
Environmental Regeneration Efforts



The plan for the Big Creek Greenway includes a series of environmental regeneration measures to begin to restore a functioning ecology within the Valley. These include expanding the width of riparian zones, wetland creation and enhancement, clean up of industrial sites within the floodplain, paving removal within riparian zones and replanting of the floodplain.

Early discussions with the Advisory Committee concluded that these measures should, for now, exclude instream improvements. The logic is that the stream is greatly impacted by storm surges and that suggested stream improvements should take into account stormwater management measures to reduce those impacts. There is an on-going watershed management study that will better define watershed characteristics and

recommend watershed-wide controls to improve management of stormwater. Stream enhancement suggestions will eventually result from that study.

Suggested enhancements are identified for the entire stream reach from Ridge Road to its confluence with the Cuyahoga River. The greenway within Brookside Reservation is highly manipulated with little native vegetation remaining, the stream channelized, concrete lined and entrained within walled revetments. The proposed regeneration effort includes restoring riparian plantings above the streambanks and widening the riparian zone. Fortunately, in this area greenspace remains that allows for the restoration. It is proposed that these mostly lawn areas from John Nagy Boulevard to the streambank be restored with native trees, shrubs and forbs. Eventually, when more is known about stormwater management measures, removal of the walled revetments, restoration of the streambanks and stream bottom is suggested. A wetland creation area is suggested near the west end of the Zoo that will allow for continued evolution of the landscape in the Zoo to a more natural relationship with the Greenway. The wetland could be used in interpretation as well as part of the exhibit areas of the Zoo.



The daylighted stream reaches within the Zoo compound are currently confined between the

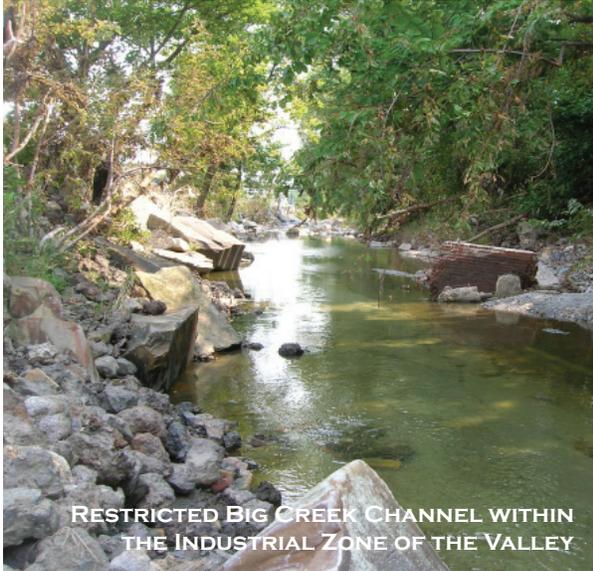
railroad tracks and zoo roads and parking. Only a very narrow band of streambank plantings remain. It is proposed that the Zoo embrace its relationship to the Greenway by widening the riparian zone within the Zoo. It is suggested that 50-75 feet of paving be removed adjacent to the streambank and that zone be restored with native trees, shrubs and forbs. This will not only provide an improved backdrop for Zoo functions but will shade adjacent paved surfaced and allow for Zoo walkways to be developed in a friendlier environment for pedestrian access to the zoo

entrance.

It is proposed that the impacted natural area between the Norfolk Southern and CSX tracks near the Zoo also be enhanced with native vegetation and an improved hydrology to permit improved wetlands and a connection to Big Creek. It is further suggested that additional study be performed in that area to determine the environmental influences from the railroad and the adjacent industrial sites and that corrective remedial action be employed where appropriate.



**BIG CREEK AT ITS CONFLUENCE
WITH THE CUYAHOGA RIVER**



RESTRICTED BIG CREEK CHANNEL WITHIN THE INDUSTRIAL ZONE OF THE VALLEY

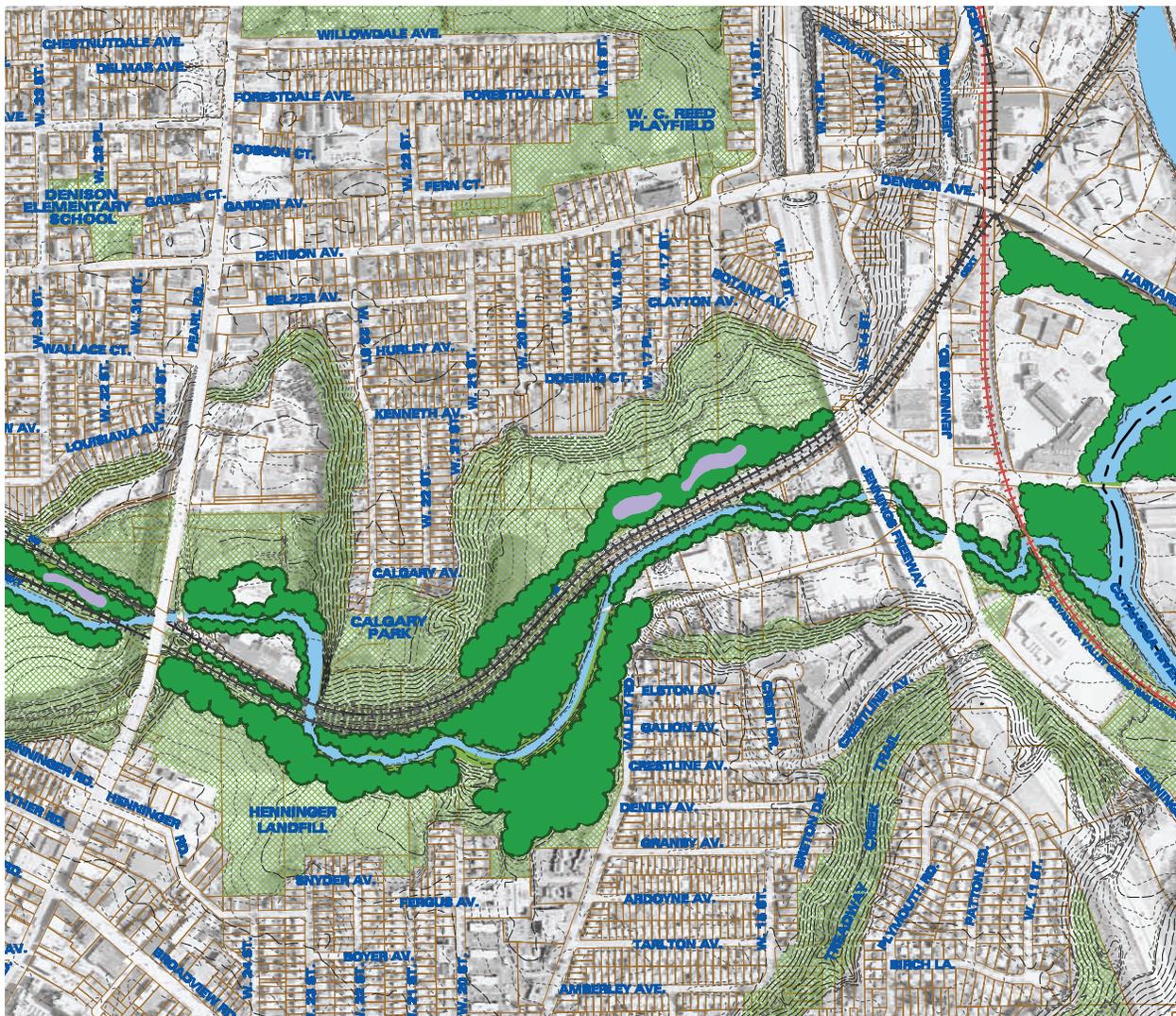
The Brookside Auto Salvage Yard lies mostly within the Big Creek floodplain. Minimally, it is suggested that the riparian zone be widened to 75 feet here to better buffer runoff from the yard. A dense planting of native floodplain trees, shrubs and forbs is suggested within the zone. Further, it is suggested that controls be expanded for the yard to prevent pollutants from reaching the stream or groundwater. Should a land use change occur at some time in the future, as is envisioned in the *Land Use* section, environmental remediation of the yard and an improved hydrologic connection to the stream is warranted.



This enhanced floodplain should also consider the construction storage yard further east. That area was permitted to be filled in the recent past, limiting its floodplain connection to the stream and undermining the toe of the wooded slope near the Calgary Park residential neighborhood.

The riparian zone adjacent to the old Champion Stove Company warehouse is recommended to be widened and reinforced with native riparian plantings. The paved yard and drive should be narrowed to the extent possible to permit the plantings.

The stream reach between the Henninger landfill and Jennings Freeway is largely entrained within a narrow steep-walled channel with industrial land uses extending to the top of its banks. Little native vegetation remains. Its floodplain has been mostly filled in this area. Although it is not really practical to restore the creek's floodplain connection here, it is possible to improve the greenway associated with the stream. It is recommended that industrial uses be removed from within 75 feet of the top of stream banks and that a native plant buffer be developed within this riparian zone. This may include repositioning of fences, removal of paving and repositioning of materials and equipment.





Several buildings fall within the setback and are suggested to remain as exceptions until they are replaced at which time they should be placed outside of the riparian zone. Runoff from the industrial uses should be further controlled to prevent pollutants from reaching the stream.

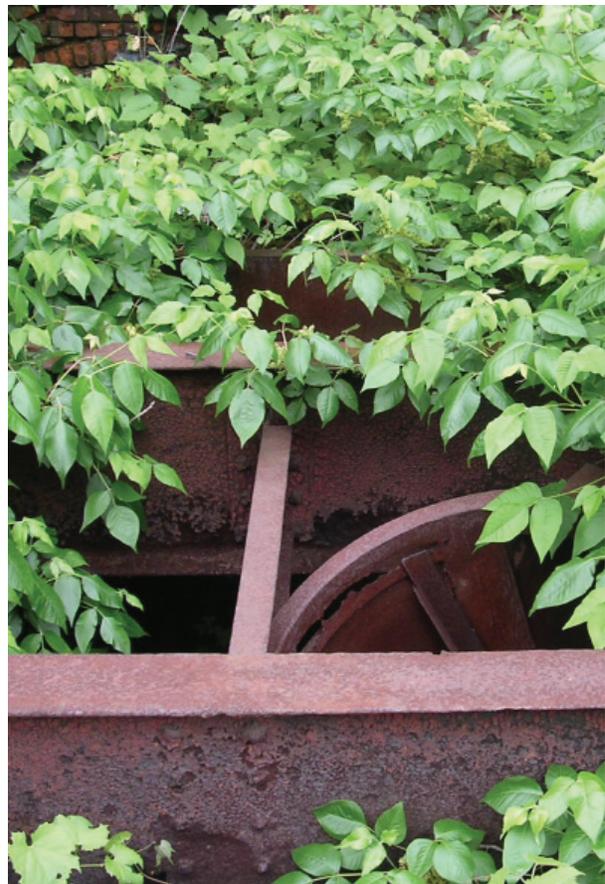
The area of land currently used by Martin Enterprises for its aggregates recycling operation is suggested to be converted to riparian zone buffer, once the recycling operation is relocated and the rubble piles are removed. Streambanks are proposed to be regraded to a more appropriate slope angle and replanted to provide overhanging vegetative cover for the stream. This is further discussed in the *Land Use* section.

The stream reach from Jennings Freeway to its confluence with the Cuyahoga River is similarly entrained within a steep-walled channel with no meaningful connection to a floodplain. The area from the Scenic Railway tracks to its confluence is in a backwater condition with stable banks and a wider riparian buffer. A portion of the remediation site for the Harshaw Chemical property is a paved lot nearby. It is recommended that remediation of this property include conversion of it to a wooded buffer. It is suggested that a 50-75 feet buffer be developed that includes the entire reach by removing adjacent paving and reconfiguring

parking, drives and fences. Zeleznik's restaurant has a summer use patio within this zone and it is recommended that the patio remain, only be reconfigured to allow for the riparian zone to be enhanced. The Northeast Ohio Regional Sewer District pump station yard east of Jennings Road is recommended to be included in the riparian zone and similarly enhanced with native riparian plants.

Suggested Land Use Changes

A component of the study included exploration of possible land use changes on specifically identified parcels within the Greenway. Land uses included: a possible location for Camping within the Greenway that supported the need for overnight accommodations identified by previous planning for the Ohio and Erie Canalway; a site for Adventure Sports that would produce economic development opportunities for the neighborhoods; land use considerations at the Harshaw Chemical site; and open space restoration that supported Greenway goals of restoring access to nature and provided an amenity for adjacent land use changes, infill development and renovations that might occur. An economic consultant has been engaged by the partner agencies to test the economic viability of these and other land use suggestions.





PB EXPRESS CONTAINER STORAGE
YARD AT THE LUSTIG TRUST PROPERTY

Camping Site

A site for camping was selected by first considering the criteria that would lead to the likeliness of success. That included direct access to the Cuyahoga River Valley and The Ohio and Erie Canalway Towpath trail, perimeter controls to enhance security and the camping experience, a natural environment attractive to prospective camp users, a suitably sized parcel and access to visitor services like food, repairs, camping supplies, etc. The Lustig Trust property was selected as the site that most fit those criteria. It is nearby the Cuyahoga River and access to the Towpath trail. It is contained in a valley that includes a surrounding forest canopy and given the proper improvements could be controlled at its perimeter. It is suitably sized for a campground that could be financially viable.

The plan for the camp site recognizes that such a facility within the Greenway would require substantial improvements to be successful. The site is partially within the Big Creek floodplain that should be avoided for development. The adjacent rail corridor is a distraction from the peaceful confines typical to a campground. The site, although gently sloped, has a considerable history as a storage yard with little remaining native



SALT STORAGE AT THE
LUSTIG TRUST PROPERTY

vegetation. Pedestrian access among the Zoo, the neighborhoods and the Towpath complicates campground controls within this narrow valley.

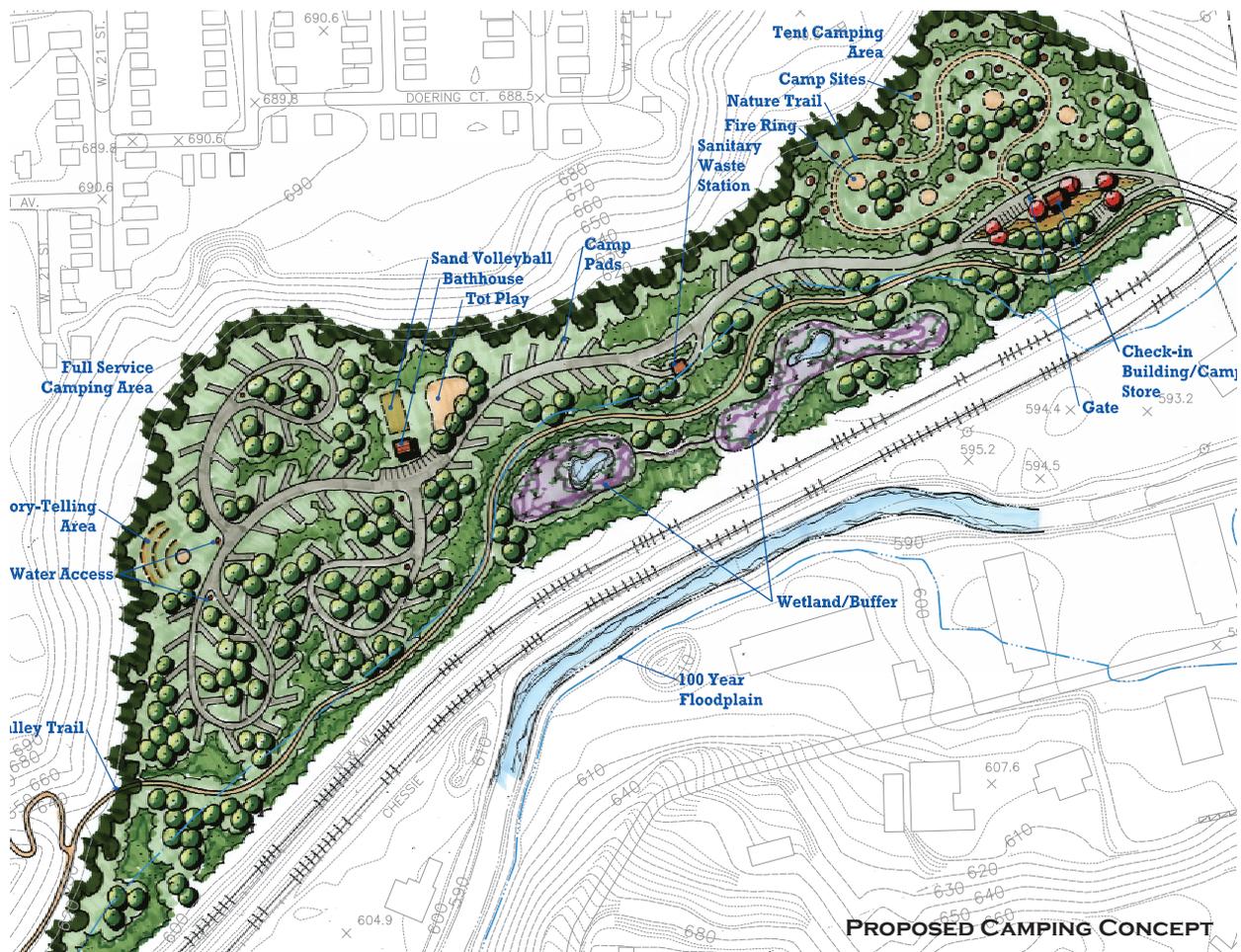
The plan for the campground balances all these issues to create the outline for a successful facility. The floodplain portion of the property is used to advantage to buffer the rail corridor from the camp site and provide a location for the Valley trail alongside the camp. That greenbelt is really the signature element of the camp, the interface between the trail and the camp users. Access for both is quite convenient, yet camp controls are maintained. The floodplain buffer is restored as wetland and shrub border to serve to separate the camp visually from the rail corridor.

The camp is placed outside of the floodplain with

the hillside forest of Calgary Park and the Brooklyn Centre neighborhood as backdrop for the camp. Access is limited here to protect both camp user and the residential properties at the rim of the valley. The camp entrance off West 14th Street is controlled at its entrance, similarly to most campgrounds with a camp check-in building/camp store. The camp drive leads to a tent camping area immediately adjacent to the entrance in a restored woodlot and the full service camp sites beyond. The entire campground is proposed to be set within a restored treed environment.

common with such facilities. The full service sites are more remote from the entrance, yet just as convenient to camp services. It is recommended that the full service camp sites be appointed similarly to those at a state park campground with electrical hook ups and water access, a nearby bathhouse, a central sanitary waste station, and camp conveniences like a playground and story-telling area. It is suggested that the camp be under public ownership but managed by a concessionaire.

The tent sites give a closer connection for camp users that might be hiking in off the Towpath, yet convenient access to camp services. These are graded sites with access to a central fire ring and grille but are otherwise unserved, as is



Adventure Sports Site

Criteria for selection of a site for the Adventure Sports facility included direct access to the interstate highway so that travelers from the region would be able to easily reach the venue, a direct relationship with the neighborhood commercial districts so that spin-off related uses could develop, and non-motorized uses that didn't conflict with the residential character of the neighborhoods. Those criteria led to the selection of the Henninger landfill site as the best alternative. It is located with immediate access to the Old Brooklyn and Brooklyn Centre neighborhoods via Pearl Road. Interstate 71 is easily accessed from Pearl Road at the bridge, giving the site the potential for high regional visibility. Its location is isolated at the rim of the valley, minimizing conflicts with the neighboring residential areas, yet is convenient to the commercial districts.

The plan suggests a mix of adventure sports that could potentially appeal to a regional audience. The site lends itself to considering a BMX track on the landfill with an adjacent skate park facility. A rock climbing tower is seen as an opportunity to create a unique architectural form at the gated entrance to the facility. This feature could offer the opportunity for visitors to train and be trained

in climbing and rappelling. It is suggested that an outfitter/restaurant facility be included of sufficient size and accommodation to include a restaurant, an indoor training center, an outfitter store and a center for the overall operation. It is suggested that the facility be developed of suitable quality and level of challenge that it could host regional events. It is suggested that the site be operated by a private for profit organization and that perimeter controls be included to ensure ticketed access to the facility.



HENNINGER LANDFILL



PROPOSED ADVENTURE SPORTS CONCEPT



HARVARD AVE. WITH VIEW OF EXISTING BUILDING ON THE HARSHAW CHEMICAL SITE



PROPOSED HARSHAW CHEMICAL SITE CONCEPT

Harshaw Chemical Site

The sites commonly referred to as the Harshaw Chemical site are actually a complex of old industrial buildings and land on both sides of Harvard Avenue that includes the site of Manhattan Project research during the Second World War. That portion is planned to be remediated and several of the industrial buildings will remain. Prior plans have called for the Harvard Avenue Station of the Cuyahoga Scenic Railway to be located on the site. The plan considers how the train station and the Lower Big Creek trail connection to the Towpath through the site might be compatible with other potential uses there.

The plan suggests that the remaining industrial buildings could be adaptively reused for a number of uses associated with the emergence of a commercial service district along Harvard Avenue and Jennings Road. They might also serve the Scenic Railway or Metroparks operations in the area. The Scenic Rail station is seen as being accessed from Harvard to a parking lot suitably sized for rail and trail visitor traffic. The Lower Big Creek trail would follow this access drive in a green corridor to its connection to the Towpath at the eastern end of the site and along the banks of the river. The land associated with the site is recommended to be restored as a native meadow,

shrub edge and forest buffer along the Cuyahoga River Greenway, near the confluence of Big Creek with the River.



Ecological Restoration

Sites considered for ecological restoration were selected based on their ability to have a major impact on the Greenway, either by virtue of their size or presence in the floodplain or by their existing land use and the potential for watershed improvement due to restoration/recovery. Several sites were selected for their potential for recovery. Those include the Henninger landfill, the Martin Enterprises aggregates recycling operation site and the Brookside Auto Recycling Yard. Each if restored would greatly benefit the Greenway. The Martin Enterprises site has the closest connection to the Creek at a point in the stream reach where the channel is particularly affected by the land use. The Brookside Auto site has the greatest potential for environmental recovery due to the risk to surface and groundwater present with the current land use. The Henninger landfill is a large parcel with a strong connection to the neighborhoods and could benefit the adjoining neighborhood and the Valley with restoration. Environmental Regeneration plans for each are examined below.

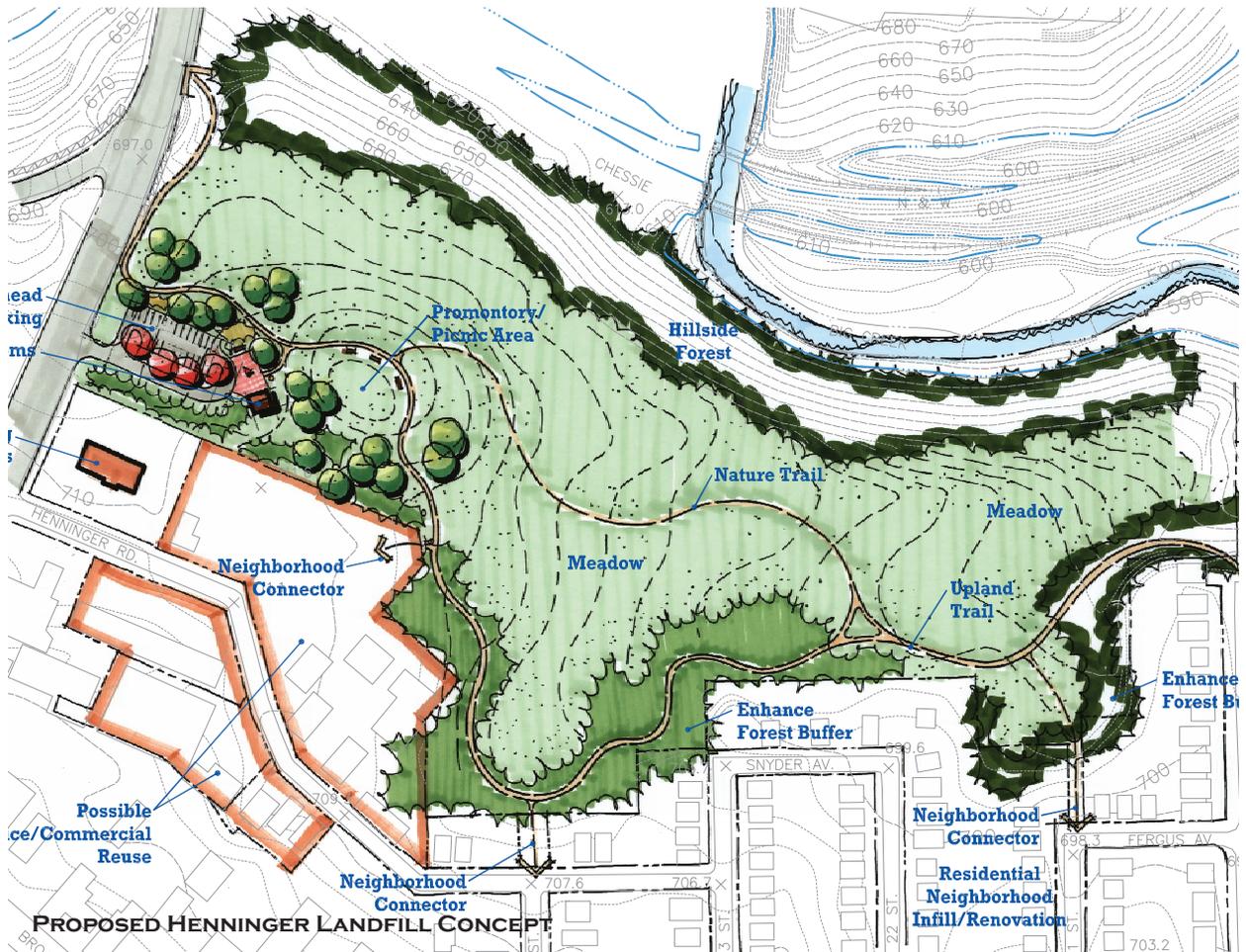
Henninger Landfill Site

The Henninger site plan suggests an alternative to the Adventure Sports land use option should it prove environmentally or economically infeasible to pursue that option. There is substantial benefit to the neighborhood of Old Brooklyn should the site be restored to a passive natural area, particularly if the area provided public access. The plan suggests the possibility that new and infill uses are possible on the margins of this large tract should it be restored with public access. The site has dramatic views into the Valley and beyond and views from the margins into the site would no doubt provide an attractive amenity for adjacent uses.

The plan suggests restoration to a native prairie or meadow with a series of nature trails that loop within the site and connect to a trailhead parking lot off Pearl Road, that includes views from a promontory overlook and picnicking site. The Upland trail is suggested to extend along the southern perimeter of the parcel, further providing connections to the adjacent neighborhood.



HENNINGER LANDFILL

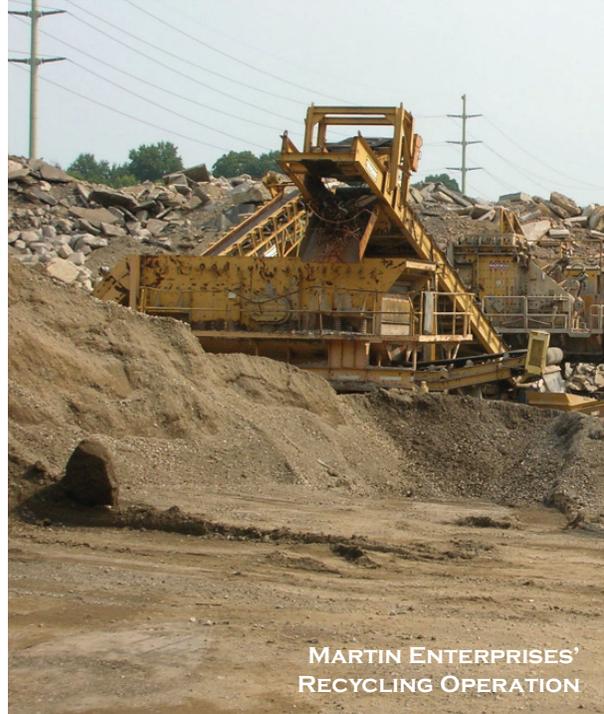




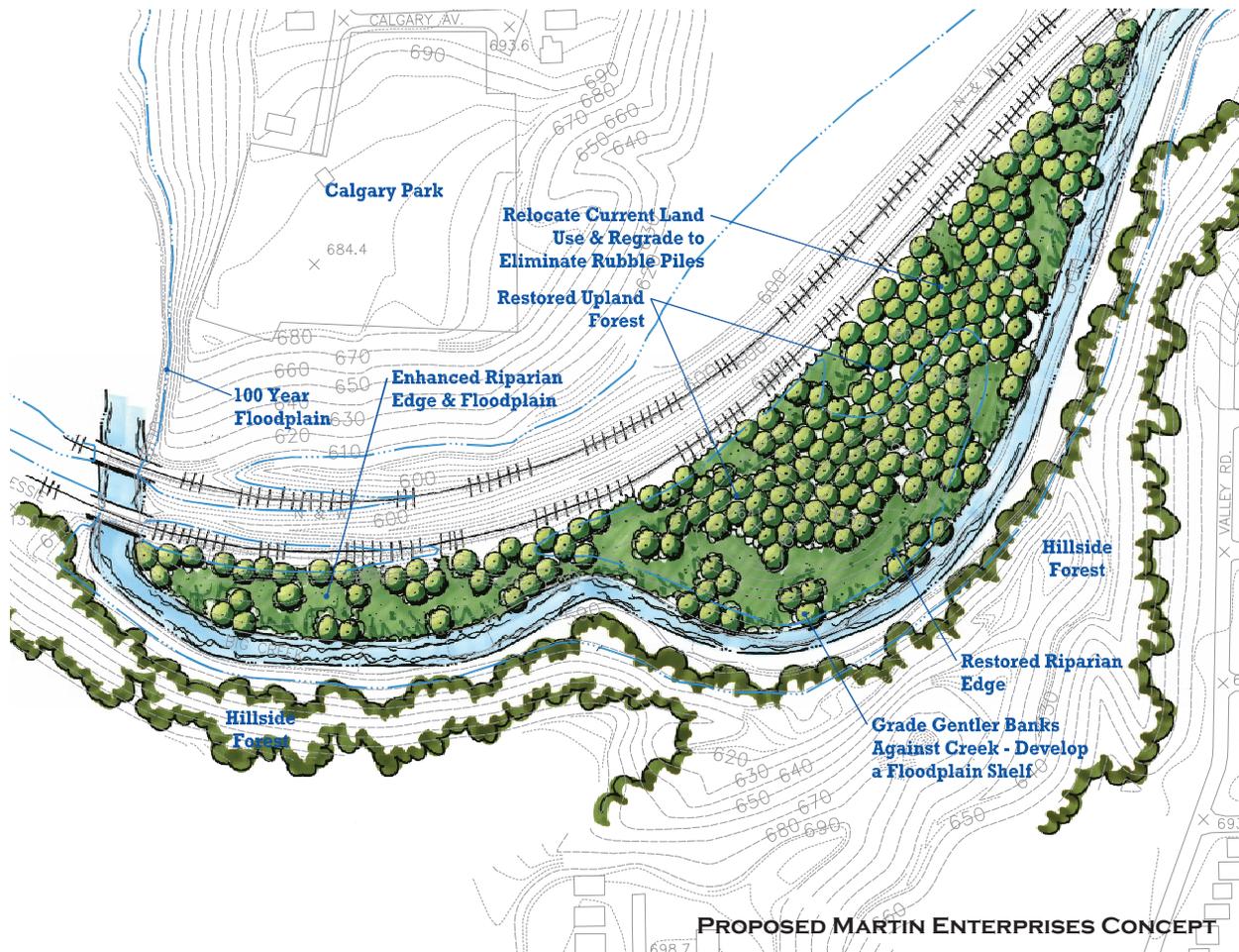
ARMORED BIG CREEK CHANNEL
NEAR THE MARTIN ENTERPRISES SITE

*Martin Enterprises
Aggregates Site*

The restoration plan suggests relocating the crushing operation elsewhere, regrading the site to remove the existing rubble piles and creating gentler banks against Big Creek. The plan calls for restoration of the site as a forested upland buffer at the level of the rail corridor and restoration of the riparian edge adjacent to the creek by developing a floodplain shelf and planting overhanging riparian vegetation. This plan is part of the larger plan to restore a riparian zone along the entire stream reach within the Lower Big Creek area.



MARTIN ENTERPRISES'
RECYCLING OPERATION



PROPOSED MARTIN ENTERPRISES CONCEPT

Brookside Auto Recycling Yard Site

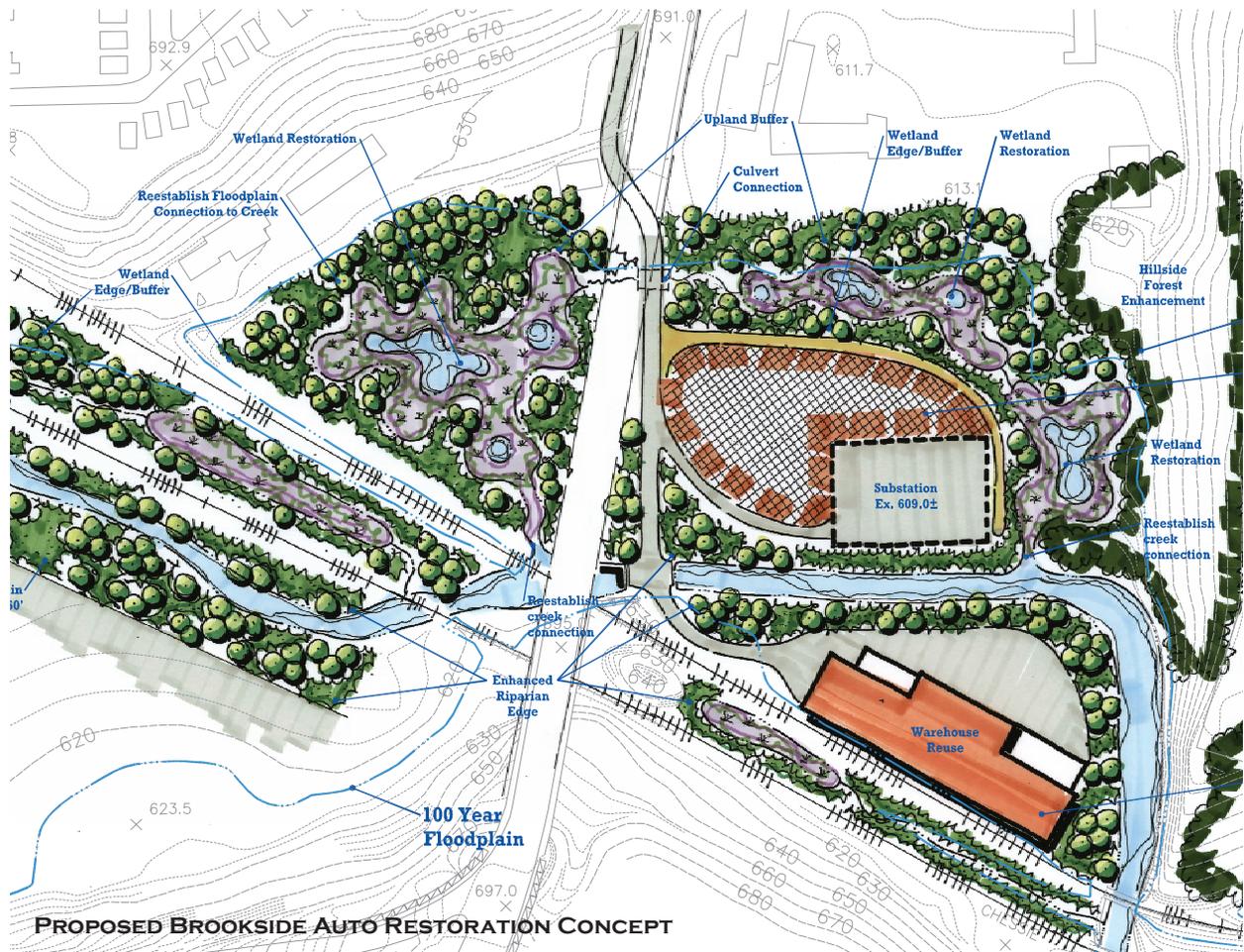
The restoration plan for the Brookside yard suggests a dramatic change from existing uses. As mentioned earlier in this report, the site is located mostly within the Big Creek floodplain and so, is subject to periodic flooding during extreme events. This, combined with the nature of the operation, suggests potential environmental risk for the watershed. The plan outlines the possibility of relocating the salvage operation elsewhere and restoring the original floodplain, providing an opportunity to recover some of the stream's capacity to store storm surges and to improve the Valley ecology.

The adjacent land use to the east (a construction yard) is included in the concept. That site was filled some time in the recent past to raise the level of the yard. In the process a connecting drainageway was restricted and the adjacent hillside was apparently excavated at its toe, undermining its stability. It is recommended that this site too be returned to floodplain elevations and the hillside toe be repaired.

The plan for these sites calls for restoration of the natural drainage connections to Big Creek to allow

for floodwaters to recharge a series of wetlands created on the properties. Adjacent buffers are suggested, as well, that would filter runoff from nearby upland areas and that, along with the filtering abilities of the wetlands, would improve water quality entering Big Creek. The plan also suggests isolating floodwaters that might affect the electrical substation in the area and offering the possibility of expansion by raising the elevation of adjacent lands with the clean fill excavations from the floodplain restoration.





Priorities & Next Steps



A conceptual stage construction cost opinion has been included in the Appendix for the public improvements needed to complete the plan. The cost opinion is divided geographically to depict segments of the trail and greenway improvements, giving readers the opportunity to view costs by probable construction phases. Details about the cost of professional fees, environmental clean-up, easements, property acquisition or relocation expenses are not included, given the variability of these costs and the relative lack of knowledge at this time about the factors affecting cost. Costs for the suggested land use changes are also excluded.

The cost opinion outlines a long-term series of activities needed to achieve the plan in its entirety. Realizing that a plan of this nature will require funding from a number of sources over a period of years the Advisory Committee has discussed priority elements of the plan.

Although the Committee is committed to the benefits of the entire plan, the committee determined that certain plan elements were more readily accomplished than others. These have been grouped as priorities and include: acquisition of the Lustig Trust property; the Valley Trail along Harvard Avenue to Jennings Road; the Valley trail along West 14th Street and through the Lustig Trust property from Jennings Road to the Calgary

Park Connector trail; the Calgary Park Connector Trail; the Valley Trail from the Calgary Park Connector Trail to the Metroparks Zoo parking lot; the Valley Trail from the Metroparks overlook in Brookside Reservation to the existing trail at John Nagy Boulevard and the Valley Trail underpass at Ridge Road.

Funding Strategies



The implementation of the *Lower Big Creek Greenway Development and Restoration Plan* will be a multiple phase project, requiring 15-20 years to complete. Completion of the improvements will require support from an array of sources including governmental, public and private support.

The Old Brooklyn Community Development Corporation and its project partners have historically been successful in acquiring various grants and awards for the wide array of project needs envisioned for the Greenway. The funding for the Treadway Creek Trail and the studies currently underway in the neighborhoods are examples of such efforts. Such grants and awards have been obtained in partnership with Ohio Canal Corridor and other private non-profit organizations, the City of Cleveland and other governmental bodies. Old Brooklyn CDC has been the administrative agent for a wide variety of the community development and neighborhood improvement programs that the City has undertaken and are on-going. They are well versed in the intricacies of grant and loan development and administration. As such Old Brooklyn CDC will play a key role in raising the funds necessary for the Greenway development.

Old Brooklyn CDC in concert with the City



and Ohio Canal Corridor will continue to apply for funding for trail design, engineering, and construction, as the opportunities arise. Both public and private funds will be sought locally, regionally, and nationally. The Cleveland Metroparks has and will continue to play a vital role in the implementation of the Greenway trail network, as demonstrated by their significant investment in trail development within the Brookside Reservation. As progress is made for the ***Lower Big Creek Greenway Development and Restoration Plan***, Old Brooklyn CDC, the City, Ohio Canal Corridor and Cleveland Metroparks will coordinate efforts to guide the successful management and construction of the Greenway.

Granting agencies are very specific in their definition and scope of work. Trail and greenway projects will be delineated as to where funding is possible and not possible. Certain agencies, organizations, and foundations have very specific projects and programs they fund. For example, one may fund the acquisition of land, but limit any construction or engineering activity, while another may only be for engineering and design.

Fee title acquisition, conservation easement acquisition, or Right-of-way access will be key to alignment of the Greenway. As land is acquired

or made accessible, trail design and engineering funds will then be sought. Acquisition and construction funds will be sought from both public and private entities. Such funding sources include, but are not limited to:

- Ohio Department of Natural Resources
 - o Natureworks Program
 - o Recreational Trails Program
 - o Land and Water Conservation Fund
 - o Coastal Restoration Program
- Ohio & Erie Canalway Association
- Lake Erie Protection Fund
- Ohio EPA (multiple programs)
- US EPA (multiple programs)
- NOACA (Transportation Enhancement/Improvement Program)
- Private Foundations
- Mitigation

Old Brooklyn CDC and its partners will be the primary parties responsible for acquiring the necessary funds for the Greenway development and restoration. Prioritized funding will be applied to the priority projects, pending funding availability, land acquisition, and alignment probability.