



# **Moon Township Riverfront Park Master Plan**

**June 2013**

# Acknowledgements

Moon Township Riverfront Park Master Plan  
Moon Township, PA

A project of this scope and magnitude could not be realized without the support and commitment of many individuals. It is important to acknowledge the vision and leadership of those that assisted in the preparation of this plan and all of the supporting technical work required. All of the participants that played a role in the project, including government, institutional and community leaders, are too numerous to list; however, primary project sponsors included:

- ***The Township of Moon staff, boards and committees.***
- ***The leadership of Moon Township for working with the project team and offering their insight and perspectives;***
- ***The residents and business community in Moon Township for cooperating with these endeavors, including property owners willing to share information on their sites;***

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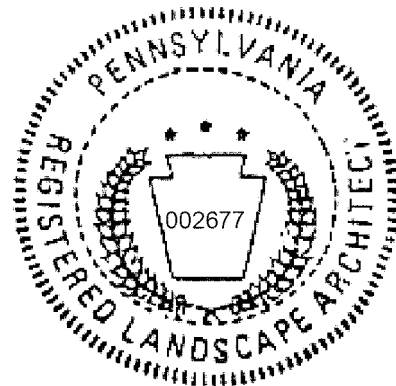
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## Introduction

This Master Plan represents the culmination of an extensive planning and public outreach effort initiated by Moon Township for the creation of a major new regional riverfront park along the Ohio River. In addition to identifying a comprehensive long term vision for the riverfront park, the plan also identifies the key steps needed to advance the project towards completion.

The next steps for advancing Moon Township Riverfront Park:

**1 -** Moon Township should formally join the Ohio River Brownfields Coalition in order to collaborate on obtaining potential funding and agency support benefits as a result of being a regional partner in the U.S. Environmental Protection Agency (EPA) funded effort. The Coalition and the EPA are focusing their resources on the clean-up and successful reuse and redevelopment of brownfields sites along the entire Ohio River Corridor. This effort will allow Moon Township to participate in a regional funding application to the EPA and other state and/or federal agencies for the further remediation and implementation of the site-specific work needed to allow the riverfront park site to function as a public park.

**2 -** The Township should considering implementing the proposed funding advocacy strategy described in

this Master Plan, along with retaining a federal and state funding specialist(s) with specific experience on cleaning-up and redeveloping brownfield sites, in order to assist the Township in pursuing the necessary financial resources needed to make the project happen, along with coordinating all of the relevant agencies involved in implementing the project.

**3 -** Pursue Pennsylvania Department of Conservation and Natural Resources (PADCNR) funding for the final design and construction of the first phase (Implementation Package A) of the Master Plan. Since PADCNR provided funding for this Master Plan, the agency can be viewed as a partner in the project; however, further advocacy for implementing the Master Plan should be performed with PADCNR agency representatives to ensure they are fully aware of the next steps and support is maintained.

**4 -** Meet with Pennsylvania Department of Environmental Protection (PADEP) representatives to promote the project for inclusion into the Department's Industrial Sites Reuse Program. This program could provide up to \$1M in grants and loans for the clean-up of the site to a standard required by the agency for use as a public park.

**5 -** Since safety and access to the site was identified as a high



*The Moon Township site highlighted adjacent to the Ohio River.*

priority, the Township should initiate the final engineering design of the proposed improvements to the at-grade railroad crossing and the creation of the new access drive through the site to FAB-TEC as soon as possible. These improvements will greatly increase safe access to the site, including during future site construction, to FAB-TEC for its employees and for the pending Ohio River Trail route. Starting this effort early is especially important since it will require extensive coordination with CSX on the safety improvements at the at-grade crossing. As part of this effort, the new service road to the Moon Township Municipal Authority (MTMA) facilities should be rough-grading for service and construction vehicles. This will allow for MTMA activities to proceed unimpeded during the future construction of the park.

**6 -** The MTMA should cease importing additional soil for potential future fill on the site. The conceptual grading plan prepared as part of this Master Plan determined that there would not be a need for substantial additional clean-fill on the site and it is a recommended protocol, at this point in time, to wait until the final engineering is completed before additional soil is brought to the site.

As part of the Ohio River Trail Federal Highway Administration's Transportation, Community and System Preservation (TCSP) grant awarded to Coraopolis Borough and Moon Township for the first implementation phase of the Ohio River Trail from the Montour Trail to the Sewickley Bridge, the Township should initiate discussions with Duquesne Power and Light regarding the use of their utility right-of-way for the location of the Ohio River Trail parallel to the CSX right-of-way, from Thorn Run to Ambulance Way, at the entrance to the park. Although the opportunity exists to locate the trail along existing PennDOT right-of-way for PA Route 51, utilizing the Duquesne Power and Light right-of-way allows greater opportunity to provide additional overflow parking for the park, adjacent to PA Route 51, within PennDOT's right-of-way. A joint coordination meeting with representative of both entities should be initiated to advance this effort since the trail project is likely to proceed, based on committed funding, in late 2013 or early 2014.

## The Moon Township Riverfront Park Vision

Moon Township Riverfront Park will be a premier destination for people of all ages to enjoy the Ohio River. The park will be a model of sustainable design and management practices rooted in water conservation in partnership with the MTMA. It will be a place of beauty with safe, clean, and fun recreation facilities. These facilities will enable park visitors to access the river with non-motorized watercraft as well as for people in motorized craft to tie up at day docks so that they can get off the river and use the park and its amenities. The landscape of the park will feature riverfront natural beauty at its finest. It will afford visitors with opportunities to refresh, relax, and de-stress; engage in self-directed recreation activities; pursue active healthy lifestyles through outdoor fitness; bond with family and friends through social events and unique facilities for play; and connect with nature. Support facilities such as restrooms, water fountains, food access, places to sit and watch the river and people, and community gathering areas will make this park comfortable and attractive for visitors who visit for a short time as well as those who want to spend the better part of a day here. By establishing a welcoming destination and enjoyable public space, the Moon Township Riverfront Park will generate park visitation that will create an ongoing positive public presence and thus provide a secure and safe place for all visitors.

## Planning Process

The Master Plan is rooted in a strong public participation process. The ideas and concerns of the community formed the foundation of the planning considerations. Blending ideas from the experiences of the community regarding the existing site with ideas for future plans helped to create a vision for the physical design, programming and operation of the Township's new Riverfront Park.

## Public Participation Process

The master planning process included extensive and broad public participation activities to ensure that a large and diverse group of individuals had the opportunity to shape the future design of the Riverfront Park. The public participation process ranged from one-on-one interviews to large, facilitated public meetings and hands-on activities along with in-depth discussions with a project steering committee.

## Master Plan Steering Committee

The Master Plan Steering Committee consisted of member representatives of:

- Municipal and authority staff; and
- Interested residents and representatives of special interest groups.

The Steering Committee met five times over the course of the project. The consulting team also had work sessions with various committee members throughout the planning process. The members served as advisors to the project, provided direction and guidance for planning the park, critiqued the design renditions, and offered input to the future financing, management and operation of the facility. The Committee provided sage advice on everything from climactic conditions within the park to the reality of the economic conditions and how they impact attitudes in Moon Township towards investing the park's development and potential phasing over time.



Moon Township, PA  
Waterfront Park Before Construction

We just had a great time at the Moon Township Waterfront Park. Wish you were here. It has the best river trails + walks  
(An activity or use you think is most important to be located in the park)  
in the Pittsburgh Region. The kids really enjoyed Sailing + playing in the park  
(Youth-oriented activity you think is needed in the Township)  
with their friends along the Ohio River. It's even better than any river park  
down + relaxing Park which  
(another park that you've been to that you really like)  
is our other favorite place to visit!!!

Best Regards,  
Friend of Moon Township Parks

Dana Kasler  
Moon Township Parks and Recreation  
1000 Beaver Grade Road  
Moon Township, PA

A 'Post Card' exercise was used to determine what programs the community wanted to see in the Moon Township park while gauging impressions of other nearby parks.

## Key Person Interviews

Key person interviews helped to identify key ideas, issues and concerns related to the physical design and operation of the park. The consulting team identified topics and led the in-depth discussions. Interviews were conducted via telephone and in person. The questions dealt with issues such as community recreational needs, MTMA facility requirements, riverfront needs, coordination of programs and services, partnerships, financing opportunities, and challenges. As part of the interviewing process, the consulting team visited recreational sites in the region to see first-hand available riverfront parks, open spaces, and play area facilities.

Key person interviews performed for the park master planning effort included the following groups and/or individuals:

- Moon Township Parks and Recreation management – Director, Program Director and Maintenance Superintendent
- Township Manager
- Moon Township Municipal Authority Director
- Township Planning
- Allegheny County Park Department
- Friends of the Riverfront Executive Director

- Coraopolis Borough
- Ohio River Trail Representatives
- Emergency Management
- Public Safety Coordinator
- Old Moon Township Historical Society President
- Boaters
- Boy Scouts
- Fish & Boat Commission
- Water Authority Manager
- Citizens
- Plan Advisory Committee
- PA DCNR
- Robert Morris University School of Art
- Adjacent Property Owners

The key findings from the key person interviews included:

- Overall there is strong support for establishing a Riverfront Park.
- Grand vision is for the people of Moon Township to have their own close-to-home access to the river.
- Protection for the public water source is crucial.
- Regional emergency responders operate all along the river. Although Moon Township does not have an emergency water response team, that service already exists as a regional service on the Ohio River in other communities such as Neville Island



*Several community members took part in Visual Preference Surveys.*

and Sewickley. Moon Township would not have to duplicate this service but could use the emergency response services that are already in operation. Negotiating coverage with them would be a good idea as they already do that.

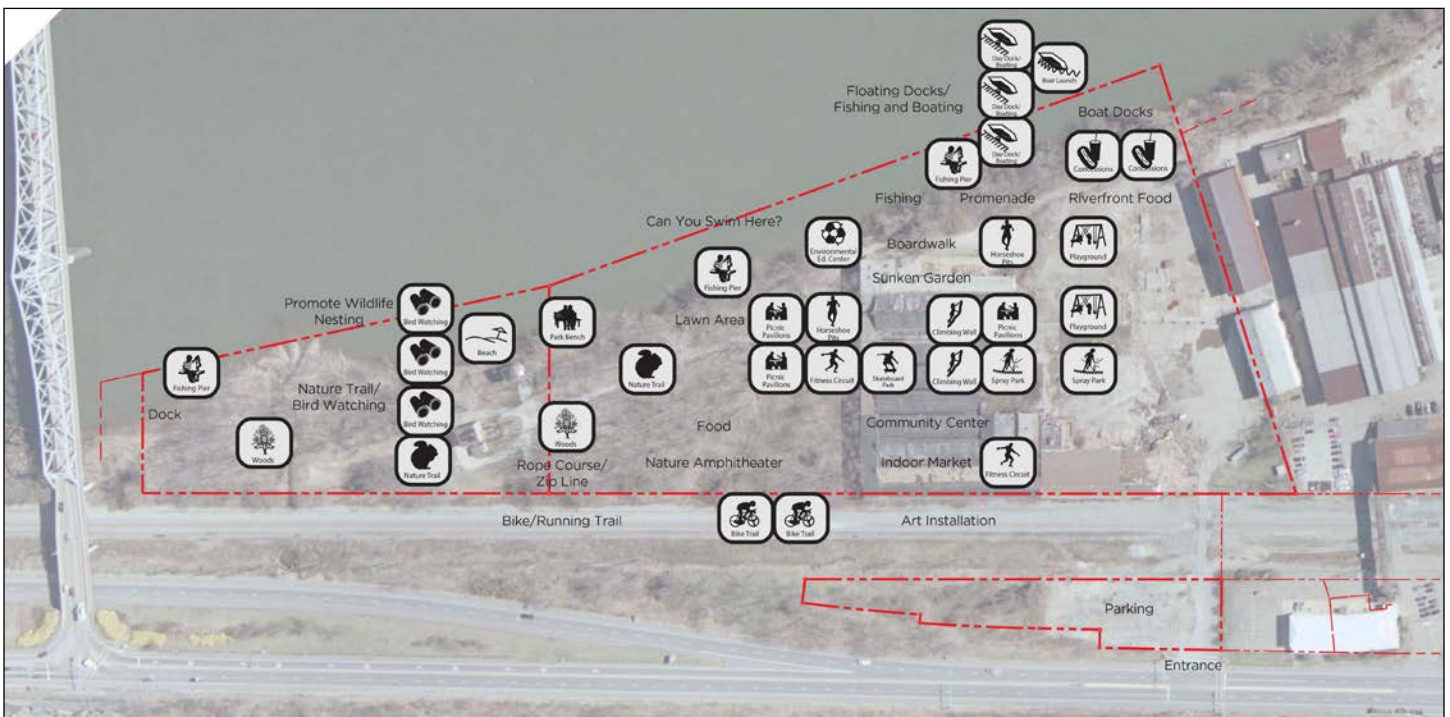
- Many volunteers are already engaged in public park related projects such as removal of invasive species.
- Preference is for non-motorized boating and passive recreation. Opposition to the Jet Ski scenario near Sewickley.
- No desire for active recreation facilities for sports; the preference is for nature-based recreation with orientation toward the river.
- Atmosphere preferred is quiet and restorative – a place where people can enjoy being outside and seeing the beautiful river sights.
- Important facilities: benches, tables, pavilions, marked trails for exercise, play area for youth and families, parking, and restrooms.
- The park as a trailhead for the Ohio River Trail is important.
- People view the future park as a crown jewel of Moon Township.
- Space for community gatherings is important.
- Desire for food service to serve land and water visitors to the park and having food service be seasonal and without permanent facilities is preferred.
- Need to establish a name for the park to serve as a major branding and promotional aspect of the park.
- Park will be a destination along the whole Ohio River.
- Boaters tend to remain in their “pools” to avoid long wait times to get through the locks.
- People need a place to tie up their boat and get off the river for rest, food, and enjoyment of the facilities on land.
- People need to gain access to the Ohio River to drop in their boats.
- Desire is for non-motorized boating access here.
- This park is viewed as a non-programmed park with most use by visitors on their own.
- It is expected that this park will not generate a great deal of revenue.
- Maintenance is a concern as it is for all public facilities. Because of the nature of this park, it is anticipated that maintenance would be lower than with active recreation facilities such as ballfields. Certainly the Township’s desires to maintain this as a “Mode A” (high quality maintenance reflecting its high visibility and use) park reflecting its status as a flagship park.
- Safety issues regarding safe crossing given the active railroad line that bisects the park property.
- Moon Township views parks and recreation as an essential public service. Investing in Moon Township’s Riverfront Park will greatly enhance the quality of life in the community. The Supervisors are committed to an excellent quality of life for all who live, work and visit here.

## Public Participation Findings

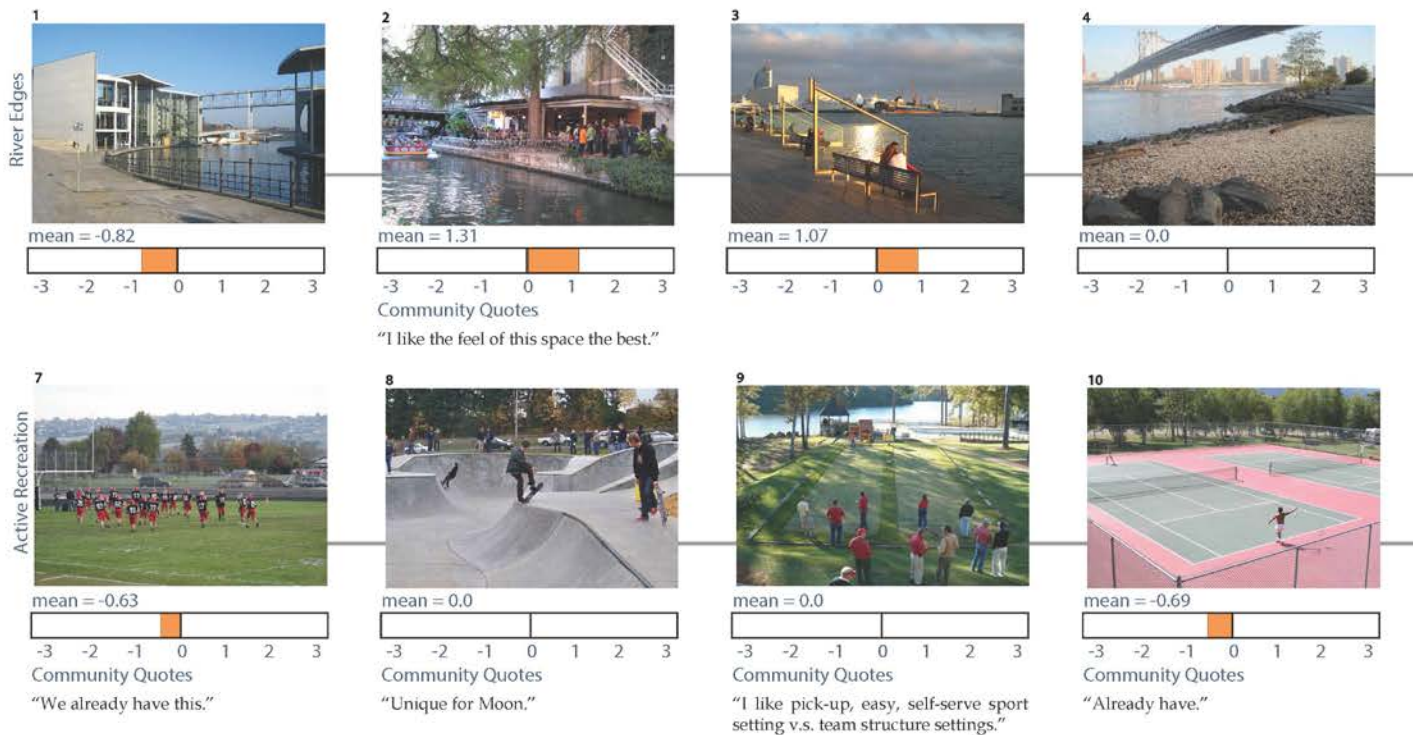
The first public meeting was held in May 2012. This meeting focused on “visioning” design concepts and programming and approximately 60 participants attended. A formal presentation of the site analysis was performed along with findings from key person interviews performed to-date. A discussion was held with the participants regarding the goals and objectives of the project along with potential vision statements for the park. A visual preference survey depicting examples of various park elements (some contrasting, others based on variation of a single theme) was provide for each participant to evaluate and rank. Attendees were divided into break-out groups and were provided with park programming puzzle pieces and site plans to diagram potential park scenarios.

- The park must be open to the public: safe, clean, and attractive.
- Park development will be phased in over time and is not to occur all at once.
- Recreational sports are not a priority for the site as these facilities exist elsewhere in the community.
- People recognize the potential of parks and recreation for economic development.

The major finding of the public participation process was the overwhelming support for and interest in a riverfront park in Moon Township. While the community has historically been separated from the riverfront zone by industry, there is a general excitement surrounding the opportunity to reconnect with the river. Additional findings included the following:



Planning activities invite the community to have a hand in designing their own park. Using cutout program icons, volunteers organize activities they would like to see in the final park design in the patterns that they would like to see them in.



The Visual Preference Survey allows the community the opportunity to express general design aesthetics and program expectations.

A second public meeting was held in October 2012 and focused on presenting the design process along with two alternative approaches to the parks design and layout. The two alternatives represented differing approaches to achieving a primarily passive park, with varying levels of recreational programming elements, combined with different techniques for addressing the environmental remediation on the site. After a presentation of the alternatives, a discussion was held and some elements from each of the two alternatives were determined to be desirable, with the overall consensus for the alternative which had fewer programmatic elements and more passive and natural areas.

Key public comments expressed at this meeting included:

- Trails - Trail connections are very important. An audience member expressed interest in the idea of trail towns and it was explained that Coraopolis would actually function as a trail town for the Ohio River Trail and that the Moon Township Riverfront Park would be an important destination for both land and water trail users. The Ohio River Trail would be the connection

between Coraopolis Borough and portions of Moon Township that connect through Coraopolis.

- Fishing - Fishing access is of great interest. An angler described locations along the park riverfront where fish gather and how the park's design would provide excellent fishing access which is needed in this pool of the Ohio River.
- Kayak/Canoe Access Turnaround - A turnaround or drop off circle is preferred for the drop-in area for canoes and kayaks. The label on the plan should be changed from "boat access" to "canoe/kayak access" especially since the ramp may be determined to be unfeasible when detailed civil and environmental engineering are performed.
- Park Development Phasing - Phasing in this project is especially important as the park development is actually the remediation of the site contamination from former industrial use. Participants wanted to know how long it will take to develop the park. It was explained that this will require years of work and at a minimum, four years

will be needed for design, permitting and generation of funding for the first phase of development.

- Amenities - Food is important and the food trucks are a good solution. It will be important to locate both electrical sources and potable water for this use. It was suggested that shade and benches should be provided near the Jet Plaza. That area needs to be comfortable for spectators. This is provided for in the design and simply did not show in the illustrations.
- Lighting - Security lighting designed as an architectural feature is needed.
- Park as Township Crown Jewel – This park has the potential to be an icon for Moon Township as it will be highly visible from the bridge and the thousands of people that use the bridge regularly. It was described how lighting and the creative approach to wrapping required water facilities on site with architectural features and lighting will serve as public art and a defining feature of the park.
- Police Patrols - Designating areas for police patrol is necessary. The parallel roadway is an important feature for this purpose. Ensure that the diagonal road through the park is sufficient for security patrols.
- Parking - Parking is an ongoing discussion as it will be important to accommodate events.
- Maintenance - Maintenance is an ongoing concern of Moon Township. Care must be taken in the further design of this park to ensure that the park is sustainable from a maintenance perspective over time.
- Emergency Response - Regarding emergency response services, having Moon Township participate in the existing regional emergency response system makes the most sense. In fact, the emergency responders for the river actually include Moon Township residents. It does not make sense to have Moon Township create yet one more emergency response system when the

river in this area appears to already be covered by EMS organizations nearby. If this becomes an issue in the future, it is recommended that the Township engage in discussions to establish regional partners regarding water rescue and emergencies in which the roles, responsibilities, and funding requirements be negotiated rather than just starting up a separate service in Moon Township.

- Revenue Potential - The park is expected to be largely for self-directed use; therefore any revenues generated will be a bonus.
- Funding - Questions about funding were raised. Information was provided about funding for the park as remediation of the contamination, grants, and Township support. It is important to recognize that this park is part of a major regional effort regarding recreation and economic development along the Ohio River including the U.S. EPA's funded Ohio River Area-Wide Brownfields Coalition focused on environmental and economic revitalization of a 40-mile stretch of the Ohio River from Coraopolis to the Ohio State Line. As a result, regional funding and project initiatives are expected to help this park.
- Appreciation of the Creative Park Design - Participants expressed their appreciation for the creativity in the beautiful design and functionality of this park master plan.

A presentation of the draft master plan was presented for public comment at a Township's Supervisors regularly scheduled workshop held in January 2013. An overview of the final preferred plan was provided along with a presentation of the proposed phasing and funding strategy with special emphasis on the cost of environmental remediation and how the creation of the park is integral to the remediation of the site's environmental conditions, not a separate and independent project. There were very limited comments. The Supervisors asked a few the staff and consultants to clarify a few items related to phasing and implementation. There was overall strong support for the project.

## Demographic Overviews

The data from both the 2000 and 2010 U.S. Census was used to produce the following demographic information for this plan.

- Moon Township's population has gone through a cycle of growth and decline following the boom and eventual decline of many industrial facilities in the region. However, recent population growth was up 8.5 percent between 2000 and 2010.
- More than half of the population is between 18-65 years of age. This has held relatively steady over the past 10 years.

<i>Table 1 Population Municipal, County and State 2000 - 2010</i>			
<i>Municipality</i>	<i>2000</i>	<i>2010</i>	<i>Change (%)</i>
<i>Moon Twp.</i>	22,290	24,185	8.5 %
<i>Allegheny County</i>	1,281,666	1,223,348	-4.6 %
<i>Pennsylvania</i>	12,281,054	12,702,379	3.4 %

<i>Table 2 Population Age 2000 - 2010</i>			
<i>Age Group</i>	<i>2000</i>	<i>2010</i>	<i>Change (%)</i>
<i>Moon Twp. (&lt;18)</i>	22.1 %	22.4 %	1.36 %
<i>Moon Twp. (18-65)</i>	65.1 %	64.7 %	-0.61 %
<i>Moon Twp. (&gt;65)</i>	12.8 %	12.9 %	0.78 %

## Township Economics

- The Air Transportation industry is the most common occupation for males in the Township, employing 12 percent of the total male population while Education and Health Care industries are the main employment industries for females, both employing 13 percent of the female population respectively.
- Residents with income below the poverty level in 2008 was 4.2 percent, well under the state average of 11.0 percent.
- Moon Township households are earning more with median household income increasing by 23.1 percent between 2000 and 2010. The median incomes per family and per capita have also increased over the past ten years by 26.1 and 22.6 percent respectively.

<i>Table 3 Population Income 2000 - 2010</i>			
<i>Moon Twp.</i>	<i>2000</i>	<i>2010</i>	<i>Change (%)</i>
<i>Median Income per Household</i>	\$57,173	\$70,387	23.1 %
<i>Median Income per Family</i>	\$68,256	\$86,074	26.1 %
<i>Per Capita Income</i>	\$26,457	\$32,451	22.6 %

## Introduction

The site analysis documents the existing physical conditions and characteristics of the site and its surrounding context. Information utilized included extensive site characteristics data collected by the MTMA during its efforts to monitor the environmental status of the RB&W site as well as information for its well site. Supplemental survey data and research was performed as well as including extensive on-site data collection by the planning team examining various physical attributes.

## Existing Conditions

### General Site Features

The site is located at 540 Narrows Run Road, PA Route 51, east of the Sewickley Bridge along the south bank of the Ohio River. The site consists of three parcels: Parcel 1: Former RB&W parking lot = 1.3 acres; Parcel 2: Former RB&W Plant Site = 13.8 acres; and the MTMA Ranney Wells Site = 4.1 acres. The total acreage of the three sites combined equals 19.2 acres. The majority of which consists of the former RB&W manufacturing complex, which was acquired by the MTMA on December 12, 2002.

## Geology, Hydrology and Riverine Dynamics

As the pre-Illionian and Illionian glaciers advanced into northwestern Pennsylvania, the ice sheet blocked the north-flowing stream (i.e. Monogahela-Beaver River System) causing a blockage that formed lakes and ponds. Over time, a series of breaching and ponding occurred until a point when a great divide was breached near New Martinsville, WV, forming the Ohio River channel and significantly altering the regional drainage pattern of western Pennsylvania sometime between 130,000 and 300,000 years ago. Over time, erosion and glacial outwash incised a channel into rock formations of sandstone, shale, limestone and coal. The very visible rock outcroppings that exist today are of a resistant sandstone that exist at elevations of 1,200 feet or more above sea level. A series of uplifting events has left several terraces along the river valley in some locations but in general the ongoing incising

of the river flow has resulted in a broadly flattened “U” cross section across the river with steeply ascending sides.

Most of the lower terraces along the river’s edge are composed of fluvial soils that have been deposited over time ranging from glacial outwash to more recent major historic flood events. Based on archeology investigations performed on the site since 2001, the site contains 3 to 5 feet of historic fill and flood deposits which include an abundant amount of slag and other non-soil fragments. Deeper soil horizons included sand layers of varying coarseness.

### The Ohio River

The park is located along a 0.35 mile stretch of the Ohio River between river miles 11 and 12. Technically, this portion of the river is referred to as the Upper Ohio River and in total this section stretches 40.0 river miles in length and flows in a northwesterly direction from Pittsburgh to the Ohio state line. Though the river is used for both industry and recreation, industry accounts for the majority of river traffic. Nautical traffic through the Upper Ohio River totaled 24 million tons in 2006, with coal accounting for 17 million tons or 74 percent of the total traffic. Coal moves both upstream and downstream depending on the characteristics of the coal, and on



*The Ohio River from underneath the Sewickley Bridge*

the locations of mines and coal consuming facilities. The evolution of the Ohio River’s industrial legacy has resulted in abundance of vacant or under-utilized industrial parcel known as brownfields. As a result, the Ohio River Brownfields Coalition is leading a U.S. EPA funded effort to inventory and assess the opportunities to redevelop sites for new development as well as for parks, recreation facilities and trails.

## Fern Hollow Run

Fern Hollow Run is small tributary of the Ohio River 0.72 miles in length. It begins in the hills above the park site near the Hyde Elementary School sports field and flows down through Fern Hollow before tunneling under PA Route 51 and the CSX line. While the hollow the run travels through is heavily vegetated, reducing sediment runoff collection potential and soil erosion concerns, the surrounding hills are heavily developed with single and multi-family residential. This increases the risk of nonpoint source pollution. The run deposits into the Ohio River just upstream of the Sewickley Bridge.



*The outfall of Fern Hollow Run underneath the CSX railroad line.*

## FEMA Zone AE

FEMA Zone AE are areas that have a 1% probability of flooding every year (previously known as the “100-year floodplain”), and where predicted flood water elevations above mean sea level have been established. Properties in Zone AE are considered to be at high risk of flooding under the National Flood Insurance Program (NFIP). Flood insurance is required for all properties in Zone AE that have federally-backed mortgages. Construction in these areas must meet local floodplain zoning ordinance requirements, including evidence that principle structures are above the Base Flood Elevation (BFE) as shown on the adopted FIRM maps.

The site lies at nominal surface elevation of 705 feet above mean sea level and on average, approximately 10 to 12 feet above the existing pool level of the Ohio River. Two distinct landforms occur with the AE Zone within the site. A low-lying floodplain zone which is at 2 to 3

feet above the nominal pool elevations of the river and a higher floodplain zone that is located 9 to 12 feet above the nominal pool elevation. The two floodplain zones are bound by a steep south slope which ascends to the active CSX railroad line.

Based on gauging station data, it is clear the lower floodplain zone is inundated several time or more per year while the higher floodplain zone is well within the floodway district. Based on verbal accounts from MTMA staff the lower zone has been covered by high velocity flood waters. Based on historical data from the Ohio River gauging station at Sewickley since 1933, indicated the flood of record occurred on March 18, 1936 which crested at approximately 34.75 feet above the normal pool elevation.

## Vegetation

The vegetation characteristics of the park site have been impacted through man-made disturbance cycles typical found with industrial processes/activities and repeated cycles of excavating, filling, and re-grading. The site contains areas of existing riparian/floodplain woodland ecosystems; however a large percentage of the site is heavily impacted by man-made disturbance with numerous blanketed areas of invasive/exotic plant species. These invasive/exotic plant species have further impacted the site’s bio-diversity and riverfront habitat by “choking-out” native flora and creating a monoculture understory and ground plane, resulting in a highly fragmented riparian ecosystem. The Ohio Riverfront ecosystem is one that thrives on bio-diversity and a layered woodland plant community that stabilizes, absorbs, and cleans the river



*Most of the mature vegetation on the site follows either the access road to the MTMA facility or the shore of the Ohio River.*

water, riverbanks, and associated floodplain. The park site currently contains strong pockets of native canopy trees found in healthier riparian floodplain woodlands but the rejuvenating and stabilizing layers of this woodland have been cleared and then overrun with Japanese Knotweed (*Fallopia japonica*), several invasive Honeysuckle species (*Lonicera* sp.), Tree-of-Heaven (*Ailanthus altissima*), and small pockets of Multiflora rose (*Rosa multiflora*) in dryer areas of the site. A major concern with all of the invasive/exotic species is their inability to stabilize soils, especially Japanese Knotweed, which has a tuberous root system which spreads rapidly but has little to no fibrous soil stabilization qualities. Once these plants crowd out all other species with fibrous root systems, there are no natural systems remaining to hold soils in place, leading to a high risk of erosion which is a major concern for alluvial soils.

## Circulation

### Vehicular

The major vehicular thoroughfare adjacent to the site is University Boulevard/Narrows Run Road/PA Route 51 which parallels the Ohio River. The main entrance to the site is just off of this road approximately 0.35 miles south of the Sewickley Bridge. The entrance to the site is controlled by a PennDOT traffic signal. Once vehicles have turned into the site off of PA Route 51 there is a small, six to eight car gravel parking area before the existing at-grade crossing of the CSX line (which is signed but not controlled with warning-flashers or operating gates).

The site has a gravel access drive that wraps around the old RB&W facility, towards the river's edge and continues

to the MTMA facilities. The main portion of the site is fenced and access to the site is currently controlled via locked gates.

Vehicular access for employees of the adjacent Fab-Tec facility is via a separate at-grade railroad across CSX's tracks, located approximately 300 feet east of the existing at-grade crossing into the riverfront park site. It is the desire of Fab-Tec management and CSX that this at-grade crossing be eliminated and access for employees be consolidated with the at-grade crossing of the railroad into the riverfront park site. A connection into Fab-Tec can then be made from the riverfront park site.

### Public Transit

The site is served by the Port Authority's Route 21 bus line which travels from Downtown Pittsburgh at Stanwix Street and Penn Avenue, through Coraopolis, via PA Route 51, past the site and then across the Sewickley Bridge.

### Bicycle/Pedestrian

The site is situated to become a major destination point along the proposed Ohio River South Shore Trail. The Ohio River Trail will extend from the Montour Trail, Mile Post "0" at the proposed Allegheny Sports Junction Complex located at the east side of Coraopolis. It will then travel through Coraopolis, mostly as an on-road route, via PennDOT's designated Bicycle Route A, to the Moon Township boundary with Coraopolis Borough, approximately at Thorn Run Road. From this location, the Ohio River Trail is proposed to continue west, via the Duquesne Power and Light utility corridor, parallel to the CSX right-of-way, to the entrance of the park at



*The existing entrance to the site off of University Boulevard/PA Route 51.*

Ambulance Way. A proposed feeder trail would extend from the Ambulance Way access, across and along the southern edge of PA Route 51 to the pedestrian walkway on the east side of the Sewickley Bridge.

There is a closed overhead pedestrian-span crossing over the CSX railroad tracks from the Valley Ambulance facility into the Fab-Tec complex. This span once served as the main employee access-way into the RB&W industrial complex. The ambulance facility formerly served as a locker and shower facility for employees. Although no longer utilized as a pedestrian span it does convey utility services over the railroad tracks into the Fab-Tec complex and therefore is planned to remain well into the future. There are issues with glass panels falling from the span onto the ambulance parking lot below so this issue should be addressed. The span is elevated sufficiently to not conflict with CSX's National Gateway double-stack train corridor project. Although no formal engineering assessment was performed to determine the structural integrity of the span for future utilization, it is believed that the span could be made to be safely accessible for emergency service personnel only, in order to provide direct access to the riverfront park site in the event of an emergency when a train is blocking the at-grade crossing. Making the span fully open to the public would likely be limited by Americans with Disabilities Act (ADA) regulations.

### Site and Adjacent Land Uses

The former RB&W parcel consists of concrete slabs and a basement area which were once part of the industrial complex that was cleared on the site. The site is being utilized by the MTMA for the storage of piping and other materials related to the maintenance of the Township's water supply infrastructure. This parcel is currently gated to control public access to the site. The separate parcel located between the CSX right-of-way and PA Route 51 consists of a gravel parking area which once served the industrial complex.

The riverfront site located to the west of the site is owned by the MTMA and is the site of the Authority's water supply wells.

Fab-Tec, a major specialty metals fabrication company is located to the east of the site, along the Ohio River, and includes a complex of large industrial buildings.

The Valley Ambulance Authority has its emergency response facility located adjacent to the site, along PA Route 51.

### Current Environmental (Industrial Legacy) Status

The Russell, Burdsall & Ward (RB&W) Corporation is a leader in the fabrication of metal fastening products and has been in business since 1845. The company produced threaded bolts and nuts at its facility in Moon Township from the 1920s until the 1990s. The site was acquired by the MTMA in 2002 in order to protect the environmental quality of its groundwater extraction wells.

As a result of the industrial activity that occurred on the site and the acquisition by the MTMA, site investigations were conducted in 2002 through 2004 with the purpose of pursuing a release of liability under Pennsylvania's Land Recycling and Environmental Remediation Standards Act (Act 2). These investigations included the installation and sampling of monitoring wells, subsurface soil sampling via test pits and soil borings (interior and exterior), sampling of the dirt-floor basement, collection of interior wipe and wood-block flooring samples, an asbestos survey, and sampling of soils along the river bank.

The Act 2 Remedial Investigation Report (RIR) was submitted to and approved by the Pennsylvania Department of Environmental Protection (DEP) in 2005. Soil impacts above residential and non-residential Act 2 standards were generally limited to Polychlorinated Biphenyls (PCBs) in a small area of the basement. An area beneath the building was identified as having a thin (0.1 feet thick) layer of oil floating on the groundwater table. Laboratory analysis characterized it as lubricating oil and non-PCB. Impacts to groundwater were generally limited to localized trace levels of organic compounds near the northern corner of the building. No impacts were identified at the MTMA water supply wells.

The facility was partially demolished in 2006, leaving the first-floor slab in place over the basement as a means of preventing exposure and rainwater infiltration to the oily basement soils below.

Subsequent to the RIR, quarterly groundwater monitoring was conducted (March 2007 through March 2009) to further evaluate groundwater quality and the presence of Light Non-Aqueous Phase Liquids (LNAPLs), which appeared to be dissipating. Interim remedial measures included removal of the small area of PCB-impacted soil in the basement in 2009. In addition, at the request of DEP, trenches were excavated in the northern corner of the basement with the purpose of recovering oil via absorbent booms as the water table rose to its seasonal high in the spring. This activity was conducted in 2009; however, no oil was observed, indicating that the previously observed thin layer of oil had dissipated or degraded naturally.

MTMA and Civil & Environmental Consultants, Inc. (CEC) met with DEP in 2010 to discuss RIR and post-RIR investigation findings, and to discuss options for further site remediation. Completion of the site under Act 2 was delayed pending the decisions on redevelopment of the site as residential or non-residential. DEP's primary concern has been the potential for oil beneath the building to become mobile and release a sheen to the river impacting the MTMA wellfield.

This site assessment and investigation work formed the basis of master planning concepts developed through this effort.

## Site Opportunities, Constraints and Conclusions

### Facilitate the Ohio River Trail Through-Route

Provide access for the proposed Ohio River Trail entering from the east, near Ambulance Way, crossing the CSX at-grade crossing, then continuing along the perimeter of the site toward the Sewickley Bridge and into Crescent Township.

### CSX At-Grade Crossing Safety Upgrades

Consolidating CSX crossings to one defined point of access will increase safety while reducing operation and maintenance costs. This access point could serve both the park and the Fab-Tec Industries facility.

### Reuse of Existing Building Foundation

Depending upon final environmental site assessment data portions of the remaining RB&W facility may be reused for programming or design elements within the park. If the facility is deemed unusable for park design elements the foundation concrete material can be crushed and reused for environmental capping fill material.

### Zone of Potential Environment Constraints

This area delineates the estimated limits of site contamination known at this time. This approximated area would require engineering control to "cap and close" the site to a residential standard allowing for a future public park use. The land outside of this zone and beyond the building foundation could require little or no environmental remediation and therefore would necessitate little disturbance aside from that which would be associated with proposed designs.

### MTMA Access and Limitations

The MTMA facility needs to remain accessible for service vehicles and routine maintenance. At the same time, in an effort to prevent tampering, graffiti or other nefarious activities the area needs to be separated from general park visitors. Both of these requirements can be achieved by fencing the area and providing service vehicle access/parking opportunities. As this area is centrally located in the park and will be highly visible from both inside and outside of the site the security fencing should be done in an aesthetically pleasing way not to detract from its more natural surroundings.

### 1,750 Linear Feet of Riverfront Access

The length and shape of the site provides an expansive riverfront zone. This ample space allows for riverfront programming to be achieved without any one program monopolizing the riverfront. Several related programs can be grouped together (i.e. kayak launch and day dock facilities) while other portions of riverfront may be left natural, devoid of programmatic elements.

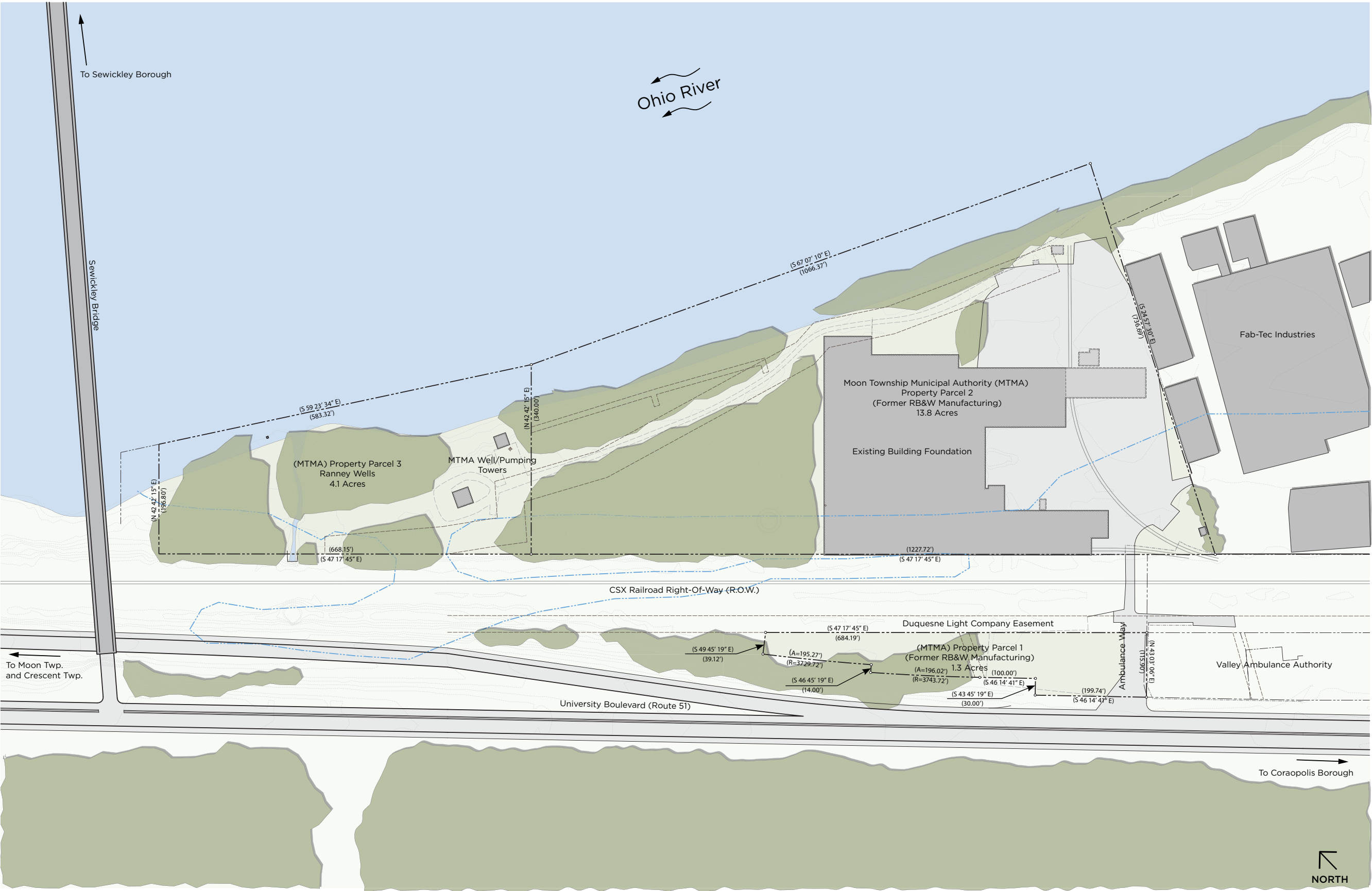
Site Analysis

Map Legend

- Building Footprints
- Woodland Vegetation
- Paved Surfaces
- Property Boundaries
- FEMA AE Zone Boundary
- Utility Easements
- Existing Contours

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Date: June, 2013

NORTH



Existing Conditions

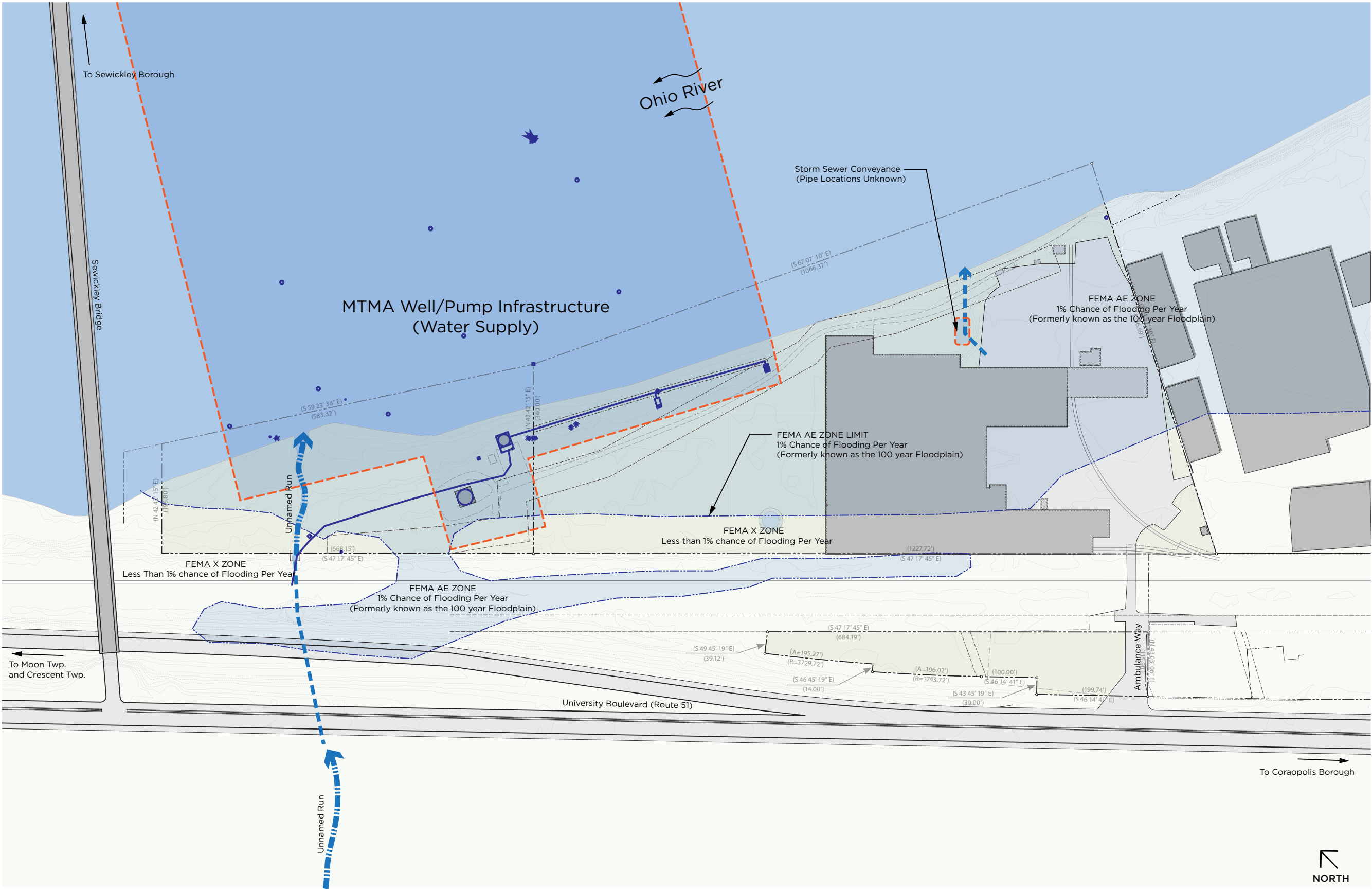
Site Analysis

Map Legend

- Building Footprints
- Paved Surfaces
- Property Boundaries
- FEMA AE Zone Boundary
- Utility Easements
- Existing Contours
- Stormwater Sewer Pipe
- Surface Drainage (Unnamed run)
- Limits of MTMA Infrastructure
- MTMA Well/Pump Infrastructure

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Date: June, 2013

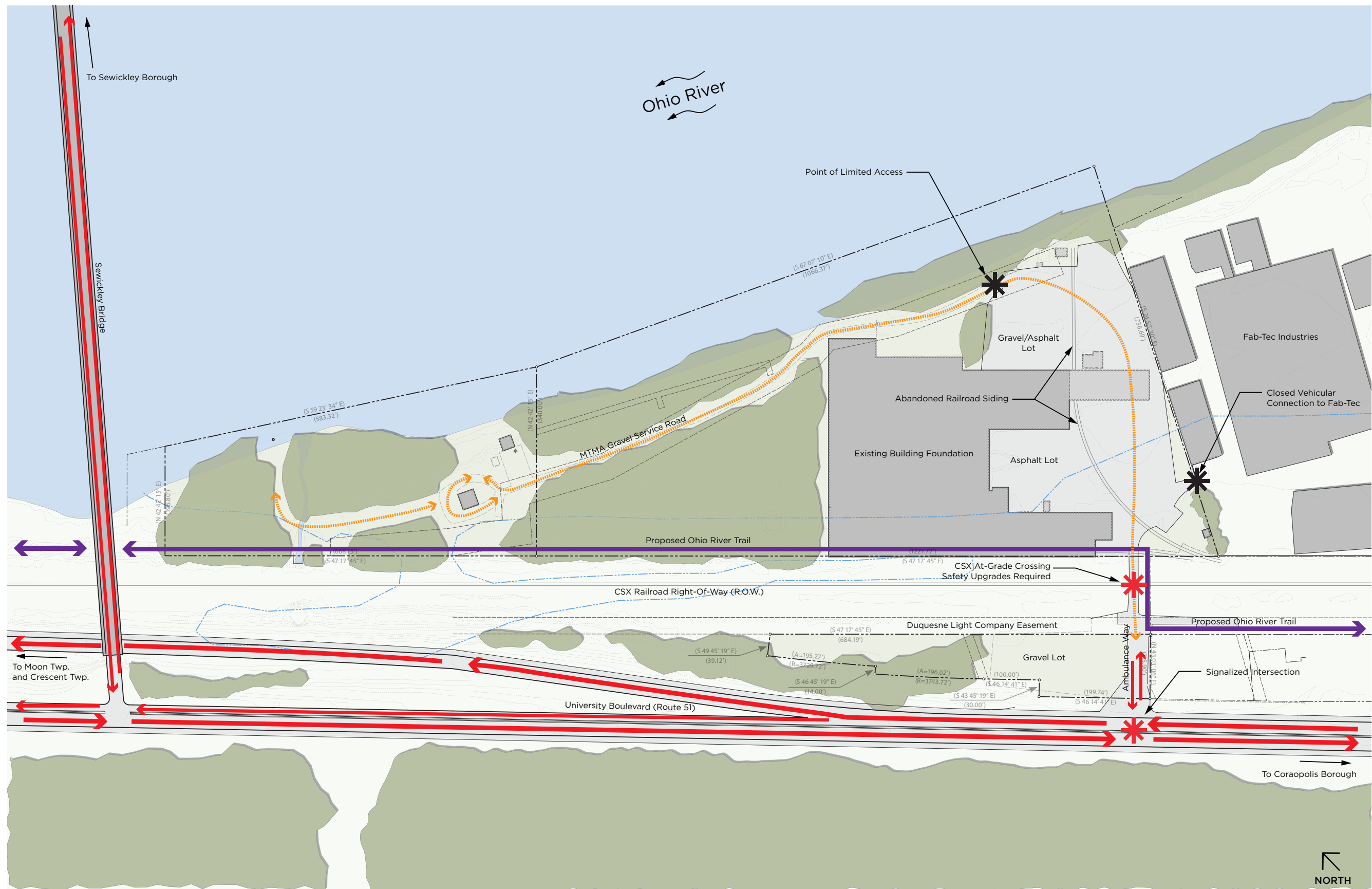
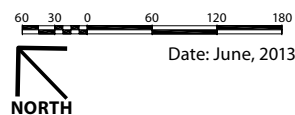
NORTH



Site Analysis

Map Legend

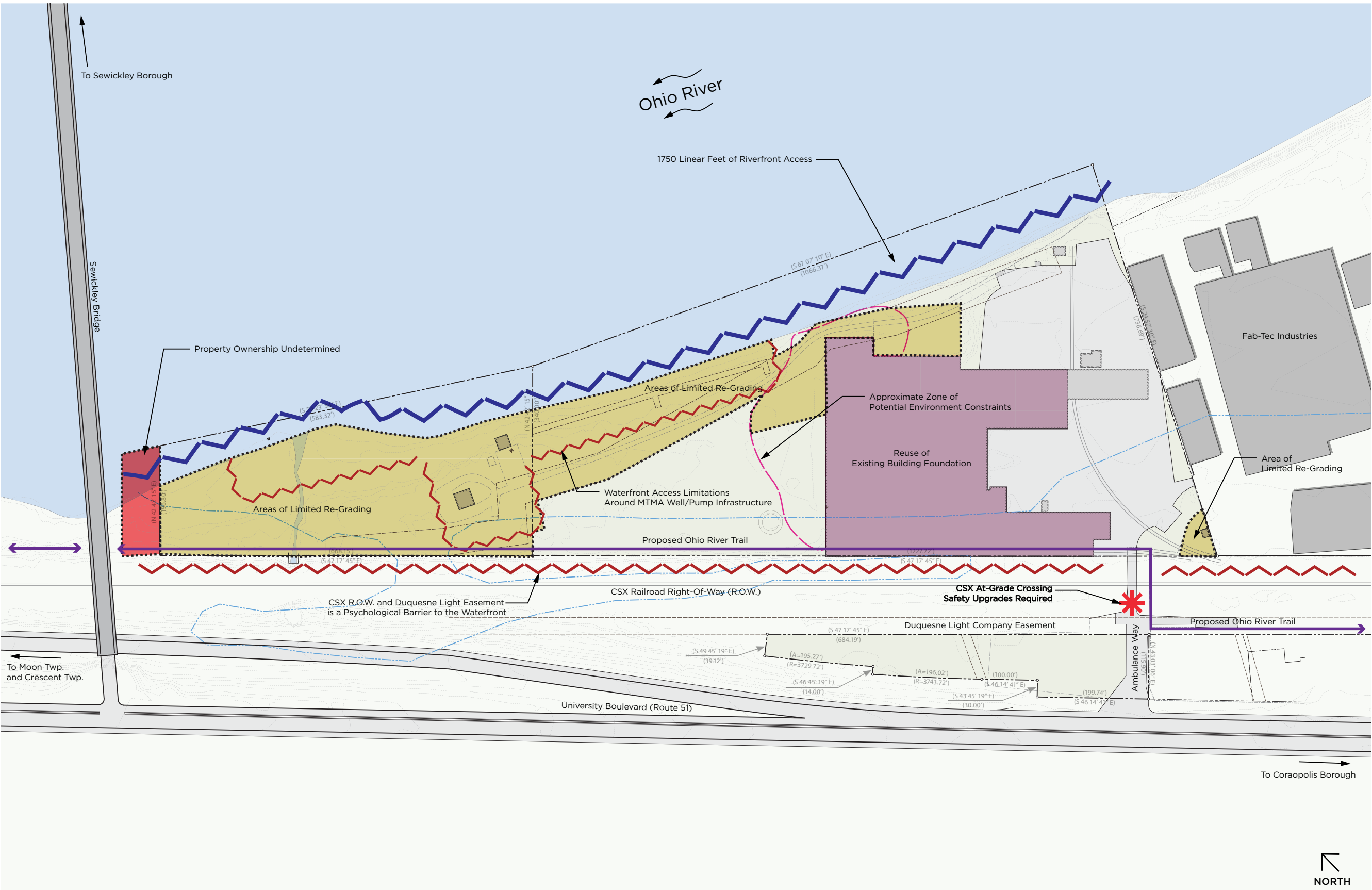
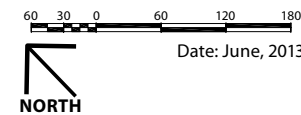
- Building Footprints
- Woodland Vegetation
- Paved Surfaces
- Property Boundaries
- FEMA AE Zone Boundary
- Utility Easements
- Existing Contours
- Vehicular Circulation
- MTMA Vehicular Service Access
- Proposed Ohio River Trail Alignment
- At-Grade Crossing Hazard
- Limited or Closed Vehicular Access Points

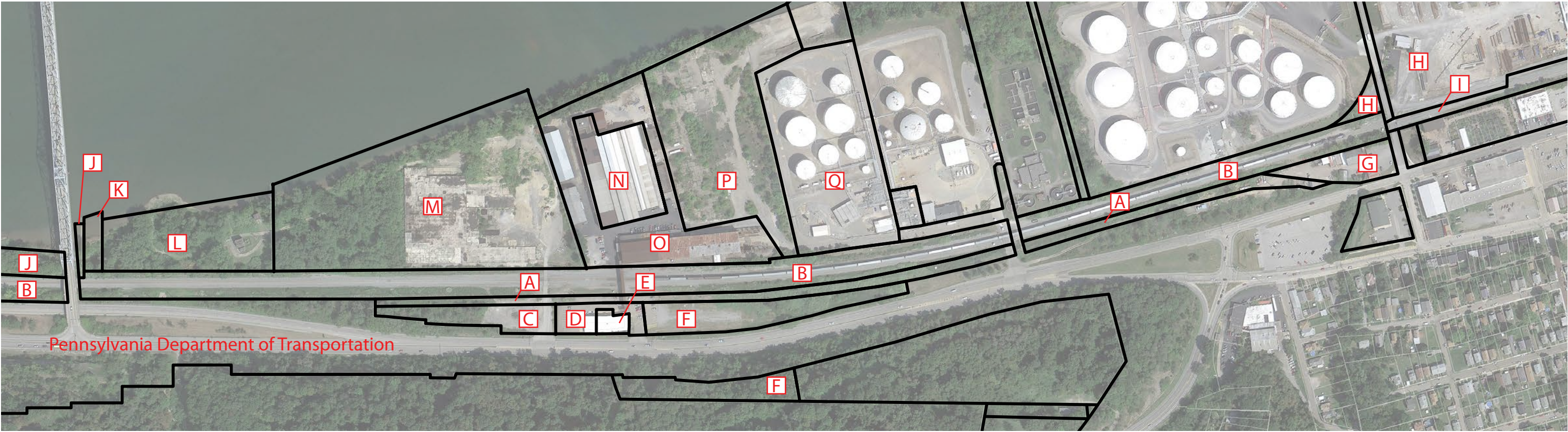


Site Analysis

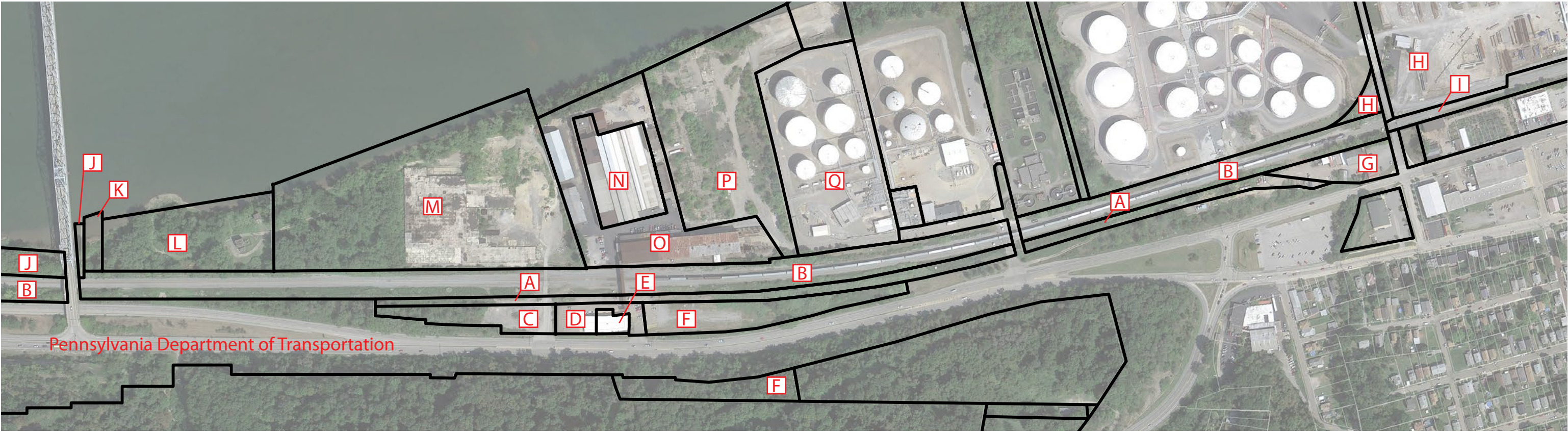
Map Legend

- Building Footprints
- Woodland Vegetation
- Paved Surfaces
- Property Boundaries
- FEMA AE Zone Boundary
- Utility Easements
- Existing Contours
- Areas of Limited Re-Grading
- Reuse of Building Foundation Material
- Proposed Ohio River Trail Alignment
- At-Grade Crossing Hazard
- Physical or Phycological Barriers
- Riverfront Access Potential
- Property Ownership Undetermined





<div><div>A</div><div>ID# 0505-D-00357</div><div>Duquesne Light Company</div><div><u>Location/ Address:</u></div><div><u>Parcel Acreage:</u> 5.34</div><div><u>Current Ownership:</u> Duquesne Light Company</div><div><u>Current Use/Description:</u></div></div>	<div><div>B</div><div>ID# 0600-B-00392000001</div><div>CSX Transportation Inc.</div><div><u>Location/ Address:</u></div><div><u>Parcel Acreage:</u> 43.22</div><div><u>Current Ownership:</u> CSX Transportation Inc.</div><div><u>Current Use/Description:</u></div></div>	<div><div>C</div><div>ID# 0505-D-00371</div><div>Moon Township Municipal Authority</div><div><u>Location/ Address:</u></div><div><u>Parcel Acreage:</u> 1.28</div><div><u>Current Ownership:</u> MTMA</div><div><u>Current Use/Description:</u></div></div>	<div><div>D</div><div>ID# 0505-H-00318</div><div>Valley Ambulance Authority</div><div><u>Location/ Address:</u></div><div><u>Parcel Acreage:</u> 0.48</div><div><u>Current Ownership:</u> Valley Ambulance</div><div><u>Current Use/Description:</u></div></div>	<div><div>E</div><div>ID# 0505-H-00316</div><div>Valley Ambulance Authority</div><div><u>Location/ Address:</u></div><div><u>Parcel Acreage:</u> 0.36</div><div><u>Current Ownership:</u> Valley Ambulance</div><div><u>Current Use/Description:</u></div></div>
<div><div>F</div><div>ID# 0505-H-00093</div><div>Moon Township</div><div><u>Location/ Address:</u></div><div><u>Parcel Acreage:</u> 1.55</div><div><u>Current Ownership:</u> Moon Twp.</div><div><u>Current Use/Description:</u></div></div>	<div><div>G</div><div>ID# 0420-R-00125</div><div>Lynn J. &amp; Susan Geisler</div><div><u>Location/ Address:</u></div><div><u>Parcel Acreage:</u> 1.01</div><div><u>Current Ownership:</u> Lynn J. &amp; Susan Geisler</div><div><u>Current Use/Description:</u></div></div>	<div><div>H</div><div>ID# 0420-R-00286</div><div>American Bridge Company</div><div><u>Location/ Address:</u></div><div><u>Parcel Acreage:</u> 31.45</div><div><u>Current Ownership:</u> American Bridge Co.</div><div><u>Current Use/Description:</u></div></div>	<div><div>I</div><div>ID# 0420-R-00397000002</div><div>CSX Transportation Inc.</div><div><u>Location/ Address:</u></div><div><u>Parcel Acreage:</u> 3.13</div><div><u>Current Ownership:</u> CSX Transportation Inc.</div><div><u>Current Use/Description:</u></div></div>	<div><div>J</div><div>ID# 0506-R-00335</div><div>Lashell Inc.</div><div><u>Location/ Address:</u></div><div><u>Parcel Acreage:</u> 5.24</div><div><u>Current Ownership:</u> Lashell Inc.</div><div><u>Current Use/Description:</u></div></div>



**K** ID# 0506-R-00338

Lashell Inc.  
Location/ Address:  
Parcel Acreage: 0.33  
Current Ownership: Lashell Inc.  
Current Use/Description:

**L** ID# 0506-R-0034

Moon Township Municipal Authority  
Location/ Address:  
Parcel Acreage: 4.12  
Current Ownership: MTMA  
Current Use/Description:

**M** ID# 0505-D-0032

Moon Township Municipal Authority  
Location/ Address:  
Parcel Acreage: 13.22  
Current Ownership: MTMA  
Current Use/Description:

**N** ID# 0505-H-00394

DPJ Enterprises  
Location/ Address:  
Parcel Acreage: 2.46  
Current Ownership: DPJ Enterprises  
Current Use/Description:

**O** ID# 0420-E-0014

Fab-Tec Industries Inc.  
Location/ Address:  
Parcel Acreage: 5.75  
Current Ownership: Fab-Tec Inc.  
Current Use/Description:

**P** ID# 0420-E-00152

Coraopolis Terminals Corp.  
Location/ Address:  
Parcel Acreage: 8.34  
Current Ownership: Coraopolis Terminals Corp.  
Current Use/Description:

**Q** ID# 0420-E-001560001

Buckeye Pipeline  
Location/ Address:  
Parcel Acreage: 7.34  
Current Ownership: Buckeye Pipeline  
Current Use/Description:

## Design Concept

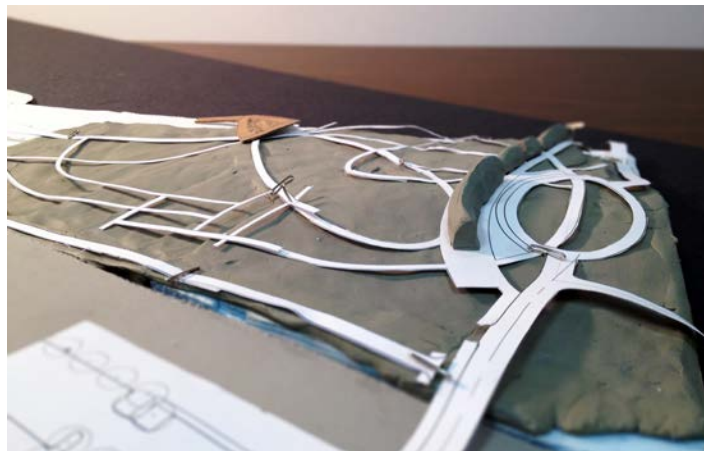
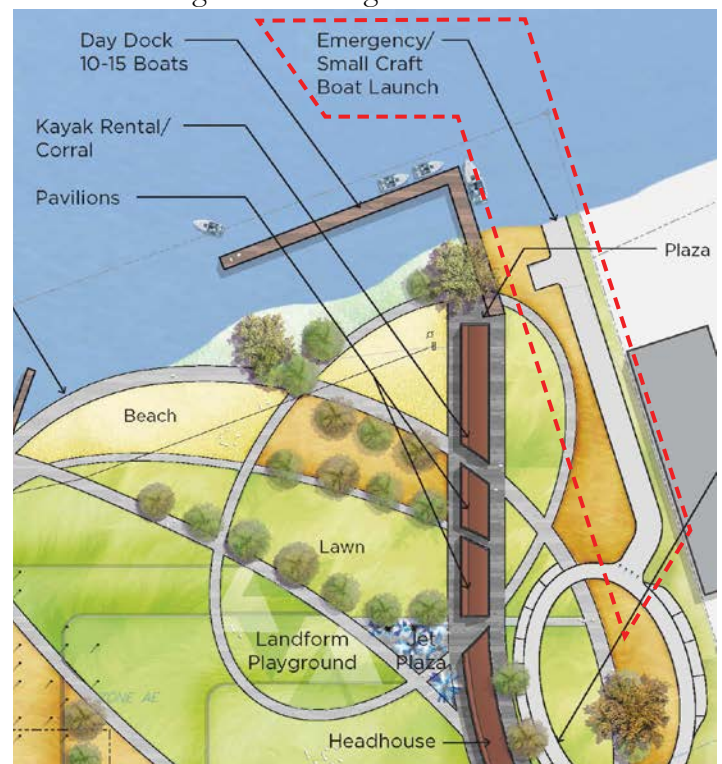
The Moon Township Riverfront Park Master Site Plan was developed in its final form after careful consideration of several conceptual sketch designs, public input and site field observations. The following facilities are proposed for the park as shown on the overall Site Master Plan drawing.

### Park Design Concept

The community's desire for diverse river-oriented activities, inter-generational exercise and wellness opportunities, physical education, environmental education, outdoor leisure activities as well as a vibrant setting for all types of social activities and events were all considered and integrated into the master plan. These desires were threaded with the site's unique manufacturing history to create a memorable experience that serves both the local community and the larger region. This was achieved through the use of a small palette of major landscape elements such as expansive lawn areas; broad promenade walkways, pathways and piers; as well as large areas set aside as natural areas; all of which are carefully located within the site. In addition, these core elements are supported by other "placemaking" aspects such as an entry plaza and promenade; food truck/vendor court for food service; a playful water jet plaza with seating; picnic pavilions; an urban beach and sunbathing areas; a fenced dog park; a unique landform playground; and the "Great Lawn" with terraced turf areas which step down toward

the river providing expansive vistas of the Ohio River and the Sewickley Bridge as well as serving as a venue for special events. All of these features further entice visitation by diversifying the experience for park visitors, creating a desire for multiple return visits.

The aesthetic of the site was based on a local vernacular. Although parks are fundamentally about landscapes and their treatment, the location, quality and aesthetic of architecture is equally important. In this case, the design of all structures serves to evoke the styles of the historic industrial uses of the site. Some elements, such as the reinforced concrete columns of the "Relic Meadow" are actually preserved aspects of this past incorporated into the design of park landscape elements. Other architectural elements new to the site reference an industrial past by their arrangement and style as seen through the proposed "Headhouse" which is a central building housing multiple uses and services, that is configured in a manner that follows the original rail siding into the site.



One of many early form studies used to direct the final design.

Other early site plans included a Emergency/Small Craft Boat Launch ramp extending from the drop-off area to the Ohio River. This access point was later abandoned in an effort to achieve target phasing cost goals.

## Park Facilities

### Active versus Passive Recreation

Through discussions with the steering committee, the public and in response to the physical characteristics of the site and a larger contextual analysis, it was determined that the balance between passive uses on the site and active recreation facilities should lean predominantly towards the passive with occasional opportunities for non-organized active recreation activities. This balance would provide recreation interest for a broad range of age and interest groups without inundating the park with an overabundance of facilities while being responsive to the delicate natural conditions of the riverfront site. Therefore, the guiding principal used to balance active versus passive space was a 'less is more' approach with only light activity being planned for and no active recreation courts or dedicated sports fields being proposed.

### Visibility and Scale

The park exists within a landscape dominated by active industrial surroundings and under the shadows of the Sewickley Bridge. Successfully addressing these contextual constraints was carefully achieved through a series of techniques to create a riverfront park that is highly visible, with multiple methods/points of access that are inviting, safe, and visitor friendly. Visually opening the park to its contextual surroundings provides sweeping river panoramas out from the park and enticing views into the park from PA Route 51/University Boulevard, the Sewickley Bridge and along the Ohio River, bringing the park to the foreground of its immediate surroundings. Once inside the park, the Great Lawn and entry promenade provide elongated and expansive vistas towards the river and the Sewickley Bridge. From the water's edge looking back across the site, the expansive Great Lawn increases the visual scale of the design and equalizes its presence within its heavily industrial context. Through these techniques the park does not stand apart from its surroundings by its scale, which is appropriate considering its large industrial surroundings, but by elements such as the Great Lawn which are unique additions to the greater context and make the park a bold punctuation mark along the Ohio River.

### Gateway and Site Illumination

The site's location at the gateway into Moon Township from Sewickley and Coraopolis Boroughs represents a major opportunity to create a signature gateway treatment to announce entry into the Township. This would be achieved through a series of architectural lighting treatments. Although after dusk use of the park is intended to be limited, site lighting treatment which highlights the unique landforms and geometries of the site will help to create an overall signature element, especially from the Sewickley Bridge. The proposed security enclosure of the MTMA well facilities also represents an opportunity to make an architectural statement through the design and treatment of the safety structure as well as internal artistic lighting treatments which could further add drama to the site, especially when viewed from the river and the bridge.

## Access

### Active CSX Right-Of-Way

Currently, the highly active CSX railroad line acts as a strong physical and physiological barrier to the site. Multiple safety and access upgrades are employed to concentrate access to the designated at-grade crossing while also providing visitors a safe, easy, and welcoming point of entry into the park. To concentrate access to the designated at-grade crossing, safety fencing will run the length of the park along both sides of the CSX right-of-way. The at-grade crossing serves as the primary point of entry into the park and accommodates two opposing lanes of vehicular traffic; a sharrow for bike access; and 10' sidewalks for pedestrian access. The at-grade crossing will also include gates, signalization and adequate areas for vehicle stacking and safe turn around. The Fab-Tec property's closed pedestrian bridge will be refurbished to provide emergency access for first responders and egress to and from the park at times when commercial train traffic is blocking the at-grade crossing.

### Private Industrial Access Road to and from Fab-Tec

The Fab-Tec facility upriver from the park is an active

manufacturing workplace. Workers drive into and out from the facility multiple times a day crossing the CSX railroad with each trip. This CSX at-grade crossing that exists today has site line and vehicle stacking limitations. The design of the park takes this into consideration by consolidating the two existing at-grade crossings into one, clearly defined and improved location mentioned previously. The improved at-grade crossing will serve as visitor access to and from the park as well as employee vehicle access point for Fab-Tec employees. Industrial truck traffic servicing the Fab-Tec facility will be continued at its current location at the Buckeye Terminals at-grade crossing located east of the site.

## Framework, Circulation and the Visitor Experience

The site has several key nodes, general punctuated by architectural features, where circulation, recreation activities and vistas or belvederes intersect, creating a heighten sense of importance. The ‘threaded’ circulation framework is tied to the sites’ industrial past and begins to tell the story of how raw materials delivered to the site were processed into nuts and bolts. Likewise, remnant manufacturing circulation paths are threaded with new paths to adapt to proposed park programming.

The primary arrival node occurs across the CSX right-of-way as a visitor enters the site and arrives at the park Headhouse and Headhouse Promenade. This arrival location is the highest elevation in the site where a park visitor is greeted with a series of uncoiling walkways that extend outward and are threaded throughout the park. The Headhouse location is also oriented to mimic the location of the rail siding used in the delivery of raw material to the former RB&W bolt and nut manufacturing complex. As the Headhouse is in many ways the interface between the arrival point and the park’s core, the structures serve many purposes including a year-round recreation building with event space, concessions, restrooms and family changing rooms (3,400 sq. ft.); two picnic pavilions (1,000 sq. ft. each); and a bike/kayak rental with winter dock storage space (2,300 sq. ft.), all of which capitalize on commanding views of the river and Sewickley Bridge.

The Fishing Pier located below the Great Lawn acts as a riverfront anchor node bookending many of the primary

programmatic elements found between the waterfront and the Headhouse on the hill above. This proximity to the Ohio River’s edge provides numerous opportunities for visitors to interact with the river environment such as opportunities for fishing bird watching, and sun bathing. The southern edge of the Fishing Pier is also the intersection for many of the site’s trails and pathways that take park visitors further into the natural and exploratory areas of the park.

## Design Elements

### Gabion Retaining Walls

Building upon the threading concept and expanding it to include the notion of an “unraveling” of the industrial past, relatively inexpensive gabion walls are proposed to be constructed from recycled and crushed concrete. To provide a more desirable architectural finish the gabions are hand stacked along the exposed wall faces then backfilled with remaining rubble and dressed with architectural and structural metal tie-downs. These 12-18” walls serve multiple functions including opportunities for seating, directing circulation, and park events as well as reinforcing the overall design geometries. Much of the site is required to be “capped” by an impervious engineering control for the required environmental remediation of the site. This capping, coupled with historic topographic modifications (made to better support industrial activity) has increased and constrained the elevation change from the point of entry into the park down to the water’s edge. This creates a plateau effect that acts as a barrier to the natural areas of the park and the Ohio River. The low gabion walls assist in absorbing these changes in elevation by allowing for a series of gently sloping lawn terraces that step down toward the river. From the Headhouse and the top of the Great Lawn the walls act as traditional ‘Ha-Ha’ landscape elements gently altering the landscape without being obtrusively visible. A Ha-Ha wall is a very old and traditional landscape element used by European landowners as an alternative to a fence as a method of keeping livestock away from the residential portions of a farm or estate. Looking back towards the Headhouse from the river, the walls become exposed elements in the landscape revealing the site’s industrial and manufacturing past.

## Boardwalks and Piers

The Ohio River is the dominant natural feature of the riverfront, attracting a broad range of visitors for various types of water play activities. Providing multiple points of access to the riverfront was an issue identified by the community as a top priority for any proposed design. Visitors to the park will want to “reach out and touch the river” and the boardwalks and piers provide the opportunity for a tactile river experience. From these elements, visitors can launch kayaks and canoes, dip their feet in the water, cast out a fishing line or simply enjoy the stunning views while the sights and sounds of the Ohio River flow past them. Though only a few of these boardwalks would be in place year-round, all would be ADA accessible.

## Vegetation Strategy

Portions of the park site contain areas of existing riparian floodplain woodland ecosystem, mostly along the river’s edge and on the MTMA Ranney Well property. Although these areas are identified as riparian floodplain woodland, much of these areas are highly disturbed with numerous invasive/exotic plant species. The impact of these invasive/exotic plant species has created a monoculture understory and ground plane which has created a highly fragmented riparian ecosystem. The approach taken was one of restoration and plant diversity/plant community expansion through an invasive plant removal regiment, plant installation and reestablishment of the riparian floodplain woodland. Newly developed areas of the park specifically over the remediation cap will establish new plant communities in the form of lowland and upland meadows, rain garden swales, and the reintroduction of native tree species typically found in the Pittsburgh region of the Ohio River. These combined long term and short term vegetation strategies will create a riverfront habitat that increases biodiversity, promotes native flora and fauna and improves the overall health of the Ohio River ecosystem. Restoring the park landscape towards its natural habitat was a key priority identified during the public involvement process.

It is recommended that a long term program focused on identifying, managing, and eradicating noxious and invasive/exotic plants from the Natural Areas be established.

## Programmatic Elements

### Great Lawn

Acting as a remediation cap for much of the site’s contaminated debris, this lawn serves a multitude of utilitarian and passive programmatic functions. At approximately 51,500 sq. ft. this area can host traditional day time activities from sun bathing, picnicking, kite flying, ball playing and frisbee tossing to the more event oriented activities such as daytime concert series or craft/food festivals. On special occasions when the park is open for the evenings the space provides terraced seating for outdoor movie festivals and could host firework shows over the river or formal white tent dining events.

### Relic Meadow

The 84,300 sq. ft. Relic Meadow is used to reflect the industrial past and history of the site while increasing the biodiversity of the delicate riverfront environment. This is achieved by preserving the original concrete columns of the RB&W factory while remediating and capping the spaces in between the columns with herbaceous vegetation such as grasses and wildflowers. The Relic Meadow becomes a symbolic embodiment of the larger site concept illustrating natural elements mending and reclaiming the land, while representing a strong aesthetic presence of the park’s industrial past throughout the seasons. At night, the relic columns of the meadow will be gently illuminated by up-lighting to create visual interest for those crossing the nearby Sewickley Bridge and during special evening events within the park.

### Dog Park

At 47,800 sq. ft. the fenced dog park provides an enclosed area for park visitors to unleash canines for exercise and play, something rarely found in the surrounding communities. Depending upon how the space is eventually used, the dog park could be further subdivided with portions provided for small and medium sized dogs separate from those for larger breeds. On-leash dog walking should be allowed throughout the park. This approach often helps to provide additional security to the park since dog owners who bring their dogs for exercise are often the first visitors to arrive at the park each day, giving the dog a little workout before work, and

are also the last visitors to leave, getting in a game of fetch after the workday has ended. Providing a designated and fenced area for the dogs to be off the leash also helps to substantiate a leashed dog policy within the remainder of the park reducing several potential conflicts.

### Urban Beach

The Urban Beach is a site specific approach to beach creation which deviates from the traditional sand beach experiences found along lakes, oceans and other non-flowing bodies of water. Here, the Ohio River and its occasional flooding would render a typical sand beach a problematic design element as it would require frequent sand filtering and replenishing. To adjust for this natural occurrence, the Urban Beach is elevated several feet above the river's edge and includes design elements that utilize dune-like landforms, seating walls and sandy-like alternative surfaces that would remain stable and easier to maintain during moderate flood events.

### Kayak/Canoe Launch and Day Dock

The kayak/canoe launch and day dock facility are combined in order to reduce the amount of dock/launch space needed in the park therefor reducing year-round maintenance costs. This combined launch and day dock facility is located along the river's edge at the terminus of the Headhouse promenade adjacent to the bike/kayak rental/corral. At this location those who have rented small paddle boats or brought their own canoe or kayak can put-in while at the same time allow motorized watercraft arriving from nearby launch facilities to temporarily dock and visit the park. The current design of the dock provides space for 10-15 motorized craft to dock without interfering with paddle craft launching, which would occur on the protected inside or shore-side portion of the dock. The design of the day dock is flexible and can be expanded or contracted based on demand, seasonal removal/maintenance and extreme flooding conditions. The entire element would be ADA compliant.

### The Headhouse

The Headhouse serves many functions in this design. At approximately 3,375 sq. ft. it can accommodate public restrooms, family changing rooms, a park administration/welcome office, indoor event space, indoor/outdoor

kitchenette and concession room for events, a mechanical room for the adjacent Jet Plaza, and storage space. All of these amenities would be part of the year-round Headhouse facility. Aesthetically, the building's footprint follows the historic rail siding of the RB&W facility as do many of the other buildings in the design; however, the Headhouse is set apart physically and in scale, from these other structures due in part to its proximity to the park entrance, the Jet Plaza and the Great Lawn.

Being located so near to the park entrance makes this structure the ideal place to accommodate several of the functions mentioned previously. An administration office and welcome area help to orient first-time visitors with the park and outline several of the park's unique features. The location of the Headhouse also serves as a support building for the adjacent Jet Plaza providing water and power supply; men's and women's bathrooms; and family changing rooms. The oval entry drive is designed to accommodate both one-way through traffic circulation as well as the parking of food vendor trucks adjacent to the Headhouse. Finally, the Great Lawn on the western side of the Headhouse can help support functions, events, or activities that might occur on the Great Lawn, such as markets, festivals or formal events which may need a year round building that can support a wide range and diverse set of needs typically found in a public park type setting.

### Landform Playground

While traditional play equipment such as swings, slides and monkey bars are undeniably important aspects of early childhood development, the organic play opportunities supported by the Landform Playground provide unique opportunities for creative and experimental play often lacking in many modern parks. Several scholars on the subject of early childhood development, such as author Richard Louv and architect Mikyoung Kim, describe this play as both mentally and physically expanding. As opposed to traditional play equipment where the use is clearly defined (swings are for swinging, slides for sliding) the exaggerated rubber topography of the Landform Playground invites children to push the limits of their tremendously creative minds to craft their own games and adventures. Often, these spontaneously created activities blur gender roles more than traditional play equipment

and tend to include, rather than exclude, groups that might otherwise play separated.

Aesthetically, the Landform Playground coincides with the larger design concepts of the park. A centrally located traditional playground, complete with swings and slides, could distract from a visitor's entry experience to the site. The topography and lower vertical elements of the Landform Playground, though still centrally located for easy access, do not visually compete with expansive vistas and long views along pedestrian promenades found within the park.

## Pavilions

Five pavilions are proposed for this park. The largest two pavilions are located near the Headhouse structure and Headhouse Promenade that follows the historic rail siding of the RB&W facility. At approximately 1,000 sq. ft. each, the buildings can accommodate numerous picnic tables and be used spontaneously or rented for larger group events providing a major revenue generator for the park. The buildings could also accommodate special recreation programming for camp programs, etc. The location next to the main drop-off area and restrooms allows for easy access and convenient utility hookups.

Three other pavilions are proposed throughout the site. These facilities are approximately 400 sq. ft. in size and are located at the intersections of various circulation paths. Like the larger facilities, these pavilions could be rented for family picnics or used for summer day camp type programs. As these are located further into the site and adjacent to many of the defined natural areas, these pavilions could also serve as field houses for small research projects or science camp-type activity stations.

## Environmental Education Landscapes/Wildlife Areas and Lookouts

The south and western portions of the park would be preserved and enhanced for environmental protection, wildlife habitat and environmental education. The shallow waters of the Ohio River and the lowest terrace level of the riparian floodplain surrounding its banks will provide the opportunity for excellent wildlife habitat observation and education. A boardwalk system with lookout areas

of varying heights is provided in key locations on the site to bring visitors into sensitive areas without creating an ecological disturbance. Supporting these boardwalks is a series of nature walkways and trails that transect the range of natural habitats found within the park from upland dry meadows down to and out beyond the river's edge. An interpretative signage program will be included to assist in flora and fauna education.

## Jet Plaza

The Jet Plaza is located near the main entrance to the park abutting the year-round Headhouse building. This programmatic element provides a major seasonal attraction for all age groups looking to cool off in the hot summer months. Unlike a structured splash park with numerous rigid elements, the Jet Plaza can simply be turned off during the cooler months of the year and the space can serve as a traditional park plaza allowing for café style seating, demonstrations and many other leisure activities that surround and support the Headhouse building. The Jet Plaza will have proper drainage with non-slip stone and/or concrete surfaces that conform to the American's with Disabilities Act (ADA).

## Trails and Pathways

### Pedestrian Circulation

The circulation system is based on the desire to provide the maximum amount of pedestrian and bicycle opportunities on the site while reserving vehicular circulation opportunities for maintenance and emergency vehicles only, west of the Headhouse.

Three tiers of pedestrian circulation exist throughout the site. These tiers range from 8'-12' in width and connect the various programmatic elements of the site. The primary tier of circulation consists of a 12' wide pedestrian/bike path network that doubles as emergency and maintenance vehicle access throughout the park. This paved path connects the park entrance with the future MTMA facility and interior sections of the park closer to the river's edge. Adequate space for service vehicle and equipment parking at the existing MTMA facility has been designed for. From here, the main path turns

east and is a 12' wide asphalt path traveling between the Riparian Forest and the Natural Area before looping back to the Headhouse and the park entrance.

Secondary and tertiary pedestrian trail networks allow visitors to move freely throughout all sections of the park and provide direct connections to amenity destinations. These networks provide opportunities for education, fitness, and leisure strolling and would be made of crushed granite surfaces for ADA accessibility as well as the occasional boardwalk decking when appropriate.

### Support Facilities

#### The Ohio River Trail

The proposed Ohio River Trail will extend from the existing Montour Trail Mile Post "0" in the proposed Allegheny County Sports Junction Complex, through Coraopolis, as an on-road facility, to the Moon Township line, near Thorn Run Road.

The first phase of the trail will be engineered and constructed as part of the Ohio River Trail Federal Highway Administration's Transportation, Community and System Preservation (TCSP) grant awarded to Coraopolis Borough and Moon Township for the first implementation phase of the Ohio River Trail from the Montour Trail to the Sewickley Bridge. The Township should initiate discussions with Duquesne Power and Light regarding the use of their utility right-of-way for the location of the Ohio River Trail parallel to the CSX right-of-way, from Thorn Run to Ambulance Way, at the entrance to the park. Although the opportunity exists to locate the trail along existing PennDOT right-of-way for PA Route 51, utilizing the Duquesne Power and Light right-of-way allows greater opportunity to provide additional overflow parking for the park, adjacent to PA Route 51, within PennDOT's right-of-way. A joint coordination meeting with representative of both entities should be initiated to advance this effort since the trail project is likely to advance, based on committed funding, in late 2013 or early 2014.

Once the Ohio River Trail reaches the park site, it will continue toward Crescent Township, via the multi-use trail/MTMA access drive, which parallels the CSX right-of-way. The proposed trail would continue beyond the MTMA property, underneath the Sewickley Bridge, paralleling the river to a point where it connects with the U.S. Army Corps of Engineers Dashields Lock Complex and ultimately Crescent Township's Shouse Park, also located on the riverfront.

#### Two-Story Rental and Winter Dock Storage Building

The promotion of water recreation and biking traffic/activities are recreation programming elements that boost visitor attendance in a park that is located remotely from residential neighborhoods, commercial downtown areas, and other public, civic or recreation spaces. These activities are the "foundation" of the riverfront park that must be a self supporting public recreation space. The bike/kayak rental/corral portion of the building assists in supporting these necessary recreation activities. The rental/corral becomes a destination point for the bike and boating recreation activities. The rental of recreation equipment further also creates a revenue stream to offset the operation costs of the park. The seasonal storage portion of the building allows the Township to store docking, boating and other park recreation equipment during the winter or the colder months of the year. This two story rental and storage building becomes a major destination node within the park.

#### Park Maintenance Access Road and Large Vehicle and Service Equipment Staging Area Adjacent to the Fenced MTMA Pump/Well Tower Area

Maintenance and emergency vehicle circulation has been incorporated into the park's pedestrian circulation system. As mentioned in the "Pedestrian Circulation/Trails and Pathways" portion of this plan, the primary tier of circulation consists of a 12' wide pedestrian/bike path network that doubles as emergency and maintenance vehicle access throughout the park, including access to and from the MTMA facility where there is a 3,300 sq. ft. asphalt paved area for equipment and vehicle staging and maneuvering. This portion would also serve as the proposed route of the Ohio River Trail through the site.

## MTMA Security Fencing

The MTMA facility currently located near the center of the site is operational and must be fully accessible and also secure from park visitors. A full security fence enclosure of the MTMA well infrastructure area is proposed. However, as this is such a large and centrally located park element, the type of security fencing used and its visual impact on the park has been carefully considered. Rather than the typical chain link or barbed wire fencing, the MTMA security fence will be constructed with sliding architectural panels of mesh or perforated metal used to screen the facility from the view of visitors while providing several maintenance access points along its perimeter. At night this screen could be artistically illuminated from the top down or from the interior by low voltage LED lights, providing both security lighting and highlighting the park from the nearby Sewickley Bridge without producing light pollution or off-site glare.

## PA Route 51 Signalized Intersection Upgrades

The existing intersection of Ambulance Way and PA Route 51 is currently signalized. The Ohio River Trail feeder route is proposed from the site at Ambulance Way, along the south side of PA Route 51 to the traffic signal at the south approach to the Sewickley Bridge and connecting to the existing pedestrian walkway on the east side of the bridge. Both of these signals should be upgraded to include pedestrian signals once the feeder trail connection is constructed.

Ambulance Way should be studied in more detail by a traffic engineer, in consultation with PennDOT, to determine if any reconfiguration of the intersection approach is necessary once the park is constructed, including potential turning lanes since there is little room for stacking before the at-grade railroad crossing. At the time of this master planning effort, a great deal of “turn-around” movements were observed by motorists avoiding the lengthy queuing at the eastbound approach lane onto the bridge; however this is occurring during an unusual traffic condition created by the ongoing rehabilitation work on the Ambridge Bridge which is forcing more traffic onto the Sewickley Bridge. Depending on the more typical conditions, a narrow concrete median may be desirable through a portion of Ambulance Way to

deter illegal turn-around activity if it's deemed to be a long-term problem.

All of Ambulance Way is proposed to be reconstructed with a sidewalk and curbs and gutters to better define the traffic patterns and provide pedestrian safety. The reconfiguration of the exit drive from the Valley Ambulance Authority should be considered as well, including potentially some sort of controlled access to ensure that this route is never blocked during emergency calls.

## Primary Parking Areas

The main parking area for the riverfront park is located on the south side of the CSX Railroad. The parking lot is accessed from the park entrance road that connects directly to PA Route 51. The area includes room for 107 parking spaces, including 8 stalls for handicapped patrons. The main parking area will be paved with asphalt and curbed. Trees will line the north edge of the lot with a few trees interspersed on planting islands within the parking area. To the south of the lot there will be rain garden swales to accommodate runoff produced by the pavement.

The entrance road to the park crosses over the threshold of the railroad to provide access to the park. In front of the main Headhouse, there is a turnaround oval which includes parking bays for food vendor trucks and water/electric hookups for them to set up alongside the park.

## Overflow Parking and Valley Ambulance facility Access

During periods of increased park attendance and/or large park events, approximately 160 overflow parking spaces could be made available to the east of the Valley Ambulance facility. Additionally, the option exists to permanently remove or block off a portion of the overflow lot and reallocate that space for a Valley Ambulance emergency heliport if Valley Ambulance decides to expand to include medevac services.

## Utilities

Water is provided to the site by the extension of an existing 6" waterline that currently travels in a downriver direction on the north side of the CSX line between the former BP tank farm and the Buckeye tank farm (both properties now owned by Buckeye). Extending this service into the park would also make it possible for the adjacent Fab-Tec facility to access this utility. Fab-Tec has expressed a desire to have potable water services provided to its complex.

Sewer service can be provided by connecting to an existing line feeding into the sewage pump station already on the site near the main entrance drive. Ideally, this can be a conventional gravity driven system and not require any additional "lift" pumping infrastructure; however, further investigation and a more extensively engineered grading plan is needed to be able to make this determination.

## Stormwater Management

Stormwater management facilities will be required for the increased runoff associated with the development of the park facilities. All stormwater management facilities should be designed in accordance with Moon Township ordinances and Beaver County/EPA Municipal Separate Storm Sewer System (MS4) requirements. The stormwater management approach should be soft engineered and vegetated as not to detract from but rather expand the habitat opportunities for local flora and fauna.

## Signage

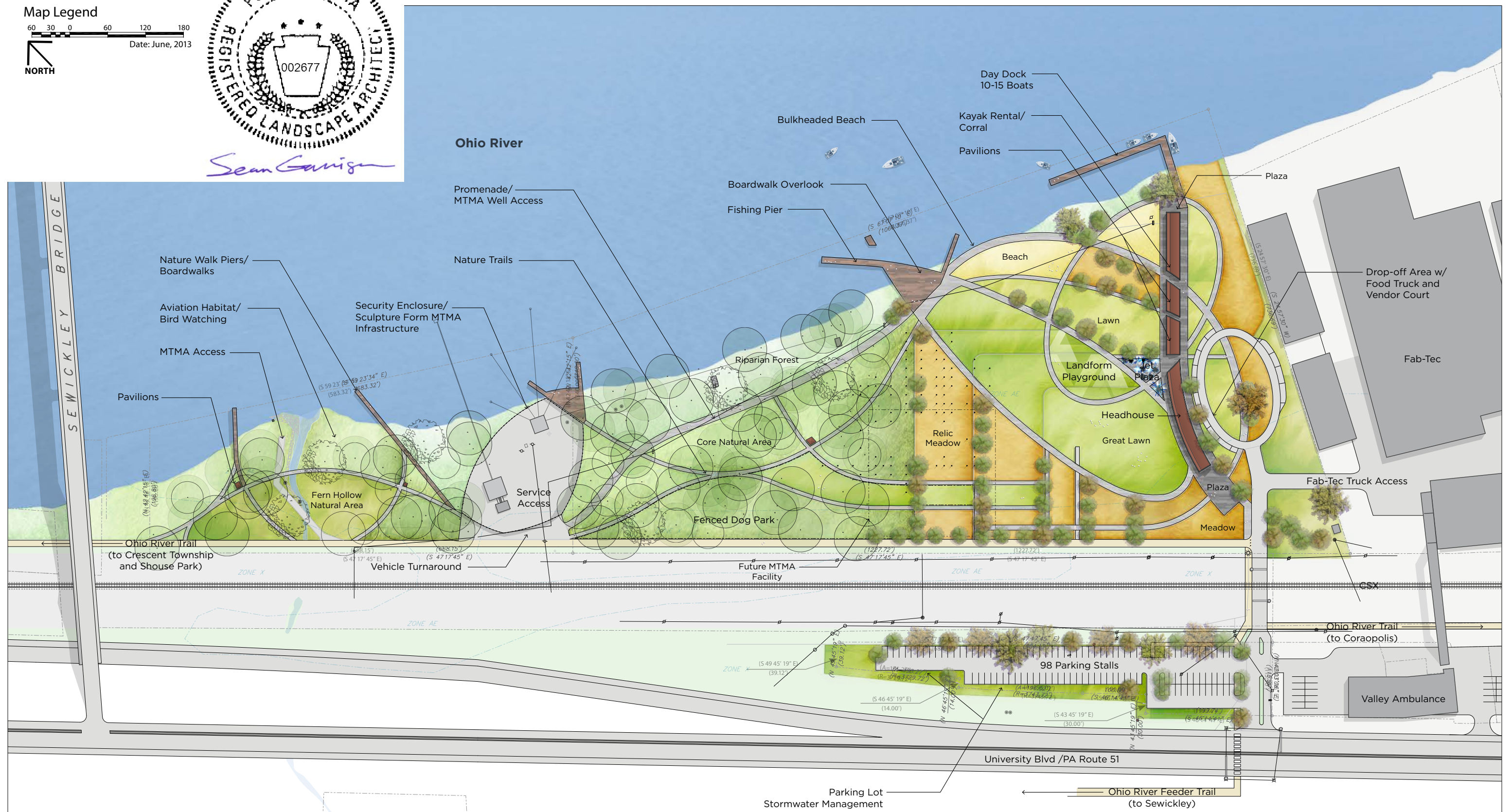
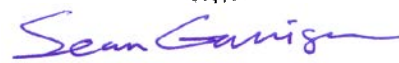
The park incorporates several levels of signage starting with a primary park sign at the entrance off of PA Route 51. This sign would begin to brand the park and make its entrance clear to those traveling along the PA Route 51 corridor. Moving into the site there would be a secondary sign defining arrival accompanied by two kiosks used to promote park events and general regulations/announcements. Placed throughout the park there would be a series of interpretive, directional, and regulatory signs as appropriate designed to convey the image of a quality recreation facility and communicate necessary information. Interpretative signs should be provided in conjunction with the proposed environmental education facilities.

**Map Legend**

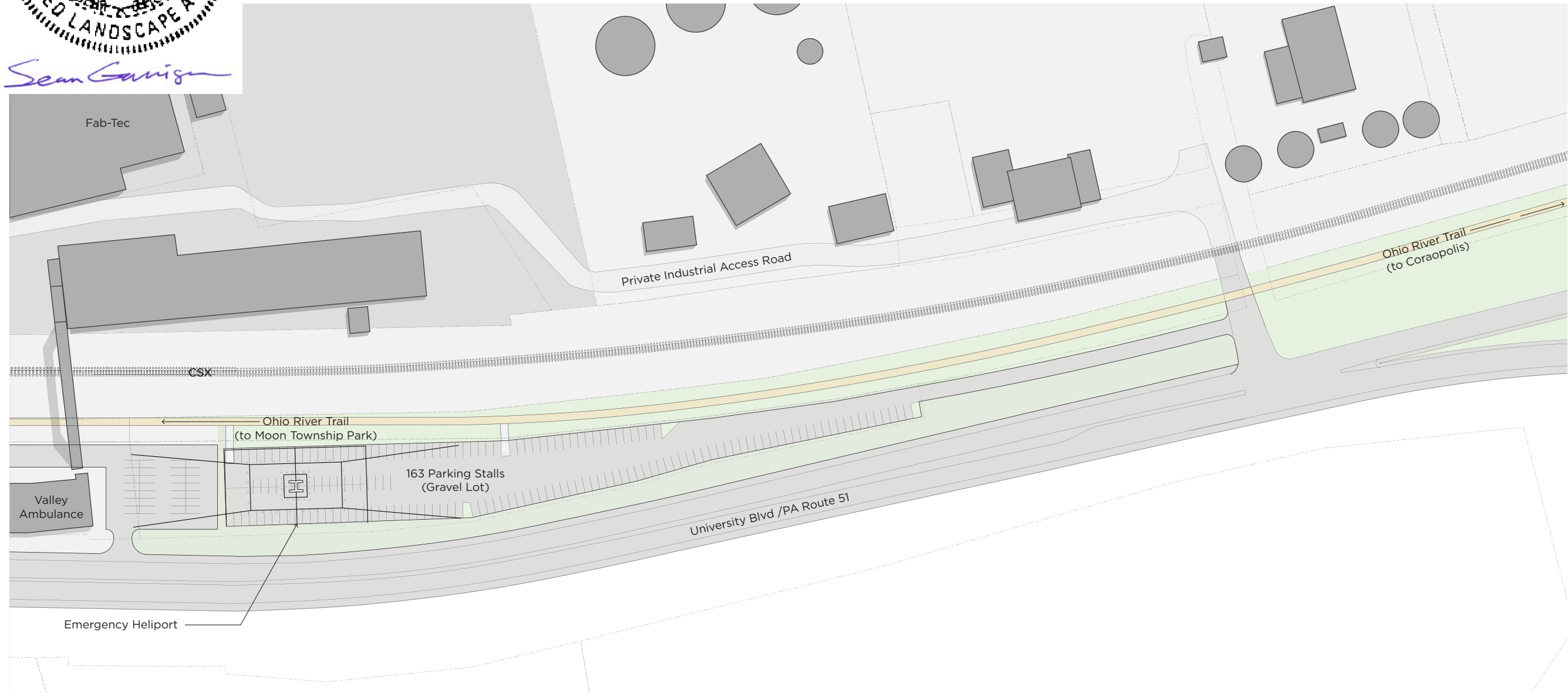
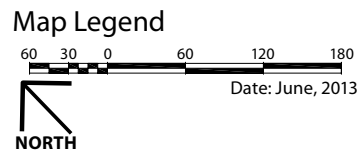
60 30 0 60 120 180

Date: June, 2013

**NORTH**

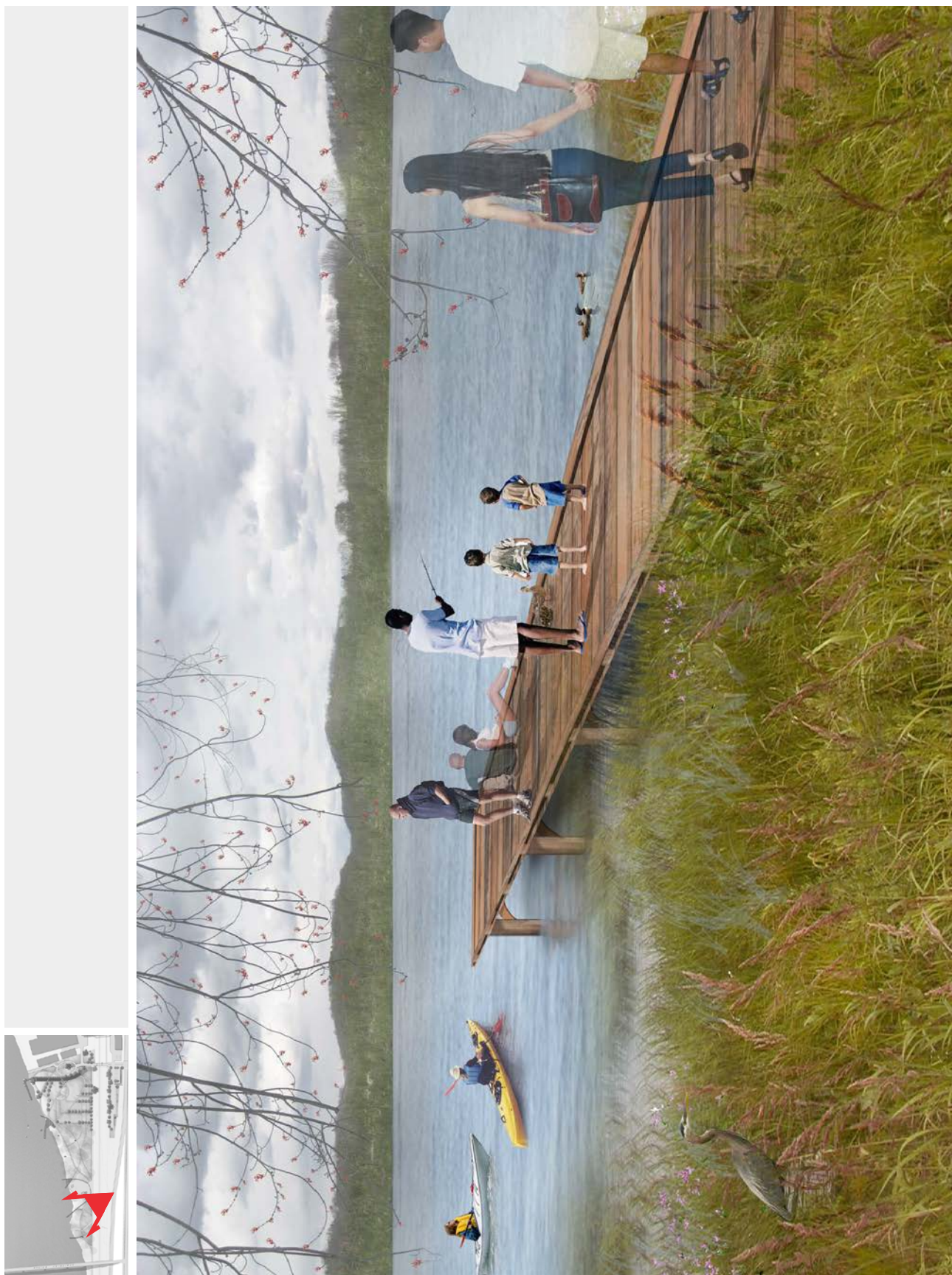


Park Master Plan





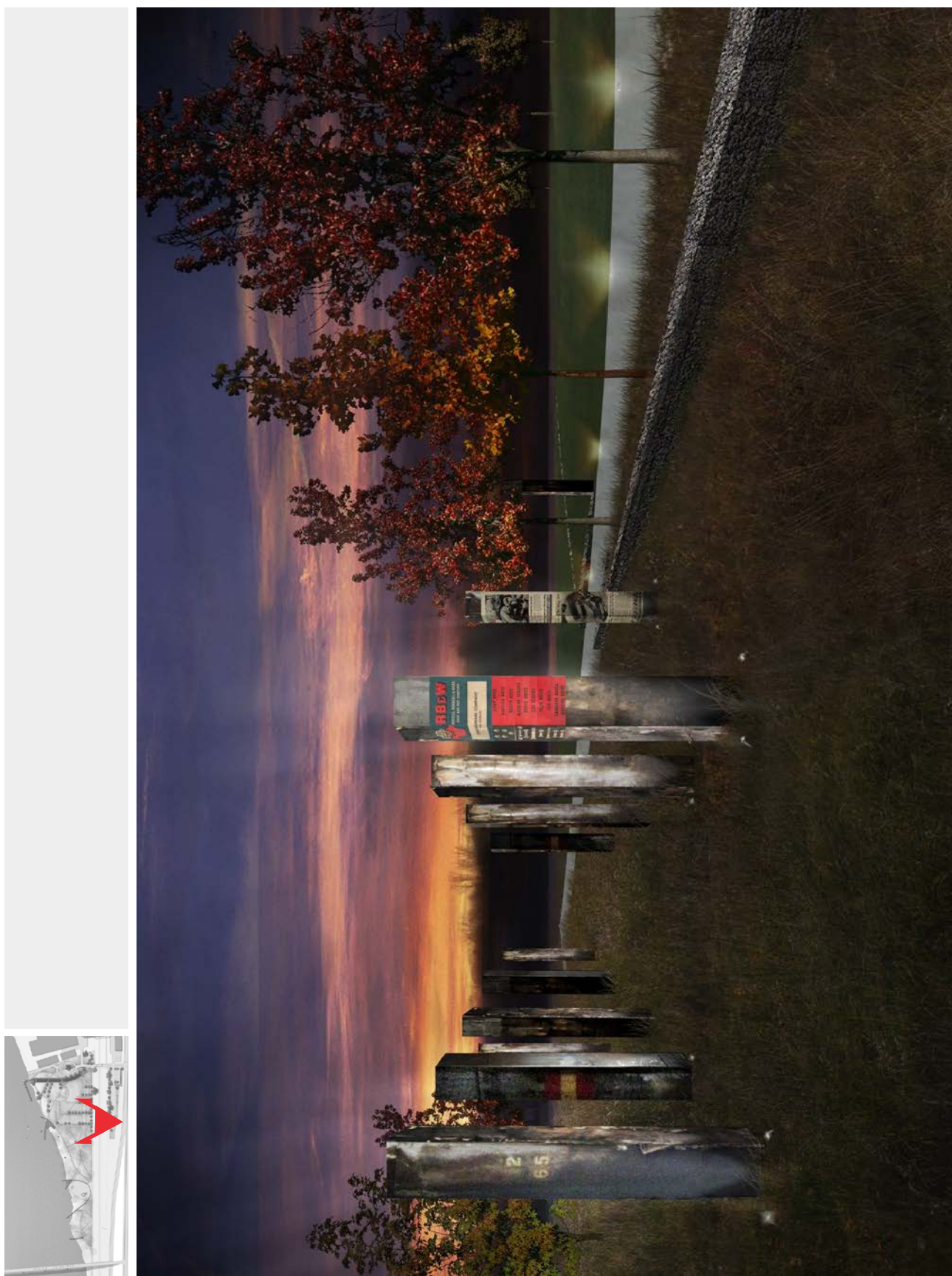
The Great Lawn



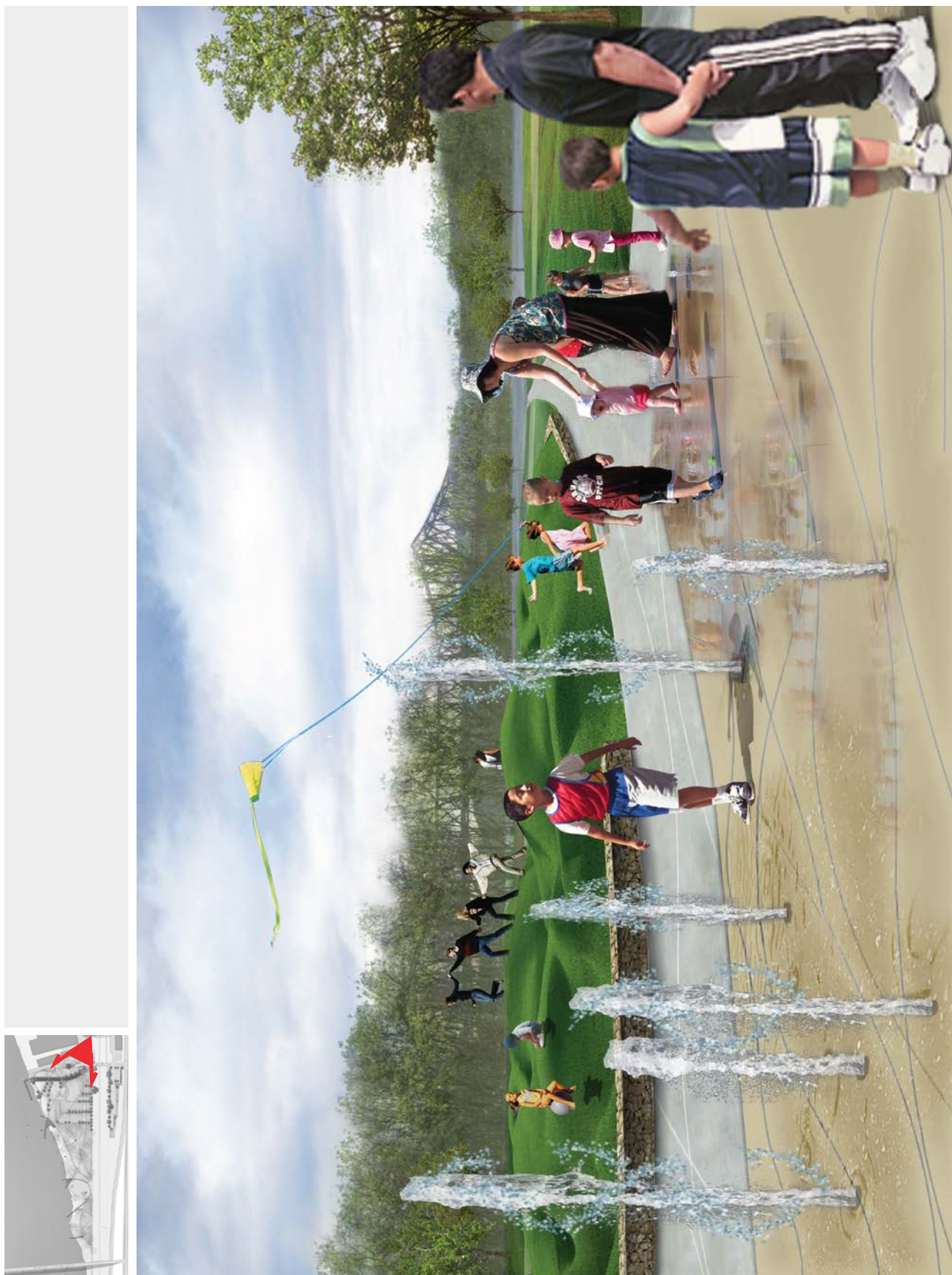
Fern Hollow Natural Area



*Relic Meadow*



Relic Meadow Night Rendering



Jet Plaza and Landform Playground

## Summary of Proposed Remedial Measures

### Moving Forward Under Act 2

Based on the data collected for the RIR and the results of the interim remedial activities, the site meets the residential State-Wide Health Standard (SHS) for soil. However, previous investigations of the site did not concentrate on the areas in the eastern half of the property where a large earthwork cut is planned so this conclusion may or may not be valid for the materials in this area. As noted, the DEP still is concerned about the potential for the onsite oil to migrate from its current location and reach the river and to impact the MTMA production wells. The SHS for groundwater at the site may be able to be met since there are very limited instances of contaminants detected and basic groundwater modeling is anticipated to show minimal migration and no impacts to the nearest receptor. Further discussion with MTMA and DEP need to be held to confirm this possibility given the presence of the oil beneath the building.

If a SHS for soil cannot be met, a Site-Specific Act 2 closure will need to be pursued. This will necessitate the completion of a Risk Assessment Report (RAR) to show that exposure routes to park patrons can be effectively eliminated via the construction of the planned park. After review and approval of the RAR, a Cleanup Plan will be required to describe the proposed site remediation.

The concept for site remediation is to install a cap over the oily soil in the basement footprint. This cap will have multiple roles:

- Eliminate direct-contact exposure to the oily soil;
- Inhibit the offsite transport of oil from the soil to the groundwater via surface water infiltration;
- Inhibit the migration of oil on the groundwater (if present).

The surface redevelopment of the cap area and other portions of the property are also considered part of the site remediation. Redevelopment of the site as a park

provides additional cover with soil, trails, vegetation and structures.

The major steps toward completion of remediation include the following:

- Meetings with DEP to further discuss the remediation concept
- RAR preparation
- Cleanup Plan preparation
- Obtaining necessary county, state, and federal permits

A final report will be prepared to document the remediation activities and achievement of the Act 2 standards.

### Site Engineering Considerations

In addition to the Act 2 costs for the project, CEC has developed a level of magnitude cost estimate for the site work. This cost estimate, including the scope of work as discussed with Stromberg/Garrigan & Associates (SGA) during a November 9th telephone conversation, has been incorporated into 'Construction Cost Analysis' 'Implementation Package A' of this plan. To discuss the site engineering and cleanup considerations, CEC originally separated this portion of the cost estimate into two parts, Permitting, and Engineering and Site Work. As mentioned, these were then combined with SGA cost estimates in 'Implementation Package A.' CEC's estimated costs are based on a conceptual master plan for the project. No engineering or design tasks were performed in preparing the estimate. Items of work are based solely on past experience with similar sites and projects. The items of work presented are not complete or all-encompassing and are standard items that would be expected to be performed on this type of project. CEC presented unit costs for calculation purposes, but these may vary significantly after design and permitting issues are considered.

## Permitting

In addition to the Act 2 process discussed above, additional permitting and engineering for the project is necessary. The estimate of costs for the permitting for the site work is separated and can be discussed in two parts, 1) Permitting and Engineering for the River Access and Encroachment, and 2) Site work.

**1 - Permitting and Engineering for the River Access and Encroachment (for Permitting):** The permits required for accessing and encroaching on the bank of a river include environmental, ecological and engineering based permits.

**2 - Site Work Permitting and Engineering (for Permitting):** The site work permitting and engineering for this project that is considered for this estimate includes the following:

- Topographic surveying
- Grading plan
- Erosion and sedimentation control plan
- Cap design

## Engineering and Site Work

The site work presented in this estimate was prepared by CEC and includes items of work to establish site grades as indicated in the conceptual master plan. All other items of work, including utilities, storm sewers, site amenities, final surfacing, etc., have been evaluated by SGA. The attached 'Remediation and Earthwork' estimate includes level of magnitude costs for clearing, erosion control, site demolition, environmental cap and cover system, and earthwork and grading. Due to the nature and history of the site, and the limited data of the soils outside the building area, the earthwork and grading estimate assumes the excavated soils to be disposed off-site are potentially impacted by contaminants (non-hazardous) and will require landfill disposal.

Erosion control includes items typically installed on similar projects. It is assumed that some erosion control items will be installed more than once to allow for work to be performed along the river bank and on-site.

The site demolition includes removing and crushing the existing slabs, columns and asphalt pavement. This material may be incorporated into the on-site fills.

The liner and cap system includes a geotextile fabric, gravel layer and impervious high-density polyethylene (HDPE) liner overlaying the entire basement area impacted by oily soils. A drain will be required to remove water from the liner system.

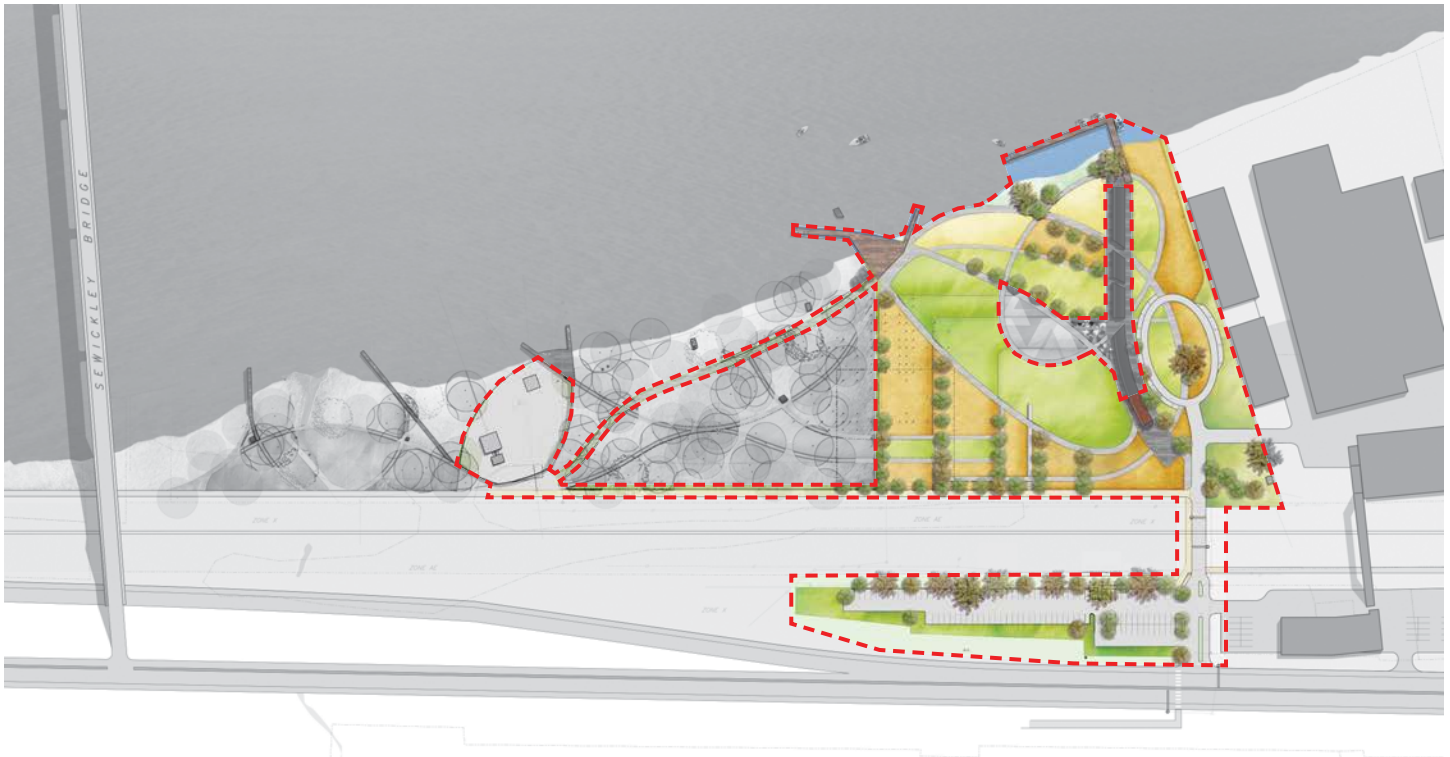
## Introduction

The Moon Township Riverfront Park has been divided into three key phasing Implementation Packages. With the exception of Implementation Package A, the phasing could be further divided into sub-element. The proposed modules are based on community need, funding opportunities, logical sequences of construction and considerations for how the park will function as well as meeting the minimum regulatory thresholds for environmental clean-up. These modules should be viewed as recommendations for development phasing and capital programming. As funding is available, needs change in the community, or opportunities present themselves, the sequence of development may change.

It is important to note that due to the brownfields status of the site, a minimum level of construction activity, as defined in Implementation Package A, must occur in order for the site to receive a permit through PADEP's Act 2 Land Recycling Program; showing the site meets a residential level standard for environmental remediation and can be utilized as a public park.

### Level-Magnitude Cost Note:

- **The following Level-of-Magnitude Cost is prepared for use by Moon Township in evaluating project options and pursuing implementation funding and the development of Capital Budgets for grant project/applications.**
- **This Level-of-Magnitude Cost is based on the conceptual designs illustrated in this plan and includes likely costs to furnish and install items identified. This estimate excludes any costs for any off-site or unknown underground utility systems, unknown hazardous materials or subgrade conditions beyond what has been identified at the time of the this plan.**
- **All costs are stated in year 2012 dollars and are not escalated to address inflation for future year construction. Once projected construction dates for each phase are determined, a 3% escalation factor should be compounded for each year between January 2013 and the midpoint of construction.**
- **No land, rights-of-way, or permanent easement acquisition costs have been included these estimates.**
- **A 15% Construction Contingency is provided to address project modifications based on more detailed design and engineering and unforeseen conditions during construction.**



## Implementation Package A

Implementation Package A covers the demolition and remediation of the former RB&W industrial site as well as the construction of a park framework along with smaller amenities associated with the riverfront park. This implementation package will be broken up into two separate modules, the Remediation/Infrastructure module and Buildings/Amenities 1 module.

The goal of the Remediation/Infrastructure module is to essentially get the riverfront park site to a point where it is prepared for the construction of the recreational amenities. The most major component of this module will be the environmental remediation of the existing site. This will consist of first clearing the site and setting up the necessary environmental controls. The remaining building slab and structure will then be demolished and ground-up to generate a useable fill material. Once the demolition has been completed, the site will be capped with an impervious liner to prevent the spread of contaminants which remain within the soil. The site will then be filled and graded to near all of the proposed grades. During the process of grading the site, any proposed retaining wall structures will be installed along with the necessary framework for all dry and wet site utilities. When the significant grading operations on the site have been completed, the main vehicular circulation network including the main parking lot, entry road, and main turnaround loop will be constructed. At the conclusion of the Remediation/Infrastructure module, the site should be at or near finished grade and prepared to receive the various park components which will be implemented.

In the Buildings/Amenities 1 module of Implementation Package A, some of the basic components of the riverfront park will be constructed. The proposed segment of the Ohio River Trail between the main access road and the MTMA pump station will be paved with asphalt to provide easy access for service vehicles to the MTMA facility. Much of the site circulation will be installed, including all of the concrete walkways around the site and the main plaza. In addition to the concrete walkways, the wide gravel trail running along the shoreline from the Great Lawn to the MTMA facility will be built. A small portion of the Headhouse building including the restrooms will be constructed in order to prevent the need for temporary restrooms at the park prior to later project phases. The main boardwalk/pier at the

end of the Great Lawn is also included so that the connection to the Ohio River is immediately supported. Much of the proposed lighting around the plaza and Great Lawn will be installed in this module as well. Other amenities would include some of the benches, bollards and trash receptacles around the site. Most of the proposed lawn areas and all of the planned meadow areas will be planted towards the end of the Building/Amenities 1 module. Also included in the module would be a rain garden and bioretention swales adjacent to the main parking lot. By the end of Implementation Package A, the park will be ready for public use, with restrooms, lawns, a boat dock and a boardwalk.

# Construction Cost Analysis

Moon Township Riverfront Park Master Plan  
Moon Township, PA

## Implementation Package A Cost

### LEVEL-OF-MAGNITUDE COSTS - SITE CONSTRUCTION IMPLEMENTATION

SITE ITEMS	UNIT	UNIT PRICE	Implementation A			
			Remediation/Infrastructure	Buildings/Amenities 1		
			QUANTITY	AMOUNT	QUANTITY	AMOUNT
<b>REMEDICATION AND EARTHWORK</b>						
Clearing						
> Site/ River Bank Clearing	LS	35,000.00	1 \$	35,000	\$	-
> Selective Clearing	LS	50,000.00	1 \$	50,000	\$	-
Erosion Control						
> Rock Construction Entrance		5,000.00	1 \$	5,000	\$	-
> Silt Sock	LF	15.00	4000 \$	60,000	\$	-
> Cleanwater Swale	LF	15.00	1000 \$	15,000	\$	-
> Rock Filters	Each	2,500.00	2 \$	5,000	\$	-
Site Demolition						
> Concrete Structure	LS	300,000.00	1 \$	300,000	\$	-
> Paving/ Slab Areas	LS	150,000.00	1 \$	150,000	\$	-
Environmental - Liner / Cap System	LS	250,000.00	1 \$	250,000	\$	-
Earthwork						
> On-site*	CY	10.00	20000 \$	200,000	\$	-
> Export-assumes impacted soil disposal*	CY	60.00	5000 \$	300,000	\$	-
> Import Topsoil	CY	40.00	20000 \$	800,000	\$	-
> Grading	LS	40,000.00	1 \$	40,000	\$	-
<b>SITE ENGINEERING</b>						
Engineered Stormwater Soils	SF - LS	3.50		\$ -	11,200 \$	39,200
Underground Conveyance Pipes	LF	12.00		\$ -	650 \$	7,800
Gabion Seat wall [18" high]	LF	150.00	1,400 \$	210,000	\$	-
Sheet Pile Bulkhead [6'-8' high avg]	LF	350.00	300 \$	105,000	\$	-
Dry Utilities	LF	31.05	1,850 \$	57,443	\$	-
Wet Utilities - Wastewater	LF	24.50	400 \$	9,800	\$	-
Wet Utilities - Water Supply	LF	24.15	2,300 \$	55,545	\$	-
<b>PERMANENT STRUCTURES</b>						
Headhouse (restroom facilities only)	SF	140.00		\$ -	500 \$	70,000
Boardwalk/Piers/Docks	SF	40.00		\$ -	8,755 \$	350,200
<b>SITE HARDSCAPE AND AMMENITIES</b>						
Paving - Gravel	SF	1.75		\$ -	10,800 \$	18,900
Paving - Concrete	SF	7.50		\$ -	45,100 \$	338,250
Paving - Asphalt	SF	5.00	59,500 \$	297,500	13,400 \$	67,000
Fencing (Architectoral)	LF	45.00		\$ -	650 \$	29,250
Fencing (6' Chain Link)	LF	17.80		\$ -	3,500 \$	62,300
Wayfinding Signage						
>Primary Signage	Each	5,000.00		\$ -	1 \$	5,000
>Secondary Signage	Each	3,000.00		\$ -	1 \$	3,000
>Kiosks	Each	4,500.00		\$ -	2 \$	9,000
>Interpretive Signs	Each	3,000.00		\$ -	4 \$	12,000
>Trail Directional Signs	Each	1,500.00		\$ -	2 \$	3,000
>Regulatory Signs	Each	300.00		\$ -	5 \$	1,500
Drinking Fountain (Stainless Steel Freeze-Proof Valve)	Each	2,950.00		\$ -	3 \$	8,850
Flag Pole (Ground Set 25' Aluminum)	Each	2,150.00		\$ -	1 \$	2,150
Trash Receptacles	Each	500.00		\$ -	10 \$	5,000
Bike Racks	Each	555.00		\$ -	2 \$	1,110
Benches	Each	1,800.00		\$ -	8 \$	14,400
Bollards	Each	1,150.00		\$ -	20 \$	23,000
Lighting	Each	2,000.00		\$ -	30 \$	60,000
RR At-Grade Crossing Safety Upgrades	LS	50,000.00	1 \$	50,000	\$	-
Food Truck Stations	EA	1,000.00	5 \$	5,000	\$	-

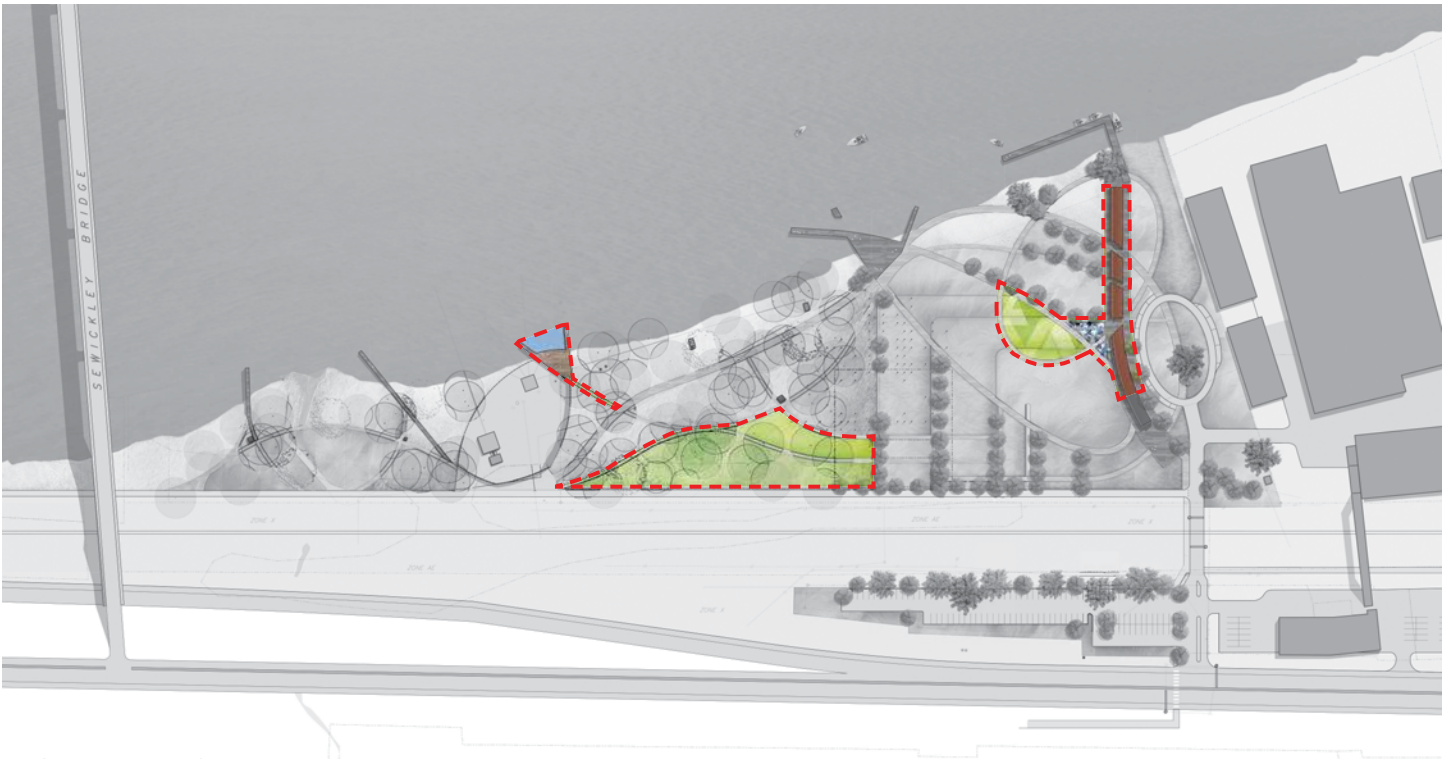
# Construction Cost Analysis

Moon Township Riverfront Park Master Plan  
Moon Township, PA

## Implementation Package A Cost Continued

### LEVEL-OF-MAGNITUDE COSTS - SITE CONSTRUCTION IMPLEMENTATION

SITE ITEMS	UNIT	UNIT PRICE	Implementation A			
			Remediation/Infrastructure QUANTITY	AMOUNT	Buildings/Amenities 1 QUANTITY	AMOUNT
PLANTING AND SOFT ENGINEERING						
Specimen Trees (3"-4" Caliper B&B nursery stock)	Each	750.00		\$ -	32	\$ 24,000
Meadow Planting (Layered Planting)						
> Herbaceous Plant Material (Plugs)	Each	4.50		\$ -	12,994	\$ 58,474
>Full Sun Dry Meadow Seed Mix	100% / SF	1.50		\$ -	89,926	\$ 134,889
Rain Garden Swale Planting (Layered planting)						
> Woody Plant Material (#3-#4 Potted Shrubs)	Each	125.00		\$ -	242	\$ 30,237
> Herbaceous Plant Material (Plugs)	Each	4.50		\$ -	4,596	\$ 20,684
Lawn	SF	0.65		\$ -	86,500	\$ 56,225
Subtotal				\$ 3,000,288		\$ 1,455,420
Contingency			15%	\$ 450,043		\$ 218,313
Subtotal				\$ 3,450,331		\$ 1,673,733
Act 2 Reporting				\$ -		\$ -
> Risk Assessment Report				\$ 30,000		\$ -
> Cleanup Plan				\$ 30,000		\$ -
> Final Report				\$ 30,000		\$ -
General Requirements			15%	\$ 517,550		\$ 251,060
Engineering/Landscape Architecture/Architecture**			10%	\$ 390,883		\$ 167,373
TOTAL ESTIMATED COST				\$ 4,448,763		\$ 2,092,166
IMPLEMENTATION PACKAGE A GRAND TOTAL						\$ 6,540,929



### *Implementation Package B*

Implementation Package B consists of one Building/Amenities 2 module which will upgrade the main riverfront park facilities to a more premier riverfront recreation destination. The remainder of the proposed buildings in the plaza will all be constructed. The rest of the Headhouse building attached to the restrooms will be built, along with the two central pavilions and the rental/storage building at the end of the plaza near the boat dock. This module also includes two major children's recreation components, the Jet Plaza and the Landform Playground. The proposed dog park in the facility will also be constructed in this module, expanding upon the park's uses. An additional boardwalk/pier is also proposed in this phase located near the MTMA facility on the site. Along with these major components, additional gravel circulation paths and more trees, lights, benches and trash receptacles are planned in this phase.

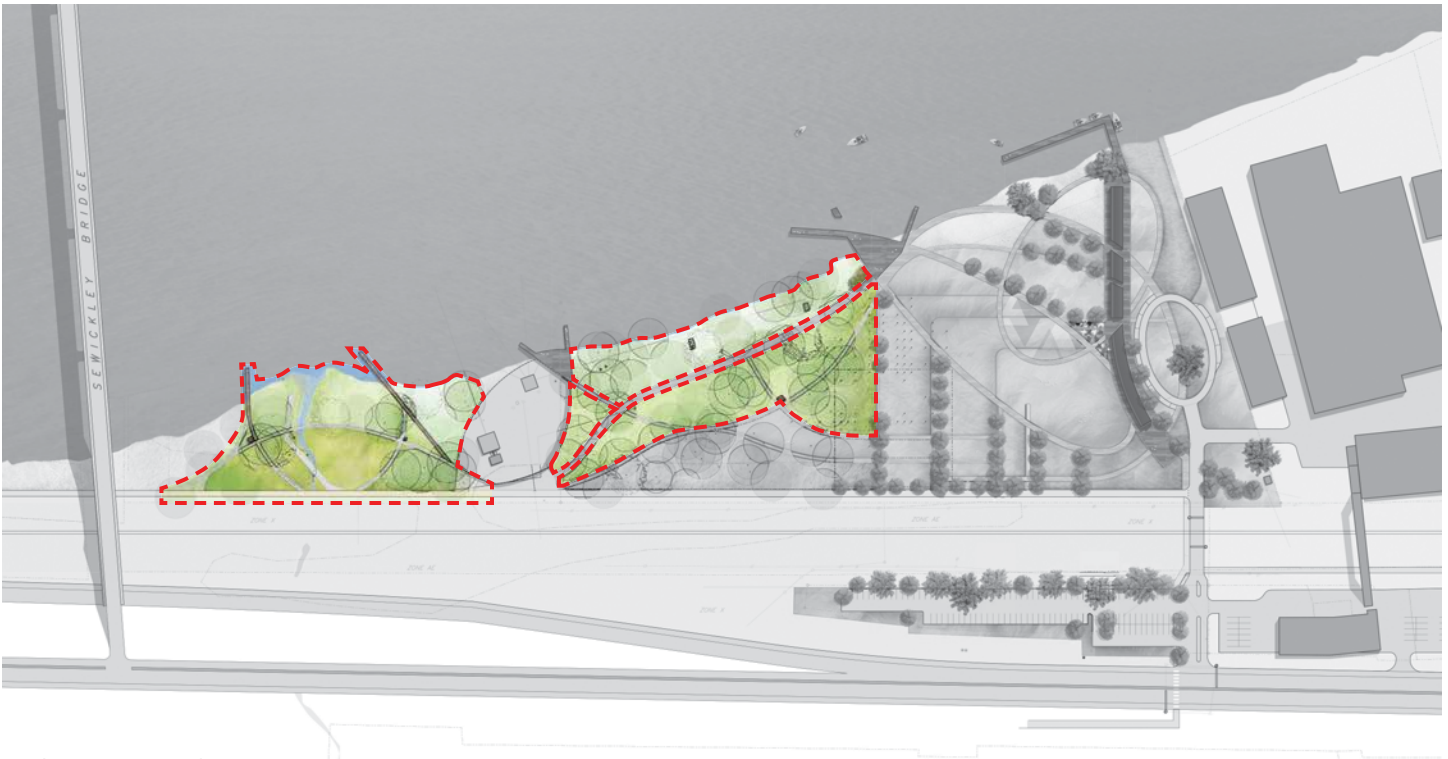
# Construction Cost Analysis

Moon Township Riverfront Park Master Plan  
Moon Township, PA

## Implementation Package B Cost

### LEVEL-OF-MAGNITUDE COSTS - SITE CONSTRUCTION IMPLEMENTATION

SITE ITEMS	UNIT	UNIT PRICE	Implementation B Buildings/Amenities 2	
			QUANTITY	AMOUNT
PERMANENT STRUCTURES				
Headhouse	SF	140.00	2,878	\$ 402,920
Pavilion A	SF	70.00	1,115	\$ 78,050
Pavilion B	SF	70.00	887	\$ 62,090
Rental/Storage Building	SF	140.00	1,463	\$ 204,820
Boardwalk/Piers/Docks	SF	40.00	2,465	\$ 98,600
SITE HARDSCAPE AND AMMENITIES				
Paving - Gravel	SF	1.75	10,352	\$ 18,116
Fencing (4' Chain Link)	LF	10.30	1,404	\$ 14,461
Wayfinding Signage				
	>Trail Directional Signs	EA 1,500.00	2	\$ 3,000
	>Regulatory Signs	EA 300.00	5	\$ 1,500
Trash Receptacles	EA	500.00	5	\$ 2,500
Picnic Table (60"W x 96"L)	EA	550.00	10	\$ 5,500
Benches	EA	1,800.00	8	\$ 14,400
Jet Plaza	LS	95,000.00	1	\$ 95,000
Landform Playground	LS	200,000.00	1	\$ 200,000
Lighting	EA	2,000.00	10	\$ 20,000
PLANTING AND SOFT ENGINEERING				
Specimen Trees (3"-4" Caliper B&B nursery stock)	EA	750.00	31	\$ 23,250
Subtotal			\$	1,244,207
Contingency 15%			\$	186,631
Subtotal			\$	1,430,838
General Requirements 15%			\$	214,626
Engineering/Landscape Architecture/Architecture 10%			\$	143,084
TOTAL ESTIMATED COST			\$	1,788,548
IMPLEMENTATION PACKAGE B GRAND TOTAL			\$	1,788,548



*Implementation Package C*

There are fewer major components added in Implementation Package C as there are in A and B, but rather than building upon the functionality of the park like the previous phase, Implementation Package C greatly increases the useable area included in the riverfront park. Implementation Package C includes the third Buildings/Amenities 3 module, which adds a few new structures and stretches the park out past the MTMA facility. This module will extend the network of gravel pathways further down the site and also add a gravel segment of the Ohio River Trail from the MTMA facility and the Sewickley Bridge. The new structures are three small picnic pavilions and two fishing piers west of the MTMA facility. Any remaining planned benches, trash receptacles and lighting will be installed in this module. The second module within this phase consists entirely of clearing and planting the proposed natural areas of the park. These areas, located under the canopy of trees, will consist mainly of shrubs and herbaceous plugs and will add huge amounts of useable areas to the park upon completion.

# Construction Cost Analysis

Moon Township Riverfront Park Master Plan  
Moon Township, PA

## Implementation Package C Cost

### LEVEL-OF-MAGNITUDE COSTS - SITE CONSTRUCTION IMPLEMENTATION

SITE ITEMS	UNIT	UNIT PRICE	Implementation C			
			Buildings/Amenities 3	Plantings/Natural Area Restoration	QUANTITY	AMOUNT
QUANTITY	AMOUNT	QUANTITY	AMOUNT			
<b>SITE ENGINEERING AND EARTHWORK</b>						
Tree Removal / Clearing and Grubbing	AC	6,500.00		\$ -	2.3	\$ 15,091
<b>PERMANENT STRUCTURES</b>						
Picnic Pavilions	SF	70.00	1,200	\$ 84,000		\$ -
Boardwalk/Piers/Docks	SF	40.00	2,342	\$ 93,680		\$ -
<b>SITE HARDSCAPE AND AMMENITIES</b>						
Paving - Gravel	SF	1.75	15,406	\$ 26,961		\$ -
Paving - Asphalt	SF	5.00	77,725	\$ 388,625		\$ -
Wayfinding Signage						
> Interpretive Signs	EA	3,000.00	1	\$ 3,000		\$ -
> Trail Directional Signs	EA	1,500.00	1	\$ 1,500		\$ -
> Regulatory Signs	EA	300.00	5	\$ 1,500		\$ -
Trash Receptacles	EA	500.00	5	\$ 2,500		\$ -
Picnic Table (60"W x 96"L)	EA	550.00	3	\$ 1,650		\$ -
Benches	EA	1,800.00	4	\$ 7,200		\$ -
Lighting	EA	2,000.00	5	\$ 10,000		\$ -
<b>PLANTING AND SOFT ENGINEERING</b>						
Specimen Trees (4"-6" Caliper B&B nursery stock)	EA	750.00		\$ -	31	\$ 23,250
Natural Area Planting (Layered Planting)						
> Woody Plant Material (#3-#4 Potted Shrubs)	EA	125.00		\$ -	1,456	\$ 182,034
> Herbaceous Plant Material (Plugs)	EA	4.50		\$ -	14,613	\$ 65,760
<b>Subtotal</b>				<b>\$ 620,616</b>		<b>\$ 286,134</b>
<b>Contingency</b>			15%	<b>\$ 93,092</b>		<b>\$ 42,920</b>
<b>Subtotal</b>				<b>\$ 713,708</b>		<b>\$ 329,054</b>
<b>General Requirements</b>			15%	<b>\$ 107,056</b>		<b>\$ 49,358</b>
<b>Engineering/Landscape Architecture/Architecture</b>			10%	<b>\$ 71,371</b>		<b>\$ 32,905</b>
<b>TOTAL ESTIMATED COST</b>				<b>\$ 892,135</b>		<b>\$ 411,318</b>
<b>IMPLEMENTATION PACKAGE C GRAND TOTAL</b>						<b>\$ 1,303,453</b>

## Introduction

At 19.2 acres, the Moon Township Riverfront Park is not only important to the citizens of Moon Township, it will also serve as a regional destination along the 0.35 mile stretch of the Ohio River. The park will provide direct access to the river for non-motorized boating, fishing, and nature experiences as well as recreation opportunities for park visitors enjoying the scenic waterfront location.

The park is a significant addition to the public parks and recreation system. It will expand the Township's parks and recreation system from three to four parks and from 600 acres to 619. More importantly, it will be a unique recreation facility unlike any other park in the Township. Its waterfront location and high visibility from the bridge and the river will position it as the flagship park for Moon Township.

The park maintenance, operations and finance plan for the Moon Township Riverfront Park incorporates the Parks and Recreation Department's approach to maintenance underway in the existing park and recreation system. In an effort to contain costs, maintain public facilities, and deliver excellent public service, Moon Township operates under a philosophy of making the most use of every dollar and every hour of staff time for the public good. The management plan for the park builds upon the current operational practices for park maintenance as it looks ahead in a holistic manner to parks and recreation operations overall.

Work sessions with Township management, parks, recreation and maintenance managers were held to establish the standard of care for the park. The standard of care established is based upon Moon Township's desire to maintain the park in an efficient and effective manner in recognition of its potential to serve as the flagship park for the community as well as an icon for Moon Township in the region. In light of the current economic situation, township resources and the municipal approach to park maintenance, the following operations and management plan would position the Township to plan for a standard

of care befitting the caliber of the nature of this riverfront park. Maintenance requirements would be phased in over time as the park is developed. The plan also encourages alternatives to conducting tasks with in-house staff such as partnerships, contracting of services and raising revenues where possible to offset maintenance costs. The maintenance and operations budget is based upon proactive, preventative maintenance rather than reactive, as-needed or emergency maintenance. A planned routine approach will ultimately be a less expensive proposition for the park. Finally, unit costs were estimated for the park care that can be adapted as workload and cost tracking data for this particular site.

In short, the operations, management and financing plan reflects both a systematic approach and an estimate of what it will take for Moon Township to care for the park. It provides a critical snapshot of the anticipated cost to maintain and operate the park allowing elected and appointed officials, planners, managers and funding bodies to come to terms with what is possible to achieve with the master plan. In this way, decision-makers will be able to gauge not only the initial affordability of the park, but also its economic sustainability over its life cycle, setting the course for a park that will be a major community asset for many generations yet to come.

### Plan Purpose

- The purpose of the Operations and Management Plan is to establish the foundation, strategies and actions required to develop the park and support its successful operation in the future.

## Purpose of the Operation and Management Plan

Maintenance is the single largest recurring expenditure in parks and recreation. Over the lifetime of a park, about 75 percent of its cost is in maintenance while only about

25 percent is in acquisition, development, design and construction (Lay, 1978).<sup>1</sup>

The Operations and Management Plan is the result of a lengthy process that involved considerable public participation, work sessions with township management and staff, discussions with community leaders, involvement of the plan Study Committee and research. The research into park systems shows that parks are vital to the quality of life and essential in attracting and retaining residents and businesses.

Some of the strategies used in community parks include the following:

**1 - Parks must rank high on the political agenda to get funded.<sup>2</sup>**

**2 - The public is involved in the planning, design and operation.**

**3 - The design conveys a strong vision and purpose for the park.**

**4 - The parks are programmed with many and varied activities for visitors of all ages.**

**5 - The parks and each of its facilities is clean. Clean, attractive appearance is crucial to a park's success and positive perception by the public and the business community.**

**6 - A mix of public and private funding sources support park improvements and operation.**

**7 - Community parks are an organizing element for initiatives such as economic development, neighborhood improvement, increasing livability of the municipality, tourism and so on.**

**8 - Parks & Recreation departments, boards, directors and staff must play a leadership role in insuring that**

**parks are part of overall community and economic planning.<sup>3</sup>**

This operations and maintenance plan sets forth a strategy for managing the park once it is developed. The plan should serve as a working document to be used as a guide in maintaining the park, allocating financial and human resources and then revised as information is developed as part of a workload cost tracking system for this and other Borough parks. The following topics will be addressed in this chapter:

## **1 - Vision and Mission**

## **2 - Community Recreation Opportunities**

## **3 - Risk Management**

## **4 - Maintenance Management**

## **5 - Management Recommendations**

3. Garvin, Alexander and Berens, Gayle. (1997) Urban Parks and Open Space. (New York: Urban Land Institute) p 36-40.

### **Vision Statement**

- The Moon Township Riverfront Park will be a premier regional destination for recreation on and near the Ohio River. Offering a scenic riverfront access, the park will be an important community hub. Here, citizens can experience nature, the Ohio River, socialize with family and friends, and enjoy life long active recreational pursuits for health and wellness.

### **Mission Statement**

- We will accomplish this by providing a safe, clean and attractive facility through effective and efficient management and maintenance provided by professional and caring employees, contractors, and volunteers.

1. Lay, Francis. 1978. Management of Grounds or Site Operations Manual, Manual of Site Management, Environmental Design Press. p 4.

2. Harnik, Peter. (2000) Inside City Parks. Washington, D.C.: Trust for Public Land. p xi.

## 1 - Vision and Mission

In defining the vision and mission for the Moon Township Riverfront Park, the community public participation process identified important values as the foundation for planning and operating the park. These included:

- Conservation - Conserving the natural features and scenic beauty of the site.
- Public Use - Bringing people to the river and from the river to the park.
- Community Wide Service - Providing a place for recreation for people of all ages in the outdoors.
- Sustainability - Minimizing the impact on the township operating budget and maintenance requirements.

## 2 - Recreation Opportunities

The emphasis of park development here is on recreation facilities that are harmonious with the natural riverfront environment. The proposed master plan reflects the community values and site conditions that reflect the industrial heritage of the area.

**River Access:** The park offers access for non-motorized boating as well as a place for boaters on the river to tie up at a dock to take a break and enjoy the facilities of the park.

### The Moon Township Riverfront Park as an Outdoor Classroom

The park can be the place to re-connect children with nature. Some of the benefits of using the park as an outdoor classroom for people of all ages, especially for children, include the following:

- Increased awareness and appreciation for the Ohio River, water and other features of the natural environment
- Improved fine motor skills
- Improved concentration even among your people with Attention Deficit Disorders
- Valuable skill development over all learning domains
- Enhanced observational skills
- Doubling of physical exercise

Source: Fazio, James R. (2008) **Tree City Bulletin No. 47. How to Bring Nature Explore to Your Community.** Nebraska City: Arbor Day Foundation.

**Trails and Trail Hub:** The park will serve as a trailhead for the Ohio River Trail. Walking is the chief form of exercise in the United States. The Center for Disease Control has called upon communities to develop safe and attractive pathways for people to use throughout their lifetime for fitness and wellness. This will help people of all ages to engage in an enjoyable activity that will extend their lives and enable them to be healthier, happier and more productive citizens. The trails in this park will be an attractive location for walking for, fitness, fun and nature enjoyment.

**Natural Resource Enjoyment:** The park preserves important and valuable resources and scenery as public parkland. The park has direct access to the Ohio River. The park can potentially be the setting for a variety of programs that could be an important public service, a source of community enjoyment and a revenue generator. Coordination of river-based programs with the School District, scout troops, the Friends of the Ohio River, Ohio River Trail Council and others would help to provide programs and support for the park without burden on the Township.

**Fitness/Wellness:** Fitness extends lives, improves self-image, reduces health care costs, reduces isolation, and makes people happier. According to the U.S. Surgeon General, the top public health issue is the lack of physical activity. One of the most important things that communities can do to help in this cause is to provide attractive, accessible areas for people to walk, jog, and run. The park will serve this purpose.

**Pavilions:** The pavilions will provide a destination for community gatherings for families, friends, and businesses. Pavilions are at a premium in the Moon Township and it is expected that the pavilions at the park will be very popular recreation facilities.

**Family Play:** According to a survey by Money magazine, traditional goals for health and money are taking a back seat to the desire to spend more time with the people we love.

The top goals among those surveyed included:

- Spend more time with family and friends (30%)
- Get healthier (19%)
- Manage money better (18%)
- Pursue enjoyable activities (17%)
- Improve career (12%)

The plan for the Moon Township Riverfront Park offers a venue for families and friends to enjoy time together. The Landform Playground and Jet Plaza, are expected to be a destination for people of all ages from young children to grandparents visiting with their grandchildren. A design tied to the strong landscape and cultural heritage and values of the site will foster community stewardship and provide lifetime memories for park visitors based upon the sense of place the playground will provide.

**Landform Playground:** The play area in the park will be a nature based design using landforms and natural and harmonious synthetic materials. It will not include a traditional play structure ordered from a catalog. Instead, it will reflect the unique aspects of the river, cultural heritage and natural resources of the site.

**Jet Plaza:** The Jet Plaza will be an interactive water feature with variable spray jets that will appeal to people of all ages. When the water is not turned on it can be used as a special events space.

**Dog Park:** The 1.5-acre dog park will serve the community well. Dog parks are extremely popular and are in fact the fastest growing type of recreation facilities in the USA. Because of their high use year round, they offer security for the park through the ongoing presence of desirable park visitors.

**The Headhouse: Concession Plaza, Storage, Restroom and Food Truck Court:** The Headhouse or “Midway Area” can serve as a special events space due to its design, location and supporting amenities. Support facilities are important to park visitors. Clean,

bright restrooms are crucial to positive public perception about parks in terms of desirability and safety. When the restrooms are clean, people tend to value the park. The importance of the design and maintenance of this facility cannot be overstated. Rather than build dedicated food service facilities, a food truck court will provide onsite-eating services.

**Self-Directed Activities:** With the hectic lives we all lead, having a place to go on our own is important. The Moon Township Riverfront Park offers an important respite for people to enjoy at their own discretion. The park is especially desirable for self-directed recreation because of its location, beautiful views, river access, trees, trails and natural areas.

**Park Art:** Given the need to incorporate the structures of the MTMA structures, the plan is recommending designing these as public art that includes lighting. The lighting would be a showcase feature of the site in the evenings, particularly for those using the Sewickley Bridge.

## 3 - Risk Management

Having safe facilities for visitors as well as protecting the public investment is essential to Moon Township. Because this is a riverfront park, safety and risk has been an important topic. Public perception that the parks are safe is important to their success. As part of establishing safe parks that limit the Township’s exposure to liability, effective risk management can help to protect both park visitors and the municipality. Coordination with Moon Township’s insurance carrier throughout the development and operation of the park would be helpful in reducing risk. Supportive insurance carriers offer advice, on-site assessment and sometimes grant funding to support safe facilities. Their advice will be helpful in identifying and adopting practices to insure visitor and park safety.

Risk Management is a standard operating practice of parks and recreation agencies. Risk includes the possibility that harm could result from a hazard that would cause personal injury, death, property damage, economic loss or damage to the environment. To manage risk in the park, three steps are needed:

**1 - Risk Identification** – It is necessary to identify all of the sources of potential hazards in the park. The Township must have knowledge at all times of any risk related to the park. This includes park conditions, the employees or volunteers that might make the Township subject to liability as the result of how they complete their duties and any other liability.

**2 - Risk Assessment** – The Township should inspect and evaluate as part of its ongoing park and recreation system operating practices. This would also include tracking of the incidents of injury reported in the park.

**3 - Risk Management Plan** – The Risk Management Plan is important for both safe operations as well as in establishing credibility in case of litigation. The plan should include the following documents all of which should be reviewed by the borough solicitor:

- Statement that the Township is committed to safety for citizens, municipal employees and Township facilities
- Program registration information
- Accident forms
- Health forms if appropriate
- Participation forms and waivers
- Rental agreements and leases
- Program dates and documents
- Operations information and policies
- Reports for maintenance and procedures.
- Inspection program and reports
- Policy on background checks for Township employees, volunteers working with children and for permittees of municipal facilities who are providing community recreation services.

## Emergency Response

Due to its riverfront location, active railroad tracks and outlying location, emergency response is an important consideration for the site. Interviews found that while Moon Township does not have a water rescue service, the surrounding areas such as Neville Island, Sewickley and others have had water rescue services in place for many years. In fact, many of the water rescue team members are Moon Township residents. Based upon the regional availability of water rescue units, this plan recommends that Moon Township work with established water rescue units rather go through the time and expense of creating a duplicative service. As the park is developed, it would be important to reach out to the water rescue units about the park and develop an agreement with them regarding water rescues generated by the park.

## 4 - Maintenance Management

Maintenance management is the process by which Moon Township plans, directs and controls the care of parks and recreation facilities. The park should reflect an effective level of service; an inviting, clean and attractive appearance; and the reality of fiscal and human resource limitations of Moon Township.

Routine scheduled maintenance provides the foundation for effective park security and risk management. A park that is well designed and maintained attracts visitors. The more use a park gets, the less vandalism occurs. When park visitors see that a facility is well cared for, the risk of vandalism and other undesirable social behaviors tends to diminish. Parks that are not well tended get fewer visitors and higher levels of vandalism.

With a maintenance plan in place, there will be a clearly defined direction for the maintenance goals and operations. **Making a repair in an emergency, unscheduled basis costs seven times as much as it does to perform the task on a routine basis.** It is far more efficient and effective to perform park maintenance on a planned and scheduled basis. On-going maintenance also prevents the need for costly rehabilitation that results from deferred maintenance.

### Benefits of Sustainable Park Maintenance Practices

- Sustainable park maintenance practices save money. The protection of our natural resources is good both for people and the earth. Connection with nature helps citizens to reduce their stress and mental fatigue and contributes to their sense of well-being. Areas with natural features help citizens develop social ties that foster strong neighborhoods and a sense of community.

### Maintenance Challenges and Opportunities

Park maintenance in Moon Township falls under the Parks & Recreation Department. The Park Superintendent has been with the Township for over 35 years. The Superintendent was consulted during the park planning process to ensure that the park design reflects the input of those who will be responsible for caring for the park.

For park maintenance, the Township has one full-time park superintendent and four maintenance staff for a total of five park maintenance employees. In addition to paid maintenance staff, the Parks & Recreation Director and Assistant Director oversee the park volunteers. These include Eagle Scouts, Boy Scouts and community service workers.

### Sustainable Park Design and Maintenance

Environmental protection and the conservation of natural resources are a primary goal of the design and maintenance of the park which has both important natural resources to protect as well as areas that are compatible for public recreation. The focus is on establishing and managing the park in a way that enables responsible public use in harmony with the environment. The traditional pattern of park maintenance in the Township has been focused on tasks such as mowing and trimming to achieve a manicured appearance. This has been the customary approach to park maintenance statewide. It is the “look” that the public has come to expect of parks. This is both costly and harmful to the environment. Park maintenance

should set the bar for practices that promote the healthy natural elements of public lands such as water, wildlife and vegetation. Adopting maintenance practices that conserve natural resources requires planning, training, expertise and public education. Public education on a nature-focused approach to park maintenance is vital as citizens tend to view natural areas as unkempt because of their expectation of a “manicured” park appearance. The Moon Township Riverfront Park represents an opportunity for the Township to establish a “green” approach to park maintenance management.

### Volunteers

Volunteers are often considered the means to managing parks and recreation at the least cost. Although volunteers are important, they are not free. Volunteers for defined tasks or programs require recruiting, training, supervision, coordination, support and recognition. Someone has to be in charge of overseeing volunteers and volunteer organizations. The Parks & Recreation Department has a small staff. Although the Department uses volunteers, it does not appear to have the capacity for extensive volunteer coordination and oversight. Volunteerism efforts should be concentrated on major organizations or volunteers of such caliber that can work independently such as Eagle Scouts. It is also important to note that volunteers are not substitutes for park maintenance expertise and staff. The park will require reliable, dependable, knowledgeable workers in the area of natural resource management, park security, play area safety and related services. Volunteers usually cannot perform to the level required due to their time limitations and demands in their own lives. Demographic changes resulting in a larger retirement population of active healthy well-educated individuals may yield a significant volunteer cadre. The park could be an important site in the Township for using this type of expertise.

Policies need to guide volunteerism to mesh with the public good and the fact that the parks belong to the community not to individual groups. As the park is developed and before it is officially open, effective policies need to be in place regarding park operations and use.

## Funding Challenges

The major challenge for this park is both capital development and the ongoing funding for operations and maintenance. Obtaining funding to build new facilities is relatively easier than getting support to pay for park maintenance and operations. There is a tendency to increase the responsibilities of existing staff for additional facilities with no commensurate support for increased workload. Moon Township is proposing a premiere facility to serve as an icon for the community. Consequently, the park requires the appropriate level of resources to support operations and maintenance. Careful consideration should be given to the capacity of existing staff to provide the caliber of maintenance needed for a park of this level along with all of the demands of the current workload. Revenues from program fees and charges, sales, leases, sponsorships, partnerships, donations and grants can help to support development and operating costs.

## Maintenance Goals

The major challenge for this park is both capital development and the ongoing funding for operations and maintenance.

**The goal of park maintenance of the Moon Township Riverfront Park is to provide a clean, safe, and attractive facility for the healthful and enjoyable use by the community and the conservation of natural resources through implementation of an efficient and effective management program.**

The following guidelines can formalize the Township's approach to park maintenance operations. The guidelines would apply to both municipal employees and contractors and for volunteers who assume responsibility for park maintenance tasks.

**1 - All maintenance will be accomplished in a manner displaying respect and concern for the environment as well as public and private property. Maintenance practices that are rooted in a strong conservation ethic are to be instituted.**

**2 - Maintenance tasks will be accomplished in a way that does not endanger the health or safety of the employees nor the public.**

**3 - All maintenance tasks will be performed as quickly and economically as possible without any loss in efficiency.**

**4 - All equipment and materials will be operated and maintained in such a way as to insure safe, effective use and long life.**

**5 - Work will be scheduled in such a manner as to make the most use of the resources of other community organizations who are involved or who may become involved.**

**6 - Preventive maintenance will be used in a continuing effort to avoid major problems and correct minor ones.**

**7 - All maintenance work will be performed with a sense of pride.**

## Maintenance Standards

Maintenance standards set forth the level of care that park and recreation facilities receive.

## Importance of Assigning Maintenance Standards

Assigning maintenance standards will enable the Township to maintain the park in conjunction with the other municipal parks with respect to needs and resources. Targeting the appropriate level of care will enable Moon Township to direct resources to balance public use with natural resource conservation. The maintenance standards provide a common frame of reference for the community including elected and appointed officials, Township employees, maintenance staff, administration, contractors, partners, sponsors, park visitors and the citizens. The common agreement will facilitate discussions and communications about the park. This will enable elected and appointed officials and parks and recreation management to establish and implement

policies on use, fees and charges, volunteer requirements, staffing levels, contractual service requirements and other issues that may emerge. It will also enable the Township to communicate with the public about the capacity of the municipality to undertake actions in response to citizen demands on the park, park maintenance tasks, natural resource protection actions, and requests for additional facilities and/or services.

## National Recreation & Park Association Standards: An Approach

The National Recreation and Park Association advocates a system of maintenance modes for parks. Modes refer to the “way of maintenance” ranging from most intensive to least intensive. Most of the developed area of the park will be maintained at the Mode I and II level. The natural areas would be maintained at a combination of the Mode V and VI levels with respect to visitation in different sections of the natural areas. The Township can use the modes as guidelines to direct resources towards the greatest need and where they will benefit the most. The modes range as follows:

### Mode I - State of the Art Maintenance

### Mode II - High Level Maintenance

### Mode III - Moderate Level Maintenance

### Mode IV - Moderately Low Level Maintenance

### Mode V - High Visitation Natural Areas

### Mode VI - Minimum Level Maintenance

**Inspections** - Mode I - Park inspection of the active areas should be done daily during peak season. Mode V should be done every other week in the natural areas.

- Landform Playground and Jet Plaza inspections should be based upon Consumer Product Safety Commission (CPSC) and manufacturer’s guidelines. The equipment manufacturer generally provides inspection sheets for use by municipal employees. These should be used as the record keeping system for the Moon Township Parks & Recreation Department and properly filed to document maintenance performed.

To protect Moon Township’s investment in the park, provide efficient and effective public service, and ensure park security, the following standards are proposed:

**Turf Care** - Turf care for the park would include: ball fields and general park areas.

- Park areas - Mode II - Mowed every five working days but only receives annual aeration. Weed control is done through pre-emergent products and seeding done when bare spots are present.
- Natural Areas – Mode VI – Not mowed.

**Disease and Insect Control** - Modes would vary by facilities.

- Natural Areas - Mode V working towards Mode I - Disease and insect control is done only to insure public safety or when a serious problem discourages public use in initial stages of park development. Moon Township could consider developing a natural resource management plan for the conservation area of the park. Mode I would be in terms of natural resource management.
- General Park Areas - Mode III -When the health or survival of plant materials is threatened or there is an issue of comfort of park visitors control measures may be taken. Disease and insect control is done usually on a complaint basis.

**Forestry** - A forestry management program should be developed. The forestry program would provide a short, medium and long-range management program for this important asset of the Moon Township Riverfront Park. This could be part of an overall park forestry program. The Township may be able to get assistance from the Conservation District; the Penn State Extension Service; or a local organizations such as Robert Morris University.

**Floral Planting** - Mode V - Floral planting should only be introduced where there is a community group to maintain them in accordance with a written agreement.

**Tree and Shrub Care** - Mode III. When required for health or reasonable appearance. With most tree or shrub species this should not be more than once every two to three years.

**Litter Control** - Mode II. Litter is picked up twice a week during peak season, weekly during non-peak, and monthly in cold weather months. Litter is always picked up after a special event. For special use facilities such as a picnic pavilion, the permittee should be responsible for litter pick-up while Moon Township would remove it from the park.

**Surfaces and Paths** - Mode II. When appearance has noticeably deteriorated, the surfaces should be cleaned, repaired, or replaced.

**Repairs** - Mode III. When safety, appearance or function is an issue, repairs are made.

**Restrooms** - Mode I. Should be done at least once per day. Special events or times of high use may warrant more than one service per day.

## Maintenance Budget Estimate

The maintenance budget must reflect the desired condition of park facilities in accordance with the financial resources available. The maintenance budget to a large extent dictates the quality of the park in terms of maintenance, appearance, beauty, and safety. Estimating what the park will cost to maintain helps in decision-making, staffing, setting of fees and charges, policy formulation, budget planning, resource allocation, and securing non-traditional methods of supporting park operations such as partnerships.

## Cost Basis

Wages comprise most of the cost of park maintenance. The hourly maintenance wage rate and benefits for township staff that provide park maintenance effective in 2013 are shown in Table 1. For the purposes of this plan, a total hourly rate in mid-range will be used: \$41 per hour. Two agencies provide useful cost standards for the use of equipment for maintenance in the public sector: PennDOT and FEMA (The Federal Emergency Management Administration). PennDOT publishes equipment rates in its publication 408. FEMA provides a schedule of equipment rates that can be used as the basis for projecting the cost of equipment needed to maintain the park. The rates on this Schedule of Equipment Rates are for applicant-owned (such as municipalities) equipment, which is in good mechanical condition, complete with all required attachments. Each rate covers all costs eligible under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. § 5121, et seq., for ownership and operation of equipment, including depreciation, overhead, all maintenance, field repairs, fuel, lubricants, tires, OSHA equipment and other costs incidental to operation. This can serve as a useful basis for cost projections until the borough has determined its own specific equipment rates for park maintenance.

For the purposes of estimating the cost of park maintenance, this plan assumes a rate of \$35 per hour for large equipment such as mowers and trucks and \$15 per hour for small equipment such as trimmers.

Table 1  
Moon Township  
Park Maintenance Wage & Benefit Rates

Position	Wage Hourly Rate	Wage & Benefits w/o Insurance Hourly Rate	Wage & Benefits with Insurance Hourly Rate
Laborer	24.73	27.20	40.06
Truck Driver	25.18	27.70	40.79
Operator	25.64	28.20	41.54
Lead	26.14	28.75	42.35

# Operations and Management

Table 2 presents the estimated hourly labor and equipment costs by task for the maintenance of the park.

## Utility Costs

This plan recommends developing a cost projection for energy costs when a major capital item is being specified for construction. The equipment supplier could work collaboratively with the Parks & Recreation Director in determining the operating costs for park lighting.

Table 2 Moon Township Riverfront Park Maintenance Task Budget: Labor and Equipment						
Maintenance Task	Units	Units/Hour	Total Hours/Task	Frequency x Hours	Hourly* Rate	Total Cost
General Park Areas						
Grass cutting & Trimming						
Labor	6 acres	3/hr	6/3=hrs	30 X 2 = 60	\$40	2,400
Meadow - Labor	4 acres	1/4 hrs	4 X 4 = 16	1 X 16 =16	\$40	640
Total mowing						3,040
Litter Control						
Pick-Up Labor	Focus Points	1 hrs	1	60 X 1 = 60	\$40	2,400
Transfers - Labor	15 barrels	1 / ¼ hr	3.75	60 X 3.75 = 225	28.13	9,000
Total Litter Control						11,400
General Park Inspection						
Labor	Park	1/1 hr	1	30 x 1= 30	\$40	1,200
Total Inspection						\$1,200
Tree & Shrub Care						
Contract	Park Area	Cyclic	5% of planting budget		Contract	\$5,000
Pier & Dock						
Two Annual Installation & Removal	40	40	2/yr	40	\$40	\$1,600
Cleaning	12	12	3/yr	36	\$40	1,440
Total						\$3,040
Dog Park						
Volunteers	0	0	0	36	40	\$1,200
Vandalism						
Incidents	6	1/2hr	6 X 2 = 12	12	40	\$1,480
Flood Clean Up						
Storm Event	1	1/40	1/yr	40 X 2 workers = 80	40	\$3,200
Trails						
Annual Prep - Labor	1	1/18 hr	1 X 18 = 18	1 X 18 = 18 X 2 workers = 36	\$40	1,440
Routine - Labor	1 mi	1/5 hr	1 X 5 = 5	4 X 5 = 20	\$40	800
Total						2,240
Paved Surfaces						
Inspection, Sweeping, Cleaning - labor	15,400 sy	1,000/.1 hr.	15 sy X .1 = 1.5	4 X 1.5 = 6	\$40	240
Total paved surfaces						240
Landform Playground						
Inspections	1 area	1 / .5 hr	1 X .5 = .5	52 X .5= 26	\$40	1,040
Repair & Preparation	"	1 / 16	1 X 16 = 16	1 X 16 = 16	\$40	640
Total play area						1,680

Table 2 continued Moon Township Riverfront Park Maintenance Task Budget: Labor and Equipment						
Maintenance Task	Units	Units/Hour	Total Hours/Task	Frequency x Hours	Hourly* Rate	Total Cost
<b>Site Furnishings</b>						
Pavilions Annual Preparation	2	2/8hr	Both X 8 hr = 8	1 X 8 = 8	\$40	320
Routine Preparation	2	1/2 hr	2 X 1 = 2	26 X 2 = 52	\$40	2,080
Bicycle Racks Annual Preparation	2	1/2 hr	2 X 2 = 4	2 X 4 = 8	\$40	320
Routine	2	.5	2 X .5 = 1	4 X 1 = 4	\$40	160
Benches Annual Preparation	20	1 / 2 hr	20 X 2 = 40	1 X 40 = 40	\$40	1,600
Routine	20	1/. 25 hr	20 X .25 = 5	10 X 5 = 50	\$40	2,000
Picnic Tables Annual Preparation	13	1 / 1 hr	13 X 1 = 13	1 X 13 = 13	\$40	520
Routine	13	1/. 25 hr	13X .25 = 3.25	10 X 3.25 = 32.5	\$40	148
Water Fountains Annual Preparation	3	1/5	3 x 5 = 15	1 x 15 = 15	\$40	600
Routine	3	1/1	3 X 1 = 3	5 X 3 = 15	\$40	600
Park Signage Routine & Repair	System	4 hrs.	1 X 4 = 4	4 X 4 = 16	\$40	640
Total Site Furnishings						8,988
<b>Leaf Removal</b>						
Labor	3 areas	1/6 hrs	3 x 6 = 18	5 X 18 = 90	\$40	3,600
Total						3,600
<b>Snow Removal</b>						
Labor	Parking area	1/6 hrs	1 x 6 = 6	6 X 6 = 36	\$40	1,440
Total						1,440
<b>Restrooms</b>						
Labor	2 (M & F)	1.5/unit	2 x 1.5 = 3	100 X 3 = 300	\$40	12,000
Natural Area	5 acres	\$500/acre	Yearly			\$2,500
Total						
TOTAL Labor & Contracts						\$62,248
Jet Plaza						\$10,000 – \$14,000

<b>Table 3</b> <b>Moon Township Riverfront Park</b> <b>Estimated Operating Budget</b>	
Personnel – Maintenance Staff and Contracts	62,248
Equipment	20,000
Spray Park	10,000 – 14,000
Insurance	0
Patrolling	0
Park Materials and Supplies	3,000
Tree Contract	2,000
Utilities	To be determined in conjunction with specifications phase
<b>TOTAL</b>	<b>\$97,000 – 101,000</b>
CIP Reserve Budget – 2% of development costs <i>annually</i> in fund dedicated to cyclic repairs and park improvements. This could be phased in as the phases of the park are constructed.	To be determined

<b>Table 4</b> <b>Moon Township Riverfront Park</b> <b>Potential Revenue Sources</b>	
Item	Projection
2 Pavilions - rental at \$100 (average) per day for 50 days.	10,000
Food Truck Space Rentals - \$25/space/day	6,500
Potential program fees from programs and special events.	8,000
Moon Landing Friends	1,000
<b>TOTAL Projections</b>	<b>\$25,500</b>

### Staffing and Organizational Implications

The required work hours for the park design are estimated at about 1,431 annually without the Jet Plaza. The Jet Plaza could run between \$10,000 – 14,000 annually. When the Jet Plaza is designed, a maintenance impact statement should be developed to ascertain maintenance costs based upon the specific design. The fulltime equivalent annual work hours are 2,000 for a typical worker.

This translates into about another 29 hours per week. This is about a 72 percent increase over one full time worker. Planning for additional work force hours will be important, as these tasks are not something that can simply be added to the current responsibilities of the dedicated labor force for parks in Moon Township.

A concern is the potential for the municipality to simply add the park as shown in the master plan as an additional responsibility of existing workers. As a premiere facility, the park requires a higher level of maintenance. The investment of about \$9 million in this riverfront park requires a commensurate addition in maintenance care to protect the public investment and ensure that the park is a focus of community pride.

Some reasons that the labor costs are high for this park include the following:

- The hourly rate of \$40 is high for some tasks especially seasonal ones. The use of seasonal staff, part-time staff or contractors could bring down the cost of litter pick-up and restroom cleaning, which are projected to be about \$23,400.

- The Jet Plaza could be fairly labor intensive. When it is designed, a maintenance plan and operating cost estimate should be determined.
- The park will have high visibility and be an icon for Moon Township, therefore top-notch maintenance is required.

## Recreation Staff and Programming

In addition to park maintenance requirements, the proposed park improvements will increase the workload for the Parks & Recreation Director and Assistant Director. The additional facilities will generate more demand on staff time for scheduling, coordination, response to public requests, and potential programming.

This park is envisioned to be primarily a facility that people use at their own discretion with a minimal number of organized schedule programs. Programs could include summer camps, fitness and wellness programs for citizens of all ages, special events, holiday activities, sporting events and nature-based programs.

## Financing

Tables 3 presents the projected budget for the park. This budget comes out to about \$2,578 per acre cost. This is in the normal range of about \$1,500 to 3,000 per acre in Townships in the area. The Township park and recreation budget is about \$227,000 for operations. With a population of 10,698 this equates to about \$21.22 per capita. The statewide average is about \$33.35 in Townships of this size. In these economic times, the topic of financing is challenging. At the same time public recreation close to home is very important for citizens especially for families looking for ways to spend time together in a way that does not cost too much money. Public parks and recreation offer many opportunities for that. If high quality facilities are available, that is a tremendous public service.

Table 4 presents the revenues for the park. Potential revenues for the park could be derived from pavilion rentals, food truck space rentals, programs, friend's organizations and increased user fees.

## 5 - Management Recommendations

To keep pace with the new park improvements, additional park acreage, citizen demands and expectations as well as to allocate resources effectively, enhancing capacity and expertise in the functional areas of park management is crucial. This would include the establishment of a planned maintenance management system, staff certification as playground safety inspectors, and natural resource management. Consider the following:

Importance of Counting: Little Things Add Up	
■	American Airlines saved \$47,000 annually by eliminating one olive from the salads served in the first class cabins.
■	The New York Times saved \$200,000 annually by eliminating one period in its masthead and the ink needed for this punctuation point.
■	Montgomery County Parks & Heritage Services saved nearly the equivalent of one full-time maintenance worker by eliminating the chopping of wood in one park.

- Develop a workload/cost tracking system for the Township parks and recreation facilities. By generating information to understand the real cost of labor, equipment, supplies and utilities, the Township will be able to allocate resources most effectively. The Township would also be able to establish policies on fees and charges based on actual cost recovery. It is impossible to manage what you do not count and track. This information is vital for making decisions such as contracting out tasks, charging fees, setting policy, deciding service levels and so on.
- Create an employee development program. Establish a five-year program that will enhance the expertise of the parks and recreation staff. This could include seminars, workshops, training programs, memberships, and visitation to other Township Parks and Recreation Departments with effective operating practices. Devote a percentage of the annual operating budget for training. One good idea obtained at a training program often more than pays for the cost of the training.

- C. Develop a natural resource plan for the park. Work in collaboration with the Penn State Extension Service, the Conservation District, local conservation organizations, and a local college to develop this plan. Adopt an implementation schedule with roles and responsibilities to ensure that the plan is carried out.
- D. Develop policies on park use, materials, supplies and practices that are environmentally friendly. Consider public education and outreach such as discouraging the use of plastic water bottles in the parks. Develop educational signage and website information to encourage the re-use of non-disposable bottles for water consumption. Encourage people to walk or bicycle to the park. Maintenance should focus on environmentally friendly practices such as composting, use of natural materials and recycled products. Other policies could be explored and implemented over time. The Township has concerns about the cost of “green” technology, materials, supplies, construction and practices. Getting “green” can be a goal that the Township would work towards with respect to the financial and human resources available and an eye toward seizing opportunities to support environmental conservation.
- E. Explore the establishment of a park rangers or park ambassadors program for the park. Consider establishing a volunteer program such as Park Ambassadors in order to establish an ongoing presence in the park.
- F. Organize a park master plan implementation committee. Strive to keep the momentum going on the park improvements. Regularly inform the public about the progress in the master plan.
- G. Develop a program management plan for this park.
- H. Explore the potential to create a Park Friends Group. The group could serve to support the park in fundraising efforts, volunteerism, advocacy, and as the ‘eyes and ears’ of park safety while they are visiting the park. This could include non-motorized boaters, trail users, conservationists, anglers, river lovers and others.

## Introduction

Moon Township is seeking funding for the establishment of a Riverfront Park, including resources for brownfields assessment and cleanup, infrastructure upgrades, stormwater management, and park and recreational facilities. Yet, grants are becoming more competitive than ever, and funding programs can continue to be complex and difficult to navigate. To be effective in raising resources, Moon Township should establish strategies and approaches for maximizing your competitive advantages and chances for success. This section provides recommendations on how the most effective approaches to seeking and obtaining resources for your community projects. The focus of these recommendations is on creating and implementing a “Strategic Advocacy Agenda” that enables Moon Township to organize and pursue its priority funding objectives in an effective way.

## Keys To Funding Success

### **1 - Building Upon Your Community Strength – the Connection to the Ohio River**

At one level, an advocacy agenda is a list of projects. And grant applications from localities are often just another set of papers in a large pile of submissions. The best advocacy agendas, however, stick together and support a broader vision for your community, and the best grant applications provide a compelling narrative about the focus and mission of a community. In your case, the connection of the communities to the Ohio Riverfront is a key organizing principle for funding advocacy. Moon Township should seek to continue to “brand” itself around your relationship to the Ohio River, weave the narrative of the River’s importance in your funding applications, connect with regional Ohio River organizations and causes, and use the restoration of the riverfront as a justification for funding agencies to provide resources.

### **2 - Building as a Region**

Likewise, Moon Township can gain a competitive advantage in funding efforts by working with the broader Ohio River/Allegheny/Greater Pittsburgh region. Most or all funding officials will know and understand the

Pittsburgh metropolitan region, and Moon Township can identify itself as a small community within this metro region seeking to promote better economic revitalization, environmental stewardship, and quality of life for citizens of the region.

This means that Moon Township must work diligently to build and maintain positive, ongoing relationships with key regional organizations, such as the Southwest Pennsylvania Commission, regional officers in federal and state agencies, and regional organizations such as the Ohio River Trail Council and Sustainable Pittsburgh. In particular, Moon Township needs to get your projects listed in regional documents that are pre-cursors to federal and state funding allocations, such as the Transportation Improvement Plan, the Comprehensive Economic Development Strategy, and the Clean Water Intended Use Plan that is updated annually by regional organizations.

### **3 - Organizing an Advocacy Team & Protocols for Regular Interaction**

Moon Township can be most effective in pursuing funding priorities in the Riverfront Park project if you convene an advocacy team, consisting of folks like election officials, managers, key department heads, critical staff, your federal and state lobbyists, and any other important stakeholders. The team would prioritize which projects deserve the community’s time and resources, and take a lead role in ensuring that your community is working toward funding goals. This team should meet together, and with key consultants, on a quarterly basis or more as necessary, to identify objectives, track progress, address obstacles, and assign next steps on your funding and project efforts.

### **4 - Preparing an Annual Advocacy Agenda**

Every year and sometimes more often depending upon circumstances and opportunities, our firms meet face-to-face with local government clients to prepare an advocacy agenda. This agenda serves two purposes. First, it identifies which projects within the overall Riverfront project will be priorities for the year, and clearly

pinpoints the funding opportunities that might support those priorities. The priorities identified in the advocacy agenda should not be too voluminous, but rather focus on the most important projects in which the community wants to invest its time and resources to move forward. To arrive at this shorter list of community priorities, the advocacy team mentioned in #3 above should discuss and determine which projects are most crucial and are ripe for investment. Typically, an advocacy agenda will include six (6) or fewer projects.

The second purpose of an advocacy agenda is to share with congressional, federal agency, and state leaders where their targeted support can be most useful. Moon Township should be asking its congressional and state elected leaders for support letters and phone calls to decision-makers on all of your priority projects. A focused advocacy agenda enables these leaders to understand where they can be helpful, and provides opportunities for supporters to identify additional funding for your community priorities.

Remember that an advocacy agenda shouldn't be a static document, as things will change in both your community and in Washington, DC.

### **5 - Matching Community Priorities to the Best Resource Opportunities**

With clearly identified community projects and priorities, Moon Township should then match priorities against the best resource opportunities provided by the federal, state, philanthropic, and private sectors. This requires knowing the best funding sources, and the attached funding matrix is a good start, which can be supplemented through the S2 Spotlight email newsletter, regular communications with your consultants, and by signing up to particular agency/program listservs that send funding announcements. These potential resources should then be assessed to determine whether your projects will be eligible, and how your projects can be shaped and developed to be most competitive for funding. The best way to make this assessment is through direct interaction with federal and state agency program officers who administer these funds.

### **6 - Developing Briefing Materials on Your Priorities**

Once Moon Township has identified priorities for the advocacy agenda, we strongly recommend that you develop concise briefing materials that explain the goals, planned activities and needs of each project. These materials, generally 2-page fact sheets, provide a clear summary of the proposed projects, and should be shared with federal and state officials, as well as other stakeholders. The fact sheets are important because they will provide funders and other supporters with more information about each of your priorities, and will be tailored to identify how particular agencies can support the community's goals.

### **7 - Organizing Local Support**

Granting agencies expect to see broad support for the projects that they will fund. Grant application windows are short, and you should be focused on developing a strong proposal during that time rather than just starting to educate the community-at-large about your priorities. After you complete your advocacy agenda and before the grant notices are even released, begin to build broad community support for your key projects. Be sure to touch all sectors of your community – business groups, homeowner associations, non-profits, environmental organizations, religious organizations, philanthropic foundations, educational institutions, regional groups, state agencies, and others. It would be prudent to create and maintain an ongoing contact database of key stakeholder contacts so that you can send e-mails or letters or organize phone calls quickly. For all organizations, ask them whether they would be willing to participate in the project, write letters of support for funding applications, or even provide matching funds toward projects.

You should also consider using traditional media as well as social media to get the word out on projects and keep the public involved. Send press releases at significant project milestones, post information on your website, create a Facebook page, and use other techniques to keep the strong backing of the community.

One particularly effective tool for project success is to form a task force to support a high-priority project. The purpose of such groups is not to make more work for

community leaders, but instead to get organizations and key citizens to agree to identify themselves with the project in a more official way, to convene them occasionally to report on progress and ask for further support, and – most of all – to be able to show funding officials the level and effective organization of buy-in at the community before grant solicitations are announced.

### **8 - Using Plans to Get to the Next Key Stage**

Given the Township's work on this Waterfront Park Master Plan, it is clear that Moon Township understands the importance of good community planning, given your active collaboration on the EPA Brownfields Area-Wide Plan. Keep in mind that federal and state funding agencies will want to see that plans, designs, engineering drawings, construction documents, permitting, and other pre-construction planning tasks are accomplished before they give you funding for project construction and implementation. That means that you should strive to move your project forward to the next stage of planning/engineering, whether through local resources or grant resources. Pay particular attention to federal, state, and philanthropic grants that support planning, design and engineering, because sometimes a relatively small grant for such planning can advance your project to a stage that it is ready to compete for bigger dollars.

### **9 - Identifying Matching Opportunities Early**

Most federal and state grants have matching requirements. Often, communities find that they cannot compete for funding opportunities because they do not meet the minimum match. And today, the minimum match is often not enough. To be most competitive, localities need to exceed matching requirements.

Your advocacy agenda should help you identify what matching requirements you'll need to produce for successful grants applications. Before the grant solicitations are announced, begin to identify how your community could meet and exceed the matching requirements. Local, state, and regional organizations will be overrun with requests for match funding when the grant notices are on the streets. Even your own governing council or board may be unable to act on matching needs within the 30- to 60-day time period

of a grant application process, because such a matching request may not align with your own budgeting, capital planning and spending cycles. It is better to identify your overall advocacy priorities annually, identify the matches you may need, and plan and budget to meet them early, should the federal/state funding opportunities arise for those projects. Build early support for your priorities, and identify potential sources of matching before the 11th hour.

### **10 - Building Relationships with Federal Agency Leaders**

This recommendation is fundamentally important. Moon Township should develop relationships with federal agency officials to build support for your projects before grant solicitations hit the streets. With a clear advocacy agenda, you can know which federal offices to approach and cultivate. Relationships should be built with both regional and Washington DC headquarters officials. These relationships and interactions can be nurtured through phone calls, e-mail correspondence, trips to the regional offices and Washington DC and, very importantly, invitations to these officials to visit your community and your projects. You want these officials to understand your goals and projects, and to think of your community when they are designing funding programs and grant solicitations. These agency leaders will be interested in receiving updates on your community's progress. Demonstrating that you are able to successfully move projects forward and fulfill your community's sustainability vision helps build confidence in your locality, making their future investment in your projects less risky.

Also, it is very important to meet with the leaders of these departments before grant solicitations have been announced, as many federal agencies get skittish about meeting with local officials when funding opportunities are on the street, and most likely won't meet with your team if an application has already been submitted for consideration.

### **11 - Identifying Alliances with Federal Elected Representatives**

Moon Township should also focus on building ongoing, collaborative relationships with your congressional

delegation, which includes Senator Casey, Senator Toomey, and Congressman Murphy. By conducting researching on your representatives' interests, committee positions, legislation, and political activities, Moon Township will be able to connect your interests with theirs. The Township should work with congressional district and headquarters staff to determine how your community projects and priorities advance their own interests, either on substantive issues or with respect to their efforts to build stronger support in your region of the state.

Moon Township should be seeking the support of these federal representatives on all your projects, particularly the high-priority initiatives. Ask these leaders to write support letters that you can include in your grant package. However, support letters aren't enough. Engage these elected leaders and urge them to make phone calls with key decision-makers. Members and Governors will often contact Cabinet Secretaries directly for projects that they are invested in. These calls matter.

### **12 - Building Relationships and Support from Key State Leaders**

Likewise, build support from the Governor and state department leaders, at both the Harrisburg headquarters levels and in the regional offices. Schedule regular meetings with key state officials, and keep them apprised of your community's progress and needs. Besides positioning yourself for state funding opportunities, their backing at the federal level can often help you out-compete other Pennsylvania localities.

Also, for some federal grant opportunities, you'll need to be listed on your state's priority funding lists, such as the State Transportation Improvement Plan for transportation projects and the Clean Water/Drinking Water State Revolving Fund Intended Use Plan lists for sewer, stormwater, and water projects. These lists often are not amended more than once annually. Make those requests early so that you are ready for those grant announcements.

### **13 - Scheduling Regular Visits with Your Congressional Delegation in DC and Locally**

It is equally important that your faces be seen in the U.S. Capitol. There you can discuss your community priorities directly with the Congressional Member, as well as meet key staff members with expertise in those areas. That contact is critical, and demonstrates that your community is actively engaged in seeking federal resources.

We recommend a visit to Washington, DC at least once annually, with other visits as needed to lend further support to your community priorities. In addition, it is important to invite your congressional Members and staff to visit your community and see your projects at least once a year. It is particularly useful to include Members at important occasions, such as at the launch of key initiatives, gatherings of citizens and organizations, groundbreakings and ribbon-cuttings.

### **14 - Building Capacity with Consultants**

Every community, particularly smaller communities, has a limited capacity to conduct all of the activities that help you become more competitive for funding resources, including tracking funding opportunities, building advocacy strategies, putting together advocacy materials, conducting planning or technical analyses to support your funding efforts, organizing contacts and collaboration with congressional and agency officials, and drafting and submitting grant applications. Consider how to spend local resources to build and extend your local capacity, either as a group of communities or individually. Often these investments can reap multiple returns and benefits.

### **15 - Celebrating Success**

Grant success can lead to further funding success. However, no one will know that you were successful unless you celebrate your achievements. Host groundbreakings, ribbon-cuttings and other celebratory events, and invite your congressional delegation, state elected leaders and key federal agency officials to attend. Nothing succeeds like success, and nothing is more important to getting the next grant than to show that you can spend the first grant effectively.

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### Resources Roster for the Moon Township Riverfront Park

Sustainable Strategies DC (S2) and Stromberg/Garrigan & Associates (SGA) have produced the following matrix, that matches Moon Township’s goals for the Moon Township Riverfront Park with the most promising opportunities for federal, state and private resources. The resources identified in this matrix have been included only if projects in Moon Township are expected to be eligible and competitive for such funding. The matrix also suggests key issues and next steps for pursuing and obtaining the identified resources.

This matrix should be considered together with other documents and materials that S2 is providing to Moon Township, including a two-page “Strategic Advocacy Agenda” that presents the Township’s highest priorities and requests, and a memorandum on “Effective Advocacy Approaches for the Township’s Riverfront Park”.

The matrix below is organized into two areas: an Overall Approach to Effective Advocacy – identifying objectives and actions that the Moon Township should pursue for a competitive edge in securing funding; and a list of Riverfront Priority Projects that identifies priority projects, sources of funding and key next steps. These Priority Projects are focused in six (6) key areas:

- Brownfields Revitalization; Transportation Infrastructure; Green Infrastructure for Clean Water; Shoreline Restoration; Parks/Recreation & Community Art; and Sustainability/Smart Growth.

This matrix does not provide exhaustive information on the 40 potential sources of funding identified below. Instead, this matrix is meant to be the overall blueprint for ideas and opportunities for Moon Township. For more detailed information on any particular resource, S2 is ready to follow-up and support the most promising opportunities. We hope that this document is a valuable tool to help Moon Township promote the revitalization of its Ohio River Riverfront.

## Overall Approach to Effective Advocacy

Success in obtaining funding takes a strategic, ongoing approach that increases Moon Township's competitive advantage. The key approaches and objectives below can help Moon Township increase your chances of obtaining funding for your priority projects.

Goal	Objectives	Strategic Approaches
Organize for Effective Action	<ul style="list-style-type: none"> <li>■ Clearly identified community priorities</li> <li>■ Moon Township working cooperatively with Ohio River communities on a regional basis</li> <li>■ Timely knowledge on funding opportunities</li> <li>■ Ongoing collaboration among key community units and consultants for an effective local team approach</li> <li>■ Strong public support for priorities</li> <li>■ Strong grant writing and packaging abilities</li> <li>■ Always prepared for match requirements</li> </ul>	<ul style="list-style-type: none"> <li>■ Maintain ongoing, dynamic Strategic Advocacy Agenda, and use it to direct community resources (to create budgets for future grant matches, allocate staff resources for projects, etc.)</li> <li>■ Affirm your Strategic Advocacy Agendas with official resolutions and implement them with top elected and staff leadership</li> <li>■ Participate in Ohio River regional coordination team that includes both elected &amp; staff; coordinate by email and meetings</li> <li>■ Maintain tracking system for federal opportunities</li> <li>■ Use 1- to 2-page briefing sheets for key projects</li> <li>■ Utilize outreach, community meetings, social media, and other communications approaches to boost projects</li> <li>■ Leverage funding sources and be prepared to match grants</li> <li>■ Celebrate/publicize successes, hold events</li> <li>■ Maintain an effective media strategy for priority projects</li> <li>■ Establish grant writing team and drafting protocols</li> </ul>
Build Key Relationships	<ul style="list-style-type: none"> <li>■ Strong alliances with key stakeholders, both within region and beyond</li> <li>■ Fully engaged relationships with congressional delegation</li> <li>■ Mutually supporting relationships with key federal agency officials and programs</li> </ul>	<ul style="list-style-type: none"> <li>■ Maintain ongoing database of key stakeholder contacts</li> <li>■ Regular briefings and communications (e.g., newsletters, e-mail reports) with key stakeholders</li> <li>■ Form interagency &amp; multi-stakeholder teams for key initiatives</li> <li>■ Regular DC and regional office visits and other communications with PA congressional delegation</li> <li>■ Regular interaction with targeted federal agencies</li> <li>■ Engagement with state and foundation funding leaders</li> <li>■ Build business, banking and finance backing</li> </ul>

## Brownfields Revitalization

The beginning point for the Riverfront Park is to clean up brownfields contamination and ready the site for reuse. The following resources can be used to foster and support such brownfields revitalization.

Potential Resources	Key Issues & Next Actions	Potential Projects
<p><b>U.S. EPA Brownfields Grants</b></p> <p>Although the Allegheny County Redevelopment Authority has received Brownfields Grants in the past, Moon Township has yet to take advantage of these important resources:</p> <ul style="list-style-type: none"> <li>■ <b>Targeted Brownfields Assessment Grants:</b> EPA Region 3 will provide a locality, at no charge, brownfields assessment and characterization at a targeted site, through a relatively simple letter application.</li> <li>■ <b>Assessment Grants:</b> These grants provide up to \$200,000 to localities, regional councils, and development authorities for site assessments, reuse planning and community outreach and collaboration to address hazardous waste and/or petroleum contamination. Consolidated Assessment Grants: EPA will provide up to \$600,000 in assessment funding for coalitions of communities, and Moon Township is part of the Monaca-area application being submitted for FY2013 Assessment grant funding.</li> <li>■ <b>Cleanup Grants:</b> These \$200,000-\$350,000 grants to localities and other parties can be used to clean up hazardous waste and/or petroleum contamination on sites owned by the grantee.</li> <li>■ <b>Cleanup Revolving Loan Fund Grants:</b> These grants of up to \$1 million can capitalize a fund that can be used for low/no-interest loans to private sector parties, or grants to local government entities and non-profits, for cleanup of hazardous waste and petroleum contamination. Supplemental RLF grants: can be obtained through a relatively simple application if you have expended a substantial amount of your original RLF grant.</li> </ul>	<ul style="list-style-type: none"> <li>■ Continue preparing the Coalition Assessment Grant application for submission December 3, 2012.</li> <li>■ Moon Township should continue to work closely with EPA Region 3's Brownfields &amp; Land Revitalization Office to discuss opportunities for grant funding.</li> <li>■ Work with the New Jersey Institute of Technology's "Technical Assistance for Brownfields" (TAB) program to get support in drafting grant applications.</li> <li>■ Moon Township should consider visiting Washington, DC to meet with key EPA Brownfield officials including Assistant Administrator Mathy Stanislaus and EPA Brownfields Director David Lloyd.</li> </ul>	<ul style="list-style-type: none"> <li>■ Additional assessment and remedial planning can be conducted with a Coalition Assessment grant, and cleanup could be supported with PA ISR grants and EPA cleanup grants.</li> </ul>

## Brownfields Revitalization

Potential Resources	Key Issues & Next Actions	Potential Projects
<p><b>U.S. EPA Brownfields Grants</b></p> <p>The EPA assessment, cleanup, and RLF grants are typically due by December each year. Other grants that may be announced later this year or early next year include:</p> <ul style="list-style-type: none"> <li>■ <b>Environmental Workforce Development &amp; Job Training Grants:</b> Provides up to \$200,000 for programs to recruit and train people in environmental fields including brownfields assessment and cleanup, green infrastructure, clean energy &amp; other fields</li> <li>■ <b>Brownfield Multi-Purpose Grants:</b> New pilot program to provide up to \$400,000 that combines brownfields assessment and cleanup grants to support flexibility at the local level.</li> </ul> <p>Also consider:</p> <ul style="list-style-type: none"> <li>■ <b>Targeted Assistance to Brownfields:</b> The New Jersey Institute of Technology has been designated a “TAB Center” by EPA to support mid-Atlantic brownfields efforts. This is only technical assistance, but it can help you be more competitive for EPA grants.</li> </ul>		
<p><b>State Brownfield Resources include:</b></p> <ul style="list-style-type: none"> <li>■ <b>PA DEP Industrial Site Reuse Program:</b> This State program provides brownfields assessment grants and loans of up to \$200,000 and cleanup grants and loans of up to \$1 million at former industrial sites.</li> <li>■ <b>PENNVEST Brownfield Redevelopment Loans</b> – The State will give loans of up to \$11 million to a single municipality or \$20 million to a joint application of 2-3 municipalities for 2.5% interest loans from the State’s Clean Water State Revolving Fund. See <a href="http://www.portal.state.pa.us/portal/server.pt/community/available_funding/11211/brownfield_redevelopment/560728">www.portal.state.pa.us/portal/server.pt/community/available_funding/11211/brownfield_redevelopment/560728</a> for terms and conditions.</li> </ul>	<ul style="list-style-type: none"> <li>■ For Industrial Site Reuse funds, contact the Environmental Cleanup Program Manager in the PA DEP Southwest Regional Office in Pittsburgh, Michael Forbeck, at 412.442.4094</li> <li>■ For the PENNVEST brownfields loan, contact the region’s PENNVEST representative together with a PA DEP representative, which then leads to an application through PENNVEST. Contact Larry Gasparato at <a href="http://www.portal.state.pa.us/portal/server.pt/community/financial_assistance/9321/get_regional_assistance/541647">www.portal.state.pa.us/portal/server.pt/community/financial_assistance/9321/get_regional_assistance/541647</a>.</li> </ul>	<ul style="list-style-type: none"> <li>■ Assessment and/or remediation of the Riverfront site.</li> </ul>

## Brownfields Revitalization

Potential Resources	Key Issues & Next Actions	Potential Projects
<p><b>Federal Home Loan Bank of Pittsburgh</b> Provides, through its member institutions of local banks and finance organizations, low cost loans, and credit support to local governments and others for its “Community Lending Program,” which can support development of public facilities and infrastructure, including public parks. Also provides intensive training, support, and partnerships with philanthropic foundations through the “Blueprint Communities” program. See <a href="http://www.fhlb-pgh.com/housing-and-community/index.html">www.fhlb-pgh.com/housing-and-community/index.html</a></p>	<ul style="list-style-type: none"> <li>■ If a development projects needs funding, approach a Member of the FHLB of Pittsburgh, see <a href="http://www.fhlb-pgh.com/about-us/our-customers.html">www.fhlb-pgh.com/about-us/our-customers.html</a>, and consider visiting the FHLB’s Director of Community Investment Programs Jim Gasperowich at 412.288.2864.</li> </ul>	
<p><b>HUD Block Grant Resources</b> HUD has a set of programs, all grouped under the Community Development Block Grant (CDBG) program, that can support a wide variety of activities including economic planning, property acquisition, infrastructure upgrades, community centers, brownfields revitalization, clean energy projects, low- and moderate-income housing, and other purposes. Moon Township is a HUD CDBG “Non-Entitlement Communities,” which means that you do not get a direct allocation of funding from HUD, but must obtain your funding from Allegheny County.</p> <p>Beyond CDBG funding from the Counties, the Township could seek to leverage more funding, in the form of “Section 108” loans, which are low-interest, 20-year federally guaranteed loans for any eligible CDBG purpose. These loans must be collateralized by the County’s CDBG program</p>	<ul style="list-style-type: none"> <li>■ Need to determine whether and how CDBG funding at the Riverfront site can support elimination of blight through a brownfield cleanup, which will require support from HUD Field Office in Pittsburgh. Start with Pittsburgh’s Director of Community Policy and Development John Tolbert.</li> <li>■ CDBG resources are typically distributed by Counties by a fairly rote formula, and thus the Township will need a strong, meritorious project to secure higher levels of CDBG grants or Section 108 loans.</li> </ul>	<ul style="list-style-type: none"> <li>■ Potential use on parking lots and road upgrades for Park, Valley Ambulance Authority, and Fab-Tec use.</li> </ul>
<p><b>USDA Community Facilities Grants &amp; Loans</b> USDA provides grants and loans for the construction of community facilities including ambulance and emergency service facilities.</p>	<ul style="list-style-type: none"> <li>■ Work with the USDA Rural Development contact, James Rhea, in the Butler, PA Service Center at 724.482.4800, x118 or <a href="mailto:James.Rhea@pa.usda.gov">James.Rhea@pa.usda.gov</a>.</li> </ul>	<ul style="list-style-type: none"> <li>■ Improvements in and around the Valley Ambulance Authority</li> </ul>

## Transportation Infrastructure

The Moon Township Riverfront Park needs road, parking, and trail improvements including a section of the Ohio River Trail, access roads, a rail crossing for vehicles, and transportation infrastructure for the Valley Ambulance Authority. Federal transportation funding is currently conducted through a 24-month piece of legislation called MAP-21 that puts forth a significant pool of funding for community projects, but also puts nearly all authority for funding decisions with the State DOTs – even more than in past years. To be proactive, the Township must work closely with PA DOT and the Southwest Pennsylvania Commission.

Potential Resources	Key Issues & Next Actions	Potential Projects
<p><b>Surface Transportation Project (“STP”) Funding</b></p> <p>U.S. DOT estimates that Pennsylvania will receive \$340,000,000 per year for both of the two years of MAP-21. This can be used on construction and improvements to roads (defined as federal-aid highways, although a state may spend up to 15% of its funding on “rural minor collectors”), bridges, bicycle and pedestrian trails, alternative fuel vehicle infrastructure, and other purposes. The law requires that States apportion half its funding each year among different sized communities, so there will be funding set aside for smaller localities, like Moon Township. In addition, the State may (but not must) spend portions of this STP funding on recreational trails, pedestrian facilities and other non-road purposes.</p>	<ul style="list-style-type: none"> <li>■ The key to obtaining State transportation funding is to have your projects listed in the “Transportation Improvement Plan” established by the Southwest Pennsylvania Commission, and the corresponding “State Transportation Improvement Plan” established by PA DOT. In general, the more outreach and collaboration to the SW PA Commission and PA DOT, the better. Consider enlisting State reps and senators for help.</li> <li>■ The Township should work with your state municipal organizations and State representatives to push PA DOT to allocate 15% of funding to small communities, and spend on transportation enhancement-type projects, as is permitted by the federal law.</li> </ul>	<ul style="list-style-type: none"> <li>■ Could potentially be used on Ohio River Trail and/or improvements to State Route 51, which could potentially support access to the Riverfront Park.</li> </ul>
<p><b>PA DOT “Transportation Alternatives” Funding</b></p> <p>The MAP-21 legislation mandates that each State must use 1% of its funding allocation and may use up to 2% of its funding allocation on these “Transportation Alternatives” projects which include non-motorized trails, sidewalks, and other walkability/sustainability projects. In PA, that means \$16-\$32 million a year, for two years, for these projects. This “Alternatives” fund replaces the Transportation Enhancements, Recreational Trails, and Safe Routes to Schools programs that have been traditionally funded by U.S. DOT through the states.</p>	<ul style="list-style-type: none"> <li>■ Again, get your projects into the Southwest PA Commission’s TIP and the PA DOT’S TIP</li> <li>■ Again, work with your allies to push the State to use the full 2% allocation of funding for these Alternatives projects.</li> </ul>	<ul style="list-style-type: none"> <li>■ Ohio River Trail</li> <li>■ Potentially could be used for green infrastructure on road facilities.</li> </ul>

## Transportation Infrastructure

Potential Resources	Key Issues & Next Actions	Potential Projects
<p><b>U.S. Department of Transportation (DOT) TIGER V Grant Program</b></p> <p>DOT provides approximately 40 annual TIGER grants for projects that foster complete streets, sustainability and livability, economic redevelopment, and safety. Average grant is \$12 million, and you must provide a non-federal match of 20+% to be competitive. State support is very important. Must be a very well-conceived project that has substantial progress already on planning, design/engineering, environmental evaluation, and funding leverage.</p>	<ul style="list-style-type: none"> <li>■ It is not clear whether U.S. DOT will obtain the congressional appropriations funding from Congress for another round of TIGER grant funding in 2013. Even if it is funding, these grants are extremely competitive, and the Moon Township park alone is not likely to be able to secure a TIGER grant. It may be possible to obtain funding as part of a collaborative project for the Ohio River Trail. Moon Township should work with the communities in the Monaca Area-Wide partnership to convene with regional and HQ U.S. Department of Transportation officials to discuss the potential feasibility and approach for a successful TIGER application.</li> </ul>	<ul style="list-style-type: none"> <li>■ Combination of Ohio River Trail and riverfront access roads, combined into a compelling “Ohio River Regional Roadways” project.</li> </ul>
<p><b>Congestion Mitigation &amp; Air Quality (CMAQ)</b></p> <p>Pennsylvania will have approximately \$106 million each year in 2013 and 2014 to provide grants for transportation projects that reduce vehicle emissions in localities that are non-attainment for Clean Air Act standards – which Allegheny County is.</p>	<ul style="list-style-type: none"> <li>■ Again, will need to work with Southwest Pennsylvania Commission and PA DOT to build support for projects that could obtain CMAQ funding.</li> <li>■ Will likely need to do technical work to show that traffic/VMT reduction, walking/biking projects will reduce vehicle emissions. The Moon Township park alone may not qualify, but could perhaps be packaged as part of a region-wide Ohio River Trail.</li> </ul>	<ul style="list-style-type: none"> <li>■ Ohio River Trail</li> </ul>

## Green Infrastructure for Clean Water

The development of a new park on the Ohio River, including impervious surfaces such as roads and parking lots, will require the establishment of stormwater infrastructure to deal with runoff. This can include the use of “green infrastructure” approaches to addressing those issues.

Potential Resources	Key Issues & Next Actions	Potential Projects
<p><b>Clean Water SRF Fund</b> The longtime traditional source of funding for wastewater infrastructure and, in the past decade or so, for stormwater infrastructure has been the ‘Clean Water State Revolving Fund’ or “SRF” program. The SRF is funded and guided by the U.S. Environmental Protection Agency, but administered by PENNVEST. These resources are loans with generally favorable terms, and the funding process is more appropriate for larger, more expensive projects than smaller projects. For FY12, Pennsylvania has \$56 million from U.S. EPA for these projects, which is probably an indication of the size of the fund in future years.</p> <p>In addition to the traditional Clean Water SRF program for wastewater projects, PENNVEST also provides approximately \$5.6 million annually for nonpoint source / stormwater and other “green reserve” projects.</p>	<p>■ To obtain either an SRF loan or a Green Reserve loan, contact the lead for PENNVEST in their Region 2 Office (Larry Gasparato, at <a href="http://www.portal.state.pa.us/portal/server.pt/community/financial_assistance/9321/get_regional_assistance/541647">www.portal.state.pa.us/portal/server.pt/community/financial_assistance/9321/get_regional_assistance/541647</a> and the PA DEP contact in the Southwest Regional Office (Dale Mills in Pittsburgh at 724.442.4000).</p>	<p>■ Green infrastructure projects associated with transportation facilities along the River.</p>
<p><b>Corps of Engineers Section 313 Environmental Improvement</b> A special authority was created in Congress in 1992 to provide funding to 15 counties in southwest Pennsylvania, including Allegheny County, to provide design and construction assistance for “Environmental Infrastructure” including wastewater treatment, water treatment and supply, and green infrastructure.</p>	<p>■ Corps funding for Environmental Infrastructure can be difficult to secure, as it is typically not included in the President’s budget, and has foes in the Congress. Moon Township will need to work closely with both your Congressman Tim Murphy, and with the Pittsburgh and Baltimore Districts of the U.S. Army Corps of Engineers, who share responsibility for the management of these Section 313 funds. You will want to get a project agreement for environmental infrastructure from these Corps offices, and have your project included for funding in the districts’ “work plans” submitted to Corps HQ in the fall of each year.</p>	<p>■ Green infrastructure and drinking water infrastructure on Ohio River.</p>

## Green Infrastructure for Clean Water

Potential Resources	Key Issues & Next Actions	Potential Projects
<p><b>EPA Green Infrastructure Program ("GIP") grants</b></p> <p>EPA provides technical assistance packages of between \$30,000 and \$75,000 in value that can be used to design community green infrastructure programs and projects. There is likely to be a solicitation for applications in the first half of 2013. See <a href="http://water.epa.gov/infrastructure/greeninfrastructure/gi_support.cfm">http://water.epa.gov/infrastructure/greeninfrastructure/gi_support.cfm</a>.</p>	<ul style="list-style-type: none"> <li>■ Moon Township should decide whether and how their individual stormwater challenges can be addressed through collaboration on key next steps for design, funding and implementation of solutions. Such a plan for collaboration can be a basis for approaching funding agencies, like EPA, that can provide grants for taking next steps.</li> <li>■ Coordinate with EPA Region 3 officials working in green infrastructure in both the Water and Brownfields offices, and coordinate with the Green Infrastructure Program leads in EPA HQ's Office of Water.</li> </ul>	<ul style="list-style-type: none"> <li>■ Could be used for Moon Township's green infrastructure planning along the Ohio River.</li> </ul>
<p><b>Clean Water Act Section 319 grants</b></p> <p>Approximately \$3 million a year in these grants are provided by PA DEP to local governments and nonprofit groups for watershed assessments, watershed restoration projects, and projects of statewide importance. The grant requires a 60% local match and 25% of the construction costs of practices implemented on private land must come from non-federal sources.</p>	<ul style="list-style-type: none"> <li>■ Contact Pennsylvania DEP's Jeff Fliss in the Southwest Regional, Lower Ohio River Basin office at 412.442.4207 to determine whether the Township's green infrastructure projects could obtain priority consideration.</li> </ul>	<ul style="list-style-type: none"> <li>■ Green infrastructure and stormwater management projects.</li> </ul>
<p><b>EPA Urban Waters grants</b></p> <p>EPA annually provides a number of these grants to local governments, working cooperatively with community and/or environmental groups, to support planning and community outreach on the protection of key waterways. Grants average \$50,000.</p>	<ul style="list-style-type: none"> <li>■ Like in the GIP description above, Moon Township should determine whether and how cooperation on green infrastructure and water improvement programs can help you move your designs and strategies to the next step.</li> <li>■ It would be very helpful for the Township to reach out to Pittsburgh-area environmental groups working on water quality and green infrastructure issues, as they have great clout with EPA on funding issues, and could help you secure and use some of these grants. Certainly continue to work with the Ohio River Trail Council and its allies. Other potential partners: Pennsylvania Environmental Council; Trout Unlimited; the Three Rivers Wet Weather Demonstration (<a href="http://www.3riverswetweather.org/">www.3riverswetweather.org/</a>), or Sustainable Pittsburgh, which has Allegheny County folks on its Board of Directors (and see its Sustainable Community Development Network) at <a href="http://www.SustainablePittsburgh.org">www.SustainablePittsburgh.org</a>. Also consider working in collaboration with Robert Morris University, as academic partnerships are favored in this EPA program.</li> </ul>	<ul style="list-style-type: none"> <li>■ Could be used on individual community projects or in a regional green infrastructure collaborative.</li> </ul>

## Shoreline Restoration

Moon Township seeks to better utilize its Ohio River shoreline for community activities, tourism, and environmental stewardship. The U.S. Army Corps of Engineers has a long history of activity on the Ohio River, and could potentially provide resources for shoreline restoration and improvements that support and enhance the Township's Riverfront redevelopment.

Potential Resources	Key Issues & Next Actions	Potential Projects
<p><b>U.S. Army Corps of Engineers Continuing Authorities Program</b></p> <p>The Corps has several "Continuing Authorities Programs" (CAP) that support feasibility studies, design and engineering projects, and construction for projects. Key authorities for Ohio River shoreline improvements could include:</p> <ul style="list-style-type: none"> <li>■ Section 313 – special authority created for Southwest Pennsylvania, described above.</li> <li>■ Section 22 Planning Assistance – to conduct feasibility and planning studies for potential Corp projects on waterways. Maximum grants of \$500,000 annually in any one state, with a 50% match.</li> <li>■ Section 1135 Planning Assistance – planning, design, engineering, and construction funding for improvement of areas that have been degraded by past Corps activities. Maximum federal share is \$5 million, with 25% non-federal match required.</li> <li>■ Section 206 Aquatic Ecosystem Restoration – for environmental improvements to waterways. Could be used for shoreline restoration and vegetation. Maximum federal share is \$5 million with 35% non-federal match required.</li> <li>■ Section 14 Emergency Shoreline and Streambank Restoration – if shoreline restoration is needed to protect against loss of public infrastructure or facilities, maximum federal expenditure \$1.5M, no match required. However, this program has been gutted of funding in recent years.</li> <li>■ A project under a Corps authority may use up to 10% of the project funding to support recreation along waterways, which could support a trail or riverfront park construction activity.</li> </ul>	<ul style="list-style-type: none"> <li>■ Key is to work cooperatively with the USACE Pittsburgh District Office, and then build support at the Great Lakes &amp; Ohio River Division and HQ levels. Contact USACE Pittsburgh District's Deputy District Engineer for Project Management, Lenna Hawkins at (412) 395-7105.</li> <li>■ Congressional officials have an important influence on Corps resource allocation to projects.</li> <li>■ A key first step will be to get agreement from the Pittsburgh District to include an initial feasibility study in District's Budget Work Plan for 2013 or 2014. Feasibility studies can lead into planning, design, engineering and then construction projects. Note – the Corps is strained and can be cumbersome to work with.</li> </ul>	<ul style="list-style-type: none"> <li>■ Green infrastructure for stormwater and shoreline restoration along the riverfront.</li> </ul>

## Parks & Recreation

Funding for parks and recreation, although critical for communities, has taken severe cuts during the economic downturn and period of federal funding cuts. The Township must have strong, well-conceived projects, and work closely with funding agencies, to be able to compete.

Potential Resources	Key Issues & Next Actions	Potential Projects
<p><b>PA Community Recreation and Conservation Program</b> The Pennsylvania Department of Conservation and Natural Resources (DCNR) provides grant funds for public parks, recreation, and trails projects. This is funded by a combination of state resources and the federal Land and Water Conservation Fund program. One key source, the “Keystone Recreation, Park, and Conservation Fund” was funded again this year by the state legislature. Planning grants are typically &lt;\$50,000, and construction grants are typically between \$150,000 and \$200,000. Match requirement is 50%, except for communities with a population &lt;5,000 and a project of &lt;\$60,000, which can receive a lower match requirement to as low as 0% match.</p>	<p>■ Contact Kathy Frankel in the DCNR Southwest Regional Office at (412) 880-0468 or KFrankel@pa.gov.</p>	<p>■ Ohio River Trail and Moon Township park development.</p>
<p><b>DCNR Rivers Conservation Program grants</b> Rivers Conservation grants are awarded to municipalities, counties, municipal authorities, educational institutions, and non-profit organizations to develop watershed/river-corridor conservation plans; acquire land or develop projects to address the recommendations in those plans. Grants can only be given for sites/locations listed on the PA Rivers Conservation Registry and recommended in a completed Rivers Conservation Plan; it is not clear that there is a plan that covers the Township’s stretch of the Ohio River.</p>	<p>■ Contact Kathy Frankel in the DCNR Southwest Regional Office at (412) 880-0468 or KFrankel@pa.gov, with the first task to determine whether Moon Township can qualify under the River Conservation Program.</p>	<p>■ Riverfront park and green infrastructure projects.</p>
<p><b>DCNR Recreational Trails Program</b> This program funds projects that help develop and maintain recreational trails, trail-related facilities for both motorized and non-motorized recreational trail use, and trail-related equipment.</p>	<p>■ Contact Kathy Frankel in the DCNR Southwest Regional Office at (412) 880-0468 or KFrankel@pa.gov.</p>	<p>■ Ohio River Trail portion of Riverfront park.</p>

## Parks & Recreation

Potential Resources	Key Issues & Next Actions	Potential Projects
<b>DCNR Partnerships Program</b> This program funds projects that help build professional capacity and provide education to the public on the benefit and value of recreation, conservation, and heritage in Pennsylvania, assisting to better develop and manage recreation and park facilities, as well as, to promote the conservation of natural and heritage resources through plan implementation, education, and training.	<ul style="list-style-type: none"> <li>■ Contact Kathy Frankel in the DCNR Southwest Regional Office at (412) 880-0468 or KFrankel@pa.gov,</li> <li>• This program would serve as a way to generate best practices for park managers and community groups</li> </ul>	<ul style="list-style-type: none"> <li>■ Building capacity and public outreach capabilities of Moon Township Department of Parks &amp; Recreation.</li> </ul>
<b>DCNR Peer-to-Peer Program</b> This program funds projects that help municipalities improve their park, recreation, and conservation services through a collaborative process. Projects are accomplished through contracts with experienced park, recreation and conservation professionals from nearby communities who will work closely with local leaders.	<ul style="list-style-type: none"> <li>■ Contact Kathy Frankel in the DCNR Southwest Regional Office at (412) 880-0468 or KFrankel@pa.gov,</li> <li>• This program would serve as a way to generate best practices for park managers and community groups</li> </ul>	<ul style="list-style-type: none"> <li>■ Building capacity and public outreach capabilities of Moon Township Department of Parks &amp; Recreation.</li> </ul>
<b>Pennsylvania Fish and Boat Commission</b> Annually provides grant funds up to \$5,000 per grantee for fishing and aquatic education programs in need of financial assistance. Grant applications are accepted from organizations and local agencies involved in offering sportfishing and aquatic resource education programming.	<ul style="list-style-type: none"> <li>■ Contact Scott Bollinger 717-346-8196; scbollinge@pa.gov, to discuss the project.</li> <li>• These funds would be used to supplement the efforts to promote the Riverfront park as a local fishermen's destination</li> </ul>	<ul style="list-style-type: none"> <li>■ Recreational fishing aspects of the project.</li> </ul>
<b>The Boating Infrastructure Grant Program</b> Provides grants for transient moorage (tie-ups) serving recreational motorboats 26 feet and longer. Transient means passing through or by a place, staying 10 days or less. The program is administered in Pennsylvania by the PA Fish and Boat Commission, in cooperation with U.S. Department of Interior's U.S. Fish and Wildlife Service.	<ul style="list-style-type: none"> <li>■ Contact Scott Bollinger 717-346-8196; scbollinge@pa.gov, to discuss the project.</li> <li>• Funds used to create the required facilities needed for day-trippers, potentially as a stop off for Pittsburgh sports fans.</li> </ul>	<ul style="list-style-type: none"> <li>■ Recreational boating aspect of the project.</li> </ul>

## Parks & Recreation

Potential Resources	Key Issues & Next Actions	Potential Projects
<p><b>Clean Vessel Act of 1992</b> The Grant will reimburse recipients for up to 75% of the installation cost of pumpout and dump stations. This includes the cost of new equipment, or the renovation or upgrading of existing equipment, as well as necessary pumps, piping, fitting, lift stations, on-site holding tanks, pier or dock modifications, signs, permits, and other miscellaneous equipment needed for a complete and efficient station.</p>	<ul style="list-style-type: none"> <li>■ Contact Scott Bollinger 717-346-8196; scbol-linge@pa.gov, to discuss the project.</li> <li>• These funds would be put in place in conjunction with the boating infrastructure grants. These pump station are in high demand and would attract boats to this location.</li> <li>• These facilities could also serve to generate additional revenue for the park</li> </ul>	<ul style="list-style-type: none"> <li>■ Recreational boating aspect of the project.</li> </ul>
<p><b>National Park Service, Groundwork Trust</b> The Groundwork Trust program supports and can fund locally-driven partnerships among local government, business, foundations, community groups, and residents to build safer and stronger communities, support local economies, and promote environmental sustainability. Creating a Groundwork Trust involves creating a new sustainability organization to promote local projects, which can include rivers restoration, “brownfields to greenfields”, community gardens, and trail restoration. The National Park Service is seeking Letters of Intent for 2013 selections by December 14, 2012, and will pick 10 communities for technical assistance and two (2) communities for seed funding plus technical assistance to create Groundwork Trust initiatives. See <a href="http://groundworkusa.org/trusts/developing-a-groundwork-trust-in-your-community/">http://groundworkusa.org/trusts/developing-a-groundwork-trust-in-your-community/</a>.</p>	<ul style="list-style-type: none"> <li>■ This approach calls for the creation of a brand new organization and process for community collaboration – so consider your commitment carefully. Enter into discussions with local businesses and constituents to generate “buy in” for the creation of a community trust.</li> <li>■ Discuss project with Groundwork USA’s Anjali Chen at 914.375.2151 and National Park Service’s Manager Douglas Evans at 617.223.5124.</li> </ul>	<ul style="list-style-type: none"> <li>■ An ongoing organization to promote sustainability in the Township and region, including along Ohio River.</li> </ul>
<p><b>National Park Service; Rivers, Trails and Conservation Assistance (RTCA)</b> Technical assistance for community-led natural resource conservation and outdoor recreation initiatives. RTCA staff provides guidance to communities so they can conserve waterways, preserve open space, and develop trails and greenways.</p>	<ul style="list-style-type: none"> <li>■ Contact the National Park Service RTCA Northeast Office in Philadelphia for an initial project discussion, including Manager Dave Lange at 215.597.6477 or Sherry Peck at 597.6478 or Kathy Schlegel at 597.6486.</li> <li>■ This can opportunity can also be used as an entry point for gather information and resources for further project development.</li> </ul>	<ul style="list-style-type: none"> <li>■ Recreational trails and water sports aspect of the project.</li> </ul>

## Sustainability / Smart Growth

The Moon Township Riverfront Park has a strong connection to the principals of smart growth and sustainable development. The Township can seek additional resources that support these specific areas.

Potential Resources	Key Issues & Next Actions	Potential Projects
<p><b>Wells Fargo / National Fish &amp; Wildlife Foundation “Environmental Solutions for Communities” grants</b></p> <p>Will provide grants of up to \$100,000 to localities for, among other focus areas, community-based conservation projects that protect and restore local habitats and natural areas, enhance water quality, promote urban forestry, educate and train community leaders on sustainable practices, promote related job creation and training, and engage diverse partners and volunteers; and demonstration projects that showcase innovative, cost-effective and environmentally-friendly approaches to improve environmental conditions within urban communities by “greening” traditional infrastructure and public projects such as stormwater management and flood control, public park enhancements, and renovations to public facilities.</p> <p>Must have a 1:1 match with the Wells Fargo grants. While Wells Fargo has not yet opened up a round of grant funding for Pennsylvania communities, it is expected that Wells Fargo will do so in future rounds.</p>	<ul style="list-style-type: none"> <li>■ Call and coordinate with the director of the Wells Fargo program, Ashley Grosh at the Wells Fargo Foundation, Environmental section. Also, contact Wells Fargo bank in your region to discuss their involvement in and support for the Riverfront project.</li> </ul>	<ul style="list-style-type: none"> <li>■ Entire Riverfront park project.</li> </ul>

## Sustainability / Smart Growth

Potential Resources	Key Issues & Next Actions	Potential Projects
<p><b>U.S. EPA “Smart Growth Implementation Assistance” (SGIA) and “Smart Growth Building Blocks” assistance</b></p> <p>Under these programs, EPA provides a team of experts on sustainable growth and community renewal to review issues and suggest approaches for addressing those issues. The SGIA assistance is more robust and intensive than the Building Blocks assistance, but more competitive. These are programs that can give a community nice profile and better relationships with key national smart growth leaders.</p> <p>EPA Building Blocks deadlines for 2012 have passed, but SGIA competition has not yet been announced.</p>	<ul style="list-style-type: none"> <li>■ The Township should identify how EPA smart growth assistance can be a follow-on to the successful collaboration of the Area-Wide grant, and then contact both EPA Region 3 and HQ staff in the smart growth offices to discuss potential projects.</li> </ul>	<ul style="list-style-type: none"> <li>■ Green infrastructure for stormwater management.</li> </ul>
<p><b>The Funders’ Network for Smart Growth &amp; Livable Communities, Local Sustainability grants</b></p> <p>The Funders’ Network for Smart Growth &amp; Livable Communities will provide up to \$75,000 to local government grantees that match that amount from a local or regional foundation, to support a variety of local sustainability initiatives including the establishment of financing programs for green buildings, funding local sustainability offices, fostering large scale behavioral change (e.g., better practices to reduce stormwater impact), promoting local food systems, and waste reduction programs.</p> <p>See examples from the first funding round at <a href="http://www.fundersnetwork.org/participate/green-building/local-sustainability-matching-fund/lsmf-ay-2012-awards">www.fundersnetwork.org/participate/green-building/local-sustainability-matching-fund/lsmf-ay-2012-awards</a>. Deadlines have passed for 2012, but there will likely be future rounds in 2013.</p>	<ul style="list-style-type: none"> <li>■ Two key steps: determining whether you have a competitive project and compelling need; and finding a local or regional community foundation to provide the match. Could seek out the support of the Three Rivers Community Foundation, or the Pittsburgh Foundation.</li> <li>■ Check this list to see if you have good relationships with any of these community foundations: <a href="http://www.foundationdatabook.com/Pages/or/orlinks.html">www.foundationdatabook.com/Pages/or/orlinks.html</a>.</li> </ul>	<ul style="list-style-type: none"> <li>■ Perhaps a project to promote deployment of green infrastructure.</li> </ul>

## Sustainability / Smart Growth

Potential Resources	Key Issues & Next Actions	Potential Projects
<p><b>Urban and Community Forestry grants</b> This funding is used to encourage the planting of trees in Pennsylvania communities. Municipal challenge grants provide 50 percent of the cost of the purchase and delivery of trees. In Pennsylvania, grants for tree planting of up to \$15,000 per municipality can be given under the “TreeVitalize” program. See <a href="http://www.treevitalize.net/SubGrant.aspx">www.treevitalize.net/SubGrant.aspx</a>.</p> <p>The Pennsylvania Community Forest Council also provides “Municipal Challenge” grants to cover the cost of planting up to 50 trees, “Municipal Tree Restoration Program” grants in partnership with utilities to help ensure tree planting that does not interfere with overhead wires, and “Tree Improvement Grants” to support better care of existing trees. See <a href="http://www.pacommunityforests.com/grants/index.htm">www.pacommunityforests.com/grants/index.htm</a>.</p>	<ul style="list-style-type: none"> <li>■ Contact the PA DCNR “Service Forester” for your county, at <a href="http://www.dcnr.state.pa.us/forestry/yourwoods/serviceforesters/index.htm">www.dcnr.state.pa.us/forestry/yourwoods/serviceforesters/index.htm</a>.</li> <li>■ Contact the Pennsylvania Community Forestry Council in Harrisburg at <a href="http://www.pacommunityforests.com/contactinformation/index.htm">www.pacommunityforests.com/contactinformation/index.htm</a>.</li> </ul>	<ul style="list-style-type: none"> <li>■ Tree planting at Riverfront Park.</li> </ul>



# **Moon Township Riverfront Park Master Plan**

## **APPENDIX**

## 2012 Pennsylvania Natural Diversity Inventory (PNDI) Report

The Pennsylvania Natural Heritage Program (PNHP) is an international network of natural heritage programs that gather and provide information on the location and status of important ecological resources (plants, vertebrates, invertebrates, natural communities and geologic features). The Pennsylvania Natural Diversity Inventory (PNDI) is an environmental review function of the PNHP. Environmental review refers to the review of projects (e.g. development, restoration) for potential impact to Species of Special Concern (SOSC) which are defined as “Ecologically significant species and communities that are State and/or Federally listed as Endangered, Threatened, Rare, Candidate, Imperiled or Vulnerable.

The PNDI reports were generated through the PNHP website which cross references project type and mapped project area with SOSC data and point/polygon GIS data to generate a receipt of analysis. A “hit” occurs when the two overlap. A hit does not necessarily mean that the species is known in the project area. Additionally, the lack of a hit may indicate that this area has not been surveyed in the past. Lack of information does not equal a lack of species/habitat.

Agency	Results	Response
PA Game Commission	■ No Known Impact	■ No Further Review Required
PA Department of Conservation and Natural Resources	■ Potential Impact	■ FURTHER REVIEW IS REQUIRED, ■ See Agency Response
PA Fish and Boat Commission	■ No Known Impact	■ No Further Review Required
U.S. Fish and Wildlife Service	■ No Known Impact	■ No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates “No Further Review Required” no additional communication with the respective agency is required. If the response is “Further Review Required” or “See Agency Response,” refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

PA Department of Conservation and Natural Resources  
RESPONSE: Further review of this project is necessary to resolve the potential impacts(s).

DCNR Species of Potential Impact: (Note: The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below. After desktop review, if a botanical survey is required by DCNR, we recommend the DCNR Botanical Survey Protocols, available here: [http://www.gis.dcnr.state.pa.us/hgis-er/PNDI\\_DCNR.aspx](http://www.gis.dcnr.state.pa.us/hgis-er/PNDI_DCNR.aspx).)

Scientific Name: *Helianthus hirsutus*  
Common Name: Sunflower  
Current Status: Special Concern Species\*  
Proposed Status: Special Concern Species\*

Scientific Name: *Scutellaria saxatilis*  
Common Name: Rock Skullcap  
Current Status: Special Concern Species\*  
Proposed Status: Endangered

## 2004 Pennsylvania Natural Diversity Inventory (PNDI) Report



**IN REPLY REFER TO**  
SIR# 15198

Civil & Environmental Consultants, Inc.  
Martin Knuth  
333 Baldwin Road  
Pittsburgh, PA 15205

Commonwealth of Pennsylvania  
Pennsylvania Fish and Boat Commission  
Division of Environmental Services  
450 Robinson Lane  
Bellefonte, PA 16823  
814-359-5237  
April 30, 2004

**RE: Species Impact Review (SIR) - Rare, Candidate, Threatened and Endangered Species  
Former RB&W Corp. Facility  
Moon Township, Allegheny County, Pennsylvania**

Dear Mr. Knuth:

I have examined the map accompanying your recent correspondence, which shows the location for the above-referenced project. Based on records maintained in the Pennsylvania Natural Diversity Inventory (PNDI) database and Pennsylvania Fish & Boat Commission (PFBC) files, the following rare or protected species falling under PFBC jurisdiction are known from the Ohio River in the vicinity of the project:

Common Name	Scientific Name	PA Status
River shiner	<i>Notropis blennioides</i>	Endangered
Smallmouth buffalo	<i>Ictalurus nebulosus</i>	Threatened
Skipjack herring	<i>Alosa chrysochloris</i>	Threatened
Brook silverside	<i>Labidesthes sicculus</i>	Candidate
Longnose gar	<i>Lepisosteus osseus</i>	Candidate
River herring	<i>Morone chrysops</i>	Candidate

These species are especially vulnerable to physical (siltation, dredging, rip-rap, etc.) and chemical (pH, dissolved oxygen, temperature, heavy metals, and organic contaminants) changes to their aquatic environment. If environmentally invasive activities will affect any waterways at the site, we will require additional information to allow for a more thorough evaluation of potential adverse impacts to the species of concern. Items such as detailed project plans, a description of the proposed work, aerial photographs of the general area, mapped areas that are to be impacted, stream characterizations and descriptions, and color photographs would expedite our review process. However, if there will be no disturbance or impacts to waterways and provided that best management practices and an approved strict erosion/sedimentation control plan is maintained, then I do not anticipate the proposed activity to have any significant adverse impacts to the rare or protected species under PFBC jurisdiction.

If you have any questions regarding this response, please contact Kathy Derge of my staff (814-359-5186) and refer to the SIR number at the top of this letter. Thank you for your cooperation and attention to this matter of threatened and endangered species conservation.

Sincerely,

Christopher A. Urban, Chief  
Natural Diversity Section

### Applicable Laws and Regulations

As a public park, the Moon Township Riverfront Park must comply with numerous laws and regulations. Some of the laws and regulations applicable in consideration of park development are noted below but the list is not intended to be all-inclusive.

- Public playgrounds should meet the guidelines of the Consumer Product Safety Commission (CPSC) Guidelines for Public Playground Safety. These guidelines establish the “standard of care” for public playground design, layout, and maintenance. An upgrade schedule should be developed based on the results of a playground safety audit. When replacement or upgrades are undertaken work must comply with the guidelines of the CPSC Guidelines for Public Playground Safety and the ADA.
- The safety surfacing in playgrounds shall meet the requirements of the American Society for Testing and Materials F1487-05. Playground safety surfacing material and depth must comply with this standard.
- Public areas of the park including parking areas, trails, picnic pavilions, picnic tables, restrooms, playgrounds, overlooks, and other areas must be accessible to physically challenged and visually impaired visitors to comply with the requirements of the Americans with Disabilities Act.
- The location of the park along the Ohio River may require multiple permits to be reviewed and granted by the U.S. Army Corps of Engineers, related to both navigable waterways and also for retaining walls and work performed within the AE Zone.
- Protection of wetland areas and streams are regulated under Section 401 of the Federal Clean Water Act. The Pennsylvania Department of Environmental Protection (PADEP) (Chapter 105) via General Permits regulates minor disturbance of wetlands and streams. Improvements in the area of the wetlands or encroachment of the wetlands will require a permit from DEP.
- As a documented brownfield, the utilization of the site for a use other than industrial activities will require a review and permitting of the site for public use (to a residential standard) within the purview of the PADEP PA Act 2 Land Recycling Program.
- The disturbance of earth is regulated both locally and at the state level. A General NPDES Permit for Stormwater Discharges Associated with Construction Activities is required for earth disturbance activities which disturb five or more acres or propose earth disturbance activities with a point source discharge to surface waters of the Commonwealth that disturb from one to less than five acres. Construction activities that are not eligible for coverage under the general permit (PA Code Chapter 92) must utilize the Individual NPDES Permit Application for Stormwater Discharges Associated with Construction Activities. These activities include, but are not limited to construction activities that require an NPDES Permit and which may affect existing water quality standards or threatened or endangered species and habitat, or construction activities that have the potential for toxic discharge. An approved Erosion and Sedimentation Control Plan is required for the disturbance of soil in areas of 0.5 acres or more.
- Federal and State agencies regulate the protection of endangered species. An environmental review of the Pennsylvania Natural Diversity Inventory (PNDI) listing is required to verify if there are animal or plant species of special concern. This review is initiated through wetland and stream encroachment permits, NPDES permits, and sewage planning module permits.
- Pennsylvania Department of Environmental Protection Sewage Planning Module permits are typically required for the expansion and/or development of sewage facilities. A sewage planning module may be required as new restroom facilities are developed in the park.
- Laws of the Commonwealth protect significant historic areas and structures. If historic areas and structures are affected by park modifications or development or if improvements reveal areas of historic significance a review by the Pennsylvania Historical and Museum Commission will be required.

## 2 Applicable Laws and Regulations

- Development of park improvements may require the approval of the local municipality and the review of the County Planning agency. The need for land development plan approval will be based on the description of the improvement project and the municipality's interpretation of their Subdivision and Land Development Ordinance.
- The development of property, buildings, and structures is regulated by municipal building codes. As improvements are contemplated they should be discussed with the appropriate building code review entities/agencies.
- Local Building Codes require Occupancy Permits for structure for fire and panic safety requirements. The pavilions proposed at the park sites will be require architectural drawings for the site specific nature of their design and needs and therefore will require code review and approval.
- The access to or improvements within the right-of-way of Pennsylvania Department of Transportation (PennDOT) roadways requires a Highway Occupancy Permit issued by PennDOT.
- Pennsylvania laws require notification of construction activities through the Pennsylvania One Call system. Three working days notice is required for construction phase work and ten working days for design stage work.

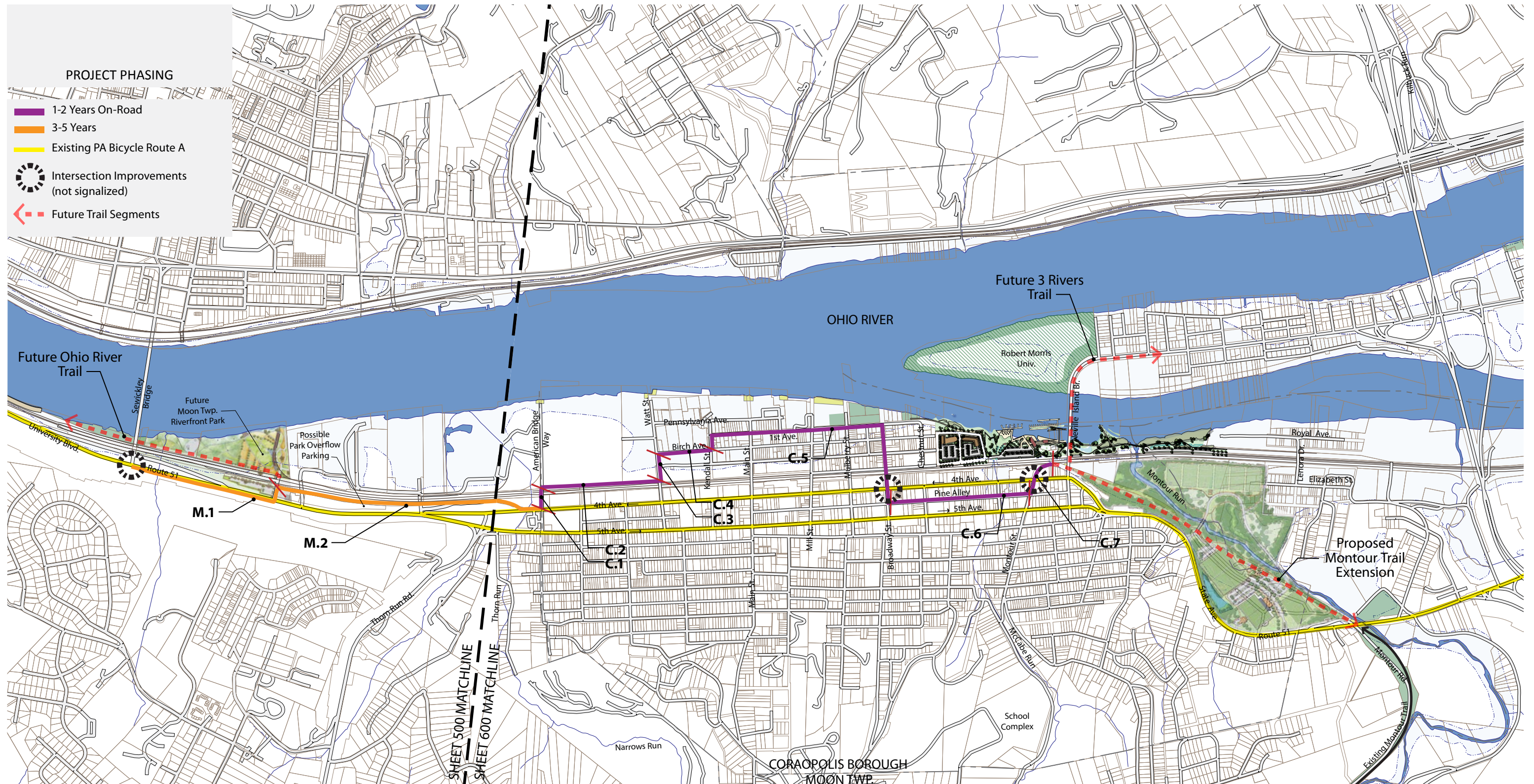
## Introduction

The Borough of Coraopolis in partnership with Moon Township and with technical support from the Ohio River Trail Council (ORTC) received a Transportation, Community, and System Preservation (TCSP) Program grant in 2012, through the U.S. Department of Transportation and PennDOT for the engineering design of the first segment of the proposed Ohio River South Shore Trail. The project consists of an approximately 2.5 mile segment starting at the proposed Allegheny County Sports & Athletic Complex at Montour Junction which is a new recreational park located on 78 acres of land in Coraopolis Borough, Moon Township and Robinson Township. The Athletic Complex will include a number of nontraditional athletic fields, recreational programming, trout fishing, and an extension of the Montour Trail. The Athletic Complex will be bordered by PA Route 51 to the west and south and the CSX Railroad and Neville Island Bridge to the north. The head of the Montour Trail is approximately one mile to the south and a trail connection will be extended through the Athletic Complex site as part of the park project. The proposed Ohio River Trail project funded under the TCSP grant will connect to the park in the vicinity of the Neville Island Bridge (at Ferre Street and via Montour Street underneath the bridge). The trail will continue through Coraopolis Borough as a series of on-road improvements, including 'sharrow' striping and markings and signage, along existing PA Bicycle Route A which travels via PA Route 51/4th and 5th Streets (as one-way pairs).

At Thorn Run Road, as the trail project extends into Moon Township, the trail has two potential routes to reach the Moon Township Riverfront Park site. An existing overhead utility corridor, which is owned by Duquesne Power and Light, is the preferred alignment since it locates the trail farther away from PA Route 51. A safety fence is proposed to be located along the edge of the utility right-of-way along the CSX rail line. The second and less desirable option is to locate the trail along the outside boundary of the existing PennDOT right-of-way for PA Route 51, which is wide in this area. The trail project will parallel PA Route 51 and the CSX railroad until it reaches Ambulance Way, at the entrance of the Moon Township Riverfront Park. The trail project will cross PA Route 51 at the signalized intersection and proceed along the south side of PA Route 51 to the signalized Sewickley Bridge approach. The trail project will end at the existing pedestrian walk-way at the bridge approach.

More detailed information is available in the Pennsylvania Department of Conservation and Natural Resources (PADCNR) funded Ohio River South Shore Trail Feasibility Study which is available on the ORTC's website. The project includes segments of Section 500 and all of Section 600, as defined in the feasibility study (see attached maps on pages A3.2 and A3.1).

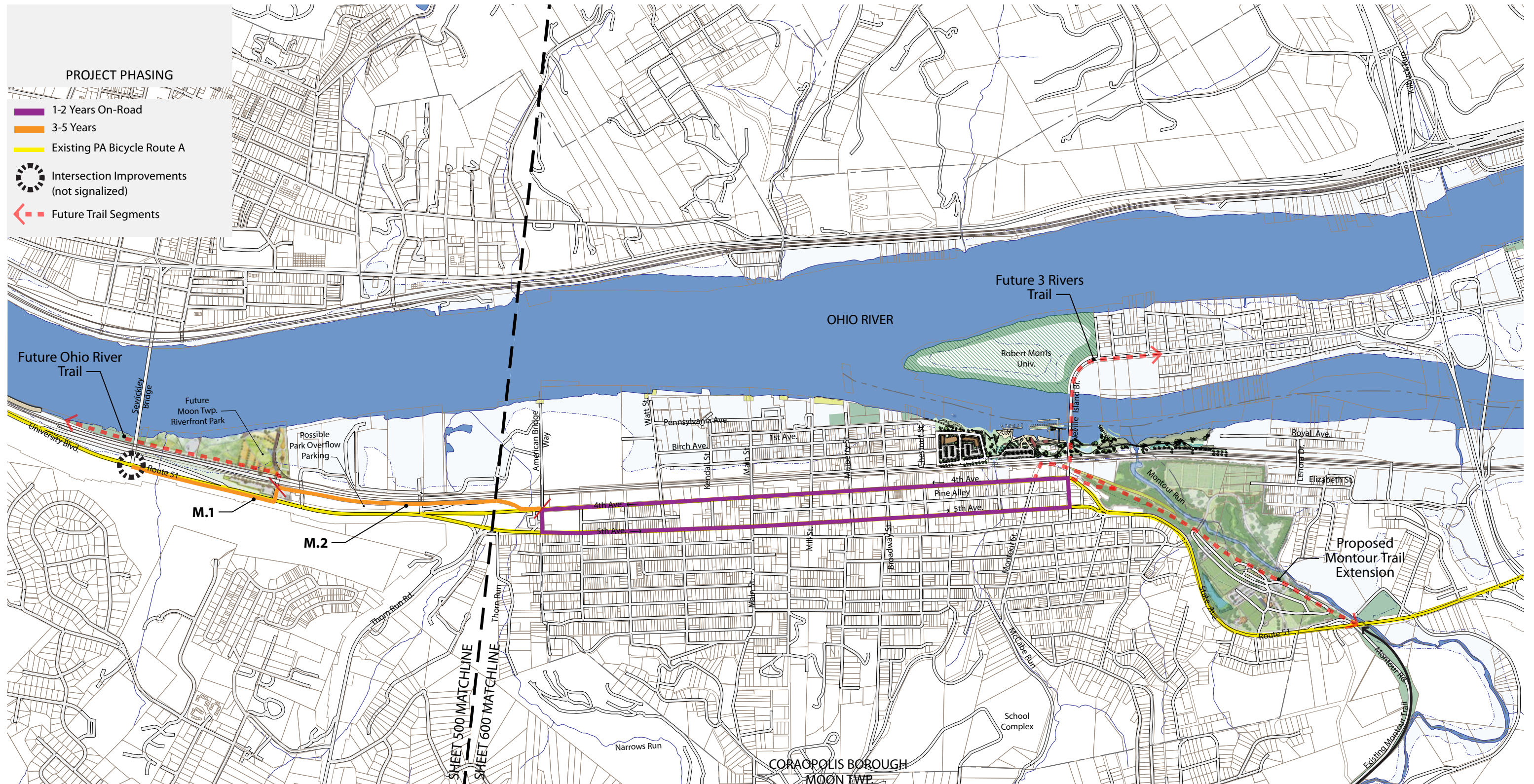
# 3 Regional Trail Networks



SCALE: Not to Scale NORTH

Proposed "Engineering Design" Project as Defined  
in the TCSP Grant

# 3 Regional Trail Networks



SCALE: Not to Scale NORTH