Big Creek / I-71 Relocation & Restoration Initiative

Prepared by

BIG CREEK CONNECTS

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Big Creek / I-71 Relocation & Restoration Initiative

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Page 17 *Flood waters entering triple culverts in Zoo* courtesy of Cleveland Metroparks; all other photographs courtesy of Big Creek Connects.

EXECUTIVE SUMMARY

The Big Creek / I-71 Relocation and Restoration Initiative looks at a number of environmental, economic, and community challenges and opportunities in the heart of a highly urbanized area straddling the cities of Cleveland and Brooklyn, Ohio. It questions the value of the Denison Avenue partial interchange and proposes removing part of its ramps and opening up land that will allow the stream to be naturalized by re-routing it into much of its historic streambed, thus addressing flooding, erosion and water quality issues and allowing fish passage upstream into the Big Creek Reservation and other areas.

As study progressed, broader transportation, economic, community and land use issues were examined. Industrial, retail and other commercial activity was found to be underperforming, particularly in the industrial areas north of the area of concern in both cities. And, housing in the Stockyards and adjacent Cleveland neighborhoods was found to be distressed, due in part to the lack of community assets found in other neighborhoods. Several alternatives to address many of these issues, both planned and proposed, were examined.

Concept plans were developed that propose the stream re-alignment along with expanded recreational space and a trail system that connects the Brookside and Big Creek Reservations to each other and the surrounding communities. Another set of concept plans add a new I-71 interchange at Ridge Road to capitalize on its economic potential and its potential to divert truck traffic away from residential areas. They propose that the interchange would help address issues related to urban sprawl and redirect investment into this urban core.

Land, stream, highway, roadway and trail data based on these concept plans were calculated along with cost estimates. However, there is a need for further study that will:

- Solicit public input
- Assess economic impacts
- Perform traffic modeling, and
- Develop a preferred plan with recommendations

This study acts as the foundation for a planning grant that will address these needs. In March of 2015 the City of Brooklyn, in partnership with the City of Cleveland and Big Creek Connects, applied for funding for this purpose through the Northeast Ohio Coordinating Agency's Transportation for Livable Communities Initiative (TLCI) grant program. Grant award announcements are anticipated in June 2015.

During Interstate 71's construction in the 1960's the "Parma Freeway" was planned to combine with I-71 in the Big Creek valley in a "weave-free, braided-type interchange". In order to make room for this extensive infrastructure, the land above the natural meander of the creek was cut and leveled, the railroad line was moved southward and Big Creek was placed in a concrete lined channel parallel to it. A "drop structure" was constructed in Brookside Park to make up for the 26' elevation difference due to the loss of the stream's natural meander. The planned freeway alignment north to I-90 was eventually abandoned and left the Denison Access ramps that remain to this day.

Each concept plan in this study proposes constructing two sets of short bridges to allow Big Creek to leave its one mile concrete channel and meander north under the railroad and highway into much of its original stream bed. The stream will then bridge back under the freeway and railroad and re-connect with its existing stream bed in Brookside Reservation, just down-stream from the drop structure.

An extensive recreational trail network could be realized, following the new stream alignment, and connecting the Brookside and Big Creek Reservations with each other and the surrounding communities.

- Concept Plan A proposes the removal of most of the Denison Access ramps without a new interchange in an alternate location. Combined with relocating the Cleveland Police firing range, over 50 acres of underutilized land could be opened up to potential environmental remediation and recreational use. Each concept plan envisions:
    - 10 acres stream/floodplain
    - 25 acres recreational space
    - 15 acres roadways, parking, other uses
    - 1.5 miles new access roads/parkway
    - Over 5 miles new all-purpose trails

  Taken together, these changes could significantly alter the neighborhood character, housing value, and quality of life of residents in the Stockyards and adjacent neighborhoods.
- In addition to these features, Concept Plan B proposes a new interchange at Ridge Road to capitalize on its economic potential and its potential to divert truck traffic away from residential areas.

Although a full interchange may be more valuable than the existing partial interchange, concerns were raised that the loss of the I-71 Denison Access ramps may cause a burden to industrial and commercial activity currently dependent on it.

This led to the development of three concept plans that build on a previously proposed idea of constructing a connector road from the Denison Access ramps to Ridge Road utilizing the existing road network in the Ridge Road [Waste] Transfer Station:

- Concept Plan C-1 proposes to make the connection to the new industrial access road with West 58th Street only. It assumes that traffic from West 56th Street will use Denison Avenue to reach West 58th Street and the new industrial access road.
- Concept Plan C-2 proposes that West 56th Street be extended south, then across the modified access ramp, where the grades are level with each other, to connect with West 58th Street and the new industrial access road.
- Concept Plan C-3 proposes re-building the Denison Access bridge over the Norfolk-Southern railroad to accommodate an extension of Tradex Parkway, connecting West 56th Street with West 58th Street. Although the most costly alternative, this option would provide a direct connection between these streets while maintaining a grade separation between industry and recreational users.

Big Creek Connects estimated land, stream, highway, roadway and trail data based on these conceptual plans. These figures were further defined and cost estimates were calculated by one of the private consulting firms providing pro-bono services for this study. A contingency of 30% was figured into the costs. However, the calculations do not consider potential land acquisition, environmental remediation, wetland construction, facility re-location or landscaping costs. The total budget for each concept ranges from $83,130,000 for Concept A to $115,900,000 for Concept C-3.

The TLCI planning grant, if awarded, will further evaluate these concept plans with input from the public and develop a preferred plan that will include a planning level cost estimate, a phasing/implementation strategy and identify funding sources.

INTRODUCTION

The Big Creek / I-71 Relocation and Restoration Initiative looks at a number of environmental, economic, and community challenges and opportunities in the heart of a highly urbanized area straddling the cities of Cleveland and Brooklyn, Ohio. It seeks to address several deficiencies in the transportation infrastructure along a section of Interstate 71 and their impacts both within and beyond the study area. It looks at how the creek running along the freeway may be returned to a more naturalized state. And, it seeks to improve existing land uses adjacent to the area, increase their connectivity to the adjacent neighborhoods, and enhance the livability and economic vitality within the surrounding communities.

Interstate 71's Denison Avenue access ramps and the over one mile of concrete channel of Big Creek would not have been constructed if the proposed "Parma Freeway" running north/south through the area was not planned for several decades ago. Fortunately, the freeway never materialized. But its abandoned construction left a number of environmental and connectivity problems in its wake.

Over the last several years, potential greenway/trail alignments and watershed restoration practices were examined within this area of concern. Problems identified along and downstream from the channelized section of the creek included erosion and flooding issues, the lack of water storage capacity, the degradation of water quality, and loss of aquatic habitat. As study progressed, broader transportation, economic, community and land use issues were incorporated into the research. Industrial, retail and other commercial activity was found to be underperforming, particularly in the industrial areas north of the area of concern in both cities. And, housing in the Stockyards and adjacent Cleveland neighborhoods was found to be distressed, due in part to the lack of community assets found in other neighborhoods.

Several alternatives to address many of these issues, both planned and proposed, are examined in this document. Included are conceptual plans that look at significant changes to the existing highway infrastructure. Each considers the economic development potential these changes could effect in the adjacent communities, particularly for industry. They envision naturalizing Big Creek by routing a section of it into an area of its former streambed. And, they look at opportunities for expanding the Cleveland Metroparks' Brookside and Big Creek Reservations and improving their connectivity with the surrounding communities.

Design considerations in the development of each concept plan are explained. To help visualize the concepts, aerial and ground level renderings were developed. Cost estimates are given for each concept plan based on ODOT's Procedures for Budget Estimating. Finally, next steps and recommendations are given.

Representatives of the cities of Cleveland and Brooklyn, various public agencies and private consultants have agreed that, upon completion of this study, funding should be sought through sources including NOACA's Transportation for Livable Communities Initiative (TLCI) program for a next phase of study that will solicit public input, assess economic impacts, perform traffic modeling, and develop a preferred plan and recommendations. This study sets the foundation for this and subsequent phases of study.

METHODOLOGY

During the development of the Big Creek Watershed Balanced Growth Plan and the two Big Creek Greenway Plans beginning in 2008, the organization Friends of Big Creek, renamed Big Creek Connects in 2014, coordinated research of watershed and stream restoration opportunities that included the relocation of Big Creek north of I-71 as an alternative. In 2012 study expanded to include transportation, economic and community development, and greenway/trail challenges and opportunities that developed into the Big Creek/I-71 Relocation & Restoration Initiative. A full list of references of study can be found near the end of this document.

By September 2013 specific problem areas were identified, existing and potential alternatives were evaluated, and two concepts plans were developed. Technical assistance and guidance on the format of this study was provided by professional consultants and Northeast Ohio Regional Sewer District (NEORSD) staff while additional input was sought that included representatives from each city, and through meetings with representatives from the Ohio Department of Transportation (ODOT), Cleveland Metroparks, the Northeast Ohio Areawide Coordinating Agency (NOACA), the Ohio EPA, and with staff from the two Cleveland community development organizations representing the focus area: the Old Brooklyn Community Development Corporation and the Stockyards, Clark Fulton, Brooklyn Centre Community Development Office.

In October 2013 Big Creek Connects' executive director, joined by NEORSD representatives, presented a draft of this first phase of study and concept plans to council and administrative representatives of the cities of Cleveland and Brooklyn separately to gain their interest in further study. During these first meetings, representatives from each city agreed that, due to the complexity of the issues this initiative seeks to address, this first phase of study should be completed before the two cities and other potential partners commit to dedicating resources and pursuing funding for further study that would contain the critical public input component and assess traffic and economic impacts. It was noted that this document would provide the foundation for this next phase of study, with a *Transportation for Livable Communities Initiative* grant as its most likely source of funding.

As study progressed, the director discussed or met with additional community, non-governmental organization and university representatives and professional consultants to gain their input on specific aspects of the initiative. An effort was made to meet or talk with all major business owners in the vicinity of the Denison Access ramps. For full a list of the individuals where input was given, see the acknowledgements page. Additional data was compiled, potential alternatives and concept plans were further refined and graphic renderings and cost estimates were developed for final review by both cities in February 2015.

Funding in the amount of $32,000 for this study was provided, in part, through watershed operating support grants funding from the Northeast Ohio Regional Sewer District, and through direct contributions from the City of Brooklyn and by the two Cleveland City Councilmen representing the wards north and south of the study area: Councilman Brian J. Cummins, Ward 14 and Council President Kevin J. Kelley, Ward 13, respectively. In addition, Big Creek Connects was able to leverage a considerable amount of in-kind, pro-bono and volunteer assistance from federal, state and local government departments and agencies, several professional consultants, and board members with expertise in key technical areas. Including these contributions, the total value of this study is approximately $60,000.00.

AREA OF STUDY

The Focus Area of this study encompasses a section of the Big Creek valley that straddles the present day communities of Brooklyn and Cleveland, Ohio (See Figure 1). This section of the valley runs approximately

2-1/4 to 3-3/4 miles upstream from the Cuyahoga River and, in addition to Big Creek and the CSX rail line, contains Interstate 71 as its most dominant feature. Just upstream from this area lies Memphis Picnic Area in Cleveland Metroparks' Big Creek Reservation. On the downstream end lie Metroparks' Brookside Reservation and Cleveland Metroparks Zoo. Ridge Road runs north-south through the center of the area. It is within this area that conceptual plans for land use changes were developed.

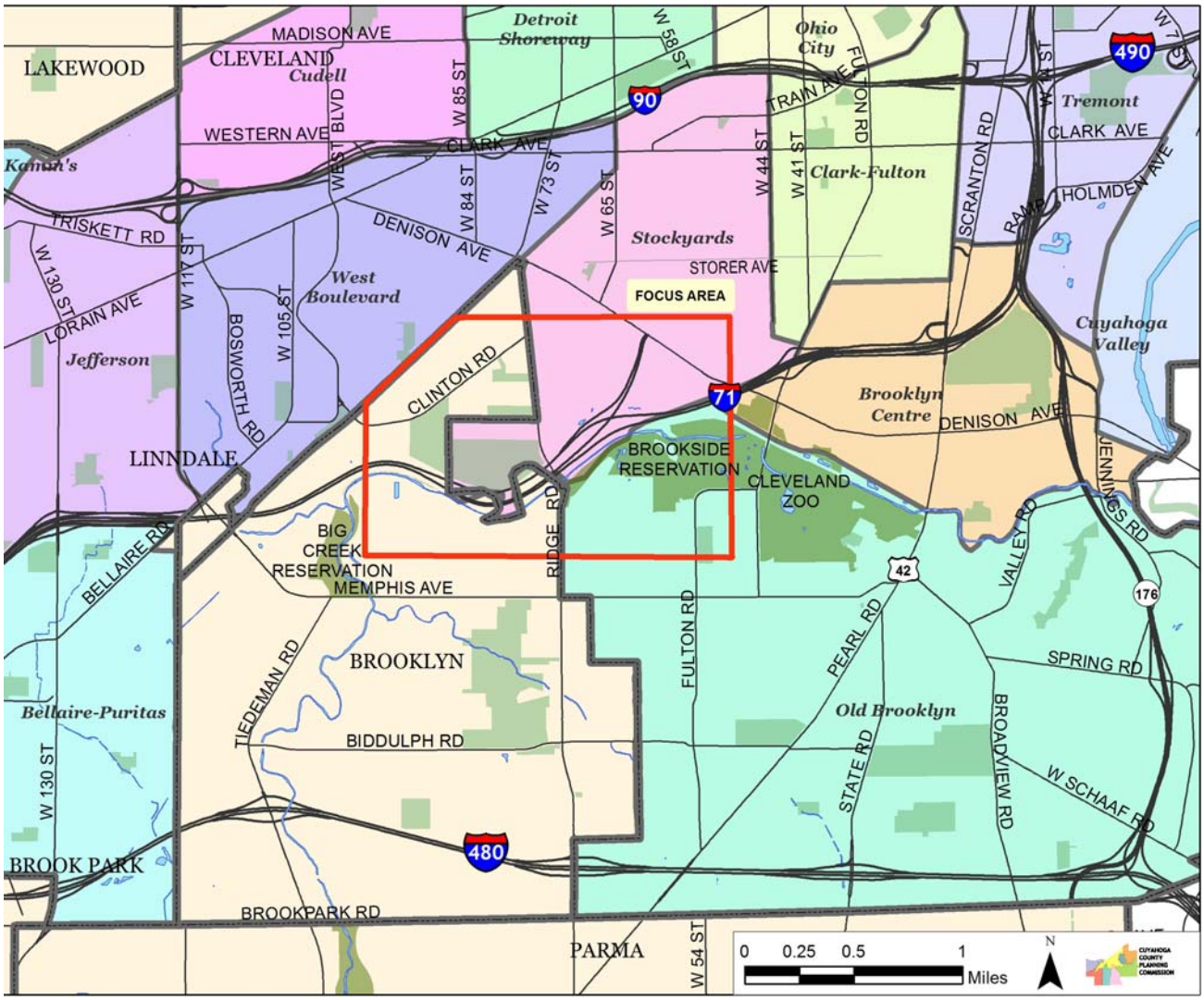


Figure 1: ***Study and Focus Areas***

Broader environmental, transportation, economic and social factors related to the Focus Area of this study reach much further. However, it was felt that a defined area of study that included only their more immediate impacts was necessary. For its environmental impacts, the Study Area included Big Creek through the city of Brooklyn and Cleveland en route to its confluence with the Cuyahoga River. For social and economic impact purposes, the area included all of the City of Brooklyn, part of the City of Cleveland's Old Brooklyn neighborhood, all of the city's Stockyards neighborhood, and to some degree its adjoining neighborhoods including Brooklyn Centre, Clark-Fulton and West Boulevard, among others. For transportation purposes, the Study Area included I-71 from its merger with I-90 and the Jennings Freeway on the east, to West 130th Street on its west; and from I-90 to the north to I-480 and Brookpark Road to the south.

Big Creek drains nearly 39 square miles from all or part of 7 present day communities – Cleveland, Brooklyn, Brook Park, Parma, Parma Heights, Linndale and North Royalton. The main stem of Big Creek begins in North Royalton and runs 12 miles until emptying into the Cuyahoga River. The northern border of the watershed follows Denison Avenue along a ridge representing a portion of ancient lake beaches. The lower Big Creek valley runs parallel and just south of this ridge.

COMMUNITIES ESTABLISHED

In 1796 the Connecticut Land Company laid out the Connecticut Western Reserve into five mile square townships including Brooklyn Township, just west of the Cuyahoga River. A prominent feature of the area was the Big Creek valley, as the stream traversed north then east through the middle of the township en-route to the Cuyahoga. Permanent settlement in the township began in the early part of the 19th century along the present day Pearl Road before expanding westward. North of the lower Big Creek valley, Brooklyn Centre was settled, expanded as Brooklyn Village in 1867 and was annexed by the city of Cleveland by 1894. South of the valley, the Brighton community was incorporated as South Brooklyn Village in 1889 before being annexed by the city of Cleveland in 1905.

By the end of the 19th century, the lower Big Creek valley between these communities contained several factories and two east-west railroad lines. Further upstream, Cleveland's Brooklyn Park was established in 1894, expanded and renamed Brookside in 1897. By 1907, the Cleveland Zoological Park began transferring from its former site at Wade Park to the eastern part of Brookside.

North of this study's focus area Cleveland continued to expand westward into the area that became known as the Stockyards neighborhood, due to the livestock yards along West 65th Street. West of Ridge Road, the City of Cleveland's West Park Cemetery was established in 1900. The property extended south into the Big Creek valley, but plans for burial grounds there were never realized. To the west of our focus area, the Linndale community prospered briefly around a railroad station and incorporated as a Village in 1902. The following year Cleveland annexed most of the community into the area that now comprises a large part of the West Boulevard neighborhood.

By 1912, except for a railroad line traversing through the valley and Ridge Road crossing north-south across it, the focus area of this study and the remaining township to the south was dominated by small farmsteads with Big Creek remaining in its natural state (See Figure 2). In 1922 a Ridge Road concrete arch high level bridge was built across the valley.

Most of what remained of Brooklyn Township was established as the Village of Brooklyn in 1927 and incorporated as the City of Brooklyn in 1950. The city developed its civic center along Memphis Avenue, just west of Ridge Road. The former South Brooklyn area of Cleveland expanded south and westward to its border with Brooklyn along or just east of Ridge Road. The area became known as the Old Brooklyn neighborhood of Cleveland to distinguish it from the newer City of Brooklyn.

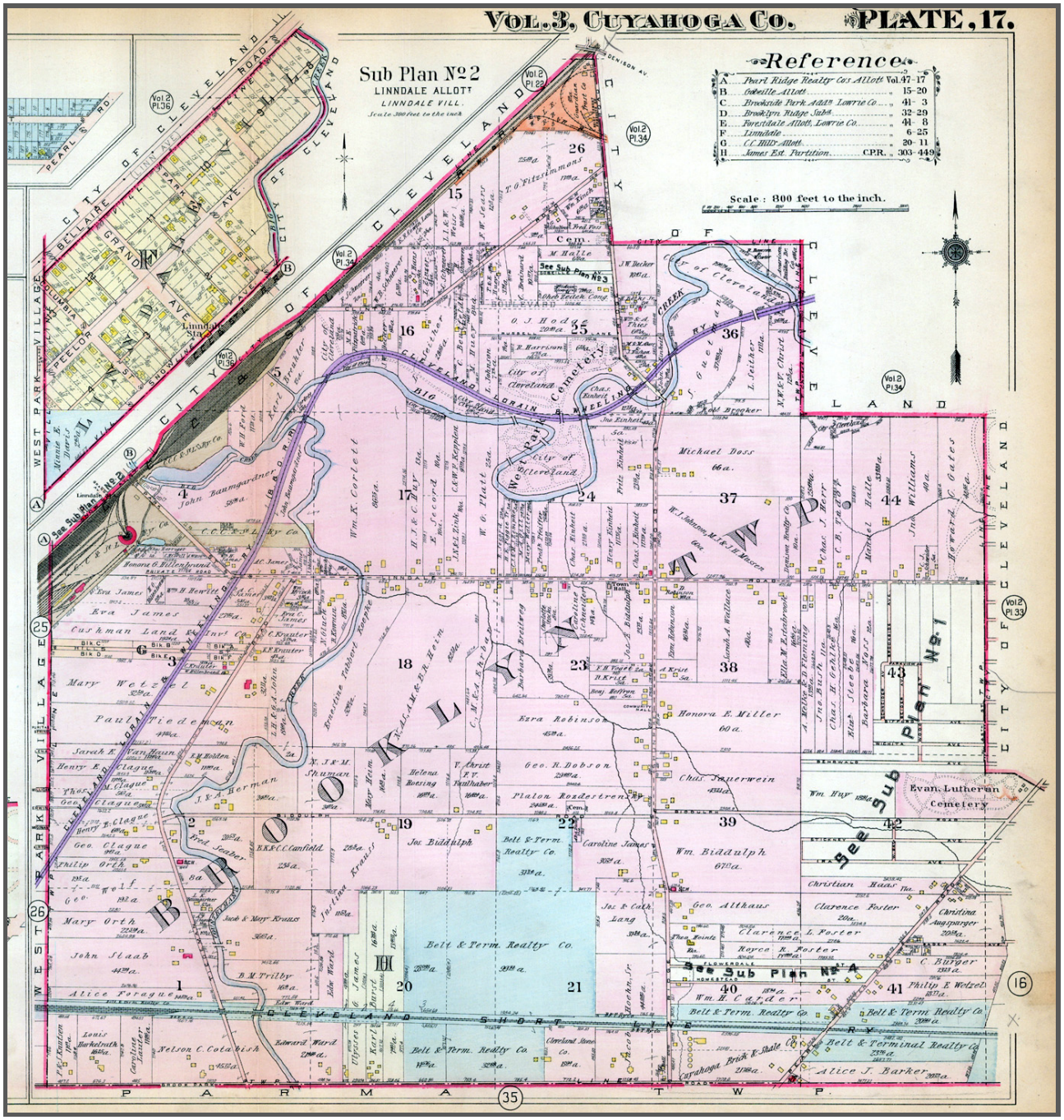


Figure 2: ***Brooklyn Township 1912. Showing Big Creek alignment prior to Interstate 71***

METROPOLITAN PARK SYSTEM

In 1905, City of Cleveland Engineer William A. Stinchcomb, who later became the first director of the Cleveland Metropolitan Park District, envisioned a metropolitan park system that included a boulevard following Big Creek north of Brookpark Road, through this study's focus area. Over the years, several versions of the plan were developed that included this greenway as the park system expanded. (See *Proposed Cuyahoga County Park and Boulevard System, June 1916* map in Appendix E)

Only a small part of Stinchcomb's vision was eventually realized within the city of Brooklyn however, with the establishment of Big Creek Reservation's Memphis Picnic Area. The city did however, gain access to Big Creek Reservation and its parkway at its southern border with Parma and to Brookside Reservation along its northeast border with Cleveland. Ridge Road remains the primary entry to Brookside via John Nagy Boulevard for both cities, since its Denison-Fulton vehicular entrance was closed in 1996 and later converted to a multi-purpose trail.

Interstate 71 Construction

As the suburban communities surrounding Cleveland expanded, the desire for an extensive freeway system increased. In 1957 the *Corridor Report for the Cuyahoga County Freeway System* was completed. The report recommended routing the "Medina Freeway" - designated Interstate 71 - south from downtown Cleveland, west through the Big Creek valley, then south again through the heart of the city of Brooklyn. It would combine with an "Airport Freeway" within the valley in a "weave-free, braided-type interchange". The Airport Freeway would continue west through the valley then turn south to the airport. Going north, it would connect with the "Northwest Freeway" designated Interstate 90. (See Recommended Freeway System map in Appendix D)

By 1966 an updated *Route Location Study for the Parma Freeway* proposed I-71 to instead follow the Airport Freeway route south, while the section through the city of Brooklyn was to become the Parma Freeway and include an interchange at Memphis Avenue en route to its termination near the border of Parma and North Royalton (See Figure 3).

In order to make room for this extensive infrastructure, the land above the natural meander of the creek was cut and leveled, the railroad line was moved southward and Big Creek was placed in a concrete channel parallel to it. A "drop structure" was constructed in Brookside Park to make up for the 26' elevation difference due to the loss of the stream's natural meander. The planned freeway alignment north to I-90 was later abandoned and left the Denison Access ramps that remain to this day. Eventually, plans for the Parma Freeway cutting through the cities of Brooklyn and Parma were also abandoned. By 1967, I-71 was complete from the airport to Fulton Road. Full interchanges were built at Fulton Road and West 130th Street, while Bellaire Road received a partial interchange.

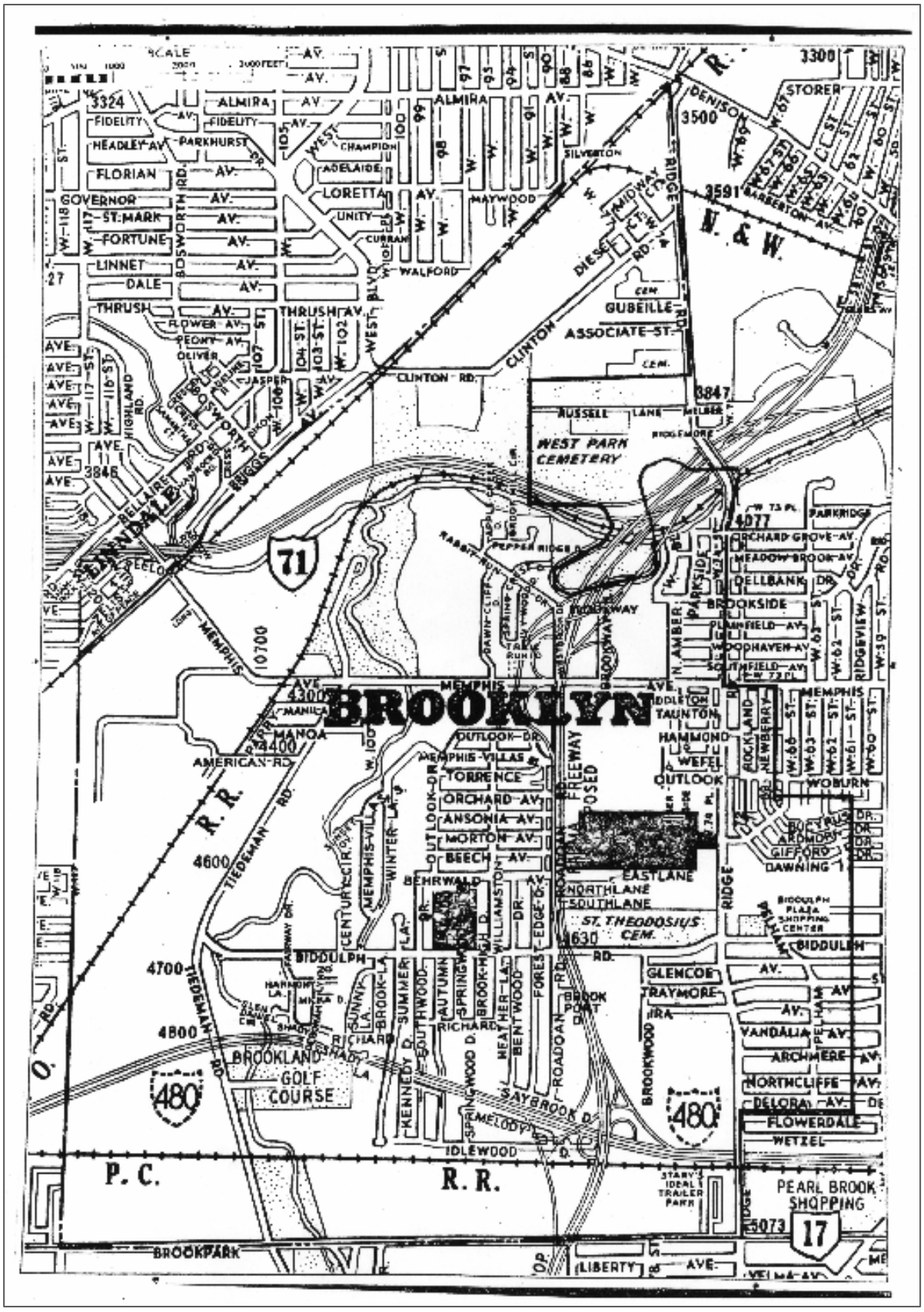


Figure 3: ***Cuyahoga County Atlas - c.1966. Showing Proposed Parma Freeway***

POST-CONSTRUCTION OF I-71

As Interstate 71 sliced through the Big Creek valley, it cut the West Park Cemetery property off from its northern section. In 1978 the city of Cleveland sold the land to the city of Brooklyn to be "used for recreational purposes only" and relocated its police firing range from there to an area north of the freeway, adjacent to the Denison Access ramps.

Immediately north of our focus area, industry remained the dominant feature along Ridge, Clinton, Barberton and other streets near the rail lines. Adjacent to this industry laid Cleveland's residential neighborhoods. A mix of residential and commercial activity existed along Denison, Storer and Fulton Avenues while the 1960's saw the Denison-Ridge area and part of the former stockyards along West 65th Street develop into strip-mall type shopping areas.

South of the valley, the city of Brooklyn and Cleveland's Old Brooklyn neighborhood continued to build out after World War II, primarily as bedroom communities with a mix of commercial activity concentrated along Memphis, Fulton and Ridge Roads, including Biddulph Plaza at the corner of Biddulph and Ridge Roads. Beginning in the late 1980's Ridge Park Square, a large shopping center with about 50 stores was developed further south along Ridge Road, just north of I-480. In 1993 the Ridge Road concrete arch bridge across Big Creek, the railroad and I-71 was replaced with a steel girder bridge.

By the year 2000 community interest increased for a recreational trial connecting the Towpath Trial along the Cuyahoga River with the Zoo and Brookside Reservation. In 2002, a comprehensive land use study was completed for the lower Big Creek valley. In 2005 Friends of Big Creek was organized to support recommendations of the study including the development of a greenway and trail through the valley, to carry that vision westward through the city of Brooklyn, and to act as the stewardship organization for the Big Creek watershed. (See Appendix J: Big Creek Connects Fact Sheet) Within the organization's vision is to see the trail run continuously from the Cuyahoga River and Towpath Trail through the Zoo, Brookside and the City of Brooklyn to Brookpark Road and the Big Creek Reservation in Parma. The 6-1/2 mile corridor will be accessible to over 24,000 residents within ½ mile and over 73,000 within 1 mile of its alignment. (See Population Buffer Map in Appendix E)

In 2006 the Brooklyn Master Plan was completed. Among the plan's recommendations was a connection between the Cleveland Metroparks Big Creek and Brookside Reservations and improved access to I-71 for the city's industry north of the valley. In 2007 the Cleveland 2020 Citywide Plan was completed. Among this plan's recommendations for the Stockyards neighborhood was the redevelopment of its commercial and industrial areas.

Over the next several years, a series of other land use plans and studies impacting this study's focus area followed. (To learn more about each of these, see the *Potential Alternatives* section) An effort to address gaps in these studies, beginning with environmental aspects led to the development of the Big Creek/I-71 Relocation & Restoration Initiative beginning in 2012. See *Appendix A* for a timeline of events related to the area of study.

Big Creek is considered an urban stream, as nearly 40% of its watershed contains impervious surfaces. The Big Creek Watershed Balanced Growth Plan notes "Typical of many urban streams, Big Creek has been subject to the effects of extensive urbanization for more than 150 years. Its original drainage patterns, wetlands, floodplains and riparian areas have been severely altered and fragmented as a result of channelization, spillway structures, culverts, and land uses encroaching on the stream. This has substantially and permanently altered stream discharge rates and volumes, decreased diversity and livability of habitat and limited the recovery potential of the stream."

The Balanced Growth plan also notes that Big Creek is part of the Cuyahoga River Area of Concern (AOC) and that "Big Creek is designated by Ohio EPA as a 'Primary Contact' and 'Warm Water Habitat' stream. These designations mean that Big Creek should have bacteria concentrations within a reasonable limit to allow safe recreational contact and be able to support a well balanced population of fish and aquatic insects."

As the Big Creek watershed became more urbanized, downstream flooding and erosion has become an increasing threat. Cleveland Metroparks has undertaken a number of studies to try to address concerns about flooding in Brookside and the Zoo, as a large scale "50 year storm event" has not occurred since their establishment. The City of Cleveland, NEORSD and ODOT share these concerns, particularly as it relates to the erosion problem impacting the CSX rail line adjacent to the channelized section of Big Creek.

Despite these concerns, the Zoo and Brookside Reservation provide significant value to the surrounding communities. This is especially so with the Old Brooklyn neighborhood immediately south of these sites. The city of Brooklyn, to the west of the area, shares many of the same benefits. The Stockyards and other neighborhoods to the north however, share somewhat less of these gains, due to limited and distant public access points, and industrial land uses acting as barriers to the area (See existing land use maps, Figures 4 & 5).

Both cities realize the economic and social value that these industrial and commercial enterprises provide. However, concerns exist about how to best serve the transportation needs of business to sustain and aid in their growth while lessening truck traffic or other negative impacts to the surrounding residential areas. Where I-71 terminates at Denison Avenue, truck traffic often causes congestion and poses safety issues. The commercial corridor along Ridge Road between Denison and I-71, in contrast, lacks vitality, while heavy truck traffic often traverses south through the city of Brooklyn en route to further destinations.

These and a number of other transportation, economic, environmental and social challenges exist that this initiative seeks to address. In the following section of this study, problems within each of these areas of concern are further defined. For a comparison of demographics between the City of Brooklyn and the City of Cleveland's Stockyards and Old Brooklyn neighborhoods, see *Community Demographics* in Appendix B.

Figure 1: Current Land Use Map

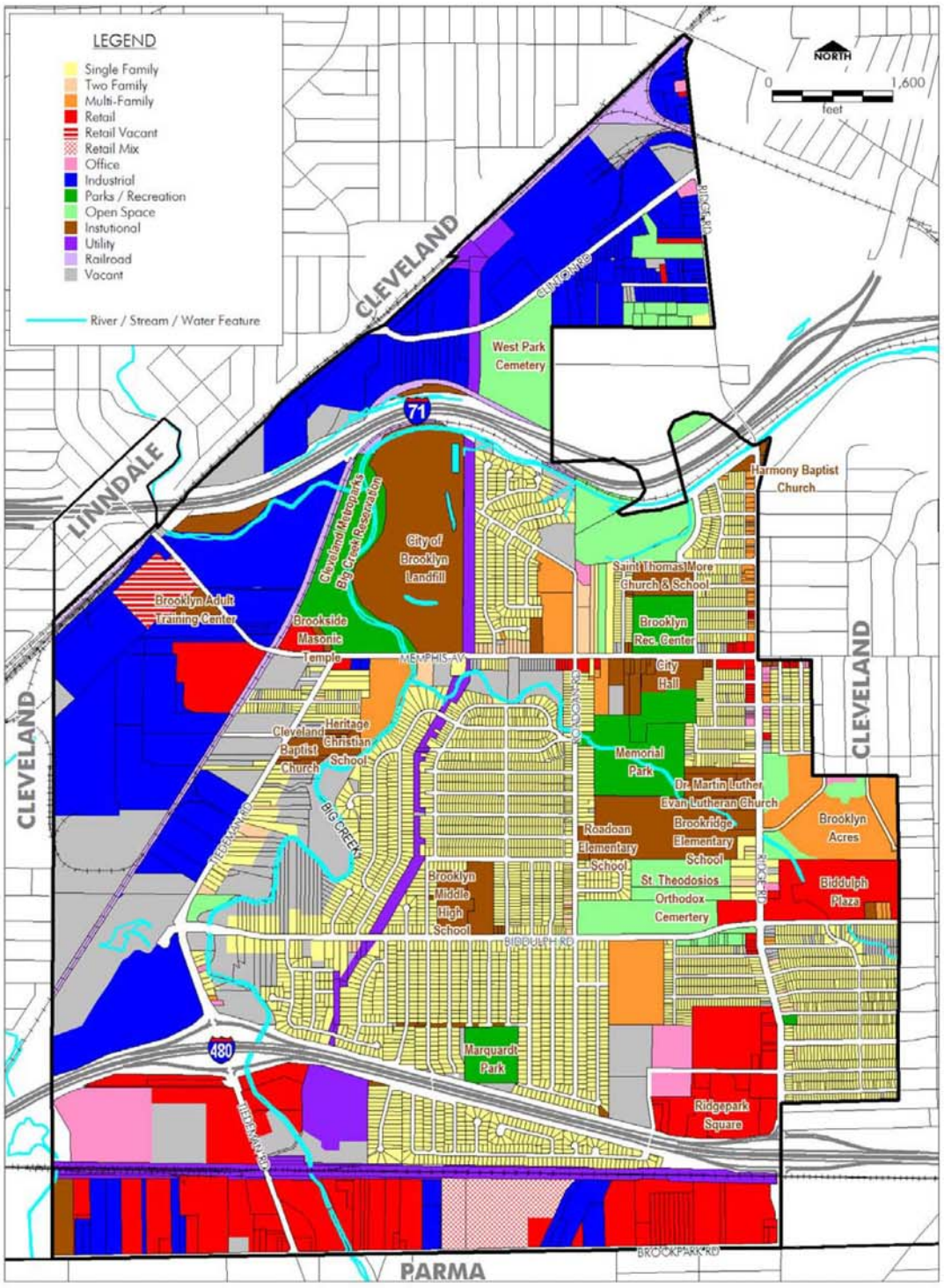


Figure 4: ***Brooklyn Master Plan: Current Land Use Map (2006)***

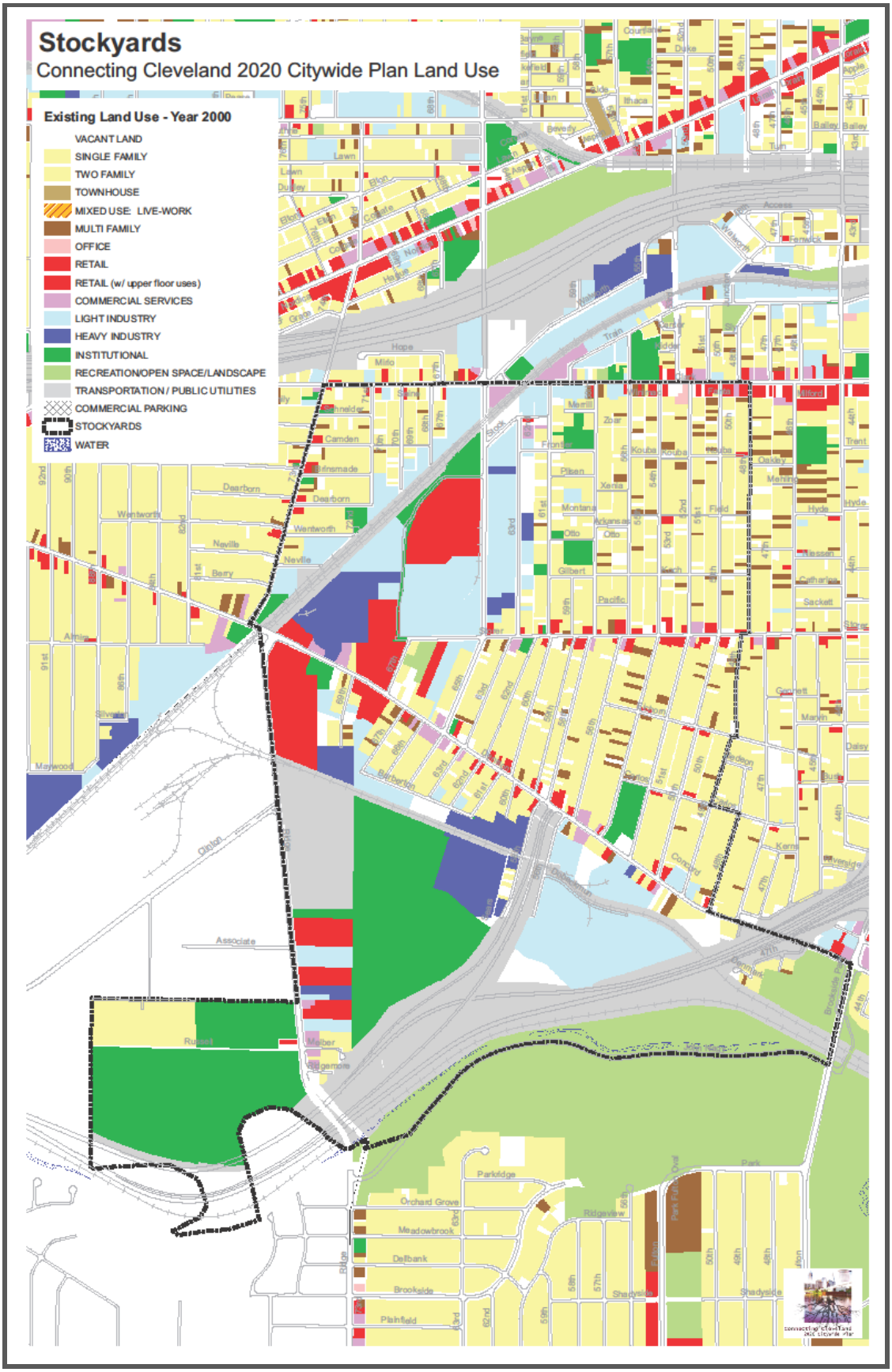
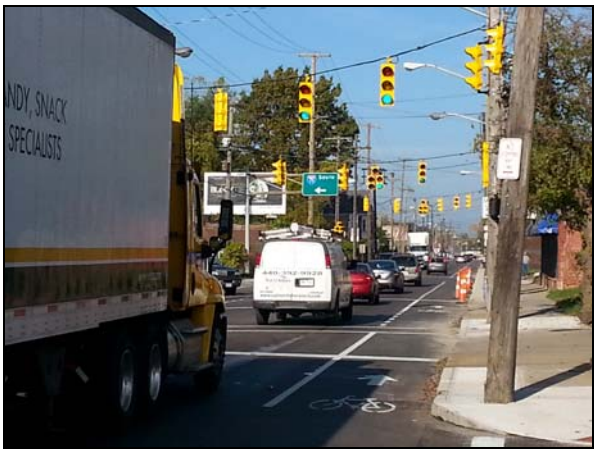


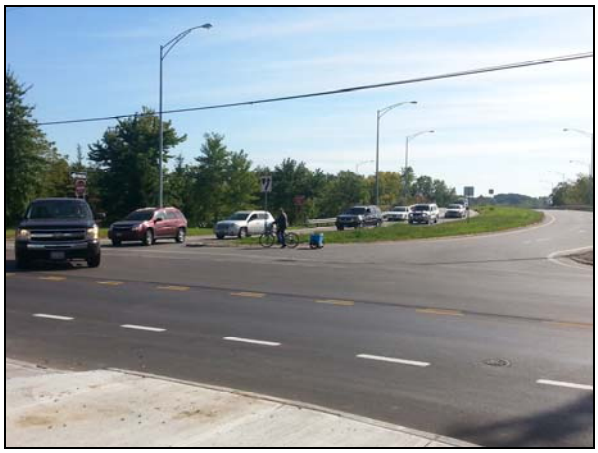
Figure 5: ***Stockyards Existing Land Use: Cleveland 2020 Citywide Plan (2007)***

TRANSPORTATION INFRASTRUCTURE

- **Long distance between full interchanges along I-71:** The distance is significant for an urbanized metropolitan area: 3.6 miles between the Fulton Road and West 130th Street interchanges (See Figure 1). If the Fulton Road exit southbound on I-71 is missed, one must travel a minimum of 7.2 miles to return to the exit. The distance between the interchanges limits highway access and forces unnecessary traffic onto local road networks between these points.
- **Limited access at existing interchange:** I-71/Denison Access on/off ramp has limited access vs. a full interchange (has northbound exit and southbound entrance only) Ramp is too close to Fulton Road full interchange to be of significant value. Truck traffic at Denison ramp causes congestion and safety concerns.
- **Limited highway access for industry:** *Brooklyn Master Plan* (2006) cites the need for better access to I-71 along Ridge/Clinton Road industrial area (See Figure 7). The *2020 Citywide* and other Cleveland plans envision expanded commercial and industrial areas yet these areas lack convenient freeway access.
- **Limited highway access to/from Cleveland neighborhoods:** Ridge Road/Denison Avenue area neighborhoods lack full interstate access; must travel east to Fulton Road to reach I-71 north, or south along Ridge Road to reach I-480 east.
- **Limited highway access to/from Brooklyn neighborhoods:** Commercial enterprises and residents within city lack convenient access to I-71 north.
- **Ridge Road receives significant traffic** between I-480 and Biddulph Avenue including truck traffic to/from the Ridge Road Transfer Station and other industrial enterprises north of I-71.
- **Denison Avenue receives significant truck traffic** en route to industry along Ridge Road, and West 56th, 58th and 65th Streets.
- **Loss of vehicular access to Brookside Reservation** for Cleveland residents since closing of John Nagy Blvd entrance at Fulton Road and Denison Avenue.
- **Ridge Road not suitable for bicycle use:** Other opportunities for bicyclists or pedestrians to traverse Big Creek valley west of Fulton Road are limited.
- **Operational and Design Standard deficiencies along I-71:** Northbound Denison exit ramp exits from left of mainline. Denison Avenue entrance/exit at T-intersection is poor location design, has safety issues and degrades the character of the neighborhood.



Denison Avenue at Access ramps looking west


Denison Avenue Access ramps looking south

Economic

- **Lack of highway access to markets** for industrial and commercial enterprises along Ridge/Denison/Clinton Road areas.
- **High road maintenance costs due to heavy truck traffic** on Denison Avenue and other light capacity roads between distant full interchanges.
- **Denison Access ramp area wastes public dollars** in road and landscaping maintenance of over 30 acres; land that delivers little net economic gain
- **Significant costs due to flooding and erosion damage** and water quality degradation due to channelization of creek
- **Ongoing costs to maintain failing concrete channel of creek** and buried sewer pipes en route to the stream channel
- **Lower residential property values**, less incentive for re-investment and lack of households with broader range of incomes for Stockyards and other neighborhoods north of area due, in part, to lack of access to greenspace and other community assets (See Figure 6).
- **Minimal incentives for attraction, retention and investments** in office, retail, other commercial enterprises near Brookside Reservation due in part to little identity with park system
- **Undervalued property tax assessments** for both cities considering locations adjacent to interstate system and potential greenway
- **Less income, sales tax income realized** from businesses in area than could be realized
- **Regional costs of urban sprawl** due to lack of attractive urban development opportunities

Ridge Road near Denison Avenue looking south

Corner of Denison Avenue & Ridge Road

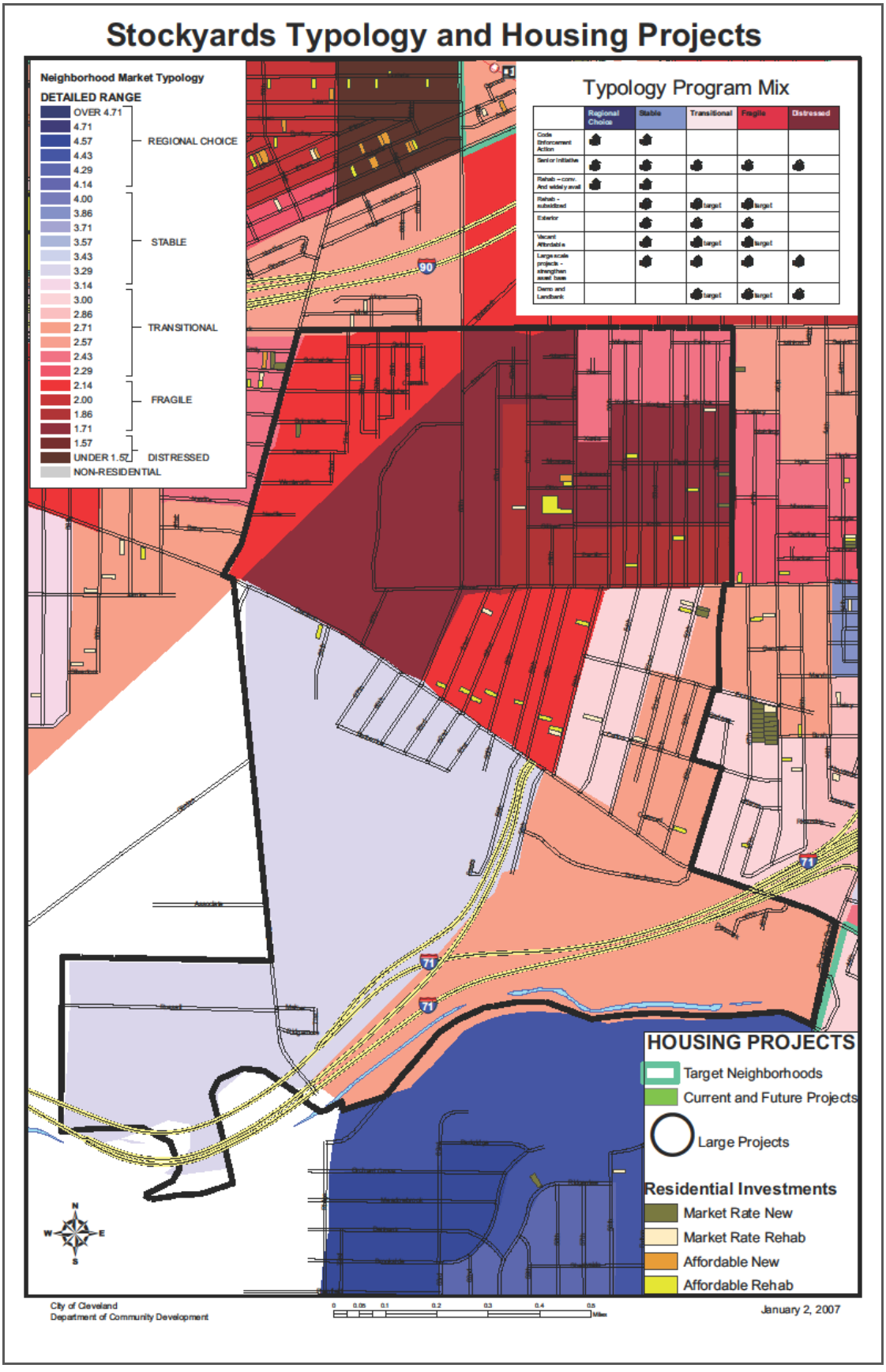


Figure 6: ***Cleveland 2020 Citywide Plan (2007)***

Environmental

- **Excessive truck traffic** through residential neighborhoods to/from distant freeway interchanges creating noise and air pollution.
- **Pressure for City of Brooklyn to court industrial development in wooded and wetland areas** west of Tiedeman Road due to proximity to interstate system via full interchange at I-480**.**
- **Outdoor Police Firing Range** in highly urbanized area creates noise disturbance, discharge contamination.
- **Large amount of impervious land area exists** where the underutilized freeway ramps consume over 30 acres of land that contribute to degraded natural habitat and excessive stormwater run-off.
- **Decreased ability of Big Creek to retain and infiltrate stream flow**, particularly as watershed becomes more urbanized, due to concrete channelization of stream (See drainage plans, Appendix C).
- **Increased risk of downstream flooding and erosion:** Concrete channel is increasing flow rate and impacts to downstream areas, risking flooding and erosion, particularly within Brookside Reservation and Zoo.

Channel looking east from Brooklyn Oxbow

Flood waters entering triple culverts in Zoo

- **Increased erosion within and adjacent to channel:** Channel itself is experiencing increasing amount of structural failure and erosion within bed and threatening adjacent property; e.g. CSX railroad bed.
- **Degraded water quality:** Channel degrades water quality due to its increased flow rate, temperature variation, lack of natural structure/riparian buffer and loss of ability to perform bioremediation.
- **Degraded aquatic habitat**: Channel and drop structure, making up for elevation difference from loss of natural meander, has severely reduced stream's ability to support aquatic habitat.
- **Degraded terrestrial habitat:** Channelization of stream has reduced or in some sections eliminated entirely a terrestrial corridor for native wildlife that had existed prior to its construction.
- **Degraded water quality and excessive sediment delivered to Cuyahoga River and Lake Erie,** as Big Creek is the third largest tributary within the Cuyahoga River Area of Concern.
- **Increase in impervious surfaces, contaminated stormwater run-off, air pollution and carbon footprint** due to urban sprawl.

Big Creek Drop Structure, Brookside Reservation, August 2013, showing CSX rail line and I-71 beyond.

Social / Cultural

- **Little social/cultural connection** or identity with park system for Stockyards and other neighborhoods north of Brookside Reservation.
- **Loss of convenient access to Brookside Reservation** for residents living north of the park after removal of vehicular access at Denison & Fulton Roads. (Pedestrian and bicycle access only)
- **Lack of pedestrian/bicycle access** to Brookside Reservation for Cleveland residents in Stockyard/other neighborhoods further west of Fulton Road.
- **Lack of connections to the Metroparks system beyond** neighborhoods north or south of Brookside Reservation and Memphis Picnic Area and the recreational, health and educational opportunities those connections could offer.
- **Communities beyond area lack same opportunities** to connect to Metroparks system north of the Big Creek Reservation in Parma, and westward from the Ohio & Erie Canal Reservation in Cleveland.
- **Lack of space for additional recreational opportunities** exists in Brookside Reservation.
- **Cleveland Metroparks Zoo lacks space** for potential westward expansion.
- **Zoo has need for additional parking** capacity, placing pressure to expand into Brookside Reservation or other culturally or environmentally sensitive areas such as the lower Big Creek valley east of Pearl Road.

- **Gap in Big Creek (Brooklyn) Greenway Trail Alignment & Neighborhood Connector Plan** exists as it was forced to seek on-street alternatives in the city for Brookside and Memphis Picnic Area trail linkages due to constricted space between freeway, railroad, channelized creek and steep slopes (See Overall Master Plan in Appendix E).
- **Freeway ramps and firing range areas are underutilized** for such a highly populated area lacking community assets.
- **Public health issues** exist due to volume of truck traffic through neighborhoods and the lack of access to greenspace and recreational opportunities.
- **Public safety issues** continue to exist with Big Creek drop structure in Brookside Reservation.

Big Creek Drop Structure, Brookside Reservation

During this study, a number of existing land use proposals were examined and new ones generated to address the problems cited above. For clarity, these were categorized in the general areas of transportation infrastructure, economic and community development, watershed/stream restoration, recreational space, and neighborhood connections. A summary of each proposal is given followed by an assessment of their feasibility. The proposals are then further examined in combination with each other in the development of several conceptual plans for the focus area.

TRANSPORTATION INFRASTRUCTURE

- **Explore Improved Ridge Road Industrial Area Connection** to existing Denison Access Interchange per Brooklyn Master Plan. The plan states: *"A precondition of redeveloping this large site as an industrial park is to improve access to I-71. The closest on-ramp to Interstate 71 is from Denison Avenue by Fulton Road. One concept considers utilizing a portion of the rail line just east of Ridge Road through the Stockyards to connect to I-71"* (See Figures 7 & 9). In addition to considering the issues involved in abandoning an active rail line (Norfolk Southern), this proposal may be costly vs. the limited benefit it may provide utilizing a partial interchange at Denison Ave.
- **Remove industrial uses along Barberton Avenue, create park space in its place** and create a connector road into the Ridge Road retail area as proposed in the *Re-envisioning the Stockyard Neighborhood* study (See Figure 8). These residential vs. industrial land use changes will need to be re-examined when considering opportunities Concept Plans A, B or C could create. The retention of the existing industry along Barberton should be examined and include the economic development potential of the Norfolk Southern rail line.
- **Increase Interchange Connectivity to proposed Tradex Parkway Industrial Area.** The Re-envisioning the Stockyard Neighborhood study also sought to better address connectivity problems east of the freeway ramp system by building a new access road along the ridge of the north oxbow, creating opportunities for business expansion and connecting the road directly with the ramp system (See Figure 8). Although promising, neither the Stockyards study, nor the Cleveland 2020 Citywide Plan considers the limited incentives for industry using the existing partial interchange vs. a full interchange. The access road idea should be further explored however, for its potential to create a more direct connection to Ridge Road if a full interchange were built there. (See Concept Plans C-1, 2 & 3 below)
- **Re-align W. 67th Street** south of Storer Avenue to provide improved linkage with Denison Avenue as proposed in W. 65th Street Corridor Study (See Figure 11). This proposal has benefits independent of other alternatives and should be re-examined in combination with others alternatives.
- **Extend Storer to Denison Avenue** as proposed in the Re-envisioning the Stockyards study. This is another proposal worth further consideration.
- **Re-configure Denison Access Ramps.** This option proposes examining the elimination of the southbound access ramp and sharing south and northbound traffic on the northbound ramp, thus freeing up land in the valley for other uses. This option may be costly considering the relatively limited gain in land acreage.

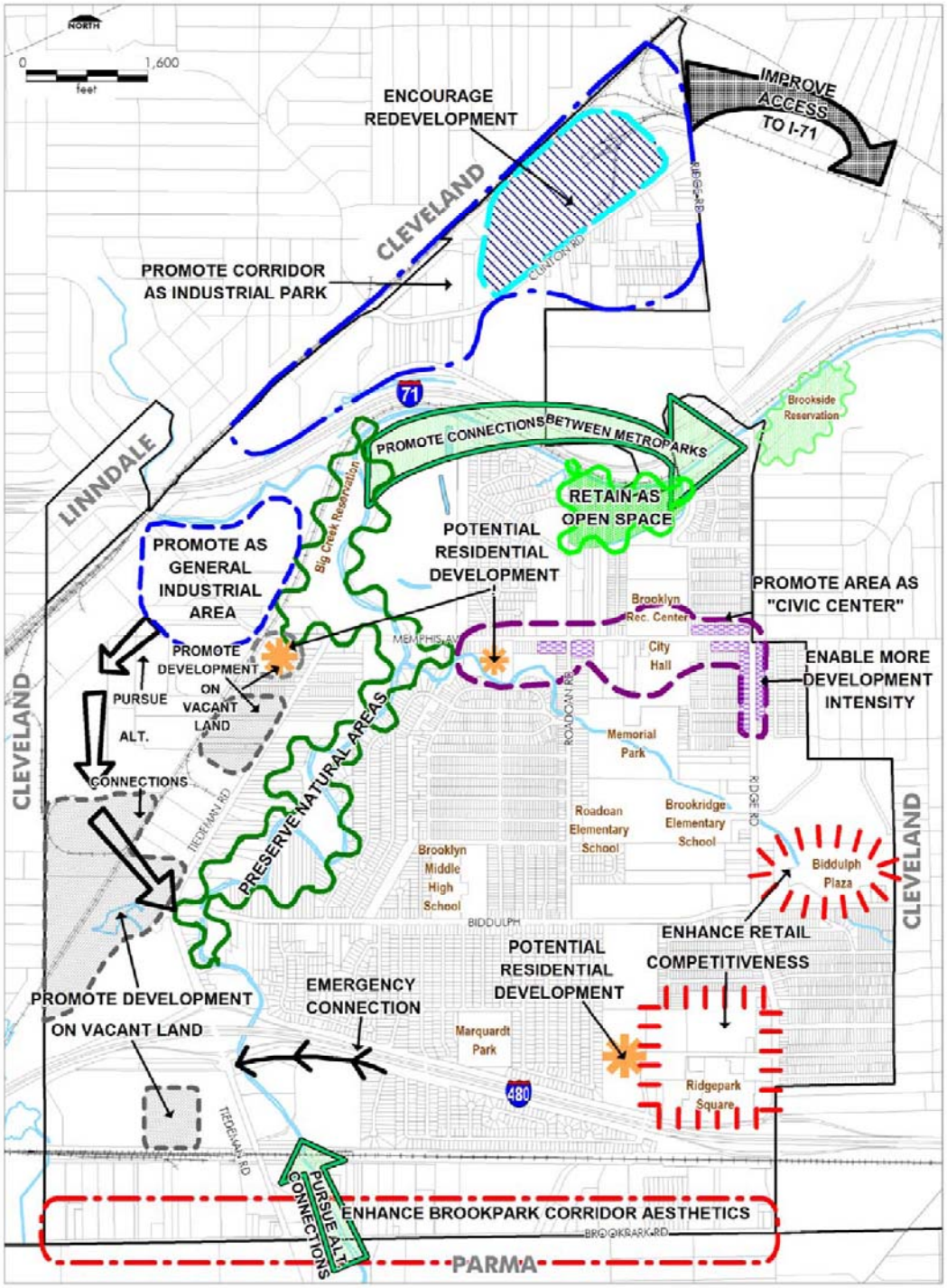
- **Full Interchange at Ridge Road.** Examine build only, without modifying/removing Denison Access ramps. This option may provide economic development potential, particularly for enhancing the industrial corridor to the north. But without the removal of the Denison Access ramps, the stream relocation and expanded recreational space, it provides little opportunity for environmental, economic, social or other quality of life benefits to the residential neighborhoods.
- **Examine Planned Highway Infrastructure Changes in ODOT Capital Plan.** As of December 2014 no planned changes have been identified by ODOT for this area. However, long term needs for the aging infrastructure should be considered and incorporated into any planning for the area including the timeline for a Ridge Road bridge repairs or reconstruction.

I-71 / Denison Exit Ramp looking west towards Ridge Road bridge

I-71 looking east from Ridge Road bridge

- **Denison Access Removal without Alternative Interchange:** See Concept Plan A
- **Denison Access Removal with New Interchange at Ridge Road:** See Concept Plan B
- **Denison Access Removal with New Interchange at Ridge Road and New Industrial Access Road:** See Concept Plans C-1, 2 & 3

Figure 1: City-Wide Plan



Part 3 The Plan
Chapter 3.2 Development Policies

Figure 7: ***Brooklyn Master Plan: Citywide Plan (2006)***

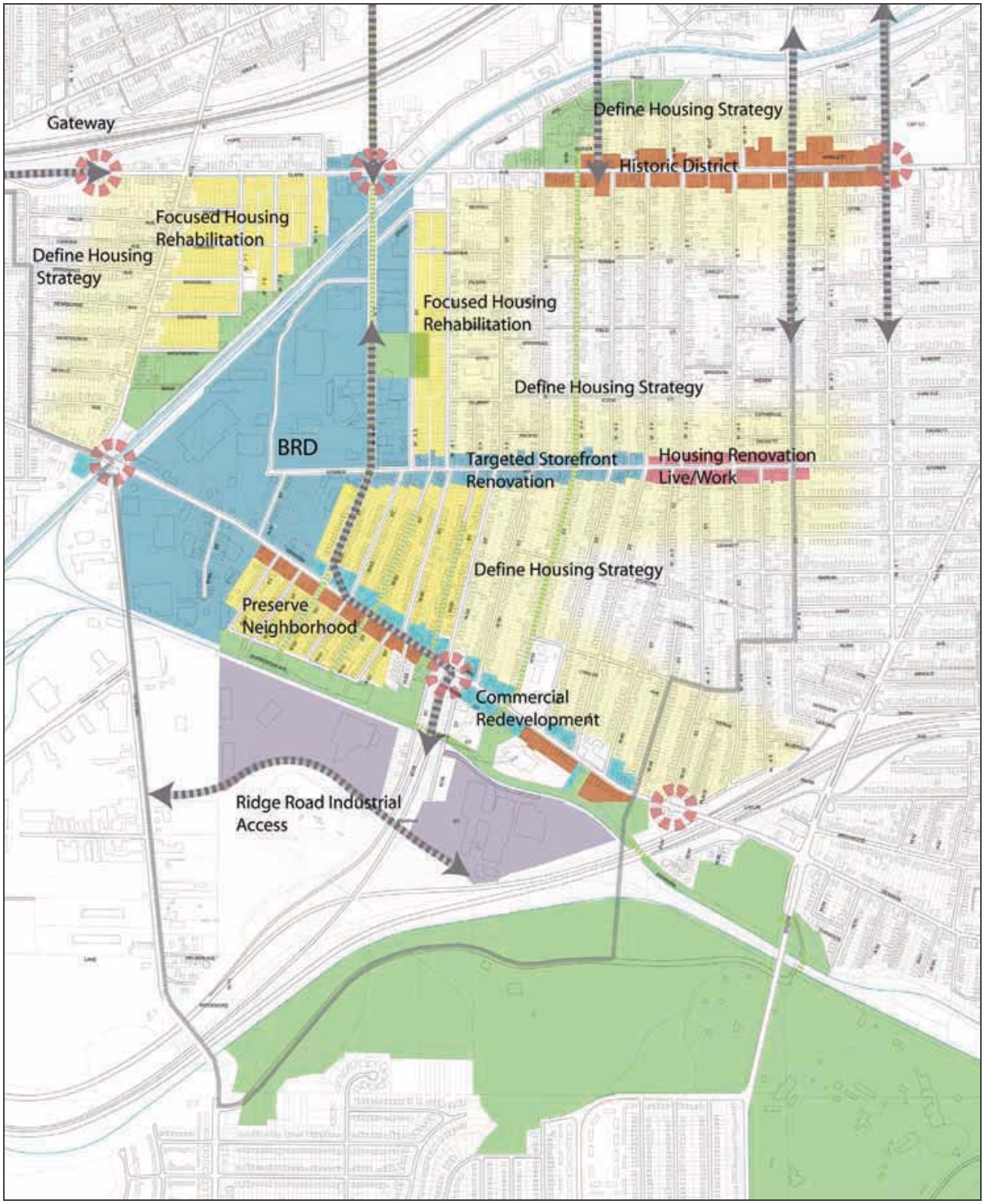


Figure 8: ***Re-envisioning the Stockyard Neighborhood study: Treatment Diagram (2007)***

Economic & Community Development

Numerous strategies exist for economic & community development within the study area, as noted in several plans and studies. Among those examined include:

- **Brooklyn Master Plan** (2006). The plan identifies a number of economic development strategies including preserving and enhancing the city's non-residential tax base; improving the visual aesthetics of the commercial streetscape; and pursuing selective redevelopment opportunities. Additional policies for specific locations are identified. Two locations adjacent to our focus area are discussed here:
  - **Clinton Road Focus Area** (See Figure 9). The plan recommends designating and marketing the area as a formal industrial park and improving truck access to the area so that trucks are not disruptive to surrounding areas. It recommends coordinating with the Stockyards Neighborhood study to explore a connection to the Denison ramps along the NS railroad right-of-way. However, as noted under *Transportation Infrastructure* above, our study recommends giving serious consideration to seeking the abandonment of an active rail line. In addition, access to the existing partial interchange at Denison would provide limited economic gain vs. a full interchange at Ridge Road. The economic development potential for this area, including along Ridge Road in both cities, could prove significant if a full interchange at Ridge Road were realized.
  - **Brooklyn City Center.** The Brooklyn Master Plan recommends creating a focal point for the city in a mixed-use "City Center" along Memphis Avenue where concentrations of civic uses currently exist. The plan wisely recommends complementary and integrated land uses within the focus area, including additional housing. However, housing should not be placed adjacent to riparian areas, as a couple examples in the plan suggests. The plan also encourages infill retail/office development along Ridge Road near Memphis Avenue (See Figure 7). This strategy as well is worth pursuing.

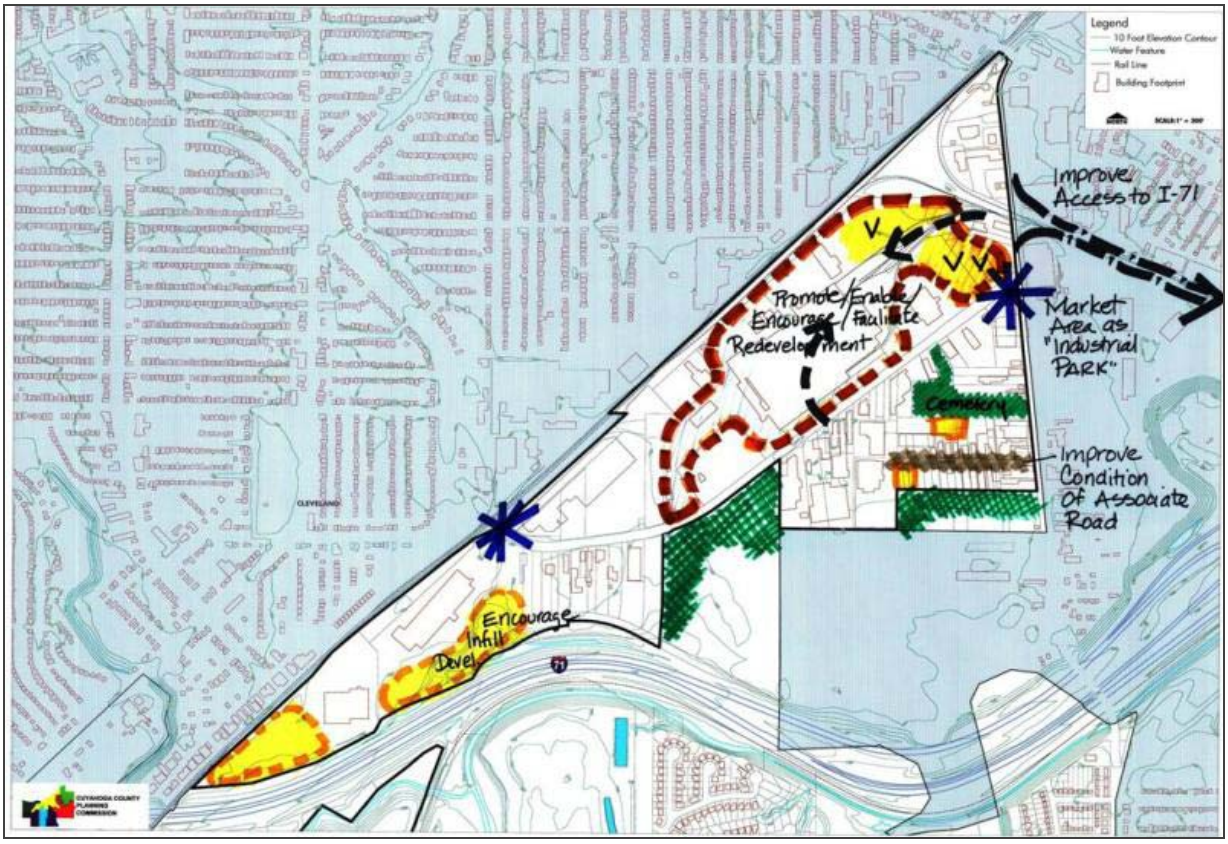


Figure 9: ***Brooklyn Master Plan: Conceptual Overview, Clinton Road Focus Area 1 (2006)***

- **Other development policy areas** include housing/neighborhood; community character and identity; and community facilities. The plan recommends providing safe travel environments in residential areas by creating linkages with existing bike/trail systems to create a regional approach to a connected system. Community survey results indicated that residents have a desire to preserve remaining areas of open space. The plan recommends encouraging property owners to consider conservation easements on those portions of their properties that are key natural areas and recommends the city adopt a riparian setback regulation to preserve and enhance Big Creek.

- **Cleveland 2020 Citywide Plan – Stockyard Neighborhood** (2007). The plan recommends redeveloping infill properties for light industrial uses along Barberton Avenue and east of West 67th Street, between Denison and Storer Avenue. It recommends redeveloping the east side of W. 65th north of Storer as a contemporary light industrial park and establishing a consolidated retail district along the west side of the street. It recommends establishing a Business Revitalization District within the area to ensure appropriate design of buildings, signage and property. For the Denison-Ridge area, the plan recommended the redevelopment of existing retail properties into new light industrial development. Later, this strategy was re-considered. In order to ensure that the area remains a viable residential neighborhood, the plan recommends these and other significant redevelopment efforts are undertaken. Other recommendations include the creation of park and playground facilities located adjacent to densely developed residential areas, and creating a strong north-south connection along West 65th Street with improved landscaping and bike lanes.
- **Re-envisioning the Stockyard Neighborhood Study** (2007). This study makes many of the same recommendations noted in the 2020 Citywide Plan for the West 65th Street area (See Figure 8). It recommends renovating existing retail on Denison and encouraging infill development compatible with existing buildings. However, it inappropriately suggests park space in areas where viable businesses exist, and recommends relocating industrial uses on Barberton Avenue and creating a park there, while establishing a trail along the NS railroad right-of-way. As noted previously, our study finds that the economic potential of the active railroad should be considered more seriously before recommending the abandonment of an active rail line. Another factor to consider however are potential traffic impacts with increased train travel at the Ridge Road rail crossing. Also noted elsewhere in our study, the Stockyard study's Tradex Parkway proposal recommending a Ridge Road Industrial Access Road could provide significant economic development opportunities with a full interchange at Ridge Road.
- **W. 65th Street Corridor Plan** (2013). The plan seeks to improve the range of transportation choices, enhance economic viability and community identity. It recommends excellent intersection and streetscape improvements with on and off-road bike facilities along West 65th Street (See Figure 10). A market analysis for the Southern Industrial Area, along West 65th between Clark and Denison Avenues, found that retail is not supported in the area and recommends redeveloping the area into light industrial (See Figure 11). Our study does not make any land use recommendations for this area but does recommend that, as the concept plans in the Big Creek/I-71 study move forward, an updated master plan for the entire Stockyards neighborhood be considered.
- **Concept Plans A, B & C-1, 2 & 3.** The concept plans in this study could provide significant opportunities in both cities for retention, attraction and investment in the commercial and industrial markets, explained in more detail under each plan description. Among the greatest community assets for neighborhoods in both communities north and south of the Big Creek/I-71 corridor is the Cleveland Metroparks' Brookside and Big Creek Reservations. Expanding and connecting these parks to each other and enhancing their connectivity to the adjacent communities, particularly to the north, could improve the marketability and quality of life within those communities. To better assess

development opportunities with the concept plans, the Big Creek/I-71 study recommends the undertaking of broad ranged marketing and economic impact studies jointly by both cities.

Figure 10: ***W. 65th Street Corridor Plan: Separated all-purpose trail***

Figure 11: ***W. 65th Street Corridor Plan: Southern Industrial Area***

WATERSHED/STREAM RESTORATION

Following are several areas explored in recent years for opportunities to help restore watershed function:

- **Conservation and restoration in Priority Conservation Areas and redevelopment in Priority Development Areas** identified in the Big Creek Watershed Balanced Growth Plan. This "smart growth" watershed plan was adopted by the five primary Big Creek watershed communities including

the cities of Cleveland and Brooklyn in 2010 and was endorsed by the Ohio Lake Erie Commission in 2011. PCA's are locations where land use change is predicted to have a high impact in the watershed in terms of flooding, erosion, and water quality. PDA's are locations where land use changes are predicted to have minimal impact on the watershed and where conditions suggest that additional development may be appropriate (See Figure 12).

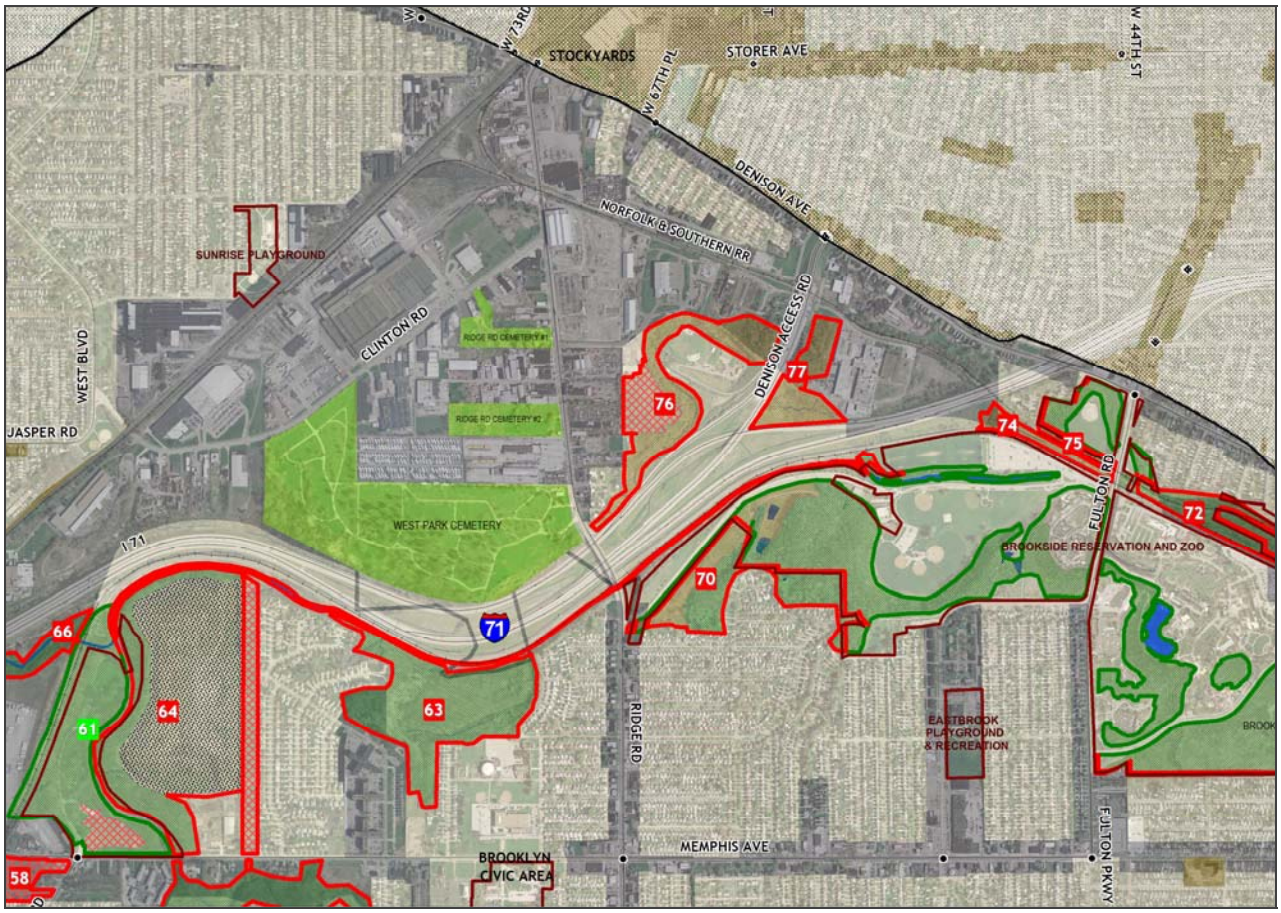


Figure 12: ***Big Creek Watershed Balanced Growth Plan (2010) – Priority Conservation Areas (outlined in red) and Priority Development Areas (dark gray areas) within this study's Focus Area. The northern edge of the Big Creek watershed boundary (black line) runs along Denison Avenue.***

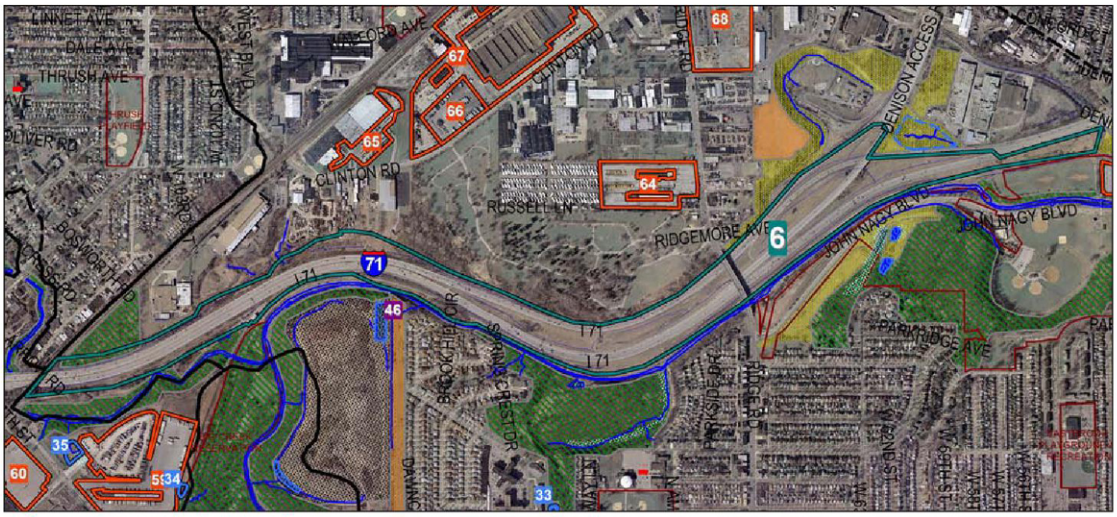
- **Stormwater Retrofits along I-71/Denison Avenue Access land areas**. These areas take up over 30 acres of land that contribute to excessive stormwater run-off. The Big Creek Watershed Balanced Growth Plan identified Storage at Highway Interchanges as one of several stormwater retrofit areas best suited to restore watershed function in urbanized areas. "Highways often contain open and under-utilized land within their right-of-way where stormwater storage can be obtained by diverting highway runoff into these areas. The most common stormwater treatment options for highway retrofits are constructed wetlands or linear bioretention and swales along wider medians and rights-of way." The plan identified the I-71 & Denison Access area as the largest of 6 highway areas within the 38 square mile watershed, and among the best candidate for retrofit practices (See Figure 13).

Big Creek

Priority Conservation / Restoration / Retrofits

Storage at Highway Interchanges

Stormwater Retrofit – New Storage Below Outfalls – EXAMPLE #3



HIGHWAY MEDIAN AND INTERCHANGE #6 AT I-71 & DENISON ACCESS

Site #6 in the city of Cleveland and Brooklyn and the Lower Big Creek subwatershed. The lower basin contains approximately 41% impervious coverage and could greatly benefit from stormwater retrofits. The I-71 and Denison areas includes large interchanges, medians and highway buffers.

Stormwater storage and improved water quality can be obtained by diverting highway runoff into these areas. Creating wetland detention basins or other best management practice could help to increase the stormwater capacity in the Lower subwatershed and potentially begin to address nearby stormwater flooding and erosion problems identified the RIDE study.

Strategies for implementation would be best pursued through multi-stakeholder cooperation and integrating this project into a larger municipal or state construction project. Also, explore directing compensatory wetland or stream mitigation that ODOT may be required to conduct in the future.

74 Big Creek Watershed Plan

Figure 13: ***Big Creek Watershed Balanced Growth Plan – from p. 74: Storage at Highway Interchanges***

- **Wetland Enhancement/Expansion or Stream Diversion into Brooklyn Oxbow** (See PCA #63 in figure 12). During the Balanced Growth and Greenway planning processes, Big Creek Connects examined the feasibility of routing the stream, or part of its flow, into this Priority Conservation Area. Greenway Plan consultants noted the value in the existing wetland area within the Oxbow. The volume of contaminated fill dirt in the western part of the oxbow area was found to be significant. The wetland area in eastern section could be enhanced and its storage capacity from storm sewer outfalls could be increased. The stream could also be allowed to continue working its way into Oxbow area, creating additional storage from upstream flow. In development of alternatives in this study, BCC found little gain in directing the entire stream into Oxbow area due to constraints in topography and the fact that it would still need to exit into the concrete channel. If the stream was to be relocated out of the channel upstream from the Oxbow however, the area could still be used for overflow storage, as it is now, via a control structure and storm drainage placed along the base of the channel.

- **Stream Restoration along Big Creek above and below drop structure in Brookside Reservation.** Public, nonprofit and private consultants met in 2008 to discuss stream restoration alternatives below the drop structure. The team examined building up the stream elevation downstream and the rerouting of the stream into the south oxbow. In October 2012 BCC re-examined restoration alternatives for the drop structure with NEORSD and Cuyahoga SWCD specialists. These included cutting the streambed back from the drop structure and adding floodplain between the drop structure and Ridge Road. It was determined that build-up of the creek downstream would require more land than presently available to be effective. The channel cut-back could be explored further but may be questionable when considering cost/benefit analysis. Additional studies have been undertaken by Cleveland Metroparks and others to address flooding and erosion (See References). A recent attempt to shore up the right bank below the drop structure has not been successful due to the velocity of the stream flow. Until a long term solution can be found, the left bank below the drop structure may need to be temporarily re-armored to prevent further erosion below the railroad bed.
- **Stream Diversion into Brookside South Oxbow.** There may be a desire to further explore routing the creek into the former streambed south of the existing ball diamonds in Brookside Reservation as part of the concepts developed in this document to add stream length, lessen stream gradient & add storage capacity. Preliminary cost/benefit analysis however, finds a low return in environmental benefit versus additional costs in construction, maintenance, and potential loss of land for other beneficial uses including potential Zoo expansion needs.
- **Storage in Cleveland North Oxbow** (Cleveland Police Firing Range area). If not modified to accept the creek's relocation, this oxbow could act as a flood water storage area for sewer outfalls from Ridge Road north of the valley by intercepting them before continuing on to Big Creek (one via an outfall above drop structure and one immediately below it) For *any* alternative uses, it will need to be determined whether the city is willing to consider relocating the firing range. Recent conversations with Cleveland Police personnel have revealed that there has been interest in an indoor firing range somewhere in place of the existing outdoor site. The concept plans in this study envision the relocation of the creek along the perimeter of this area with recreational use within. However, a larger part of the area could instead be used as floodplain or wetland to increase storage capacity. Also to note for any alternative uses, is that environmental cleanup costs from long term firing range discharges may prove challenging.
- **Routing Creek into North Oxbow without removing access ramps** or relocating southbound highway lanes, and enabling stream to re-enter below the drop structure. This alternative would remove the stream from the concrete channel and eliminate many of its related problems. It may be possible to engineer if there is enough room between the southbound lanes and the slope to the north or by moving the lanes southward slightly. It may still require the relocation of the police firing range, however. The access ramps would need to be modified to allow the creek to pass under. And, two sets of highway and railroad bridges would need to be constructed. Considering the financial costs involved without enabling the expansion of and increased connections to the park system, and the related economic and community impacts identified in Concept Plans A, B or C below, this alternative does not seem feasible.
- **Routing Creek into North Oxbow by removing access ramps,** relocating southbound highway lanes and re-entering stream below drop structure: See Concept Plans A, B & C.
- **Implement Stormwater Control Measures throughout the Big Creek watershed.** SCMs, both structural and nonstructural, will need to increase in order to reduce pollutant loads, moderate the variation and intensity of flow regimes, and maintain aquatic habitat in the stream channel.

Cleveland Police Firing Range - North Oxbow area, looking northwest

Recreational Space

- **Support the Cleveland Metroparks 2020 Plan.** The plan examines existing conditions and lists recommendations for improvement for the Brookside and Big Creek Reservations. The Brookside Reservation/Cleveland Metroparks Zoo Concept Plan seeks to "Enhance and integrate roles as a local community open space and a regional destination; increase connectivity to Big Creek and Ohio & Erie Canal [Reservations]" The plan recognizes and supports the implementation of the Lower Big Creek and Brooklyn Greenway Plans as well as stormwater management practices beyond the park system. (See Appendix F)
- **Explore options that provide new opportunities to address park system's challenges.** The cities and other stakeholders could help Cleveland Metroparks better address flooding, erosion and site constraint challenges in the Brookside and Big Creek Reservations and the Zoo by exploring alternative stream restoration practices and land uses suggested in this document including concept plans A, B and C. These include opening up over 50 acres of underutilized land north of I-71 to public use with the potential of expanding or re-locating Brookside Reservation facilities into the area.

Neighborhood Connections

- **Support the Implementation of the Lower Big Creek Greenway Redevelopment and Restoration Plan.** The 2008 plan is a comprehensive master plan and land use strategy for the Lower Big Creek Valley Greenway. Project partners are focusing efforts on land reuse and trail connections between Pearl Road and Jennings Avenue (See Overall Map in Appendix E) In addition to the trail alignments proposed in this study for Brookside Reservation, a re-examination of a trail east of Brookside between the Zoo and the CSX railroad should be considered, keeping the main trail along the valley floor.

- **Support the Implementation of the Big Creek (Brooklyn) Greenway Trail Alignment & Neighborhood Connector Plan.** This plan, completed in 2009, builds on the work of the Lower Big Creek plan by creating a continuous greenway and trail system linking the Brookside and Big Creek Reservations through the city of Brooklyn and enhancing connections to the surrounding neighborhoods. (See Overall Master Plan in Appendix E)
- **Address Gaps in Connections between both Plans and to adjacent Neighborhoods.** Significant challenges exist in making connections from neighborhoods north of Brookside Reservation west of Fulton Road. And, due to sections of steep topography along the stream's corridor and its proximity to a railroad line, the Brooklyn Greenway plan was forced to utilize the street network within the city to make connections between the Brookside and Big Creek Reservations. Options for addressing these challenges are limited without considering significant changes to the infrastructure that bisects the valley. The concept plans in this study seek to address these challenges.

Big Creek corridor looking west from Ridge Road showing steep slope on left and CSX railroad on right

COMBINED TRANSPORTATION, DEVELOPMENT, RESTORATION, RECREATION AND NEIGHBORHOOD CONNECTION OPPORTUNITIES

CONCEPT PLANS A, B & C-1, 2 & 3

The Denison Avenue access ramp and over one mile of concrete channel of the creek would not have been constructed if the proposed "Parma Freeway" running north/south through the area was not planned for several decades ago (See Figure 3). The freeway never materialized, thus the ramp's continued existence is hard to justify when looking at opportunities its removal could present (See Figure 14: *Existing Conditions*). The concept plans in this document propose the decommissioning and removal of the multi-lane ramps and relocating the freeway's southbound lanes adjacent to its northbound lanes. Combined with relocating the police firing range, over 50 acres of underutilized land could be opened up to potential environmental remediation and recreational use. (See concept plans below)

Each concept plan proposes constructing two sets of short bridges to allow Big Creek to leave its one mile plus concrete channel and meander north under the railroad and highway into its original stream bed. The stream would then bridge back under the freeway and railroad and re-connect with its existing stream bed in Brookside Reservation, just down-stream from the existing 26' high drop structure.

Concept Plan A envisions the removal of most of the Denison Avenue Access Ramps without a new interchange at an alternative location (See Figure 15). Concept Plans B & C add a new interchange at Ridge Road. Due to the amount of fill dirt in the area, creating additional floodplain or wetland area could be problematic. The fill material was created during I-71's construction as the land area above the stream's meander was cut and leveled. The concept plans envision:

- Land usage:
  - 10 acres stream/floodplain/wetlands (not including Brooklyn Oxbow area)
  - 25 acres recreational space
  - 3 acres parking (+-300 cars)
  - 12 acres roadways/fill area
- Stream length:
  - Existing concrete channel portion of creek = 5800 lf.
  - New alignment will bypass drop structure, naturalize the stream and add 2093 linear feet (36%) to its length
- Stream gradient:
  - Existing concrete channel: 35 ft per 5800 lf = 0.60%
  - New alignment: 60 ft per 7893 lf = 0.76%

The abandonment of the armored channel of Big Creek would address a number of erosion, flooding and water quality problems for the stream. In addition, it could realize early 20th century plans linking the Brookside and Big Creek Reservations by placing storm pipe along the bottom of the abandoned channel to accept outfalls and run-off along its length, adding fill material, and locating a greenway and all-purpose trail above. Public access to the Cleveland Metroparks could be opened up to numerous Cleveland residents with a new city park or Brookside Reservation entrance at Denison Avenue by modifying part of the abandoned freeway ramp with a roadway and all-purpose trail leading into the valley. A neighborhood connector trail to the West Boulevard neighborhood could also be realized. A relocated and naturalized stream could re-create a wildlife corridor, support aquatic habitat and allow fish passage upstream from

Brookside Reservation into the Big Creek Reservation in Parma/Parma Heights and other areas. Numerous opportunities for interpretive signage would exist for the natural landscape, the surrounding communities and industry in the area. The concept plans envision:

- New all-purpose trails: over 5 miles
- New access roads/parkway: 1.5 miles

Taken together, these changes could significantly alter the neighborhood character, housing value and quality of life in the Stockyards and adjacent neighborhoods. These changes could in turn have a positive effect on neighborhoods south of the valley including Cleveland's Old Brooklyn neighborhood and neighborhoods in the city of Brooklyn. Additionally, new opportunities for westward expansion could open up for Cleveland Metroparks Zoo.

> A primary question to address if further study moves forward, is if an alternative like Concept Plan A would have economic, community and environmental benefits over costs without a new interchange in an alternative location. The loss of the Denison Access Interchange without a viable alternative could have significant negative impacts for industrial and commercial enterprises in the area.

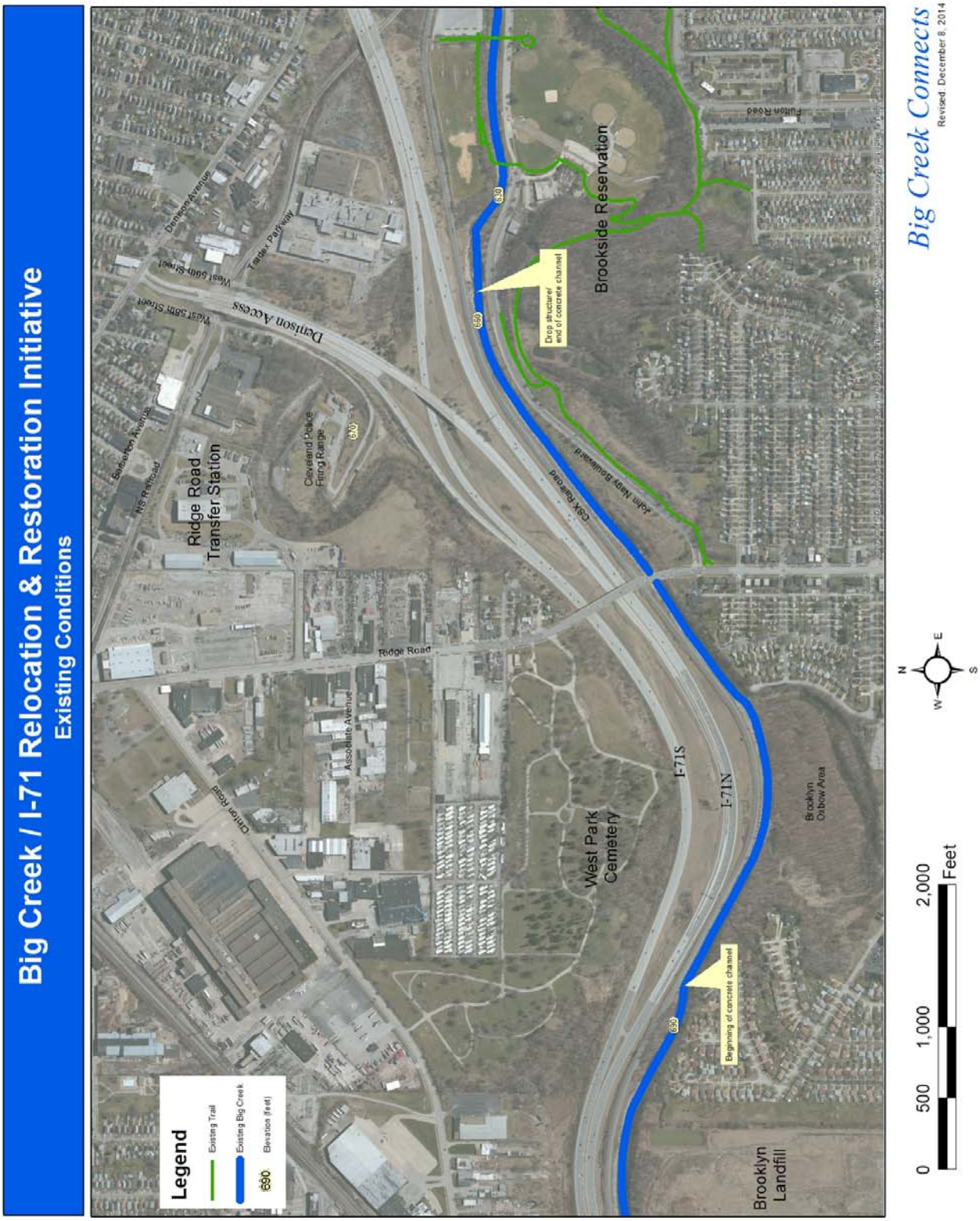


Figure 14: ***Existing Conditions***

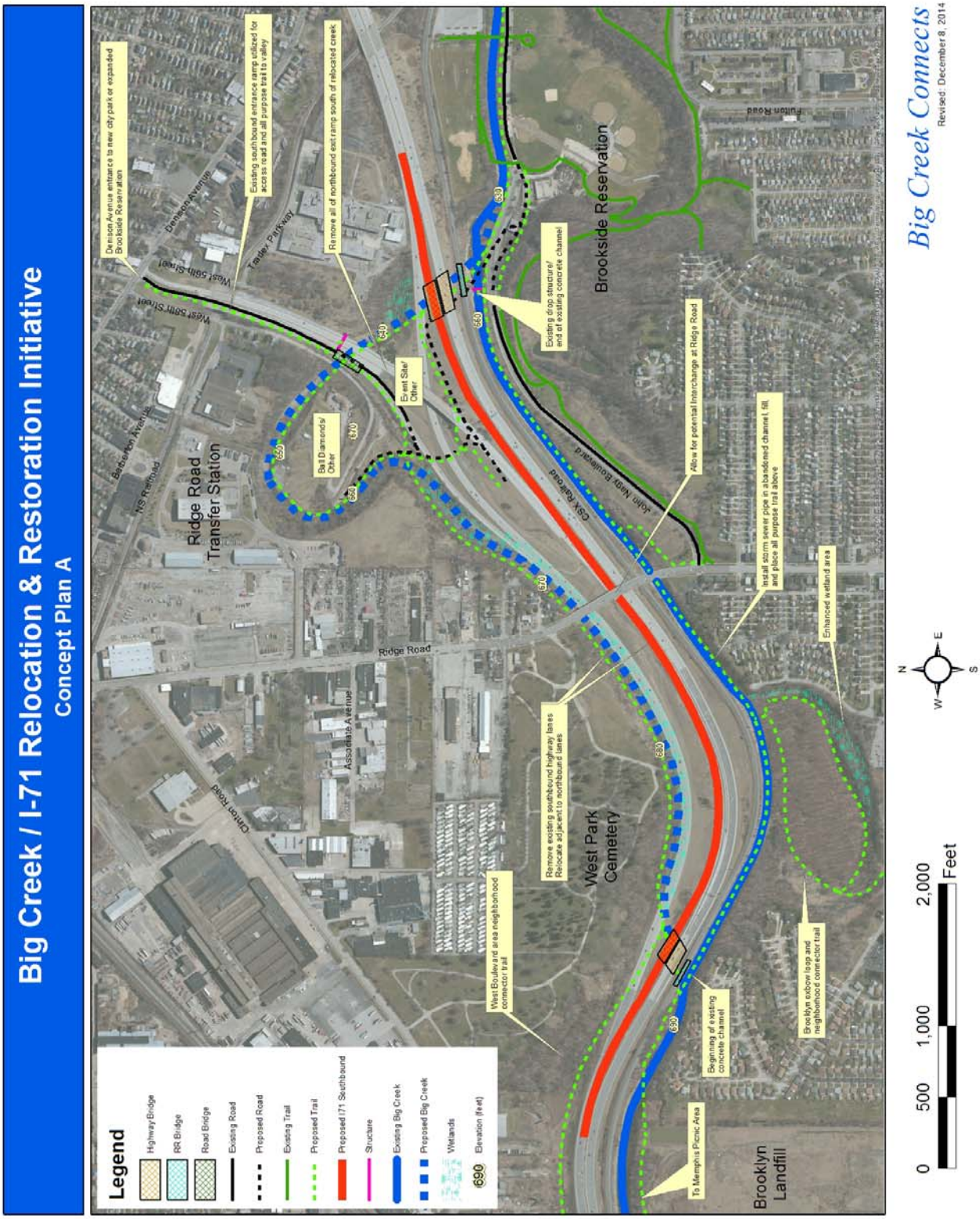


Figure 15: ***Concept Plan A***

CONCEPT PLAN B

In addition to the features contained in concept Plan A, Concept Plan B envisions a full interchange at Ridge Road (See Figure 16). An interchange at this location would provide a break in the 3.6 mile I-71 highway corridor that exists in this highly urbanized area. It could help address issues related to urban sprawl and redirect investment and employment into this urban core.

A full interchange at Ridge Road could offer significant opportunities in economic development, as both cities are interested in enhancing or expanding light industry in the Clinton/Ridge/Denison areas, north of the potential interchange. For both cities, industrial land use and traffic could be concentrated along these and adjacent streets as envisioned in various Cleveland and Brooklyn plans. A full interchange there could direct industrial activities away from residential neighborhoods and environmentally sensitive areas in both cities.

The interchange could also divert truck traffic from using Ridge Road to reach I-480 by instead using I-71 south to reach I-480 west, or using I-71 north to I-176 south to reach I-480 east. Using these alternate routes would be to the advantage of truck drivers by eliminating traffic stops en route to reaching these destinations (See Figure 1: *Study and Focus Areas* map).

An access road from Barberton Avenue westward should be re-explored, connecting its industry towards Ridge Road, diverting truck traffic away from the residential areas and more directly to the new interchange. First however, the desire for industrial development vs. park space along the Norfolk Southern rail line running parallel to Barberton Avenue should be determined. A new access road from Tradex Parkway to Ridge Road also proposed in the Re-envisioning the Stockyard Neighborhood study should also be re-examined. Further details about these options are discussed under *Potential Alternatives to Transportation Infrastructure* and in the C concept descriptions below.

The *West 65th Street Corridor Plan* recommended re-developing the abandoned buildings and existing retail along West 65th and West 67th Streets between Clark and Denison Avenues into light industrial (See Figure 11). The plan also recommended a realigned West 67th Street to Denison Avenue. This alignment should be further explored as should continuing this, or another alignment south of Denison Avenue to meet with a Barberton Avenue access road, if it were to be realized. An extension of Storer Avenue further westward, connecting more directly with Ridge Road should also be re-examined.

South of the interchange, opportunities exist to strengthen the retail and commercial markets along both Ridge Road and Memphis Avenue in both cities.

Through a combination of these changes, Ridge Road, Denison and Memphis Avenues and other streets could more easily be developed into compact, mixed use, pedestrian, bicycle and transit friendly "complete and green streets".

Concept Plan B is a sustainable, livable and smart growth approach to community design. It has the potential to address a number of transportation, economic, community and environmental challenges that would be difficult to address using any number of other existing or proposed plans alone or in combination.

> Perhaps the largest question to be addressed in considering a full interchange at Ridge Road, whether as part of Concept Plan B or as part of other alternatives, would be if any negative impacts, such as an increase in traffic volume, were worth any gains in economic, social or environmental benefits. Not knowing those potential impacts for certain however, may help justify the need for further study.

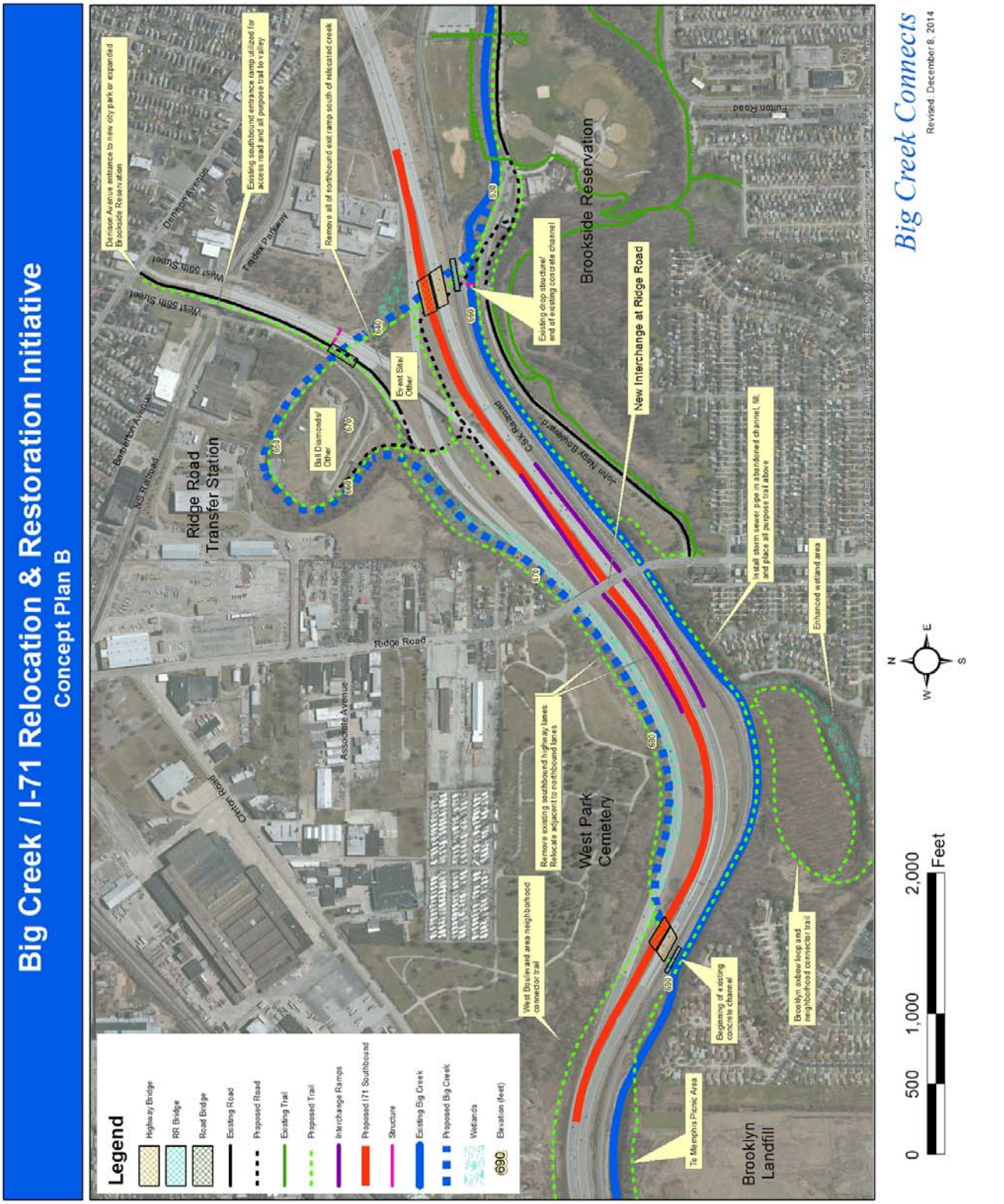


Figure 16: ***Concept Plan B***

CONCEPT PLANS C-1, 2 & 3

In addition to the features contained in concept Plan A, and a full interchange at Ridge Road proposed in concept B, the three C concepts envision an industrial/commercial connector road from West 58th Street to Ridge Road. Although a full interchange may be more favorable than a partial interchange, concerns were raised that the loss of the I-71 Denison Access may cause a burden to industrial and commercial activity currently dependent on it.

The additional distance to reach a new interchange at Ridge Road via Denison Avenue for southbound travel could be significant for industry located in the Denison Access area. Additional truck traffic on Denison would be undesirable, as would the extra traffic lights trucks would have to contend with. Therefore, various options for more direct access to a full interchange at Ridge Road were explored. Among those explored were ways in which to connect West 58th to Barberton Avenue and Barberton to Ridge Road. The most favorable option however, is based on an access road originally proposed in the Re-envisioning the Stockyard Neighborhood study noted earlier. In addition to improving access, this "industrial parkway" could act as a catalyst for additional industrial land use development.

The road would traverse along the ridge above the north oxbow from West 58th Street to the Ridge Road [Waste] Transfer Station. The road network within the Transfer Station property would be modified to share traffic with this new roadway. Three options are proposed that then connect this roadway with West 58th and West 56th streets.

Concept Plan C-1 proposes to make the connection to the new industrial access road with West 58th Street only. It assumes that traffic from West 56th Street will use Denison Avenue to reach West 58th Street and the new industrial access road (See Figure 17). Although this is the least costly solution, this concept would continue to force truck traffic from West 56th Street onto Denison Avenue.

Concept Plan C-2 proposes that West 56th Street be extended south, then across the modified access ramp, where the grades are level with each other, to connect with West 58th Street and the new industrial access road (See Figure 18). This option was proposed in the Re-envisioning the Stockyard Neighborhood study. It would reduce truck traffic from having to traverse Denison Avenue to reach West 58th. However, crossing the access ramp at grade, mixing truck traffic with the road and recreational trail leading into the valley, may be undesirable.

Concept Plan C-3 proposes re-building the Denison Access bridge over the Norfolk-Southern Railroad to accommodate an extension of Tradex Parkway, connecting West 56th Street with West 58th Street (See Figure 19). Although the most costly alternative, this option would provide a direct connection between these streets while maintaining a grade separation between industry and recreational users. Following the Tradex Parkway alignment, south of the NS rail line would allow ingress and egress from businesses there that are currently cut off by any train traffic.

The industrial access road should be considered as a first step in a phasing strategy for any of the concepts, if ultimately implemented. To minimize impacts to those dependent on the Denison Access ramps, the full interchange should be built next, followed by the decommissioning of the ramps.

Finally, considering its potential economic impact and its improvement in access to the area, the industrial access road should be considered for construction based on its own merits, whether or not any of the other concepts are ever realized.

West 58th Street looking south. Denison Access ramp is on the left.

Denison Access ramp over NS railway, looking west. Tradex Parkway is to the left.

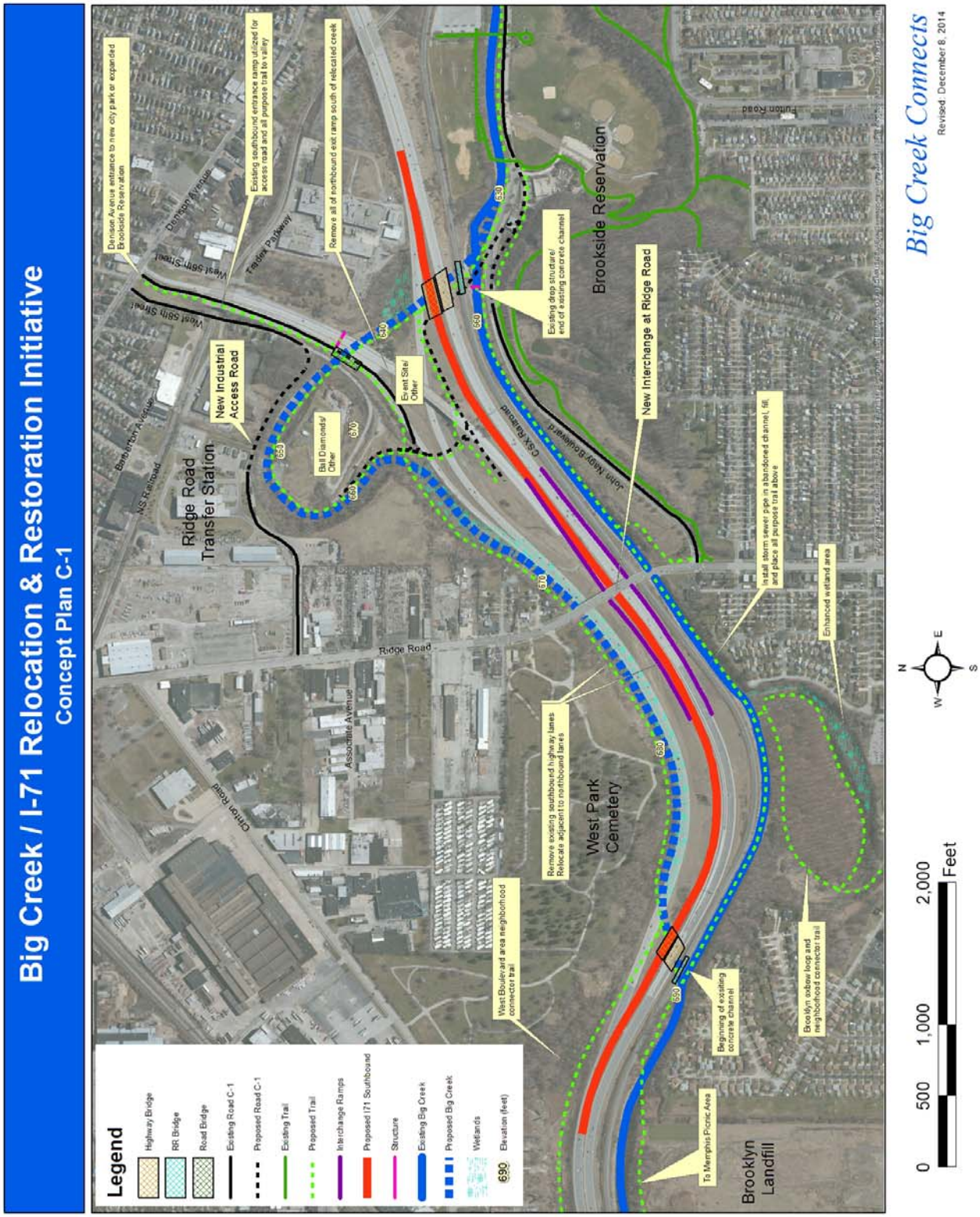


Figure 17: *Concept Plan C-1*

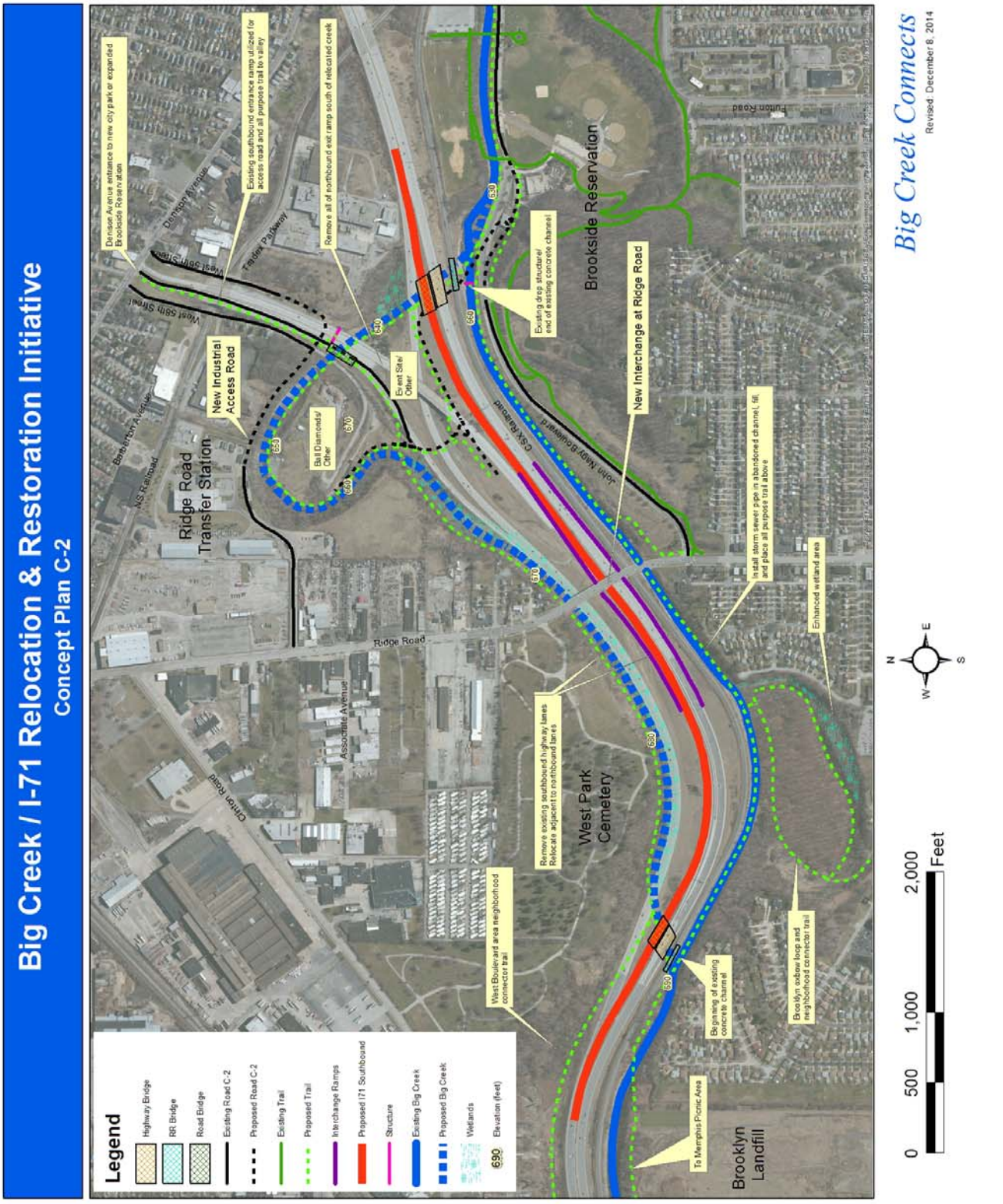


Figure 18: ***Concept Plan C-2***

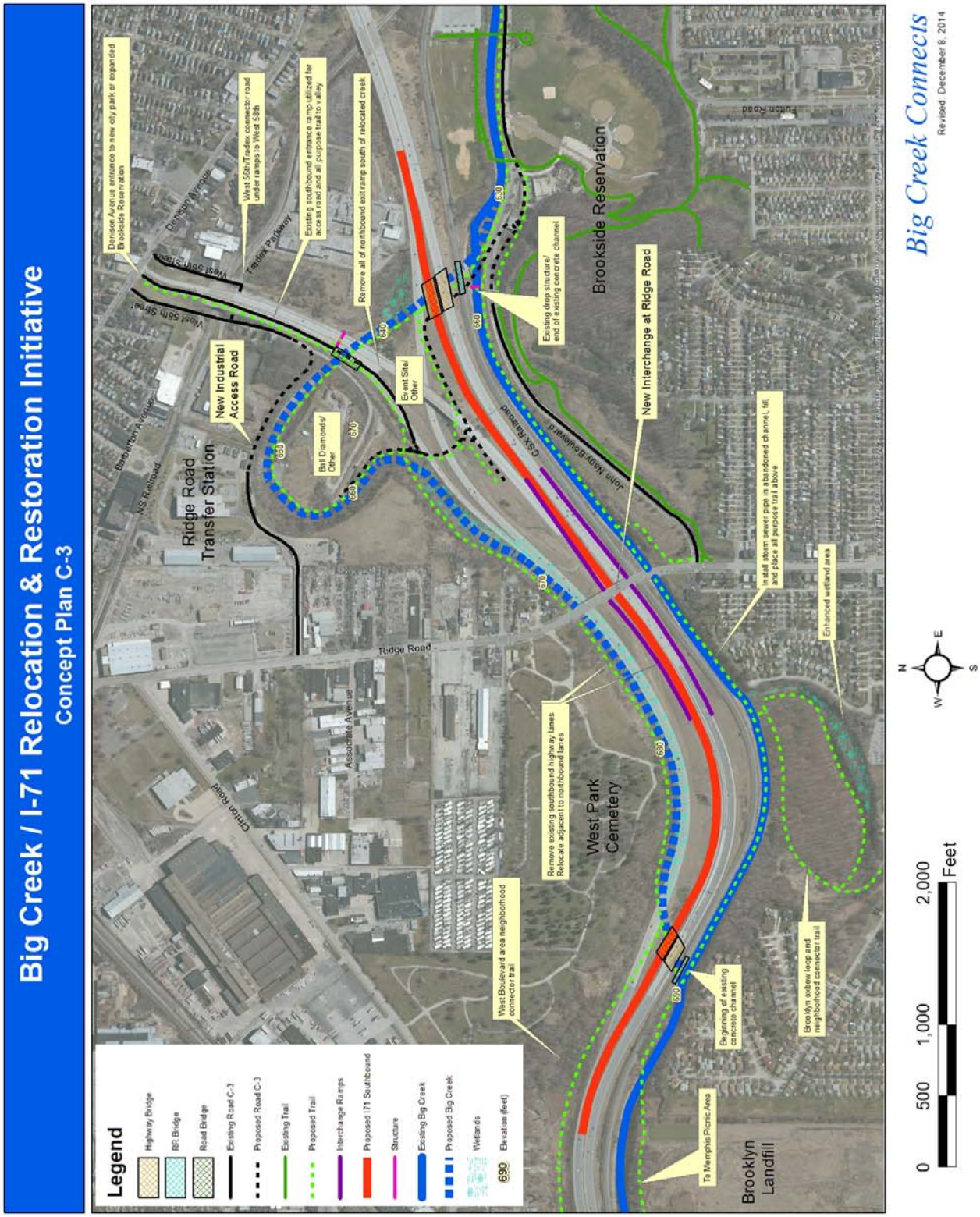


Figure 19: ***Concept Plan C-3***

After weighing the potential alternatives, the following considerations and factors were taken into account that shaped the stream, highway, road, trail alignment and land uses chosen in the concept plans.

Stream Alignment:

The stream's alignment prior to I-71's construction was examined so as to mimic the natural topography in the proposed alignment. Due to the number of crossings under the existing freeway and railroad alignments that would result by following the entire historic alignment, a route was designed that would follow as much of this alignment as possible with minimal crossings. (See 1937 vs. 2006 Stream/Highway Alignments in Appendix G)

Near the upstream end of the concrete channel the concept plans propose diverting the stream along its historic alignment, crossing under the railroad and freeway to the north. After making the crossing, for the next 2000 feet or more the stream would follow a small percentage of its historic alignment, where it had traversed north and south five times before entering the "north oxbow" area where the Cleveland Police Firing Range currently exists. From approximately halfway between the Ridge Road bridge and the beginning of the north oxbow, through the remainder of the proposed alignment, the stream follows most of its historic alignment. Only at its crossing under I-71 and the railroad does it align slightly to the west. This deviation is due to the need to construct the highway bridges further westward without impeding the operation of the existing freeway lanes.

After examining historic topographic maps, it was estimated that ¼ of the proposed channel alignment would consist of shale vs. softer earth or fill material that was deposited during I-71's construction. Cost differences in excavation for these differing materials were later calculated with shale removal ranging between three to four times the cost of loose fill or soil removal. Most of the elevations noted along the proposed stream alignment downstream from Ridge Road are close to the existing numbers. The concept plans depict floodplain and wetlands adjacent to the stream along much of its length. However, the cost estimates do not figure for the extra soil or shale removal, if they were to be constructed.

As noted earlier in this study, the concept plans propose installing storm sewer pipe in the abandoned concrete lined stream channel to accept stormwater outfalls and surface runoff along its length before filling and placing an all purpose trail above. Alternative designs were considered such as leaving the channel open with a narrower stream width. However, due to the depth variation to adjacent land uses, such a channel would be extremely steep sloped, pose another set of maintenance and erosion issues and limit space for public access. Opening the channel just prior to the drop structure was also considered. Again, maintenance, public access and perhaps more importantly, safety issues weighed heavily towards it remaining culverted. As a trade-off, a fully restored, naturalized stream with fish passage and public access along its length can be realized.

Highway/Railroad Alignments:

With the removal of the Denison Access ramps, the southbound highway alignment is placed adjacent to the northbound lanes, streamlining the system, saving maintenance costs and opening up underutilized land for other purposes. Two pairs of bridges are proposed where the stream passes under the north and southbound lanes. After excavating for the new stream alignment, it is assumed bridges would be built for the southbound lanes adjacent to the northbound lanes. Here, northbound traffic would be diverted while excavation continues and two bridges for the northbound lanes are built. The railroad would also assume a temporary alignment north of its existing alignment while excavating and building its pair of bridges.

The concept plans propose leaving much of the Denison Access ramps in place and utilizing the southbound highway entrance for a new roadway and trail network into the valley. Utilizing West 58th Street for access into the valley was also considered, as it is currently used to access the Cleveland Police Firing Range. However, several factors were considered that weighed in favor of using the highway access ramp instead. First, access into the area using West 58th would require crossing the NS Railroad at-grade, interfering with commercial traffic and posing safety issues for the public. Second, leaving most of the access ramps in place eliminates the need for extra costs in earth removal where the ramps were built above the surrounding land. Finally, this land area could help define and bring in closer to the neighborhood the new greenway and park system. From Denison Avenue south to the new stream alignment this 1500' "High Line" could offer a commanding view of the surrounding industry and, at its southern end, a scenic overlook before descending into the valley.

The Ridge Road interchange proposed in the B and C concepts is a tight diamond interchange, minimizing the amount of land needed for its footprint. Cost estimates were calculated building a new Ridge Road bridge, however cost savings in the modification of the existing bridge could be further considered as study progresses. During the development process of this study and concept plans, ongoing discussions and meetings occurred with ODOT representatives to examine various aspects of the proposals. Although initial discussions with CSX and NS railroad representatives were made, these representatives did not follow up with any comments after they received study and concept plan drafts. They did provide contact information however, should planning progress further.

ROADWAYS:

The road network for each concept was designed with the goal of providing access into the valley from Denison Avenue and connecting with John Nagy Boulevard in Brookside Reservation. As noted, the southbound entrance ramp from Denison Avenue is proposed to be used for the roadway to and from the valley. An all purpose trail is proposed adjacent to it. The bridges along I-71 and the CSX railroad were conceived to allow space below them for both a road and trail in addition to the stream.

Where the road and trail enter the existing Brookside Reservation, just downstream from the drop structure, the elevation difference from under the bridges to the existing grade proposes that John Nagy Boulevard be relocated further south to allow for a gradual ascent. This may require that the existing maintenance facilities owned by the city of Cleveland may need to be relocated, as they would lie within the proposed road re-alignment.

The C concepts show three alternatives to providing improved east-west industrial access to a full interchange at Ridge Road. All three envision an access road connecting with a modified road network in the City of Cleveland's Ridge Road Transfer Station. The proposed road extension would traverse across the southern edge of an industrial property to reach West 58th Street. Although this proposal was discussed with, and a study draft and concept plans were given to the property owner, to date no feedback has been received. If a property transfer or easement cannot be negotiated along this parcel, alternative alignments north of the property should be further explored. Further design considerations about each C concept are discussed under their descriptions above.

Brookside Entrance at Ridge Road. Similar treatment is proposed for the Denison Access ramp.

Brookside looking east from drop structure area with proposed trail alignment to the right

Recreational Trails:

Broadly speaking, the trail network proposed in these concept plans reflect alignments proposed in earlier studies. (See Appendix E: Greenway/Trail Plans) This study did not attempt to provide great detail about trail locations so early in the planning process. But allowing continuous access along the proposed stream alignment, joining the two Metroparks Reservations in the most direct manner and providing connections to the surrounding neighborhoods should be priorities. It is recommended that the trails serve as multi-purpose trails and be ADA accessible. Similar to Cleveland Metroparks' existing design standards, they should be a minimum of 10 feet in width and able to support emergency vehicles.

Other Land Uses:

As noted earlier, the concept plans envision the existing ball diamonds in Brookside Reservation to be relocated into the north oxbow. Likewise, the current event site is proposed to be relocated just north of I-71, where the access road into the valley makes a large loop. The concept plans do not suggest specific land uses west of the proposed event site, as it could be used for additional recreational space, re-forested, built as a wetland area, or used for other purposes. Except adjacent to the re-located ball diamonds, parking locations were not identified in the concept plans. It should be noted that these land uses are suggestions only, and that a thorough planning process with public input will need to be performed before any land use designations; highway, bridge, road and trail alignments; or other design elements are ultimately decided (See graphic renderings: Figures 20-23). Most of the properties where land use changes are proposed are publicly owned. Only a few commercial properties may be directly impacted, while no residential properties would be.

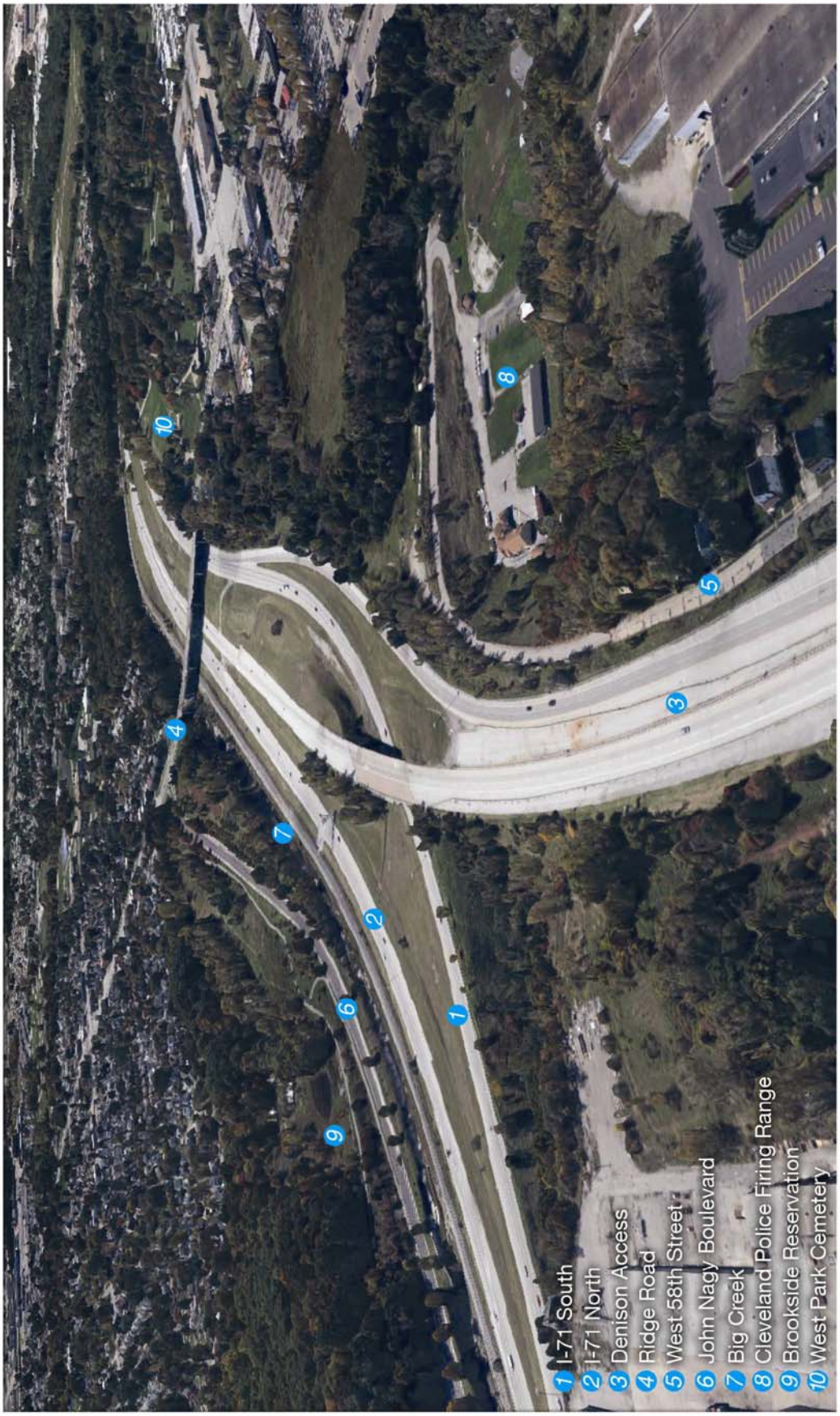


Figure 20: ***Southwest Aerial rendering –Existing***

Figure 21: ***Southwest Aerial rendering – Concept Plan B***

Figure 22: ***Brookside Ground Level rendering – Existing***

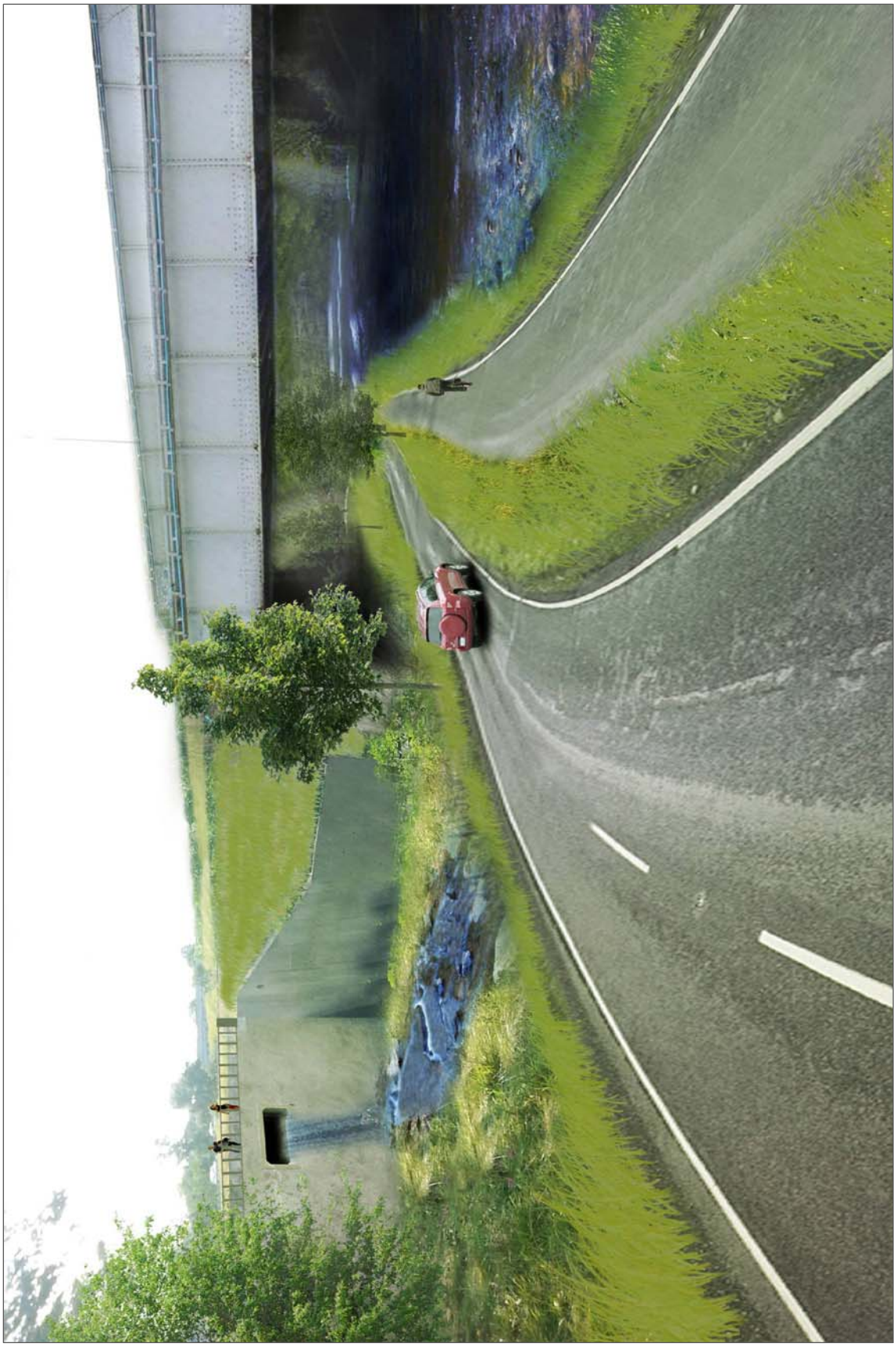


Figure 23: ***Brookside Ground Level rendering – Proposed***

Big Creek Connects estimated land, stream, highway, roadway and trail data based on the conceptual designs that it developed. These figures were further defined and cost estimates were calculated by one of the private consulting firms providing pro-bono services for this study. The firm requested to remain anonymous for this service so as not to jeopardize their eligibility to bid on future phases of study. The costs were calculated using the *Ohio Department of Transportation's Procedure for Budget Estimating - May 2013.*

A contingency of 30% was figured into the costs. However, the calculations do not consider potential land acquisition, environmental remediation, wetland construction, facility re-location or landscaping costs. The total budget for each concept ranges from $83,130,000 for Concept A to $115,900,000 for Concept C-3. Table 1 lists a summary of costs for each concept plan. For detailed calculations of costs for Concept C-3, see Appendix H.

Concept Plan:	A	B	C-1	C-2	C-3
Stream Relocation:	12,600,000	12,600,000	12,600,000	12,600,000	12,600,000
I-71/Denison/Ridge Reconstruction:					
Removals:	1,540,000	2,540,000	2,540,000	2,540,000	2,540,000
I-71 Reconstruction:	9,640,000	9,640,000	9,640,000	9,640,000	9,640,000
Bridges:	21,250,000	21,250,000	21,250,000	21,250,000	24,920,000
I-71/Ridge Interchange:		15,500,000	15,500,000	15,500,000	15,500,000
Access Drives:	835,000	835,000	1,241,000	1,245,000	1,335,000
Fill Existing Stream Channel:	3,915,000	3,915,000	3,915,000	3,915,000	3,915,000
All Trails:	2,550,000	2,550,000	2,550,000	2,550,000	2,550,000
Subtotal:	52,330,000	68,830,000	69,236,000	69,240,000	73,000,000
Contingency (30%):	15,700,000	20,650,000	20,700,000	20,780,000	21,900,000
Subtotal:	68,030,000	89,480,000	89,936,000	90,020,000	94,900,000
Planning, Environmental, and Engineering (15%):	10,300,000	13,500,000	13,500,000	13,600,000	14,300,000
Construction Admin and Inspection (7%):	4,800,000	6,300,000	6,300,000	6,400,000	6,700,000
Total Budget:	83,130,000	109,280,000	109,736,000	110,020,000	115,900,000

Table 1: ***Summary of Costs***

ESTABLISHING PARTNERSHIPS/COMMUNITY ENGAGEMENT

Big Creek Connects, through the development and implementation of the Big Creek Watershed Balanced Growth Plan and the Big Creek Greenway Plans, has taken the lead in the Big Creek/I-71 Initiative by engaging stakeholders, gathering data, defining the problems and developing potential alternatives. This first phase of study is scheduled for completion by March 31, 2015.

It had been determined that, upon completion of this first phase of study, a stronger role by the cities of Brooklyn and Cleveland and other stakeholders will be required before moving forward and that public input will be a major component of any further study.

TLCI / OTHER STUDIES

The examination of potential alternatives, the planning process and potential types of funding for studies, engineering and construction were discussed with private consultants; separately with a four member ODOT team; and with two NOACA representatives, all between September 24 and October 10, 2013.

The consensus during all three meetings was that a Transportation for Livable Communities Initiative (TLCI) planning grant through NOACA led by the two cities was the best starting point for further study. Other transportation, environmental, economic and land use studies could be performed concurrently or following the completion of the TLCI. NOACA representatives stated at that time that they may be able to assist with traffic studies for this initiative in-house, beyond the funding applied through a TLCI study.

During meetings in October and November 2013, representatives of both cities agreed to apply for TLCI funding for further study if/when it next becomes available and that the City of Brooklyn should be the applicant with the City of Cleveland as a partner. This phase of study should seek to:

- Solicit public input
- Assess economic impacts
- Perform traffic modeling
- Develop a preferred plan with recommendations

Ongoing discussions continued to find this to be the best approach. An application for the current round of TLCI planning grants was submitted by the City of Brooklyn March 6, 2015 with the City of Cleveland and Big Creek Connects as partners. Both cities passed resolutions noting the partnership with Brooklyn as the applicant. Letters of support for the application are noted in the Acknowledgments section. If awarded, the preferred plan will include a planning level cost estimate, a phasing/implementation strategy and identify funding sources. For the full scope and deliverables for the $98,000 project, see Appendix I. Grant award announcements are anticipated in June 2015.

NEORSD has indicated possible technical support in assisting with the development of hydrologic modeling of Big Creek within the immediate project area and technical support for the development of a preliminary stream design of the proposed channel alignment depicted in these concept plans. The Ohio EPA's Northeast District Office's Division of Surface Water stated that they can start evaluating stream habitat quality at various points along the existing channel beginning in the spring of 2015. This evaluation process would need to be performed over a period of years before stream re-engineering work could be undertaken.

BCC is working with NEORSD, Ohio EPA, Cleveland Metroparks and others to determine potential habitat improvements and fish passage upstream via a new stream alignment. It is important to note, however, that improvements to the stream will be dependent on watershed management activities addressing water quality, volume and velocity from communities upstream of the project area in future years.

Moving forward, Interchange Modification and Interchange Justification Studies will need to be performed as part of the ODOT process if the highway infrastructure changes are sought.

Other measures for each city to consider during this early phase of study include:

- Undertaking a Health Impact Assessment for the surrounding communities based on land use changes proposed in the concept plans
- Developing comprehensive Master Plans for the Stockyards and other neighborhoods as the concept plans move forward
- Re-examining the municipal boundary between the cities of Brooklyn and Cleveland that currently follows an historic Big Creek alignment
- The cities and other stakeholders should consider providing annual support to Big Creek Connects, as it remains the primary organization driving this and related projects throughout the Big Creek watershed

Funding

As ODOT representatives have stated, a project of the scope depicted in these concept plans will need to be "locally driven". Funding for the major components would need to proceed through the ODOT's Transportation Review Advisory Council (TRAC) process to determine eligibility. A large part of funding for construction of such a project would have to come through local sources. These could include funding received through the following agencies:

- Ohio Department of Natural Resources (multiple programs)
- Ohio EPA (multiple programs)
- NOACA - STP (Surface Transportation Program)
- NOACA - CMAQ (Congestion Mitigation and Air Quality)
- ODOT - Safety Funds

More descriptive funding mechanisms and project phasing details will be sought through the next phase of study via the TLCI planning grant or other funding sources.

Timing

Even if a TLCI is awarded during the current funding cycle, and upon completion of the project its recommendations are favorable towards proceeding with alternatives similar to those found in these concept plans, due to the lengthy public input process, additional impact studies, land use negotiations, stream and highway modeling and engineering work necessary, any construction would not likely begin to occur for 10 years or more for a project of this scale.

These steps are in addition to the funding challenges that lie ahead for a project of this scope. ODOT District 12 funds, for example, are primarily committed to the Cleveland Innerbelt project for the foreseeable future.

- Comprehensive Arterial Highway Plan, Cuyahoga County – Ohio: A Report to the Board of County Commissioners. Knappen, Tippetts, Abbett, McCarthy. February 1955
- Corridor Report for Interstate and Alternate Routes in the Cuyahoga County Freeway System. Howard, Needles, Tammen & Bergendoff, Consulting Engineers. Hal G. Sours, Associate. December 1957
- Parma Freeway Route Location Study. Howard, Needles, Tammen & Bergendoff, Consulting Engineers. Hal G. Sours, Associate. March 1966
- Encyclopedia of Cleveland History. Case Western Reserve University & Western Reserve Historical Society. 1998-2010
- Flood Relief Options for the Cleveland Metroparks Zoo, URS Corp. August 2000
- Lower Cuyahoga River Total Maximum Daily Load report (Includes Lower Big Creek) approved by U.S. EPA, September 2003.
- NEORSD Regional Intercommunity Drainage Evaluation (RIDE) Study Draft Report. December 2003.
- Connecting Cleveland 2020 Citywide Plan – Stockyards Neighborhood. 2004
- The Lower Big Creek Study - Phase 2 Report. February 2006
- Our Plan for the Future: City of Brooklyn Master Plan. March 2006
- Re-envisioning the Stockyard Neighborhood study. December 2007
- Lower Big Creek Greenway Restoration and Redevelopment Plan. June 2008
- Big Creek (Brooklyn) Greenway Trail and Neighborhood Connector Plan. February 2009
- Old Brooklyn/Brooklyn Centre Neighborhood Master Plan. 2009
- Big Creek Watershed Balanced Growth Plan. 2010
- Signal Warrant Analysis & Intersection Capacity Analysis West 65th Street. February 2012
- West 65th Street Corridor Light Industrial Market Analysis. May 2012
- Cleveland Metroparks 2020 Plan (2012)
- W. 65th Street Corridor Plan (2013)
- Vibrant NEO 2040. February 2014
- NEORSD 2012 Big Creek Environmental Monitoring: Biological, Water Quality, and Habitat Survey Results. March 2014

ACKNOWLEDGMENTS

The following individuals contributed to various aspects of this study upon request. *Provided letters of support for the TLCI application submitted March 6, 2015 by the City of Brooklyn in partnership with the City of Cleveland and Big Creek Connects.

Public Entities

City of Brooklyn
- Richard Balbier, Mayor
- Katherine Gallagher, Council President
- Mary Balbier, Councilwoman
- Andy Celcherts, Councilman
- Anthony DeMarco, Councilman
- Kathleen Pucci, Councilwoman
- Kevin Tanski, Councilman
- Ron Van Kirk, Councilman
- Regis Barrett, Chair, Board of Zoning Appeals
- David Kulcsar, Building Commissioner
- Fran Migliorino, Director of Economic Development
- John Verba, Service Director

City of Cleveland
- Kevin J. Kelley, Council President - Ward 13*
- Anthony Brancatelli, Councilman - Ward 12
- Joe Cimperman, Councilman - Ward 3
- Brian J. Cummins, Councilman - Ward 14*
- Jay Westbrook, former Councilman - Ward 16
- Matt Zone, Councilman - Ward 15
- Darnell Brown, Chief Operating Officer
- George Cantor, Chief City Planner
- Freddie Collier, Director - Cleveland City Planning Commission
- Andy Cross, Traffic Engineer
- James DeRosa, Commissioner of Real Estate
- Trevor Hunt, Neighborhood Planner
- John James, Research & Policy Analysis Manager
- Valarie J. McCall, Chief of Governmental & International Affairs
- Jenita McGowan, Chief of Sustainability
- Glenn Murray, Chief Architect, Master Plans Examiner, Department of Building and Housing
- Edward W. Rybka, Chief of Regional Development
- Rashid Zoghaib, Commissioner, Division of Water Pollution Control

Cleveland-Cuyahoga County Port Authority
- Jim White, Director, Sustainable Infrastructure Programs

Cleveland Municipal Court
- Honorable Lynn McLaughlin-Murray, Magistrate

Cleveland Public Library
- Thomas B. Edwards, Map Librarian
- Daniel Milich, Library Assistant

Cleveland State University, Maxine Goodman Levin College of Urban Affairs
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- Kirby Date, Community Planning Program Manager

Cuyahoga County Board of Health
- Meiring Borcherds, Program Coordinator

Cuyahoga County Planning Commission
- Daniel Meaney, Manager - Information & Research
- Elaine Price, Program Manager - Greenspace

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- Dale Miller, Councilman
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- Mike Foley, Director, Department of Sustainability

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Ohio Rail Development Commission
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US Army Corps of Engineers
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U.S. Department of Housing and Urban Development
Lucy W. Miller, Senior Management Analyst

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Roger J. Kalbrunner, Esq., Secretary
Greg Cznadel, Trustee
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Dennis Petro, former Trustee
Jim Wohl, former Trustee
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Brooklyn Kiwanis
Greg Frey, Member
Canalway Partners*
Tim Donovan, Executive Director
Cuyahoga River Restoration*
Jane Goodman, Executive Director
Peter Bode, Watershed Coordinator
Green City Blue Lake Institute, Cleveland Museum of Natural History
David Beach, Director
Great Lakes Biomimicry Collaborative
Tom Tyrrell, CEO, Chairman and Founder
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Steve Wozniak, member
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Northeast Ohio Sustainable Communities Consortium
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Old Brooklyn Community Development Corporation*
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Jeff Broadwater, Project Manager
Christopher Owen, NEPA Project Manager
Debra White, Environmental Manager

Storm Water Control Services, LLC
Ed Kelly, Manager
URS Corporation
Thomas M. Evans, Green Infrastructure Design Services Director
Beth Fulton, Director of Transportation
Dale Schiavoni, Senior Transportation Planner

Businesses in Denison Access area

ACME Refining
David Pisano, Vice President
Mario Pisano, President
Cleveland Propeller & Marine Service
Victoria M. Jones, President
Container Compliance Corp.
Daniel Mackall, Vice President
Steve Ferguson, Project Manager
Festa Foods
Tim Fagan, President
Forest City Products
Anthony Galang, President
Tradex Corporation
Dan Zimbardi, Manager of Financial Planning and Analysis
Warwick Products
Matt Beverstock, President

Other

Bill Callahan former Executive Director, Stockyards Area Development Association
Tim Ferris, member, Brooklyn Centre Design Review Committee
Rick Jaworski, former President, Brooklyn Centre Historical Society
Brian Pagnotta, Geographic Information Systems consultant
Jack Ricchiuto, Writer
Greg Soltis, Geographic Information Systems consultant

The following public officials, representing the study area, and member(s) of their staff reviewed this study's final draft and provided letters of support for the TLCI application submitted March 6, 2015 by the City of Brooklyn in partnership with the City of Cleveland and Big Creek Connects:

United States House of Representatives:
Marcy Kaptur – Ohio 9th Congressional District
The Ohio Senate:
Sandra R. Williams – District 21
Michael J. Skindell – District 23
The Ohio House of Representatives:
Bill Patmon – District 10
Nickie J. Antonio – District 13
Martin J. Sweeney – District 14
Nicholas J. Celebrezze – District 15

Appendices

A. Timeline of notable events related to Study Area
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APPENDIX A HISTORIC TIMELINE OF NOTABLE EVENTS RELATED TO STUDY AREA

- 1796 Townships laid out in *Connecticut Western Reserve.*
- 1812 *Brooklyn Centre* community settled.
- 1814 *Brighton* community settled.
- 1818 *Brooklyn Township* incorporated.
- 1867 *Brooklyn Village* (Cleveland) incorporated.
- 1889 *South Brooklyn Village* incorporated.
- 1894 *Cleveland* annexes *Brooklyn Village*. *Brooklyn Park* established.
- 1897 *Brooklyn Park* renamed *Brookside Park.*
- 1900 *West Park Cemetery* established.
- 1902 *Linndale Village* incorporated.
- 1903 *Cleveland* annexes most of *Linndale Village.*
- 1905 *Cleveland* annexes *South Brooklyn Village*.
  Metropolitan Park System report submitted by City of Cleveland Engineer William Stinchcomb.
- 1907 *Cleveland Zoological Park* begins transfer from *Wade Park to Brookside.*
- 1922 Ridge Road high level concrete arch bridge built.
- 1927 *Village of Brooklyn* incorporated.
- 1950 *City of Brooklyn* incorporated.
- 1957 *Corridor Report of the Cuyahoga County Freeway System* completed.
- 1959 Big Creek 7 Year Storm – 6,000cfs. Overflow floods Zoo; wipes out reptile collection, damages many buildings.
- 1965 Interstate 71 complete from Airport to Bellaire Road.
- 1967 Interstate 71 complete from Bellaire Road to Fulton Road.
- 1968 *City of Cleveland* transfers ownership of Zoo to *Cleveland Metropolitan Park District*.
  Cleveland Union Stockyards Co. shuts down.
- 1975 Big Creek 33 Year Storm – 9,060 cfs. Causes significant damage and loss of animal life in Zoo.
  Old Brooklyn Community Development Corporation established.
- 1978 Cleveland property south of I-71 (former West Park Cemetery property) sold to City of Brooklyn.
- 1981 *Cleveland Stockyard Area Development Association* formed.
- 1993 Ridge Road girder-bridge replaces concrete arch bridge.
  City of Cleveland transfers ownership of *Brookside Park* to *Cleveland Metroparks.*
- 1996 Denison Avenue/Fulton Road entrance to *Brookside* closed to vehicular traffic.
- 2005 *Friends of Big Creek* organized. Renamed *Big Creek Connects* in 2014.
- 2010 *Big Creek Watershed Balanced Growth Plan* completed. State Endorsed in 2011.
- 2012 *Big Creek/I-71 Relocation & Restoration Initiative* study begins.

APPENDIX B

COMMUNITY DEMOGRAPHICS (2010)
CITY OF BROOKLYN; CITY OF CLEVELAND NEIGHBORHOODS: OLD BROOKLYN & STOCKYARDS

❖ POPULATION

Total Population	11169	39282	10372

❖ AGE

Age Distribution	City of Brooklyn		Cleveland City Neighborhoods Old Brooklyn		Stockyards	
	#	%	#	%	#	%
75 +	2144	19.2	1914	6.0	1070	8.9
60-74	1414	12.7	3728	11.7	949	9.2
35-59	1458	13.1	12135	37.9	3185	30.7
25-34	1416	12.7	4498	14.1	1386	13.4
18-24	1310	11.7	2729	8.5	1311	12.6
0-17	1703	15.2	7005	21.9	4044	33.6

http://neocando.case.edu/neocando (# 2006-2010 5-yr estimate)

❖ DIVERSITY

Racial Makeup	City of Brooklyn	Cleveland City Neighborhoods Old Brooklyn	Stockyards
	%	%	%
White	**84.3**	**82**	**56**
Black	**5.2**	**8**	**19**
Asian	**3.9**	**1**	**1**
Am-Indian	**0.2**	**0.3**	**1**
Other	**4.0**	**5**	**18**
Two + Race	**2.4**	**3**	**5**

Population	City of Brooklyn		Cleveland City Neighborhoods Old Brooklyn		Stockyards	
	#	%	#	%	#	%
Latino	1165	**10.4**	4414	**14**	3626	**35**
Non-Latino	10004	**89.6**	27595	**86**	6746	**65**

Sources: United States Census Bureau 2010 Decennial Census; American Community Survey 2006-2010 5 Year Estimates; Cleveland City Planning. Compiled by BCC.

APPENDIX B

COMMUNITY DEMOGRAPHICS (2010)

CITY OF BROOKLYN; CITY OF CLEVELAND NEIGHBORHOODS: OLD BROOKLYN & STOCKYARDS

❖ FAMILIES & HOUSEHOLDS

Households	5153	-	-

	City of Brooklyn		Cleveland City Neighborhoods Old Brooklyn		Stockyards	
	#	%	#	%	#	%
1-Person Household	1925	**37.4**	5480	**38**	953	**26**
Multi-Person Household	-	-	8786	**62**	2662	**74**
Family Households	2926	**56.8**	7667	**54**	2427	**67**
Non-Family Households	2227	**43.2**	6599	**46**	1187	**33**
Households with Person(s) under 18	1261	**24.5**	3842	**27**	1558	**43**
Households with Person(s) 65 and over	1657	**32.2**	4405	**31**	1007	**28**
Family Households with Own Children under 18	647	**12.6**	3769	--	1376	-
Husband-Wife	1965	**38.1**	1838	**53**	421	**33**
Male Householder, no Wife Present	250	**4.9**	402	**12**	168	**13**
Female Householder, no Husband Present	711	**13.8**	1208	**35**	692	**54**

❖ EDUCATION ATTAINMENT

	City of Brooklyn		Cleveland City Neighborhoods Old Brooklyn		Stockyards	
	#	%	#	%	#	%
High School-less than 9th grade	316	**3.8**	1357	**6.0**	994	**18**
No High School	1463	**10.9**	3306	**14**	978	**17**
High School degree	5755	**42.9**	9662	**41**	1861	**31**
Some College	3108	**23.2**	4884	**21**	920	**16**
Associates Degree	1054	**7.9**	1156	**5**	148	**4**
Bachelor's Degree	1137	**8.5**	1839	**8**	72	**2**
Graduate/Professional Degree	381	**2.8**	904	**4**	58	**1**

❖ HOUSING UNITS

Total Units	City of Brooklyn		Cleveland City Neighborhoods Old Brooklyn		Stockyards	
	#	%	#	%	#	%
Occupied Housing Units	5506	**94**	14266	**90**	3615	**80**
Vacant Housing Units	353	**6**	1646	**10**	883	**20**
Renter v Owner (for all occupied housing units)						
Owned w/mortgage or loan	1741	**34**	6310	**44**	911	**25**
Owned free and clear	1284	**25**	2387	**17**	573	**16**
Renter Occupied	2128	**41**	5569	**39**	2131	**59**

COMMUNITY DEMOGRAPHICS (2010)
CITY OF BROOKLYN; CITY OF CLEVELAND NEIGHBORHOODS: OLD BROOKLYN & STOCKYARDS

❖ INCOME

Median Household Income	41,637	39,282	19,658

Income Brackets

Household Income	City of Brooklyn		Cleveland City Neighborhoods Old Brooklyn		Stockyards	
	#	%	#	%	#	%
<$10k	262	**5.4**	1757	**12**	803	**19**
$10k - $19k	384	**7.9**	2259	**15**	1124	**20**
$20k - $29k	729	**15.1**	2463	**16**	666	**14**
$30k - $39k	627	**13.0**	2254	**15**	467	**12**
$40k - $49k	958	**19.8**	1874	**12**	192	**9**
$50k - $74k	846	**17.5**	2883	**19**	399	**14**
$75k - $99k	664	**13.7**	1226	**8**	68	**2**
$100k - $149k	256	**5.3**	376	**2.5**	44	**2.5**
$150k -$199k	67	**1.4**	179	**0.6**	0	**1**
$200k +	42	**0.9**	94	**0.6**	0	**0.4**

Households with….	City of Brooklyn		Old Brooklyn		Stockyards	
	#	%	#	%	#	%
Social Security Income	1759	**36.4**	3807	**27**	1035	**27**
Supplemental Security Income	288	**6.0**	793	**6**	750	**20**
Public Assistance Income	154	**3.2**	439	**3**	418	**11**
Received Food Stamps-Last Year	535	**11.1**	2166	**15**	1487	**39**

❖ EMPLOYMENT

	City of Brooklyn	Cleveland City Neighborhoods Old Brooklyn	Stockyards
	%	%	%
In Labor Force	61.5	67	52
Unemployed	6.5	10	24

Prepared by Cleveland City Planning. Data from United States Census Bureau 2010 Decennial Census & American Community Survey 2006-2010 5 Year Estimates. Edited by BCC for easy comparison.

COMMUNITY DEMOGRAPHICS (2010)

CITY OF BROOKLYN; CITY OF CLEVELAND NEIGHBORHOODS: OLD BROOKLYN & STOCKYARDS

❖ POVERTY

	City of Brooklyn	Cleveland City Neighborhoods Old Brooklyn	Stockyards
	%	%	%
Poverty Rate	14.4	18	47
Child Poverty Rate	27.6	25	64
Elder Poverty Rate (+65)	7.9	16	24

❖ TRANSPORT

	City of Brooklyn		Cleveland City Neighborhoods Old Brooklyn		Stockyards	
Workers:	#	%	#	%	#	%
Drove to Work Alone	4276	**93**	14136	**90**	2220	**81**
Public Transportation	131	**3**	702	**5**	404	**15**
Walked to Work	46	**1**	276	**2**	81	**3**
Work from Home	83	**2**	375	**2**	17	**1**
Other Means	32	**1**	167	**1**	22	**1**

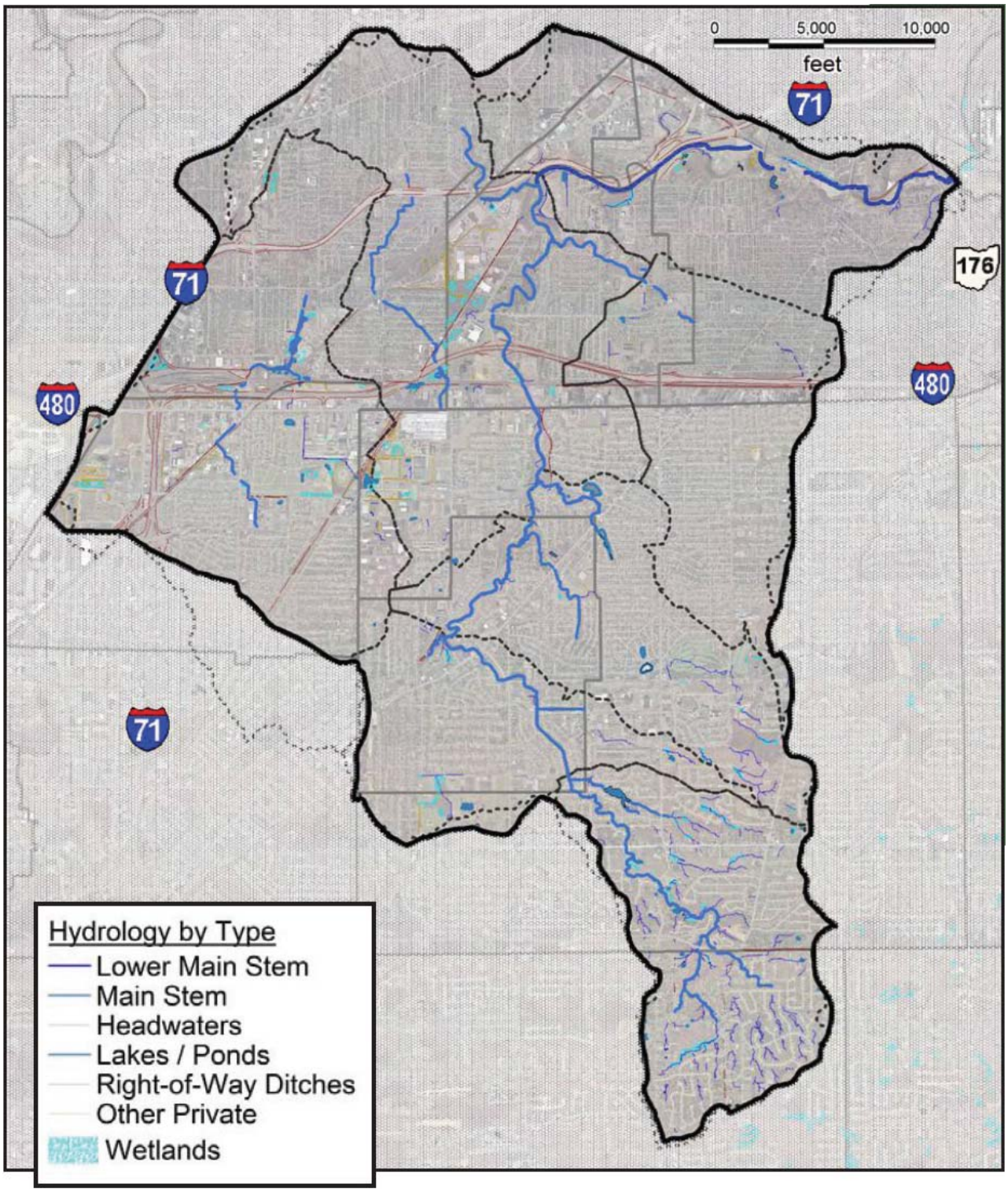
❖ EMPLOYMENT BY INDUSTRY

	City of Brooklyn		Cleveland City Neighborhoods Old Brooklyn		Stockyards	
	#	%	#	%	#	%
Education, Health Care, Social Assist.	996	20	-	19	-	13
Manufacturing	750	15		15	-	20
Arts, Recreation, Entertainment, Food Service	461	9.1	-	12	-	11
1.21Retail Trade	547	11	-	11	-	11
Professional, scientific, admin & waste mgt.	496	9.8	-	8.3	-	17
Finance, Insure, real estate, rent & lease	336	6.7	-	7.6	-	3.9
Utilities, Transport & Warehousing	365	7.2	-	6.2	-	4.4
Other Services	330	6.5	-	3.6	-	9.8
Construction	238	4.7	-	6.0	-	4.4
Wholesale Trade	194	3.8	-	3.9	-	5.3
Information	69	1.4	-	1.8	-	0.0
Agriculture, fishing, forestry, mining	19	0.4	-	0.2	-	0.0
Other Services	330	6.5	-	3.6	-	9.8

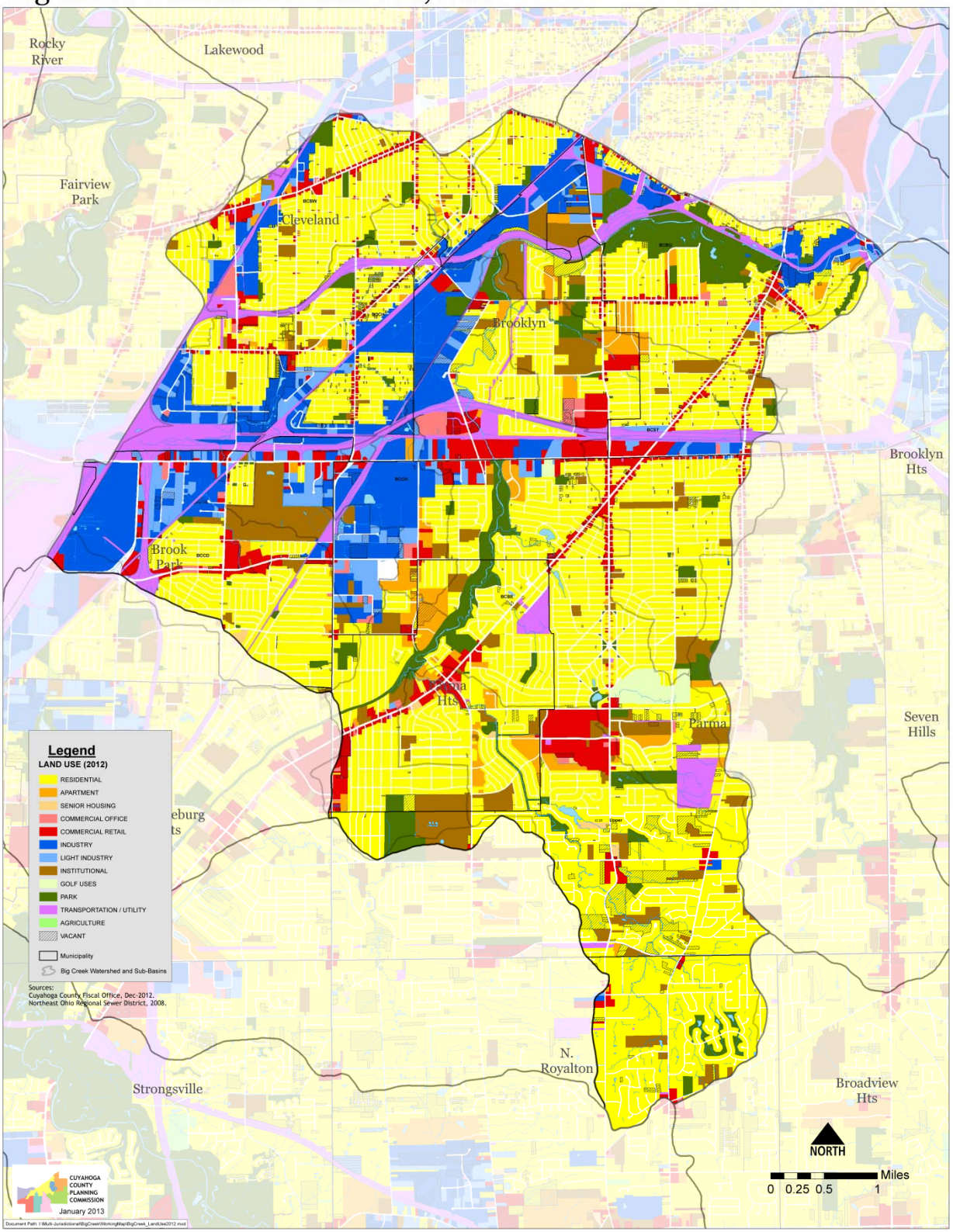
http://neocando.case.edu/neocando (# 2006-2010 5-yr estimate)

WATERSHED/DRAINAGE MAPS

NATURAL FEATURES: STREAMS (WATERSHED)

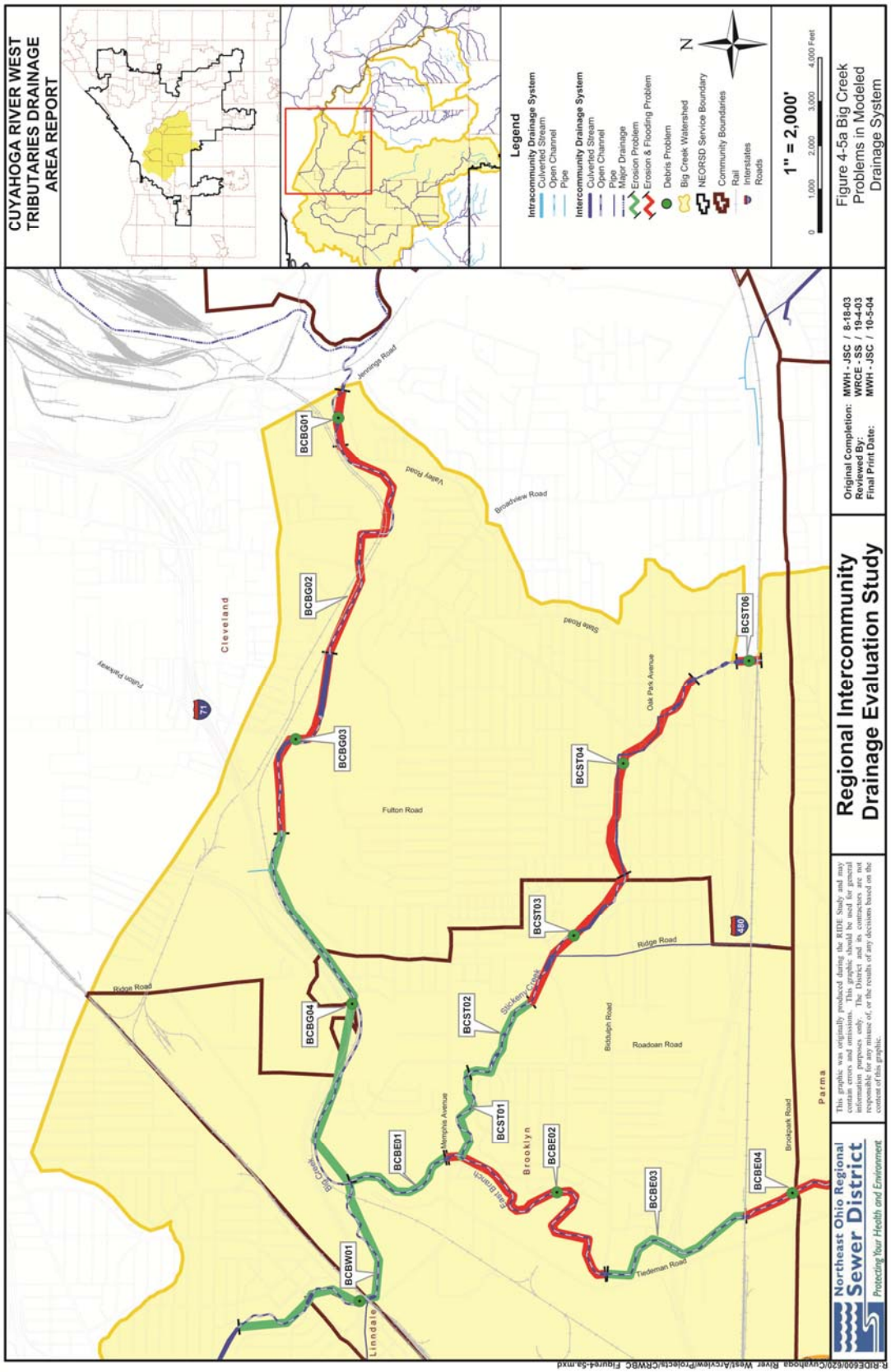


Big Creek Watershed: Land Use, 2012



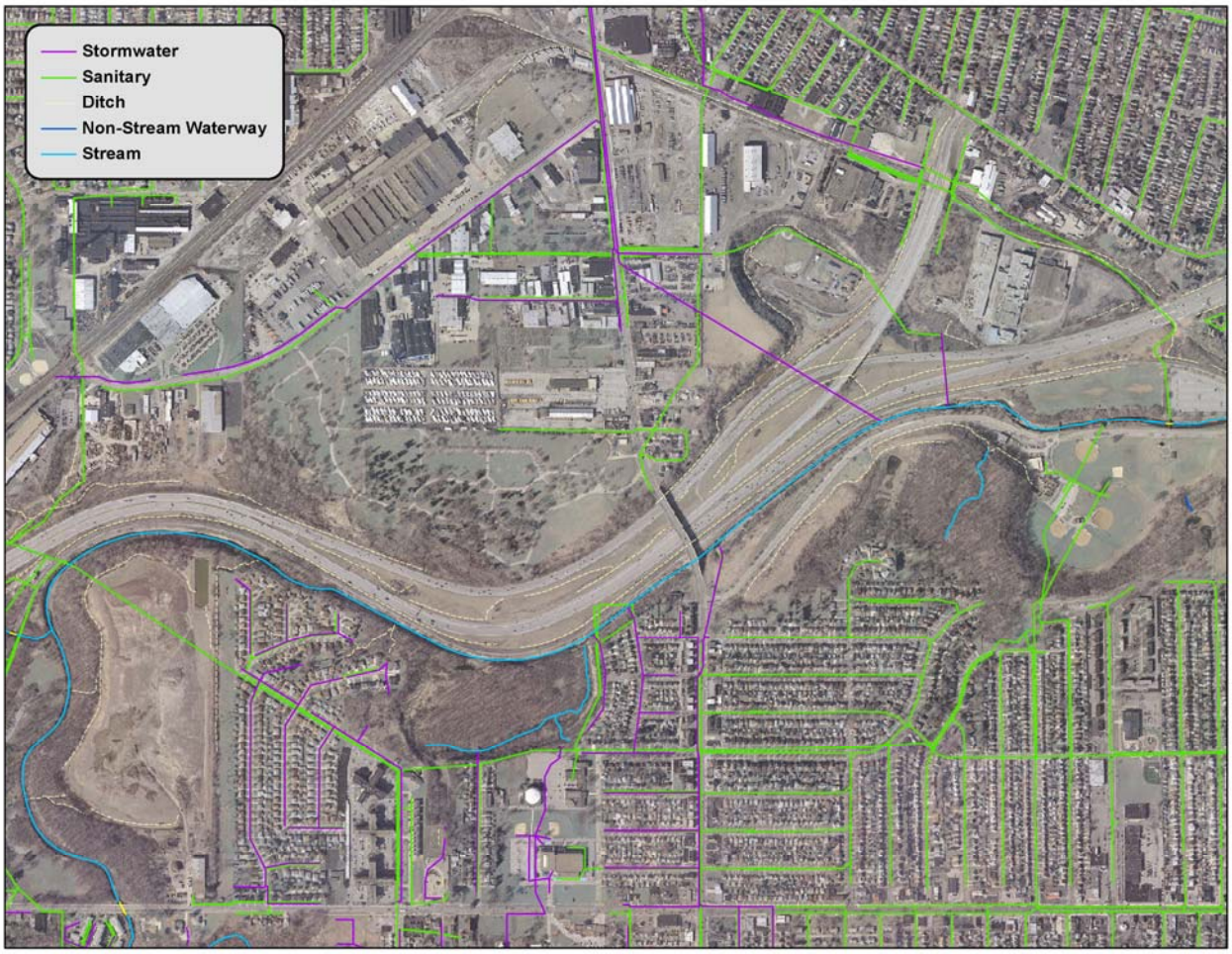
WATERSHED/DRAINAGE MAPS

PROBLEMS IN MODELED DRAINAGE SYSTEM, NEORSD (STUDY AREA)



WATERSHED/DRAINAGE MAPS

SANITARY/STORM SEWERS (FOCUS AREA)

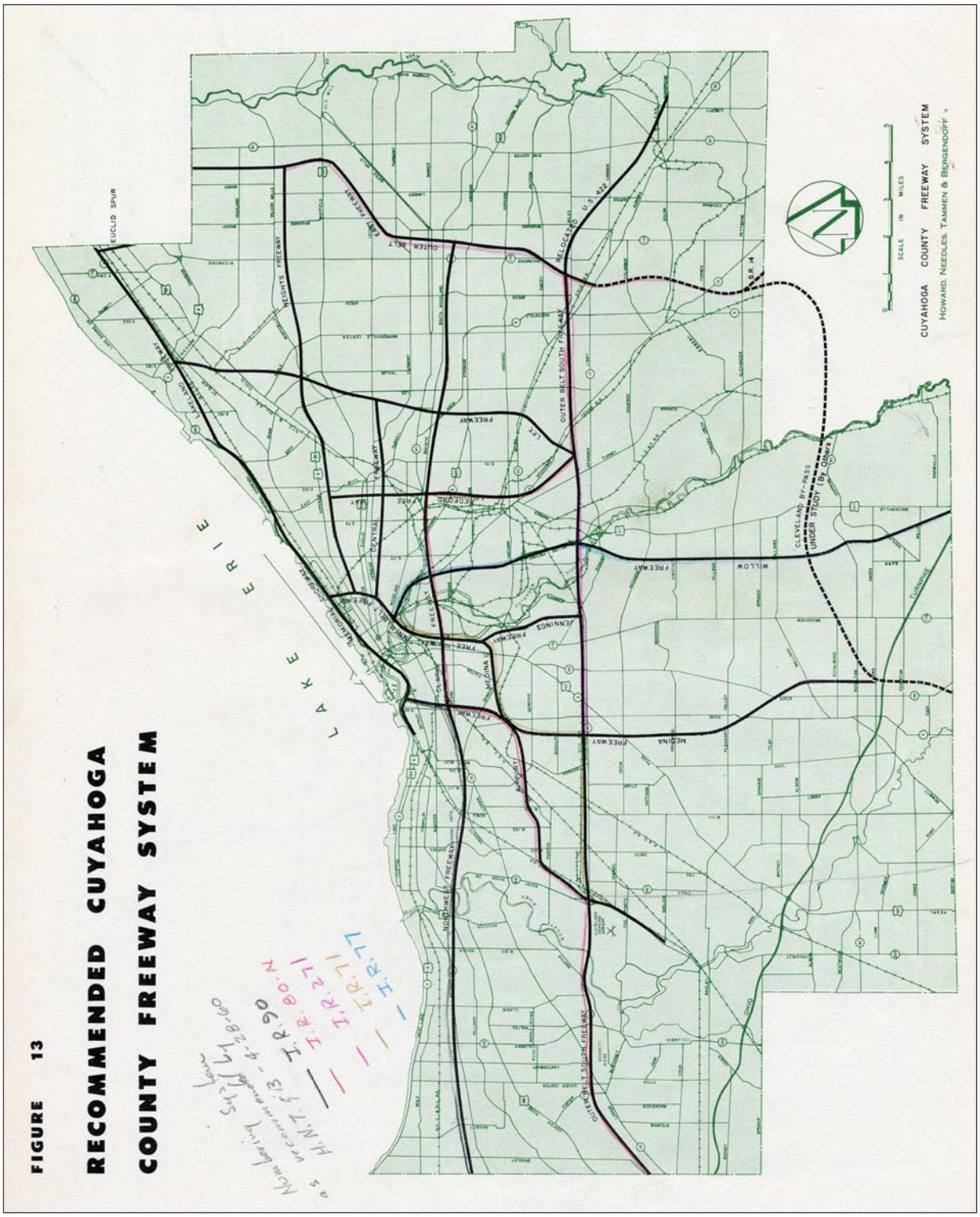


Appendix D

Highway Studies

Corridor Report for Interstate and Alternative Routes in the Cuyahoga County Freeway System (1957):

Figure 13: Recommended Cuyahoga County Freeway System (plan)



HIGHWAY STUDIES

CORRIDOR REPORT FOR INTERSTATE AND ALTERNATIVE ROUTES IN THE CUYAHOGA COUNTY FREEWAY SYSTEM (1957):

FIGURE 41: MEDINA FREEWAY – BIG CREEK VALLEY (AERIAL)

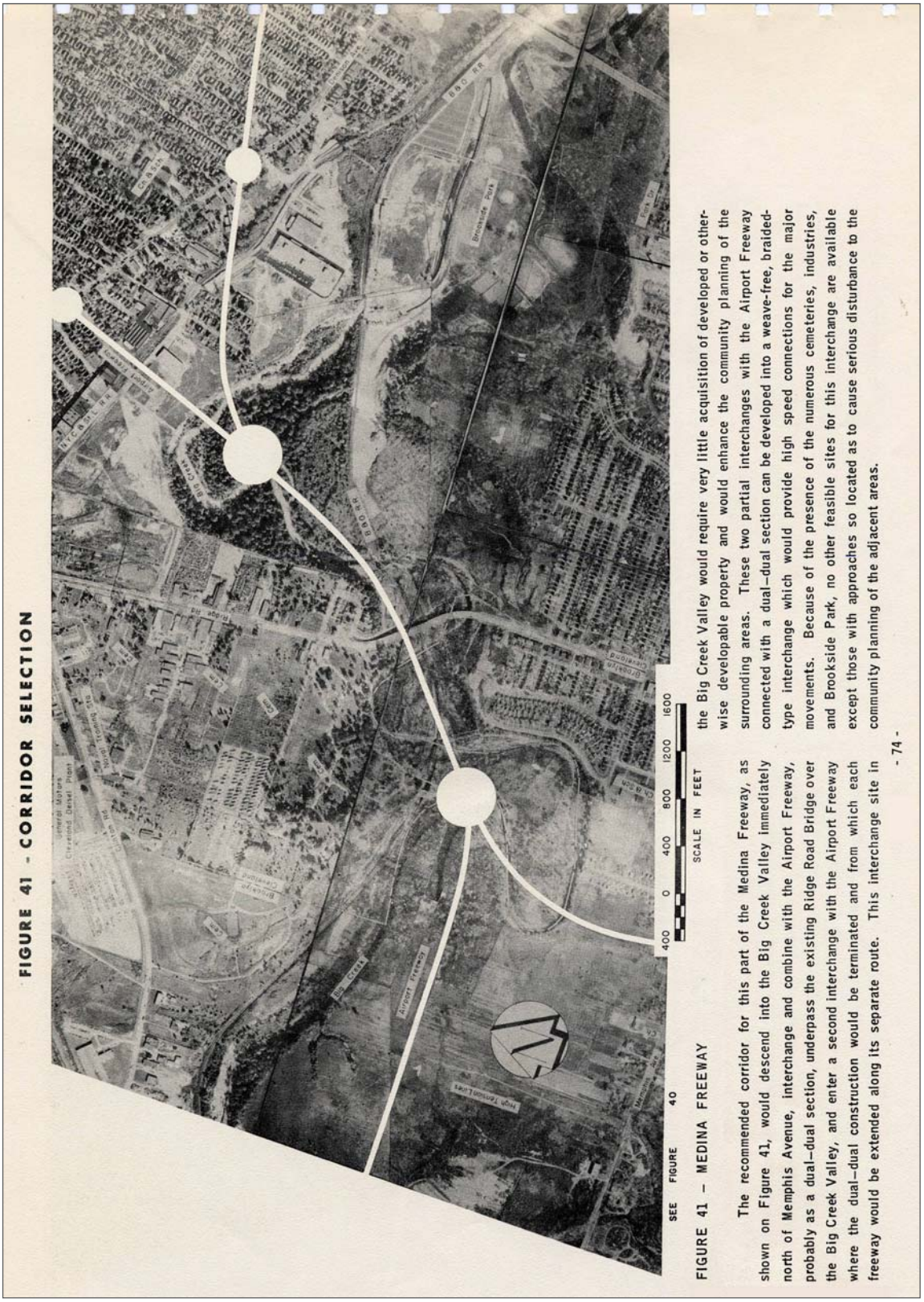


FIGURE 41 – MEDINA FREEWAY

The recommended corridor for this part of the Medina Freeway, as shown on Figure 41, would descend into the Big Creek Valley immediately north of Memphis Avenue, interchange and combine with the Airport Freeway, probably as a dual–dual section, underpass the existing Ridge Road Bridge over the Big Creek Valley, and enter a second interchange with the Airport Freeway where the dual–dual construction would be terminated and from which each freeway would be extended along its separate route. This interchange site in the Big Creek Valley would require very little acquisition of developed or otherwise developable property and would enhance the community planning of the surrounding areas. These two partial interchanges with the Airport Freeway connected with a dual–dual section can be developed into a weave-free, braided-type interchange which would provide high speed connections for the major movements. Because of the presence of the numerous cemeteries, industries, and Brookside Park, no other feasible sites for this interchange are available except those with approaches so located as to cause serious disturbance to the community planning of the adjacent areas.

IV - FREEWAY INTERCHANGE STUDIES

Four freeway to freeway interchanges are included along the overall length of the Parma Freeway to provide connection to the adjoining elements of the Cuyahoga County Freeway System. Preliminary studies of the northerly two interchanges – at the Memorial Shoreway and at the Northwest–Clark Freeway – and for the 1.4 miles of the Parma Freeway between those points are summarized in Report No. 6, dated March, 1963. The design for the Medina Freeway (I–71) – Parma Freeway Interchange has been developed by others and was furnished, during the preparation of this route report. A perspective view of that interchange is shown in Figure 5 on the next page.

Preliminary studies of the remaining freeway to freeway interchange – at the Outer Belt South Freeway – are summarized below. These studies have been prepared at this very preliminary stage (1) to determine the effect of the alternate route locations on the resulting sites or designs for that interchange, (2) to appraise the resulting traffic patterns in, through and around the interchange area and (3) to permit selection of a realistic interchange type to provide a basis for the preliminary estimates of cost contained in this report.

Two feasible sites for the Outer Belt South – Parma Freeway Interchange exist along the already established alignment for the Outer Belt South Freeway (I–80). Site A, as shown in Figure 6 on Page 17, locates the interchange in the tract formerly occupied by the Brooklyn Airport immediately north of the New York Central Railroad tracks. New residential development is fast infringing on this site which is consistent with the recommended routing for the Parma Freeway. Site B, located in the 18-hole, par-3 Roseland Golf Course, is consistent only with Alternate Routes 3 and 3C, both of which result in substantially decreased vehicular benefits and in greater taking of recreational space including the Metropolitan Park System's property south of the golf course.

As shown in Figure 6, the 1975 traffic forecasts in each quadrant of the interchange can be accommodated on single-lane pavements although each will be operating at nearly full capacity. Multi-lane pavements are, of course, required for the "through" movements along both freeways.

Alternate Type No. 1, as shown in Figure 6, is a conventional clover-leaf interchange design. Although this design provides the basic lane capacities

HIGHWAY STUDIES

PARMA FREEWAY ROUTE LOCATION STUDY (1966):

PAGE 16: FIGURE 5 - AERIAL VIEW OF MEDINA-PARMA FREEWAY

Figure 5 - Aerial View of Medina-Parma Freeway Interchange (view looking westerly)

required to accommodate the anticipated design year traffic volumes, excessive weaving operations would occur between adjacent loop ramps within the interchange.

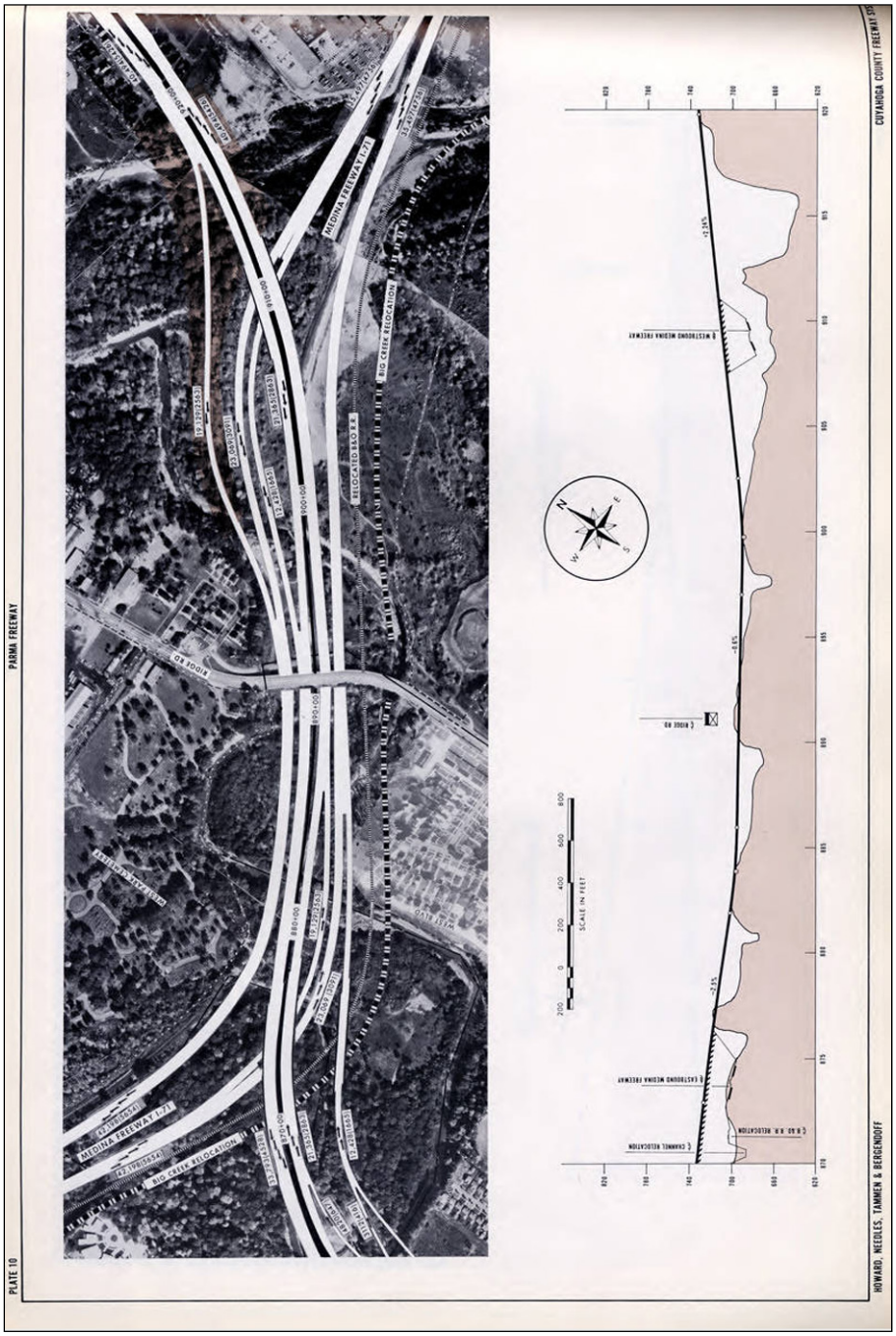
Alternate Type No. 2, as shown in Figure 6, replaces the loop ramps in the northwest and southeast quadrants with semi-directional connections, thus avoiding all weaving conflicts within the interchange and shortening the paths of travel for two of the turning movements. With this alternate, the semi-directional left turn lanes have both been located in the northwest quadrant of the interchange to avoid the need for a three level design at the crossing of the New York Central Railroad. Alternate Type No. 2, which appears to be the most economical interchange design capable of fully accommodating the anticipated design year traffic volumes, has been used in the preliminary estimates of cost contained in this report and is shown in greater detail on Plate 8 in the Appendix. A perspective view of this interchange design is shown on the frontispiece.

Alternate Type No. 3, as shown in Figure 6, is a four-level semi-directional, or "stack", interchange design eliminating all short-radius loop

HIGHWAY STUDIES

PARMA FREEWAY ROUTE LOCATION STUDY (1966):

PLATE 10: PRELIMINARY DESIGN – BIG CREEK VALLEY



GREENWAY/TRAIL PLANS

PROPOSED CUYAHOGA COUNTY PARK AND BOULEVARD SYSTEM, JUNE 1916

GREENWAY/TRAIL PLANS

PROPOSED BIG CREEK GREENWAY POPULATION BUFFER MAP (2006)

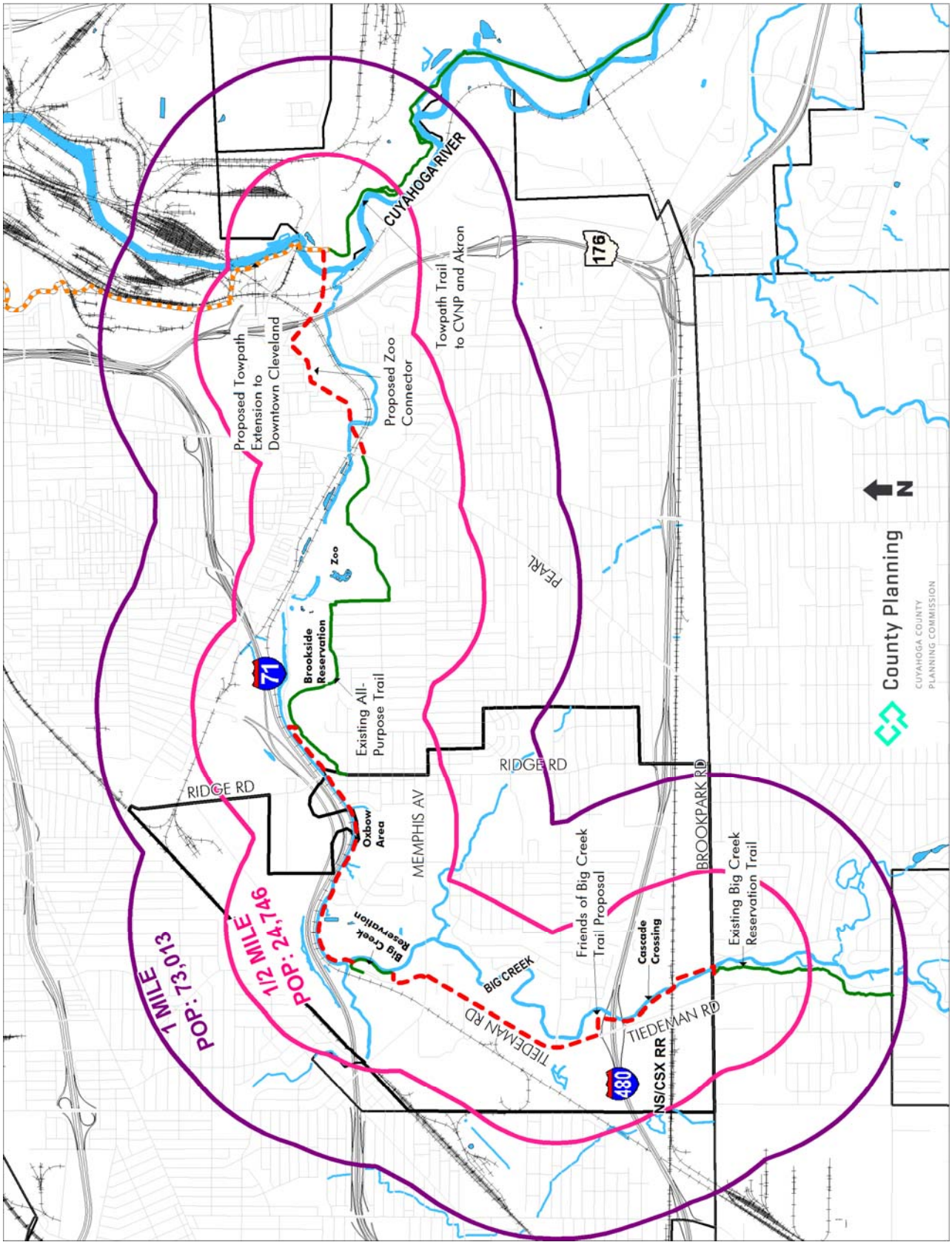
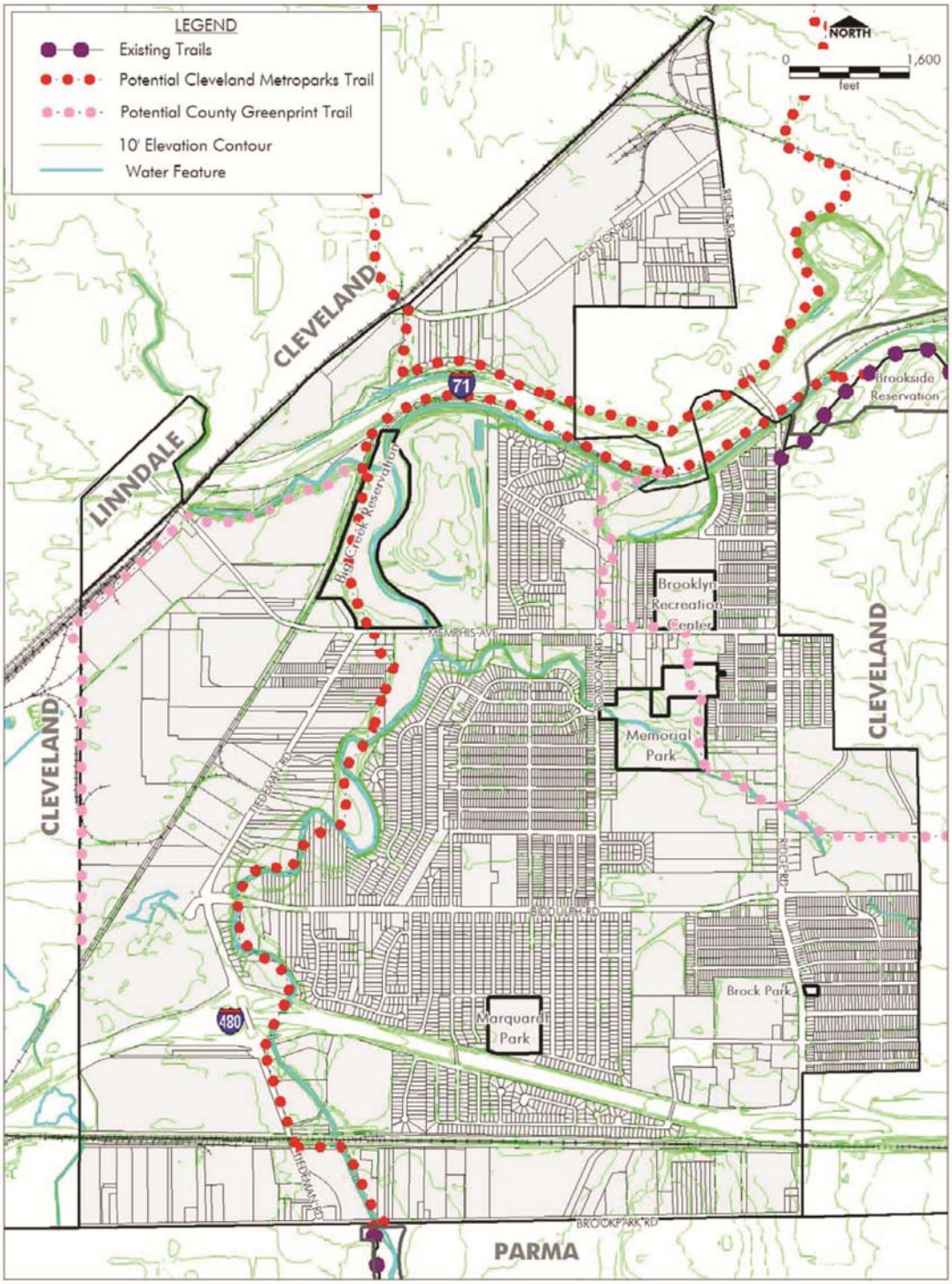


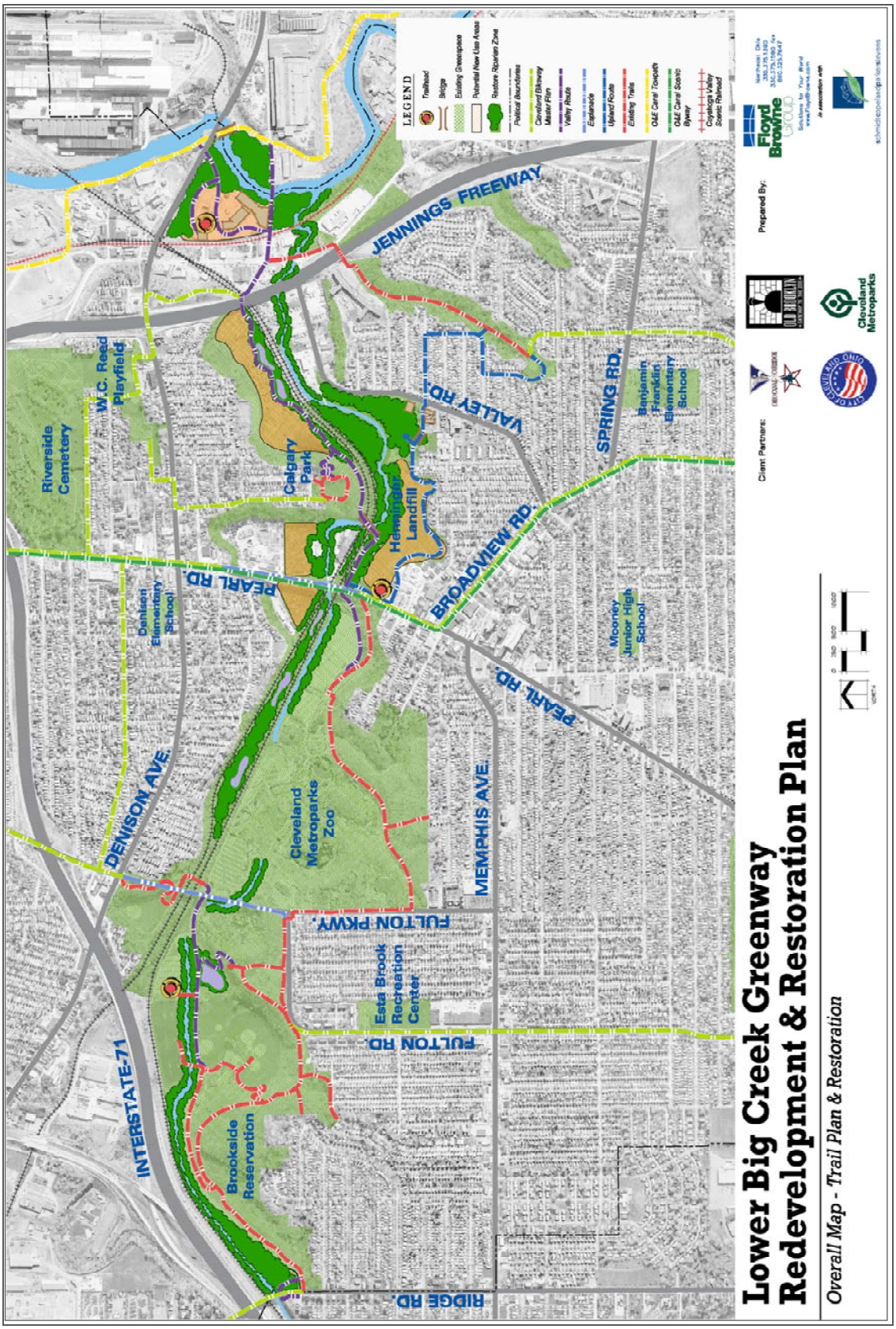
Figure 7: Existing and Planned Pedestrian and Bike Trails, Brooklyn

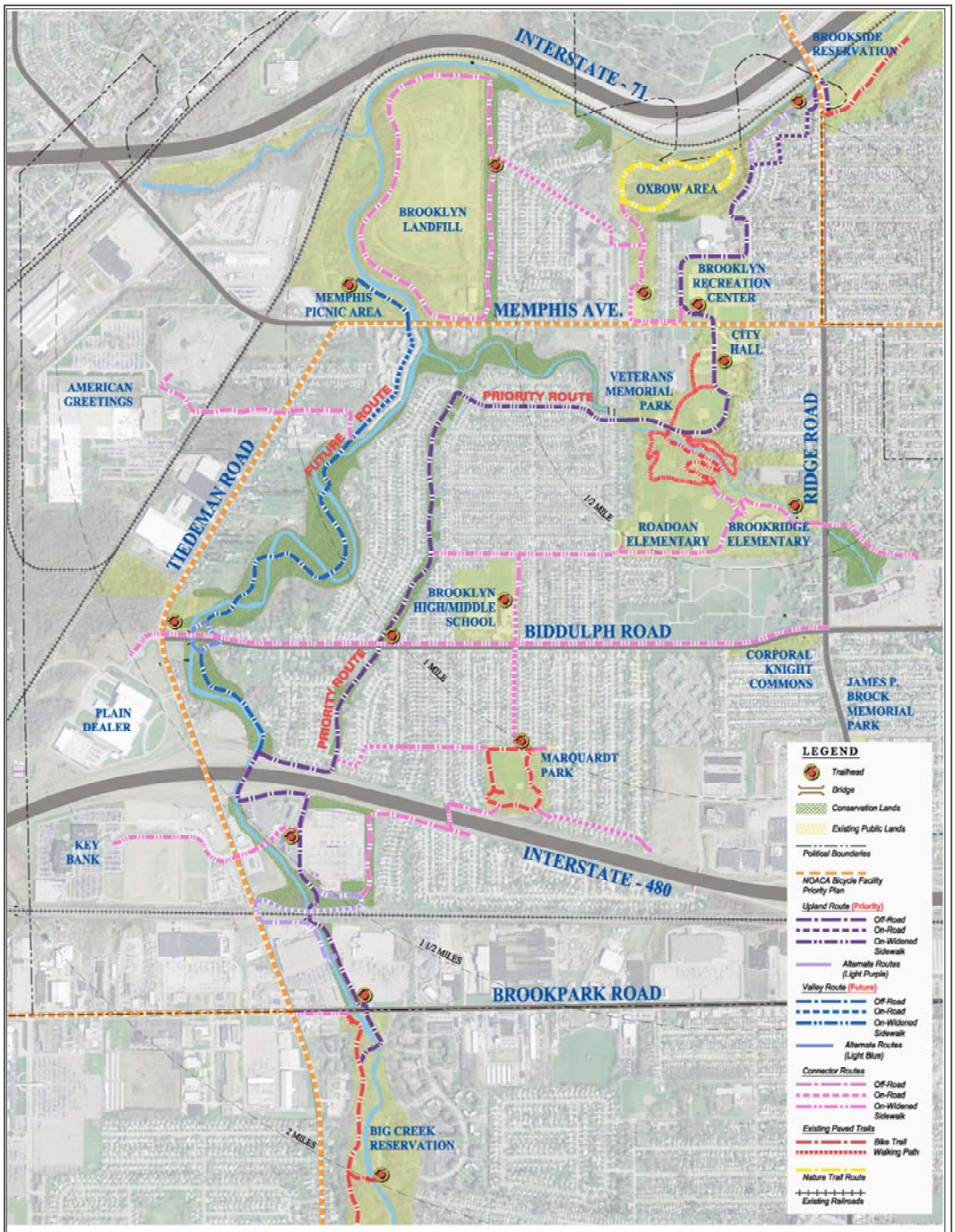


Existing Conditions and Assessment Part 1
Land Use Patterns, Zoning and Natural Features Chapter 1.3

GREENWAY/TRAIL PLANS

LOWER BIG CREEK GREENWAY & RESTORATION PLAN – OVERALL MAP (2008)




INTERSTATE - 71
BROOKSIDE RESERVATION
OXBOW AREA
BROOKLYN LANDFILL
BROOKLYN RECREATION CENTER
MEMPHIS PICNIC AREA
MEMPHIS AVE.
CITY HALL
VETERANS MEMORIAL PARK
AMERICAN GREETINGS
PRIORITY ROUTE
FUTURE ROUTE
TIEDEMAN ROAD
RIDGE ROAD
1/2 MILE
ROADOAN ELEMENTARY
BROOKRIDGE ELEMENTARY
BROOKLYN HIGH/MIDDLE SCHOOL
BIDDULPH ROAD
CORPORAL KNIGHT COMMONS
JAMES P. BROCK MEMORIAL PARK
1 MILE
PLAIN DEALER
MARQUARDT PARK
KEY BANK
INTERSTATE - 480
1 1/2 MILES
BROOKPARK ROAD
2 MILES
BIG CREEK RESERVATION
LEGEND
Trailhead
Bridge
Conservation Lands
Existing Public Lands
Political Boundaries
NOACA Bicycle Facility Priority Plan
Upland Route (Priority)
Off-Road
On-Road
On-Widened Sidewalk
Alternate Routes (Light Purple)
Valley Route (Future)
Off-Road
On-Road
On-Widened Sidewalk
Alternate Routes (Light Blue)
Connector Routes
Off-Road
On-Road
On-Widened Sidewalk
Existing Paved Trails
Bike Trail
Walking Path
Nature Trail Route
Existing Railroads
Big Creek Greenway Trail Alignment & Neighborhood Connector Plan
Overall Master Plan
0 250 500 1000
NORTH
Client Partners:
Friends of Big Creek
NOACA
Cleveland Metroparks
Prepared By:
Floyd Browne Group
In association with
schmidtcopelandparkerstevens

CLEVELAND METROPARKS 2020 PLAN: BROOKSIDE RESERVATION/CLEVELAND METROPARKS ZOO

EXISTING CONDITIONS SUMMARY

CLEVELAND METROPARKS 2020 THE EMERALD NECKLACE CENTENNIAL PLAN

BROOKSIDE RESERVATION/CLEVELAND METROPARKS ZOO
Existing Conditions Summary

Year Established: 1986
Location: Cleveland (Cuyahoga Co)

Overview: Since its acquisition by the City of Cleveland in1894, Brooklyn Park developed as a site for active recreation and outdoor picnicking, at a location conveniently close to the center of the growing city. After its transfer to Cleveland Metroparks in 1993, Brookside Reservation expanded to include more land and a lake, which were later assigned to house the Cleveland Metroparks Zoo. The redevelopment of Brookside Reservation to include a stronger natural area component has motivated the creation of wetlands and vernal pools and the sustainable management of its woodlands. These natural features are also part of the flood control methods that Cleveland Metroparks and other organizations like Friends of Big Creek are trying to implement to decrease flooding along Big Creek, a portion of which runs on the northern edge of the reservation.

Total Acreage: 132* (14th of 16) Forested: 49 Major Wetland: 2

Developed and Highly Impacted from this Development: 71%

Primary Natural Resource Theme: Example of low maintenance plant communities in an urban park

Other Natural Resource Issues: Big Creek floodway and riparian corridor maintenance and erosion, Big Creek bluff oak savanna condition, mitigation wetland condition, Wildlife Way valley fill

Natural/Cultural Resource Amenities: Big Creek, Cherry Tree Grove, Historic Baseball Field, Rose II, Elder II, and Tally Fields

Outdoor Recreation Amenities: Hiking trails, nature watching, activity fields by picnic areas

Picnic Areas: Meadow Ridge

Reservable Facilities: Brookside Valley Event Site

Parkway Mileage: 1.1

Trail Mileage: All Purpose (APT): 3.5 Hiking: 2.6

Recreation Visits: 215,224† (14th of 16)

*Total acreage is 300 if area occupied by Cleveland Metroparks Zoo is included.

†2010 Park District Visitation, pp. 3 - 6, of the Division of Research and Program Evaluation, Marketing Department, CM.

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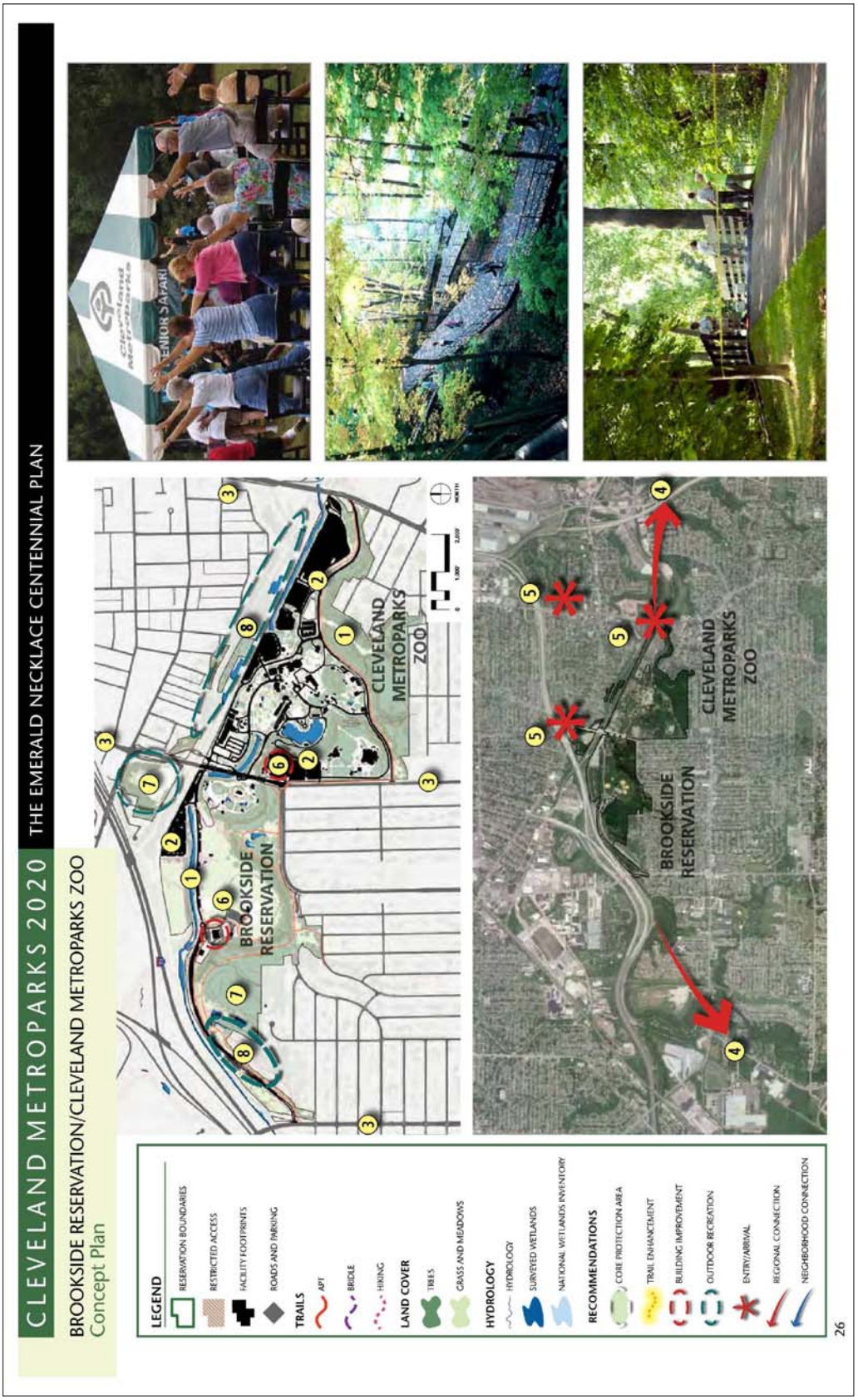
CLEVELAND METROPARKS 2020 PLAN: BROOKSIDE RESERVATION/CLEVELAND METROPARKS ZOO

CONCEPT PLAN - MAP



Enhance and integrate roles as a local community open space and a regional destination; increase connectivity to Big Creek and Ohio & Erie Canal

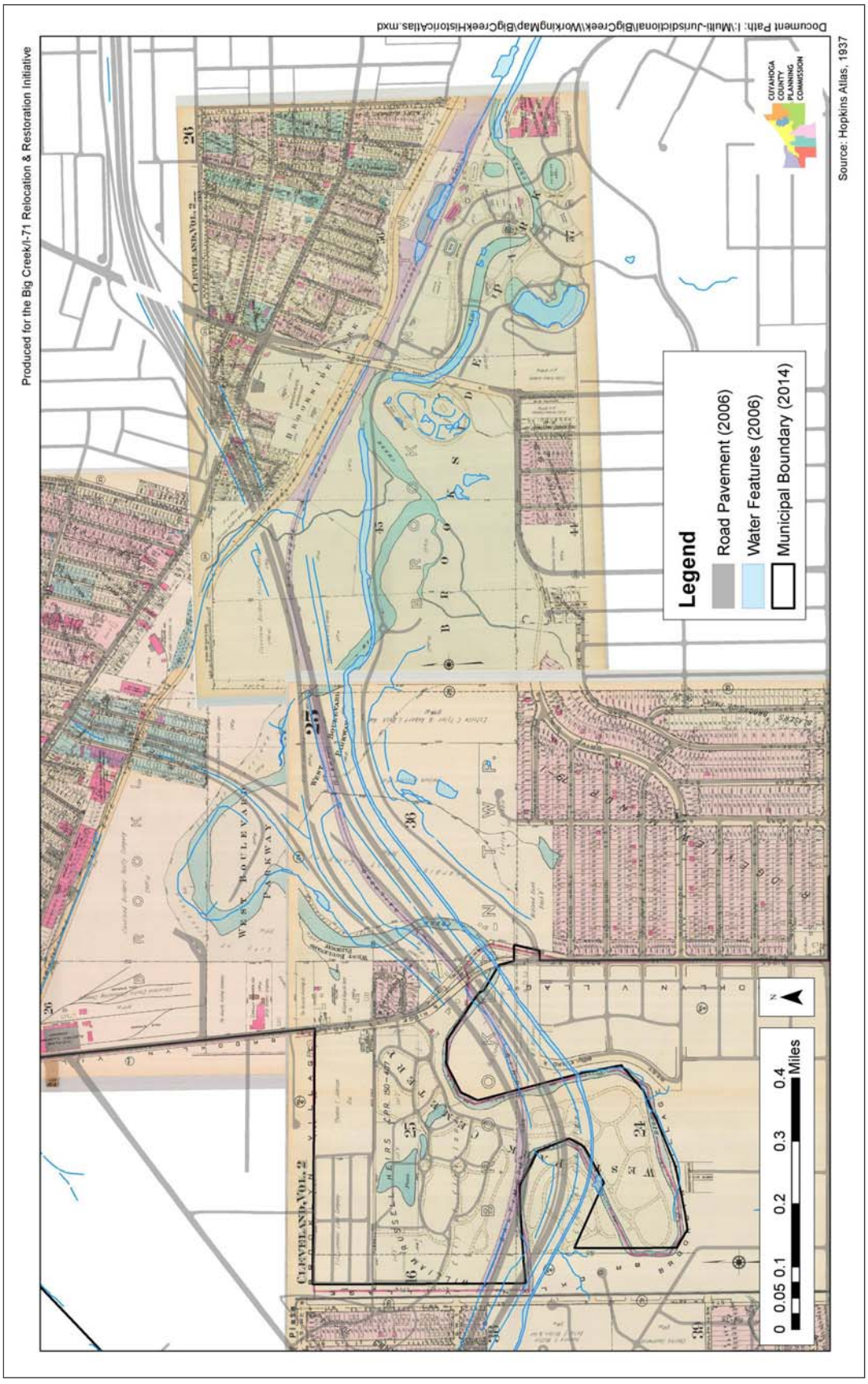
BROOKSIDE RESERVATION/CLEVELAND METROPARKS ZOO - Concept Plan

Recommendations	Key: 1 = highest, 2 = medium, 3 = lowest, OG = On-Going, NR = Natural Resources, PL = Planning, OE = Outdoor Education, PM = Park Manager, TR = Trail Coordinator, RE = Real Estate, Des = Design, Eng = Engineering, PO = Park Operations, G = Golf	Strategic Plan Objective	Priority	Grant Potential	Partner Potential	Budget (operations/ capital/income potential)	Phase (Operations, Planning, Design, Engineering)	Responsibility
①	**Core Protection Areas (Big Creek Floodway and Riparian Corridor)**							
BK1.1	• Work with surrounding community partners & NEORSD on major ecological enhancement program of Big Creek watershed including stream restoration.	3.2	OG	X	X	C	PL	NR
BK1.2	• Enhance the Big Creek bluffs & seeps as indigenous plant communities.	3.1	OG	X	X	C/O	IMP	NR
BK1.3	• Restore Wildlife Way valley and drainage corridor (remove fill).	3.1	2	X	X	C/O	ENG	NR
②	**Internal Trails & Roadways**							
BK2.1	• Improve parking lots and west zoo entry demonstrating green infrastructure stormwater solution.	3.2	1	X	X	C	ENG	PM
③	**Neighborhood Connections**							
BK3.1	• Work with local communities to improve bikeway connections and streetscapes surrounding Reservation & Zoo.	4.3	3	X	X	C	PL	PDNR
④	**Regional Connections**							
BK4.1	• Continue to work with community partners on connection to Towpath and Scenic Rail with reuse strategies for underutilized land that builds synergy with zoo.	4.2	2	X	X	C	PL	PDNR
BK4.2	• Pursue connections to natural areas along I-71 west of the Reservation and connect to Big Creek Reservation to create a greenway through Brooklyn.	4.3	2	X	X	C	PL	PDNR
⑤	**Entry/Arrival**							
BK5.1	• Work with community partners on improving connections from Interstate as gateways to Reservation and Zoo.	4.2	3	X	X	C	DES	PM
⑥	**Building Improvements**							
BK6.1	• Work with City of Cleveland to relocate city maintenance buildings out of park and reuse area for recreational enhancements.	2.2	1		X	C	IMP	RE
BK6.2	• Work with Zoo to address maintenance and management expansion needs and consider potential for relocation and consolidation with Brookside operations facility needs.		2			O	PL	PM
⑦	**Outdoor Recreation**							
BK7.1	• Work with the City on the historic ballfield site to optimize its use as a public amenity.	2.2	2	X	X	C	IMP	OE
BK7.2	• Consider addition of outdoor recreation and education amenities such as exercise stations, bike skills course, community garden, dog exercise area, innovative play feature(s), potentially in conjunction with Zoo.	2.2	2			C	DES	PM
⑧	**Park Expansion**							
BK8.1	• Work with City of Cleveland to include Historic Ball Diamond, maintenance area and out parcel on southwest corner of Reservation.	3.3	2	X	X	C	IMP	RE
BK8.2	• Investigate opportunity to incorporate wetland area north of railroad track as restoration/mitigation bank.	3.3	3	X	X	INC	ENG	NR

27

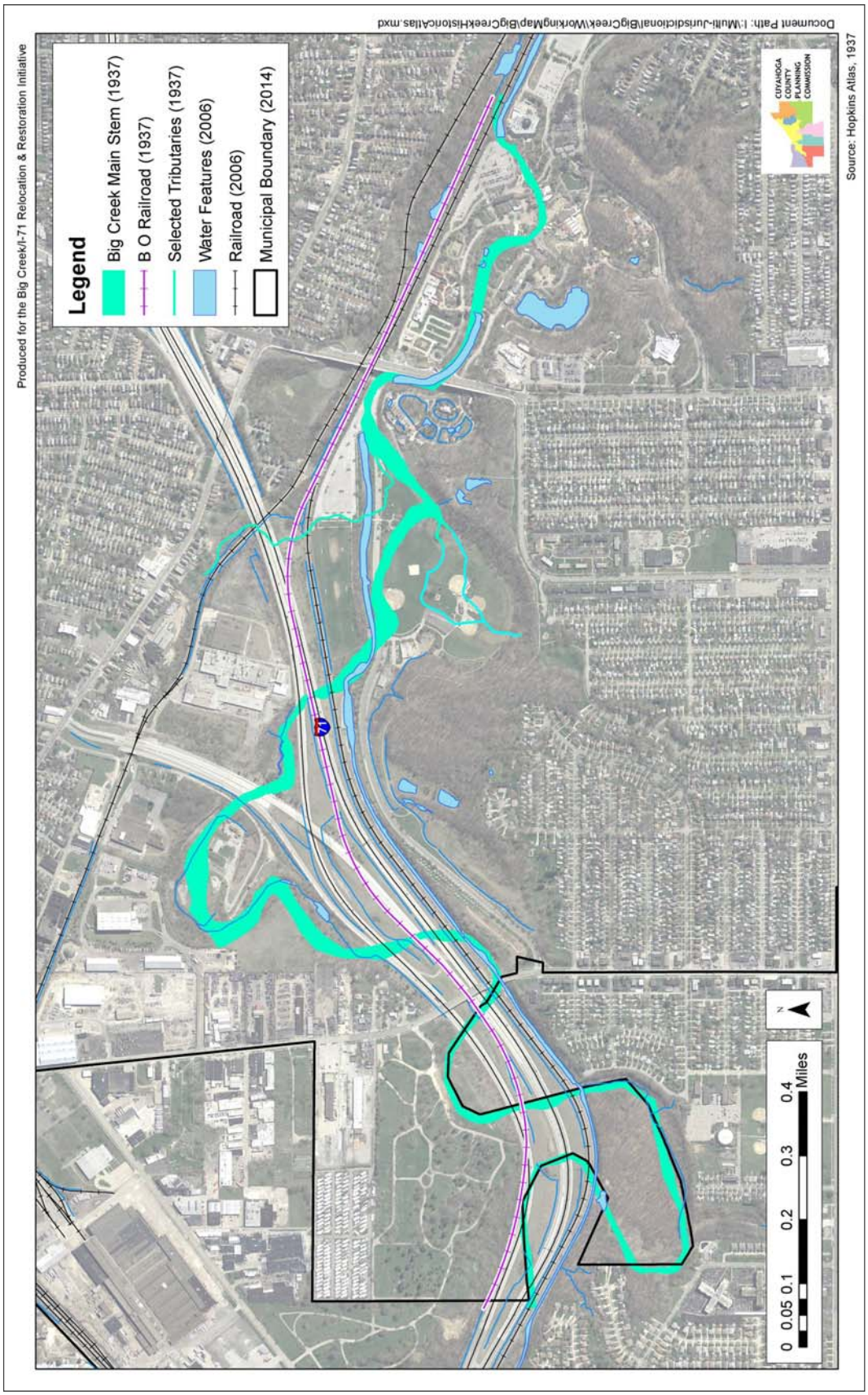
STREAM/HIGHWAY OVERLAY MAPS - 1937 VS. 2006

1937 BASE MAP



STREAM/HIGHWAY OVERLAY MAPS - 1937 VS. 2006

2006 BASE MAP



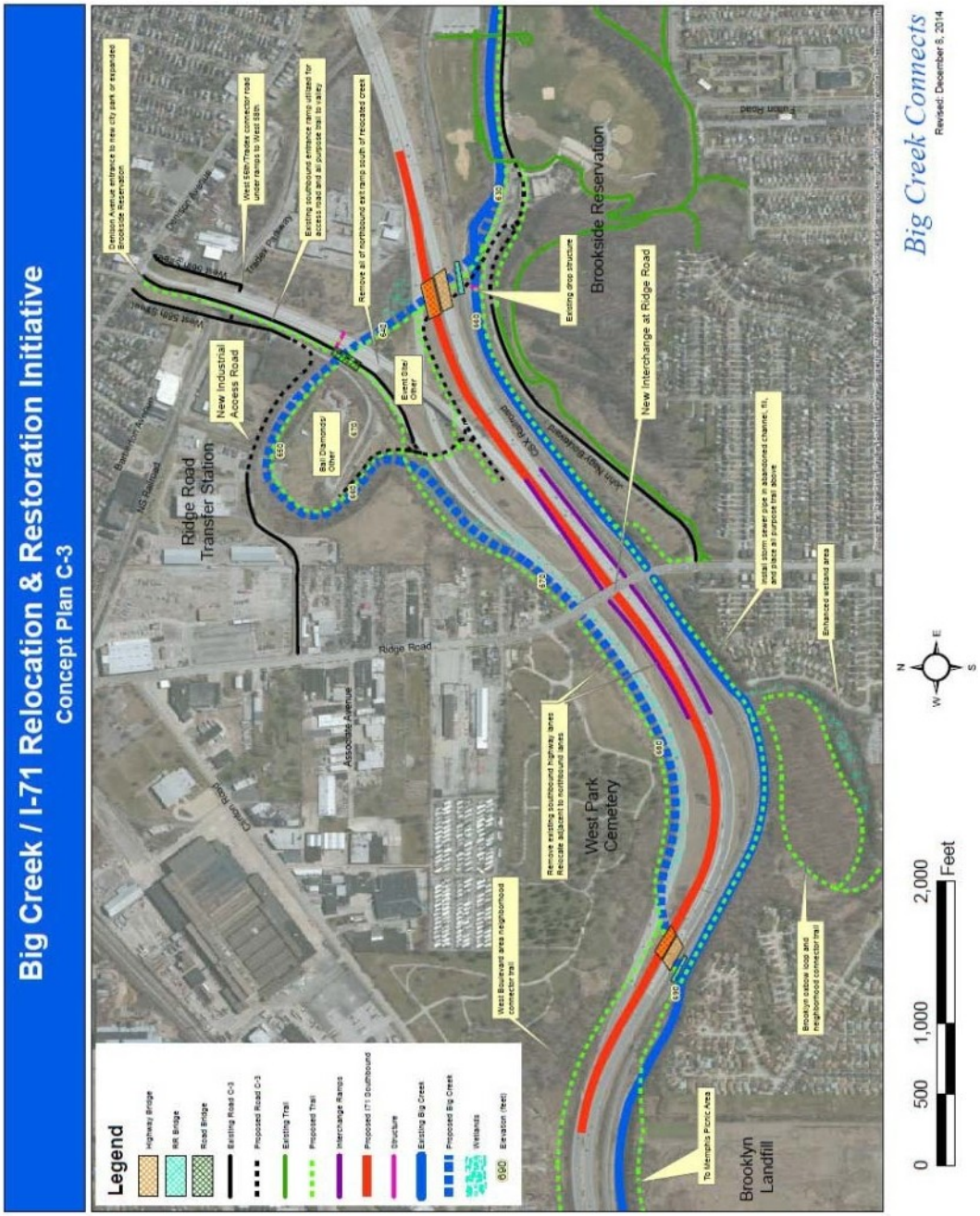
BIG CREEK I-71 RELOCATION AND RESTORATION INITIATIVE - CONCEPT C3 ESTIMATE

Summary of costs:

Stream Relocation:	$	12,600,000
Access Drives and Bike Trails:	$	7,800,000
I-71/Denison/Ridge Reconstruction:		
Removals:	$	2,540,000
I-71 Roadway Reconstruction:	$	9,640,000
Bridge:	$	24,920,000
I-71/Ridge Interchange:	$	15,500,000
Subtotal:	*$*	*73,000,000*
Contingency (30%):	$	21,900,000
Subtotal:	*$*	*94,900,000*
Planning, Environmental, and Engineering (15%):	$	14,300,000
Construction Admin. And Inspection (7%):	$	6,700,000
Total Budget:	***$***	***115,900,000***

Source: ODOT Procedure for Budget Estimating - May 2013

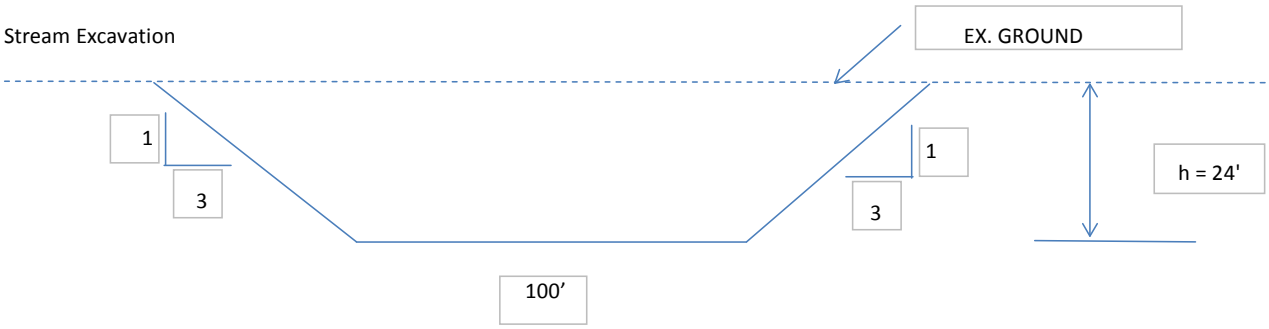
COST ESTIMATE DETAILS FOR CONCEPT C-3



Source: ODOT's Procedure for Budget Estimating - May 2013

COST ESTIMATE DETAILS FOR CONCEPT C-3

Stream Excavation



EX. GROUND	PROP. STREAM ELEV.	h
705	690	15
720	680	40
696	670	26
690	660	30
670	650	20
650	640	10
704	640	64
630	630	0
	AVG. =	25.625

Area = ((100 x 25.625) + (3 x 25.625))/27

97.8 cy/ft

Assume 1/4 shale excavation -

0.25	97.8 cy/ft	8400 lft	$ 30	/cy	$6,158,542
3/4 earth excavation -					
0.75	97.8 cy/ft	8400 lft	$ 8	/cy	$4,926,833

Stream Restoration -	$1,500,000

Subtotal: $12,600,000

Source: ODOT's Procedure for Budget Estimating - May 2013

COST ESTIMATE DETAILS FOR CONCEPT C-3

Access Drives:

1	mile	3	lanes	$415,000	/lane-mile	$1,245,000

Bike Trails:

Fill existing Big Creek

Assume

75	cy/lft	5800	lft	$9	/cy	$3,915,000

Trail on old creek alignment

5800	lft	5280	ft/mile	$500,000	/mile	$549,242

All other trails:

4	miles			$500,000	/mile	$2,000,000

Subtotal: $7,800,000

Source: ODOT's Procedure for Budget Estimating - May 2013

Pavement Removed:

I-71 SB, Denison to I-71 SB and I-71 NB to Denison

Designation	Area (SF)
R1	245000
R2	365000
R3	70000
R4	75000
R5	45000

800000 sft	1 sy	9 sft	88888.89 sy	
$ 8 /sy	$ 711,111			

Bridges Removed:

Ridge Road over I-71:

50000 sft

I-71 NB to Denison over I-71 SB:

41000 sft

91000 sft	$ 20 /sft	$ 1,820,000

Subtotal: $ 2,540,000

Source: ODOT's Procedure for Budget Estimating - May 2013

COST ESTIMATE DETAILS FOR CONCEPT C-3

Proposed I-71 Southbound Pavement:

8000 ft

Assume 4-12' lanes

8000	lft	5280	lft/mile	4	lanes	$ 478,000 /lane mile	$ 2,900,000

Outside shoulder + 2 inside shoulders:

8000	lft	5280	lft/mile	3	lanes	$ 345,000 /lane mile	$ 1,600,000

Lighting:

8000	lft	$ 100	/lft	$ 800,000

Drainage:

8000	lft	$ 500	/lft	$ 4,000,000

Signs and Pavement Markings:

$200,000	per miles for signs
$3,000	per lane mile for lane lines
$5,000	per lane mile for edge lines

$200,000 /mile (signs)	/lane mile $5,000 (lane lines)	3	lanes	$3,000	/lane mile (edge lines)	3	lanes	8000 lft	5280 ft/mile	$ 339,394

Subtotal: $ 9,640,000

Source: ODOT's Procedure for Budget Estimating - May 2013

Bridges

I-71 NB and SB over Relocated Big Creek (2 Structures):

2 Structures	220 ft	158 ft	$175 /sft	$12,166,000

CSX over Relocated Big Creek (2 Structures):

2 Structures	220 ft	20 ft	$900 /sft	$7,920,000

Access Road over Big Creek:

1 Structure	200 ft	33 ft	$175 /sft	$1,155,000

Bridge over NS and W. 56th Access Road:

1 Structure	200 ft	105 ft	$175 /sft	$3,675,000

Subtotal: $ 24,920,000

Source: ODOT's Procedure for Budget Estimating - May 2013

COST ESTIMATE DETAILS FOR CONCEPT C-3

New Ridge Road Interchange:

Ramps:

1100 ft	4 ramps	28 ft wide	1 sy	9 sft	$ 68 /sy	$ 930,844

Retaining Walls (assume walls between 71NB and CSX to support ramps to and from Ridge Road)

2 ramps	2 walls/ramp	1100 ft	12 ft ht		$ 150 /sft	$ 7,920,000

Bridges:

Ridge over I-71:

19000 sft					$ 175 /sft	$ 3,325,000

Ridge over Big Creek:

250 ft	64 ft				$ 175 /sft	$ 2,800,000

Lighting:

Interchange lighting	$ 500,000

Subtotal:$ 15,500,000

Source: ODOT's Procedure
for Budget Estimating - May 2013

Big Creek/I-71 Relocation & Restoration Initiative
Project Scope & Deliverables for Transportation for Livable Communities (TLCI) Planning Grant
February 27, 2015

Determine Project Goals and Objectives and Public Process ($15k)

- Work with Steering Committee to determine the project goals and Objectives
- Public Involvement – the public process will conform to the project goals and objectives

Traffic Analysis ($20k)

- Traffic counts:
  - Peak hour counts only
- Trip Development and Distribution
  - Existing & Proposed Trip Generation
  - Volume Distribution & Development
- Traffic Analysis
  - Existing and design year freeway traffic analysis following ODOT Interchange Modification Study guidelines.
  - Existing and proposed traffic signal analysis.

Assess Economic Impacts ($25k)

- Perform a general market analysis, covering the study area containing the I-71 interchange project. The areas covered within the market analysis will include neighborhoods immediately adjacent to and those within a mile of the proposed infrastructure improvements. The analysis will identify market supportable land-uses, post infrastructure improvements (inclusive of residential, commercial and industrial uses) and the likely absorption period for such uses.
- Conduct both economic and fiscal impact analyses associated with the prospective investment which may materialize, after infrastructure improvements. Impacts associated with direct and indirect job creation, economic output, and state and local tax revenues and service costs will be evaluated.
- Perform an economic impact analysis associated with newly created open/green space (e.g., a proximity effect analysis to identify the likely incremental increase in real property value, as well as the likely increase in social capital, due to recreational attractiveness of the open/green space improvements.)

Conceptual Plan ($38k)

- Land Use Assessment: Property Map of the area with owners' information and existing land use
- Develop concepts for roadway reconfiguration and pedestrian/bicycle enhancements
- Determine Grading Issues
- Evaluate Structure (Bridge and Wall) Alternatives
- Coordinate Relocated Creek Realignment/Stream Restoration with Design Alternatives
- Determine Environmental Constraints
- Develop Planning Level Cost Estimate, Conceptual Phasing/Implementation and Identify Funding Sources
- Report

Total Cost: $98,000

CITY OF CLEVELAND
Office of the Council www.clevelandcitycouncil.org

Kevin J. Kelley COUNCIL MEMBER, WARD 13 • COUNCIL PRESIDENT
COMMITTEES: Finance - Chair • Rules - Chair
Mayor's Appointments • Operations

March 5, 2015

Grace Gallucci
Executive Director,
Northeast Ohio Areawide Coordinating Agency
1299 Superior Avenue
Cleveland, Ohio 44144

Dear Ms. Gallucci:

Please accept this letter of support for the **Big Creek/I-71 Relocation & Restoration Initiative** application being submitted by the City of Brooklyn for Transportation for Livable Communities Initiative (TLCI) funds.

I reviewed the Final Draft for Review of the Big Creek/I-71 study (February 2015) and support the Project Scope & Deliverables for 2016 TLCI application. These include determining project goals, objectives and the public process; performing traffic analysis, assessing economic impacts; and developing a preferred concept plan with a planning level cost estimate, a conceptual phasing/implementation strategy and identification of funding sources.

The City of Cleveland will partner with the City of Brooklyn and Big Creek Connects for this $98,000 planning study. I will also submit a Council Resolution of Support to NAOCA by June 5, 2015 noting this commitments.

I believe that the Big Creek/I-71 Initiative has the potential to restore the hydrology of Big Creek and address a number of issues related to flooding, erosion and water quality; restore and naturalize developed and underutilized land areas; open up a number of economic development opportunities within the adjacent neighborhoods; improve traffic distribution, increase recreational space; connect these spaces with each other and with the adjacent neighborhoods and other communities; and make these neighborhoods more livable and attractive for investment.

For these reasons, I strongly support the TLCI application from the City of Brooklyn.

Sincerely,

Kevin Kelley
President of Cleveland City Council

City Hall 601 Lakeside Avenue N.E., Room 220, Cleveland, OH 44114 • **Phone** (216) 664-2943 • **Fax** (216) 664-3837
Email kkelley@clevelandcitycouncil.org

City of Cleveland
Office of the Council
Brian J. Cummins
Councilman, Ward 14
Committees: • Development, Planning and Sustainability • Health and Human Services • Municipal Services and Properties • Utilities • Rules • Community Relations Board

March 5, 2015

Grace Gallucci
Executive Director
Northeast Ohio Areawide Coordinating Agency
1299 Superior Avenue
Cleveland, Ohio 44144

Dear Ms. Gallucci:

Please accept this letter of support for the Big Creek/I-71 Relocation & Restoration Initiative application being submitted by the City of Brooklyn for Transportation for Livable Communities Initiative (TLCI) funds.

Cleveland City Council has reviewed the Final Draft for Review of the Big Creek/I-71 study (February 2015) and supports the Project Scope & Deliverables for 2016 TLCI application. These include determining project goals, objectives and the public process; performing traffic analysis, assessing economic impacts; and developing a preferred concept plan with a planning level cost estimate, a conceptual phasing/implementation strategy and identification of funding sources.

Cleveland City Council, with the Ward 14 office as a primary lead sponsor, will partner with the City of Brooklyn and Big Creek Connects and commit one-half of the 20% match requirement ($10,000) for this $98,000 planning study. The city will also submit a Council Resolution of Support to NAOCA by June 5, 2015 noting these commitments.

We believe that the Big Creek/I-71 Initiative has the potential to restore the hydrology of Big Creek and address a number of issues related to flooding, erosion and water quality; restore and naturalize developed and underutilized land areas; open up a number of economic development opportunities within the adjacent neighborhoods; improve traffic distribution, increase recreational space; connect these spaces with each other and with the adjacent neighborhoods and other communities; and make these neighborhoods more livable and attractive for investment.

For these reasons, we strongly support the TLCI application from the City of Brooklyn.

Sincerely,

Brian J. Cummins
Cleveland City Council, Ward 14

City Hall • Room 216 • 601 Lakeside Avenue • Cleveland, OH 44114 • (216) 664-4238 • Fax (216) 664- 3837
bcummins@clevelandcitycouncil.org

Representative Bill Patmon
10th District

March 5, 2015

Grace Gallucci
Executive Director,
Northeast Ohio Areawide Coordinating Agency
1299 Superior Avenue
Cleveland, Ohio 44144

Dear Ms. Gallucci:

Please accept this letter of support for the **Big Creek/I-71 Relocation & Restoration Initiative** application being submitted by the City of Brooklyn for Transportation for Livable Communities Initiative (TLCI) funds.

I have reviewed the *Final Draft for Review* of the Big Creek/I-71 study (February 2015) and supports the following scope and deliverables for the TLCI application: determine project goals, objectives and the public process; perform traffic analysis, assess economic impacts; and develop a preferred concept plan with a planning level cost estimate, a conceptual phasing/implementation strategy and identification of funding sources.

I believe that the Big Creek/I-71 Initiative has the potential to: address a number of issues related to flooding, erosion and water quality; restore and naturalize developed and underutilized land areas; open up a number of economic development opportunities within the surrounding communities; improve vehicular traffic distribution; increase recreational space; connect these spaces with each other and with the adjacent Brooklyn and Cleveland neighborhoods; and make these communities more livable and attractive for investment.

For these reasons, I strongly support the TLCI application by the City of Brooklyn.

Respectfully,

Representative Bill Patmon
10th House District

Committees:

- Agriculture and Rural Development
- Community and Family Advancement
- Subcommittee on Minority Affairs
- Education

www.house.state.oh.us
77 S. High Street, Columbus, Ohio 43215-6111

Contact Information:
Office: 614-466-7954
FAX: 614-719-0010
Email: rep10@ohiohouse.gov

Committees:
Finance and Appropriations
Health and Aging, Ranking Member
Finance Subcommittee on Health & Human Services
Rules & References

13th District
City of Lakewood
Parts of Cleveland's West Side
Wards 3, 14, 15, 16, & 17
(614) 466-5921
(614) 719-3913 (fax)

Nickie J. Antonio
State Representative

March 5, 2015

Grace Gallucci
Executive Director,
Northeast Ohio Areawide Coordinating Agency
1299 Superior Avenue
Cleveland, Ohio 44144

Dear Ms. Gallucci,

Please accept this letter of support for the Big Creek/I-71 Relocation & Restoration Initiative application being submitted by the City of Brooklyn for Transportation for Livable Communities Initiative (TLCI) funds.

I have reviewed the February 2015 Final Draft for Review of the Big Creek/I-71 study and support the following scope and deliverables for the TLCI application: determine project goals, objectives and the public process; perform traffic analysis; assess economic impacts; and develop a preferred concept plan with a planning level cost estimate, a conceptual phasing/implementation strategy and identification of funding sources.

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For these reasons, I strongly support the TLCI application by the City of Brooklyn.

Sincerely,

Nickie J. Antonio
State Representative
13th District

77 South High Street • Columbus, Ohio 43215-6111

14th House District

· Cuyahoga County·
·Brooklyn·
·Brook Park·
·Middleburg Heights·
·Parma Heights·

Committees

·Commerce and Labor·
·State Government·
·Transportation·

Martin J. Sweeney
State Representative

Grace Gallucci
Executive Director,
Northeast Ohio Areawide Coordinating Agency
1299 Superior Avenue
Cleveland, Ohio 44144

Dear Ms. Gallucci:

Please accept this letter of support for the Big Creek/I-71 Relocation & Restoration Initiative application being submitted by the City of Brooklyn for Transportation for Livable Communities Initiative (TLCI) funds.

My staff and I have reviewed the *Final Draft for Review* of the Big Creek/I-71 study and supports the following scope and deliverables for the TLCI application: determine project goals, objectives and the public process; perform traffic analysis, assess economic impacts; and develop a preferred concept plan with a planning level cost estimate, a conceptual phasing/implementation strategy and identification of funding sources.

I believe that the Big Creek/I-71 Initiative has the potential to: address a number of issues related to flooding, erosion and water quality; restore and naturalize developed and underutilized land areas; open up a number of economic development opportunities within the surrounding communities; improve vehicular traffic distribution; increase recreational space; connect these spaces with each other and with the adjacent Brooklyn and Cleveland neighborhoods; and make these communities more livable and attractive for investment.

For these reasons, I strongly support the TLCI application by the City of Brooklyn.

Sincerely,

Martin J. Sweeny
State Representative
14th Ohio House district

77 South High Street, Columbus, Ohio 43215-6111
Phone: (614)466-3350
Email: Rep14@ohiohouse.gov

Columbus Office:
(614) 466-3485
(614) 719-3911 (fax)
(800) 282-0253 (toll free)
District15@ohiohouse.gov

District:
Parts of Cuyahoga County
5546 Pearl Road
Parma, OH 44129
(440) 884-2400
(440) 884-2401 (fax)

Committees:
Rules and Reference
Judiciary

Nicholas J. Celebrezze
State Representative
15th House District

Grace Gallucci
Executive Director,
Northeast Ohio Areawide Coordinating Agency
1299 Superior Avenue
Cleveland, Ohio 44144

Dear Ms. Gallucci:

Please accept this letter of support for the **Big Creek/I-71 Relocation & Restoration Initiative** application being submitted by the City of Brooklyn for Transportation for Livable Communities Initiative (TLCI) funds.

I/my staff has reviewed the *Final Draft for Review* of the Big Creek/I-71 study (February 2015) and supports the following scope and deliverables for the TLCI application: determine project goals, objectives and the public process; perform traffic analysis, assess economic impacts; and develop a preferred concept plan with a planning level cost estimate, a conceptual phasing/implementation strategy and identification of funding sources.

I believe that the Big Creek/I-71 Initiative has the potential to: address a number of issues related to flooding, erosion and water quality; restore and naturalize developed and underutilized land areas; open up a number of economic development opportunities within the surrounding communities; improve vehicular traffic distribution; increase recreational space; connect these spaces with each other and with the adjacent Brooklyn and Cleveland neighborhoods; and make these communities more livable and attractive for investment.

For these reasons, I strongly support the TLCI application by the City of Brooklyn.

Yours in service,

Nicholas J. Celebrezze
Ohio State Representative
Ohio House District 15

www.house.state.oh.us
77 S. High Street, Columbus, Ohio 43215-6111

SENATOR
SANDRA R. WILLIAMS
21ST DISTRICT

Committees
Public Utilities - *Ranking Member*
Finance - Sub-Committee on Workforce Development, *Vice Chair*
Criminal Justice
Education
Energy and Natural Resources
Insurance
Medicaid
Ways and Means

March 20, 2015

Bob Gardin
Executive Director
Big Creek Connects
4352 Pearl Road,
Cleveland, Ohio 44109

Dear Mr. Gardin:

Please accept this letter of support for the Big Creek/I-71 Relocation & Restoration Initiative application being submitted by the City of Brooklyn for Transportation for Livable Communities Initiative (TLCI) funds.

I have reviewed the February 2015 Final Draft for Review of the Big Creek/I-71 study and supports the following scope and deliverables for the TLCI application: determine project goals, objectives, and the public process; perform traffic analysis, assess economic impacts; and develop a preferred concept plan with a planning level cost estimate—a conceptual phasing (implementation) strategy and identification of funding sources.

I believe that the Big Creek/I-71 Initiative has the potential to: address a number of issues related to flooding, erosion, and water quality; restore and naturalize developed and underutilized land areas; open up a number of economic development opportunities within the surrounding communities; improve vehicular traffic distribution; increase recreational space; connect these spaces with each other and with the adjacent Brooklyn and Cleveland neighborhoods; and make these communities more livable and attractive for future investment.

Therefore, I strongly support the Big Creek / I-71 Relocation and Restoration Initiative's request for the Transportation for Livable Communities Initiative (TLCI) funds. I wish you all the best in your efforts to improve our community and look forward to working with you as you move forward with your plans.

Yours in Service,

Sandra R. Wms

Sandra Williams
Ohio State Senator, District 21

Columbus Office: Senate Building • 1 Capitol Square • Columbus, OH 43215
Email: Williams@ohiosenate.gov
Phone: 614-466-4857 • Fax: 614-466-4120

Ohio Senate
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1 Capitol Square
Columbus, Ohio 43215
(614) 466-5123

Committees:
Finance - *Ranking Minority Member*
Civil Justice - *Ranking Minority Member*
Agriculture
Criminal Justice
Finance - General Government Subcommittee
Government Oversight and Reform

Michael J. Skindell
State Senator
23rd District

March 10, 2015

Grace Gallucci
Executive Director,
Northeast Ohio Areawide Coordinating Agency
1299 Superior Avenue
Cleveland, Ohio 44144

RE: Big Creek/I-71 Relocation & Restoration Initiative

Dear Ms. Gallucci:

Please accept this letter of support for the Big Creek/I-71 Relocation & Restoration Initiative application being submitted by the City of Brooklyn for Transportation for Livable Communities Initiative (TLCI) funds.

I have reviewed the February 2015 Final Draft for Review of the Big Creek/I-71 study and supports the following scope and deliverables for the TLCI application: determine project goals, objectives and the public process; perform traffic analysis, assess economic impacts; and develop a preferred concept plan with a planning level cost estimate, a conceptual phasing/implementation strategy and identification of funding sources.

I believe that the Big Creek/I-71 Initiative has the potential to: address a number of issues related to flooding, erosion and water quality; restore and naturalize developed and underutilized land areas; open up a number of economic development opportunities within the surrounding communities; improve vehicular traffic distribution; increase recreational space; connect these spaces with each other and with the adjacent Brooklyn and Cleveland neighborhoods; and make these communities more livable and attractive for investment.

For these reasons, I strongly support the TLCI application by the City of Brooklyn.

Sincerely,

Michael J Skindell

Michael J. Skindell
State Senator
23rd Senate District

COMMITTEE ON APPROPRIATIONS
RANKING MEMBER
Subcommittee on Energy and Water Development and Related Agencies
Subcommittee on Defense
Subcommittee on Financial Services and General Government

MARCY KAPTUR
9TH DISTRICT, OHIO

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http://kaptur.house.gov

March 11, 2015

Grace Gallucci
Executive Director
Northeast Ohio Areawide Coordinating Agency
1299 Superior Avenue
Cleveland, OH 44144

Dear Ms. Gallucci:

I am pleased to offer my support for the proposal being advanced by the City of Brooklyn for the Transportation for Livable Communities Initiative (TLCI) funds. The City seeks to partner with the City of Cleveland and Big Creek Connects on the *Big Creek/I-71 Relocation and Restoration Initiative*.

In keeping with the goals of the TLCI program, Brooklyn proposes a study that will determine project goals, objectives and the public process; perform traffic analysis, assess economic impacts; and develop a preferred concept plan with a planning level cost estimate, a conceptual phasing/implementation strategy and indentify funding sources.

The Big Creek/I-71 Relocation and Restoration Initiative will improve the prospect of a well-integrated transportation and land use in the community. The proposed study will be designed to improve traffic distribution, expand recreational space, identify economic opportunities through appropriate land use, and provide better connectivity with adjacent communities.

As an additional benefit, the Brooklyn proposal has the potential to restore the hydrology of Big Creek. Environmental problems such as flooding, bank erosion and declining water quality will be addressed through the planning process. For these reasons I urge the application's favorable review consistent with your agency's rules and regulations.

Sincerely,

Marcy Kaptur

MARCY KAPTUR
U.S. Representative

One Maritime Plaza, Rm. 600
Toledo, OH 43604
419-259-7500

200 West Erie, Rm. 310
Lorain, OH 44052
440-288-1500

16024 Madison St., Ste.3
Lakewood, OH 44107
216-767-5933

5592 Broadview Rd., Rm. 101
Parma, OH 44134
440-799-8499

Northeast Ohio Regional Sewer District
Protecting Your Health and Environment

March 5, 2015

Grace Gallucci
Executive Director,
Northeast Ohio Areawide Coordinating Agency
1299 Superior Avenue
Cleveland, Ohio 44144

Re: Big Creek / I-71 Relocation & Restoration Initiative

Dear Ms. Gallucci,

The Northeast Ohio Regional Sewer District (NEORSD) has reviewed the Big Creek / I-71 Relocation & Restoration Initiative Study and supports the City of Brooklyn's 2016 Transportation for Livable Communities Initiative application to further develop project goals and objectives, assess economic impacts and to complete traffic analysis studies that may influence the relocation, restoration and water quality improvement to Big Creek and associated sewer collection system infrastructure within this portion of the Big Creek watershed.

For the past 43 years, NEORSD has provided watershed management services to the City of Brooklyn, City of Cleveland and 60 other member communities across the Rocky, Cuyahoga, Lake Erie Direct Tributaries, and Chagrin River watersheds. We support the efforts of our member communities and partnering organizations implementing projects that sustain healthy watersheds.

Sincerely,

Frank Greenland
Director of Watershed Programs

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STOCKYARD, CLARK-FULTON & BROOKLYN CENTRE
COMMUNITY DEVELOPMENT OFFICE

3167 FULTON ROAD, SUITE 303, CLEVELAND, OHIO 44109
TEL (216) 961-9073 / FAX (216) 961-9387

March 4, 2015

Grace Gallucci
Executive Director,
Northeast Ohio Areawide Coordinating Agency
1299 Superior Avenue
Cleveland, Ohio 44144

Dear Ms. Gallucci:

Please accept this letter of support for the **Big Creek/I-71 Relocation & Restoration Initiative** application being submitted by the City of Brooklyn for Transportation for Livable Communities Initiative (TLCI) funds.

The Stockyards, Clark Fulton, Brooklyn Centre (SCFBC) Community Development Office has reviewed the *Final Draft for Review* of the Big Creek/I-71 study (February 2015) and supports the February 27, 2015 *Project Scope & Deliverables draft for 2016 TLCI application*. These scope and deliverables include determining project goals, objectives and the public process; performing traffic analysis, assessing economic impacts; and developing a preferred concept plan with a planning level cost estimate, a conceptual phasing/implementation strategy and identification of funding sources.

We believe that the Big Creek/I-71 Initiative has the potential to restore the hydrology of Big Creek and address a number of issues related to flooding, erosion and water quality; restore and naturalize developed and underutilized land areas; open up a number of economic development opportunities within the Stockyards neighborhood; address issues related to traffic congestion, increase recreational space; connect these spaces with each other and with the Stockyards, adjacent neighborhoods and other communities; and make these neighborhoods more livable and attractive for investment.

For these reasons, we strongly support the TLCI application from the City of Brooklyn. If you have any questions, please feel free to contact me at 216-961-9073 x209 or by email at astalder@dscdo.org.

Sincerely,

Adam Stalder
Economic Development Director

March 4, 2015

Grace Gallucci
Executive Director,
Northeast Ohio Areawide Coordinating Agency
1299 Superior Avenue
Cleveland, Ohio 44144

Dear Ms. Gallucci:

Please accept this letter of support for the **Big Creek/I-71 Relocation & Restoration Initiative** application being submitted by the City of Brooklyn for Transportation for Livable Communities Initiative (TLCI) funds.

Old Brooklyn Community Development Corporation (OBCDC) has reviewed the *Final Draft for Review* of the Big Creek/I-71 study (February 2015) and supports the February 27, 2015 *Project Scope & Deliverables draft for 2016 TLCI application*. These scope and deliverables include determining project goals, objectives and the public process; performing traffic analysis, assessing economic impacts; and developing a preferred concept plan with a planning level cost estimate, a conceptual phasing/implementation strategy and identification of funding sources.

We are interested in exploring the solutions that the Big Creek/I-71 Initiative proposes to restore the hydrology of Big Creek and address a number of issues related to flooding, erosion and water quality; restore and naturalize developed and underutilized land areas; open up a number of economic development opportunities; increase recreational space; connect these spaces with each other and with the Old Brooklyn neighborhood and other communities; make these neighborhoods more livable; and attractive for investment.

For these reasons, we strongly support the TLCI application from the City of Brooklyn.

Sincerely,

Jeffrey T. Verespej
Executive Director

2339 BROADVIEW ROAD - CLEVELAND, OHIO 44109 - PHONE: 216.459.1000 | FAX: 216.459.1741
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BIG CREEK CONNECTS
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March 6, 2015

Grace Gallucci
Executive Director, Northeast Ohio Areawide Coordinating Agency
1299 Superior Avenue
Cleveland, Ohio 44144

Dear Ms. Gallucci:

Please accept this letter of support for the **Big Creek/I-71 Relocation & Restoration Initiative** application being submitted by the City of Brooklyn for Transportation for Livable Communities Initiative (TLCI) funds.

We developed the February 2015 *Final Draft for Review of the Big Creek/I-71* study, will have the final version of the study completed by March 31, 2015, and make the study available on our website. We support the following scope and deliverables for the TLCI application: determine project goals, objectives and the public process; perform traffic analysis, assess economic impacts; and develop a preferred concept plan with a planning level cost estimate, a conceptual phasing/implementation strategy and identification of funding sources.

As project partners BCC will share responsibility in selecting, overseeing and facilitating the work of the consultants and the steering committee, act as a liaison between the partner communities and other stakeholders, and assist with coordinating community outreach.

We believe that the Big Creek/I-71 Initiative has the potential to: address a number of issues related to flooding, erosion and water quality; restore and naturalize developed and underutilized land areas; open up a number of economic development opportunities within the surrounding communities; improve vehicular traffic distribution; increase recreational space; connect these spaces with each other and with the adjacent Brooklyn and Cleveland neighborhoods; and make these communities more livable and attractive for investment.

For these reasons, we strongly support the TLCI application by the City of Brooklyn.

Sincerely,

Bob Gardin
Executive Director

Mary Ellen Stasek
Board Chair

cleveland.com

Big Creek bike-pedestrian greenway eyed for vicinity of abandoned 'Parma Freeway'

Alison Grant, The Plain Dealer By **Alison Grant, The Plain Dealer**

Email the author | Follow on Twitter

on May 06, 2015 at 8:00 AM, updated May 08, 2015 at 7:22 AM

CLEVELAND, Ohio -- A highly urbanized area that straddles Cleveland and Brooklyn is the proposed canvas for a 6 ½-mile biking and walking trail that would be a green link between **the Towpath Trail** along the Cuyahoga River and **Big Creek Reservation** in Parma.

But making that happen, local planners say, could require tearing out a massive vestige of a highway started and then scrapped 50 years ago.

The Parma Freeway was planned in the 1960s to connect Interstate 71 with Interstate 90 to the north. It was never built -- a casualty of the era's "highway revolts" against expressways that were going to slice through neighborhoods, displacing homeowners and businesses.

But the Parma Freeway did get going in a big way, with construction of the first section of the highway, which instead ended as a stub of roadway and ramps leading to Denison Avenue. The incongruous infrastructure, which consumes over 30 acres, remains to this day.

The intended freeway came with other false starts. In order to make room for it to run north to I-90 and south through Brooklyn and Parma, the land above the natural meander of the Cuyahoga River tributary of Big Creek was leveled, a railroad line was moved south and Big Creek was shunted into a concrete channel parallel to the train tracks.

The map illustrates concepts developed by Big Creek Connects for removing much of the ramp structure off Interstate 71 leading to Denison Avenue, an anomaly left from an expressway started but never completed -- the "Parma Freeway." By also relocating southbound lanes next to the northbound lanes on I-71 and returning Big Creek to much of its original streambed, space would be freed up for a 6.5-mile multipurpose trail connecting Metroparks reservations, while also infusing economic vitality into distressed neighborhoods and lagging industrial/retail sections of Cleveland and Brooklyn, Big Creek Connects says. Click on the map several times to englarge it.

Big Creek Connects

The **non-profit Big Creek Connects** is questioning the value of the Denison ramp "partial interchange" (it allows southbound entrance and northbound exiting off I-71 only), and of the other freeway-related disruptions that went with it.

In a 98-page report released in March, the group looks at an array of transportation, economic, environmental and community changes along the Big Creek/I-71 corridor that could dramatically impact surrounding communities.

Tearing out the northbound exit ramp from I-71 to Denison would open up land so Big Creek could be "naturalized" by routing it into much of its historic streambed, said Bob Gardin, executive director of the stewardship organization.

That would go a long way toward alleviating the flooding, erosion and damage to aquatic life aggravated by the concrete channel, he said.

The proposed new bike-pedestrian trail would follow the new creek alignment, under concepts developed in the report. A parallel trail would go where the abandoned one-mile creek channel would be filled in. The greenway would run in an unbroken stretch from the Cuyahoga River around the Metroparks Zoo through Brookside Reservation to Brookpark Road and the Big Creek Reservation in Parma.

Ideas arising from years of study by Big Creek Connects don't end with a trail system linking the reservations to each other and surrounding communities. The organization suggests other transportation and land use changes that could help turn around lagging industrial, retail and housing blocks of Brooklyn and Cleveland.

Removing the Denison ramp, for example, when combined with relocating a Cleveland Police firing range, would open up over 50 acres of underused land to environmental cleanup and recreation. Taken together, the changes could significantly alter housing values and quality of life in the Stockyards, one of Cleveland's most distressed neighborhoods, Gardin said.

One concept would add a full I-71 interchange at Ridge Road to fan business growth, especially in the industrial corridor to the north, while helping divert truck traffic away from homes.

Another concept calls for building a connector road from Denison Avenue to Ridge Road by tying into an existing road that serves the Ridge Road Waste Transfer Station.

Budgets for the initial models range from $83.1 million to $115.9 million. The final amount would be bigger, because the calculations don't consider potential land acquisition, environmental cleanup, wetland construction, facility relocation or landscaping costs.

Jim Rokakis, director of **the Thriving Communities Institute,** quoted in a Big Creek Connects press release, described the non-profit's initial study as "an impressive body of work" that "makes good sense. Now we have to find the will — and dollars — to make it happen."

Thomas Bier, a senior fellow at the Maxine Goodman Levin College of Urban Affairs at Cleveland State University, said the objective of remaking the area in ways that are "best suited for the next 50 years, at least" is right on target. "[This] project is exactly what Cleveland and old inner suburbs like Brooklyn need."

Gardin goes before the executive committee of the Northeast Ohio Areawide Coordinating Agency on Friday to seek $78,000 for a **grant for in-depth planning.** Scheduled to join him in support of the request are Brooklyn City Council President Katherine Gallagher, Brooklyn Economic Development Director Fran Migliorino, Cleveland City Council President Kevin Kelley and Cleveland Councilman Brian Cummins.

The planning grant would be used to hire consultants who would study the traffic and economic impact of creating the greenway, decommissioning the Denison ramps, building an interchange at Ridge Road and other options. Meetings for public input would be set and a construction strategy and funding sources mapped out.

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Author/Byline: Alison Grant I Page: 01 I Section: A

June 19, 2015

The Honorable Richard Balbier
City of Brooklyn
7619 Memphis Avenue
Brooklyn, Ohio 44144

Dear Mayor Balbier,

Thank you for your interest in the Northeast Ohio Areawide Coordinating Agency's (NOACA) 2016 Transportation for Livable Communities Initiative (TLCI) program. We regret to inform you that the *Big Creek/I-71 Relocation & Restoration Initiative* application has not been selected for funding in this year's program.

NOACA received a total of 11 applications for the 2016 program requesting $669,000 in funding. Since the TLCI planning grant program annual allocation is limited to $500,000, this year's call for applications resulted in a highly competitive selection process. While your project was not advanced in the 2016 program, NOACA staff is committed to working with your staff and Big Creek Connects to identify key project elements for an application for the next round of TLCI expected this fall. We will also work with you to identify possible funding avenues to explore the interchange modification study and traffic analysis. NOACA staff will also be working with Ohio EPA and stakeholders to perform a land use inventory of potential pollutant sources in the Big Creek watershed and will be working with your staff and Big Creek Connects.

If you would like to meet to discuss your proposed project, please contact Joshua Naramore, Transportation Studies Manager, at 216-241-2414 extension 212, or jnaramore@mpo.noaca.org.

Thank you again for your interest in the TLCI program.

Respectfully,

Grace Gallucci
Executive Director

Cc: Fran Migliorino, Economic Development Director

GG/ks/jn

1299 Superior Ave., Cleveland, Ohio 44114-3204 Phone: 216·241·2414 FAX: 216·621·3024
Web: www.noaca.org noaca.org @noaca_mpo

The City of Brooklyn · Ohio

May 11, 2015

Ms. Grace Gallucci
Executive Director
Northeast Ohio Areawide Coordinating Agency
1299 Superior Avenue
Cleveland, Ohio 44114

Dear Ms. Gallucci:

The City of Brooklyn would like to thank you for putting the *Big Creek/I-71 Relocation & Restoration Initiative* on the Executive Committee's agenda Friday, May 8, 2015. We appreciate the time and discussion that took place during the meeting, and value your opinion. We will look at other funding opportunities and strategies to move the project forward.

We understand that the Transportation for Livable Communities Initiative is not the correct funding mechanism, and I thank you for offering other suggestions through NOACA for us to pursue. We look forward to working with your staff during this process.

Best regards,

Richard H. Balbier
Mayor

7619 Memphis Avenue • Brooklyn, OH 44144-2197 • (216) 351-2133 • Fax (216) 351-7601 • www.brooklynohio.gov

Ohio Balanced Growth Program

Program Overview

balancedgrowth.ohio.gov

Balanced Growth Plans:

In the Ohio Balanced Growth Program, watersheds are the key organizing feature for land use planning. Collaboration across the watershed allows coordinated, regional decision-making about how growth and conservation should be promoted by local and state policies and investments.

Best Local Land Use Practices:

The Ohio Balanced Growth Program supplies information on best local land use practices for minimizing development and redevelopment impacts on water quality. This includes model zoning ordinances and resolutions, guidance documents, and training opportunities for local government elected officials and staff.

Implementation:

- Several Watershed Planning partnerships have developed Watershed Balanced Growth Plans (see map on reverse).
- The state sponsors an awareness and training program on Best Local Land Use Practices highlighting examples used in Ohio, guidance for local governments, and free technical assistance to local officials interested in improving land use practices in their communities.
- An Ohio Balanced Growth Strategy identifies programs and policies that state agencies can use to assist and encourage local governments in implementing the Watershed Balanced Growth Plans.
- The program maintains an online Inventory of State Programs that influence or support local land use decisions.

About Balanced Growth

The Ohio Balanced Growth Program is a voluntary, incentive based program to encourage local governments to engage in watershed-based regional planning and water quality oriented best local land use practices. The goal of the program is to protect and restore Lake Erie, the Ohio River, and Ohio's watersheds and drinking water source areas to assure long-term economic competitiveness, ecological health, and quality of life in Ohio.

The program focuses state funded development and redevelopment into suitable areas, and focuses state conservation investments into areas of ecological and hydrological significance. If local governments can agree on areas within a watershed where development is to be encouraged (Priority Development Areas) and areas where conservation activities are to be promoted (Priority Conservation Areas), the state will support those decisions by aligning state programs to support those decisions, and conversely will not utilize state programs to violate those locally based decisions.

State Commitment

Originally endorsed by the Ohio Lake Erie Commission and piloted in the Lake Erie watershed in 2004, the Ohio Balanced Growth Program was expanded statewide by action of the Ohio Water Resources Council in 2009. Member agencies of the Commission and Council have committed to supporting the program through their individual agency activities. One of the state incentives for local governments is the opportunity to work with state agencies through the State Assistance Work Group (SAWG). The SAWG consists of management level representatives of each member agency. The SAWG members will assist in identifying sources of state support, providing agency guidance on utilizing state support, and promoting awareness of the local government watershed based planning intentions within the agencies.

Recommendations

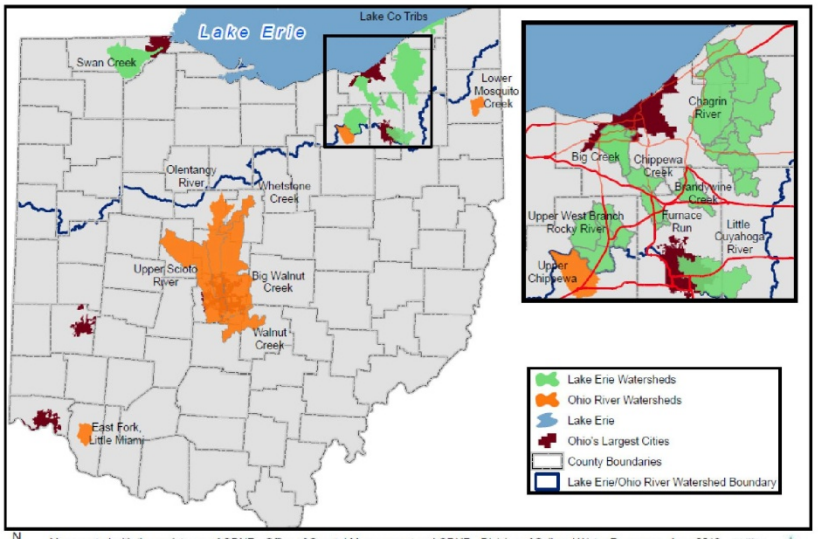
- A regional focus on land use and development planning.
- The creation of local Watershed Planning Partnerships to designate Priority Development Areas, Priority Conservation Areas, and, if desired in the watershed, Priority Agricultural Areas.
- The alignment of state policies, incentives, funding, and other resources to support watershed balanced growth planning and implementation.
- The implementation of recommended best local land use practices that minimize impacts on water quality and provide for well planned development efficiently served by infrastructure.

A Vision for Ohio

The Ohio Balanced Growth Program will raise the stewardship of Ohio's watersheds to a higher level; promote new forms of regional cooperation; and help us all envision how stewardship of our great water resources will be an essential part of Ohio's future progress.

V2.0

Balanced Growth Planning Partnership Watersheds



Watersheds with state endorsed Balanced Growth Plans:

- Swan Creek
- Upper West Branch Rocky River
- Chippewa Creek
- Big Creek
- Chagrin River
- Eastern Lake County Coastal Tribs
- Brandywine Creek
- Lower Mosquito Creek
- Middle East Fork
- Upper Chippewa Creek
- Olentangy River
- Upper Scioto River
- Walnut Creek
- Big Walnut Creek (draft)

Watershed Planning Partnerships

A Watershed Planning Partnership is the organization leading a watershed planning process that reviews local development pressures and opportunities, inventories sensitive resources, and produces a Watershed Balanced Growth Plan. Once the plan is endorsed by the state, the participating local communities are eligible for state incentives.

The Financial and Technical State Incentives consist of existing state programs that have implemented additional consideration (extra priority ranking, interest rate discounts, or special support) for funding applications or technical support that will implement specific activities in Priority Development Areas or Priority Conservation Areas in Balanced Growth participating communities:

Ohio Environmental Protection Agency:

- Section 208 Planning
- Clean Water Act Section 319 Implementation Grants
- Water Pollution Ctrl Loan Fund
- Water Supply Revolving Loan Account

Ohio Development Services Agency:

- Technical Assistance for Business and Community Development

Ohio Lake Erie Commission:

- Lake Erie Protection Fund

Ohio Water Development Authority:

- Dam Safety Loan Program
- Community Assistance Loan Program
- Fresh Water Loan Group

Ohio Department of Natural Resources:

- Coastal Mgmt Assistance Grant
- Watershed Coordinator Grant
- Market Development Grant
- Scrap Tire Grant
- Land & Water Cons. Fund
- Nature Works
- Streams & Storm Water Program
- Ohio Lake Erie and Scioto River Conservation Reserve Enhancement Program
- Wetland Restoration Program
- National Flood Insurance Program Community Rating System
- Floodplain Management Technical Assistance Program
- Dam Safety Technical Assistance
- Statewide Geologic Mapping
- Recreation Harbor Evaluation Program

Ohio Department of Agriculture:

- Clean Ohio Agricultural Easement Purchase Program
- Agricultural Security Area

Ohio Water Resources Council
Lake Erie Commission

OWRC: 614.644.2033
OLEC: 419.357.2775

dnr.ohio.gov/OWRC/
lakeerie.ohio.gov

APPENDIX K BIG CREEK CONNECTS PROFILE

MISSION

To conserve, enhance, and bring recognition to the natural and historic resources of the Big Creek Watershed and develop a recreational trail network that connects these resources to each other and the community.

BACKGROUND

In 2004 the Lower Big Creek Valley Study was underway; a comprehensive planning effort in the City of Cleveland that included environmental, land use, transportation, recreational and economic development elements. In addition, the Cuyahoga County Greenprint was envisioning a recreational trail extending through the valley westward through the City of Brooklyn connecting the Towpath Trail with the Big Creek Reservation in Parma. Also at this time, the Ohio EPA and the Cuyahoga River Area of Concern (AOC), formerly the Remedial Action Plan (RAP), were supporting the creation of Cuyahoga River tributary watershed groups.

In 2005, stakeholders met to discuss a strategy for building a sustainable Big Creek support group, and in May of that year Friends of Big Creek (FOBC) was formed. After nine years since its founding, Friends of Big Creek became Big Creek Connects (BCC) - a new name that better reflects the organization's programs and mission.

Today the organization is a non-profit 501(c)(3) organization with a Board of eleven dedicated individuals. Former Cleveland Waterfront Coalition President and FOBC co-founder, Bob Gardin, is Executive Director. An 18-member Advisory Committee provides input and guidance to the group's efforts.

WATERSHED MANAGEMENT

Big Creek Connects and Cuyahoga River Restoration (formerly Cuyahoga River Community Planning Organization) with support from the five largest watershed communities (Brook Park, Brooklyn, Cleveland, Parma and Parma Heights) and other partners developed the Big Creek Watershed Balanced Growth Plan (see Appendix J). The watershed-scale land use plan was completed in 2010 and received state endorsement from the Ohio Lake Erie Commission in 2011. In addition to identifying priority conservation and development areas, the plan identifies stormwater retrofit practices designed to mitigate erosive flows, reduce pollutants, and promote conditions for improved aquatic habitat. BCC is the lead organization to manage the implementation of the plan.

In addition to implementing stormwater retrofit projects and other aspects of the Balanced Growth Plan, BCC is currently developing a Non-point Source Implementation Strategic Plan that will allow local entities to effectively propose and implement non-point source pollution projects utilizing funding through federal programs.

GREENWAY/TRAIL DEVELOPMENT

Big Creek Connects, Cleveland Metroparks, and the cities of Cleveland and Parma joined the City of Brooklyn in the development of the Big Creek Greenway Trail Alignment & Neighborhood Connector Plan. The study seeks to connect the Metroparks Big Creek and Brookside Reservations through the City of Brooklyn while identifying opportunities for ecological restoration. The plan was completed in 2009 and complements the Lower Big Creek Greenway Redevelopment & Restoration Plan completed the prior year. The Big Creek/I-71 Relocation & Restoration Initiative seeks to close gaps where these plans overlap and open up additional land use opportunities.

Big Creek Connects also works to conserve parcels in the watershed – enabling it to develop stream, wetland and green space restoration projects and open up opportunities for an expanded trail and greenway system. BCC manages several watershed educational and outreach programs. In 2009 BCC initiated and co-sponsored the Greater Cleveland Trails & Greenways Conference (gctrails.org) held biennially beginning in 2010.

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Advisory Committee

Gayle Albers, Manager, Cleveland Metroparks Watershed Stewardship Center at West Creek
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Sean Brennan, President, Parma City Council
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Kyle Dreyfuss-Wells, Manager of Environmental Programs, Northeast Ohio Regional Sewer District
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Big Creek / I-71 Relocation & Restoration Initiative

March 2015