out, so there are folks coming in now to look at the property and put in bids. The goal is light industrial, warehousing, entertainment space, that sort of thing. Something that can provide jobs, tax based, for the communities.*

EV: So, do you think with that new development happening, do you think any effects, good or bad, will rub off on the Carrie Furnaces?

RB: *Well, I guess you can hope for good neighbors. What's nice is we [Rivers of Steel] have a very nice relationship with Allegheny County and the county is very, very supportive of what we do on the site and understanding that this site is important and needs to be maintained. It [Carrie Furnaces] is actually not being marketed with the rest of the site, which is nice. So, we are protected. And they are consulting with us or we are consulting with them, I should say, on who comes in, so it would be a good fit. It could be office spaces, I don't know, maybe something more. The idea is to encourage whoever is coming in to create green spaces throughout their development that can tie back into what we are doing. The goal is to marry the developments as much as possible so that you don't have this great hole left. The goal is to integrate everything together and have them be complimentary.*

EV: Gotcha, yeah, and that makes absolute sense that there is a mutual understanding. Are there any challenges that the Carrie Furnaces are facing currently?

RB: *One of the biggest challenges is dealing with the code work. And it isn't anything that what we were using was placing anyone in danger, actually not at all. However, the local municipalities, for years, weren't paying any attention to what was down there. It really wasn't a big deal to them. And they saw numbers grow, they saw people coming in and spending money and realized that they had a responsibility to make sure things were done properly, but they also saw an opportunity to bring in much needed income for their borough. So, a couple years ago they imposed an amusement pact, a 5%*

amusement pact. So, every ticket that is sold, whether it's a tour or one of the events, they get 5%. Which is fine. And then they started adding programming fees, and it's a bit of a money grab in some situations. The code work is something that has been a struggle because we had already put in some light safety and then they insisted we needed more. So, we did that and then they came back to the table and said now we need even more work done. They say it's a fire hazard, yet the building is made out of brick, which doesn't burn. Some of it is political, some of it is just the reality of doing business within a borough. But we have reached an agreement, as long as we finish what we are doing, which is adding some doors and a couple of other stairwells, then we should be good. That's been the biggest external challenge. You know, funding is always an issue. Doesn't matter what historic site you go to, funding is always an issue. It's just how it is. And this goes back to the question about events, you have to have events because you cannot survive as a historic site alone. Externally, we just have to make sure everyone is working together. Internally, every day is a challenge, in that it's a 112-year-old structure that are made out of steel and concrete. Once you stop using them for their functioning purpose, they start to deteriorate. So, we are constantly having to go around and reassess the site, make decisions on what takes priority. So, it's a constant struggle with that.

EV: Yeah, so back in 2006 was when they got their official 'National Historic Landmark' title. When that was instated, did you notice an increase in media attention or tours or maybe wedding bookings or things like that?

RB: *Well, yes and no. In 2005, we were first allowed to do tours, but we didn't have control of the site yet. In 2006, it's the second year we were doing tours and finally after 10 years and many, many, many revisions, we achieved an NHL status. Was there a bump? Yes. Was it a huge bump at the time? No, but that's because we were so new as an attraction, people just didn't know. If the same thing happened now, there would be a much bigger bump for it. Because the profile is much bigger for the site. But what it [National Historic Landmark status] did do, beyond adding a layer of protection, it gave us a level of credibility and marketability. So, then we were able to market this as not only a local attraction, but something of national significance.*

EV: Yeah, that's awesome. So, I know I've seen that document, it's like 60 pages or something like that, and I've actually read through the whole thing and it's pretty fascinating.

RB: *Yeah, and I started 2 years after the first draft. And as I've said, one of the reasons I was brought in was to help with that. So, I was a part of the 8 years of rewrites. It was a long road but getting the NHL designation always is. There is a lot of back and forth because it has to be of national significance.*

EV: So, with this title, meaning that certain structures on the site can't be altered or changed, would you like to see in the future any alterations made to the land around it? Maybe introducing more native plantings or installing benches or art sculptures or anything like that.

RB: *We are actually doing that already, and I'm sure you saw some of it. We are allowing these plants to grow naturally and to thrive. So, looking forward we will keep making adjustments to the site and opening other areas up. Adding seating and other amenities to make it a usable portion to the site. In addition, I hope within the next 3 years there is more infrastructure on-site, I mean keep in mind, we didn't even have electricity there until about 2 years ago. We had solar power, but it was very limited. With us being on grid power now, that has allowed us to expand with more expansion on top of that. There is no running water and there is no direct sewage link on that site. So, once all of that happens, then we can add a visitor center and other amenities that can accommodate more people.*

EV: And I guess that kind of leads into my next question but in your opinion can you see that type of change and development, similar to SteelStacks in Bethlehem, happening at the Carrie Furnaces?

RB: *Well, I guess that depends on what happens with the rest of the site. The difference between our site and Bethlehem is that we interact with the physical site, as in Bethlehem, the structures really serve as a backdrop to the development. Whereas with us, the structures itself are something you can move through and interact with. So, so they've had all of this casino money come in through the years, but I hear they are having some problems now. They are changing owners again and fighting over access to the site and all of those fun things that go with that. But there is infrastructure there that would be highly beneficial to us, if a similar thing happened. As long as we never lose sight on what these furnaces are and what they mean. Because at its core, it is always going to be a historic site. And it needs to be nurtured and treasured and used in that manner.*

EV: Absolutely, and this does lead into my last question but what do you enjoy most about your job?

RB: *The challenges, to be honest with you. I love working with the people, I love hearing people from all over the world, but I also love that challenge of keeping the history alive and keeping a site that is just so important to the story of this country and moving forward. And finding new and inventive ways, whether it be through the artwork or the events, to make it attractive and bring people in. That's really the most satisfying thing, is that we went from a point of a derelict old mill to people realizing that it's a treasure and something that needs to be preserved. It is, as you say, 'on the map', and we are in a unique place in this region where we can really make a difference.*

EV: Yeah, that's awesome. Well, that does wrap up all of the questions I have for you but thank you so much for doing this.

RB: *Of course, any time. I'm happy to do it.*

**Interview ends, 1:34pm CST*