

The North Scranton Riverfront Project

A SUMMARY PLAN & COST ANALYSIS

PRODUCED BY: THE LACKAWANNA RIVER CONSERVATION ASSOCIATION
THE LACKAWANNA VALLEY CONSERVANCY

WITH INPUT FROM: THE LACKAWANNA HERITAGE VALLEY AUTHORITY

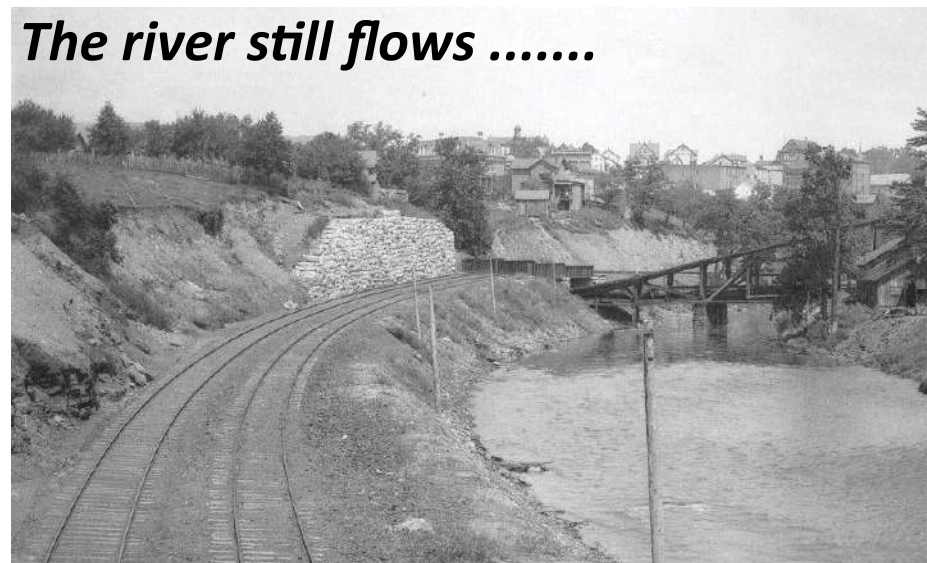
Funding for the North Scranton Riverfront Project has been provided through a Robert H. Spitz Environmental Grant administered by the Scranton Area Foundation and through support of the membership of the Lackawanna River Conservation Association and the Lackawanna Valley Conservancy.



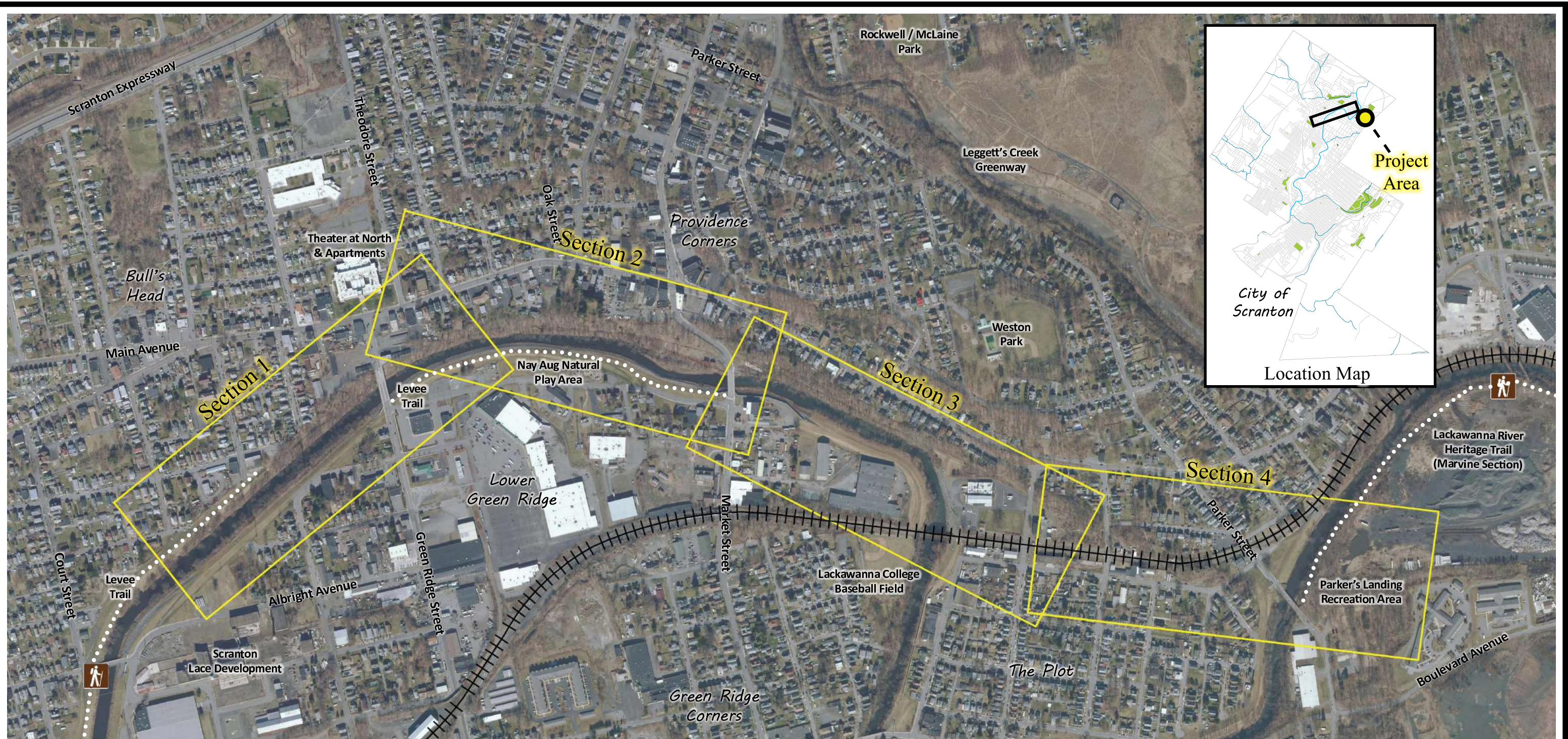
Project Goals

This Riverfront Project is focused on dynamic urban blight removal, environmental restoration, river corridor access, greenway, and trail development. The project aims to reconnect neighborhoods, residents and tourists to the Lackawanna River and the Heritage Trail, which will facilitate economic, wellness, alternative transportation and recreational growth within the Lackawanna Valley.

The river still flows



..... Re-Embrace, Re-Value & Restore our connections



Project Area The Riverfront Project begins at the northeast terminus of Diamond Avenue in the Bull's Head neighborhood of North Scranton. It extends on property owned by the Lackawanna Valley Conservancy along the west bank of the Lackawanna River through Green Ridge Street, Market Street, and Depot Street to Dean Street in The Plot neighborhood. These parcels of former New York, Ontario, and Western Railroad right of way extend for approximately one mile in length. The width of the property varies between 75 to 125 feet. At one point the corridor width constricts to approximately 40 feet. The project area continues through The Plot to Parker Street and terminates at Parker's Landing and the newly completed Marvine section of the Heritage Trail.



Scale: 1 inch = 600 feet
(11" x 17" sheet size)



The North Scranton Riverfront Project

Diamond Avenue to Parker Street - City of Scranton, Lackawanna County, PA

Thomas J. McLane & Associates
Landscape Architecture - Environmental Science

December 2022
Project Area



EXISTING CONDITIONS

..... Existing Trails
 - - - - - Proposed Trail

City-owned land

Signature Projects (proposed)

Areas of Interest (improvement needs)

Key Parcel (privately-owned)

Scale: 1 inch = 150 feet
 (11" x 17" sheet size)



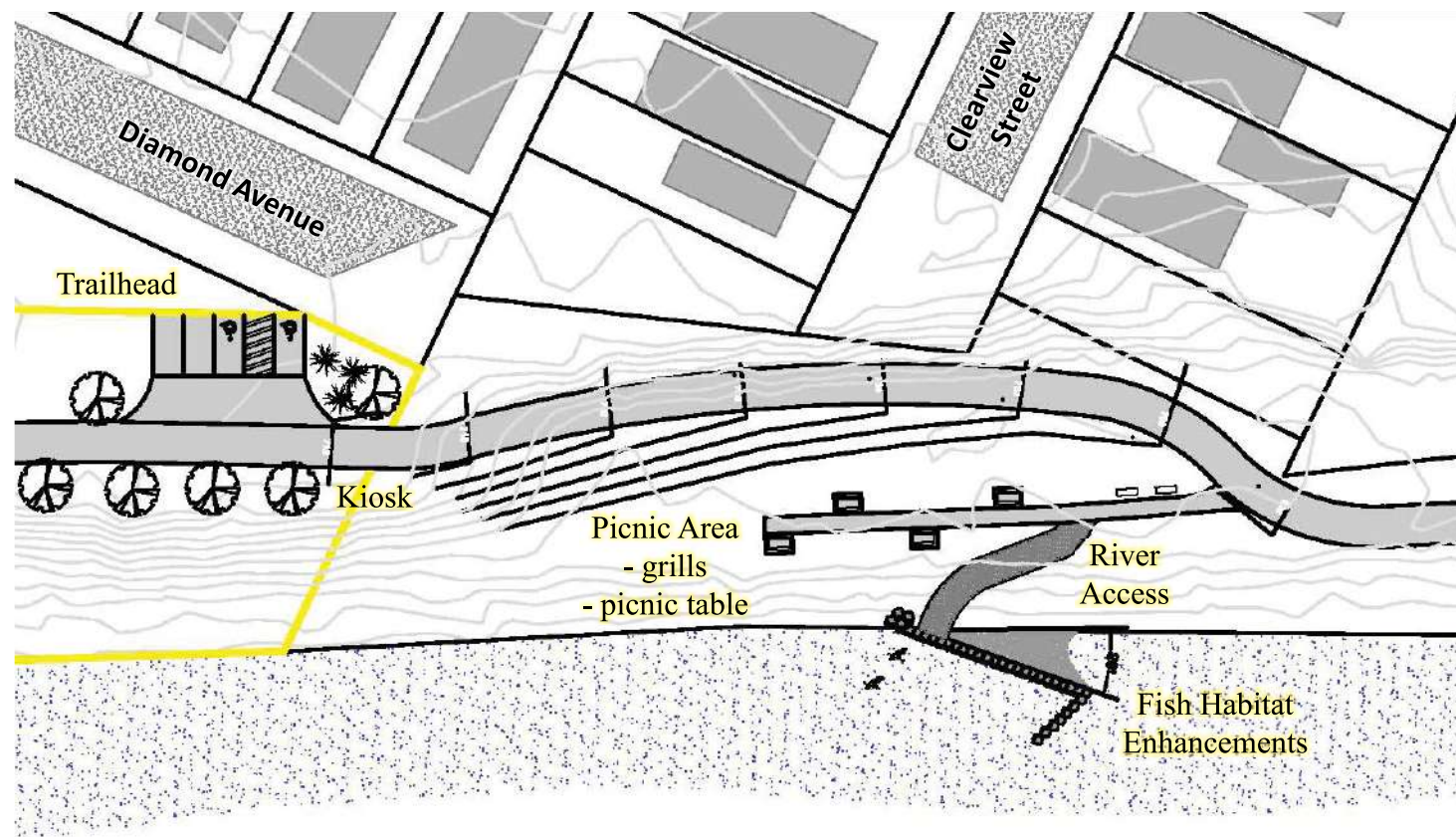
1 Diamond Ave to Green Ridge Street Bridge

Proposed Trail Alignment:

- The existing levee is utilized as an informal trail. Future plans by the Lackawanna Heritage Valley and City of Scranton includes paving the levee tops to create a more sustainable, multi-use trail surface and assure the city has regulated flood protection through FEMA and the US Army Corps. This scenario will provide dual benefits for city residents.
- The proposed trail alignment moving north will link to the flood levee at the rear of the Talarico Building at Diamond Avenue and Wood Street. The trail will proceed from the existing grade of the levee slightly upgrade to street grade and a new trailhead at the dead end of Diamond Avenue. The trail will then proceed downslope toward the Green Ridge Street bridge.
- The LRCA expects PennDOT will use the area from Diamond Avenue to the Keen Encroachment Fill Pile for their Temporary Construction Easement Area for the Green Ridge Street Bridge replacement project. PennDOT most likely will grade a fill slope area from the end of pavement at Diamond Avenue downgrade to the O&W grade where the "Bocce Courts" were located. The LRCA will request PennDOT leave this grade in place post construction to facilitate trail construction.

1a. Bull's Head Landing:

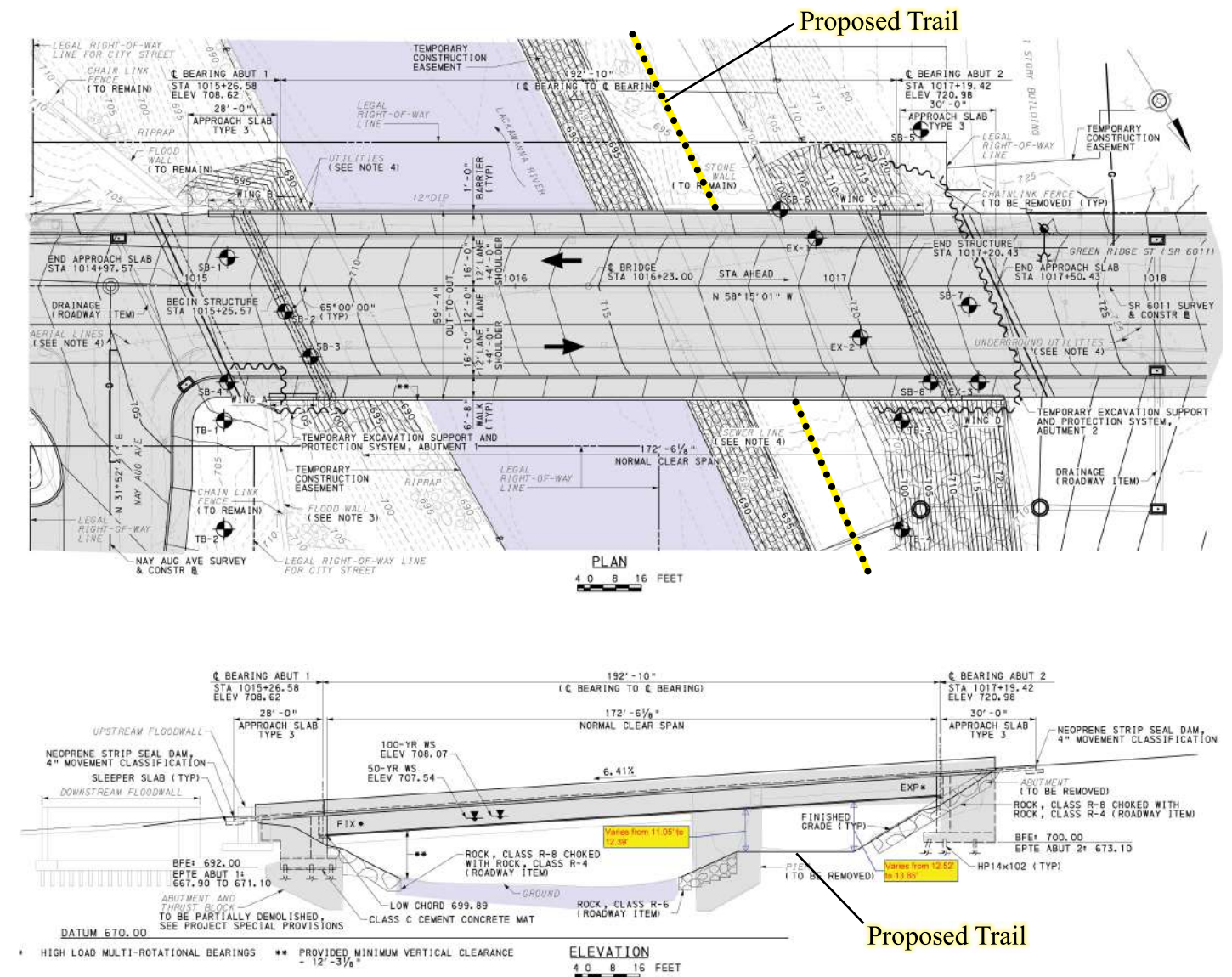
- A new recreation, picnic grove and river access area is proposed. Similar to Parker's Landing, this facility will implement fish habitat improvements like random boulders and a j-hook structure, while also installing a river access ramp. How this site is ultimately used is dependant upon how the site is left by PennDOT after bridge replacement.



Bull's Head Landing

1b. Green Ridge Street Bridge:

- The Green Ridge Street Bridge is slated for replacement. The timing of this project may work well with the long-term goals and needs of the LRCA and the Lackawanna River Heritage Trail. It is crucial that both LRCA and LHVA remain engaged in discussions with PennDOT to assure the new bridge will provide adequate width and height for a trail beneath the bridge. The bridge project will require removal of the Keen Building and portions of the fill slope that has encroached on the historic rail corridor. Removal and/or recontouring of this slope is important to achieve the goal of an ADA accessible River Heritage Trail alignment, trail head and access ramp through this area.



Current 'Not for Construction' draft plans for bridge replacement. Courtesy of GPI.

2

Keen Fill Slope:

- Decades of unauthorized fill and encroachment into the remnant rail road ROW has created a roadblock for the proposed trail. The replacement of the Green Ridge Street bridge can be the catalyst needed to finally address this fill slope.
- Coordination with PennDOT is crucial in this area. The full extents of earth moving required to replace the Green Ridge Street Bridge is not fully understood at this time. For example, the LRCA needs to determine what slopes/grades will be left by Penn DOT (Department of Transportation) on the former Keen Site post Bridge project. Currently, there are two proposed options for the trail in this area:

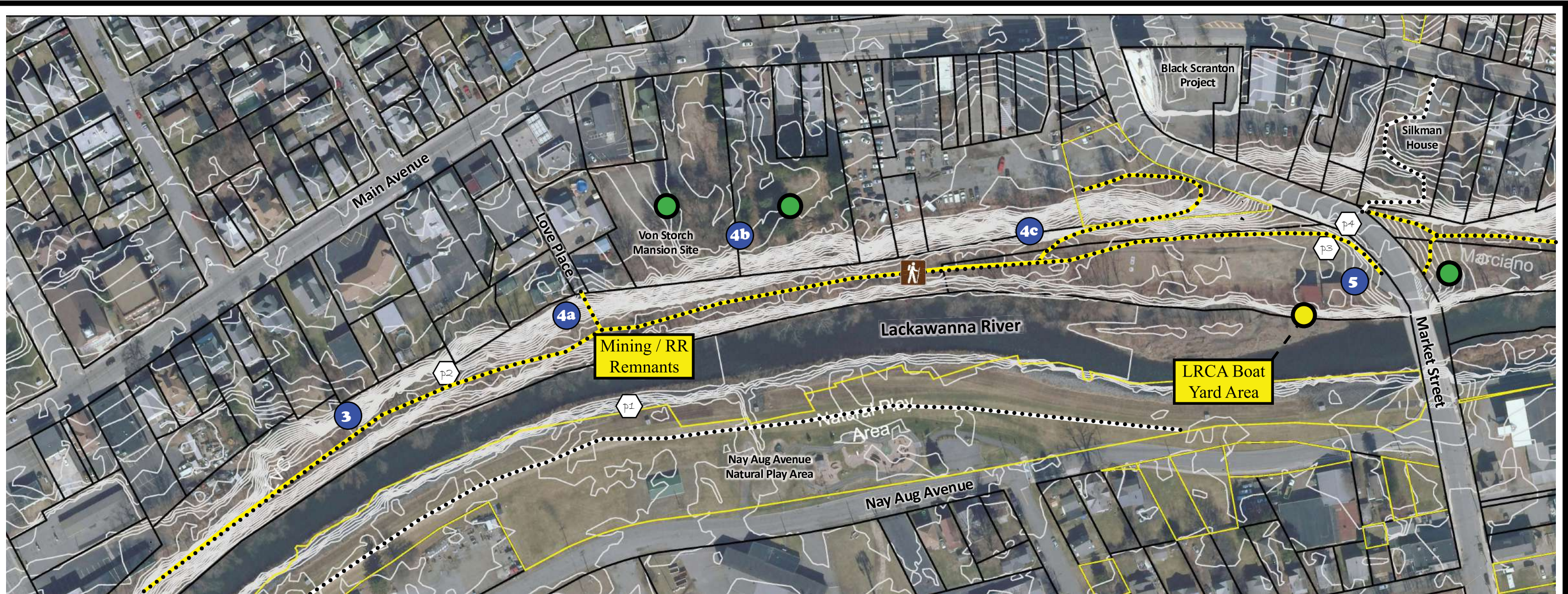








Option #1: Earthen ramps & removal of historic fill

- #1.) Remove as much debris and fill from the encroachment. Bench cut the earthen fill slope and create long ramps from a high point behind Keen’s that have maximum 5% longitudinal slopes. The removal of the fill will be costly and will require the removal of most if not all of the established vegetation. However, this long-term solution may provide safer and more ideal access for trail maintenance and river recreation, as well as, riparian slopes that are less prone to erosion, once native vegetation reestablishes;
- #2.) Construct a mixed bench cut / cantilevered trail lower down the fill slope using helical piles. This will reduce costs associated with large excavation, grading and vegetation removal. Although the species are not the highest quality (Norway Maple, Sumac, Ailanthus, etc.), keeping the intact vegetation in place has environmental benefits like slope stabilization and stream shading to lower water temperatures. A more-thorough analysis of costs, engineering and tree health is required.
- Trail access is a priority in this area, especially with the new senior housing in the nearby North Scranton Junior High School. Thus, the LRCA will strive to convert the old Keen’s parking lot into a new trail head with ADA access to the Heritage Trail. The LRCA will need ownership of the land and a new Highway Occupancy Permit to establish a trail head/trail entry point at this location. Another constraint is the steep grade change down to the river, which may require switchbacks to attain ADA grades (<5%).



Option #2: Cantilevered trail using partial bench cut and helical piles



-  Existing Trails
-  Proposed Trail
-  City-owned land
-  Signature Projects (proposed)
-  Areas of Interest (improvement needs)
-  Key Parcel (privately-owned)

Scale: 1 inch = 150 feet
(11" x 17" sheet size)



EXISTING CONDITIONS



The North Scranton Riverfront Project - Green Ridge Street to Market Street
Diamond Avenue to Parker Street - City of Scranton, Lackawanna County, PA

December 2022
Section Sheet 2 of 4

3 Mining & Rail Road Remnants:

3a. The Gravity Wall

- A remnant wall from the railroad parallels the trail corridor for approximately 150-200 lineal feet at the rear of 1640 through 1650 N. Main Ave. (Ragnacci, Plocha / Von Storch cemetery plot /Plocha to Lesko parcels). Portions of the wall are unstable with some visible slumping and fallen rock. This wall will require a full structural engineering assessment. To retain the historical significance and aesthetics, the LRCA wants to keep the wall and fund wall restoration and stabilization, if economically feasible. There are approximately 30 wall boulders that are heaped at the base of one breach area. These stones can either be reused during restoration or they will be salvaged for use as landscape elements along the trail alignment.
- In order to attain ADA grades from the proposed trailhead at Keen's, a portion of the gravity wall may be buried under fill material for construction of an earthen ramp to keep longitudinal slopes less than 5%.

3b. Von Storch Tunnel Site:

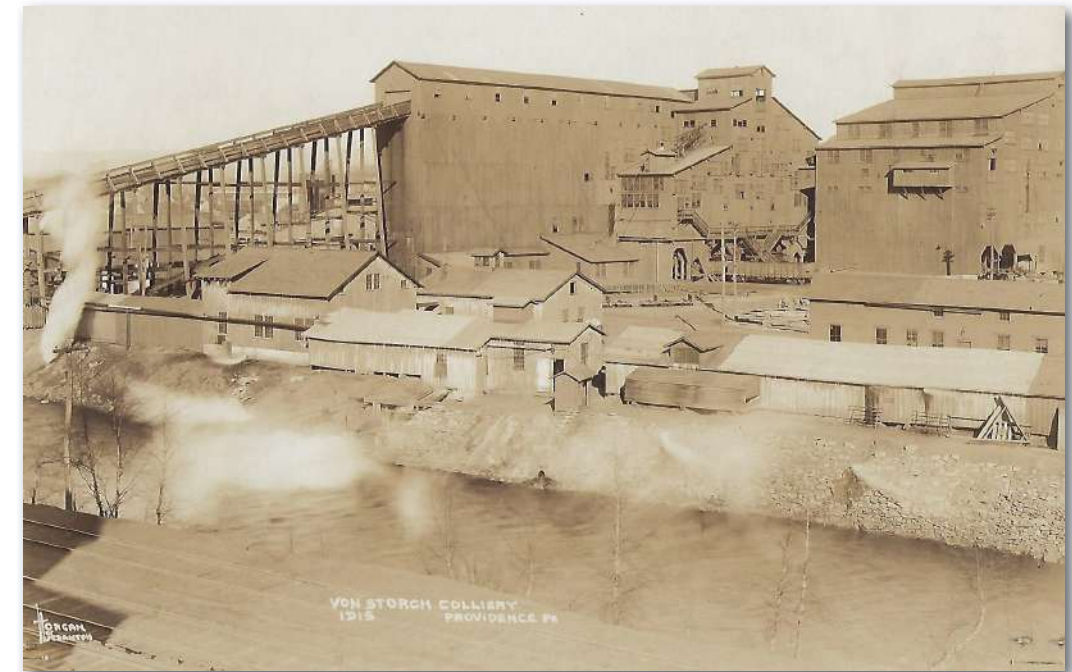
- Remnants of the Von Storch Mine Tunnel are still visible in this trail section. The existing grade is depressed where the Von Storch Mine entry once passes under the original rail grade on a girder bridge, which has since been removed. If the cut material is classified as 'suitable,' some of the Keen Encroachment fill material will be relocated to this site to help establish a more level and safer trail grade.
- There are also remnant concrete structures in the riverbank at the Mine Entry site. These include piers from the historic bridge & trestle structures that crossed the river from the Mine Entry to the Von Storch Breaker along Nay Aug Avenue. There is potential for a switchback pathway downgrade to the edge of the water and J-hook fish habitat structure.
- This section of trail would benefit from interpretive signage panels to tell the story of the Von Storch Mine and Breaker. Historic images are on the right.



Remnants of the past are still visible along the rail road corridor. They provide value to the Heritage Trail and opportunities for interpretation.



Looking north from Green Ridge Street; Historic photo shows the retaining wall and location where fill was placed behind Keen's.



Von Storch Breaker along Nay Aug Avenue and abutting the Lackawanna River.

4

Connections to Main Avenue Commerical District & Providence Corners:

Proposed Trail Alignment:

- The proposed trail alignment will continue along the river using the old railroad corridor. This path is currently maintained by PA American to access the Love Place Combined Sewer Outfall.

4a: Love Place

- Love Place dead ends and officially terminates at a fence/stone wall about 30 feet higher than the trail grade. There is an opening in the wall that drains stormwater runoff from the road. This has caused a rill and erosion on the slopes leading to the river. PA American Water operates the Love Place Combined Sewer Overflow (CSO) along the old rail road / proposed trail alignment at this site. Lessening erosion and sediment loading into the river is important for the City and improvements at Love Place can be beneficial for the City’s Municipal Separate Storm Sewer System (MS4).
- To foster better connectivity from the neighborhoods to the Lackawanna River and Heritage Trail, a custom metal stairway can be installed to create a pedestrian trail entry/egress at this location. The land is within the Scranton City ROW, however, creating an access point may be negatively received by the abutting land owners.
- Main Street Ice Cream and the Sunoco can be a destination for food and drinks along the Heritage Trail. However, there is potential for more litter along the trail, as well. A trash receptacle should be installed at the steps.
- This can be a good site for Interpretive panels about CSO’s.



Love Place terminus, trail overlook (approx. 20’ drop). Possible location for metal staircase, like the example above.

4b: Acquisition of Key Private Parcels

- Expansion of the Lackawanna River Greenway footprint should always be considered, especially when parcels can provide an opportunity to restore long-severed connections between neighborhoods and the Lackawanna River.
- There are actually two key parcels - the Von Storch Mansion site at the intersection of Oak Street and North Main Avenue and an abutting parcel (historic funeral home) at 1806 North Main Avenue. These were important pieces of historical Providence. These parcels have potential for redevelopment as greenspace / pocket parks with passive recreation, interpretive and historical educational signage, stormwater management, conservation/riparian restoration and options for dedicated trail access. Both parcels are accessible from North Main Avenue and have room in the rear for parking. The Von Storch Mansion site appears to be utilized by the abutting parcel owner. More information is required to determine full ownership and use potential for this parcel.
- The trail alignment remains on the rail road corridor and at a much lower elevation than Market Street. Railroad era retaining walls (300-400’ long) are still visible near the toe of slope creating steep drop-offs. If one or both of the above parcels are acquired, there is potential to grade ADA compliant switchback ramp(s) into the slope and replace the retaining walls. This would allow trail users to enter and exit the trail from the Von Storch Mansion Site. This is not possible at Love Place, where there is no space to lay back the steep slopes.



Two key parcels that can help reconnect the neighborhoods of North Scranton to the River Corridor; Von Storch Mansion site is on left.

4c: Rear of Castle Site

- Steep slopes are also hard to maintain and are attractive for illegal dumping. The steep slopes behind the Castle site, abutting the trail alignment, need cleanup in the form of trash and invasive plant removal. This 800 foot long dump slope is covered in Knotweed, Ailanthus, and Norway Maple with a failing railroad era timber crib wall in portions. The LRCA may consider a mix of native plants, terraces, gabions, boulder walls, etc. to help with aesthetics and slope stabilization.
- The City of Scranton owns a parcel along Market Street at the rear entry to the Castle area. There is PA American Water CSO infrastructure on this parcel. A series of sloped/ramped ADA pathways and stairs should be considered to connect Providence Corners to the Boat Yard. One possible alignment would be along the base of the Market Street MSE wall and then switchbacking, down grade to intersect with the trail in the lower portions of the Boat-yard site.

5 The LRCA Boat Yard at Market Street:

Connections to Market Street and Providence Square:

- The LRCA seeks to make this site a centerpiece of the Providence Riverfront. Long-range plans include an event space, trailhead, multi-use trail, educational signage and river access. The LRCA plans to utilize the existing “Boat House” and its adjacent “Patio” for events and possibly future leases to a kayak bike rental vendor. Improved sight lines and driver awareness of the “hidden driveway” into the Boat Yard is a critical need.
- The Boat Yard is set below the surrounding infrastructure, which makes access challenging. One option is to install a ramp to create an accessible trail rising up to the Market Street Bridge. Improvements are still needed to address safety once trail users access the road. A three way stop sign at the intersection of Market Street and Nay Aug Avenue is recommended to slow traffic. The bridge needs improved pedestrian bicycle lanes and stamped asphalt trail crossings similar to other crossings along the Lackawanna River Heritage Trail.
- A switchback spur trail is also proposed from the Boat Yard to Providence Corners. The City of Scranton owns an asphalt lot that can be used as a trail head and for event parking. A switch back trail will be challenging and costly but can be valuable for the Boat Yard to reach its full potential.



Proposed ADA accessible Heritage Trail Alignment with Providence Square connections

Future of Existing Boat Yard:

There are basically three options regarding the structure:

- **Renovate:** The existing facility will be renovated and upgraded with utilities, rest rooms, office space and other amenities that can be utilized during special events, or rented by a recreation-based company that may offer fishing, boating or biking excursions along the Lackawanna River.
- **Demolish & Rebuild:** Does the existing structure lend itself to renovation? Is it more economical to build a new structure? Will a new structure be allowed to be built within floodplain? Is the existing building grand-fathered in? If yes, it may be best to build a new structure in the current location.
- **Rebuild in a New Location:** The current location of the building is a constraint because it forced the construction of a steep entrance road with poor ingress/egress to Market Street. If the building was removed, the driveway could be redesigned and regraded with gentler slopes and a safer intersection with the road. A new building would be built beyond the new parking lot to better serve this recreation area and trail. However, a final determination from regulatory agencies is required to fully explain what construction is allowable within the floodplain - it may not be possible to build a new structure, which would make renovation the only option.



A renovated building can provide a valuable access, recreation and gathering space along the River. Biggest obstacle is the current access road.



As shown in this historic newspaper article, Market Street has always been a complicated road with the alignment and slopes a topic of discussion.

Market Street Underpass:

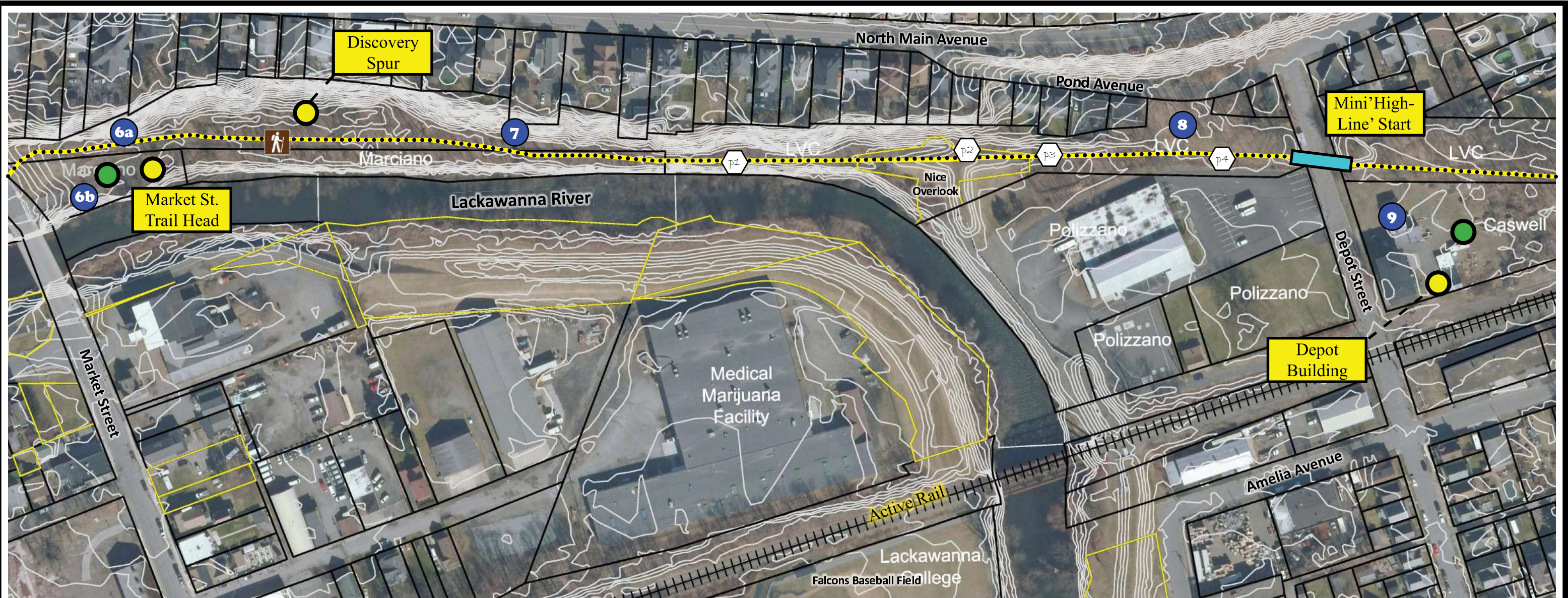
- Safe access for pedestrians, bikers, and vehicles is the main challenge due to the existing Market Street Bridge configuration and steep slopes. One long-term goal is installation of a tunnel or culvert type underpass to convey the trail under Market Street. This will improve public safety at the present dangerous driveway entry to the site by keeping trail users on the trail.

Stream Bank Restoration:

- There is about 1000 linear feet of riverbank, although approximately 500 to 600 feet of riverbank will require bank stabilization work. (From the lower end of the riprap apron at the Market Street bridge abutment downstream to the lower extent of the gravel bar). This reach includes the outfall of the Market Street CSO chamber. This area is also a brownfield and requires soil remediation. Metals and hydrocarbons from previous junkyard activities still pose a risk to the environment when erosion carries contaminants into the river. This validates the need for bank stabilization. Any work will require environmental assessments, permits and coordination with PA Department of Environmental Protection (PA DEP).
- The LRCA envisions an improved and hardened ramp from the Boat Yard to access the river via the adjacent wooded gravel bar. This may require a low flow crossing.



Proposed Market Street Tunnel; Historically the rail road passed beneath the road.



- Existing Trails
- Proposed Trail
- Proposed Bridge
- City-owned land
- Signature Projects (proposed)
- Areas of Interest (improvement needs)
- Key Parcel (privately-owned)

Scale: 1 inch = 150 feet
(11" x 17" sheet size)



EXISTING CONDITIONS



The North Scranton Riverfront Project - Market Street to Plot Section

Diamond Avenue to Parker Street - City of Scranton, Lackawanna County, PA

December 2022
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6 Kosciusko Garden Area:

6a. Kosciusko Garden Enhancement & Silkman House Link:

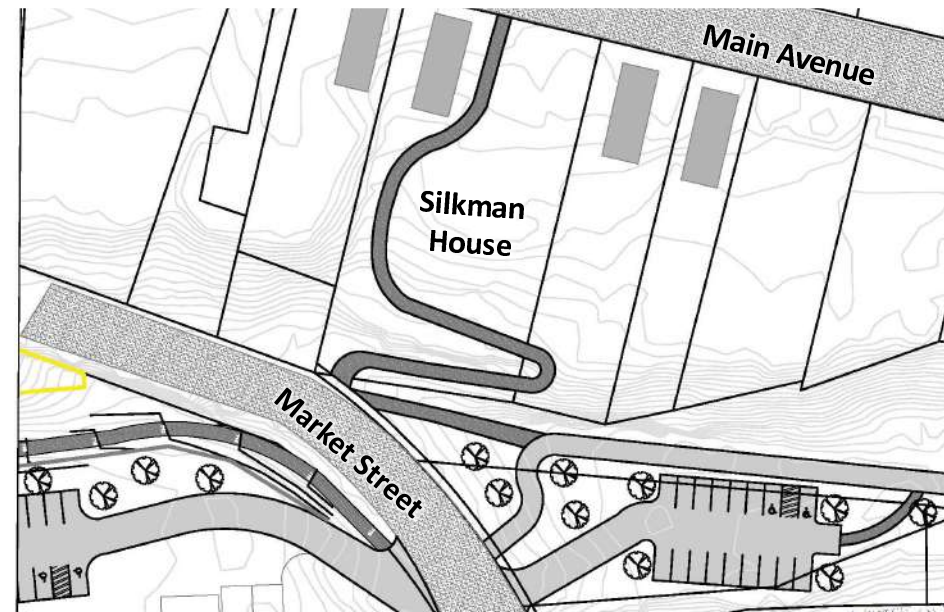
- A new connection is proposed to connect the Kosciusko Garden and Heritage Trail to Main Avenue/Providence Square via the Silkman House property. The Silkman House once housed the LRCA offices and a wooden staircase was often utilized by local residents. A new metal stair case, or catwalk, ADA grade ramps from the garden area up to the Silkman House are possible. Additionally, with coordination with the abutting property owner, there is potential to make this connection with boulder steps.
- Although the rendering to the right shows repairs to the existing RR-tie crib wall, replacement of this structure, between the Silkman House and the rear of the Scranton Revival Baptist Church, with a new MSE wall may be the best long-term option.
- The Kosciusko Garden has been a successful project along the Heritage Trail. With more volunteers, efforts to expand this space along the terrace should be explored.



Enhanced access to the Garden and Silkman House

6b. New trail head entry on the Harry's Scrap site:

- The current trail terminates near the Garden at the sidewalk. There will remain a spur to the Garden, however, long-term plans include the realignment of the main trail from the sidewalk to a new crosswalk across from the LRCA Boat Yard access or to a new tunnel beneath the Market Street Bridge.
- LRCA is optimistic of the forthcoming LVC acquisition of the old Harry's scrap yard parcel. This will be improved with a new driveway and trail head parking.



Parking options near Boat Yard

7 Market Street to Pond Avenue Reach:

- The Lackawanna Heritage Valley had 60% construction drawings completed for this stretch. The trail alignment is already established and is utilized by residents. The current trail is earthen and future plans will be trail upgrades to asphalt. New amenities like benches, trash receptacles and river access are proposed.

Environmental Education - Discovery Spur:

- The existing corridor has a side spur that veers off the existing trail alignment and then curves back creating an opportunity to construct a fun discovery spur. These space can include historic and educational signage, sculptures, silhouettes of birds, and realistic animals in the trees. With proper programming and the right creative committee, the ideas for this spur are limited only by imagination.
- The spur will work well with the Kosciusko Healing Garden and create a more exciting destination.



woodpecker pulley



Bird Silhouette Cutouts hung over head in trees



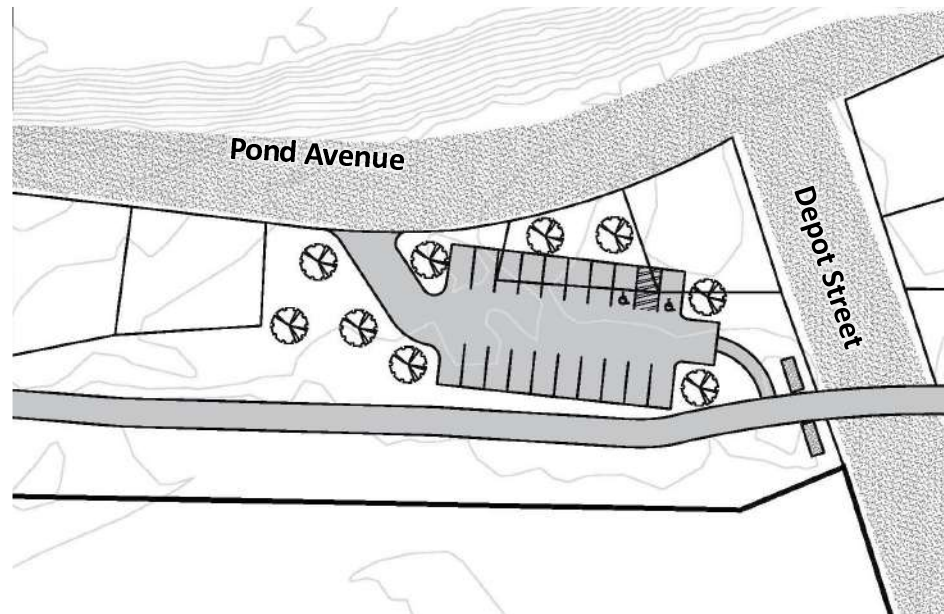
Artful Wood Stacking & Insect Hotels along trail



The main trail alignment will follow the existing earthen trail ; An old RR siding can make an interesting discovery spur

8 Pond Avenue Trailhead & Depot Street - Gateway to The Plot:

- A trailhead is proposed along Pond Avenue. The LVC owns sufficient land to construct a trailhead at Pond Avenue and Depot Street. Acquisition of a single family residence at the corner would provide a larger site to accommodate a larger trailhead.
- If the existing abutments can not be reused for new trail bridges over Depot and Dean Streets, the LRCA would like to partially deconstruct the bridge abutments at Depot and Dean Streets and redesign the trail alignment to pass through these stones. Currently the trail alignment simply squeezes past these abutments to the side. The abutment stones will provide 'Gateway' entry points that demarcate The Plot.



Pond Avenue Trail head with access to Depot Street Gateway



Existing conditions at Depot Street ; remnant abutments. The trail alignment will split through the abutments (where RV is parked)



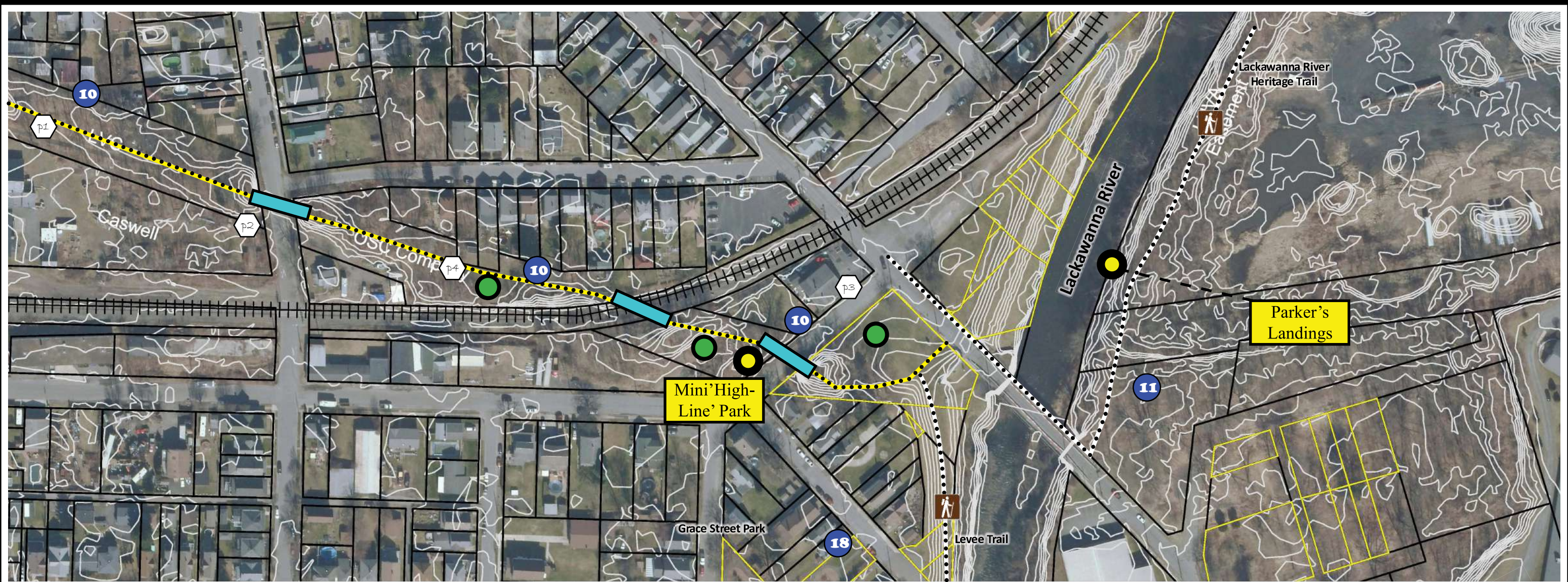
Rebuilt bridge abutments at Depot Street (and Dean Street); New stone Gateway entry points along the trail to demarcate The Plot.

9 The Depot:

- The Delaware & Hudson Canal Company office building, known as 'The Depot,' is currently in private hands; however, it has real potential for redevelopment and conversion into a hub for not-profit and/or community activities. It can also be an important parcel for trail protection, recreation, community programming and an arts and culture hub for the Plot neighborhood.
- The LRCA/LVC are currently working to acquire this property, in partnership with the Lackawanna Historical Society. Both organizations can use the space for their offices with plenty of room for activities described above.
- Rather than using Amelia Avenue, the primary alignment of The Lackawanna River Heritage Trail would now be located behind the Depot parcel and run between Depot Street and Dean Street.



With the proper tenants and funders, the Depot building can undergo adaptive reuse as a restaurant/event venue/historic site and offices.



- Existing Trails
- - - - - Proposed Trail
- ▬ Proposed Bridge
- ▭ City-owned land
- Signature Projects (proposed)
- # Areas of Interest (improvement needs)
- Key Parcel (privately-owned)

Scale: 1 inch = 200 feet
(11" x 17" sheet size)



EXISTING CONDITIONS



The North Scranton Riverfront Project - Plot Section to Parker Street
Diamond Avenue to Parker Street - City of Scranton, Lackawanna County, PA

December 2022
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10 Dean Street, Amelia Avenue and Parker Street:

- The proposed trail alignment will run from Depot Street to Dean Street along the remnant rail road corridor. Similar to the Dean Street abutments, if the Dean Street abutments are compromised, the stones are best utilized as gateways. New abutments or major repairs to the existing abutments can still be considered so a bridge can be installed, however, these streets are not heavy volume so crosswalks would be the most economical method for safely crossing the streets.
- Long-range goals are to create a mini 'High-Line' Park within the Plot that crosses the rail road and Amelia Avenue since both sets of abutments are in place and functional. Once beyond Amelia Avenue, the land between Amelia Avenue, the levee and Parker Street can be graded for ADA compliance. Interpretive panels should be installed at the bridges to explain the numerous NYO&W bridges built in the 1880's and that the O&W was the last anthracite hauling rail operation to develop in the Lackawanna Valley and the first to go out of business in 1957.



Trail crossing over Amelia Avenue. This area of The Plot will have two bridges that use remnant RR abutments and help to create a mini 'High-Line Park with green space on both sides of Amelia Avenue.

11 Parkers Landing:

The terminus of the North Scranton Riverfront Project is the Proposed Parker Street Recreation Area. PennDOT is in final designs for replacement of the Parker Street Bridge, which will include important streetscape infrastructure and improvements that will directly benefit the connectivity and safety of the Heritage Trail from Dickson City into the Plot Section. A river access ramp and fish habitat improvements (J-hook, random boulders) have recently been completed.



New j-hook fish habitat structure and an access ramp (under construction, July 2022)

Parker's Landing Park and Trailhead

THE GARDENS OF GREEN RIDGE CONCEPT PLAN
Lackawanna Heritage Valley
213 Railroad Avenue,
Scranton Pennsylvania, 18505
Joseph Corcoran, Executive Director

Legend
 Kayak Launch
 Fishing Access
 ADA Access
 Picnic Area
 Trailhead
 Bike Lane
 Parking

Thomas J. McLane Associates
Landscape Architects & Environmentalists

November 2021

RECREATIONAL CONNECTIONS

Connect to Existing Parks & Trails

- The Heritage Trail has potential to be a valuable connector to other recreational facilities within the Lackawanna River Corridor. The Nay Aug Avenue Natural Play Area, Grace Street Park, Weston Park, Lackawanna College Baseball Complex are all in close proximity to the proposed trail alignment.



Nay Aug Ave. Natural Play Area

Create Loop Trail Opportunities

- Create loop trail between Green Ridge Street Bridge and Market Street Bridge using the levee along Nay Aug Avenue and the trail along the west bank of the Lackawanna River, previously discussed.

Connect to the Leggett's Creek Greenway

- Just north of Parker Street, along the Lackawanna Heritage Trail, there is potential to access the Leggett's Creek Greenway if a remnant trestle bridge behind Toyota of Scranton is renovated. The other connection would be along roadways like Parker Street and Wells Street. More details are provided in the "Recreation, Conservation & Restoration Plan: A cursory Review of the Leggett's Creek Watershed" prepared by the LRCA in 2020.



ECOLOGICAL RESTORATION & ENHANCEMENTS

Removal of Invasive Species

Efforts should continue to remove the many invasive plants that grow, persist and choke out native plants along the Heritage Trail and the Lackawanna River. These plants reduce biodiversity and are catalysts for bank erosion and loss of native canopy cover. Additionally, the overgrowth of knotweed creates an unsafe condition for trail users.

The most common invasive plants include Japanese Knotweed, Garlic Mustard, Oriental Bittersweet, Japanese Barberry, Privet, Multi-flora Rose and Tartarian Honeysuckle.

Soil Amendments

Several areas along the Lackawanna River lack natural mineral soils and have been replaced by mine spoils and fill materials. Where possible these eroding, friable soils should be removed or amended with compost to facilitate a better soil biome capable of supporting native vegetation and not just weedy and invasive plants.

Plant Native Riparian Trees, Shrubs & Meadow Mixes

The LRCA should continue to partner with the Lackawanna Heritage Valley and complete riparian planting events. These events have ecological benefits and are great opportunities for stewardship and environmental education.

Fish Habitat Enhancements

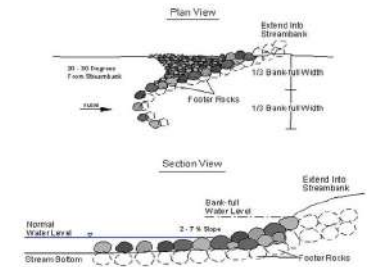
Work should continue to support and enhance the aquatic habitat within the Lackawanna River. This includes bank stabilization, random boulder placement, and other structures that can create better and more-encompassing water regimes (pools, riffles and runs).



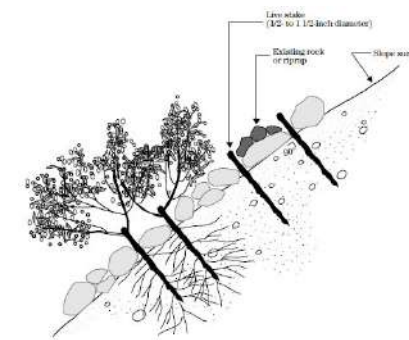
Example of volunteer planting event along Grassy Island Creek



Japanese Knotweed



J-Hook Structure



Live Stakes / Joint Plantings

OPINION OF PROBABLE ALIGNMENT COSTS
NORTH SCRANTON RIVERFRONT PROJECT (Diamond Avenue to Parker Street)

RIVERFRONT SECTIONS \$ 10,070,352.95

Section 1: Diamond Avenue to Green Ridge Street	\$ 1,112,370.31
Heritage Trail Alignment:	\$ 131,901.00
Diamond Avenue Trail Head	\$ 26,450.00
Bull's Head Landing	\$ 67,900.00
Keen's Floral Encroachment Area	\$ 437,000.00
Keen's Trail Head	\$ 145,450.00
Professional Design & Contractor Services	\$ 202,544.74
Contingency (10%)	\$ 101,124.57
Section 2: Green Ridge Street to Market Street	\$ 4,018,485.74
Heritage Trail Alignment	\$ 2,173,810.00
Mining & Rail Road Remnants Area	\$ 45,600.00
Love Place Access	\$ 64,350.00
The Boat Yard Recreation Area	\$ 664,150.00
Professional Design & Contractor Services	\$ 705,258.85
Contingency (10%)	\$ 365,316.89
Section 3: Market Street to Depot Street	\$ 2,981,521.48
Heritage Trail Alignment	\$ 271,970.00
Pond Avenue Trail Head	\$ 33,900.00
Depot Street Gateway	\$ 62,800.00
Depot Street Building Renovations	\$ 1,822,375.00
Professional Design & Contractor Services	\$ 519,429.08
Contingency (10%)	\$ 271,047.41
Section 4: Depot Street to Parker Street	\$ 1,957,975.43
Heritage Trail Alignment	\$ 190,956.00
Mini High Line through Plot Section	\$ 1,240,200.00
Professional Design & Contractor Services	\$ 348,821.66
Contingency (10%)	\$ 177,997.77

SPUR TRAILS & CONNECTORS

Keen's Fill Slope Option #2 - Cantilevered Walkway	\$ 165,060.00
Providence Square Spurs	\$ 80,800.00

Note: At such an early stage in planning, there are still multiple unknown factors that can and will impact construction costs. A non-exhaustive list of examples include: yearly inflation; costs of materials; regulatory requirements related to work around the Lackawanna River; unforeseen issues with utilities and below ground conditions; lack of site control; need for easements and acquisition; new data from geotechnical and structural engineering assessments; available funding; and partnerships.

Section 1: Diamond Avenue to Green Ridge Street \$ 1,112,370.31

Cost Item	Quantity	Unit	Unit Price	Total
Heritage Trail Alignment: \$ 131,901.00				
Clear & Grub Trail Corridor 12' wide; Rough grade trail alignment	11160	SF	\$ 1.10	\$ 12,276.00
Large Tree removal	1	LS	\$ 6,500.00	\$ 6,500.00
New 10' wide Asphalt Trail with 2' wide 2A shoulders: Superpave Asphalt Mixture Design, WMA 3" depth Base Course, PG 64-22, <0.3 esals, 25.0 mm mix; WMA 2" depth Wearing Course, PG 64-22, <0.3 esals, 9.5 mm mix; 6" 2A aggregate subbase with geotextile	1050	SY	\$ 70.00	\$ 73,500.00
Benches with concrete footers	3	EA	\$ 975.00	\$ 2,925.00
Trail Signs (directional, location, safety)	4	EA	\$ 425.00	\$ 1,700.00
Fencing near trail head and steep slopes; with footers	250	LF	\$ 68.00	\$ 17,000.00
E&S Control Measures: Installation of Rock Construction Entrances, Compost Filter Socks, Inlet Filter Bags, Pumped Water Bags and Erosion Control Blankets, Temporary Seeding, as needed	1	LS	\$ 18,000.00	\$ 18,000.00
Diamond Avenue Trail Head \$ 26,450.00				
Diamond Avenue Trail Head: Asphalt Stalls (4 total, 2 ADA) & Connector pad	115	SY	\$ 60.00	\$ 6,900.00
Diamond Avenue Trail Head: Wheel stops, recycled rubber, complete, black and yellow strip, black and blue for ADA stalls	4	EA	\$ 300.00	\$ 1,200.00
ADA Parking Stalls: Breakaway parking signs and Line Painting; van stall	2	EA	\$ 650.00	\$ 1,300.00
Trail Head Landscaping (Trees, landscape bed, rain garden)	1	LS	\$ 11,000.00	\$ 11,000.00
Kiosk/Trail Map	1	EA	\$ 2,400.00	\$ 2,400.00
Trail Barrier Gate	1	EA	\$ 2,800.00	\$ 2,800.00
Trash Receptacle	1	LS	\$ 850.00	\$ 850.00
Bull's Head Landing \$ 67,900.00				
Fish Habitat Enhancements: Installation of J-Hook boulder structure	1	LS	\$ 16,000.00	\$ 16,000.00
Invasive Species Removal: Clear/Removal of specified invasive plants; targeted rodeo spray (to be thrown away)	1	LS	\$ 8,000.00	\$ 8,000.00
Riparian Plantings (live stakes, shrubs, native saplings)	1	LS	\$ 5,500.00	\$ 5,500.00
New 5' Asphalt Trail: Superpave Asphalt Mixture Design, WMA 3" depth Base Course, PG 64-22, <0.3 esals, 25.0 mm mix; WMA 2" depth Wearing Course, PG 64-22, <0.3 esals, 9.5 mm mix; 6" gravel subbase with geotextile	110	SY	\$ 70.00	\$ 7,700.00
New 8' River Access Ramp: Includes materials and installation (concrete lattice pavers, curbing, subbase, grout, geotextile, soil, seed)	1	LS	\$ 20,000.00	\$ 20,000.00
Pedestal Grills with concrete footers	4	EA	\$ 525.00	\$ 2,100.00
Picnic Tables with surface anchors	4	EA	\$ 1,200.00	\$ 4,800.00
Benches with concrete footers	2	EA	\$ 975.00	\$ 1,950.00
Trash Receptacles; Bear Proof	1	EA	\$ 1,850.00	\$ 1,850.00
Keen's Floral Encroachment Area \$ 437,000.00				
Tree, Brush & Invasive Species Removal; Clear/Removal of vegetation on slope prior to earthwork	1	LS	\$ 90,000.00	\$ 90,000.00
Encroachment Area Excavation (Cut/Fill): Remove debris, grade site with gentler slope, bench cut for accessible trail	8000	CY	\$ 42.00	\$ 336,000.00
E&S Control Measures: Installation of Rock Construction Entrances, Compost Filter Socks, Inlet Filter Bags and Erosion Control Blankets	1	LS	\$ 11,000.00	\$ 11,000.00



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Keen's Trail Head					\$ 145,450.00
Trail Head Concrete Sidewalks; 4" depth with 2B subbase	110	SY	\$	115.00	\$ 12,650.00
Trail Head Infrastructure: 6" wide concrete curbs; includes materials, forms, subbase	400	LF	\$	70.00	\$ 28,000.00
Kenn's Trail Head: Porous Asphalt with 2ft clean gravel subbase and overflow infrastructure (16 total, 2 ADA)	380	SY	\$	60.00	\$ 22,800.00
ADA Parking Stalls: Breakaway parking signs and Line Painting; van stall	2	EA	\$	650.00	\$ 1,300.00
New 8' Asphalt Ramp from Trail Head to Heritage Trail: Superpave Asphalt Mixture Design, WMA 3" depth Base Course, PG 64-22, <0.3 esals, 25.0 mm mix; WMA 2" depth Wearing Course, PG 64-22, <0.3 esals, 9.5 mm mix; 6" gravel subbase with geotextile	165	SY	\$	80.00	\$ 13,200.00
Stormwater Management (pipe underdrains, bioswales, rain gardens)	1	LS	\$	25,000.00	\$ 25,000.00
Trail Signs (directional, location, safety)	4	EA	\$	425.00	\$ 1,700.00
Wireworks Fencing near trail head and steep slopes; with footers	300	LF	\$	72.00	\$ 21,600.00
Trail Head Landscape Beds & Trees	1	LS	\$	14,000.00	\$ 14,000.00
Kiosk/Trail Map	1	EA	\$	2,400.00	\$ 2,400.00
Trail Barrier Gate	1	EA	\$	2,800.00	\$ 2,800.00
Standard Professional & Contractor Services					\$ 202,544.74
Legal Fees for easements	1	LS	\$	8,500.00	\$ 8,500.00
Permit Fees (E&SC/NPDES, PADOT HOP, PA DEP)	1	LS	\$	4,000.00	\$ 4,000.00
Consultant Fees (survey, prep. permit plans, bid docs, final design drawings, specs, calcs...)					\$ 105,131.13
Contractor Expenses (noted below)					\$ 84,913.61
Total Construction Costs in Section 1				\$ 808,701.00	
Design/Engineering (8%)				\$ 64,696.08	
Construction Inspection (2%)				\$ 16,174.02	
Project Management (3%)				\$ 24,261.03	
Contractor Bonding & Insurances (6.5%)				\$ 52,565.57	
Contractor General Expenses (mobilization, project meetings, coordination (4%))				\$ 32,348.04	
					\$ 1,011,245.74
					Contingency (10%) \$ 101,124.57
Section 1 Totals					\$ 1,112,370.31

Keen's Fill Slope Option #2 - Cantilevered Walkway					\$ 165,060.00
Cost Item	Quantity	Unit	Unit Price		Total
Clear & Grub, Partial Bench of trail corridor 4' wide: Select Tree, Brush & Invasive Species Removal; Clear/Removal of specified vegetation (native plants can be chipped and left on site; Invasive plants to be thrown away)	3780	SF	\$ 8.25	\$	31,185.00
Partially Cantilevered walkway with trex decking and helical piles; includes fencing	315	LF	\$ 425.00	\$	133,875.00

* This option should only be considered if PennDOT does not significantly remove the encroachment fill slope and vegetation during the replacement of the Green Ridge Street Bridge

Section 2: Green Ridge Street to Market Street					\$ 4,018,485.74
Cost Item	Amount	Unit	Cost		Total
Heritage Trail Alignment					\$ 2,173,810.00
Clear & Grub Trail Corridor 12' wide; Rough grade trail alignment	27600	SF	\$ 1.10	\$	30,360.00
Large Tree removal	1	LS	\$ 6,500.00	\$	6,500.00
E&S Control Measures: Installation of Rock Construction Entrances, Compost Filter Socks, Inlet Filter Bags, Pumped Water Bags and Erosion Control Blankets, Temporary Seeding, as needed	1	LS	\$ 18,000.00	\$	18,000.00
New 10' wide Asphalt Trail with 2' wide 2A shoulders: Superpave Asphalt Mixture Design, WMA 3" depth Base Course, PG 64-22, <0.3 esals, 25.0 mm mix; WMA 2" depth Wearing Course, PG 64-22, <0.3 esals, 9.5 mm mix; 6" 2A aggregate subbase with geotextile	2555	SY	\$ 70.00	\$	178,850.00
Earthen Ramp and Concrete retaining wall along Market Street Bridge	1	LS	\$ 65,000.00	\$	65,000.00
New Crossing at Market Street: PennDOT approved, electronic cross walk signs, stamped asphalt, HOP	1	LS	\$ 38,000.00	\$	38,000.00
Stormwater Management (pipes, bioswales)	1	LS	\$ 21,500.00	\$	21,500.00
Trail Signs, (directional, location, safety, interpretive)	6	EA	\$ 325.00	\$	1,950.00
Kiosk/Trail Maps	2	EA	\$ 2,500.00	\$	5,000.00
Benches with concrete footers	8	EA	\$ 975.00	\$	7,800.00
Crosswalk Ahead Signage, PennDOT approved	2	EA	\$ 425.00	\$	850.00
Market Street Tunnel; Work with PennDOT, Design, Assessment, materials, installation	1	LS	\$ 1,800,000.00	\$	1,800,000.00
Mining & Rail Road Remnants Area					\$ 45,600.00
Repair of stone walls along trail alignment	1	LS	\$ 23,000.00	\$	23,000.00
Slope stabilization with rock, plants, etc. behind Castle parcel to Market Street	1	LS	\$ 20,000.00	\$	20,000.00
Interpretive Signage at Von Storch Mine	2	EA	\$ 325.00	\$	650.00
Benches	2	EA	\$ 975.00	\$	1,950.00
Love Place Access					\$ 64,350.00
Staircase at Love Place terminus: includes materials and installation of a custom metal staircase	1	LS	\$ 60,000.00	\$	60,000.00
Trash Receptacle near Love Place	1	EA	\$ 1,850.00	\$	1,850.00
Kiosk/Trail Map at Love Place	1	EA	\$ 2,500.00	\$	2,500.00
The Boat Yard Recreation Area					\$ 664,150.00
Soil Remediation Area Excavation (Cut/Fill): Remove and properly dispose of contaminated soils; import clean soil, regrade and seed	2600	CY	\$ 75.00	\$	195,000.00
Building Renovations; create venue for excursion and rental shops; event space	1	LS	\$ 225,000.00	\$	225,000.00
Site Infrastructure: 5' wide Concrete Sidewalks; 4" depth with 2B subbase, complete	115	SY	\$ 115.00	\$	13,225.00
Site infrastructure: 6" wide concrete curbs; includes materials, forms	600	LF	\$ 70.00	\$	42,000.00
Parking Lot: Superpave Asphalt Mixture Design, WMA 3" depth Base Course, PG 64-22, <0.3 esals, 25.0 mm mix; WMA 2" depth Wearing Course, PG 64-22, <0.3 esals, 9.5 mm mix; 6" gravel subbase with geotextile	1050	SY	\$ 70.00	\$	73,500.00
Stormwater Management (rain garden)	1	LS	\$ 12,000.00	\$	12,000.00



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Fish Habitat Enhancements: Installation of rock wiers in overflow side channel	1	LS	\$	35,000.00	\$	35,000.00
Invasive Species Removal: Clear/Removal of specified invasive plants; targeted rodeo spray (to be thrown away)	1	LS	\$	21,000.00	\$	21,000.00
Riparian Plantings	1	LS	\$	9,000.00	\$	9,000.00
New 8' River Access Ramp: Includes materials and installation (concrete lattice pavers, curbing, subbase, grout, geotextile, soil, seed)	1	LS	\$	20,000.00	\$	20,000.00
Pedestal Grills with concrete footers	4	EA	\$	525.00	\$	2,100.00
Picnic Tables with surface anchors	8	EA	\$	1,200.00	\$	9,600.00
Benches with concrete footers	5	EA	\$	975.00	\$	4,875.00
Trash Receptacles; Bear Proof	1	EA	\$	1,850.00	\$	1,850.00

Standard Professional & Contractor Services \$ 705,258.85

Legal Fees for easements	1	LS	\$	8,500.00	\$	8,500.00
Permit Fees (E&S/SC/NPDES, PADOT HOP, PA DEP)	1	LS	\$	4,000.00	\$	4,000.00
Consultant Fees (survey, prep. permit plans, bid docs, final design drawings, specs, calcs...)					\$	383,228.30
Contractor Expenses (noted below)					\$	309,530.55

Total Construction Costs in Section 2	\$	2,947,910.00
Design/Engineering (8%)	\$	235,832.80
Construction Inspection (2%)	\$	58,958.20
Project Management (3%)	\$	88,437.30
Contractor Bonding & Insurances (6.5%)	\$	191,614.15
Contractor General Expenses (mobilization, project meetings, coordination (4%))	\$	117,916.40

	\$	3,653,168.85
Contingency (10%)	\$	365,316.89
Section 2 Totals	\$	4,018,485.74

Providence Square Spurs \$ 80,800.00

Cost Item	Quantity	Unit	Unit Price	Total
Clear & Grub Trail Corridor 8' wide;; Rough grade trail alignment	3200	SF	\$ 8.25	\$ 26,400.00
New 6" Asphalt Trail: Complete (Superpave Asphalt Mixture Design, WMA 3" depth Base Course, PG 64-22, <0.3 esals, 25.0 mm mix; WMA 2" depth Wearing Course, PG 64-22, <0.3 esals, 9.5 mm mix; 6" gravel subbase with geotextile)	375	SY	\$ 70.00	\$ 26,250.00
Improvements on Silkman House Parcel including the Kosciusko Garden (boulder steps or stairs)	1	LS	\$ 16,000.00	\$ 16,000.00
Trail Signs, (directional, location, safety)	4	EA	\$325.00	\$ 1,300.00
Kiosk/Trail Maps	2	EA	\$ 2,500.00	\$ 5,000.00
Benches	6	EA	\$ 975.00	\$ 5,850.00

Note: Connections to Von Storch Mansion Site or other private parcels will require land acquisition; This planning exercise is too early in the process; thus, no designs and estimates are provided for green space, pocket parks, trails, etc..

Section 3: Market Street to Depot Street \$ 2,981,521.48

Cost Item	Amount	Unit	Cost	Total
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Heritage Trail Alignment \$ 271,970.00

Clear & Grub Trail Corridor 12' wide: Rough grade trail alignment	25200	SF	\$ 1.10	\$ 27,720.00
Large Tree removal	1	LS	\$ 8,000.00	\$ 8,000.00
E&S Control Measures: Installation of Rock Construction Entrances, Compost Filter Socks, Inlet Filter Bags, Pumped Water Bags and Erosion Control Blankets, Temporary Seeding, as needed	1	LS	\$ 12,000.00	\$ 12,000.00
New 10' wide Asphalt Trail with 2' wide 2A shoulders: Superpave Asphalt Mixture Design, WMA 3" depth Base Course, PG 64-22, <0.3 esals, 25.0 mm mix; WMA 2" depth Wearing Course, PG 64-22, <0.3 esals, 9.5 mm mix; 6" 2A aggregate subbase with geotextile	2350	SY	\$ 70.00	\$ 164,500.00
New Crossing at Depot Street: cross walk signs, stamped asphalt	1	LS	\$ 14,000.00	\$ 14,000.00
Stormwater Management (pipes, bioswales)	1	LS	\$ 16,000.00	\$ 16,000.00
Trail Signs, (directional, location, safety, interpretive)	6	EA	\$325.00	\$ 1,950.00
Kiosk/Trail Maps	2	EA	\$ 2,500.00	\$ 5,000.00
Discovery Spur (sculptures, signs, bird silhouettes, etc.)	1	LS	\$ 15,000.00	\$ 15,000.00
Benches with concrete footers	8	EA	\$ 975.00	\$ 7,800.00

Market Street Trail Head \$ 34,200.00

2A modified (15 stalls); with grading	140	CY	\$ 80.00	\$ 11,200.00
Asphalt Stalls (2 ADA)	65	SY	\$ 70.00	\$ 4,550.00
Wheel stops: recycled rubber; complete, black and yellow strip, black and blue for ADA stalls	17	EA	\$ 300.00	\$ 5,100.00
ADA Parking Stalls: Breakaway parking signs and Line Painting; van stall	2	EA	\$ 650.00	\$ 1,300.00
Trash Receptacle, Bear proof	1	EA	\$ 1,850.00	\$ 1,850.00
Trail Head Landscape Beds & Trees	1	LS	\$ 5,000.00	\$ 5,000.00
Kiosk/Trail Map	1	EA	\$ 2,400.00	\$ 2,400.00
Fencing		LF	\$ 72.00	\$ -
Trail Barrier Gate	1	EA	\$ 2,800.00	\$ 2,800.00

Pond Avenue Trail Head \$ 33,900.00

2A modified (17 stalls); with grading	125	CY	\$ 80.00	\$ 10,000.00
Asphalt Stalls (2 ADA)	65	SY	\$ 70.00	\$ 4,550.00
Wheel stops: recycled rubber; complete, black and yellow strip, black and blue for ADA stalls	20	EA	\$ 300.00	\$ 6,000.00
ADA Parking Stalls: Breakaway parking signs and Line Painting; van stall	2	EA	\$ 650.00	\$ 1,300.00
Trash Receptacle, Bear proof	1	EA	\$ 1,850.00	\$ 1,850.00
Trail Head Landscape Beds	1	LS	\$ 5,000.00	\$ 5,000.00
Kiosk/Trail Map	1	EA	\$ 2,400.00	\$ 2,400.00
Fencing		LF	\$ 72.00	\$ -
Trail Barrier Gate	1	EA	\$ 2,800.00	\$ 2,800.00

Depot Street Gateway \$ 62,800.00

Rework abutment stones to create a gateway for trail to pass through	1	LS	\$ 60,000.00	\$ 60,000.00
Custom Heritage Trail sign	1	EA	\$ 18,000.00	\$ 18,000.00
Bollards; removable with concrete footers	4	EA	\$ 700.00	\$ 2,800.00



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Depot Street Building Renovations \$ 1,822,375.00

Property Acquisition	1	LS	\$	150,000.00	\$	150,000.00
Building Renovations	1	LS	\$	\$1,600,000.00	\$	1,600,000.00
Parking Lot: Superpave Asphalt Mixture Design, WMA 3" depth Base Course, PG 64-22, <0.3 esals, 25.0 mm mix; WMA 2" depth Wearing Course, PG 64-22, <0.3 esals, 9.5 mm mix; 6" gravel subbase with geotextile	200	SY	\$	70.00	\$	14,000.00
ADA Parking Stalls: Breakaway parking signs and Line Painting; van stall	2	EA	\$	650.00	\$	1,300.00
Site Infrastructure: 5' wide Concrete Sidewalks; 4" depth with 2B subbase, complete	115	SY	\$	115.00	\$	13,225.00
Site infrastructure: 6" wide concrete curbs; includes materials, forms	600	LF	\$	70.00	\$	42,000.00
Trash Receptacles; Bear Proof	1	EA	\$	1,850.00	\$	1,850.00

Standard Professional & Contractor Services \$ 519,429.08

Legal Fees for easements	1	LS	\$	8,500.00	\$	8,500.00
Permit Fees (E&SC/NPDES, PADOT HOP, PA DEP)	1	LS	\$	4,000.00	\$	4,000.00
Consultant Fees (survey, prep. permit plans, bid docs, final design drawings, specs, calcs...)			\$		\$	280,428.85
Contractor Expenses (noted below)			\$		\$	226,500.23

Total Construction Costs in Section 3	\$	2,157,145.00
Design/Engineering (8%)	\$	172,571.60
Construction Inspection (2%)	\$	43,142.90
Project Management (3%)	\$	64,714.35
Contractor Bonding & Insurances (6.5%)	\$	140,214.43
Contractor General Expenses (mobilization, project meetings, coordination (4%))	\$	86,285.80

	\$	2,710,474.08
Contingency (10%)	\$	271,047.41
Section 3 Totals	\$	2,981,521.48

Section 4: Depot Street to Parker Street \$ 1,957,975.43

Cost Item	Amount	Unit	Cost	Total
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Heritage Trail Alignment \$ 190,956.00

Clear & Grub Trail Corridor 12' wide;; Rough grade trail alignment	17460	SF	\$	1.10	\$	19,206.00
Large Tree removal	1	LS	\$	12,000.00	\$	12,000.00
E&S Control Measures: Installation of Rock Construction Entrances, Compost Filter Socks, Inlet Filter Bags, Pumped Water Bags and Erosion Control Blankets, Temporary Seeding, as needed	1	LS	\$	9,000.00	\$	9,000.00
New 10' wide Asphalt Trail with 2' wide 2A shoulders: Superpave Asphalt Mixture Design, WMA 3" depth Base Course, PG 64-22, <0.3 esals, 25.0 mm mix; WMA 2" depth Wearing Course, PG 64-22, <0.3 esals, 9.5 mm mix; 6" 2A aggregate subbase with geotextile	1615	SY	\$	70.00	\$	113,050.00
New Crossing at Dean Street: cross walk signs, stamped asphalt	1	LS	\$	14,000.00	\$	14,000.00
Stormwater Management (pipes, bioswales)	1	LS	\$	16,000.00	\$	16,000.00
Trail Signs, (directional, location, safety, interpretive)	4	EA		\$325.00	\$	1,300.00
Kiosk/Trail Maps	1	EA	\$	2,500.00	\$	2,500.00
Benches	4	EA	\$	975.00	\$	3,900.00

Mini High Line through Plot Section \$ 1,240,200.00

Earthen fill between railroad and Amelia Avenue abutments	1300	CY	\$	42.00	\$	54,600.00
Bridge/earthen ramp over Depot Street	1	EA	\$	180,000.00	\$	180,000.00
Bridge over Dean Street	1	LS	\$	220,000.00	\$	220,000.00
Bridge over Rail Road Corridor	1	EA	\$	275,000.00	\$	275,000.00
Bridge over Amelia Avenue	1	LS	\$	230,000.00	\$	230,000.00
Fencing near bridges with footers	450	LF	\$	68.00	\$	30,600.00
Land Acquisition	1	LS	\$	250,000.00	\$	250,000.00

Standard Professional & Contractor Services \$ 348,821.66

Legal Fees for easements	1	LS	\$	8,500.00	\$	8,500.00
Permit Fees (E&SC/NPDES, PADOT HOP, PA DEP)	1	LS	\$	4,000.00	\$	4,000.00
Consultant Fees (survey, prep. permit plans, bid docs, final design drawings, specs, calcs...)			\$		\$	186,050.28
Contractor Expenses (noted below)			\$		\$	150,271.38

Total Construction Costs in Section 4	\$	1,431,166.00
Design/Engineering (8%)	\$	114,492.48
Construction Inspection (2%)	\$	28,623.12
Project Management (3%)	\$	42,934.68
Contractor Bonding & Insurances (6.5%)	\$	93,025.14
Contractor General Expenses (mobilization, project meetings, coordination (4%))	\$	57,246.24

	\$	1,779,977.66
Contingency (10%)	\$	177,997.77
Section 4 Totals	\$	1,957,975.43

