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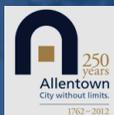


Welcome to the Lehigh Riverfront...
A new center for Heritage, Recreation,
Living & Innovation in the Lehigh Valley



THE LEHIGH RIVERFRONT MASTER PLAN

ALLENTOWN, PENNSYLVANIA



Prepared for:
The City of Allentown



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August 2012

*Welcome to LEHIGH LANDING...
The new south gateway to the Lehigh Riverfront District*



*A view of the new Hamilton Street Riverfront District Gateway
and Wharf Street entry to the Lehigh Riverfront.*

FOREWORD 1



A view of the expanded America on Wheels Transportation Museum and Lehigh Landing family entertainment area.

I. FOREWORD

A MESSAGE FROM THE MAYOR

The Lehigh River front has been the topic of much discussion and speculation over the years, all the while remaining a hidden treasure right in the middle of Allentown. As is the case with similar waterfronts in cities across the country, these areas that were often neglected and primarily used to support industry are now being reclaimed to take advantage of their natural environments and the redevelopment opportunities they represent.

Our Riverfront can be anything we want it to be, from providing recreation and entertainment opportunities, to providing a unique residential experience and even to its continuance as a place for business and commerce. For the past 10 months we have been studying these alternatives and developing a vision for its future redevelopment. Based on these studies and much public input, this vision foresees an area that once again invites people back to the water; an area where people want to live, work and play; and an area that does not ignore its roots or the surrounding neighborhood. It envisions a mile long river trail that connects to other trails being developed in the City. It includes places where you can launch a boat or simply touch the water. It foresees new business uses and housing that coexist to create a unique riverfront community where people can walk to work or do their shopping. And finally, it respects the heritage of the area and the need to develop a cohesive and undivided community by providing additional street, pedestrian and bicycle connections with the First and Sixth Wards and the rest of the City.

I would like to take this opportunity to thank everyone for their help and support and look forward to working with the community in the plan's implementation.



Mayor Pawlowski addresses the Riverfront Task Force.

WELCOME TO THE LEHIGH RIVERFRONT

The City of Allentown would like to welcome you to the Lehigh Riverfront Master Plan.

By its very name, the "Lehigh Riverfront Master Plan," is intended to enhance public areas of the Riverfront and its neighborhood edges along with attracting new businesses to the Riverfront zones. While building on the unique character and heritage of the adjacent neighborhoods and by being creative and flexible, the Master Plan accommodates a broader mix of building uses, to be served by much improved multi-modal transportation and parking systems within a grand network of parks, plazas and natural open spaces for the Allentown community and visitors to the area to enjoy!



The Lehigh River Dam at the Hamilton Street Bridge

Through a common community vision that includes creative design principles, strategies and innovative site development concepts, the Plan will build upon the City's river orientation, architectural heritage,

cultural mix, industrial economy and Eastern Pennsylvania quality of life that Allentown's residents enjoy.

The goal for this study is to help the Lehigh Riverfront reach its optimal potential as a balanced, live-work-tourism destination known for its classic residential atmosphere, niche commercial/entertainment uses, strong urban streets and transit corridors, expanded employment opportunities, surrounding open areas, creative reuse of historic structures, celebrated civic heritage and a magnetic riverfront.

ABOUT THE ASSIGNMENT

The Lehigh River is one of Allentown's most valued natural and recreational resources in the City; however, many years of historical industrial, rail and truck transportation use along the banks have left it largely underutilized, until now. The City began its rediscovery of the Lehigh Riverfront with a site specific master plan for a small portion of the Riverfront above the Hamilton Street Bridge, now affectionately referred to as Lehigh Landing. Since that time, redevelopment and implementation along the river has been primarily focused around two key areas; the America on Wheels Transportation Museum and City Visitor Center, and recreational improvements at the City's Bucky Boyle Park. Until late 2010, redevelopment of other areas of the Riverfront had been primarily encouraged through the City's Comprehensive Plan, traditional zoning incentives, a relatively new Riverfront Redevelopment Overlay District and the Pennsylvania Keystone Opportunity Zone program for key sites.



“The magnitude of the project area (120 acres) will necessitate the efforts and investments of multiple developers in multiple phases and will be guided by a community supported and well thought-out master plan”

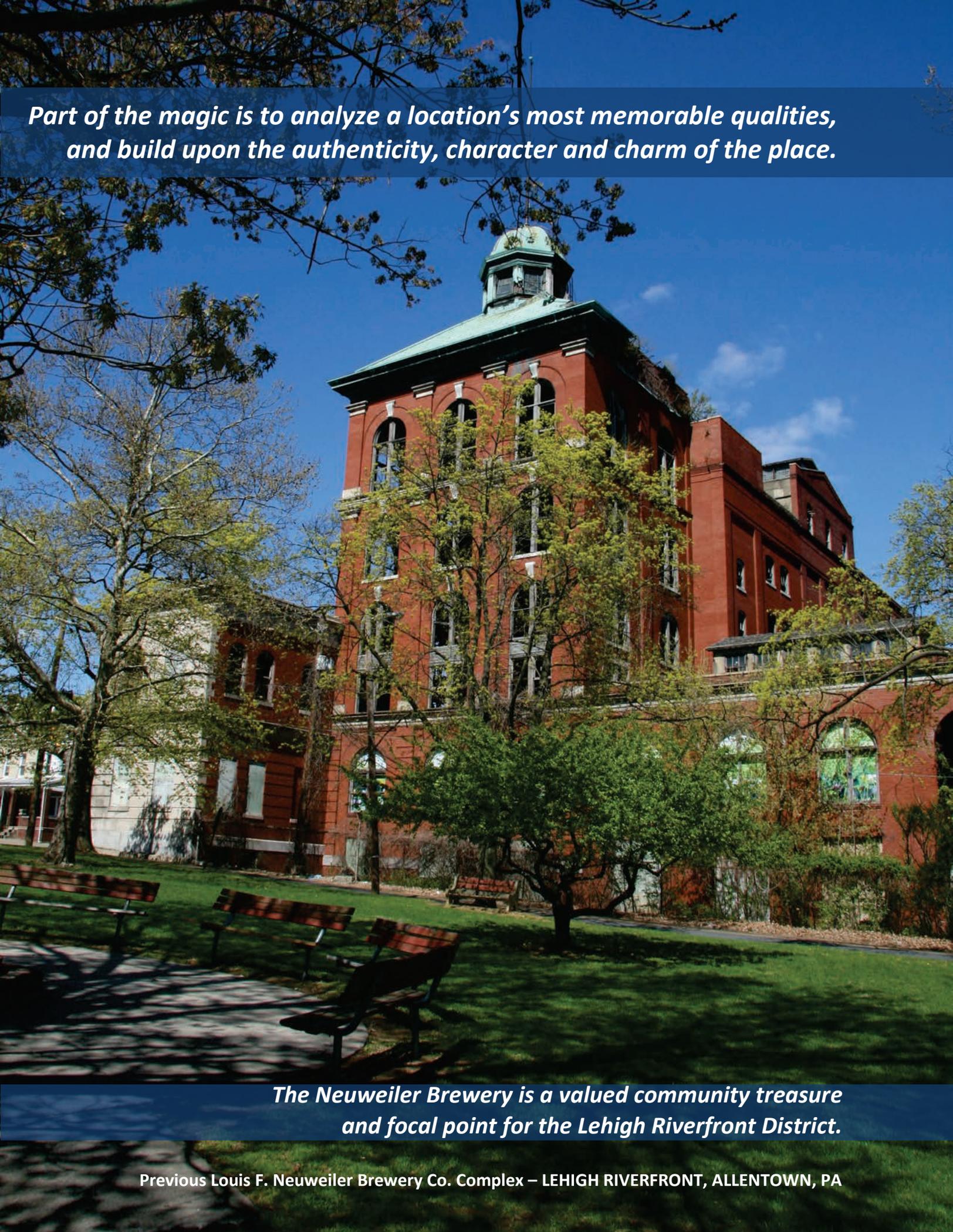
The Lehigh Riverfront Master Plan was made possible through a federally funded grant from the Pennsylvania Department of Transportation, under its Pennsylvania Community Transportation Initiative

Fund. This Master Plan addresses the City’s need for an overall plan to guide a phased development approach for the Lehigh Riverfront needed to complete the full reuse of the District over the next decade. The Plan also serves as an information piece to attract additional developer interest to the many potential development opportunities along the Riverfront.

This Master Plan is built upon the following plan elements requested by the City of Allentown, each of which plays a critical role in defining “What the Lehigh should become in the future.”

- **Public outreach and participation** by the Allentown Community, including neighborhood residents; city, regional and state officials; the development community and other identified stakeholders which resulted in broad community ideas, support and buy-in for the Plan.
- **Marketplace and economic development planning** resulting in a market-based economic development program for the Riverfront District.
- **Overall urban and riverfront design planning** that creates a distinct sense of place within the new Riverfront District area yet is connected to and a complement to the adjoining heritage neighborhoods. The urban design plan will guide future phases of redevelopment and public realm enhancements to ensure that the development is sensitive to the existing 1st and 6th Ward Neighborhoods.
- **Land use planning** that considers and integrates office, entertainment, commercial, recreational and residential mixed-use developments into the Riverfront District with reuse alternatives identified for the former Neuweiler Brewery buildings, Ribbon Works Factory buildings, American Atelier Factory Buildings and the A&B Meats Loading Dock buildings.
- **Zoning considerations** to guide the implementation of the suggested land use/development plans through improved development standards and initial design guidelines that focus on the public realm as well as private parcel development.
- **Park and open space planning** for the existing Bucky Boyle Riverfront Park area and new public spaces integrated within the suggested private redevelopment and complementary to the City’s recent regional park and trail network master plan.
- **Parking design and management** recommendations for the many public and private parking resources that will be needed to serve the existing neighborhood residents and active businesses, as well as phased adaptive reuse and infill development along the Lehigh River.
- **Traffic and transportation planning** that suggest expanding the existing transportation infrastructure through an efficient multi-modal transportation plan of streets, transit ways, walkways and bikeways that supports the optimum potential for redevelopment in the District.
- **Infrastructure and environmental planning** to define the expanded utility systems and eco-system elements that will be needed to serve existing and new development.
- **Brownfield site re-use analysis** that assesses the intended uses for documented Riverfront brownfield sites and advises if there are special circumstances and precautions that would have to be made for development.
- **An implementation strategy** that provides direction for the City and its development agencies in terms of property acquisition; marketing to developers; infrastructure improvements; incentives and marketing/branding identity.

It’s important to note that the resulting Master Plan is a flexible, illustrative vision of what the Riverfront could become, built upon detailed recommendations in each of these topic areas that are supported by a thorough analysis of existing conditions and an equally thorough public participation process that generated tremendous enthusiasm and support for many of the ideas presented herein. We invite you now to come and explore the new vision for the Lehigh Riverfront Master Plan! Thank you.

A large, multi-story red brick building with a prominent green copper dome on top, surrounded by trees and a grassy area with benches.

Part of the magic is to analyze a location's most memorable qualities, and build upon the authenticity, character and charm of the place.

The Neuweiler Brewery is a valued community treasure and focal point for the Lehigh Riverfront District.

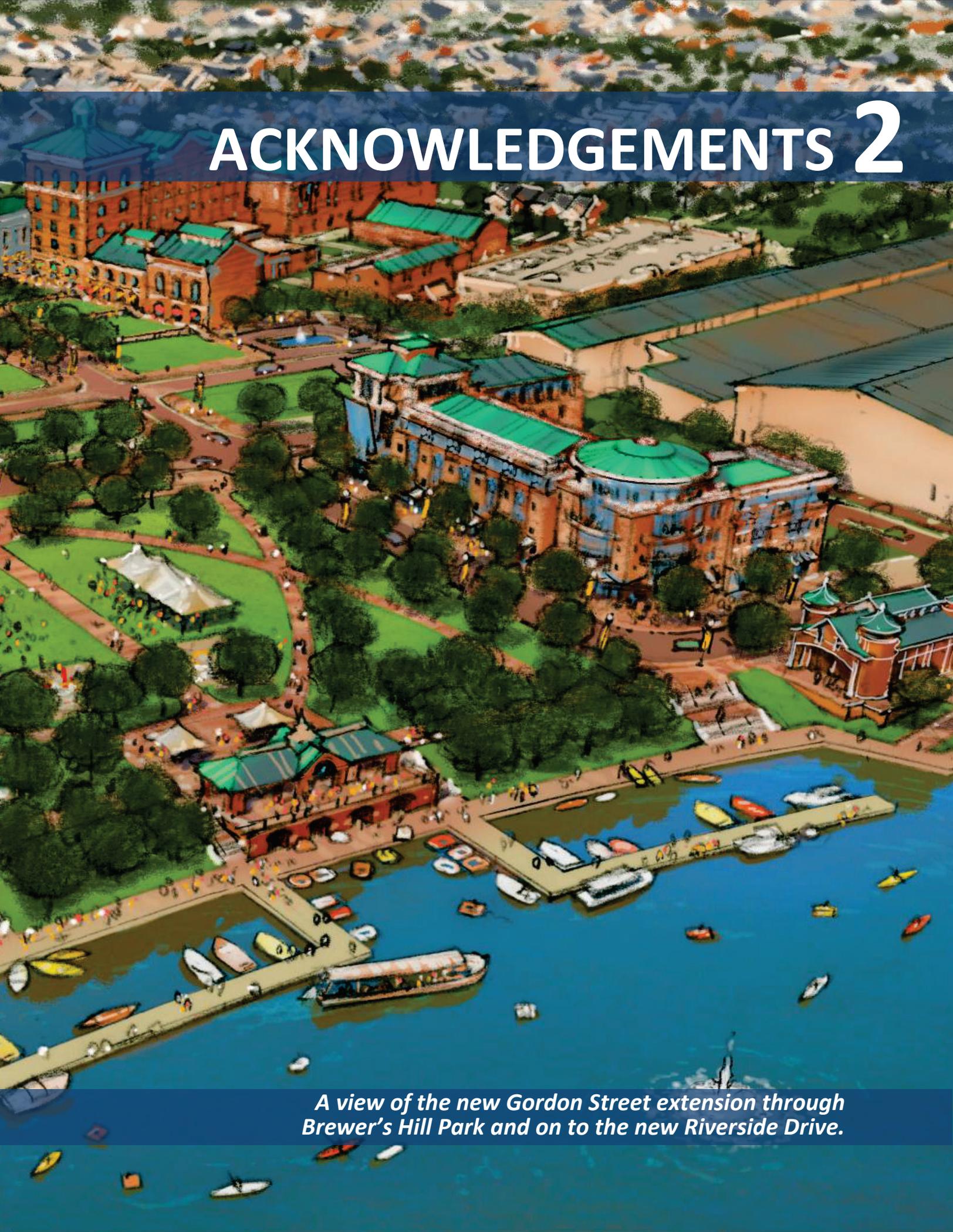
Previous Louis F. Neuweiler Brewery Co. Complex – LEHIGH RIVERFRONT, ALLENTOWN, PA

*Welcome to LEHIGH RIVERFRONT FESTIVAL PARK...
A new common ground for Allentown's citizens and visitors*



*A view of the new Chew Street pedestrian
promenade and Lehigh Riverfront promenade.*

ACKNOWLEDGEMENTS 2



A view of the new Gordon Street extension through Brewer's Hill Park and on to the new Riverside Drive.

II. ACKNOWLEDGEMENTS

On behalf of the Lehigh Riverfront Master Plan consultant team, we would like to thank Mayor Ed Pawlowski and the Lehigh Riverfront Master Plan Task Force for their leadership during the Master Plan process and the opportunity to work with the City in creating a Vision for the Lehigh Riverfront. The Lehigh Riverfront Master Plan is the culmination of several months of dedicated work by the City's Resource Staff and the Lehigh Riverfront Task Force members listed below. The consultant team would also like to thank the many other citizens of Allentown who participated in interviews, responded to comment forms and questionnaires, attended the public forums, and extended their hospitality to our team. We would like to extend special thanks to the residents and business people of the Ward 1 and Ward 6 Neighborhoods who provided substantial input that helped to shape the Lehigh Riverfront Master Plan vision for future generations to enjoy.



Opening Lehigh Riverfront Task Force meeting

MASTER PLAN FUNDING

Special thanks are extended to the Pennsylvania Department of Transportation for providing the grant funding that made this Lehigh Riverfront Master Plan and its future redevelopment, transportation and enhancement initiatives possible for the Allentown community.

ALLENTOWN LEADERSHIP

The Honorable Ed Pawlowski, Mayor, City of Allentown

The Allentown City Council Members

Julio A. Guridy – Council President

Joe Davis

Cynthia Mota

Ray O'Connell – Council Vice President

Jeanette Eichenwald

Mike Schlossberg

Peter G. Schweyer

CITY RESOURCE TEAM

Michael Hefele, AICP, Director of Planning, City of Allentown

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Mark Hartney, Community Planner, City of Allentown

Owen O'Neil, Director of Planning, Lehigh & Northampton Transportation Authority (LANTA)

Jackie Parker, Community Solutions, LLC

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Richard Rasch, Utility Engineer, City of Allentown

Alan Salinger, Chief Planner, City of Allentown

Molly Slevin Wood, Project Manager, Allentown Economic Development Corporation

Scott Unger, Executive Director, Allentown Economic Development Corporation

Greg Weitzel, Director of Parks and Recreation, City of Allentown

Tamara Weller, Executive Director, Allentown Parking Authority

Richard Young, Engineer, Director of Public Works, City of Allentown

LEHIGH RIVERFRONT MASTER PLAN TASK FORCE MEMBERS

The Honorable Ed Pawlowski, Mayor
City of Allentown

The Honorable Peter Schweyer,
Allentown City Council

Mr. Gerald Alfano, Chairman,
Allentown Commercial & Industrial
Development Authority

Mr. Donald Bernhard, Manager
Economic Development and Community Affairs,
Pennsylvania Power and Light (PPL) Electric
Utilities

Mr. Anthony Boyle, Chairman
Boyle Construction Inc.

Ms. Tammy Checo,
Casa Guadalupe Center

Mr. Silas Chamberlin,
The Delaware & Lehigh National Heritage
Corridor

Ms. Holly Edinger, Director
Lehigh Valley Land Recycling Initiative

Mr. Oldrich Foucek III Esq., Chairman
Allentown City Planning Commission

Mr. Todd Gibbs, Chief Executive Officer
ASGCO Manufacturing Inc.

Mr. Armando Greco, Executive Director
Lehigh & Northampton Transportation
Authority

Mr. Larry Hilliard
Allentown Redevelopment Authority



Mr. Anthony Iannelli, President & CEO
Greater Lehigh Valley Chamber Of Commerce

David and Janet Keshl, Members
Frick Boat Club

Mr. Glenn Lichtenwalner, AIA, Chief Architect,
COO & Principal
W2A Design Group

Ms. Linda Merkel, Executive Director
America on Wheels Museum

Mr. Brent Nichols,
Lehigh Valley Youth Academy

Mr. Eric Olson,
Olson Technologies, Inc.

Mr. Michael Rebert, District Executive
Pennsylvania Department of Transportation
Engineering District 5-0

Reverend Jim Rivera, Pastor
City Limits Assembly of God

Mr. John Schneider, President
LSS Realty Corporation, Inc.

Mr. Michael Stershic, President
Discover Lehigh Valley

Mr. Seymour Traub, Esq., President
Allentown Economic Development Corporation

Mr. Andrew Twigg, Principal
Dunn Twigg Company, LLC.

Welcome to RIVERSIDE OVERLOOK...

A new urban center for corporate innovation in the Lehigh Valley



A view of the new Riverside Drive and Allen Street promenade leading to Lehigh Structural Steel Pier... A tribute to Allentown's industrial heritage.

MASTER PLAN SUMMARY 3

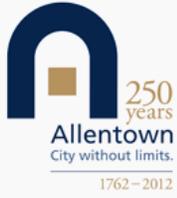


A view of the new Riverfront Mixed-use District overlooking the Lehigh Riverfront Greenway & Trail.



III. MASTER PLAN SUMMARY

A NEW VISION FOR ALLENTOWN & THE LEHIGH RIVERFRONT



New visions and goals for Allentown have played a large part in the City's 250-year growth from a small, creek side village to Pennsylvania's third largest City. During this period, the future aspirations of its many leaders, entrepreneurs and citizens have

helped to guide and shape Allentown into the City that it is today. The City continues to celebrate its on-going growth, reported in the 2010 census, while paving the way for continued advancement through designation of two new, companion downtown districts; the "Arena District" and the "Lehigh Riverfront District".



Allentown at the height of industrial growth



The new Allentown Arena District in the CBD

The Arena District and Riverfront District initiatives mark a new and exciting chapter in the history and evolution of Allentown. The new arena is well underway, with many spin-off developments and benefits planned or underway for the Central Business District. The Lehigh Riverfront District has been undergoing a parallel, stakeholder planning process that now culminates with this Master Plan document. The plan is intended to be a visionary guide for optimizing the future potential of the Lehigh, while respecting existing residents, businesses and the environment.

Just imagine a new and exciting place in the City of Allentown and the Lehigh Valley where...

- *You can join over 30,000 regional visitors a year already drawn to the area's attractions and destinations;*
- *Your new, innovative business is encouraged to locate through substantial State and local tax incentive programs; including sites located within the Keystone Opportunity Zone (KOZ) and the newly created Neighborhood Improvement Zone (NIZ);*
- *Your fellow residents and employees are able to walk freely to over a mile of publicly controlled riverfront offering new passive and active recreation amenities;*
- *You can walk, run and bike on over five-miles of designated riverside and rail trails, where vehicles, pedestrians and cyclists can coexist;*
- *You can live, work or recreate in a rehabilitated brewery, ribbon factory, furniture factory or meat factory that celebrates the industrial roots of the area;*
- *You can easily access shared parking resources where you park once, leave your car for the day and explore the entire area within a five to ten minute walk of your car;*
- *Your business patrons, employees and/or residents can participate in a shared public/private parking program, passing on less cost to you through a reduction in your required parking to build or lease;*
- *You have a choice in multi-modal transportation options with a state-of-the-art transit system serving the area with five designated routes and passenger amenities at all transit stops;*

- *You can navigate and recreate on over three miles of Lehigh River water with your personal watercraft;*
- *You can partner with the City of Allentown to redevelop key public land holdings at high profile locations;*
- *You can better serve your growing business through improved roadway access via the new American Parkway Bridge and railway access via the RJ Corman Railway;*
- *You have ample utilities and infrastructure to facilitate new development;*
- *You can enjoy a setting that offers something for everyone; and,*
- *You can chose to live or work in an eco-friendly riverfront village showcasing low impact development practices, LEED certified or green building systems and home to new green and clean industries for Allentown.*

*This is the vision for the new Lehigh Riverfront... **A new center for Heritage, Recreation, Living, and Innovation in Allentown and the Greater Lehigh Valley.***

BY AND FOR THE ALLENTOWN COMMUNITY

Building upon Allentown’s history of great visions originating from its people, the Lehigh Riverfront vision and supporting Master Plan were developed through an open public planning process designed to encourage transparency and idea sharing amongst Riverfront and community stakeholders throughout Allentown and the Greater Lehigh Valley. Stakeholder involvement consisted of three community forums and a charrette session, three Lehigh Riverfront Task Force work sessions, a number of individual stakeholder interviews, and numerous meetings and webinars with the City’s Resource Team. One of the most important outcomes of the Lehigh Riverfront Master Plan was the public planning process itself making the Lehigh Riverfront plan by and for the people of Allentown. These sessions are further detailed in Section 1.4 of the Master Plan.



You are the change agents in the Allentown community

WORKING WITH A MARKET-BASED DEVELOPMENT PROGRAM

A key directive from the City, the Lehigh Riverfront Task Force and the public stakeholders during the Master Plan process was for the Lehigh Riverfront Vision and Master Plan to be built upon a market-based development program that could be predicted with some certainty over the next decade. Since the Arena District and the Riverfront District were both initiated at roughly the same time, it became clear that identified market sector growth for the Downtown could be directed toward either the Arena District or Riverfront District, and would be difficult to differentiate given their relatively close proximity. The key will be attracting appropriate development downtown that could either benefit from or be a benefit to sustaining and reinforcing the business activity in the Central



The market area for the Riverfront included the Downtown core

Business District, while directing an equal or larger number of appropriate uses to the Riverfront District which can benefit from and be a benefit to the Lehigh River experience!

Incentive Programs Context for the Riverfront

The City of Allentown has been laying the groundwork for the revitalization of the Riverfront by creating two financial incentive programs that can be used to attract both developers and new business and industry.

The Neighborhood Improvement Zone (NIZ) program was established by Act 50 of 2009 and Act 26 of 2011. State and local taxes collected by businesses within the boundaries of the Allentown NIZ are used to repay bonds issued by the Allentown Economic Development Corporation to fund various economic development projects within the zone. The NIZ can be used to offset the initial development costs of a project, thereby allowing the developers to offer lower, more marketable rental rates. This program positions the Riverfront to successfully compete within the regional marketplace.

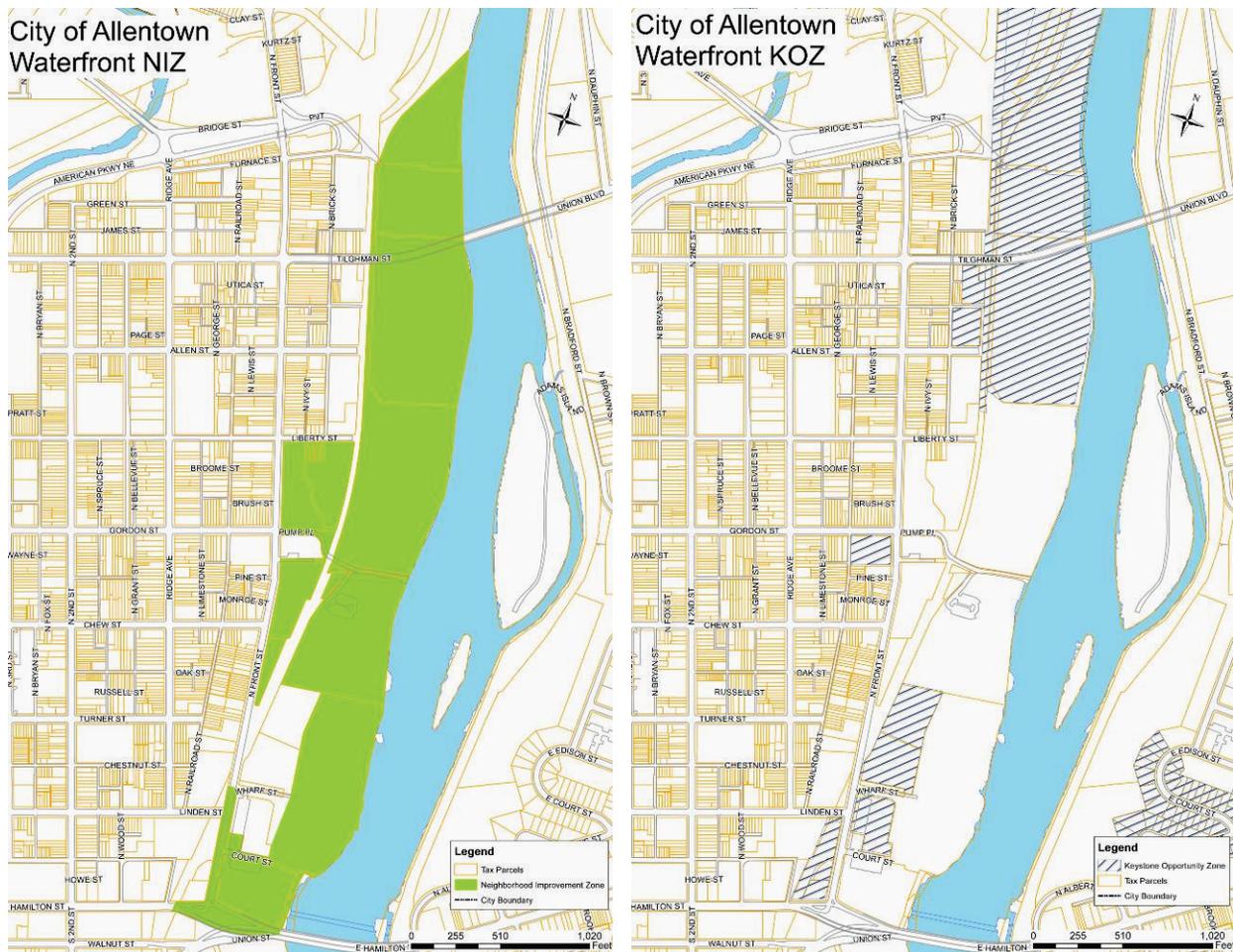


Exhibit 1-1: The Lehigh Riverfront portion of the neighborhood Improvement Zone in green (left) and the Riverfront Keystone Opportunity Sites in blue hatch (right)

The **Keystone Opportunity Zones (KOZs)** were established in the City of Allentown during the Governor Ridge administration. Businesses that locate within a KOZ enjoy the waiver, abatement or exemption of certain state and local taxes. For the Commonwealth of Pennsylvania these would include the corporate net income tax, capital stock and foreign franchise tax, personal income tax, sales and use tax on

purchased consumed by businesses in the zone, mutual thrift institution tax, bank and trust company shares tax and insurance premiums tax. For the City of Allentown, these taxes would include earned income/net profits tax, business gross receipts, business occupancy, business privileged and mercantile tax, sales and use tax on purchases consumed and used by a business in the zone, property taxes including the school district. This program has been used for years to attract new business and industry to the City of Allentown. The abatement of taxes allows companies to recoup their initial start up costs over time. It also provides an incentive to attract employees and residents to the zone.

These two financial incentive programs will help in attracting and implementing mixed-use development along the Riverfront that builds upon, but is not limited to, the initial economic development program projected for the Riverfront on the pages that follow.

Potential Retail/ Restaurant/ Entertainment Program - Considering regional consumer

capture rate, Allentown Arena and Events Center visitor spending, general visitor spending and downtown employee spending, it is estimated that the City of Allentown can currently support 62,701 square feet in new retail space, 105,216 square feet in new restaurant space, and 14,000 square feet in new entertainment space between the downtown core and the Lehigh Riverfront. This development; however, must be constructed in a phased approach. Adding approximately 20,000 square feet of combined retail, restaurant, and entertainment space at a time would allow this space to be absorbed into the market before continuing to the next phase.



Riverside Market House – Wilmington, DE



Waterside inn – Charleston, SC

Potential Hotel Program - The Lehigh Valley offers a total of 5,716 hotel rooms with 21% of the market share located within three miles of the Riverfront. Many of the closer in hotels were constructed prior to 2005, with some recent renovations or mergers. In 2010, the average occupancy rate of the hotels in the Lehigh Valley was 56.2%, which was slightly lower than the statewide average. Approximately \$134,622,000 of regional spending occurs on lodging with a historical average occupancy of 56.2% and an average daily rate of \$85.00 per room. It is assumed that the

new hotel product would be more attractive in the market and therefore would maintain a higher occupancy and daily rate than the competition. A 70% occupancy rate and \$125.00 daily rate were assumed for determining the potential for additional hotel rooms in the Allentown Arena and Riverfront Districts. Current market conditions indicate that a new downtown hotel(s) could capture 5% of the lodging expenditures which translates to +225 new hotel rooms in proximity to the Riverfront or the new downtown arena site at 7th and Hamilton Streets. The estimated 225 additional rooms are a conservative estimate based on the current visitor spending.



Riverside downtown hotel – Savannah, GA



Waterside apartment lofts – Frederick, MD

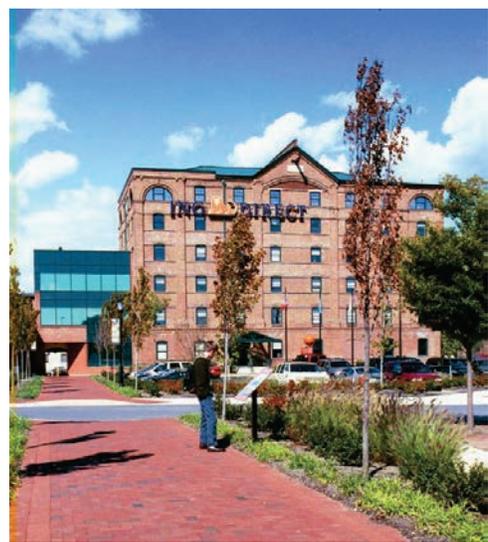
Potential Housing Program - An assessment of the potential for new housing included a review of Allentown's neighborhoods, new rental products that have been recently introduced to the market, the commuter patterns for the City's employees, and an analysis of young residents living within 50 miles of the Riverfront. Based on this assessment, it was determined that the Riverfront should offer new and unique riverside housing products anchored by interesting commercial development, which includes unique retail and restaurants, as well as a health and wellness center.

Within the past decade, three new luxury apartment buildings were added to the Allentown housing market in close proximity to the Riverfront with units ranging from \$900.00 per month to \$1,150.00 per month. These properties currently have a waiting list with the primary demographic of the residents being young professionals. Although the market analysis identified young professionals as a target market for new housing in the Riverfront, this type of living will also appeal to empty nesters and those wishing to sell their home in exchange for the carefree lifestyle an apartment or condominium can provide. Once the Riverfront's housing is established by young professionals, other demographic age groups will then be drawn to the site. Current market conditions indicate that a conservative **estimate of 500 new rental housing units** could be added to the Riverfront in a strategically phased approach, where 60 to 80 units are incrementally added with commercial and retail development. As these units are absorbed into the market, additional residential should be considered.



Waterside residential/mixed-use – Seattle, WA

Potential Office/ Industrial Development Program - The Finance/Insurance, Professional/Scientific/ Technical, and Transportation/Warehousing are the strongest industry sectors for the City of Allentown. Continued job growth in these sectors during the recent economic downturn, coupled with their higher location quotients, suggests that both the Finance/Insurance and the Professional/Scientific/Technical sectors should play a key role in the Riverfront's revitalization and redevelopment. Current market conditions indicate the Finance/Insurance sector would add an additional 3,300 jobs requiring 1,101,897 square feet of Class A office space over the next 10-year period. The Professional/Scientific/Technical sector would add 931 jobs requiring 310,023 square feet in office/lab/flex space during the next 10-year period. Introducing Class A office space with the proposed retail, restaurants, and entertainment will add additional consumers to the market place; those employed within these buildings may also prefer to live within the housing units proposed for the Riverfront.



Riverside office development – Wilmington, DE

The Transportation/Warehousing sector could also add an additional 5,047 jobs supporting over 15 million square feet of industrial/flex space expansion over the next 10-years period. This use is not recommended within the Riverfront but should be certainly considered for more appropriate sites on the periphery of the City of Allentown near major transportation corridors.



Riverside office-flex development-Wilmington, DE

PROJECTED PROGRAM VS. MASTER PLAN DEVELOPMENT CAPACITY

The resulting market-based economic development program summary for the Downtown Allentown area is listed in the table to the right. The Lehigh Riverfront Master Plan, illustrated on the following page, represents over 1.8 million square feet of redevelopment capacity in the Riverfront District through a combination of both adaptive reuse of noted heritage structures and new building development. Of this total, roughly 1.57 million square

Use	Estimated Market Demand
Retail	62,701 sq. ft.
Restaurant	105,216 sq. ft.
Entertainment	14,000 sq. ft.
Residential Units	500 market rate rental units
Hotel	225 rooms
Office	1,411,920 sq. ft. (over next decade)
Industrial/Flex	15,000,000 sq. ft. (over next decade)

feet of redevelopment is suggested for specific non-residential uses and approximately 270,000 square feet is initially identified for medium to higher-density residential use. If either the PPL Site or the Iron Mountain Storage site were to be eventually redeveloped at some point in the future, as suggested in the optional development plans, the Riverfront District’s development capacity could easily exceed 2.0 million square feet of mixed retail, restaurant, commercial, office, residential and employment uses.

At first glance, these figures indicate that the Riverfront District could absorb the majority of the market-based development program identified for Downtown Allentown within the 4-5 story development scale and pattern envisioned for the Riverfront. However, it is not the intent for the Riverfront District to compete with, or draw away, uses that could flourish in the Allentown Central Business District. First and foremost, new uses that are appropriate for the downtown must be directed to the Arena District which is underway in the Central Business District. Given that the both the Arena District and the Riverfront District share the Neighborhood Improvement Zone (NIZ) designation, any development that occurs in either district is mutually beneficial to the overall Neighborhood Improvement Zone and the Allentown Community. The Riverfront offers opportunities for both large and small scale redevelopment that may otherwise be difficult or costly to assemble and develop in the Downtown core. It also offers opportunities for uses which need rail access, regional roadway access or an address on a dramatic amenity like the Lehigh River and Dam.



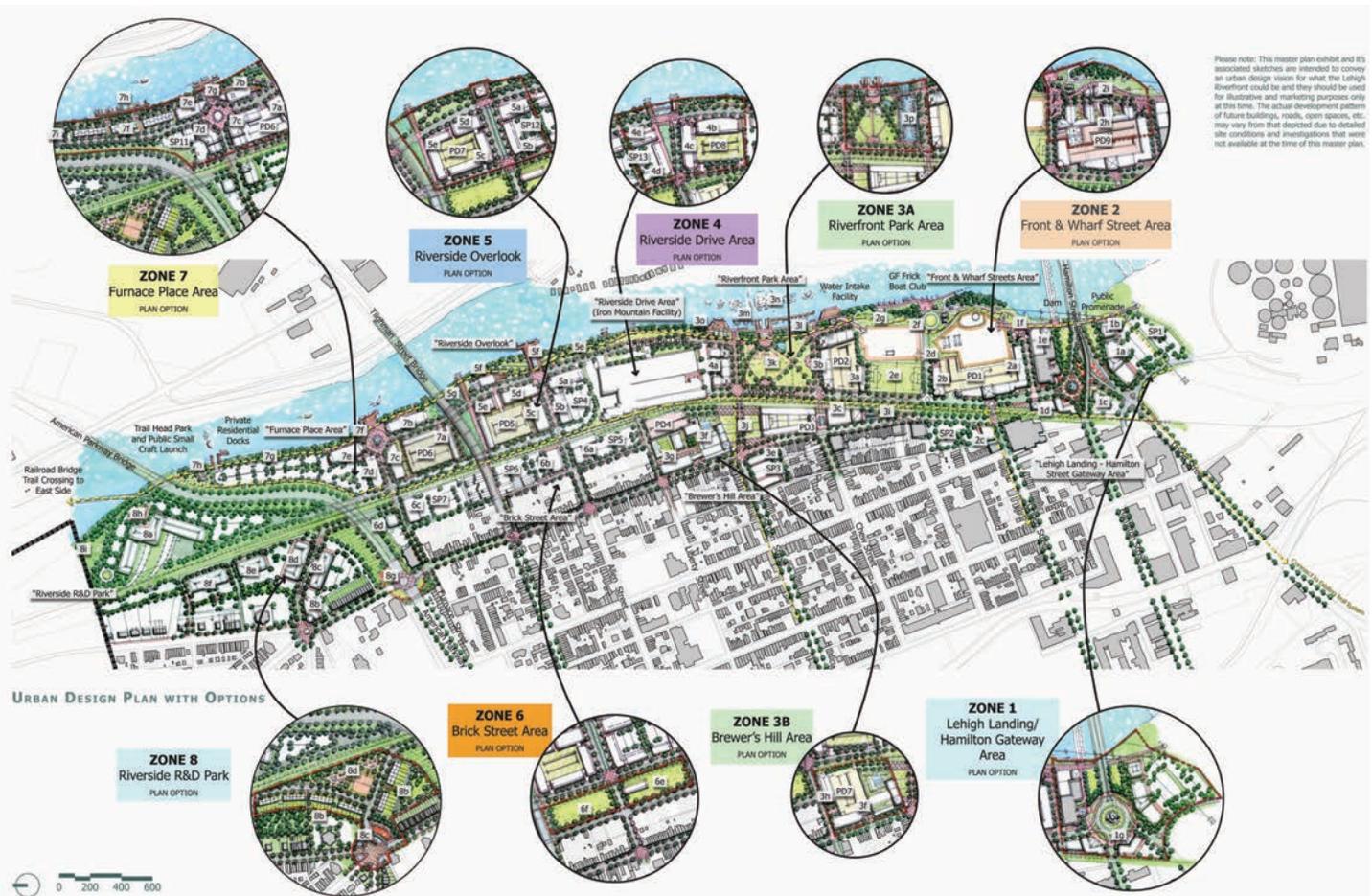
Planned arena and office development in the Central Business District at 7th and Hamilton Streets.



THE BASE MASTER PLAN AND OPTIONS

A common theme and directive from stakeholders during the Master Plan process was “to make the Lehigh Riverfront Master Plan diverse in use, character and offerings, so that it will address and serve the needs of as many user groups as possible”. The 120-acre area was perceived by stakeholders to be too large and too varied for any one solution to occupy the entire area. In response, the resulting Riverfront District Plan is envisioned to be a compilation of eight smaller zones that each contribute to the overall Riverfront experience in their own unique way.

The focus of the Lehigh Riverfront Master Plan is to create a critical mass of activity in each of these recommended Thematic Riverfront Zones to make them sustainable for the long-term. To be economically sustainable, master plans must be flexible enough to adapt to market conditions and development trends that will likely occur over the next ten years as the District Plan is implemented. The Lehigh Riverfront Plan was prepared with this flexibility in mind throughout the planning process. The final Master Plan is comprised of a Base Master Plan (centered plan below) joining each of the eight Riverfront zones into one cohesive plan, supported by a series of eight development plan options (circled plans), one for each zone. The options were prepared to document either another mix of uses, another physical layout, or a second phased development approach that were also viable within the Base Master Plan framework that had received majority consensus.



The Lehigh Riverfront Master Plan with options in the eight Riverfront theme zones (Larger map provided at back of summary)

Zone 1 refers to the “Lehigh Landing - Hamilton Street Gateway” area that includes the properties immediately surrounding the north and south sides of the Hamilton St. corridor at the Riverfront.

The north side, Lehigh Landing, is envisioned to be a mixed-use expansion on the America on Wheels Museum attraction offering retail, restaurant and family-entertainment uses that frame a new and exciting gateway for the Riverfront District to the north. The south side is envisioned for a riverfront office/research and development use that would serve as the signature gateway for the future Union Street Employment Corridor to the south. The area is programmed for over 140,000 square feet of non-residential development comprised of 60,000 square feet of Office/Technology/R&D Space, 35,000 sq. ft. in an America on Wheels Museum expansion for Exhibit Space, Children’s Museum and Riverside Retail/Commercial, 30,000 sq. ft. of mixed-use retail and 16,500 sq. ft. of restaurant/commercial space. An alternative development plan for this area suggests that a larger two-lane roundabout be



Current Lehigh Landing/ Hamilton St. area



ZONE 1: “Lehigh Landing/Hamilton Gateway” Vision & Base Plan program

constructed to replace the current ramps and intersections at Hamilton and Front Street, and Hamilton at Union Street. This would create a grander entry to the Riverfront, while also allowing full traffic and pedestrian flow from Union Street to the new Wharf Street.

Zone 2 is referred to as the “Front Street & New Wharf Street” area that focuses on the lands between the America on Wheels Museum and the Bucky Boyle Park baseball fields to the north. This area is envisioned to be a vibrant mixed-use retail, restaurant and entertainment corridor with mixed-use office space or residential apartments above, surrounding a “south-side” public/private parking structure for the walking/biking district. The area is programmed for over 150,000 square feet of retail, entertainment and commercial



Front St. corridor and RJ Corman Railway



ZONE 2: “Wharf Street & Front Street” Vision and Base Plan program elements

space to be focused along the new Wharf Street and Linden Street frontage and served by the parking structure and a reconfigured surface parking lot. An optional plan for this area suggests that, with future relocation of the PPL Generators and consolidation of the switching station, a

substantial commercial-residential mixed use development could be constructed overlooking the picturesque Lehigh River Dam and Delaware & Lehigh Canal and Locks beyond. A summary of the key elements envisioned for Lehigh Landing, Hamilton Street Gateway, and the new Front/Wharf Street areas illustrated in the sketch below.



Zone 1: "Lehigh Landing Gateway" and Zone 2: "New Wharf Street/Front Street" Master Plan elements

Zone 3 encompasses both the "Brewer's Hill and Riverfront Park" areas which include the Neuweiler Brewery, Ribbon Works Factory and American Atelier Furniture Factory areas and the Bucky Boyle Riverside Park area respectively. Brewer's Hill will be unique in that it is envisioned to be a mix of small retailers, restaurants, arts related businesses, offices and residential apartments incorporated within the existing industrial buildings identified to be saved and rehabilitated. The American Atelier building is seen as a mix of commercial and clean industry/technology uses in an effort to keep clean, light industry and manufacturing uses within the Riverfront. The area is recommended for over 350,000 square feet of non-residential development and adaptive re-use of historic structures with another 108,000 square feet of residential development translating to approximately 108-132 dwelling units. An optional development plan was also explored for the



The historic Neuweiler Brewery Co. complex



ZONE 3: "Riverfront Park & Brewer's Hill" Vision & Base Plan program elements

Neuweiler Brewery complex that suggests removing 2-3 smaller buildings from the site to facilitate a modern expansion and use of the primary brewery buildings with a larger centralized parking structure to serve the Neuweiler Brewery redevelopment, as well as the surrounding Ribbon

Works and American Atelier development sites. The Site Specific Reuse Study for the Former Neuweiler Brewery Site, by Cornerstone Consulting Engineers and Architectural, Inc., is available for review at the City’s Bureau of Planning and Zoning offices.

Zone 4 is referred to as the **“New Riverside Drive”** area which is limited to the current Iron Mountain Storage Site between Bucky Boyle Park and the old Lehigh Structural Steel site to the north. It’s titled such in that the area’s primary role in the shorter-term Master Plan is to provide opportunities for both new street connectivity, “Riverside Drive”, and greenway trail connectivity along the Riverfront.

As redevelopment activity in the District grows, this area is envisioned to eventually become a waterside and park side destination with ground floor retail and restaurant uses supported by corporate offices and some residential on the upper levels overlooking the river. The area is initially recommended for over 80,000 square feet of retail, commercial and office development while the primary Iron Mountain Storage Facility remains in place. The optional plan shows the potential for over 155,000 sq. ft. of additional commercial/office space and 108,000 sq. ft. of residential space estimated at 108- 126 new riverside residential dwellings if the Iron Mountain Storage facility were to eventually relocate to a non-riverfront site. A summary of the key elements envisioned for the Riverfront Park, Brewers’ Hill and Riverside Drive areas are illustrated in the sketch below.



Current Iron Mountain Storage at Pump Place



ZONE 4: “Riverside Drive” Area Vision and Base Plan program elements



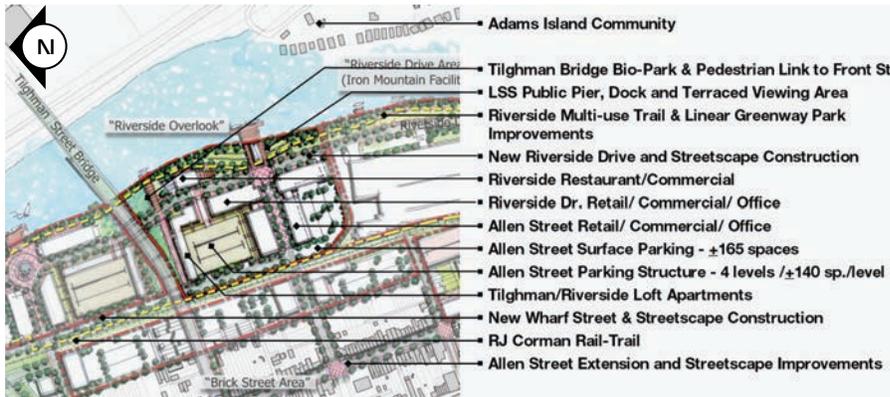
ZONE 3: “Riverfront Park & Brewer’s Hill” and Zone 4: “Riverside Drive” Master Plan elements

Zone 5 has been titled the **“Riverside Overlook”**

area, referring to the site’s great views up and down the Lehigh River. It encompasses the southern portion of the Lehigh Structural Steel site between the Iron Mountain Storage facilities and the Tilghman Street Bridge and is envisioned to be a prime site for riverside restaurant and retail uses with corporate offices on the upper levels overlooking the river and some residential offerings looking north to the Tilghman Street Bridge. The area is programmed for over 285,000 square feet of mixed-use retail, restaurant, commercial and corporate office development, and an additional 80,000 square feet of residential space translating to 80 to 94 new dwelling units overlooking the river and the Tilghman Bridge. It would be served by a 600 car parking structure and 100 space surface parking lot. An optional development plan for the Riverside Overlook suggests that the site could also be developed “in-the-round” with a similar building program which addresses the Downtown neighborhoods to the west and the Riverfront to the east. A summary of the key elements envisioned for the Riverside Overlook and Furnace Place areas are illustrated in the sketch below.



Previous Lehigh Structural Steel south site



ZONE 5: “Riverside Overlook” Vision and Base Plan program elements

also be developed “in-the-round” with a similar building program which addresses the Downtown neighborhoods to the west and the Riverfront to the east. A summary of the key elements envisioned for the Riverside Overlook and Furnace Place areas are illustrated in the sketch below.



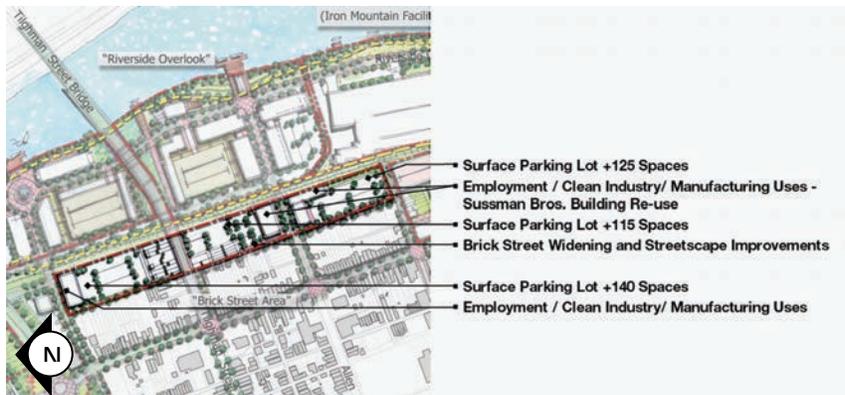
Zone 5: “Riverside Overlook” and Zone 7: “Furnace Place” Master Plan elements

Zone 6 refers to the “Brick Street Live-Work Enclave”

which is confined to the Brick Street corridor between Liberty and Furnace Streets and, like the American Atelier Building, it is envisioned to be a mix of smaller, clean, light industrial, technology and manufacturing uses providing employment opportunities for the surrounding residents. The existing rowhome residential blocks would remain and be encouraged to enhance their appearance through façade grants. The area is programmed for over 80,000 square feet of clean industry employment/light manufacturing uses served by three surface parking areas providing over 380 parking spaces. The optional concept for this area shows the potential for over 2.2 acres of open space and a possible 30,000 square foot community building re-use of the Sussman Building rather than the employment uses suggested in the Base Master Plan. The



Brick Street corridor at the Tilghman Bridge



ZONE 6: “Brick Street Corridor” Vision and Base Plan program elements

The optional concept for this area shows the potential for over 2.2 acres of open space and a possible 30,000 square foot community building re-use of the Sussman Building rather than the employment uses suggested in the Base Master Plan. The Sussman Building could also be considered for a portion of the ground floor being devoted to a local railway heritage museum whereby visiting and historic trains could be displayed on rail sidings within the public park. This would aid in celebrating the industrial and rail heritage of the Lehigh Riverfront.

Zone 7 is titled “Furnace Place”, referring to its location

at the terminus of Furnace Street and includes the northern portion of the Lehigh Structural Steel site between the Tilghman Street Bridge and the proposed American Parkway Bridge. The area is programmed for over 280,000 square feet of retail, restaurant, commercial and corporate office space



Previous Lehigh Structural Steel north site



ZONE 7: “Furnace Place” Vision and Base Plan program elements

and 80,000 square feet of premium upper level residential space accommodating 80-94 riverside apartments, lofts or condominiums. It would be served by a 650 space parking structure to the south and 380 space surface parking lot

to the north. The optional concept for this area suggests that the new Riverside Drive should be extended north to the planned trailhead park at the base of the American Parkway Bridge. This approach results in less mixed-use development space, 220,000 square feet, and fewer multi-family residential dwellings, 52-60 units; however, it offers the opportunity to develop 22-44 riverside townhomes to help animate the north end of the Riverfront.

Zone 8: The “Riverside R&D Park” area includes all

the vacant and underutilized industrial sites north of the proposed American Parkway Bridge. This area is envisioned to continue as a working riverfront, as it offers the greatest opportunity for maintaining a substantial portion of the Riverfront for skilled employment and jobs for Allentown residents. The eastern portion of the R&D Park is serviceable by the RJ Corman Railway and both sides of the park would be serviced by the new American Parkway and Bridge Street access planned for completion in 2013. The area is programmed to accommodate over 195,000 square feet of clean, light industrial, technology and manufacturing uses with a small element of retail at the corner of Front and Bridge Streets. It would be served by over 535 surface parking spaces provided on-site. Should the west side of the zone be slower to develop for employment, an optional development plan for the Bridge Street corridor suggests that a small townhome community could be developed as an



Previous industrial site & old railway bridge

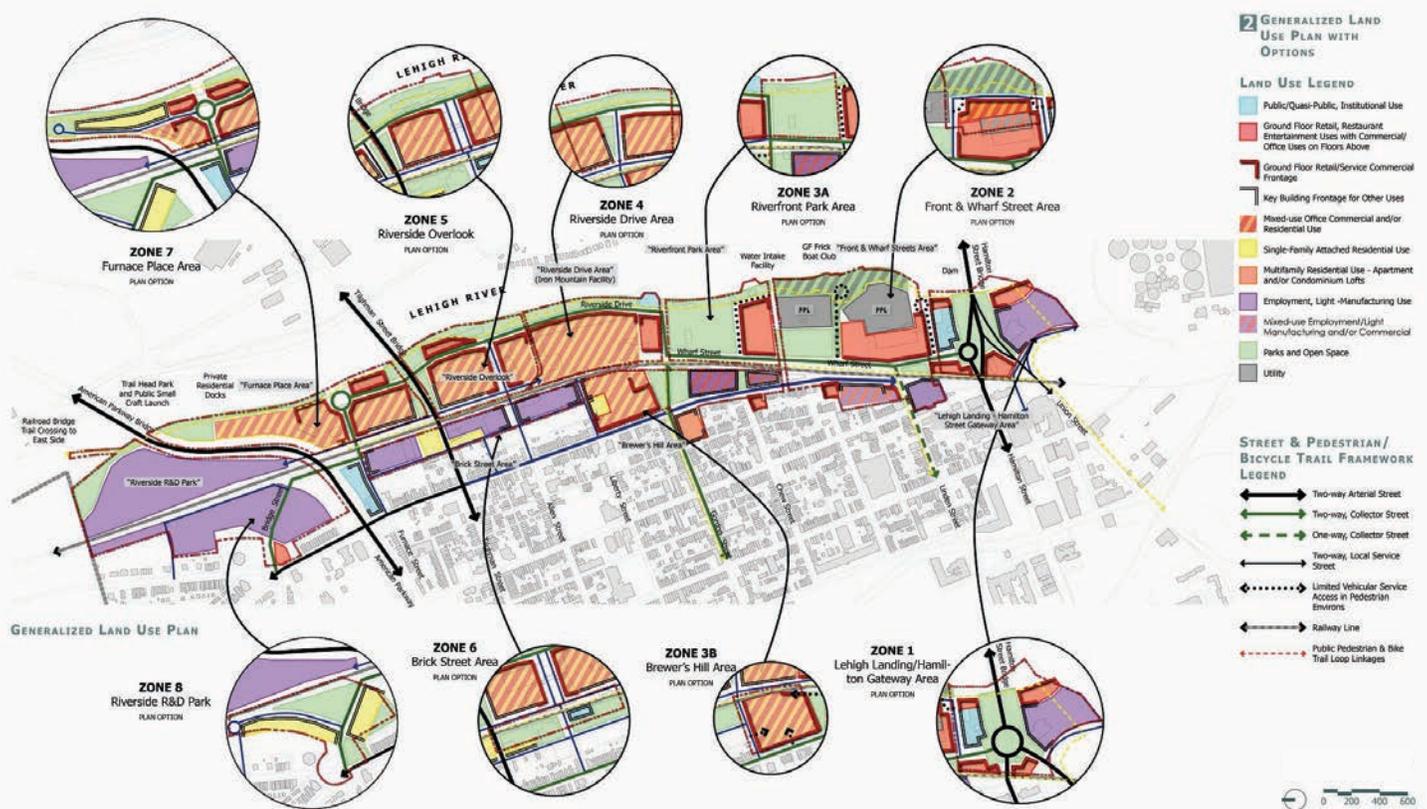


ZONE 8: “Riverside R&D Park” Vision and Base Plan Program Elements

extension of the 6th Ward Neighborhood on the Bridge Street hillside. The residential enclave would be developed around a new, north side community park overlooking the R&D park and the Lehigh River beyond.

GENERALIZED LAND USE/DEVELOPMENT STANDARDS PLAN

Based on the results of previous tasks and a review of the current zoning ordinance for properties within the Master Plan area, the best way to effectively and efficiently achieve the vision illustrated in the Master Plan would be to create a new zoning district to cover all properties in the Master Plan area. Using only one zoning district will improve predictability and uniformity of development within the area, and allow for a more developer-friendly atmosphere. One district will also be much easier for City staff to become familiar with and enforce consistently. This district, called the Riverfront Redevelopment Traditional Neighborhood Development District for the purposes of this study, would ideally be presented as a form-based code with a strong focus on regulating land uses as well as development form and character. It is recommended that the new District be written and adopted as a Traditional Neighborhood Development District to allow the City an opportunity to enforce more specific development standards and design guidelines if necessary.



Recommended Generalized Land Use and Development Standards Framework Plan for Consideration (See larger map provided at the end of this summary)

The aforementioned new zoning district would draw primary elements from the current RRO district and incorporate a bit heavier focus on permitted land uses than is typical in a form based style code. The code will utilize the Riverfront Land Use Plan as the “regulating plan” for the district and will be largely organized by the street framework already highlighted in the Land Use Plan. Each street type will be the foundation of a unique and appropriate character that will be realized through a description of the land uses, building forms, and public/private space requirements associated with each street cross section.

TRAIL INITIATIVES

The Lehigh Riverfront Master Plan achieves regional connections, broader city-wide trail connections and creates a neighborhood/riverfront specific set of trail loop routes. The proposed trail alignments allow for the Lehigh Riverfront to act as the hub for multiple regional connections in all directions, consistent with the trail network advocated in both the City’s Parks and Recreation Master Plan and Comprehensive Trails Connectivity Master Plan. The Lehigh Riverfront Master Plan’s overall trails approach includes:

1. Creating a loop trail network within the Riverfront planning area (Lehigh River West Side) and providing maximum connectivity to adjacent neighborhoods. The loop trail would be comprised of a riverside trail/promenade along the Lehigh River from below Hamilton Street to the abandoned railway bridge and a rail-trail along RJ Corman’s easternmost rail bed from Union Street to the proposed American Parkway. The rail trail would follow the base of American parkway to join with the Riverside Trail a small trailhead with limited parking for visitors to the Riverfront area. Each side of the loop trail would be tied back to the neighborhoods and employment areas through planned

bike/pedestrian improvements along Hamilton Street, Union Street, Front Street, Ridge Avenue, Tilghman Street and Gordon Street.



Planned Trails & Walkway Linkages Map for the Lehigh Riverfront District and 1st and 6th Ward Neighborhoods

2. Linking the East and West sides of the Lehigh Riverfront with a loop trail connecting the both sides of the river, both north and south, as well as to the regional Delaware and Lehigh Canal Tow Path Trail. This would be accomplished with the proposed multi-use trail initiatives recommended for the Tilghman Street Bridge, the Hamilton Street Bridge and the abandoned railway bridge in the City of Allentown's Comprehensive Trails Plan.
3. Providing key connections to city and regional trails and greenways making the Riverfront a hub of regional trails.
4. Expanding water-based access points along the Riverfront to serve a broad range of river craft. Although there is a boathouse for the Lehigh University Rowing Team within the study area, there is no formal water trail access points located on the west side of the river. The Riverfront Master Plan provides several public river access points, to serve varying purposes and needs. In the Riverfront Park Area, a public marina would be created to provide docking facilities for boats launched into the river at other locations. The Lehigh University Boathouse and dock would be relocated to an area slightly north of its existing facility, providing a private/public boating activity in this core area within the Riverfront. The Riverside Overlook is primarily a commercial oriented area for a signature restaurant to be located on the river and a small amount public docking could be created to support the commercial activity. A third public landing is proposed as part of the signature riverfront node in the Furnace Place Area, which could allow for limited public boat docking. Much of this area would be focused on private boating activities more than likely serving the adjacent residential development. A small craft launch is proposed at the trailhead located on the southern side of the American Parkway as it crosses the river.



Kayaking along working riverfront – Chicago, IL

PARKS, RECREATION AND PUBLIC SPACES INITIATIVES

The Riverfront Master Plan is consistent with the City’s Vision for Parks and Recreation as defined in its 2006 Parks and Recreation Master Plan, which emphasizes a neighborhood, based system of parks and recreation opportunities, with the ability for each neighborhood to easily connect to the entire parks system. The Vision focuses on the role parks play in the City’s vitality by providing attractive and safe environments for people to live, work, do business and play; all critical aspects of attracting private economic development investment in the City as a whole and specifically within the Riverfront area. The Lehigh Riverfront Master Plan’s overall parks approach includes:

1. Promoting the creation of a continuous linear greenway of parks, trail and public spaces along as much of Lehigh River frontage as possible.
2. Creating nodal parks and recreational opportunities that focus on integrating adjacent economic development with the river through appropriately scaled spaces to support activities and events that spur further economic development.
3. Developing parks and public spaces that create a variation of experiences along the Riverfront and promote individual identities of the sub-development areas, i.e. Lehigh Landing, Riverside Overlook, Brewer’s Hill, etc.
4. Limiting the amount of large fixed-use facilities such as use-specific playfields and instead establish multi-purpose open lawns for active and passive recreation utilization; further creating a setting for events and diverse economic development activities.
5. Utilizing iconic park spaces for “place making” to support long-term economic development activities, including integrating public and green spaces into infrastructure including traffic calming devices, streetscaping and land-banking for future uses.
6. Providing pocket and smaller-scaled parks and public spaces into the design of infill development, especially residential and mixed-use.
7. Integrating natural processes and green technologies into the design of parks and public spaces to achieve improved urban stormwater management and passive treatment of run-off to enhance water quality and habitat conditions within the in Lehigh River and its watershed.

PARKING INITIATIVES

While it is important to balance the need to accommodate all parking on-site within the Lehigh Riverfront Master Plan, it is equally important to preserve valuable land for the greatest use (typically not parking). As such, reductions in the parking requirements, when appropriate, will yield greater density, more revenue, and a higher tax basis for the City. Conversely, overbuilding the parking facilities will result in partially vacant parking facilities, wasted land and resources, and little if any additional tax basis for the City. The Lehigh Riverfront Master Plan’s overall parking management approach includes:

1. Recommended changes to the current zoning and code requirements for parking in the Riverfront Redevelopment District, including: Lowering multi-family dwelling parking ratios, reducing commercial parking requirements, creating better defined parking requirements for dining uses, increasing shared parking resource distances and increasing the maximum shared parking reduction to encourage a healthier mix of land uses.
2. Recommended changes to the current parking geometrics and dimensions, including: recommended removal of Permitted Compact Spaces due to misparked vehicles, removal of

Surface Lot Landscape Requirements and Surface Lot Tree Requirements due to an overlapping 10% green space requirement.

3. Recommended Parking Facility Design Guidelines for the Riverfront district.



Planned Riverfront District consolidated parking resources location map

4. Recommendations for cost effective parking management strategies:
 - a. Use of future development sites for overflow parking in the interim and land banking strategic parcels for future public or public/private parking structure locations.
 - b. Consolidation of parking resources/assets to promote pedestrian activity. We recommend a four-node approach with anchor parking facilities located on the north and south end of the corridor and two other central parking facilities equidistant from the anchors. We strongly recommend encouraging developers to consider the consolidation as it not only benefits the entire Riverfront Development but will also result in lower overall infrastructure costs.
5. Recommended shared parking strategies to allow multiple users generated from different land uses, to share the same parking space in the same day or week, thus reducing excessive parking construction and underutilization. It is now possible to reach or exceed a 30 percent reduction in parking by selecting a well-balanced mix of land uses.
6. Recommended payment in lieu of parking (PILOP) initiatives as a way of allowing new development to be built without the need to provide all or some of the required parking on-site. A PILOP program allows a developer or other entity to pay into a parking or municipal fund in lieu of some or all of the parking for their proposed land use. The benefits of the program include a reduction in over building, encouraging shared parking, saving valuable land for other uses, and creating a fund from which to build parking in the future.
7. Recommendations for treating parking as a catalyst for revitalization and creating people places through: 1] enhanced lighting, safety and security, 2] providing clear wayfinding and signage, 3] car sharing and bicycle sharing programs, 4] establishing quality walking linkages, and 5] considering comfortable walking distances from parking facilities.
8. Order of Magnitude Cost Estimates for each of the parking facilities shown on the Lehigh Riverfront Master Plan and optional development plans.

TRANSPORTATION INITIATIVES

Redevelopment of the Lehigh Riverfront can only be facilitated if key transportation, transit and infrastructure systems are implemented to meet the increased traffic and service needs that will come with the shift from lower density industrial uses to moderate density mixed-use suggested in the Master

plan. The land uses and development patterns recommended for the Riverfront District will require the incremental construction of gateway intersection and street improvements to serve development as it is phased into the Riverfront District.

Riverfront Gateways

The major vehicular gateways to and from the area will remain at Tilghman Street and Hamilton Street with a third gateway from the north yet to be constructed with the American Parkway Bridge. At the southern entry into the Lehigh Riverfront area there are two new transportation alternatives for the configuration of Hamilton and Front Streets in the Master Plan that would improve access to the Riverfront District from the South. Under the first Base Master Plan a mini-roundabout would replace the jug handle configuration that exists today but Union Street would still intersect with Hamilton at the Bridge with no access to Front Street. The second, optional development plan recommends a larger, two-lane roundabout that would replace the Union, Hamilton, Front Street intersection, and requiring the demolition of the existing overpass ramps that merge Union and Hamilton Street traffic onto the bridge. Further detailed analysis for this type of roundabout is recommended as an early phase implementation initiative as it enhances the accessibility from the south both for vehicles and pedestrians and creates a great new civic scaled entrance into the Lehigh Riverfront.

Northern access to the Riverfront will be from both Tilghman Street and American Parkway onto Front Street where a number of extended east-west cross streets will provide access to the river depending on the final destination. To accommodate the increased traffic on Front Street, the Tilghman and Front intersection would need some signal system and lane designation changes, but no additional lanes. As designed the new American Parkway and Front Street intersection would operate at an acceptable level of service; however, a northbound receiving lane would be required on Front Street between American Parkway and Bridge Street to accommodate the increased traffic flow to the Riverfront. This approach would create two northbound lanes on Front between American Parkway and the farthest northern entrance into the Riverfront. This can be



The Tilghman Bridge is a key crossing for all travel modes



Hamilton and Wharf Streets gateway entry/ intersection improvements Option 1: Smaller, three-leg roundabout



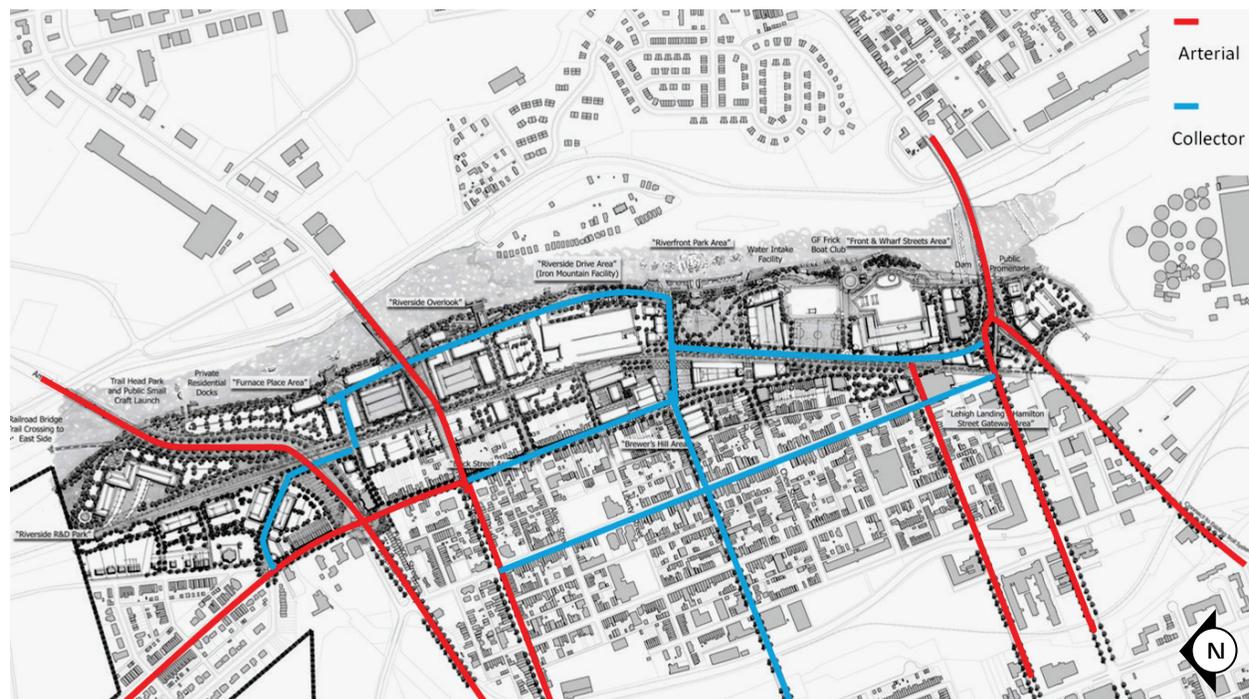
Hamilton and Wharf Streets entry improvements Option 2: Larger, four-leg roundabout with full service

accommodated within the existing Right- of-Way where there is currently 32 feet between the east and west curbs that can accommodate three 10-foot lanes, allowing the sidewalks on either side to essentially remain as they are today. All other minor signalized access points into the Riverfront will also operate at an acceptable level of service with only minor adjustment in signal timing being required to accommodate new traffic from the Riverfront.

The offset intersection of Pump Place, Front Street and Gordon Street is an important mid-way access into the Lehigh Riverfront do to its central location. Pump Place is so close to the Neuweiler Brewery wall that there is no opportunity for a sidewalk on its north side and exiting traffic is blind to pedestrians using Front Street's eastern sidewalk. Planned riverfront development will generate a significant increase in both pedestrian and vehicular traffic, requiring the recommended redesign and realignment of Gordon Street and Pump Place intersection to improve pedestrian traffic and sight lines for motorists exiting onto Front Street.

Street Extensions, Realignment and New Streets

In Allentown all streets are classified as either **arterial streets** that provide for regional travel from one area of the city to another, **collector streets** that collect traffic from **local streets** and distribute it to the arterials. Today Tilghman, Hamilton, Union, Linden Streets and Front Street north of Tilghman Street are all classified as arterials. American Parkway, when it is built, will also be an arterial street. Front Street and Gordon Street are currently classified as collectors and the remaining streets in the Riverfront are all local streets.



Proposed Riverfront District Street Hierarchy and Classifications Map

With planned Riverfront redevelopment only a few street classifications would have to be adjusted such as Front Street south of Gordon would become a local street and within the new development Wharf Street, Riverside Drive, Bridge Street and Pump Place would be collector streets and all remaining streets would be local streets. The new street classifications are illustrated in the Master Plan above

with local streets illustrated on the background map only. The Master Plan's detailed transportation and traffic improvement recommendations also include:

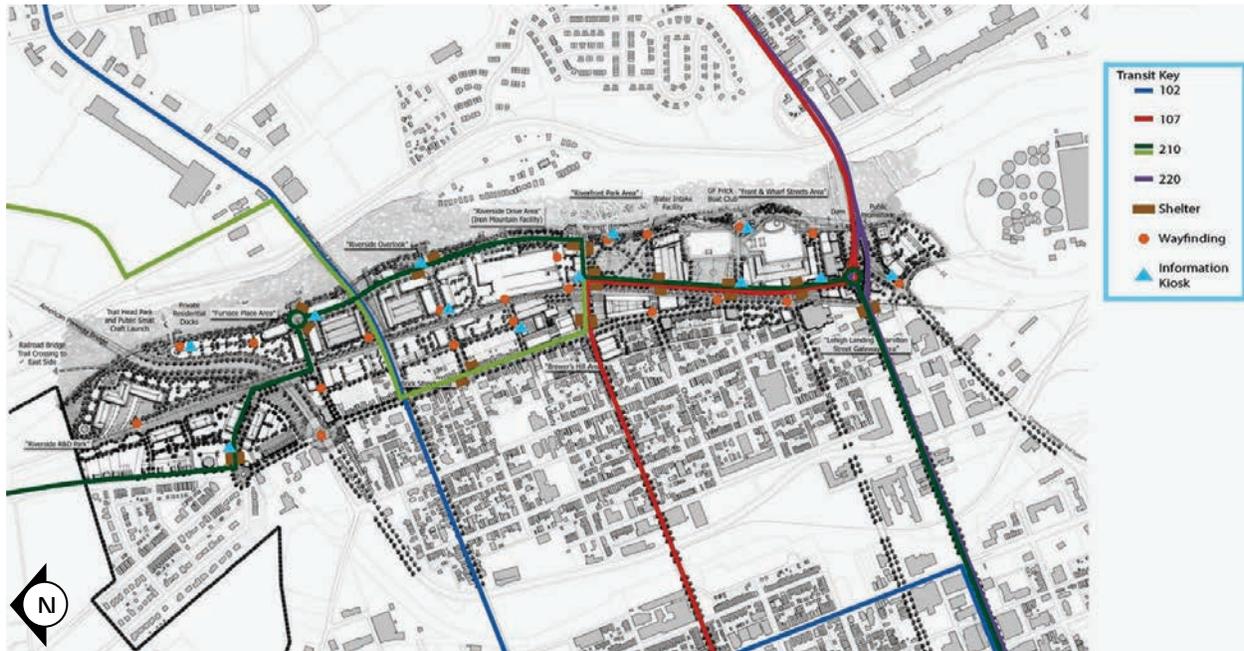
- The Hamilton Street and Front Street intersection would receive both functional and aesthetic improvements to make it a more legible, safe and visually pleasing gateway to the Riverfront District. Initial recommendations include a small roundabout to accommodate movements from Hamilton Street and the new two-way Wharf Street discussed below.
- The realignment of the southern portion of Front Street to the west of the RJ Corman railway with a new terminus intersection at Linden Street. This is envisioned as a two-way, two-lane street with parallel parking on one side between Chew Street and Linden Street.
- A new Wharf Street is recommended to parallel the east side of the RJ Corman Railway between Hamilton Street and Furnace Street. This is envisioned to be a two-way, two-lane street with parallel parking between Gordon Street and Hamilton Street and a two-way, two-lane street with no on-street parking between Gordon Street and Furnace Street.
- Gordon Street/Pump Place would be reconfigured as a two-way street with parallel parking on one side between Front Street and the Lehigh River.
- A new entry drive and drop-off to Lehigh Landing on the north side of the America on Wheels Museum. It is envisioned to be a two-way, two-lane lane or alleyway with no on-street parking
- A new entry drive to the Frick Boat Club is recommended to be a two-way, two-lane lane or alleyway with no on-street parking.
- A new entry drive/pedestrian promenade to the City Water Intake Facility is recommended to be a two-way, two-lane lane or alleyway with parallel parking on the development side.
- A future Liberty Street extension to the new Wharf Street and Riverside Drive is recommended to be a two-way, two-lane street with parallel parking on both sides to serve future redevelopment of the Iron Mountain Storage Company site.
- Allen Street is recommended for extension across the RJ Corman Railway to the new Wharf Street and the new Riverside Drive. It is envisioned to be a two-way, two-lane boulevard with parallel parking on both sides.
- Furnace Street is also recommended for extension to the new Wharf Street and the new Riverside Drive where it would terminate in a roundabout or an equal configuration.
- Various intersection improvements are recommended along Front Street at the American Parkway, the new Bridge Street access, Tilghman Street, and Gordon Street.
- The new Bridge Street access drive from the new American Parkway Bridge/Front Street to Furnace Street is recommended to be a two-way, two-lane street with parallel parking along both sides.

The RJ Corman Railroad operates an industrial siding that serves some remaining industries within the Riverfront area and extends several miles to the north of the site. This study has assumed that the railroad will continue to operate for the foreseeable future. The Lehigh Riverfront plan does not change the overall number of crossings, but all crossings would become public street crossings with appropriate grade crossing protection. The existing skew crossing on Front Street would be eliminated thus significantly improving overall safety.

TRANSIT INITIATIVES

Good public transit is one of the important elements necessary to creating a thriving and lively mixed use neighborhood with vibrant sidewalks and outdoor spaces, where reliance on the automobile is

diminished and alternative transportation is used for many local and some regional trips. In an effort to provide better access to transit service in the Lehigh Riverfront area, two of the existing bus routes, #107 and #210, are recommended for realignment to pass through and serve the new Riverfront District utilizing Wharf Street, Pump Place and Riverside Drive. Making these relatively minor alignment changes will not significantly impact LANTA's overall operation but will provide significantly improved access to transit stops along the Riverfront.



Recommended Transit Service Routes and Amenities Map

Transit ridership can also be improved in the Ward 1 and Ward 6 Neighborhoods with the Riverfront District if the needs and comfort of the passenger are considered from trip end to trip end. Every transit rider is a pedestrian before and after boarding the vehicle, so the enhanced public realm initiatives in the Master Plan are critical to attracting additional transit riders. The public realm includes:

- The waiting environment where shelters with seating should be provided at all transit stops within the Riverfront district and nearby neighborhoods.
- Each bus stop must also be prominently signed and display complete route and timetable information as well as a route map that shows potential transfer opportunities.
- Electronic signs, informing passengers in real time when the next bus will arrive, have proven to be very popular with the public and should be given serious consideration in future transit implementation

ENVIRONMENTAL, UTILITY AND INFRASTRUCTURE INITIATIVES

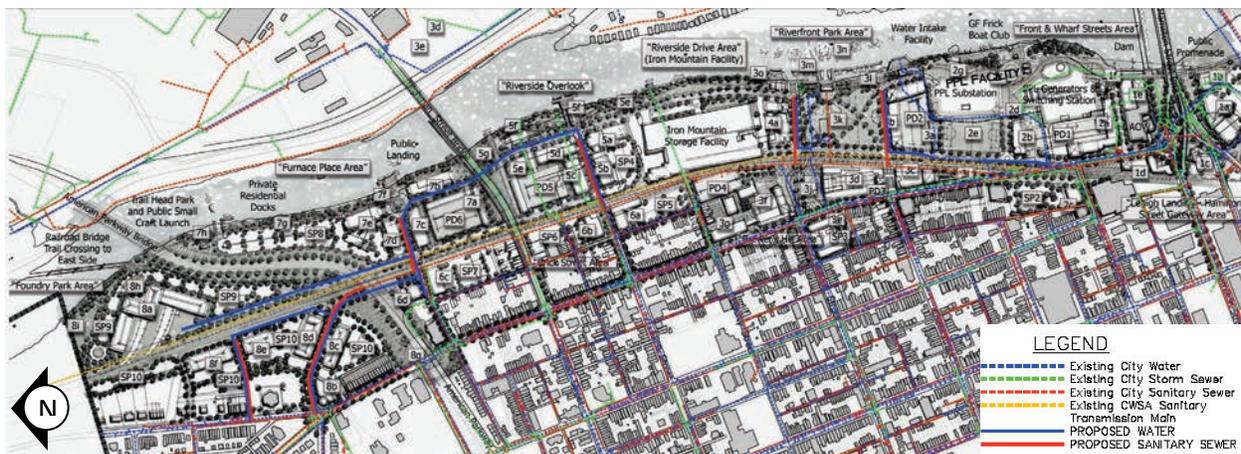
Throughout the Master Plan process it became clear that the environmental, stormwater and marine systems of the Lehigh Riverfront needed to be carefully managed as assets. The Riverfront area possesses many unique environmental, utility and infrastructure elements that should be treated as assets and leveraged for Riverfront redevelopment through the following recommendations.

The City has a water intake facility located in the Lehigh River, south of the Bucky Boyle Park Pavilion, which supplies potable water through an existing thirty-six inch main that must be avoided with any potential redevelopment of the Bucky Boyle Park ball fields, due to cost and possible interruption of water supply. This should not be an issue, given the large areas of redevelopment potential on the Riverfront. The two existing wells located beneath the former Neuweiler Brewery may be a potential supplemental source of potable water, with offsite treatment, to enhance the City’s water supply.



Lehigh River City Water Intake Facility

The existing eight-inch main in North Front Street will serve as the backbone to the water utility needs in the Riverfront area with new eight inch loop lines recommended to be constructed from this trunk with appropriately sized laterals for the proposed redevelopment. The few existing waterlines in the Riverfront area are recommended to be increased in size to eight-inch lines. Water pressure in the new system should be optimal given the riverfronts relatively low location compared with the rest of the city’s water system. The Riverfront has historically been an industrial area that had a high water demand, which only helps position the District for increased usage with mixed-use redevelopment.



Conceptual Utility Plan for Base Master Plan

Fortunately, the Riverfront area also has adequate sanitary sewer capacity to serve the recommended Master Plan redevelopment needs. As the existing Coplay Whitehall Sewer Authority interceptor line along the RJ Corman Railway cannot be utilized to service the Riverfront area due to service area limitations, generally speaking, Riverfront area sewage flows should be directed toward the existing trunk system located in North Front Street to minimize disturbance to current users and disruption to traffic flow. Properties located closest to the Lehigh River should have back fed sewer laterals, located to the rear of properties, as a more cost effective solution to down slope sewage flow to the nearby City Wastewater Treatment Plant.

The Pennsylvania Power and Light facilities are cost prohibitive to relocate; however, PPL has agreed to research and consider future relocation of portions of the Riverfront facilities as upgrades become necessary. Current and future Public Utility Commission and Department of Environmental Protection regulations will also have to be negotiated to facilitate relocation of any PPL facilities. In the meantime, the Master Plan approach to the PPL area is to employ screening and buffering with buildings and recreation fields along Wharf Street and vegetative landscaping along the riverside trail.

A significant cost savings can be realized for new utility Installation in the Riverfront District by minimizing underground utilities, minimizing rail crossings, by placing utilities in adjacent trenches, and by providing for future growth with sufficient rights-of-way and forward thinking when sizing utility lines. A number of detailed methods are also offered in the Master Plan for reducing utility installation costs with planned redevelopments.

The current method of concentrating stormwater within the Riverfront area will need to be discontinued and new dispersal stormwater techniques will need to be installed with redevelopment. Stormwater retention and infiltration are not appropriate techniques in the Riverfront due to the historic land use and proximity to the River. Instead, low maintenance, vegetative swales and biofilters to naturally filter stormwater and provide improved habitat for aquatic and land animals that lead to a diverse and connected ecosystem where all thrive.

Permitting is also a significant cost associated with possible long lead times. It is recognized that Sewer planning modules, DBRC approval, PennDOT HOPs and Rail approvals will most likely be the critical path items and therefore should include pre-application meetings, sketch designs, multidisciplinary teams, and regular follow up with the appropriate agencies. The existing water intake should be protected to minimize potential impacts from a more intensive use of the site and river.

Given the Lehigh River's current moderate quality ranking on the Department of Environmental Protection classification system, only a general NPDES permit, rather than individual, will be required for riverfront redevelopment. A general permit can be obtained for an entire project site and modified as different phases of the development get implemented.

For any development in the Riverfront District, a Pennsylvania Natural Diversity Inventory search will need to be conducted to identify any possible sensitive plant and animal species impacts. Due to the heavy industrial use of the Riverfront lands, extensive mitigation efforts are not anticipated to facilitate redevelopment.

Given the Riverfront's location in Allentown and Lehigh County, an Erosion and Sedimentation Pollution Control Permit will need to be obtained from the County Conservation District.

Per DEP Chapter 93 the Lehigh River, from the dam upstream, is classified as both a Trout Stocking Fishery (TSF) and a route for Migratory Fishes (MF) requiring passage, maintenance and monitored propagation of stocked trout, anadromous and catadromous fishes and other fishes which move to or from flowing waters to complete their life cycle in other waters. Riverfront redevelopment activities and protection measures will need to be timed and approved individually by



Perimeter walking tour of PPL facilities



Riverfront aquatic species survey – Chicago, IL



Streambank vegetation at the Lehigh River Dam



Lehigh River fish ladder system at the Dam

the (Lehigh County Conservation District (LCCD) and Department of Environmental Protection (DEP).

Any changes to the Lehigh Riverbank edge and marine systems in the Master Plan will require a joint permit approval from both the Army Corp of Engineers (ACOE) and the Department of Environmental Protection; This permit will also encompass wetlands impacts, Pennsylvania Historic Museum Commission (PHMC) and the Pennsylvania Fish and Boat Commission (PFBC). Regulation of the waterway use falls under the PFBC thus they should be included in detailed redevelopment discussions along with the GF Frick Boat Club and Lehigh University Sculling team representatives.



Kimmet's Lock river access on the east bank

A Federal Emergency Management Agency (FEMA) approval will be necessary for any changes to the existing floodplain and floodway or alterations to the existing Lehigh River Dam. Previous dredging activities on this section of the River have been very short-term fixes, due to the silt deposition caused by the current dam design. The potential solution is to replace the dam with a new, bottom discharge dam which would involve a major initial capital investment with long-term benefits of minimizing siltation and harmful dredging.



Lower dock area at the Lehigh Boathouse

A FEMA Letter of map revision will also be required for portions of the Riverfront redevelopment or public realm enhancement that may be located within the Floodway Zone AE and Floodplain Zone D. This typically requires an 8 to 12 month lead time.

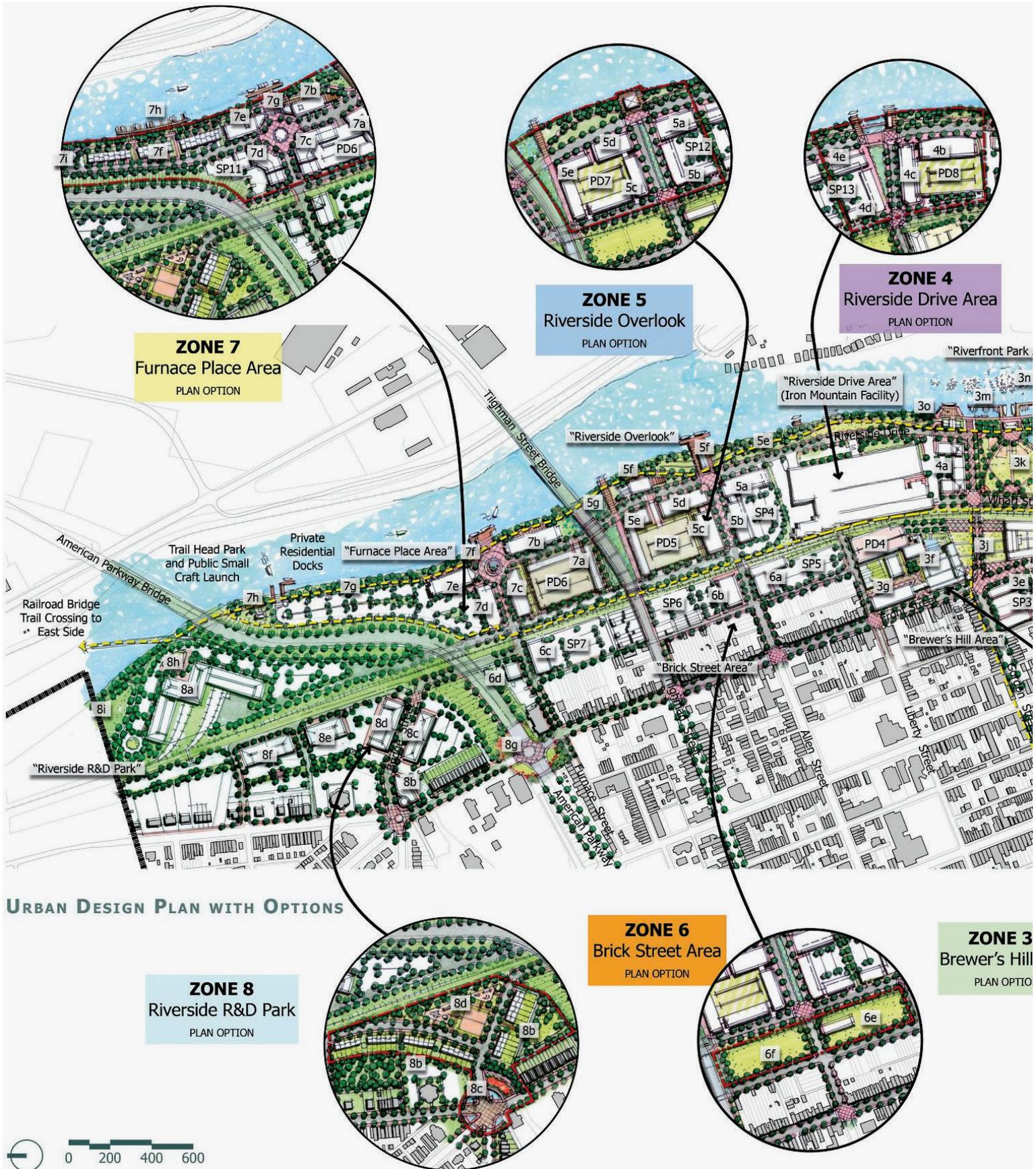


Sample riverside boating inlet – Boston, MA

The PPL property had historically been an inlet. New inlets could be added as shown in the Master Plan options with certain design parameters:

- The inlet should be angled downstream to minimize siltation from upstream flow.
- Reefs should be installed to deflect river flow from the opening of the inlet. This countermeasure provides a more placid inlet and protects the inlet from seasonal variations.
- Stormwater collected upstream of the Riverfront could be strategically placed and utilized to assist in the flushing of sediment that may be deposited by the general river flow.
- Provide for easily removed features to account for annual seasonal freezing of the river and protect the investment in the inlet amenities.

The magnitude of these recommended adjustments in the Riverfront District may initiate the immediate need to update the City's Act 537 Plan for Department of Environmental Protection (DEP) approval. The City's current Act 537 Plan is dated October 1, 1985. Since the plan is in the 20 to 40 year age category the Pennsylvania Department of Environmental Protection (PADEP) can request that the City update their plan. This scenario is unlikely but is possible due to the age of the Plan and the perceived magnitude of the recommended adjustments in the Riverfront District. Pre-application discussions with DEP are highly recommended to provide momentum and direction to the review process. It is highly recommended that the study be started in the very near future as this process can take quite some time to be completed and approved.



Lehigh Riverfront District Base Master Plan with Optional Development Concepts

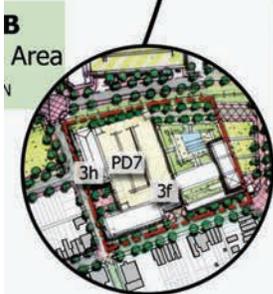
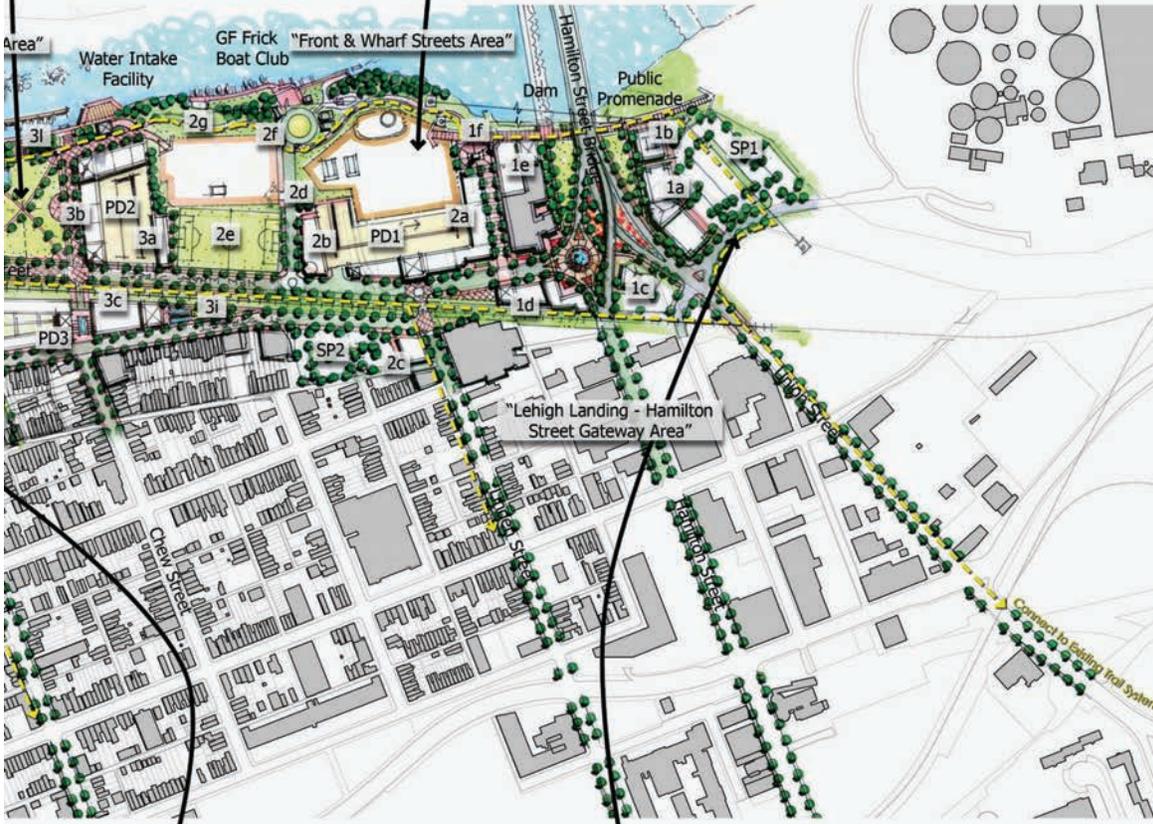
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ZONE 3A
Riverfront Park Area
PLAN OPTION



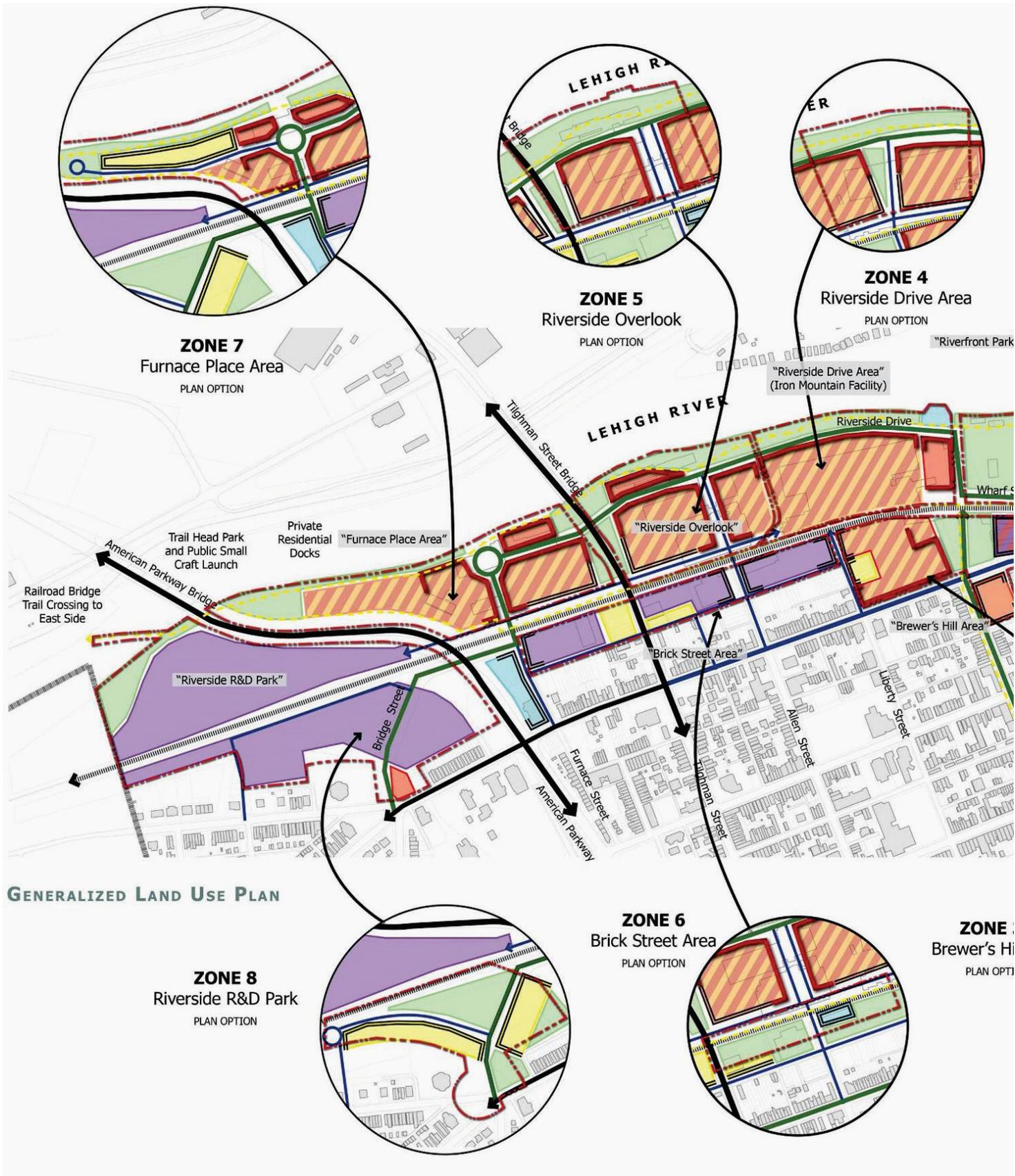
ZONE 2
Front & Wharf Street Area
PLAN OPTION



ZONE 1
Lehigh Landing/Hamilton Gateway Area
PLAN OPTION



Zone 1	Lehigh Landing/Hamilton Street Gateway Area
1a	Office / Technology Space
1b	Riverside Restaurant
1c	Gateway Restaurant/Commercial
1d	Loading Dock Building Restaurant / Retail / Mixed-Use Re-use and Expansion
1e	America On Wheels Museum Expansion Retail/Commercial/ Children's Museum
1f	America On Wheels Pedestrian Mall/Access Drive, Arrival Court and Riverfront Promenade/Overlook
1g	Roundsabout Entry at Hamilton, Front and Wharf Streets
SP1	Surface Parking - ±210 Spaces
Zone 1 Optional Plan Elements	
1h	Full Size Hamilton and Wharf Street Roundsabout Construction
Zone 2	Front Street & Wharf Street Area
2a	Retail, Entertainment / Commercial Uses Wrapping Parking Deck
2b	Retail, Entertainment / Commercial Uses Wrapping Parking Deck
2c	Lincoln Street Retail, Entertainment/Commercial Uses
2d	Relocated Outdoor Basketball Courts (Two)
2e	Multi-use Soccer/Football Field for Parks & Recreation Use and Middle School
2f	New Entry Drive and Gateway to GF Frick Boat Club
2g	Riverside Multi-use Trail and Linear Greenway Park Improvements
PD1	Parking Structure - 3 levels @ ±190 spaces per level
SP2	Lincoln Street Surface Parking Lot - 105 Spaces
Zone 2 Optional Plan Elements	
2h	Mixed-use Riverside Development 2 Stories Retail/Commercial/Office with 2 Stories Residential Apartment/Condo Loft Above
2i	Riverside Public Pavilion and Promenade/Trail Overlook
PD9	Parking Structure Expansion w/ Possible Switching Station Building Below- 2 levels @ 190 spaces per level
Zone 3	Brewers Hill and Riverfront Park
3a	Parks & Recreation Support Facility Building Equipment Storage
3b	Retail, Entertainment/Commercial Uses Wrapping PPL Substation
3c	Atelier Site Redevelopment - Commercial/Office/Technology Use
3d	Atelier Building Re-use and Expansion
3e	Ribbon Works Lofts - (Apartments)
3f	Brewer's Alley - Newweiler Building Re-use of All Existing Buildings
3g	Brewer's Alley - Newweiler Bottling Building Re-use
3h	Front Street & Wharf Street Cafeteria and Fountain Features
3i	Brewers Hill Park and Mayor McHose Memorial Plaza
3j	Expanded Buck Boyle Riverfront Festival Park & Promenades (Spray Park/ Playground, Festival Grounds)
3k	Upper and Lower Riverfront Promenades/Multi-use Trails, Reforestation, Steps, Etc.
3l	Riverside Marina & Historic Canal Boat Docking Facility
3m	Riverside Floating Fountain Display
3n	New Expanded Lehigh University Boathouse and Sculling Dock
PD2	Parking Structure - 3 levels @ 175 spaces per level
PD3	Lower Level Parking Under Atelier Development
PD4	Newweiler Brewery Parking Structure - 3 to 4 levels @ ±100 Spaces per level
SP3	Ribbonworks Surface Parking
Zone 3 Optional Plan Elements	
3h	Commercial/Mixed-use Building
3i	Brewer's Alley - Newweiler Building Re-use and Expansion (2-3 structures removed)
3j	Inland Wharf Inlet
PD7	Newweiler Brewery Parking Structure - 3 levels @ ±145 spaces per level
Zone 4	Riverside Drive (from Mountain Storage)
4a	Gordon Street & Riverside Dr. Retail/ Commercial/ Office
4b	Riverside Multi-use Trail and Linear Greenway Park Improvements
4c	Riverside Reforestation and Habitat Creation
4d	New Riverside Drive and Streetscape Construction
4e	New Gas, Water, Storm Sewer and Sanitary Sewer Lines
Zone 4 Optional Plan Elements	
4b	Riverside Drive Commercial/Office Development
4c	Liberty Street Loft Apartments (South side of Street)
4d	Liberty Street Loft Apartments (North side of street)
4e	Riverside Drive Commercial/Office Development
PD8	Parking Structure - 3 levels / 200 Spaces per level
SP13	Surface Parking - ±85 Spaces
Zone 5	"Riverside Overlook" (Allen Street & Riverside Drive)
5a	Riverside Drive Retail/ Commercial/ Office
5b	South Side Allen Street Retail/ Commercial/ Office
5c	North Side Allen Street Retail/ Commercial/ Office
5d	Riverside Drive Retail/ Commercial/ Office
5e	Tilghman/Riverside Loft Apartments
5f	Riverside Restaurant/Commercial
PD5	Allen Street Parking Structure (North Side) - 4 levels / ±140 spaces per level
SP4	Allen Street Surface Parking (South Side) - ±165 spaces
Zone 5 Optional Plan Development Elements	
5a	Riverside Drive Retail/ Commercial/ Office
5b	South Side Allen Street Retail/ Commercial/ Office
5c	North Side Allen Street Retail/ Commercial/ Office
5d	Riverside Drive Retail/ Commercial/ Office
5e	Tilghman/Riverside Loft Apartments
PD5	Allen Street Parking Structure (North Side) - 4 levels @ ±162 spaces per level
SP12	Allen Street Surface Parking (South Side) - ±100 spaces
Zone 6	"Brick Street Area"
6a	Employment / Clean Industry/ Manufacturing Uses - Sussman Bros. Building Re-use
6b	Employment / Clean Industry/ Manufacturing Uses
6c	Employment / Clean Industry/ Manufacturing Uses
6d	Employment / Clean Industry/ Manufacturing Uses
SP6	Surface Parking Lot - ±125 Spaces
SP6	Surface Parking Lot - ±115 Spaces
SP7	Surface Parking Lot - ±140 Spaces
Zone 6 Optional Plan Development Elements	
6e	Community Park/Open Space / Re-use of Sussman Building for Railway Museum Building
6f	Community Park/Open Space / Railway Museum Display Yard
Zone 7	"Furnace Place" (Furnace Street & Riverside Drive)
7a	Tilghman/Riverside Loft Apartments
7b	Riverside Drive Retail/ Commercial/ Corporate Office
7c	Furnace Street (South Side) Retail/ Commercial/ Corporate Office
7d	Furnace Street (North Side) Retail/ Commercial/ Corporate Office
7e	Furnace Street Retail/ Commercial/ Corporate Office
7f	Riverside Drive/Furnace Street Roundsabout and Public Landing
7g	Riverside Multi-use Trail and Linear Greenway Park Improvements
7h	Riverside Trail Head Park & Small Boat Launch
PD6	Furnace Street Parking Structure (South Side) - 3 levels @ ±164 spaces per level
SP8	Surface Parking Lot - ±380 Spaces
Zone 7 Optional Plan Elements	
7a	Tilghman/Riverside Loft Apartments
7b	Riverside Restaurant/Commercial
7c	Furnace Street Retail/ Commercial/ Corporate Office (South Side of Furnace Street)
7d	Furnace Street Retail/ Commercial/ Corporate Office (North Side of Furnace Street)
7e	Riverside Restaurant/Commercial
7f	Riverside Town Homes
7g	Riverside Drive/Furnace Street Roundsabout and Public Landing
7h	Riverside Multi-use Trail and Linear Greenway Park Improvements
7i	Riverside Trail Head Park & Small Boat Launch
PD6	Furnace Street Parking Structure (South Side) - 3 levels @ 160 spaces per level
SP10	Surface Parking Lot - ±75 Spaces
Zone 8	Foundry Park Area (North of the American Parkway Bridge)
8a	Corporate Manufacturing Campus (With truck and rail service)
8b	Front Street Retail / Restaurant
8c	Employment / Clean Industry/ Manufacturing Uses
8d	Employment / Clean Industry/ Manufacturing Uses
8e	Employment / Clean Industry/ Manufacturing Uses
8f	Employment / Clean Industry/ Manufacturing Uses
8g	American Parkway and Front Street Gateway Enhancements
8h	Riverside Arrival Court
8i	North End Riverside Park and Trail
SP9	Shared Surface Parking for Manufacturing Site and North End Park Use
SP10	Employment/Clean Industry Use Surface Parking Lots - ±276 Spaces
Zone 8 Optional Plan Elements	
8b	Residential Townhome Development
8c	Front Street Gateway Entry Park
8d	Community Recreation Park - Children's Playgrounds and Court Sports with Passive Park Space



2 GENERALIZED LAND USE PLAN WITH OPTIONS

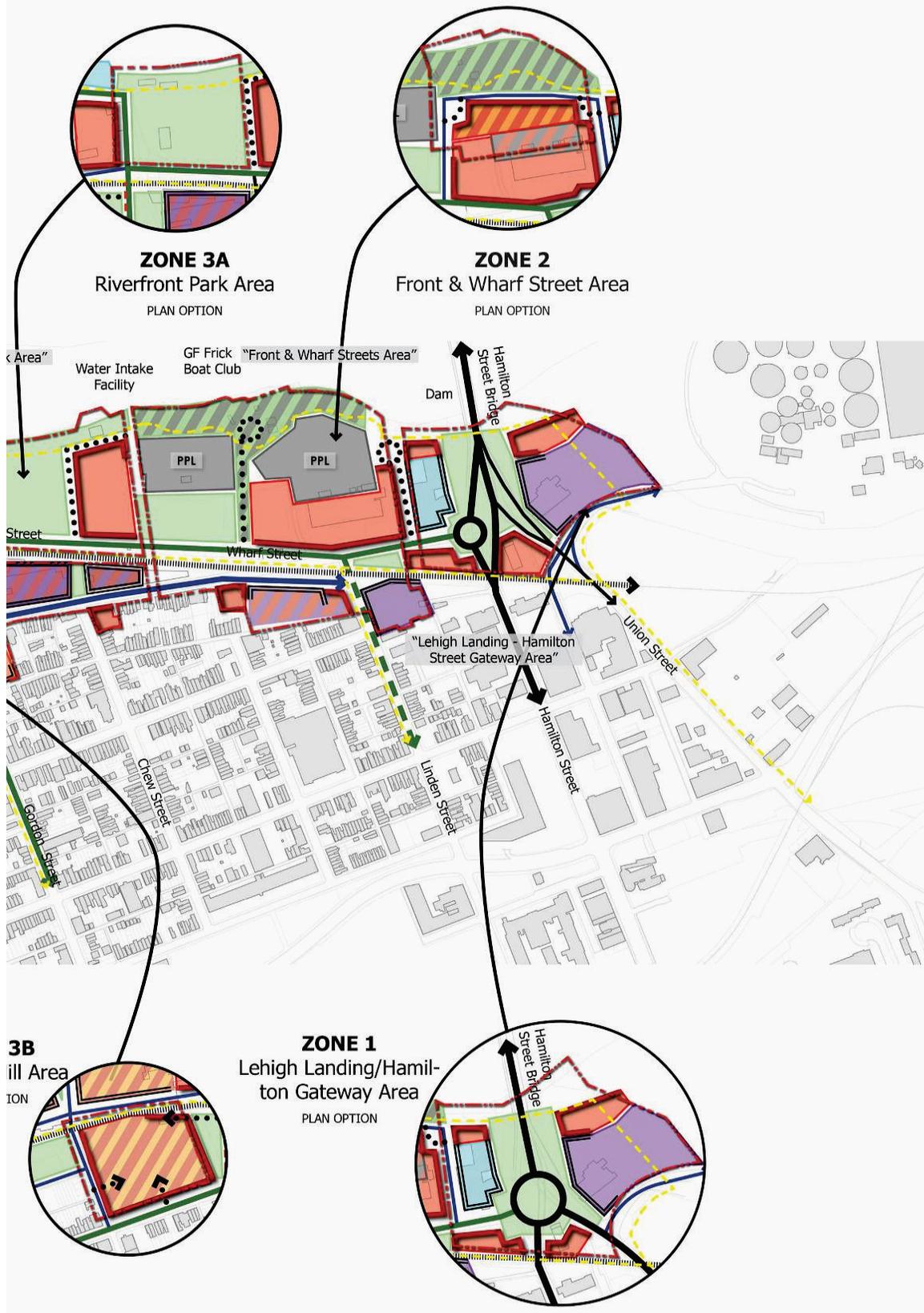
LAND USE LEGEND

- Public/Quasi-Public, Institutional Use
- Ground Floor Retail, Restaurant Entertainment Uses with Commercial/ Office Uses on Floors Above
- Ground Floor Retail/Service Commercial Frontage
- Key Building Frontage for Other Uses
- Mixed-use Office Commercial and/or Residential Use
- Single-Family Attached Residential Use
- Multifamily Residential Use - Apartment and/or Condominium Lofts
- Employment, Light -Manufacturing Use
- Mixed-use Employment/Light Manufacturing and/or Commercial
- Parks and Open Space
- Utility

STREET & PEDESTRIAN/ BICYCLE TRAIL FRAMEWORK LEGEND

- Two-way Arterial Street
- Two-way, Collector Street
- One-way, Collector Street
- Two-way, Local Service Street
- Limited Vehicular Service Access in Pedestrian Environs
- Railway Line
- Public Pedestrian & Bike Trail Loop Linkages

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ZONE 3A
Riverfront Park Area
PLAN OPTION

ZONE 2
Front & Wharf Street Area
PLAN OPTION

3B
Mill Area
PLAN OPTION

ZONE 1
Lehigh Landing/Hamilton Gateway Area
PLAN OPTION

IMPLEMENTATION – FROM MASTER PLAN TO REALITY

The Department of Community and Economic Development (CED) will guide the implementation for the Lehigh Riverfront Master Plan. Due to the size, complexity, and anticipated long-term redevelopment timeline for the Lehigh Riverfront, it is recommended that a special Implementation Team be established to implement a comprehensive vision and marketing effort while also helping to facilitate the coordinated efforts and investments of numerous public- and private-sector interests. A partnership of public- and private-sector stakeholders will allow for long-term stability and continuity of management, as well as create a focal point for information and decision making without placing a burden on existing City of Allentown staff.

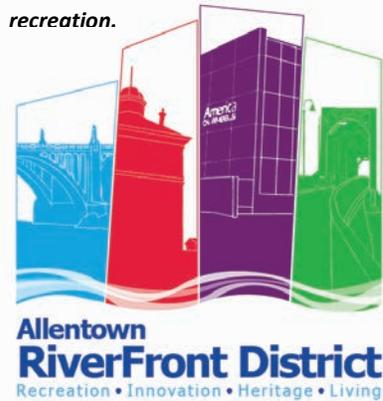
The intent of the Riverfront Implementation Team is to promote economic and community development through the administration, coordination, and oversight of select components of an implementation strategy for the Lehigh Riverfront Master Plan. Through a general advisory role for development/redevelopment projects and the establishment of diverse initiatives, including a branding and marketing strategy, business recruitment plan, permitting and approvals facilitation, and agency coordination, the Implementation Team will successfully enhance the quality of existing and future neighborhoods, encourage economic growth, and aid in the realization of the City's vision for the Lehigh Riverfront. To this end, the Implementation Team will guide public and private investment, market and brand the Riverfront as an attractive location to live and work, organize and host special events and other programs aiming to enhance the quality of the Riverfront.

The Implementation Plan provides a series of action steps that help guide the redevelopment of the Lehigh Riverfront. Year one will focus on developing land use regulations to promote the type of development envisioned within the Master Plan. The first year will also focus on acquiring property and the right of ways needed to build roads and public space/amenities. Prioritizing projects in areas that will leverage private investment will be the key to successfully redeveloping the Riverfront. It will take a number of years to build the infrastructure and public amenities identified within the Master Plan. The City will need to continually update priorities and funding strategies based on the progress made each year.

Year two will continue to set the stage for redevelopment by focusing on creating an image/brand identity for the Riverfront, adopting a residential LERTA program to encourage residential development, and identifying areas for new industrial development.

Year three will begin the process to actively recruit new businesses to the Riverfront. Full build out of the Riverfront will take many, many years. The Implementation Plan sets the stage for investing time and money with public sector dollars in order to leverage the private sector dollars and investment.

One of many branding and logo concepts for the marketing the new Lehigh Riverfront: A center for heritage, innovation, living and recreation.





Thank you for your interest in the Lehigh Riverfront Plan...We welcome your participation in this next chapter of Allentown's development.

Please contact the City of Allentown Community & Economic Development Department if you are interested in playing a role in the Lehigh Riverfront!



THE LEHIGH RIVERFRONT MASTER PLAN

ALLENTOWN, PENNSYLVANIA



For More Information please contact:



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