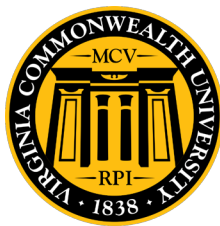


BridgePark Design Analysis & Recommendations



Figure 1: Spatial Affairs design for BridgePark (source: BridgePark Foundation)

Salwa G. Aljehani
PROFESSIONAL PLAN 2015



BridgePark Design Analysis and Recommendations

Prepared for:

BridgePark

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“BridgePark first and foremost should bring people to the river and bring the river to the city”

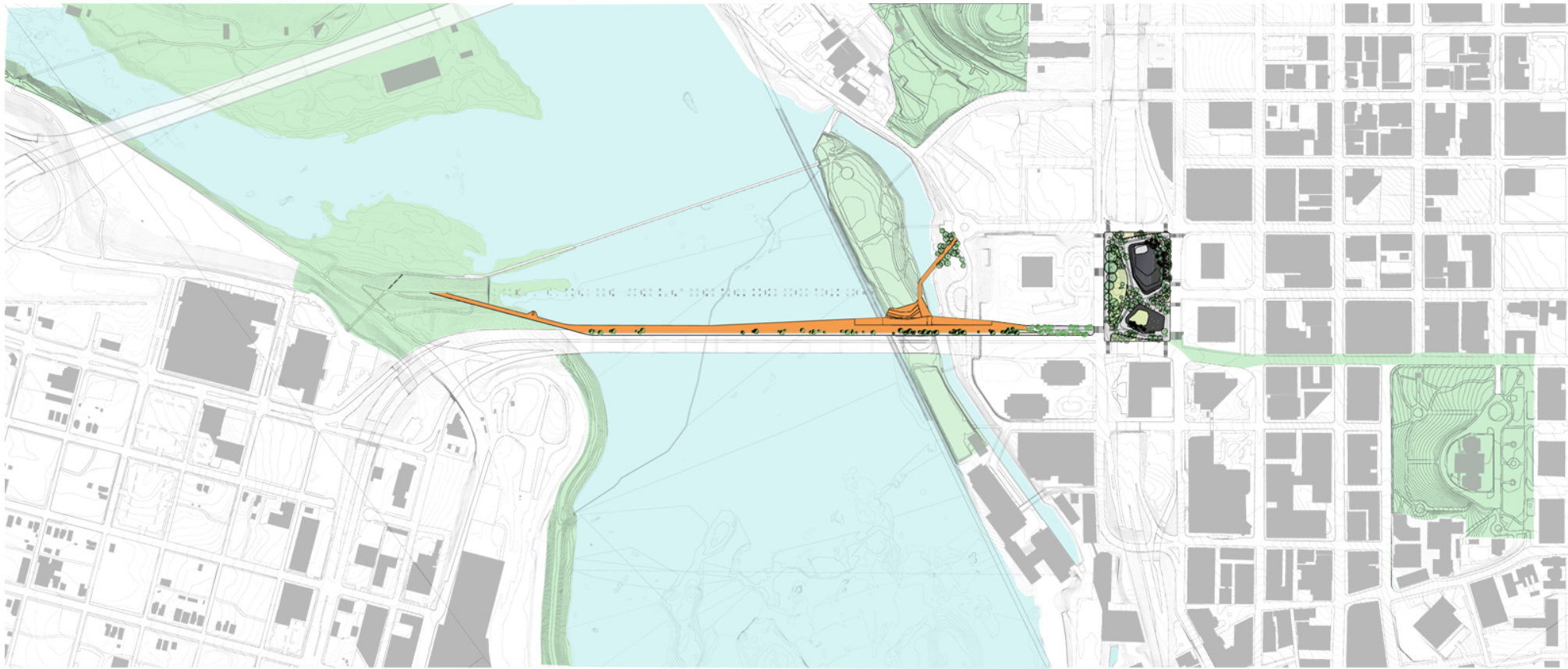


Figure 2: Manchester Bridge, site for BridgePark over view (source: BridgePark Foundation)

EXECUTIVE SUMMARY

The BridgePark Design Analysis & Recommendations Plan was requested by BridgePark Foundation. This plan also fulfills the requirements of the Master of Urban & Regional Planning program in the L. Douglas Wilder School of Government and Public Affairs at VCU.

BridgePark Foundation requested this plan to address four specific criteria it wanted to focus on in regards to the design of the proposed park spanning over the Manchester Bridge, which crosses the James River in Downtown Richmond. The four criteria that BridgePark looks to address are:

- Public Health
- Enhanced Beauty
- Enhanced Transportation System
- Enhanced Public Engagement

The client requests that special attention be given to opportunities for enhanced benefits to public health that BridgePark can provide to the surrounding communities. The plan first looks to define the four criteria through research. This includes references to best practices that have defined each criteria in planning. Second, it looks at two precedent projects that relate best to BridgePark. These two precedent projects are the High Line in New York City, and the Pont des Arts in Paris. The plan evaluates them on the four criteria that BridgePark is looking to address.

From the analysis that has been reached from defining criteria and evaluation of precedents, the plan then makes recommendations that best will address the goals that BridgePark is looking to achieve.

INTRODUCTION

CLIENT

This “BridgePark Design Analysis and Recommendations” document was requested by Richmond BridgePark Foundation (RBF), and it also fulfills the requirements of the Master of Urban & Regional Planning program in the L. Douglas Wilder School of Government and Public Affairs at VCU.

RBF was created to develop the idea for a park over the James River in downtown Richmond that was introduced to the public in the summer of 2012 by Ella L Kelley and Mike Hughes. Richmond Bridge Park Foundation was incorporated as a Virginia non-stock corporation in June 2012, and was granted 501(c) (3) status by the Internal Revenue Services in June 2013. As a non-profit organization, the Foundation consists entirely of enthusiastic volunteers who love their community, and believe in the power of big ideas to transform the lives of people.

RBF’s Board of Directors consists of government, business, real estate, marketing and communications leaders from the area. The Foundation is currently privately funded through donations from corporations, charitable and civic organizations, community groups and citizens. RBF also works closely with City of Richmond and other jurisdictions of the immediate region in development of the project, and anticipates applying for state and federal grants where appropriate



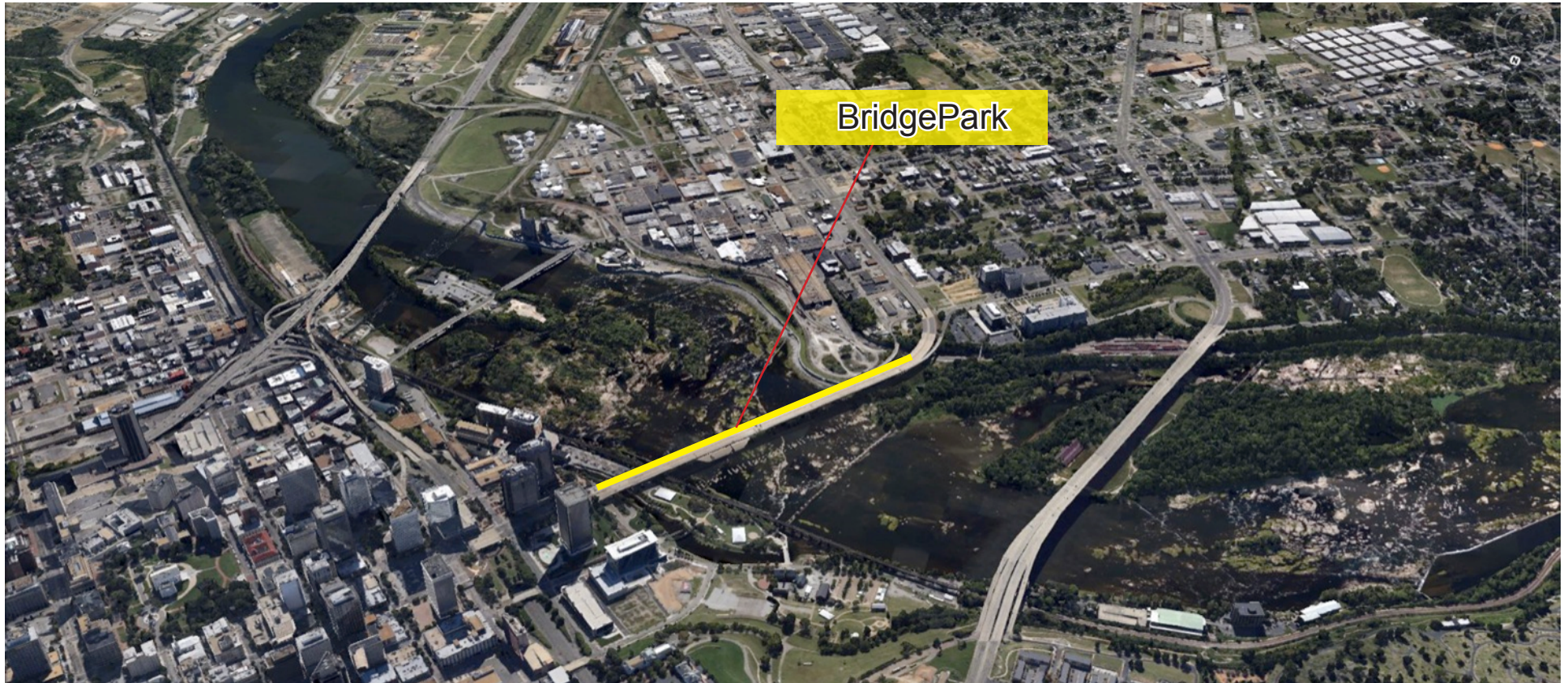


Figure 3: Birds eye view Manchester Bridge, site for BridgePark (Source: Bing Maps)

PURPOSE

RBF requests an analysis and recommendations for a BridgePark on and along the existing vehicular Manchester Bridge.

Since the introduction of the idea for BridgePark over the James River by Kelley and Hughes, the concept has undergone some alterations. The original park concept was for use of the old Huguenot Bridge, which was scrapped as a site because the span had to be demolished to make room for a replacement bridge (Hallman, 2014).

But Kelley and Hughes came up with a new location. The park could be built, they proposed, using the twelve granite piers that stand like sentinels paralleling the Manchester Bridge, which once supported a railroad trestle across the James River – a span burned during the evacuation of Richmond in the last days of the Civil War.

In late 2013, Kelley and Hughes passed away, but their grand vision lives on through RBF, which was established before they died. This document will look at a new direction, as it will be considering the design for BridgePark along Manchester Bridge. While it may be a another direction, it stays true to the original concept that Kelly and Hughes envisioned for a linear park spanning the James River.

The Foundation since hired the Timmons Group to conduct a survey of the site. The study focused in particular on how BridgePark might fit into and connect Downtown Richmond. Timmons survey included 3D laser scanning survey and mapping of portions of Manchester Bridge, the existing CSX viaduct, and the flood wall on the southern bank.

Timmons also showed the 100 year flood plain and 500 year floodplain. Environmental evaluation of site conditions and constraints as it concerns, wetlands, resource protection areas, rare, threatened, endangered species and cultural resources was also surveyed by Timmons Group. This should be the guiding principal in designing the plan, making BridgePark a fabric of the city people engage with everyday.

RBF also commissioned architecture firm Spatial Affairs Bureau for a study to look at different ways BridgePark can create a walking, and cycling connection across the James River, while also allowing for, hosting major spectacles and events balanced with allowing for a more quite, and meditative environment. Peter Culley, who has worked extensively in architecture and landscape, conceived Spatial Affairs Bureau as a cross-disciplinary container. Culley led the Virginia Museum of Fine Arts Expansion as Project Director, and also was part of the BridgePark study carried out by the firm.

Community engagement has been continuous and a major focus of RBF's efforts in creating awareness and support of the project. These include:

- Several hundred face to face-to-face meetings with community stakeholders
- Speaking engagements at several major community groups
- Three open public community meetings
- BridgePark site model residencies where visitors could review and study the model
- Engaging students and academia through speaking engagements and site tours



Figure 4: Peter Culley of Spatial Affairs presents a model of BridgePark to attendees at Storefront for Community Design (source: Style Weekly)

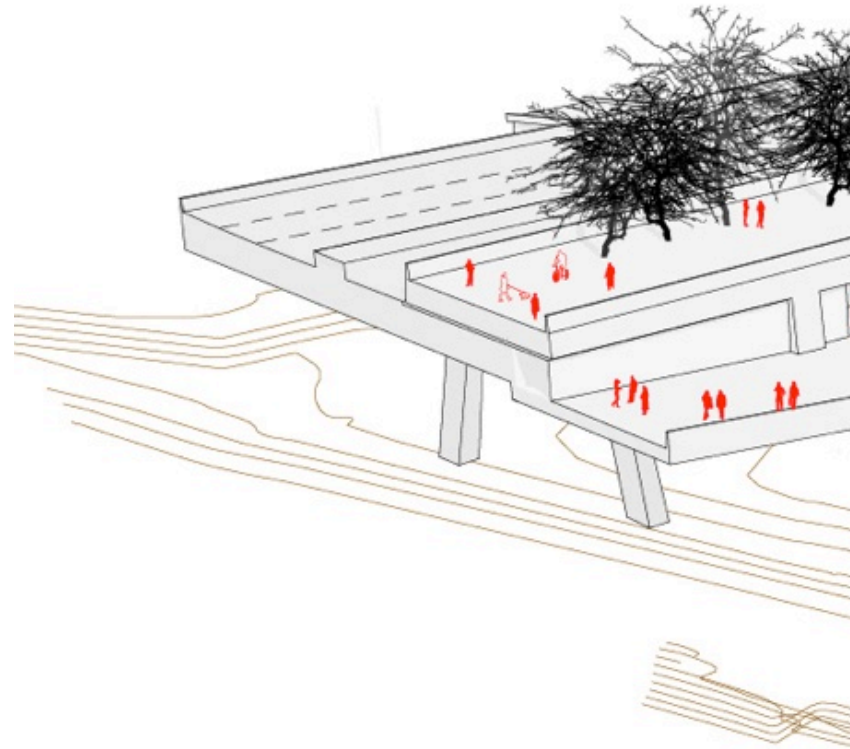
PURPOSE

The preservation and utilization of the natural resources and heritage urban centers is key to a successful park. Thus, BridgePark will be an extension of existing assets already in use in Richmond's James River corridor. The park should further enhance existing assets such as Brown's Island, the T. Tyler Potterfield Memorial Bridge, the Manchester Climbing Wall, the Central Business District, Manchester, and the surrounding areas.

The client's vision for the plan is for BridgePark as a place to engage the city with both beautiful views and culture. The design, therefore, must accommodate different functions while making the existing beauty of the river its centerpiece. As a radical and modern park space, it will put Downtown Richmond on the map as a destination for local citizens and tourists.

Strong support from the public and governmental organizations will require RBF to detail substantial positive impact by BridgePark. Thus, the development program and purpose for this plan focuses on four specific goals of the park (with the client's request to particularly give extra attention to goal one - public health):

1. Public Health Benefit
2. Beautiful Environment
3. Enhanced Transportation System
4. Enhanced Community Engagement



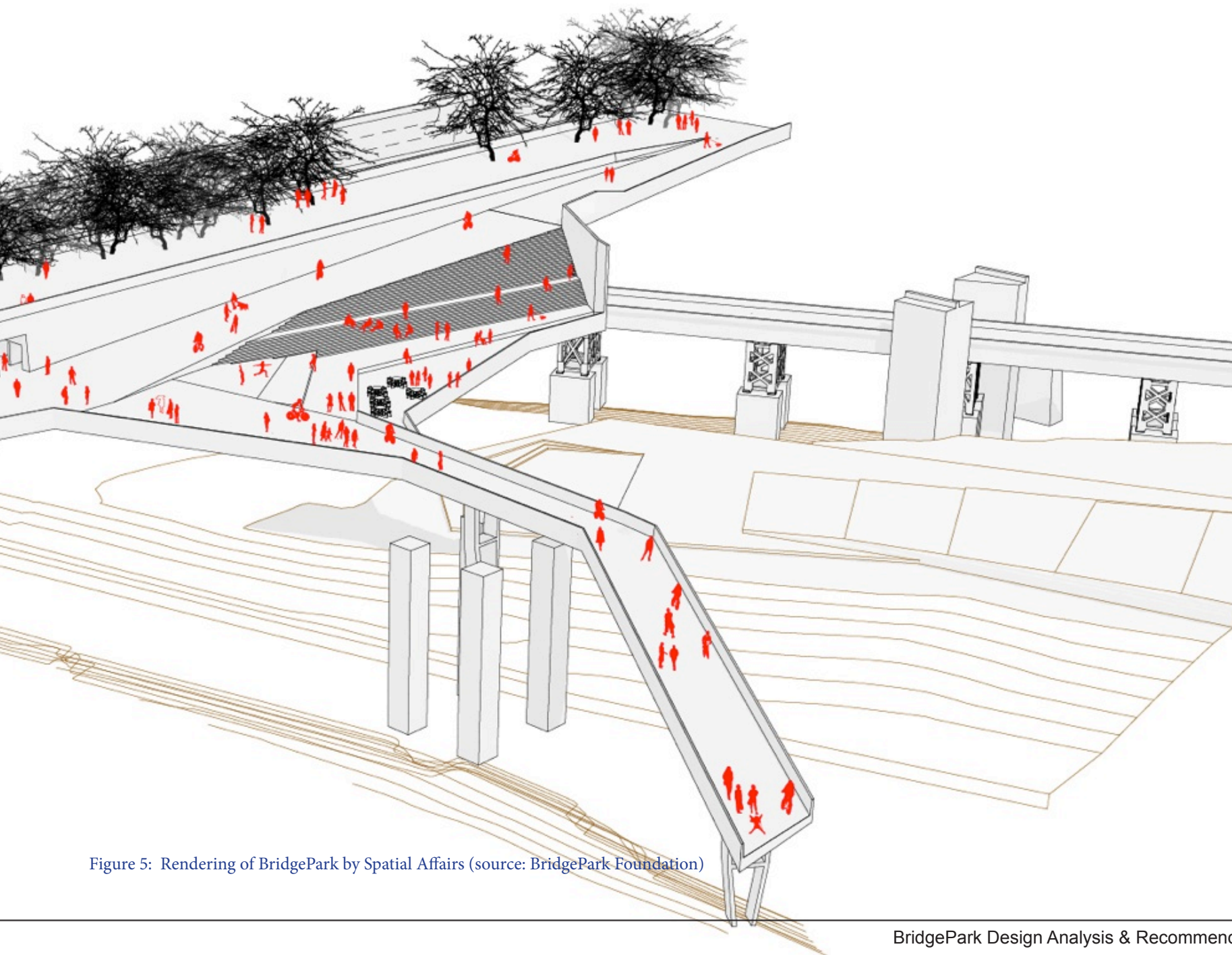


Figure 5: Rendering of BridgePark by Spatial Affairs (source: BridgePark Foundation)

STATE OF THE ART

Studies have found that parks and green spaces have a correlation to mental, physical and social health (Barton, 2009). Studies find they benefit stress reduction, promote quicker healing, prevent illnesses, improve work productivity and air pollution. The United States Office of Disease Prevention and Health Promotion established Healthy People 2020 plan in December 2, 2010 to provide science-based, 10-year national objectives with the primary goal to create social and physical environments that promote good health for all. One of the five key areas the plan outlines as social determinants of health was neighborhood and built environment. Other four key areas were: economic stability, education, social and community context, and health and health care.

Urban parks and green spaces are an integral part of making livable cities healthy. They provide a place to exercise, play and meet. They can also be part of a transportation route, making them safe and healthy pathways that can connect neighborhoods and communities. Parks also add beauty to our surroundings, and allow for green and breathable spaces. They are places for the arts and festivals. They are places of play and gathering, keeping communities engaged.

Cities and planners have long understood the benefit of parks and green spaces as a condition for sustainability and economic development. New Urbanism, for example follows walkability, connectivity, green transportation, quality architecture and urban design, and sustainability as its core principles in planning.



Figure 6: Manchester Bridge today looking over Downtown (source: <http://www.independent.co.uk/travel/americas/richmond-virginia-beyond-the-american-civil-war-10501294.html>)

PRECEDENT PROJECTS

The two precedent projects this plan studies are the High Line in New York City and the Pont des Arts in Paris. Other similar projects worth of note are the 11Street Bridge Park in Washington D.C., and the Bridge Street District in Dublin, Ohio. Planners and cities have in recent years used one single project to address the four goals Richmond's BridgePark is looking to achieve. Most interestingly, they have been through creative and imaginative adaptive reuse projects of surprising structures and landscapes. The High Line in New York City used a vacant existing elevated railway line to transform it in to an urban park that has fast become an iconic destination in the city.

The Pont des Arts in Paris, while originally intended as a pedestrian bridge, it has been a point of reference and inspiration in similar fashion to the High Line. They both; however, have one similar feature in that they are relatively near or over a river. These precedent projects used a rational model in planning established and evaluated planning criteria, created alternatives, implemented alternatives, and monitored progress of the alternatives. This will be the method used in developing the following professional plan for BridgePark Design Analysis and Recommendations.

These two precedents are relevant to Richmond's BridgePark project as they are very similar in concept and overall purpose and use. The project of High Line in New York City has sparked and engaged citizens and planners to find new ways to use and transform long forgotten and decaying transportation infrastructures in urban neighborhoods in need of revitalization. Initiated by members of the community who had a vision and organized as a non-profit to achieve their goals in major city centers, make them

extremely relevant to BridgePark.

With its overwhelming success in its active use by locals and tourists, beautiful design, and its role in the revitalization of the Lower West Side and Chelsea neighborhoods, the High Line precisely relates to the goals that BridgePark is trying to achieve.



Figure 7: New York's The High Line (source: Friends of the Highline)

APPROACH AND METHODS

The following professional plan is an analysis of the proposed BridgePark in Richmond VA, and analysis of the potential benefits of the project to the community. This plan looks to evaluate the project's success by four criteria:

1. public Health
2. beauty in its design
3. transportation use
4. community engagement

The document will define the goals, objectives, and the four criteria to evaluate (public health, beauty, transportation, and community engagement). This will consist of a clear depiction of the client's goal, and objectives, as well as a clear characterization of the four criteria that will be used in evaluating BridgePark.

Using existing images, design guidelines, and planning documents, it will be looking at two precedent projects that relate to Richmond's BridgePark and evaluate them according to the four criteria: public health, beauty, transportation, and community engagement.

The proposed BridgePark in Richmond, Manchester Bridge will be analyzed using the four criteria used to evaluate the precedents in the previous part. Furthermore, here it will refer back to the evaluation findings of precedents to cross-analyze Richmond's BridgePark design.

Finally, it will assess findings regarding the four criteria for Richmond's BridgePark. It will use findings from precedents analysis to get the best recommendations for BridgePark. Throughout the

document, images and maps will be used to relate visually the documents content.

ROADMAP TO THE DOCUMENT

In order to address the client's request for an analysis of BridgePark in Richmond, this document will evaluate the four identified criteria's (public health, beauty, transportation, and community engagement) in three parts as follow:

Part I of this document provides information needed to answer the questions in regards to the four criteria that the BridgePark must best address. The first section will define and use findings on best practice in planning for addressing public health through park systems. It will also use best practices addressing beauty and community engagement through design, and transportation concerns.

Part II is going to be a research and analysis of two segments. It will first analyze the two chosen precedents (High Line and Ponte des Arts) and identify which have addressed each of the four criteria best, and how they have addressed them. It will conclude with a final assessment as to which precedent's identified best practice may be used as a model in the context of achieving the client's goals with BridgePark. The second segment will be look at three existing plans that relate to BridgePark. They include: Richmond Downtown Plan; Richmond Riverfront Plan; and Old Manchester Neighborhood Plan.

Part III will use the four well-defined goals and criteria to analyze the preferred BridgePark design using the Manchester Bridge. It will refer to findings and analysis from Part II to identify key areas of benefits and challenges. This will include design, as well as political and financial challenges and opportunities.

It will conclude with recommendations for improvement of the BridgePark Design. The recommendations will derive from findings of best practice of precedents evaluated.

DEFINING CRITERIA - PUBLIC HEALTH

PUBLIC HEALTH (BIOPHILIA HYPOTHESIS)

Definition of ‘Health’: World Health Organization (WHO)

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

Harvard Professor E.O. Wilson first developed the Biophilia Hypothesis in 1943. It is a theory that describes the link between humans and nature (Wilson, 1984). It implies that people are mentally, spiritually and physically more healthy when they are in contact with nature. This theory has gained attention in the urban planning field, particularly in justifying the need for green space in urban centers for the benefit of public health.

The understanding that the environment plays a key determinant on the health benefits of a community is no longer a question. Humans have long been an integral part of their surroundings through their connection with nature. It has been this connection that has led to the development of spirituality, health and mass growth in population of humanity. While we may be fast becoming an urbanized and highly technological community of people, the need of our connection to nature for the health of our mind, body and soul is always a factor. The World Health Organization (WHO) reports that close to a quarter of the “global disease burden, and more than one-third of the burden among children, is due to modifiable environmental factors”.

When most people are asked the three important life’s most valued assets, health is always one of them. In the context of the globalized urbanization factor, the need for people to have access to nature for their health benefits has become the interest of many urban studies. While there may be many factors for the need to consider nature and environmental concerns when planning, developing, and redeveloping cities today; access to parks, green ways, open space and natural physical environments are becoming essential in structuring healthy and sustainable cities.

James River is a natural surrounding that is already utilized as a place to connect with nature. It is used as a park for relaxing and exercising; however, direct access to the river is limited at the city level. Excessive roadways and lack of connection between the city center and the river experience diminish the opportunity the river provides. BridgePark will add to the already existing health benefits that the riverfront allows to the public. Most importantly, it will bring people to the river in a safe and green space, connecting people with nature.

In 2015, Richmond City ranked 115 for health factors and 113 for health outcomes out of 133 Virginia Counties (University of Wisconsin Population Health Institute, 2015). Health factors are based on health behaviors, clinical care, social and economic factors, and the physical environment. Health outcomes are based on an equal weighting of length and quality of life. To understand

DEFINING CRITERIA - PUBLIC HEALTH

the poor health condition of Richmond City, consider that neighboring counties Henrico ranked 23 for health factor and 33 for health outcomes, while Chesterfield ranked 25 for health outcomes and 16 for health factors.

According to director of ranking program at the University of Wisconsin Bridget Caitlin, “almost all (the city of) Richmond’s problem areas stem from poor social and economic factors” (Kranz, 2014). Socio-economic factors such as unemployment, access to nutritional foods, and health care, crime, bad social habits (excessive drinking, smoking, diet, etc...), access to parks and recreational areas play a big role in the current health ranking of Richmond. For example, the obesity rate for Richmond is 28%, and it can be linked to both economic (no access to nutritional foods) and social factors (diet and exercise).

BridgePark may not solve all the issues linked to Richmond’s health, but people are more likely to be physically active when they live in neighborhoods with better access to resources to walk, jog, bike, exercise, and relax. Having access to a beautiful park connected to nature is nurturing to the body and soul, which also plays a big role in the health of a community. Further, BridgePark has potential for urban farming as well as provide a meeting space for community educational programs on healthy living. The High Line has used its well diverse horticulture and seasonal planting of herbs and vegetables as an educational and beneficial addition to its extended community. BridgePark can

look to this as an inspiration in adapting a similar program to further heal Richmond’s current health standing.

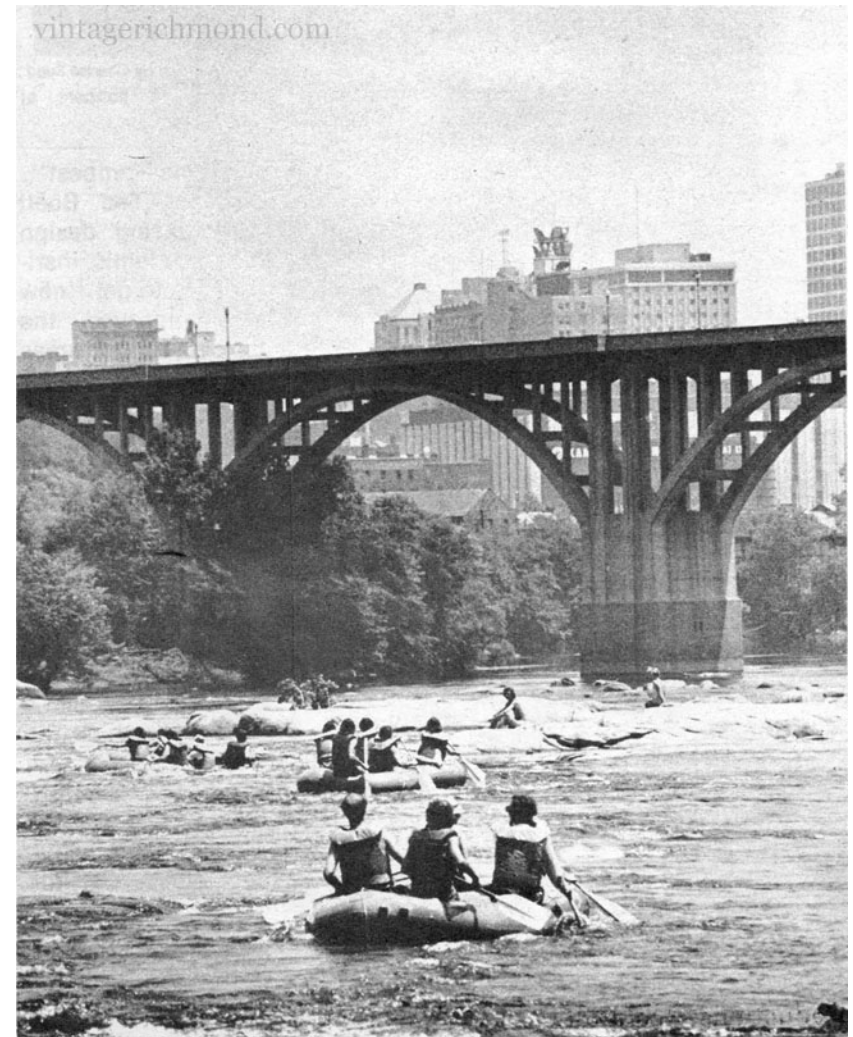


Figure 8: Vintage late 1970’s use of James River as an active park (source: VCU Libraries)

DEFINING CRITERIA - BEAUTIFUL ENVIRONMENT

Study nature, love nature, stay close to nature. It will never fail you.

Frank Lloyd Wright

Being in the presence of beauty offers is a sense of serenity that benefits our health. Beauty in the context of our urban life includes many aspects of the built and natural environment. The characteristics of structural architecture in both buildings and streets shape an image of place, culture and history. More important is how the built environment mixes with the natural surroundings that can create a sense of beauty. Richmond was founded on the James River, not only for its importance for commercial purposes, but also for its natural beauty that reminded the founders of the city of their home of Richmond on the River Thames in England.

Sitting on the Fall Line, Richmond's downtown riverfront creates beautiful rapids that are not only visually satisfying but also great use for rafting and other water activities. BridgePark will allow for close connection to the James, giving visitors a front seat to appreciate the beauty of the whitewater that is created by the Fall Line on the river, making it a destination and not just a means for transportation.

One of the main visions for BridgePark is to create a holistic place that incorporates the rich long history of Richmond and its connection to the river. Along with the natural surrounding of the river, the view shed that is created along BridgePark will combine the historical built up environment of Downtown Richmond and Manchester. The skyline coming from Manchester into Downtown is modern and large scale, while the view towards Manchester

gives a much smaller scale historical landscape of the beginnings of the city. There is no harmony between nature, history and architecture that is created which brings a sense of beautiful surroundings currently (top image), which BridgePark and its holistic and integrated design can create (bottom image). (Figure 4)



Figure 9: Manchester Bridge looking over Manchester today (source: BridgePark Foundation)

DEFINING CRITERIA - BEAUTIFUL ENVIRONMENT



Figure 10: Spatial Affairs Rendering of BridgePark as a green extension of downtown towards Manchester (source: BridgePark Foundation)

DEFINING CRITERIA - TRANSPORTATION

In a quality city, a person should be able to live their entire life without a car, and not feel deprived.

Paul Bedford

Transportation, in its diversity in type, safety, convenience, connectivity, and accessibility plays a major role in how an urban city functions. Downtown Richmond has a long history in its diverse transportation modes and planning. Since its early days, the city was well connected through its grid system streets to the river. However, the river has always played as a linkage and a dividing element between Manchester, which lies to the south of the James, and the rest of Downtown across the river to the north.

While the rise of the automobile ushered in the Lee, Manchester, and Mayo bridges allowing for vehicular connectivity, their main function and design was not holistically inclusive for safe bicycle and pedestrian ways. A pedestrian link is accessible via the Richmond Riverwalk, which connects the Floodwall Walk in Manchester in the South to the Canal Walk on the north side of the river.

More importantly to this plan and BridgePark, the stretch of streets closer to the river are not pedestrian scale, are not lined with trees, and mostly lack safe sufficient sidewalks, crossings, and clearly marked bike paths. In addition, connectivity between destinations such as Kanawha Plaza, Brown's Island, Downtown, Manchester, Mayo Island are not cohesive and safe due to the high volume of traffic crossing the Manchester Bridge.

BridgePark's proposal to diet traffic on Manchester Bridge for vehicular traffic while creating a park along it will slow traffic to a

pedestrian friendly level. The design for expanded sidewalks and trees will create human-scale streets in and around Kanawha Plaza leading to the bridge and the proposed BridgePark. There will be continuity and linkage between the two sides of the river, which will be friendlier to pedestrians and bicyclists, and joggers.

Sitting high above the James, the view from Manchester Bridge is probably the best looking over the skyline towards Downtown Richmond. The current median walkway; while it still allows for a great view, does not feel safe. The concrete walkway and concrete on either side of vehicular lanes doesn't allow for enough buffers from speeding cars nor does it provide beauty. With BridgePark, the experience will be completely different due to the beautiful and pleasant view created while driving adjacent to, or walking, jogging, biking through the park into Downtown Richmond.

DEFINING CRITERIA - TRANSPORTATION



Figure 11: Old street grid of Richmond showing extensive connectivity to river (source: Valentine Museum)

DEFINING CRITERIA - PUBLIC ENGAGEMENT

Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody.

Jane Jacobs

A link exists between accessibility to public places, physical activities, social bonds, and individual and community wellbeing. Parks connect neighbors for stronger ties to each other, lead to higher levels of physical activity, community participation, and social relationships and interaction. These benefits lead to social capital and social cohesion. Social capital is an individual's sacrifices (time, effort, etc...) made in an effort to promote cooperation with others, while social cohesion is a characteristic of society that depends on the accumulated social capital (Oxoby, 2009). These two theories foster for a greater engaged public, which builds a healthier, and thriving community.

Downtown Richmond has seen similar socio-economic shifts that most urban centers experienced with urban flight and suburbanization post W.W. II. With the increased mobility, the automobile provided, and the suburban housing boom accelerated by the G.I. Bill, there was a flight of middle and upper class, particularly white, to the suburbs. This trend led to high number of poor and minorities left in most downtowns across most US cities, leading to urban decay.

The disparities were even more increased with the movement of urban renewal of the late 1960s – 80s, with poor urban neighborhoods being torn down, or divided to make way for six-lane expressways. Richmond's own downtown was cut in the center for its elevated Downtown Expressway, and still hasn't recovered from the disconnection it created to its long historic street

grid-system and cohesive neighborhoods. Richmond Downtown Plan emphasizes that this has led to less connectivity within areas of downtown and also has limited access to the river.

Richmond's Downtown has stayed active with its commercial and central business district bringing in the working class of the suburbs to their offices during the day. The population that drives in to work; however, drives out and Downtown is empty by 6 p.m. Moreover, adjacent neighborhoods like Manchester, Jackson Ward, Fulton, and Oregon Hill stayed poor neighborhoods if not more marginalized and dilapidated.

The last decade has seen an increasing trend of return to urban centers and downtowns in most cities. This is also true in Richmond, where old abandoned warehouses and buildings have been increasingly turned into lofts and condos, attracting a young professional crowd back to Downtown. The trend of gentrification is also happening in Richmond's downtown neighborhoods. However, this trend is more so on one side of the river than the other. Most of Manchester is still highly poor and access to amenities such as parks, grocery stores, and restaurants are far and few in between. The Central Business District and adjacent neighborhoods, with better access to parks, the river, restaurants and other businesses are flourishing.

BrigePark is one great idea that can bridge that gap and give connectivity to these two conflicting development trends. It can become not only a community bridge to better access to what may be on the other side of the river, but a place to meet, mingle, commune, and create bonds between communities. RBF, through

DEFINING CRITERIA - PUBLIC ENGAGEMENT

its public engagement efforts in creating awareness about these socio-economic benefits of BridgePark, must constantly emphasize the greater positive implications that the project can provide.



THE HIGH LINE, NEW YORK, NY

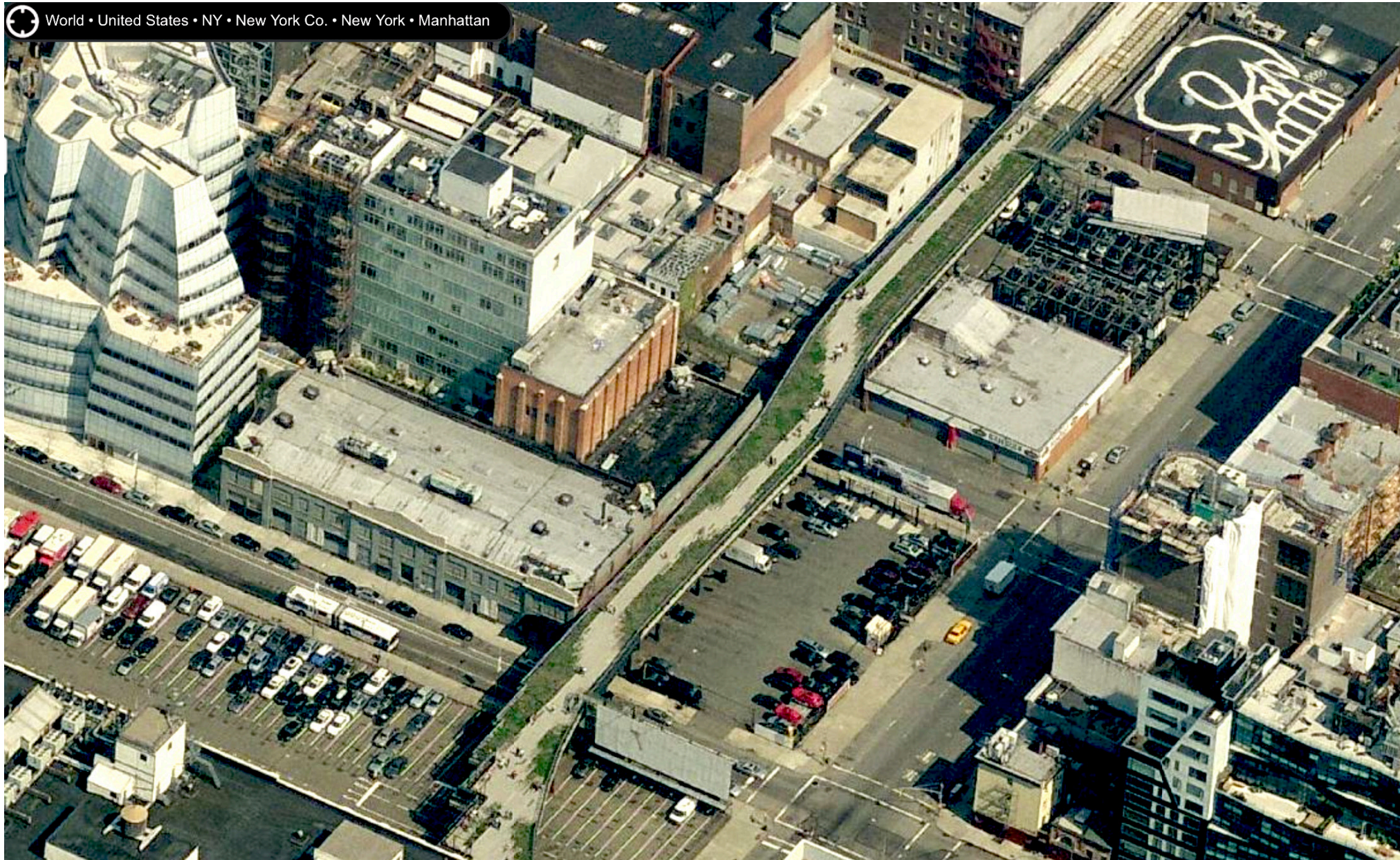



Figure 12: Birds eye view of the High Line in New York City (source: Bing Maps)

THE HIGH LINE, NEW YORK, NY



New York's The High Line is a linear park that runs 1.45 miles along the city's historic West Side from 34th Street to 14th Street. The park is an adaptive reuse of an old raised railway line transformed into a public park. Lauded, as one of urban planning most successful projects in recent memory, it is owned by the City of New York, and maintained and operated by Friends of the High Line.

Public Health

The design of the High Line has several features that promote public health. Taking users off busy and interrupted streets, its raised active design has attractive linear paths with landscaping elements that change and structural points of interest that motivate jogging or walking. Its inventive "slow stair" design also encourages stair use and stair climbing, although there are also elevators for accessibility. (Design, 2015).

The trees and horticulture that surround the park also allows for green space benefiting air quality for adjacent neighborhoods. While there are other smaller parks in the area, the High Line has enhanced the public health that stems from an uninterrupted path for walking and running.

Beauty

The High Line's distinct and beautiful landscape design attracts its active use. People are attracted to beauty, and the park's varying shades, vegetation, views and points of interest has been its most unique asset. About 25 feet from the ground, the view atop the High Line allows the user a different perspective of the city's skyline and built environment. Several large, new adjacent developments since the opening of the High Line have purposely

designed their buildings as to almost become part of the High Line enhancing the experience (Farge, 2012).

The landscape on the High Line is also unique and modern, while still maintaining some of its historical features. Original railroad tracks are visible at some areas while new sleek wooden planks that seem to randomly rise off the ground give the park a modern feel. The original, and some new, steel frames also give the High Line a connection to its past use, allowing for historical reference.

Probably most distinct about the park are its site-specific diverse plantings. Friends of the Highline collaborated with Dutch landscape architect Piet Oudolf who recommended horticulture of "wide range of plantings, with heavy leanings toward tall grass and reeds that recalled the wildflowers and weeds that had sprung up during the High Line's long abandonment" (Line, 2015).

Transportation

The High Line's 1.45 miles is a safe, functional and uninterrupted pedestrian greenway, relieving the user from the motorized traffic below. Its proximity to several subway stations, as well as multiple bus lines, allows for connectivity to other modes of transportation. The park also has ten entry points, with 5 having elevators, making the High Line wheelchair accessible. However, several modes of transportation and destinations; however, are not permitted on the High Line. Use of bicycle, skateboards, skates, and recreational scooters are prohibited. This may be one of the shortcomings of the High Line, as it is limited by size of width to allow for multiple modes of transportation uses.

THE HIGH LINE, NEW YORK, NY



Figure 13: The High Line human and nature interaction (source: Friends of the High Line)



Figure 14: Community engagement at The High Line (source: Friends of the High Line)

Public Engagement

From the beginning of the concept to turn the High Line into a park, it was a public project, with local residents involved in rescuing of the raised railway from demolition. The Friends of the High Line organization, a non-profit organization that oversaw the project from the start, is today responsible for maintaining the park. The public was engaged in the development of the High Line, maintenance of horticulture and other park elements, and its engagement is critical to its success.

Since opening in 2009, the High Line has fast become one of New York City's most iconic landmarks. With an estimated four million visitors a year, it is popular with locals and tourists, and has generated over \$5 billion in development along its path making the neighborhood one of the city's hippest neighborhoods (Line, The High Line Effect, 2009)

Throughout the High Line, there are multiple opportunities for the public to engage. Many different types of seating areas and benches allow for multiple functions. There are single curved benches for an individual or a couple to use for leisure, reading or people watching. There is also an amphitheater with a glass front that faces the traffic below, which allows for larger group gatherings.

Food carts, restrooms and water fountains encourage public engagement. Gatherings of more than 20 people are only allowed through permit. Permits can be obtained for larger gatherings and for commercial purposes (Recreation, 2015). In addition, there are special events, as well as free or private tours available that highlight on the parks history, design, horticulture, and art.

THE HIGH LINE, NEW YORK, NY

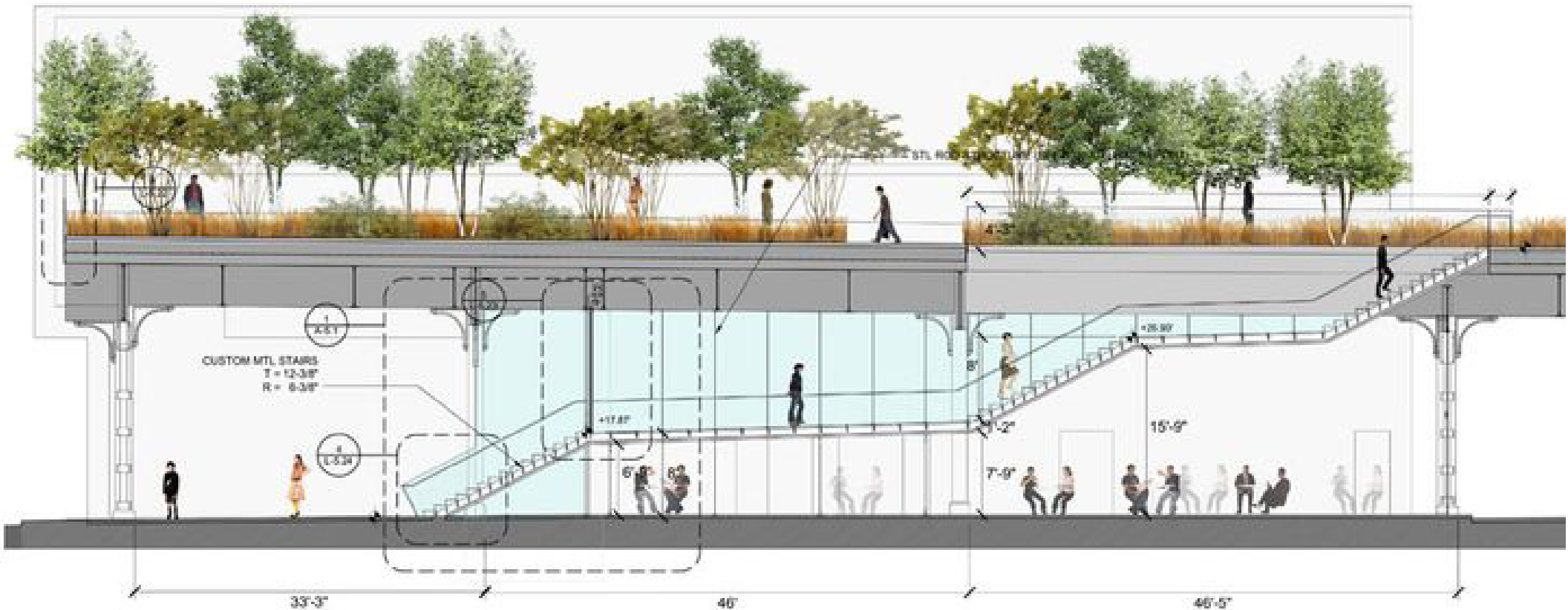


Figure 15: Section design plan of the High Line (source: Friends of the High Line)

PONT DES ARTS – PARIS, FRANCE

World • France • IdF • Paris • Paris



Figure 16: Birds eye view of Pont des Arts in Paris (source: Bing Maps)

PONT DES ARTS – PARIS, FRANCE

Pont des Arts is a pedestrian bridge in Paris which crosses the River Seine. It links the Institut de France and the central square (cour carrée) of the Palais du Louvre. It was originally constructed in 1804 as a pedestrian bridge by Napoleon I, but after constant bombardment from below passing barges, and damage from bombing during both World Wars, the bridge was rebuilt in 1984 per its original design less two of its original nine arches.

Designed by Louis-Alexander de Cessart and Jacques Dillon, the bridge was to resemble a suspended garden, with trees, banks of flowers, and benches. It was also the first iron bridge to be built in the city.

Public Health

Unlike the High Line, Pont des Arts original purpose was always for pedestrian use. At a 509ft in length and 36ft in width, it is also much shorter. The bridge is more functional for pedestrians to cross the River Seine rather than to jog, but the walkability of the crossing makes it beneficial to public health.

The bridge is probably most known for bringing love and joy to its visitors, which also makes for a healthier being. The views from the bridge have been long described as one of the most romantic and beautiful in Paris (Doggett, 2015). Over the years, thousands of lovers visited the bridge to share and profess their love and commitment threw padlocks on the bridge with their names or initials on them. The Pont des Arts Bridge's historical, romanticized and highly active use makes it an asset to public health for locals and visitors.

Beauty

While its iron arch bridge design may seem simple, the surrounding views of Paris (city of love) makes it part of the beautiful built environment. The bridge has a wooden walkway accented with periodic benches and light posts placed along its length.

Not much remains of its original designer's vision of it as a suspended garden, as there are neither trees, nor banks of flowers on the bridge today. In its design, it is at the human scale allowing for views of the city to become the focal point. The lack of vegetation on the bridge, however, doesn't allow for any shade for users.

Another difference from the High Line, but similar to BridgePark, is that Pont des Arts crosses a river. This water feature has a calming effect while it changes its colors and reflection; it makes for a different experience through a course of a day, adding to its charm and beauty. While the High Line has a deep urban fabric to its immediate environment, the river softens the urban scale of Paris at the Pont des Arts.

PONT DES ARTS – PARIS, FRANCE



Figure 17: Sunset view shed looking over Paris at the Pont des Arts (source: <https://www.flickr.com/photos/janneka/12203329724/>)



Figure 18: Active use of Pont des Arts, bringing people together (source: https://commons.wikimedia.org/wiki/File:Soir_de_juin_sur_le_Pont_des_Arts.jpg)

Transportation

The main access from mass transit to the Bridge is at the Paris Metro Station – Pont Neuf. As it was its original purpose, the Pont des Arts Bridge is pedestrian friendly, as well as wheel-chair accessible. There are no bicycle lanes on the bridge, and because most of the time the bridge is crowded with people lounging about, it is not bicycle friendly. The Pont des Arts Bridge's most important transportation role is for the safe pedestrian crossing of the River Seine.

Public Engagement

Pont des Arts Bridge has long been a meeting place for lovers, friends and tourists. People in love find it a romantic place where locks are placed to symbolize eternal love, and the key is then thrown in the Seine River. It's a popular gathering place in the summer for picnics. Artists, painters, and photographers use its special perspective of view as inspiration for their art. Special art exhibitions and live musical events are held on the bridge, as well as live music events (Doggett, 2015).

While the Pont des Arts does allow for large groups to meet, the lack of vegetation and seating areas makes it difficult and uncomfortable for gatherings. Picnicking groups sit directly on the wooden floors open to all the surrounding elements.

EXISTING PLANS

Three existing plans relate to BridgePark: Richmond Downtown Plan, Richmond Riverfront Plan, and Old Manchester Plan. These plans must be considered for the feasibility and cohesiveness of BridgePark as they will guide the analysis of the project in terms of existing conditions and challenges, both physical and political, which may exist or materialize.

Richmond Downtown Plan

The seven foundations of the Richmond Downtown Plan, include: History; Green; Mixed-Income; Traditional City; Urban Architecture, and River. BridgePark encompasses all the mentioned foundations.

The Downtown Plan understands that central urban areas do not allow for much green space in terms of backyards, so it focuses on the use of green space, trails and parks for connection with nature and recreational uses. Green space and Downtown park systems are also a focal point of the Downtown Plan to attract other visitors to the central part of Richmond, which in return develops the area economically.

The Plan also states that the James River is Richmond's "great, wet central park". As such, it allows relief for the otherwise urbanized concrete on both sides of its banks. Downtown is the birth of the city, and the Plan recognizes that the river is still a pivotal heart of the city. The Plan's goals include the Richmond Riverfront Plan for a comprehensive system of natural open space along the river and green connections between city parks and the riverfront.

BridgePark fits within the Downtown Plan's scheme on the use of the James River as the heart of the city. Further, the Plan supports an integrated park system that links and allows for access to the river.

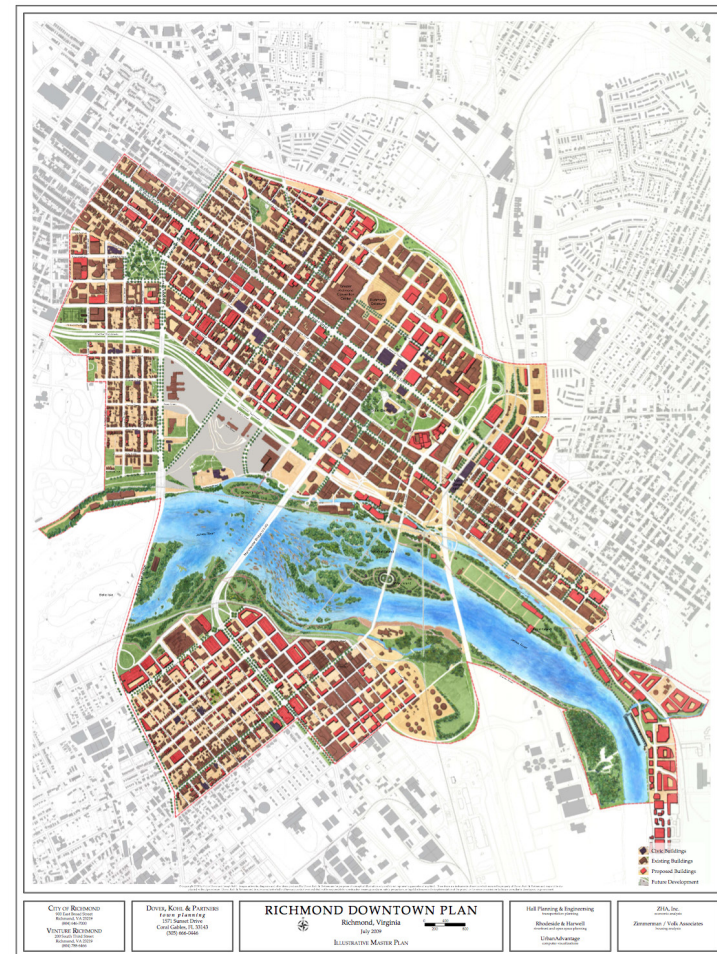


Figure 19: Richmond Downtown Plan map (source: Richmond Downtown Plan)

RICHMOND RIVERFRONT PLAN



Figure 20: An artistic vision for the use of James River in the Downtown Plan (source: Richmond Riverfront Plan)

RICHMOND RIVERFRONT PLAN

While all existing plans are important for analyzing the prospect for support and success of BridgePark, the Richmond Riverfront Plan is the most important for the project. The Riverfront Plan is a continuation of the 2009 Richmond Downtown Plan. It recognizes the findings and vision of the Downtown Plan's view of the James as an important asset of downtown Richmond, and conveys a comprehensive plan with specific strategies to revitalize the 2.2 miles in length of the James River and 200' inland of both banks.

As a comprehensive plan, it maps out a “transformation comprised of incremental interventions, some bold and sweeping, and some subtle and strategic; together they describe an entranced urban landscape”. (City of Richmond, 2012) The plan for the riverfront includes recreational use, inland infill for dense populated multi-use redevelopment, transportation connectivity, and environmental rehabilitation and conservation of the river's physical and cultural history.

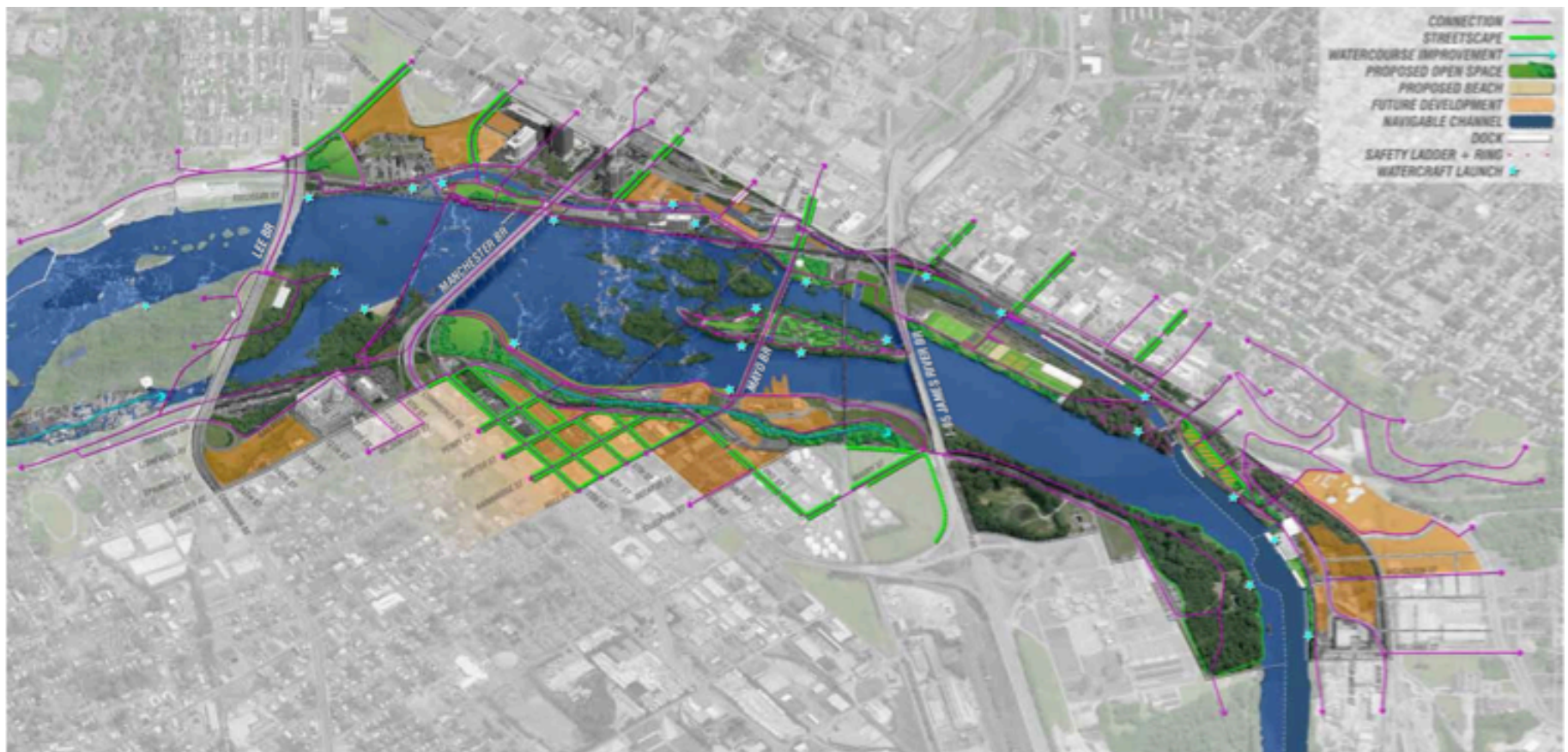


Figure 21: An overview map of the Richmond Riverfront Plan (source: Richmond Riverfront Plan)

RICHMOND RIVERFRONT PLAN



Figure 22: The proposed Missing Link Trail along the Norfolk Southern switchyard (source: Richmond Riverfront Plan)



Figure 23: The proposed Brown's Island Dam Walk (source: Richmond Riverfront Plan)

The central focus of the Riverfront Plan is the James River itself, both for its historical significance as the base for the founding of the city, as well as its natural beauty. It proposes mixed-use infill development along its banks for increasing density and use of the riverfront as an added amenity for urban living. While it acknowledges the existing highly used pedestrian and bike routes, it emphasizes areas for improvements and additions for much more pedestrian and bike friendly connectivity programs.

One proposed enhancement for connectivity is the Missing Link Trail, which calls for a paved route along the existing Norfolk Southern switchyard directly adjacent to the south channel (Figure 14). In this regard it is not directly concerned with the river as its core as BridgePark is designed to be.

Another program is the Brown's Island Dam Walk, which will use the existing dam structures to build a 1,500-foot long bike and pedestrian way free of vehicular traffic over the James River (Figure 15). This will connect the existing partial steel structures on either side of the banks with new sections added to allow for connectivity. While both proposed programs are an added value in creating connectivity, they both lack a sense of attractive design rather they are convenient modes of transportation.

RICHMOND RIVERFRONT PLAN

Related directly to BridgePark, the Riverfront Plan also proposes an enhancement for better bike and pedestrian accessibility along Manchester Bridge. The plan primarily proposes better accessibility for bike traffic by eliminating the sizable stair on the Manchester terminus by reconfiguring the median at Semmes Avenue to create a universally accessible ramp. In addition it recommends a road diet of the Bridge by eliminating one innermost lane in each direction to allow for perennial landscape both as a buffer from vehicular traffic and to create an enhanced crossing of the half-mile span of the current median pathway.

The Riverfront Plan for Manchester Bridge is more of an immediate enhancement for better access and use, rather than a bold and much more multi-purpose use of the bridge as proposed by BridgePark. It doesn't allow for an extended visit along the bridge for enjoyment of the view or the river. While it benefits health by allowing for walking, jogging and biking, it doesn't utilize the full potential of the bridge for exercising and relaxing by creating open space and landscapes envisioned by BridgePark. Further, use of the median will fail to provide the same dramatic views of the river or fully connect to adjacent neighborhoods.



Figure 24: The proposed ramp and road diet for the Manchester Bridge in the Riverfront Plan (source: Richmond Riverfront Plan)

OLD MANCHESTER NEIGHBORHOOD PLAN

With its proximity to Downtown and its long historical connection to the James River, the current Old Manchester Plan looks to redevelop the neighborhood as an active mixed-use urban village. The plan states several goals in realizing this vision including the development of new housing, revitalizing existing historical buildings for both business and single and multi-family housing, economic development, and improved circulation and parking, and to capitalize on Old Manchester's location on the James River by creating a continuous greenway along the James River.

Most importantly, the plan looks to develop parks in strategic locations for the maximum benefit of the community. Further, it looks to provide for the educational, recreational and civic needs of Old Manchester's children, adults and elderly. This is in line with what BridgePark is eying to do and complements the already existing Old Manchester Plan.

Another important linkage to BridgePark is the proposed linear open space along Riverview Parkway that will provide continuity between James River Park and the Flood Wall Walk. The proposed path will connect the James River Park system and Flood Wall Walk to Belle Isle. BridgePark will further enhance connectivity to the riverfront canal system north of the River, as the plan has already suggested Lee Bridge as one method. The goal is to create a multiple-use path, pedestrians can share with bicycles, joggers and skaters.



Figure 25: Magnificent view of Downtown Richmond and Manchester Bridge from Manchester (s



source: <http://devenjames.com/tag/old-manchester-lofts>)

RECOMMENDATIONS

Goal 1: Public Health

With Richmond City ranking 113 out of 133 counties for health outcomes, there are a lot of ways that the City can improve the health of its citizens. BridgePark can play an integral role; particularly in the Downtown communities where high level of poverty persist, in promoting and encouraging healthy living by providing a safe, beautiful, and welcoming environment for physical activities, transportation and a place for serenity and mental wellbeing.

The High Line has proved to be a welcome addition to an otherwise once dilapidated and unwelcoming neighborhood in New York. The High Line today is an actively used as a jogging and walking path, and as a place for relaxation by New Yorkers and tourists alike. Its successful transformation of the old railway line and its adjacent neighborhoods as healthier places to live, play, and visit are key drivers for the recommendations of this plan for BridgePark.

While RBF has done some research on the feasibility of the plan, for example the work done by Spatial Affairs, this plan recommends that further study be conducted regarding health related issues in the adjacent neighborhoods. This includes a study on the current health factors and indicators of neighborhoods, as well as a mapping of existing assets that encourage healthy living, such as parks, gyms, and grocery stores. This will give RBF a better understanding of the health aspect of the City as well as an additional resource for the justification for why BridgePark should exist.

Key Findings:

- Studies have overwhelmingly confirmed that parks play a role in the health benefit of the mind, body, and soul of communities
- Linear parks and greenways have high potential for encouraging physical activity, connect neighborhoods, and can be utilized as a connecting tissue to other park systems and entertainment destinations
- Biophilia theory suggests there is an instinctive bond between humans beings and nature, which urban centers at times lack to provide
- BridgePark can bring people back to the river, giving opportunities for connection with nature

RECOMMENDATIONS

Goal 1: Public Health			
Objectives & Actions	Priority Level	Time Frame	Actors
1.1: Grasp the existing assets that promote health for neighborhoods surrounding BridgePark and what is lacking which BridgePark can provide			
Action: Conduct a GIS based mapping of assets that benefit healthy living in the immediate surrounding neighborhoods and areas adjacent to Downtown Richmond and James River (i.e. parks, grocery stores, gyms, clinics, hospitals, sidewalks, etc...)	High	1-2 Years	BridgePark Foundation VCU - Urban & Regional Studies and Planning
1.2: Grasp the existing health of neighborhoods and communities adjacent to BridgePark			
Action: Conduct an extensive research study regarding the health of Downtown Richmond neighborhood residents in order to promote the benefits of BridgePark	High	1-2 Years	BridgePark Foundation VCU - MCV
1.3: Engage stakeholders to view BridgePark as an essential addition to enhance and benefit a healthy Richmond			
Action: Hold/host physical activities around the James River such as yoga, hiking, historical trails, mountain biking, rafting and other river oriented sports to promote and show the potential of BridgePark as a unique and bold addition to existing and other plans that are in development for Downtown Richmond and James River	High	1-2 Years	BridgePark Foundation VCU - MCV Mayor's Healthy Richmond Campaign Virginia Public Health Association
1.4: Increase recreation potential of existing sites by creating safe strategic linkages by use of BridgePark as a connecting tissue			
Action: The architectural and physical design of BridgePark should include safe and strategic modes of connecting paths to other recreation and amenity destinations that already exist and are in the planning process. This will allow for a diverse variety of physical activity areas that BridgePark may not be able to provide (i.e. Skate Park, Tennis, Basketball, etc...)	High	1-3 Years	BridgePark Foundation Spatial Affairs City of Richmond Department of Parks & Recreation

RECOMMENDATIONS

Goal 2: Beautiful Environment

BridgePark's location, sitting high up over the James River, is surrounded with natural beauty of the River, as well as grand views of the Skyline of Downtown. In this regard, it is the design of the park that will enhance the existing beautiful environment that already exists.

A beautiful environment strengthens a high quality of life for a community, including public health. BridgePark in its design should be as beautiful as its already existing environment. Incorporating an attractive landscape that uses fauna that is naturally found in and around the river is recommended. Planting should include trees that will allow for a buffer from adjacent vehicular traffic on Manchester Bridge, while still not obstructing views of Downtown, Manchester, and the River.

Park furniture should be well placed and designed, with a variety of seating options such as curved seating for individuals or couples, benches, and chairs. Other important park furniture to include are green trash bins, bicycle

stands, fountains, and picnic tables.

Lighting is key to any successful park, as it creates mood and ambiance as well as the feeling of safety. Park lights should be human scale and well incorporated with overall design of BridgePark. Historical lighting fixtures of Downtown and Manchester should guide the design, as to allow for continuity and historical reference. In addition, there is a high potential for Public Art at BridgePark, which should be an additional focus to enhance beauty and engage the community.

Parks also allow for a variety of beautification opportunities during holidays and special occasions, bringing communities together. BridgePark should become a destination for holidays such as Christmas by creating a modern and celebratory lighting of lights events. Other occasions and holidays should include 4th of July, Thanksgiving and St. Patrick's Day.

Key Findings:

- Beautiful environment plays a role in creating vibrant, healthy and thriving communities and cities
- Rivers and water ways are not only beautiful elements, but they have shown to reduce stress and enhance mental wellbeing
- Parks and green ways add beauty to otherwise highly concrete and steel urban centers, and also buffer pedestrians, joggers, and cyclists from vehicular traffic
- BridgePark sitting high above the James River will be surrounded with beautiful views of rapids of the River below, while allowing for a breathtaking view of the skyline of Downtown

RECOMMENDATIONS

Goal 2: Beautiful Environment			
Objectives & Actions	Priority Level	Time Frame	Actors
2.1: Create beautiful human scale experience that engages with the river, surrounding historic areas and views of Downtown Richmond skyline			
Action: Collaborate with architects and landscape architects that understand the history of Richmond to have a holistic approach in the design of BridgePark. This should include the use of naturally already existing fauna for landscaping the park, and use of old wood from surrounding buildings to be demolished for park furniture	High	1-2 Years	BridgePark Foundation
2.2: Use holidays, City celebrations and other special occasions for specific beautification projects of BridgePark			
Action: Collaborate with City and community groups to coordinate plans for such events as Christmas lighting, Halloween, and Thanksgiving decoration which will add specific additional beauty to BridgePark	High	1-2 Years	BridgePark Foundation City of Richmond
2.3: Enhance landscaping to surrounding areas, including river, for a more beautiful views and experience along BridgePark			
Action: Work with City, and other public and private organization to beautify banks of river (clearing of overgrowth and habitat conservation), and surrounding area (planting of trees and beautification of connecting streets) to enhance beauty of views from BridgePark	Medium	2-3 Years	BridgePark Foundation City of Richmond Parks & Recreation Friends of the James James River Green Building Council
2.4: Maintain a revolving, diverse, innovative, and engaging public art projects that will add to the beautification of BridgePark			
Action: BridgePark Foundation should work with local, national and international art organizations to curate revolving public art installations which engage the public, foster community identity and interaction, while not obstructing or disconnecting connection to surrounding views and nature	Low	3-4 Years	BridgePark Foundation VCU Arts Virginia Museum of Contemporary art

RECOMMENDATIONS

Goal 3: Enhanced Transportation System

As a linear park crossing over the James River, BridgePark adds to the multi-modal transportation opportunities that the Manchester Bridge will provide connecting neighborhoods and communities living on both sides of the River. Adding to the health benefits of communities, people can walk, skate, or bike to reach multiple destinations through a safe and beautiful environment.

As this plan must have a special focus on the benefits to public health that BridgePark will provide, the most important aspect of the park is that it will encourage people to walk or bike, rather than take a bus or drive short distances to work or school. Parks and open space are neighborhood features that provide opportunities to increased active transportation and levels of physical activity. This also reduces traffic congestion and air pollution.

BridgePark should make its main priority to pedestrians, providing safe paths with dedicated lanes that are free from

speeding bicyclists. Pedestrian paths should also be given priority to the closest views of the River, as they will be the slowest moving traffic over BridgePark and can take in the views longer.

Richmond has a sizable bike culture, and the City in recent years has become more bicycle-friendly. Bike lanes are being added to more streets in the city, connecting neighborhoods and communities. BridgePark will become a main bike route connecting Downtown and Manchester, with grand views of the skyline of Downtown and the River. Safe and dedicated bike lanes should be incorporated in the design for BridgePark.

Connecting the park to public transportation and automobile users should also be considered, with a well defined connecting paths from and to key GRTC stops and public parking lots. In addition, it is important that BridgePark is a connecting tissue to other parks and recreational riverfront destinations on both sides of the River.

Key Findings:

- Walkability of a neighborhood can translate into important, health-enhancing increases in active transportation and physical activity
- BridgePark will provide a safe bike route that is in line with the Richmond Bicycle Master Plan 2014
- BridgePark will play as a main gateway connecting other parks that exist and are in planning on both sides of the River
- Richmond Riverfront Plan, Richmond Downtown Plan, and Old Manchester Plan all focus on the need to have better connectivity to River, which BridgePark will allow

RECOMMENDATIONS

Goal 3: Enhanced Transportation System			
Objectives & Actions	Priority Level	Time Frame	Actors
3.1: Allow for multi-modal use of transformational paths to connect the two sides of the James River			
Action: Design should include safe and designated paths for pedestrians, cyclists, and joggers, without being too restrictive connecting the two sides of the river	High	1-3 Years	BridgePark Foundation Spatial Affairs
3.2: Make a special effort to enhance the experience and accessibility for pedestrians a priority			
Action: Work with organizations and City to make BridgePark both a recreational and transportation mode for pedestrians. This includes a dedicated commitment to make BridgePark a safe and convenient walk path for connecting neighborhoods on both sides of the James River	High	1-3 Years	BridgePark Foundation Spatial Affairs Virginia Department of Transportation
3.3: Create links through design to other parks, open space, and recreational destinations			
Action: Design should specifically have continuity in mind to already existing and planned parks and Riverfront destinations (Belle Isle, Flood Wall, Kanawha Plaza, etc...), BridgePark should become the arterial gateway to destinations on both sides of the river. Clearly marked guides to destinations should also be installed	High	1-3 Years	BridgePark Foundation Spatial Affairs Virginia Department of Transportation
3.4: Create links to BridgePark from key public transportation stops and public parking			
Action: Develop a strategy for safe link paths to BridgePark from key GRTC stops and public parking with marked guides to BridgePark also installed along paths	Medium	2-3 Years	BridgePark Foundation Greater Richmond Transit Corporation

RECOMMENDATIONS

Goal 4: Enhanced Public Engagement

For enhanced public engagement, this plan first recommends that a clear understanding of the demographics of communities and stakeholders that are most adjacent to BridgePark is needed. Public support for BridgePark as a positive addition to the city that can enhance public health, transportation, and beauty is important for the realization of the project. A clear understanding of these communities and stakeholders will enable BridgePark to assess which community engagement methods and techniques to best utilize. Gathering data on the profile of these communities therefore is very important in the early stages of the project.

RBF has already conducted a variety of community engagement events around the city; however, this plan recommends further public awareness and support is needed to increase the visibility of the project and its benefits. Recommendations particularly include direct engagement with communities such as the Manches-ter, Downtown, and surrounding neighborhoods, as they will be the major park using population and have more sway in proposed development projects for Downtown.

Secondly, this plan looks at opportunities for enhanced public engagement from BridgePark and its design. Beautiful and well-designed parks create places for people to meet and gather. They bring communities together which otherwise may be separated

by physical barriers or economical and cultural differences. This study has found a long history of disconnect between the communities between two sides of the River. BridgePark can provide a much needed connecting and meeting place that can bridge the gap that currently exists.

BridgePark therefore should consider in its design open public spaces where social events such as farmers market, concert, fairs, and festivals could be held. In addition, there is opportunity for a community garden, where members of all surrounding communities can participate. For example, the High Line has ongoing public engagement outreach, where it engages the public in initiatives such as its current Adopt a Juniper (*Juniperus Virginiana*) program.

Most importantly, recommendations are for RBF to establish a Friends of BridgePark society, where members of the community can join. Similar again to the Friends of the High Line, this will create a wide range of opportunities for public engagement through planning of events, management of the park and other activities.

RECOMMENDATIONS

Goal 4: Enhanced Public Engagement			
Objectives & Actions	Priority Level	Time Frame	Actors
4.1: Have a complete understanding of the communities and stakeholders that are adjacent to BridgePark			
Action: Perform a community profile for Downtown Richmond, Manchester and surrounding neighborhoods to assess the demographics of communities and stakeholders to engage. This will establish an informed approach in to which types of community engagement processes and methods best to use	High	1-2 Years	BridgePark Foundation
4.2: Develop a positive public awareness for legitimacy of what BridgePark can add to a vibrant Downtown Richmond			
Action: Present BridgePark and its benefits to communities and stakeholders at community meetings, design workshops, citizens panels, community fairs, festivals, and other key gatherings through appropriate methods	High	1-2 Years	BridgePark Foundation
4.3: BridgePark should be a public/private endeavour in its conception, maintenance, and management			
Action: Create a Friends of BridgePark Association and encourage for all stakeholders and residents to participate in the development of and management of the park similar to how the Friends of the High Line in New York has done	Medium	2-3 Years	BridgePark Foundation
4.4: Incorporate diverse opportunities for future public engagement in BridgePark design			
Action: Public engagement should be encouraged upon construction of park by creating diverse spaces for small and large group gatherings in the design park. These should include lawns, picnic areas, pavilion, and concert area.	Medium	2-3 Years	BridgePark Foundation Spatial Affairs

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Figure Sources

Figure 1: BridgePark Foundation

Figure 2: BridgePark Foundation

Figure 3: Bing Maps

Figure 4: Style Weekly

Figure 5: BridgePark Foundation

Figure 6: <http://www.independent.co.uk/travel/americas/richmond-virginia-beyond-the-american-civil-war-10501294.html>

Figure 7: Friends of The High Line www.thehighline.org

Figure 8: VCU Libraries

Figure 9: BridgePark Foundation

Figure 10: Spatial Affairs

Figure 11: Valentine Museum

Figure 12: Bing Maps

Figure 13: Friends of the High Line www.thehighline.org

Figure 14: Friends of the High Line www.thehighline.org

Figure 15: Friends of the High Line www.thehighline.org

Figure 16: Bing Maps

Figure 17: <https://www.flickr.com/photos/janneka/12203329724>

Figure 18: https://commons.wikimedia.org/wiki/File:Soir_de_juin_sur_le_Pont_des_Arts.jpg

Figure 19: Richmond Planning and Development Review, Richmond Downtown Plan

Figure 20: Richmond Planning and Development Review, Richmond Riverfront Plan

Figure 21: Richmond Planning and Development Review, Richmond Riverfront Plan

Figure 22: Richmond Planning and Development Review, Richmond Riverfront Plan

Figure 23: Richmond Planning and Development Review, Richmond Riverfront Plan

Figure 24: Richmond Planning and Development Review, Richmond Riverfront Plan

Figure 25: <http://devenjames.com/tag/old-manchester-lofts>

Appendix 1: Virginia Outdoors Demand Survey through the years (Source: 2013 Virginia Outdoors Plan)

Years in the following bar graphs represent the year the survey was conducted. Percentages indicate the percentage of households that responded.

