Van Buskirk Island Park & Historic Hackensack Water Works Buildings

A Financial-Sustainability Feasibility Study

CUES
Center for Urban Environmental Sustainability

DISCLAIMER

This Feasibility Study was conducted for CUES as a* pro bono *Case Study through the Rutgers Graduate MBA Program. This study is for discussion purposes only, and is not meant to be used as an actual Business Plan for the Hackensack Water Works.

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(Cover Image courtesy of Rutgers CUES)

Executive Summary

Van Buskirk Island, the site of the Hackensack Water Works, is located between the Boroughs of Oradell and New Milford in Bergen County, NJ. The site has been underutilized since the land and buildings were donated to Bergen County in 1993 by the United Water Co. The property contains the historically designated Hackensack Water Works buildings, which are bordered by the Hackensack River. The site has an environmental habitat composed of marshland and deciduous forest, both on the island itself and in the riparian zone surrounding the river. Environmental and historic preservation stakeholders, County Officials, and local residents have all proposed options related to the site's future. However, it is very apparent that in order to achieve a final reuse solution for the Hackensack Water Works, a plan must demonstrate the probability that the property can become financially self-sustainable.

The Rutgers Center for Urban Environmental Sustainability (CUES) contracted with the Rutgers Business School MBA program (the Project Team) to conduct a Financial Feasibility Study. The deliverable for this project was to financially test possible Hackensack Water Works reuse options that would preserves the site's historical and environmental integrity. The following report presents the findings of this Case Study.

It is the Project Team's finding that Van Buskirk Island Park and historic buildings can be stabilized, rehabilitated and turned into a Hackensack Water Works Center for the Culinary and Performing Arts (CCPA). The proposed Center would house a Hackensack Water Works Museum, a Culinary Institute and Restaurant affiliated with Bergen Community College's Culinary Arts Program, a 300-seat Performing Arts Theater, and an Environmental Park. These areas would be managed through a collaboration established between Bergen County and a newly-created 501c3 non-profit organization. The non-profit governing body would be composed of County, Historical, Environmental, Financial and Educational representatives. This governance structure would protect the integrity of the property and be responsible for oversight of ongoing management, maintenance, preservation, and redevelopment efforts.

The Hackensack Water Works and Van Buskirk Island's potential to be a multiple use destination spot for Bergen County residents and other residents of the New Jersey-New York metropolitan area is unique. This analysis indicates that sustainable reuse of site could be financially feasible, provided a financially stable tenant is found for the filtration building. This tenant would provide a reliable revenue stream that covers overall site operation and maintenance costs, and would be the basis for attracting complimentary tenants and reuses to the historic building complex. While it is not possible to project exact financial revenues, this analysis indicates that the potential does exist to create theater, museum, gift shop and café uses in the oldest buildings that could be financially self-sustaining.

Site Background

While today most people take clean water for granted, a century ago waterborne diseases killed thousands of Americans annually. The Hackensack Water Works on Van Buskirk Island is a rare surviving example of water works architecture and engineering from the late 19th and early 20th centuries.

Van Buskirk Island is situated in the Hackensack River at Oradell, NJ. It is a man-made island formed as a result of channeling the water flow in order to power mills during the 1800s. For the early part of its existence, the site was owned by the Van Buskirk family as part of an 11 acre land purchase on the western bank of the Hackensack River.

The Hackensack Water Works
(Image courtesy of Rutgers CUES)

Van Buskirk Island and the surrounding area is part of the Hackensack River riparian zone. The island supports a combination of maintained grass areas, forest and horticultural plantings. The area surrounding the island, however, is a mix of dense vegetation and freshwater wetlands. The area is home to native trees such as the river birch, sycamore, American elm, and basswood, as well as a wildlife habitat where black-crowned night heron, eastern painted turtles, and little brown bats are often seen.

An area south of the island, also considered a part of this redevelopment project, is forested and contains a mix of native plants as well as non-native and ornamental species. This area is crucial to the overall ecological health of the Hackensack River, a fact that must be taken into account when making any future plans for the site.

The Hackensack Water Company bought Van Buskirk Island in 1881 and opened the Hackensack Water Works treatment plant there a year later. Subsequent additions to the site, including the filtration plant, coagulation basin, and filter house extension were made over the course of decades, and the facility remained in operation until 1990, when the United Water Company closed the Van Buskirk Island facility and open a new treatment plant in nearby Haworth, NJ. In 1993, United Water donated the island and plant facilities to Bergen County, along with $1 million in order to preserve the site. During its time of operation, there were many historically significant developments in water filtration technology that occurred at the plant, most notably the pioneering of charcoal filtration technology. For this reason, the structural elements of the site were placed on the New Jersey and National Registers of Historic Places in 2001. At the present time, the site contains a Pumping Station (Building 1), a Filtration Plant and Garages (Building 2), a Coagulation Basin (Area 3), and a small building known as the “Gate House” next to the Coagulation Basin (Building 4). The site is subject to periodic flooding when large precipitation events coincide with a high tidal cycle and a full reservoir upriver of the buildings. This combination of hydrologic events contributes to flooding of the site if United Water releases prodigious amounts of water from the Oradell reservoir system.

The site is in a state of disrepair, as minimal upkeep has been performed on the buildings and surrounding areas on the island since United Water vacated the property. Broken windows and a thick layer of dust covers the interior of the buildings, and the iconic smokestacks require repair and rebuilding. Before any restoration work can be initiated, the site must be stabilized in order to ensure the safety of those who work there.

Hackensack Water Works Broken Windows (Image courtesy of Rutgers CUES)

As part of the effort to involve the local community in developing reuse solutions for Van Buskirk Island Park, a design Charrette was organized by CUES in 2009 to obtain input from local residents, environmental advocates, and historic preservationists. The results of this community Charrette showed that area residents felt Van Buskirk Island could potentially be home to a restaurant, theater, cultural center, museum, or master gardening/ urban agriculture combination. Residents were most concerned about negative aspects related to flooding, parking, and walkable access/connectivity of the site.

Project Objective and Approach

The overall objective of this project was to ***"test a sustainable business model for reuse of the historic and environmental elements of the Hackensack Water Works and Van Buskirk Island in a manner that satisfies residents of the surrounding communities and local stakeholders."*** In order to do this, the Team enlisted the help of several groups and individuals including:

- Bergen County Parks Department (BCPD)
- Water Works Conservancy (WWC)
- Rutgers Center for Urban Environmental Sustainability (CUES)

The Team also consulted with the following individuals and organizations to obtain insights about the site itself and potential redevelopment options:

Bergen Risk Managers, Inc. (Bergen County insurance provider)
Fairmount Waterworks (water treatment plant museum subject to flooding, located in Philadelphia, PA)
Mark Thompson Associates LLC (historic architecture firm)
Irfan Bora (retired CFO, NJ Meadowlands Commission; now a Professor at Rutgers Business School)
Loubna Erraji (Project Advisor and Professor at Rutgers Business School)

This Feasibility Study relied largely on information and assumptions provided by these individuals and groups. Though all stakeholders' visions for a redevelopment project were not necessarily compatible, all stakeholders agree that the site has great potential, and that care must be taken in order to preserve the unique historic and environmental elements of the property.

The Project Team vetted several business options derived from the CUE-led design Charette and stakeholder suggestions, including the following:

- Water Works Museum
- Cultural Center
- Restaurant
- Culinary Academy/Restaurant
- Theater
- Outdoor Amphitheater
- Café
- Franchised Coffee Establishment
- Art Gallery
- Gardening Area
- Farmer's Market
- Environmental Area
- Active Recreation Area
- Dog Park
- Corporate Retreat
- Nature Center
- Picnic Areas

Initially, these options were explored based on practicality related to the site's dimensions, stakeholder and public interest, and a general competitive analysis of Oradell, New Milford, and northern Bergen County. From this initial analysis, several options were eliminated for the reasons shown below.

Option	Reason(s) for Elimination
Cultural Center	-Not well defined idea -Could be overarching theme for the site instead
Restaurant	-Lack of on-site parking could limit customers -Large amount of space needed -Would need interest from an investor to perform accurate financial analysis
Outdoor Amphitheater	-Would have to go in the Coagulation Basin, which would collect water, so it would have to have a dedicated draining system -Construction costs would likely be large -Recently opened outdoor amphitheater in Overpeck County Park
Dog Park	-May conflict with environmental interests and site objectives -Other dog parks are located in area -No ideal location on site
Farmer's Market	-Already active markets in Emerson, Haworth, Teaneck, Englewood, etc.
Active Recreation Area (ballfields, soccer fields, playgrounds)	-Many alternative sites for active recreation in the area -May conflict with environmental interests and site objectives -No room on site for full-size ballfields or other active recreation areas
Picnic Areas	-Could be included to some extent, but would not contribute significantly to business plan
Nature Center	-A dedicated nature center would take up room in the buildings -Would likely not be profitable -Could accomplish this purpose more effectively with signage on nature trails in environmental areas
Corporate Retreat	-Not enough space -Would generate extremely sporadic income -May conflict with environmental interests and site objectives
Gardening Area	-Against Environmental interests and site objectives -No ideal location on site, flooding issues
Franchised Coffee Establishment	-Dunkin' Donuts and Starbucks are not currently adding franchises in New Jersey
Art Gallery	-Other art galleries exist in area -No ideal location on site for this option given other more preferable uses. (Culinary Academy and Restaurant would have to go in Building 2, and Culinary Academy seems like the better option)

After these options were discarded, remaining options were evaluated with a broad bottom-up financial analysis to test financial feasibility. Once the analyses were completed, a go/kill decision was made for each option. Those options termed "go" were subject to a more detailed financial analysis and included in the feasibility study recommendations, while the options that were killed were removed from further consideration. The Culinary Academy and Restaurant was not evaluated with this process, since profit generation is not the primary goal of an educational institution. We assumed that the school would be paying rent to the proposed non-profit entity, rather than sharing profits. The Van Buskirk Island Park area was not included in the financial analysis because it was not considered as a revenue generating option.

The results of the evaluation described above are shown here:

Option	Projected Income/(Loss)	Go / Kill Decision
Water Works Museum	Breakeven	Go
Café	($46,572)	Kill
Museum Gift Shop	$9,408	Go
Culinary Academy/Restaurant	$787,500 (rental income)	Go
Theater	$57,360	Go
Environmental Area	N/A	Go

More details pertaining to the individual assumptions made for each option are outlined in the Financial Projections portion of this report. It should be noted that although the Café is expected to lose money and received a "kill" decision, we included a Cafe in the financial analysis since it does add an amenity to the site by providing a place for those enjoying the Museum or Environmental Areas to relax and purchase food.

From the results of this feasibility study, a theme for the site was developed that encompasses historic and environmental aspects, as well as viable reuse options. The theme we envisioned for the site was the ***Water Works Center for the Culinary and Performing Arts***. The reasoning for this theme and approach is outlined in detail in the study.

The Van Buskirk Island Alliance (VBIA)

The Project Team proposes that the Van Buskirk Island Park and historic buildings be overseen by a 501c3 organization (for purposes of this study only, named **The Van Buskirk Island Alliance (VBIA)**. The organization should be a federally and state-registered nonprofit organization, and would have overall responsibility for administration, maintenance and integrity of the site. We believe that the establishment of this organization will be beneficial for the following reasons:

- Secure historic and environmental funding available to non-profit organizations that would not be available to Bergen County
- Removes sole financial and management responsibility of the property from Bergen County and County taxpayers
- Would have full-time management whose sole responsibility would be maximization of the property's benefits
- Would provide a long-term direction for reuse of the property, without being subject to shorter-term changes in policy
- Allows major stakeholders to have input in the overall integrity of the site and ensure that the historical and environmental aspects of the site are preserved
- 501c3 organizations are exempt from state and federal taxes (although as a County-owned site this is not a major factor)

The VBIA would be governed by a Board of Directors, which would oversee restoration and future development and preservation efforts. While the project team is hesitant to speculate as to what the Charter, Articles of Incorporation, or voting procedures of the VBIA should look like, we are willing to make recommendations regarding the composition of the Board of Directors and the Mission Statement of the organization.

The Mission Statement of the organization should be a slightly modified version of the objective of this study: ***"To sustainably preserve the historic and environmental aspects of the Hackensack Water Works and Van Buskirk Island in a manner that benefits residents o fBergen County and the surrounding communities."***

It is important to emphasize that the goal of the VBIA would be to achieve financial sustainability for the site, not to maximize revenues or profits. The Project Team believes that this mission statement should be strictly followed by the VBIA, as it can be easy to get caught up in the potential the site has to generate revenues and profits that could compromise the historic or environmental significance of the property. The VBIA's primary purpose should be devoted to preserving existing aspects, and if some additional revenue can be made while maintaining the site's historic and environmental integrity, this is certainly a good thing. However, if the source of these revenues (even if they are substantial) will violate the integrity of the site (even if on only a minor level) these initiatives should not be implemented.

In order to achieve this Mission, we propose the VBIA Board of Directors be minimally comprised of at least the following thirteen (13) stakeholders:

- The Bergen County Executive or an appointed representative
- Two representatives from Bergen County Parks Department (park and historic expertise)
- The Mayor of Oradell or an appointed representative
- The Mayor of New Milford or an appointed representative
- The Hackensack Riverkeeper (Environmental representative)
- The National Audubon Society (Environmental representative)
- The Water Works Conservancy (Historic representative)
- Second Historic organization (Historic representative)
- Two educational representatives (Bergen Community College, Rutgers, Bergen Academies)
- Representative with public financial expertise
- Representative with fund raising expertise

In the opinion of the Project Team, the proposed representative mixture provides balance and the expertise required to rapidly move the non-profit mission forward. While the project team cannot speculate as to the method of voting for resolutions or other organizational business, it suggests that the Articles of Incorporation and Charter for the VBIA be approved only by unanimous consent of the Board of Directors. For its initial duties, the Board would not be paid for its services.

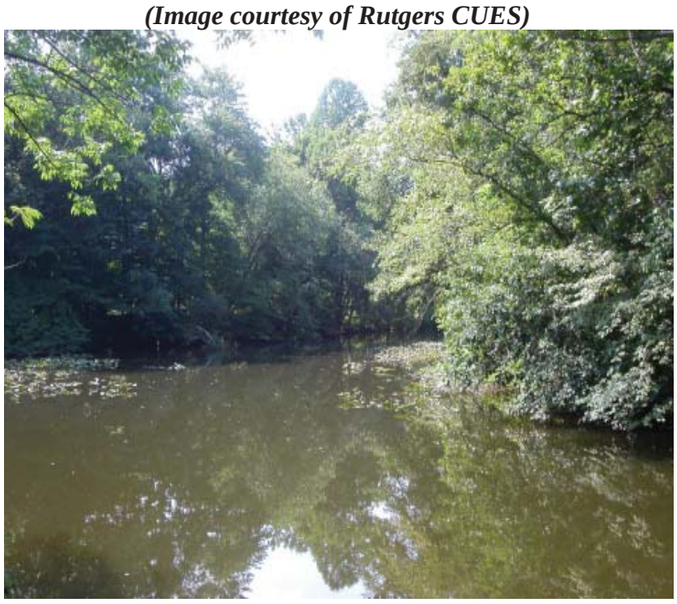
In the Project Team's estimation, the VBIA could pursue and receive funding through the following revenue streams:

- Federal and State Government Grants
- County Appropriations
- Donations
- Leases from tenants
- Profits generated from VBIA managed businesses

The Project Team proposes that the 501c3 lease the buildings from Bergen County for a period of 10 years for a negligible fee ($1 a year). Bergen County would continue to manage the Van Buskirk Island Park itself, and be responsible for grounds maintenance as is currently the case. Development of the Park would involve collaboration between Bergen County and VBIA. The VBIA would manage and oversee all of Building 1, including the Museum, Theatre, Café, and Museum Gift Shop and use all profits to maintain and further the non-profit Mission. However, some or all of the management responsibilities might be leased out to private parties, management companies, other non-profit organizations, or other sources at the discretion of the Board of Directors. For the purposes of this financial analysis, Building 2 will be assumed to be wholly occupied by the Culinary Academy and Restaurant, though the building itself could be subdivided and space leased to other tenants. Funding projections and details for these uses, as well as the 501c3 as a whole, are given in the Financial Projections section of this report.

Though it would lease the property to the VBIA for a negligible fee, this leasing arrangement would allow Bergen County to develop what is now an eyesore and potential liability into a site that the County, Oradell, New Milford, and the surrounding areas will cherish and regard as a valuable addition to their communities. The arrangement would also allow major stakeholders (including the County itself) to each have a seat at the table in terms of the future development of the site. If after the 10-year period of the lease, Bergen County believes that the site is sustainable it could choose to lease the structures at an increased rate, though certainly not enough to hamper the operation of the site or jeopardize its sustainability. The Project Team believes it is of the utmost importance for the site to be able to achieve its full potential without relying on Bergen County as the sole source of future funding. Our financial projections indicate this site could potentially become sustainable within a 10-year time period.

Image of the Hackensack River near Van Buskirk Island
(Image courtesy of Rutgers CUES)



Site Plan and Timeline

The proposed plan would transform Van Buskirk Island Park and Hackensack Water Works over the course of 7 years. The redeveloped property would include the following aspects:

- Hackensack Water Works Museum (Building 1)
- Museum Gift Shop (Building 1)
- Café (Building 1 or Building 2)
- Performing Arts Theater (Building 1)
- Culinary Arts Program & Restaurant (Building 2)
- Environmental Area (Trails, Landscaping, and Natural Areas)
- Parking (Madison Avenue and Elm Street)

A map showing the locations of features located in Building 1 and Building 2 is found in Exhibit 1 of the Appendix.

We propose that the non-profit Board be responsible for management and oversight of all aspects of the site, but would only be responsible for **build out costs** of the Museum, Gift Shop and Theater (aspects such as equipment, seating, stage, museum displays, etc.). Responsibility for the build out(s) of Building #2, other than providing basic security and maintenance services, would reside with the tenant(s) renting space in this building.

Water Works Museum

A Historic Science & Technology Museum would have as its central focus the Pumping Station and its engines (the history of the Industrial Revolution in one building – from steam to computers). The motive behind this proposal is to preserve and maintain the pump house, a red brick Romanesque Revival building built 1882-1911. The plan preserves and maintains the pump house's historic equipment, including "Old Number 7," one of the few remaining and largest, stationary, triple-expansion Allis-Chalmers Steam Engines, installed in 1911, as well as other rare equipment built before World War I.

The "Old Number 7" steam engine
(Image Courtesy of Rutgers CUES)

This museum has the "*opportunity to create a unique monument to the nation's waterworks industry and to a type of nineteenth-century machine that once dominated that industry but that now is on the verge of extinction*," as commented Robert M. Vogel, Curator Emeritus, Engineering & Industry of the Smithsonian Institution, in his letter to the Oradell Planning Board. With input from experts from around the country, the Museum can restore the steam equipment and allow the public to see them "turning over," although not actually pumping water. Walking through the museum, the visitor would pass from the early days of steam engines all the way to electricity and computers.

The non-profit would develop programming for this unique museum space that will help children and adults understand the development of water treatment technology and the development of Bergen County through the 20th Century. Students would also explore the importance of wetlands and water resources for both the historical past and the future of the country and the County. By preserving the technology of the past, curators will help visitors explore the Industrial Revolution and ponder the technology of the future. The history of the Hackensack River, wetlands, population growth, and town planning would also be part of the diverse programming.

Computers and interactive displays would help children develop scientific literacy and pique their curiosity in science and technology, and the Museum could draw on the resources of many local institutions to enrich its programming. The model for such an interactive water-focused museum can be found at the Fairmount Water Works in Philadelphia. Among those available to provide technical help and experts for classes and workshops are: The Smithsonian Institution; Rutgers University; Bergen Community College; New Jersey Institute of Technology; Ramapo College Masters Program in Environmental Studies and Technology; Pratt University; United Water Resources (Former owners of the Water Works itself); and the American Society of Mechanical Engineers.

School class trips would attract the youth of the greater Bergen County area. Interested seniors could become docents, advisors, and volunteers. The list of advisors could also include former employees of the Hackensack Water Company, who have actively supported the County in providing lectures and tours related to the history of the buildings and the water treatment plant. Student visitors would provide a reliable revenue stream for the museum, and programming would be tied into the State Education Curriculum Standards. One model for establishing student trips and activities would be the Meadowlands Environment Center.

This museum would preserve the past and point to the future, ensuring that the groundbreaking scientific achievements which took place at the Hackensack Water Works will not be forgotten.

Museum Gift Shop

Many museums have gift shops and the Hackensack Water Works museum should be no exception. The Museum Gift Shop will serve as a way to promote and showcase the museum, while providing a revenue stream that would help to offset museum operating costs.

The Museum Gift Shop would be housed in Building 1. Since this entrance would face New Milford Avenue, it could be seen by both motorists and pedestrians. The Gift Shop would have the same hours as the Museum.

A potential format for the Museum Gift Shop (Image courtesy of Speyside Cooperage - Banffshire , Scotland)

Café

The Café would provide those who visit the Museum or Environmental Park a place to purchase a light lunch, snack, or beverages. The Café would serve patrons of the Museum, Culinary Academy students, as well as the general public and individuals that use the surrounding area for environmental activities. The Café would primarily serve coffee and pre-made sandwiches, but there is some flexibility in what the menu could include. Due to limited space, the Café would be more of a “grab and go” establishment, since there would not be an extensive seating capacity. During the warmer months, the establishment could specialize in ‘picnics to go’ that could be enjoyed on site in the parkland open space.

Performing Arts Theater

A theater in the Hackensack Water Works complex would serve a currently unmet need throughout Bergen County. There are at least 10 independent non-profit theater companies in Bergen and neighboring counties, including the Bergen County Players, which is currently housed in Oradell. There is a need for a 200-300 seat theater in the area to serve these non-profit theater groups.

courtesy of northjersey.com)

School or cultural groups looking for a theater space for instructional classes or performances would also be served. Businesses in the area could rent the space for their own purposes, and rental income could provide a significant revenue source to the umbrella non-profit organization. As the performing arts component of the CCPA, the Theater would be an epicenter for culture in the region. The performance area would be located in Building 1, and be surrounded by the museum. The theater would likely operate when the museum is closed, though the space could be used by the museum to make presentations to class trips when not in use by theater groups.

Culinary Arts Program & Restaurant

In recent years, cooking has increasingly become an art, rather than just a way to nourish people. The need for trained chefs has expanded as people demand greater variety and emphasis is placed on freshness and flavor. A Culinary Arts Program located within the Hackensack Water Works complex would bring additional prestige to Bergen Community College. A culinary institute and the creative emphasis of culinary art would benefit County residents and students, and provide a unique dining experience that is currently unavailable within the County.

We proposed that a Culinary Academy will be housed in Building 2 (the filtration plant), and part of this academy would be an affiliated student-run Restaurant. The model for this institution would be the Culinary Institute of America in Hyde Park, NY. We believe the Filtration Building is the best site for the Culinary Academy because this building has a large internal capacity (more than 52,500 sq. ft. of space), a non-historically designated section that could be converted for classroom space and educational kitchens (the 1950's building), and of course, a unique setting for a culinary experience. Preliminary suggestions provided by a culinary consultant are included in the Appendix of this report.

(Image courtesy of chef2chef.net)

The culinary institute would feature multi-purpose kitchen classrooms, lecture rooms, wine/beverage tasting equipment, a catering kitchen, and receiving and storage areas. Culinary courses would attract many residents of the County, especially teenagers, career changers, as well as professionals who want to improve or expand their cooking repertoire.

For area residents who do not attend the Culinary Academy, the school and restaurant would provide a unique local place to dine. The facility would serve walk-in customers, and could also be rented as a venue for catering events and fundraisers, both for the general public and the non-profit itself. The Project Team believes that the lease of Building 2 by a Culinary Academy and Restaurant would be a reliable primary revenue source that could support ongoing operation and maintenance costs of running the Hackensack Water Works complex.

A vision similar to what the restaurant may look like (Image courtesy of Cintrone Restaurant - Redlands, CA)

Unfortunately, we were not able to speak with representatives from the Bergen Community College Culinary Arts Program due to the time constraints of this project. Therefore, it is important to note that we do not know how much space the College might need or want, or if entering into such a program meets the College's educational objectives. We are sure that most of Building 2 would be needed for a Culinary Academy and Restaurant. However, the offices in the Head House could be either used for traditional classroom space by a Culinary Academy, or as office space for other tenants (to be identified). Furthermore, part of the Gallery of the filtration plant might be used as a multipurpose room that could be rented out for large functions such as weddings, awards ceremonies, company functions, or other catered affairs. If a Culinary Academy did not use all of the space in Building 2, the project team suggests that tenants be identified which are compatible with the "Culinary and Performing Arts" theme to rent space on the 2nd floor of Building 2.

Environmental Park

The Environmental Park would be include the area immediately surrounding the Coagulation Basin (Area 3), as well as all areas of the site north of the island and south of New Milford Avenue. This park concept follows the design created by Dr. Wolfram Hoefer of Rutgers and includes a series of primary and secondary pathways that run throughout the property. The primary pathways are a canopy walk constructed of a wooden platform raised 13 feet above ground, which would extend above and across the Hackensack River, New Milford Avenue, and the Coagulation Basin. This unique design was conceived because permitting surface elevation trails in a flood plain would not be in the interest of good environmental stewardship. The proposed pathways would be perfect for nature lovers and joggers, and would provide beautiful views of Van Buskirk Island and the adjacent areas. Secondary trails would be formal trails at ground level, and would draw hikers, nature enthusiasts, and joggers. There would also be park amenities within the coagulation basin, a bird blind on the northwestern end of the island for bird watchers, and a canoe launch on the southwestern end of the island. For complete details on the Environmental Area, please see Exhibit 2 in the Appendix.

An overhead view of Van Buskirk Island and its surrounding environment (Image courtesy of Rutgers CUES)

Parking

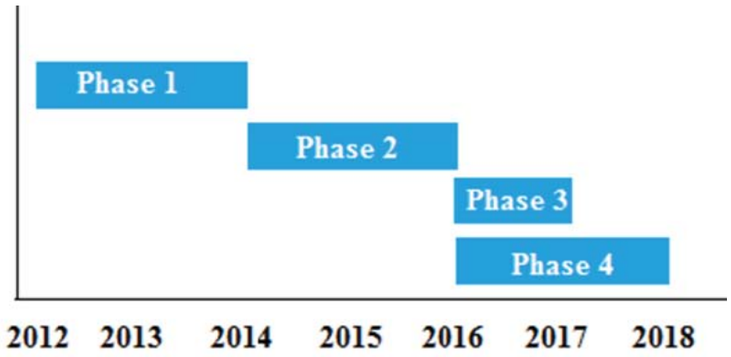
The Project Team assumes that existing parking would be sufficient for the site redevelopment proposed in this study. The existing street parking on the island itself (Elm Street) can accommodate 37 spaces, which could be used by visitors to the museum, theater, restaurant, and possibly tenants in Building 2. Elm Street could also be used as a drop off location for buses bringing students on class trips, or shuttles used for large events at the museum and eating areas. There would be parking for three buses or shuttles on Madison Avenue, directly to the south of the site. An additional 73 parking spaces could be placed in an old maintenance lot off Madison Avenue. This lot could be used by Culinary Academy students as well as visitors to the Environmental Park. Access to the island for local residents would be provided using the canopy walk in the environmental area of the park, and also from Madison Avenue. For large theater events, school events, or fundraisers, valet parking or shuttle service could be used to drop visitors in front of the buildings, and return to the maintenance lot on Madison Avenue to park the vehicles. Such a valet parking arrangement would be completely at the discretion of the operators of the site. The current parking configuration would allow a total of 110 parking spaces and three bus parking spaces without creating a large negative impact on the local communities. The Project Team believes that this is the optimal arrangement for the initial configuration of the site. While Rutgers has developed a parking plan with a maximum of 325 cars, this would involve changes to the buildings and the environmental areas. The project team does not believe the initial configuration of the site would need this much parking, since many of the uses of the site would occur at the same time (for example, the museum would be open during the day, but the theater would only feature night performances). Although the need for parking might increase over time, depending in part by which tenants are added in Building 2, the Project Team strongly recommends that additional parking not be constructed until the need presents itself, allowing the natural aspects of the site to be preserved as much as possible. A map of the existing parking areas, as well as the maximum number of parking spaces that could be constructed can be found in Exhibits 3 and 4 of the Appendix, respectively.

Timeframe

The Hackensack Water Works and Van Buskirk Island could be converted into the Hackensack Water Works Center for the Culinary and Performing Arts (CCPA) in four (4) phases:

- Phase 1 – Stabilization
- Phase 2 – Restoration & Environmental Park Development
- Phase 3 – Opening of Building 1
- Phase 4 – Opening of Building 2

Though some of these phases could run concurrently, we are assuming that each phase will start and finish in the order specified. A timeline of these events follows:



If the second floor of Building 2 is not used by the Culinary Academy and Restaurant, the non-profit would begin leasing this space during Phase 4.

Target Market

Bergen County is an affluent county in northeastern New Jersey, and would be the primary market for the renovated Hackensack Water Works complex and parkland. It is anticipated that the Museum would attract class trips from surrounding New Jersey counties and possibly downstate New York and New York City. The primary adult visitors would be those in Bergen County who appreciate a unique dining experience or a high-quality theatrical performance, follow industrial history, or enjoy nature and the outdoors. Therefore, the target market for the site would be focused on four different groups:

"Local Schools" – History or Science classes (primarily grades 4-12) in Bergen County and the surrounding region. Teachers wcould be made aware of the site, particularly its educational aspects, through through outreach conducted by the non-profit in collaboration with the Museum. Visits to area schools, making presentations to educational administrators and also holding educational assemblies for students would increase educational awareness of all the site has to offer students.

"Aspiring Foodies" – Area residents who appreciate a dining experience in a unique environment (the model for the academy and restaurant would be the Culinary Institute of America in Hyde Park, NY). The non-profit would engage local media to do write ups about the culinary restaurant, the culinary school, and periodic restaurant reviews.

"Environmental Recreationalists" – Local residents who appreciate a "nice walk in the park" could spend hours on the canopy walk enjoying the natural environment surrounding the site or alternatively, canoeing or kayaking down the Hackensack River. We expect that the Bergen County Parks Department would include Van Buskirk Island Park on its website and publications listing park facilities in the County. This effort would be supplemented by advertising for periodic family-friendly events.

"Local Theatergoers" – Theater enthusiasts who live in northern New Jersey and enjoy staying 'local'. This group also includes families with young or teenage children whose parents would like their children to involved in the performing arts. Bergen County Players have expressed interest in considering a move to a renovated Hackensack Water Works Theater. Brochures would be placed in local dance academies, art studios, and other "artsy" places in the area, as well as playbill ads in local New Jersey theaters.

Financial Projections

The Financial Feasibility Analysis was conducted as a three-part process. First, the stabilization and restoration costs were estimated using information supplied by Bergen County staff and Mark B. Thompson Associates, although, at the instruction of the Client (CUES), these amounts are not included in the 10-year projections. Second, each of the individual components were evaluated as annual "snapshots" to test if they were viable financially. Finally, a 10-year projection was created using the annual estimates and the rehabilitation Timeline.

Phase 1: Stabilization

The first phase involves stabilizing and securing the buildings and landscape elements in order to make the site safe and secure for workers and the general public. Currently, the smokestacks and some roof areas of the facility are crumbling, making it a hazard to walk around the site. Before any rehabilitation or restoration of the buildings or the park can be accomplished, these structural deficiencies must be remedied. The projection for stabilization costs and funding, taken solely from the Bergen County Parks Department's 2009 projection and budget, can be found in Exhibit 6 of the Appendix. Whether the site restoration effort goes forward or not, the County still has the responsibility for safety on the site, so stabilization efforts should certainly be undertaken.

According to Bergen County Parks Department projections, the cost of stabilizing the Hackensack Water Works facility **($3.44 million**) is covered by sources already secured and/or budgeted from the County and the State of New Jersey. The Project Team assumed this funding to be in place.

Phase 2: Restoration & Environmental Development

Phase 2 would combine the restoration of Buildings 1 and 2. According to Bergen County staff, there have not been any grants awarded for funding a restoration project for the site, and therefore, we have only projected Expenses for Phase 2 of the project. As stated previously, we have assumed that all costs associated with the Environmental Park surrounding the buildings would be borne by the County Parks Department.

Costs for Phase 2 of the redevelopment are estimated to be **$35.6 million**. Of course, these costs can be offset by any grants, donations, fundraising initiatives, or government support. We did not account for revenues in this phase of the project so that we could test, even with zero funding for this phase of the project; the revenue-generating options that materialize in later phases; the revenue-generation that comes in later phases of the site redevelopment can contribute to offsetting Phase 2 expenses.

It is important to note that even if restoration activities at the Hackensack Water Works ceased, the responsibility of maintaining a safe County- owned site would not go away. Should it be determined that the buildings will not be restored, demolition costs would need to be determined. We have no way of knowing what those costs might be, but given the extensive infrastructure demolition that would be required and the connection of underground piping to the existing water supply system, we assume that this would be a significant number. Therefore, the cost of stabilization/restoration should be weighed against a realistic demolition figure.

However, the Project Team believes that restoration would provide a much more desirable outcome than a vacant lot in the middle of Van Buskirk Island. Furthermore, our analyses employ a conservative scenario, as Mark Thompson Associates provided the Project Team with a range of $375-$475 per square foot as the estimated cost for restoration. The Project Team used the rate of $475 per square foot, but if the restoration project came in at the low-end of the estimate ($375), the Phase 2 restoration cost would be considerably lower.

Phase 3: Opening of Building #1

Building #1 would house the Water Works Museum, Museum Gift Shop, Café and Theater. Individual one-year analyses for each use follow.

Water Works Museum

The Museum is expected to break even **if the non-profit can secure $43,340 in annual grant funding** through public or private sources. This number assumes the Museum will be open six days a week and charge an $8 admission fee for regular visitors and $5 for students. Students on class trips are projected to be the primary visitors to the Museum, assuming a frequency of two class trips a week during the school year with 30 students each. We anticipate an additional five walk-in visitors a day. Individual and family memberships would also be offered, at rates of $40 and $65, respectively. While this Museum may not be one that members choose to visit multiple times annually, the assumption used was that a number of local residents would purchase the membership in order to support the Hackensack Water Works restoration and park.

Costs must also be taken into account, as the museum will need to hire a Museum Associate, Education Curator, and an External Education Consultant to reach out to schools in order to generate interest in taking class trips to the site. Utilities and maintenance are also accounted for in the Financial Analysis, which is shown in detail in Exhibit 7 of the Appendix.

Based on these assumptions, the Museum would require $43,340 from outside grants and fundraising initiatives annually to break even. In addition, once the Museum is well-established, summer programs could be offered for students to help increase fundraising efforts; this potential revenue stream was not included in our financial projections.

Museum Gift Shop

The Museum Gift shop has the potential to **generate a small annual profit of $9,408**. The underlying Assumption is that the gift shop would be open only when the museum is open and would attract 75% of the visitors (9) to buy a gift with an average price tag of $10. The analysis assumes that the Gift Shop would be staffed by the Museum staff or a volunteer, so there are no anticipated wage costs associated solely with the Gift Shop. Operating costs are limited to utilities and the cost of goods sold, and so would be minimal. Details of the financial performance of the Museum Gift Shop can be found in Exhibit 8 of the Appendix.

Café

Based on our financial assumptions, a Café that serves basic coffee and sandwiches is not sustainable as a separate entity, and would **generate a yearly loss of $46,571.50**, as shown in Exhibit 9 of the Appendix. Revenue is hard to generate based on the small amount of visitors the Café would attract per day (the Project Team anticipates an average of 17.25 visitors a day, half of which would buy just a cup of coffee, and half would buy a coffee and sandwich), largely due to the limited number of daily visitors to the site, the low amount of pedestrian traffic on New Milford Avenue, and the close competition from the local coffeehouse, Cool Beans. The local community is loyal to Cool Beans, and we question if there would be the willingness to travel to the museum Café location for basic coffee and sandwich selections. Unfortunately, a break even scenario is not even close due to the high cost of the equipment required to operate this type of establishment. To break even with the assumed cost structure and margins, the Café would need well over 100 buyers per operating day.

The Café operating cost is extremely high compared to the revenue itself, due to the machines the Café must maintain for daily business. The operating cost does not account for other expenses such as utilities and insurance; but even without these costs, we are projecting a loss of $46,571.50 per year. Based on these financial assumptions, it is not recommended that the non-profit attempt to operate a Café. However, a local operator with a lower cost structure or the Culinary Academy might be able to come up with a business plan that makes a Café more financially feasible.

Performing Arts Theater

We project that the Theater, located in Building 1, would **generate $57,360 in profits on an annual basis**. The assumption is this venue would seat 300 people, and host runs of 2 or 3 days (not including a half day at the beginning and end of the run for set-up and take-down). Visiting companies would pay for their own production costs and provide their own technicians for lighting, sound, etc. The theater would provide a stage manager for all performances, though the renting company might supplement this individual with their own personnel. Our research showed that other local theaters rent their space to nonprofit theater companies 75% of the time and 25% of the time to for-profit ventures. We assumed a cost of $1,000 per day rental fee for nonprofit organizations and a $3,000 fee for business/private

ventures – an amount that is consistent with the prices other theaters charge. We expect the theater to be open 17 days a month, or roughly 200 days a year.

We estimated 150 nonprofit rentals and 50 for-profit rentals, thus generating $300,000 in rental revenues. The theater could also generate an additional $10,000 from playbill ads, for an overall total of $310,000 annual revenue. This would make the Theater profitable without grant support, donations, or memberships necessary (though these could certainly be pursued). Expenses are expected to total $252,640 to cover operating costs, staff salaries, and insurance. This analysis is detailed further in Exhibit 10 of the Appendix.

Phase 4: Opening of Building #2

Building #2 would house the Culinary Academy and Restaurant, and possibly other tenants. If the Bergen Community College Culinary Arts Program used the whole of Building 2, we estimated a lease payment of **$787,500** a year, as seen in Exhibit 11 of the Appendix. Since Building 2 is 52,500 sq ft., this lease only charges $15/sq. ft.; a number well below the average Bergen County commercial lease rate of $30-$35 per sq. ft. Because of this extremely competitive number, many tenants in the visual arts or other creative mediums (graphic designers, architects, etc.) might be attracted to the site if Bergen Community College opts not to use the whole building. In this scenario, the Culinary Academy would pay for whatever amount of space it needs at a rate of $15/sq. ft., and the rest of the building would be leased to other tenants at the same rate. If Bergen Community College occupied Building 2 the college would build out the space to meet their needs at their own expense.

Conclusions and Discussion

The major source of projected revenue is the lease of Building 2. Should a suitable tenant be acquired, the Hackensack Water Works property would not have to rely solely on grant funding for continuing operations. Furthermore, these projections include the anticipated loss generated by the Café. If an operator can be found to run this amenity profitably that lose would go away.

One caveat to this analysis is the fact that setup costs were not estimated for the Museum (cost of exhibits, etc.), Gift Shop (shelving, cash register), and Theater (seating costs, stage construction, lighting apparatus). The Project Team did not include these costs in the analysis because there can be much variability, depending on how the non-profit wants to organize exhibits in the Museum, equip the Theater, and what space it uses for the Gift Shop (i.e. whether to use the area designated as Café space as part of the Gift Shop). Inclusion of these expenses would increase the required payback period.

A second caveat to this analysis is that the Project Team has not included expenses associated with maintaining the entire property such as liability insurance. Since this is a County owned property, we have assumed that these details would be included in the lease agreement between the non-profit entity and Bergen County, and as such, require further exploration.

After determining the costs of demolition of the Hackensack Water Works buildings, a decision could be made regarding the financial benefits of a Hackensack Water Works Center for the Culinary and Performing Arts, and a determination made if this is a superior alternative to simply razing an historic site. This financial feasibility study projection does not include potential revenue streams provided by grant funding from the many public and private sources of grants, such as interested parties in science and water technology (National Science Foundation, PSE&G, United Water), Historical Preservation organizations (Institute of Museum and Library Services, National Endowment for the Arts, National Trust for Historic Preservation), and other potential donors. However, the most important grant amounts may be obtained from the State of New Jersey itself, as the Garden State Historic Trust Fund, a State entity, awards Historic Site Management Grants ranging from $5,000 - $50,000, and Capital Preservation Grants that range from $5,000 to $750,000. With these multiple opportunities for a non-profit to apply for grant funding to cover restoration and maintenance of the site, we conclude that the decision to restore this site would be a worthwhile investment.

The Project Team believes that this site can reach its full potential and become a unique and sustainable landmark site for Bergen County, the Borough of Oradell, and the State of New Jersey. The Hackensack Water Works Center for the Culinary and Performing Arts would be a unique blend of historical, educational, culinary, arts, and environmental interests, will would serve Bergen County residents for many years, and most importantly, preserve the historical and environmental aspects of Van Buskirk Island and the historic Hackensack Water Works.

An artist's rendering of the opening of the restored Hackensck Water Works (Image courtesy of Rutgers CUES)

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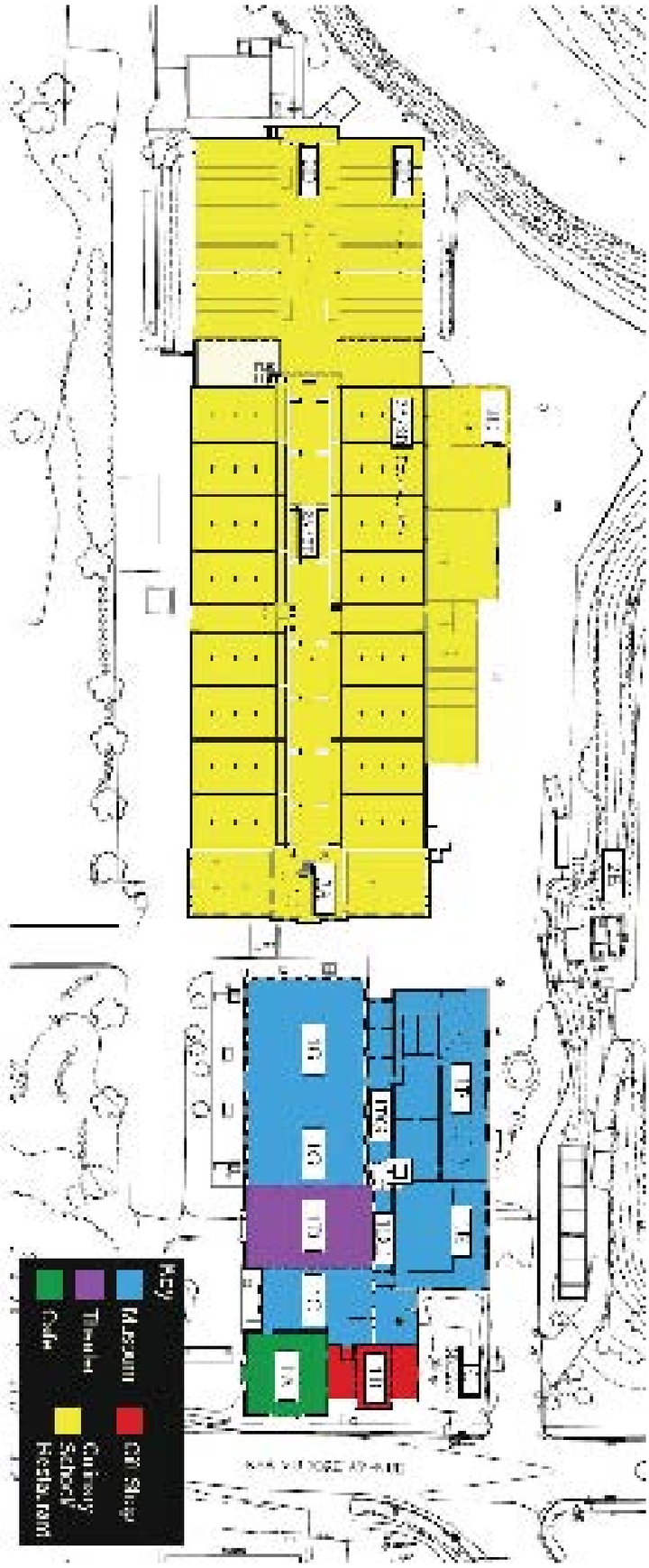
APPENDIX

Exhibit 1: Building Layout



(Image Courtesy of Mark B. Thompson Associates

Exhibit 2: Overview of Environmental Areas

(Image Courtesy of Rutgers CUES)

Exhibit 3: Existing Parking Areas

(Image Courtesy of Rutgers CUES)

Exhibit 4: Location of 325 Potential Parking Spaces

(Image Courtesy of Rutgers CUES)

Exhibit 5

STABILIZATION FINANCIAL ANALYSIS

Assumption

1 - The information from Bergen County's 2009 Surveys remain accurate

Sources

1 - All Revenues taken from 2009 Van Buskirk County Park Funding for Historic Preservation Estimates
2 - All Expenses taken from 2009 Van Buskirk County Park Budget for Historic Preservation

Revenue	**Amount**
Bergen County Trust Award	$ 1,006,376
Bergen County Trust Fund award 2007	$ 340,000
Bergen County Trust Fund award for Van Buskirk Island Park River Walk	$ 77,200
New Jersey Historic Trust award for Phase 1	$ 750,000
New Jersey Historic Trust award for Preservation Plan	$ 50,000
New Jersey Historic Trust award for Phase 2	$ 704,384
Divisions of Cultural & Historic Affairs operating	$ 10,913
2010 Request to Bergen County Trust Fund	$ 500,000
Total Revenue	**$ 3,438,873**
Expenses	**Amount**
Construction Costs	
Restoration of Chimneys, Structural Preservation Systems	$ 983,853
Limited Protection	$ 5,789
Construction of protection and stabilization and initial rehabilitation of 1882 section	$ 1,562,000
Total Construction Costs	**$ 2,551,642**
Non-Construction Costs	
Civil and Environmental Engineering	$ 882,107
Signage	$ 5,124
Total Non-Construction Costs	**$ 887,231**
Total Expenses	**$ 3,438,873**
Net Income	**Amount**
Project Profit/Loss	$ -

Exhibit 6

RESTORATION FINANCIAL ANALYSIS

Restoration Assumptions*

1 - There is no dedicated funding for this project
2 - Site will be restored at a rate of $475 per sq ft
3 - Entire area of Building 1 and Building 2 will be completely restored
4 - Demolition Costs will Total $25 million

***Sources**

1 - Preliminary estimate from Mark Thompson Associates, LLC suggests site will be restored at a rate of $375-$475 per sq ft
2 - Mark Thompson Associates, LLC estimates complete demolition of the buildings on site will cost $25 million
3 - Total Square Footage of Building determined by Reuse Attributes Chart provided by Rutgers CUES

Revenue	**Amount**
Total Revenue	**$ -**
Expenses	**Amount**
Restoration Costs	
Rate of Restoration (per sq foot)	$ 475
Total Square Footage of Building 1 and Building 2	74,900
Total Restoration Costs	**$ 35,577,500**
(LESS DEMOLITION COSTS)	**$????????**
Net Income	**Amount**
Project Profit/Loss	**$ (Expense – Demolition Costs)**

Exhibit 7

MUSEUM FINANCIAL ANALYSIS

Museum Assumptions

1 - An average of 5 independent visitors will visit the museum each day
2 - Museum would be open 8 hours/day, 6 days/week (48 hours a week)
3 - Admission fees would be $8 for Unaffiliated Visitors and $5 for students
4 - Yearly Individual Memberships would cost $40, Family Memberships will cost $65
5 - 150 people would purchase individual memberships, 150 people would purchase family memberships
6 - The museum would offer educational programs (for class trips) 2 times/ week over the 9 month (39 week) school year
7 - The average number of students on a class trip would be 30
8 - Weekly utilities and maintenance costs will be $360/wk
9 - Staff would include a Museum Associate and Education Curator who would make $10/hr and $15/hr, respectively
10 - An Educational Consultant would be hired to reach out to local school administrators
11 - The fee for the Educational Consultant would be $50/hr, working approximately 5 hrs/week
12 - The fee for accounting services would be $1,500 per year
13 - Utilities and Maintenance would cost $60/wk

Theater Revenue	Amount
Independent Visitors	
Number of Independent Visitors to Museum per day	5
Admission Fee (Free for Children and Members)	$ 8.00
Daily Admission Fee Revenue	$ 40.00
Weekly Admission Fee Revenue	$ 240.00
Yearly Admission Fee Revenue	**$ 12,480.00**
Membership Visitors	
Number of members (One-Year Dual/Family Membership)	100
One-Year Dual/Family Membership Fee	$ 65.00
Yearly Family membership Revenue	$ 6,500.00
Number of members (One-Year Individual Membership)	150
One-Year Individual Membership Fee	$ 40.00
Yearly Individual Membership Revenue	$ 6,000.00
Total Membership Fee Revenue	**$ 12,500.00**
Educational Program Visitors	
Number of Education Programs per week	2
Average Number of students per program	30
Education Program fee per student	$ 5.00
Weekly Education Program Revenue	$ 300.00
Education Program months	9
Education Program weeks	39
Yearly Education Program Revenue	**$ 11,700.00**
Grants and Other Funding	
Government Grants (Contributions) and other gifts, similar	$ 43,340.00
Total Theater Annual Revenue	**$ 80,020.00**

Theater Expenses	Amount
Salary Expenses	
Hourly wage of Museum Associate	$ 10.00
Weekly salary for Museum Associate	$ 480.00
Annual salary for Museum Associate	$ 24,960.00
Hourly salary of education Curator	$ 15.00
Weekly Salary for Education Curator	$ 720.00
Annual Salary for Education Curator	$ 37,440.00
Hourly salary of External Educational Consultant	$ 50.00
Weekly Fee for External Educational Consultant	$ 250.00
Annual Salary for External Educational Consultant	$ 13,000.00
Total salary expense per week	$ 1,450.00
Total Yearly Salary Expense	**$ 75,400.00**
Misc. Expenses	
Fees for Services (Accounting) per year	$ 1,500.00
Average Utilities, maintenance cost per week	$ 60.00
Utilities, maintenance cost per year	$ 3,120.00
Total Misc. Expenses	**$ 4,620.00**
Total Annual Operating Cost	$ 80,020.00
Net Income	**Amount**
Annual Profit/Loss	$ -

Exhibit 8

MUSEUM GIFT SHOP FINANCIAL ANALYSIS

Gift Shop Assumptions

1 - Gift shop will be open all hours the Museum is open (6 days a week, 8 hours a day)
2 - The number of visitors to gift shop will be 75% of the museum's attendees (adults and students)
3 - Of the number of visitors that visit the gift shop, 75% will purchase an average gift
4 - Gifts will be sold at a 50% markup
5 - The average gift price will be $15.00
6 - The Museum Gift Shop will be run by the Museum Associate, therefore there will be no salary expenses
7 - Yearly Cost of Goods Sold (COGS) is estimated by the Total Annual Revenue - (1-markup %)
8 - Utilities for the site will cost $5/day

Revenue	**Amount**
Number of Visitors to museum/day	12.5
% of site visitors who visit gift shop	75%
Number of Visitors to gift shop/day	9.38
% of visitors to gift shop/day who buy gift	75%
Number of gift buyers	7.03
Average Gift Shop Purchase	$ 10.00
Gift Price Markup %	50%
Total Daily Revenue	$ 70.31
Total Weekly Revenue	$ 421.88
Total Annual Revenue	**$ 21,937.50**
Operating Cost	**Amount**
Yearly COGS	$ 10,969.00
Daily Operating Cost (utility)	$ 5.00
Weekly Operating Cost	$ 30.00
Annual Operating Cost	$ 1,560.00
Total Annual Cost	**$ 12,529.00**
Net Income	**Amount**
Annual Profit/Loss	**$ 9,408.50**

Exhibit 9

CAFÉ FINANCIAL ANALYSIS

Cafe Assumptions

1 - The number of café visitors is calculated as half the number visiting the museaum/day + 4 from the culinary school + 5 from the Environmental Park + 2 walk-ins
2 - Half the café customers will purchase just coffee/beverage and half will purchase coffee/beverage and a sandwich
3 – The average price for coffee/beverage will be $2.50; the average price for a sandwich will be $7.50
4 – Café will be open during museum operating hours (6 days per week; 8 hours per day)
5 – Cleaning equipment will cost $100.00 per year
6 – Cups will cost $600.00/yr (need 6,000 cups/yr to satisfy calculated coffee demand *$100/1,000 cups)
7 - Coffee Filters will cost $40.00/yr (need 1,000 filters/yr to satisfy coffee demand*$10/250 filter package) 8- A standard diner-style coffee maker will cost $300, amortized over 10 yrs ($30/yr)
9 – A refrigerated display case for sandwiches costs $15,000, amortized over 10 yrs ($1,500/yr)
10 – Coffee COGS will be $1.00/cup
11 – Sandwich COGS will be $4.50/sandwich
12 - Café will employ 1 manager and 2 part-time staff members; the manager and one staff member will be present at all times
13 – Manager will be paid $35,000 annual salary; staff will be paid $7.50/hr

Revenue	Amount
Number of visitors to Café/day	17.25
Number of visitors to Café who buy only a Coffee/Beverage per day	8.625
Number of visitors to Café who buy a Coffee/Beverage and Sandwich per day	8.625
Number of coffee purchases/year	5,382
Number of sandwich purchases/year	2,691
Price of Coffee/Beverage	$ 2.50
Price of Sandwich	$ 7.50
Average Daily Revenue	$ 86.25
Average Weekly Revenue	$ 517.50
Total Annual Revenue	**$ 26,910.00**
Operating Cost	**Amount**
Materials	
Cleaning equipment	$ 100.00
Cups	$ 600.00
Coffee Filters	$ 40.00
Coffee Maker (Amortized over 10 years)	$ 30.00
Refrigerated Display Case (Amortized over 10 years)	$ 1,500.00
Annual Materials Cost	**$ 2,270.00**
COGS	
Coffee (Raw Materials per cup)	$ 1.00
Number of Cups sold/yr	5,382
Annual Coffee COGS	$5,382.00
Sandwich (Raw Materials per Sandwich)	$ 4.50
Number of Sandwiches sold/yr	2,691
Annual Sandwich COGS	$ 12,109.50
Total COGS	**$ 17,491.50**
Salary Expenses	
Manager Annual Salary	$ 35,000.00
Manager Weekly Salary	$ 673.08
Hourly Wage Rate for Staff	$ 7.50
Weekly Staff Expense	$ 360.00
Yearly Staff Expense	$ 18,720.00
Annual Salary Expense	**$ 53,720.00**
Total Annual Operating Cost	**$ 73,481.50**
Net Income	**Amount**
Annual Profit/Loss	**$ (46,571.50)**

Exhibit 10

Theater Assumptions

1 - Theater will have seating for 300
2 - Theater will be used 200 days a year
3 - Theater will be used by nonprofit organizations 75% of the time, for-profit entities 25% of the time
4 - Rental fee for nonprofits will be $1,000/day
5 - Rental fee for others will be $3,000/day
6 - Theater will employ a Stage Manager at an annual salary of $60,000
7 - Theater will employ a General Manager at an annual salary of $40,000
8 - Theater will employ one or more staff members working a total of 40 hours a week at a rate of $8/hr
9 - Theater companies that rent the facility will pay for their own production costs
10 - Ticket takers, ushers, and any other event staff will be volunteers
11 - The Theater will make $10,000/year selling Playbill ad space
12 - Annual Repairs will cost $5,000
13 - Annual Utilities will cost $25,000
14 - Annual Supplies will cost $6,000
15 - Annual expense for insurance and professional services will be $25,000

Revenue	Amount
Rental Revenues	
Nonprofit rentals daily rate	$ 1,000.00
Number of Nonprofit rental days/year	150
Annual Nonprofit rental revenue	$ 150,000.00
Other Entity rentals daily rate	$ 3,000.00
Number of Other Entity rental days/year	50
Annual Other Entity rental revenue	$ 150,000.00
Revenue from Rentals	**$ 300,000.00**
Other Revenues	
Grants, donations, memberships	$ -
Playbill ad revenues	$ 10,000.00
Total Other Revenues	**$ 10,000.00**
Total Revenues	**$ 310,000.00**
Expenses	**Amount**
Upkeep/Maintenance	
Annual Repairs	$5,000.00
Annual Utilities	$25,000.00
Annual Supplies	$6,000.00
Annual Insurance and professional service expenses (ie: accounting)	$25,000.00
Total Annual Upkeep/Maintenance Expenses	**$61,000.00**
Marketing Expenses	
Playbills, marketing, promotions, fundraising	$75,000.00
Total Annual Marketing Expenses	**$75,000.00**
Salary Expenses	
General Manager Annual Salary	$40,000.00
Stage Manager Annual Salary	$60,000.00
Staff Wage Rate	$ 8.00
Weekly Staff Hours	40
Weekly Staff Expense	$ 320.00
Annual Staff Wage Expense	$16,640.00
Annual Wage Expense	**$116,640.00**
Total Annual Operating Cost	**$252,640.00**
Net Income	**Amount**
Annual Theater Projected Profit/Loss	**$ 57,360.00**

Exhibit 11

BUILDING 2 FINANCIAL ANALYSIS

Filtration Building Assumptions

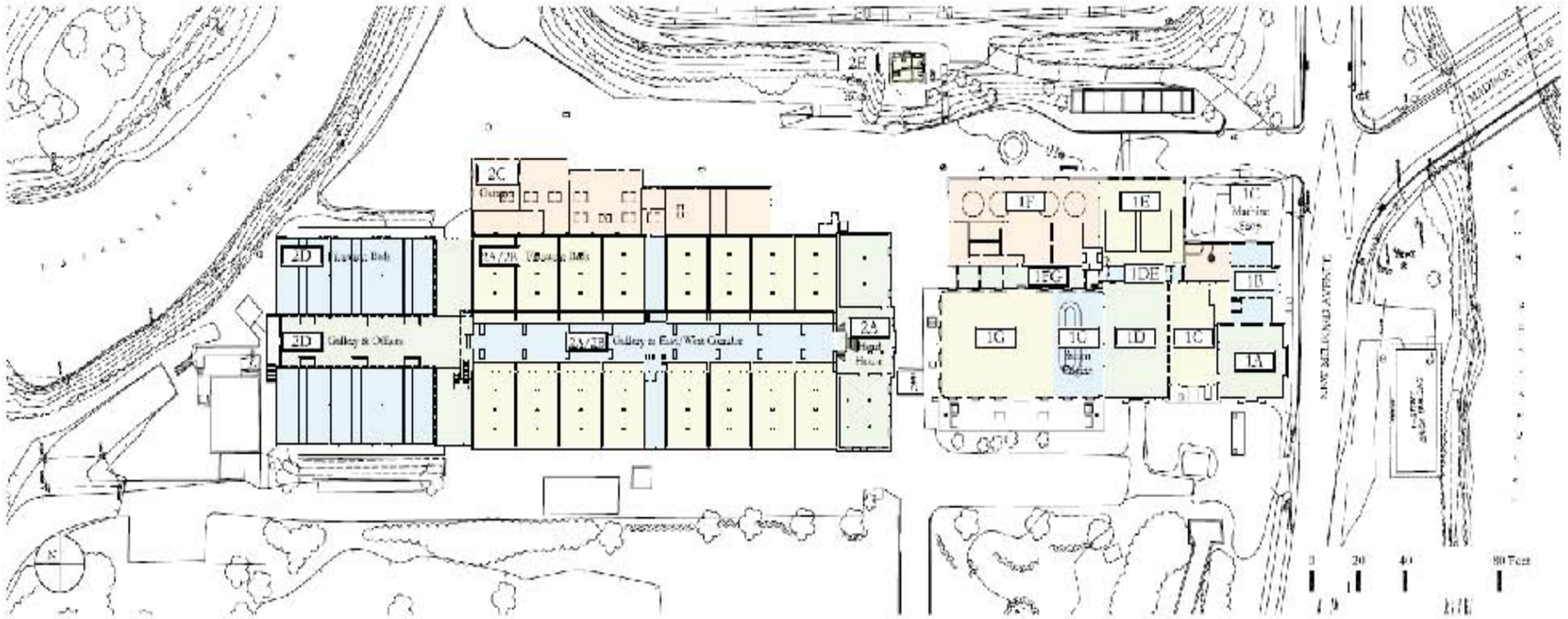
1 - Building 2 will be entirely leased once restoration is completed

2 - Either a Culinary School would lease the entire building, or other tenants would lease the remaining available space

3 - The entire building would be leased at $15/ sq. ft.

4 – Total square footage of the building is accurately depicted by the reuse attributes chart provided by Mark B. Thompson Associates

Revenue	**Amount**
Number of Square Feet	52,500
Lease rate per sq. ft.	$ 15.00
Building Total Lease	$ 787,500.00
Total Annual Revenue	**$ 787,500.00**
Operating Cost	**Amount**
Total Annual Cost	**$ -**
Net Income	**Amount**
Annual Profit/Loss	**$ 787,500.00**



FILTRATION PLANT

PUMPING STATION

BUILDING IDENTIFICATION	2A Head House	2A/2B Gallery & E/W Corridor	2A/2B Filtration Beds	2C Garage	2D Gallery & Offices	2D Filtration Beds	2E Coal House	1A	1B	1C	1C Machine Shop	1D	1DE	1E	1F	1FG	1G Water Purifier	1G
BUILDING FOOTPRINT AREA (SQ FT)	1st fl: 2nd: 3rd fl: 4th: Total:	8,000	28,450	6,150	6,750	8,150	900	1,826	1,200	1,800	500	2,500	400	2,400	4,200	1,600	1,200	4,200
FLOOR LEVEL CAPACITY	4	1	**	**	1	**	*	1-1/2	1-1/2	1	1	2-1/2	2	2	2-1/2	1	2	2
# OF EXISTING FLOOR LEVELS	4	1	*	1	1	*	*	1	1	1	1	1	2	1	1 1 MEZZ	1	1	1
CONDITION	GOOD	GOOD	FAIR TO POOR	FAIR	FAIR	FAIR	GOOD	GOOD	FAIR	GOOD	GOOD	GOOD	POOR	POOR	POOR	POOR	GOOD	GOOD
IN-SITU MACHINERY & EQUIPMENT	LARGE TANKS ON 3rd FLOOR	LARGE PIPE GALLERY BELOW	S. WOOD UNIT / FILTER ELEMENTS	-	LARGE PIPE GALLERY BELOW	S. WOOD UNIT / FILTER ELEMENTS	-	SMALLER SCALE PUMPS	SMALLER SCALE PUMPS	PUMPS	-	TRAVELING CRANE	-	LARGE BOILERS	LARGE TANKS	-	2 TON STEAM ENGINE & TRAVELING CRANE	PUMPS
ORIGINAL DATE OF CONSTRUCTION	1908	1935 / 1-42	1908 / 1-42	1936a	1908	1908	1908	1882	1886	1891	c.1920s	1908	c.1960	1908	1908	c.1950s	1911	1911
# CONSENTS			PRESENCE BELOW, 2ND & FLAT ROOF ABOVE	PRESENCE BELOW, FLAT ROOF ABOVE		PRESENCE BELOW	PRESENCE BELOW											

Charrette 2
Visioning for Sustainable Reuse

REUSE ATTRIBUTES

Image courtesy of Rutgers CUES