



Linking the Corridor

A Plan for the Towpath Trail in the North Cuyahoga Valley Corridor

Prepared by the
Cuyahoga County Planning Commission

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Prepared by:

Cuyahoga County Planning Commission
323 Lakeside Avenue West, Suite 400
Cleveland, Ohio 44113-1010

Paul A. Alsenas, Director
James M. Kastelic, Deputy Director

Planning Staff

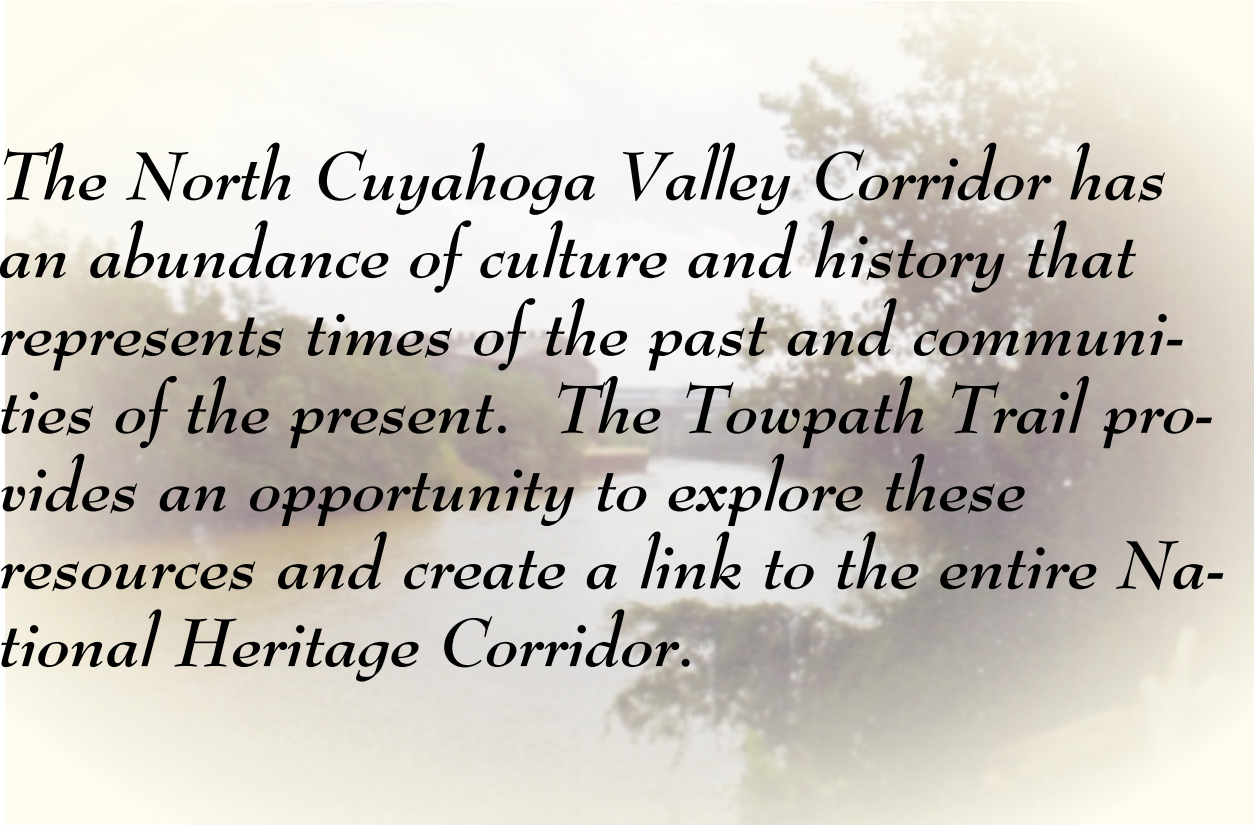
Richard J. Sicha, Principal Planner
Lynn Garrity, Associate Senior Planner

Report Production Staff

Judith L. Bohanek, Production Specialist

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The North Cuyahoga Valley Corridor has an abundance of culture and history that represents times of the past and communities of the present. The Towpath Trail provides an opportunity to explore these resources and create a link to the entire National Heritage Corridor.

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The information in this plan is neither approved or disapproved by any agency or organization and may change in the future due to property ownership and feasibility.

Introduction



COVER: Recreation of Ohio & Erie Canal Activity

SOURCE: Ohio & Erie Canal Corridor Coalition

Background

The lower Cuyahoga Valley has been one of the main physical features of the region for thousands of years. It has been the location for villages, encampments, and burial sites of pre-historic cultures, including the mound builders. In the mid-18th century, it became important in French and British fur trading. Both Benjamin Franklin and George Washington predicted a prominent role for the valley in the westward expansion of America due to its size and location. Settlement by New Englanders began in the 1790's, and the mouth of the river was selected by Moses Cleaveland as the location for the principal city of the Connecticut Western Reserve.

Successive technological advances in the 19th century brought a canal, railroads, and shipping. The Ohio & Erie Canal lifted the lower Cuyahoga Valley to regional importance. Opened from Lake Erie at Cleveland to Akron in 1827, and completed to the Ohio River at Portsmouth in 1832, it became the first canal built west of the Appalachians. Cleveland, with its lake shipping access to the Erie Canal at Buffalo--and hence its connection to the markets of New York City--became an exchange point for a wide variety of agricultural products and finished goods. Canal traffic in Cleveland reached its peak about 1850, the same time the first railroad connection was completed.

During the 1870's through the 1920's, with the benefits of a geographic location midway between extensive deposits of natural resources, access to land and water transportation networks, and the evolution of inter-related industries such as oil, chemicals, and paint; sewing machines and clothing; and iron, steel, fasteners, machine tools, automobiles, and shipbuilding, the lower Cuyahoga Valley emerged as the setting for one of the most significant examples

of industrialization and urbanization in America. The industrialization of the lower Cuyahoga Valley created tens of thousands of jobs, a substantial portion of which were filled by foreign immigrants who lived in Cleveland neighborhoods directly in or along the rim of the valley.

Through time however, the size of the Cuyahoga River Valley has developed in its residents the psychological division of Cuyahoga County into an "East Side" and a "West Side." This image was true 200 years ago, when the 1795 Treaty of Greenville set the Cuyahoga River as the western boundary of the United States, with Native American lands to the west, as well as today, when residents cross the valley on high level freeway bridges. When viewed from this perspective, the heritage planning, neighborhood revitalization, recreation projects, and open space conservation efforts that have occurred in the Cuyahoga River Valley during the 1990's have a shared vision: create a major north-south link in a county that has traditionally perceived itself to be divided into eastern and western sections. This document continues the effort to examine the Cuyahoga River Valley as a unifying element. Emphasis is placed on relationships and linkages, rather than physical barriers or man-made designations such as community boundaries.

The Towpath Trail

The Towpath Trail has become a defining feature in the Cuyahoga Valley landscape. Constructed almost 175 years ago as part of the Ohio & Erie Canal, it was a simple dirt path on which to lead animals pulling canal boats. When the economically unprofitable canal finally ceased to be used after a 1913 flood, the towpath survived as a silent witness to an earlier era.

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The rediscovery of the towpath began with the establishment of the Cuyahoga Valley National Recreation Area (CVNRA) as a unit of the National Park Service in 1974. Initially, the towpath hosted hikers.



Towpath Trail, CVNRA

By the early 1990's, the CVNRA had improved the towpath into a multipurpose trail. Today, almost two million people a year explore the Cuyahoga Valley on the CVNRA towpath, linking heritage education with recreational opportunities.

The success of this 20-mile segment of towpath has sparked a campaign to extend the towpath trail to approximately 100 miles, so that it will be a continuous journey through the entire length of the Ohio & Erie Canal National Heritage Corridor from Cleveland to New Philadelphia. Currently, about one-half of the towpath trail is in place or funded.

Within Cuyahoga County, the *North Cuyahoga Valley Corridor Concept Plan*, published by the Cuyahoga County Planning Commission in 1992, established the importance and priority for continuing the towpath trail northward from the CVNRA to downtown Cleveland. This plan outlined potential bikeway routes on both the east and west sides of the Cuyahoga River, in order to take advantage of the different experiences that are available. The west route has been selected as the first priority due to the ability to create an off-road route that can provide direct access to the Cuyahoga River, connect various recreation and develop-

ment projects, and provide access to many Cleveland neighborhoods.

Taking the lead on ideas outlined in the Cuyahoga County Planning Commission

plan, Cleveland Metroparks created the Ohio & Erie Canal Reservation, which was dedicated in 1999. The Towpath Trail in the reservation recorded 100,000 users in its first three months, illustrating again the public demand for this unique recreational amenity. The Metroparks reservation, once completed, will extend the trail to the southern edge of the City of Cleveland.

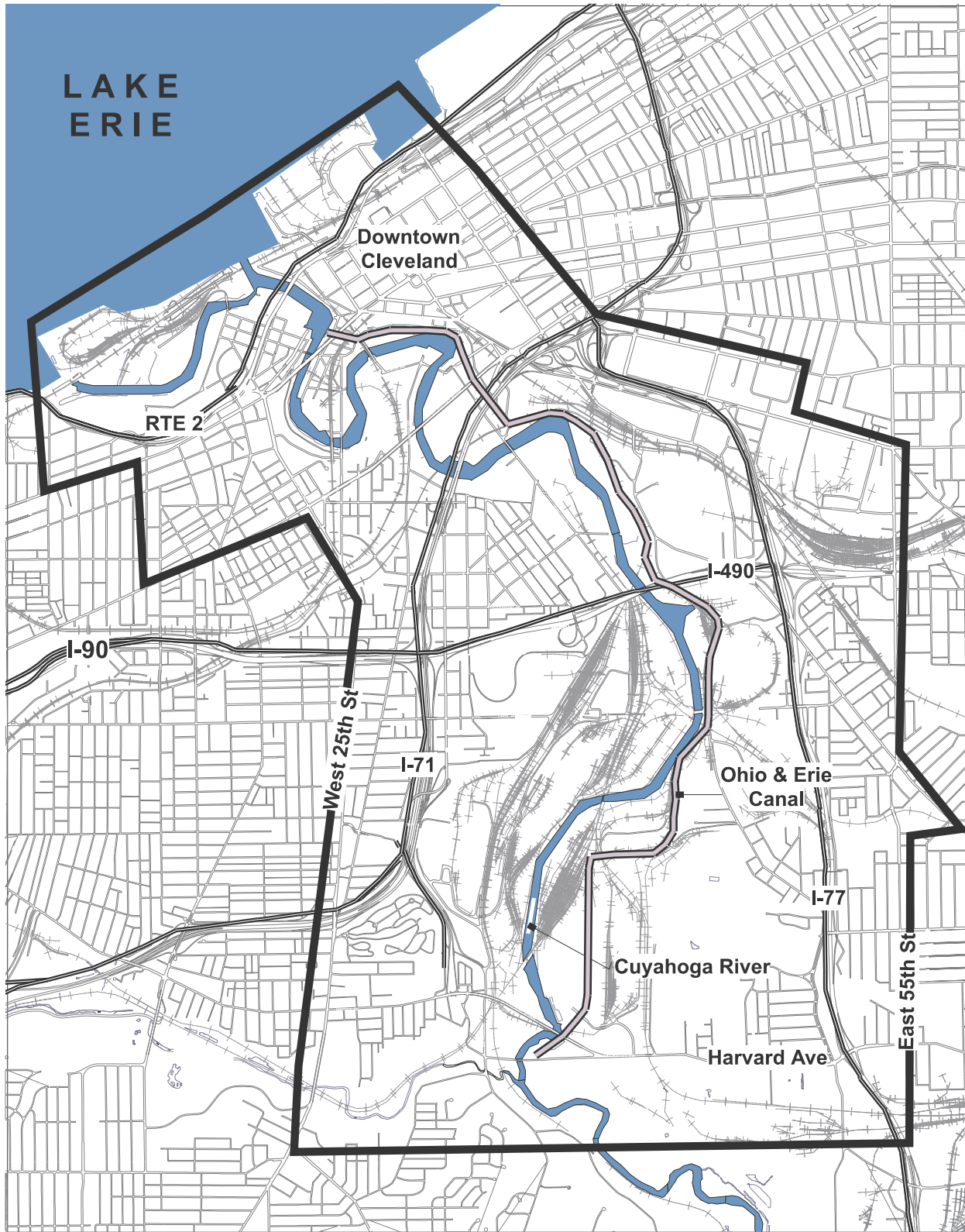
The momentum to complete the Towpath Trail within Cuyahoga County increases as the downtown Cleveland skyline grows nearer for trail users. This plan provides a guide to establish the Towpath Trail for this final Cuyahoga County segment, as part of reaching the National Heritage Corridor's goal of a continuous trail.

Project Boundaries

This study encompasses the area from the vicinity of Old Harvard Avenue, the northern boundary of the Cleveland Metroparks Ohio & Erie Canal Reservation, northward to the terminus of the Ohio & Erie Canal and the mouth of the Cuyahoga River at Lake Erie, both in downtown Cleveland (*Map I.1*). The study

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Map I.1, Study Area Boundaries



area extends west generally to West 25th Street/Pearl Road, although it expands westward near Lake Erie, and east generally to East 55th Street, then cutting northwesterly toward the foot of East 9th Street at Lake Erie. The study area contains the entire breadth of the Cuyahoga River Valley, including the Cuyahoga River and the original route of the Ohio & Erie Canal (*Map I.1*). Within the study area, the original canal bed began to be filled and replaced with railroad tracks as early as the 1870's. Today, the original canal route is situated primarily on inaccessible portions of privately owned industrial properties.

The study area is primarily within the City of Cleveland, including various neighborhoods and downtown. The study area also includes the Village of Newburgh Heights and a portion of the Village of Cuyahoga Heights.

Scope

The purpose of this document is to serve as a guide plan for the future design and construction of this trail segment. This plan includes an inventory of existing conditions and resources within the study area; an examination of route alternatives, their feasibility and impacts; and implementation strategies.

Inventory of Existing Conditions

This section discusses the inventory of existing conditions, including natural resources, environmental issues, and planning resources that may impact or be impacted by the development of the proposed trail.

Examination of Route Alternatives

After examining existing conditions, proposed route alternatives are presented, as well as neighborhood connectors. This section in-

cludes planning strategies and design considerations. Finally, the alternative routes are compared based on a comprehensive list of impact criteria.

Implementation Strategies for Development

A framework to determine mechanisms for implementation, funding, and management are discussed in this section. Strategies and resources are provided to guide future steps in the development of the trail route.

Links with Other Planning Initiatives

The North Cuyahoga Valley Corridor has a number of planning initiatives taking place simultaneously with this Towpath Trail route extension study. The following items describe these projects and their relationship to the trail route.

Local and Regional Trails

Cleveland Lakefront Bikeway

The entire project consists of a bikeway linking Wildwood Park on the east side of Cleveland with Edgewater Park on the west side of Cleveland. The east portion, covering about ten miles from Wildwood Park to the Rock and Roll Hall of Fame, is open. The west portion, extending about four miles from the Hall of Fame to Edgewater Park, is currently in the planning stage. It is anticipated that the Lakefront Bikeway would cross the Cuyahoga River on the Center Street Bridge. The east bank approach to this river crossing would be adjacent to the proposed Canal Basin Park, which is the end point for the proposed Towpath Trail route. The planning process of the

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Canal Basin Park should ensure that these two bikeways have a well-defined connection.

For a review of the relationship of the Towpath Trail extension and the Cleveland Lakefront Bikeway, please refer to the map in the Appendix.

City of Cleveland Bikeway Master Plan

The Cleveland City Planning Commission maintains and updates, on an ongoing basis, a citywide map of preferred bikeways. As part of the Towpath Trail study, Cleveland City Planning Commission staff worked with Cuyahoga County Planning Commission staff to adjust and confirm the City of Cleveland routes to ensure appropriate connections to the Towpath Trail for both west side and east side neighborhoods. Due to the fact that the Towpath Trail route is almost entirely on the west side of the Cuyahoga River, particular attention was devoted to ensuring that east side neighborhoods have satisfactory access.

For a review of the relationship of the Towpath Trail extension and the Cleveland Bikeway Master Plan, please refer to the map in the Appendix.

Statewide and National Trail Linkages

The proposed Ohio-to-Erie Trail would be the first cross-state trail in Ohio. The proposed route would extend from Cincinnati through Columbus to Cleve-



land. In Northeast Ohio, the proposed trail would utilize the National Heritage Corridor's Ohio & Erie Canal Towpath Trail, including the segment proposed in this document. This developing network may also provide a springboard to connect to the National Trail System proposed by the National Park Service.

Ohio & Erie Canal Scenic Byway

In 1996, the State of Ohio designated a 110 mile north-south route parallel to the Ohio & Erie Canal between the northern terminus of the Canal in downtown Cleveland and Dover, Ohio as the state's first scenic byway. In Cuyahoga County, the byway divides into three routes in order to take advantage of industrial heritage opportunities and the diverse, adjacent, historic neighborhoods (*Map I.2*). A wayfinding system of signage and visitor maps are currently being developed for the byway. The Towpath Trail extension will be near the West Route of the scenic byway. In addition, the three scenic byway routes converge at the proposed Canal Basin Park. Coordination efforts between the trail route and scenic byway should be encouraged.

Ohio & Erie Canal National Heritage Corridor

This 88-mile corridor from Cleveland to Zoar, Ohio was designated by the United States Congress in 1996. The management plan for the corridor outlines strategies for protection

and enhancement of resources. The Towpath Trail extension project is identified as a priority project for completion in the management plan.

American Heritage River

In 1998, the President of the United States designated the entire length of the Cuyahoga River as one of fourteen American Heritage Rivers in the country. This designation represents an effort to recognize and reward local efforts to restore and protect America's rivers and waterfronts. The Cuyahoga was designated for both its historic significance and the leading role it played in the environmental movement and the creation of federal water quality legislation during the 1970's. The design and construction of the Towpath Trail extension should protect the river and its adjacent lands. The trail route should also promote public awareness and encourage other organizations to undertake projects with similar goals.

Cuyahoga Valley Scenic Railroad

This year-round excursion train currently operates in the Cuyahoga Valley National Recreation Area from Independence to Akron. An extension of the line to Canton is scheduled for the near future. The National Park Service is also working with the Cuyahoga Valley Preservation and Scenic Railway Association, railroads, and property owners to extend the excursion train northward to Tower City Center in downtown Cleveland (***Map I-2***). The coordination of the excursion train and the trail route would significantly enhance opportunities for persons to experience the Cuyahoga Valley. Potential projects include train stops in proximity to the trail route and programs such as combination train/bicycle excursions.

Neighborhood Plans

Within Cleveland, planning at the neighborhood level represents ongoing, coordinated, efforts by various City of Cleveland departments, as well as neighborhood-based organizations. For example, the Cleveland City Planning Commission's *Civic Vision* initiatives establish goals and strategies for revitalization and redevelopment opportunities for each of the city's neighborhoods, as well as downtown Cleveland. For this guide plan, Cuyahoga County Planning Commission staff have worked closely with City of Cleveland staff, neighborhood-based organizations, and local elected officials to identify planning initiatives and integrate them whenever possible. As these planning efforts evolve over time, ongoing coordination will be needed among the various projects (***Map I.3***).

Benefits of Trails and Greenways

Urban greenways are part of the renaissance of America's cities reinvigorating their centers and neighborhoods. Investment in trails and greenways in urban areas encourages the momentum of economic activity, promotes a better quality of life, improves environmental quality, and fostering awareness and preservation of cultural and historic areas.

Economic Benefits

The presence of a greenway or trail can spark revitalization of neglected areas and increase interest in business activity to either serve the trail or access the trail. Property values have been shown to increase significantly adjacent to trails and greenways. For example, the Trust for Public Land (TPL) has reported that in Oakland, California, a three-mile greenbelt around Lake Merritt, near the city center, added \$41 million to the value of surrounding properties. TPL has also noted that many

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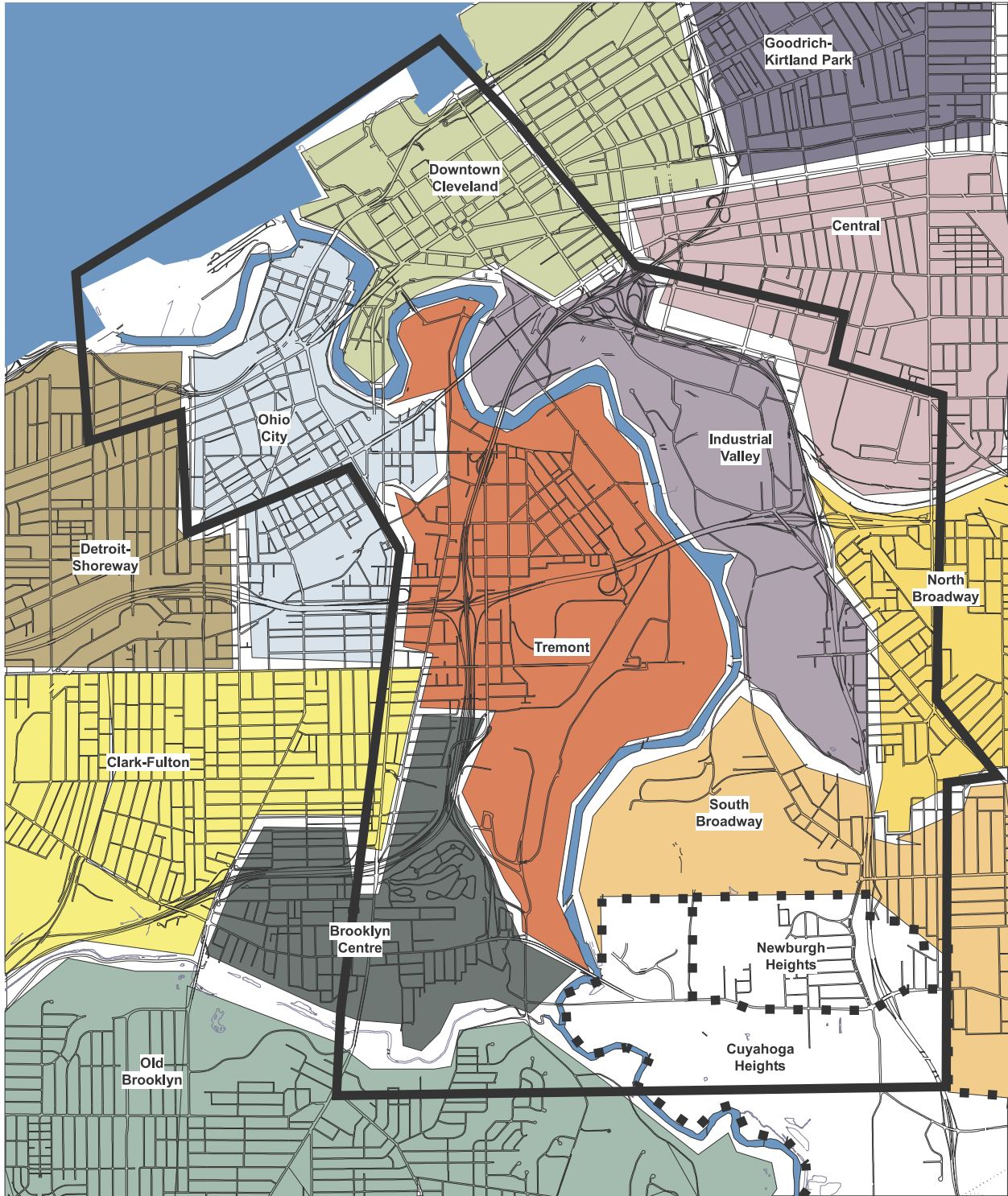
Map I.2, Links with Other Planning Initiatives



SOURCE: Cuyahoga County Planning Commission, 1999

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Map I.3, Cleveland Neighborhoods and Adjacent Communities



SOURCE: Statistical Planning Areas, Cleveland City Planning Commission

businesses view locating near greenways and trails as an opportunity to provide an amenity to employees. Therefore, the economic strength of a community can be influenced by the physical attributes of its work environments. Greenways can be a positive factor in promoting a healthy economy.

Quality of Life

Trails and greenways are essential in urban areas to provide a similar outlet to recreational activities and enjoyment of natural areas that are frequently provided to suburban communities. A greenway encourages interaction among its users, provides opportunities to explore the outdoors, creates revegetation efforts that decrease air pollution, and promotes exercise. As a feature that can attract residents to a neighborhood, a shared interest in a greenway may spark a neighborhood to address other local quality of life issues. TPL has noted that “nationwide, easy access to parks and open space has become a new measure of community wealth—an important way to attract businesses and residents by guaranteeing both quality of life and economic health.” Chattanooga, Tennessee is an example of a city that has successfully revitalized itself with this strategy.

Environment

Many urban settings have poor environmental quality due to decades of industrial land use. Trails and greenways can be a catalyst to restore environmental quality and promote the rediscovery of natural areas. For example, trails can improve air quality by providing an alternative mode of transportation, as well as increased vegetation. Trails can also improve water quality and rejuvenate ecosystems through responsible creation of a green corridor coupled with other development initiatives. Denver, Colorado’s Platte River Greenway is

an example of the positive impact of a greenway on a neglected environmental setting.

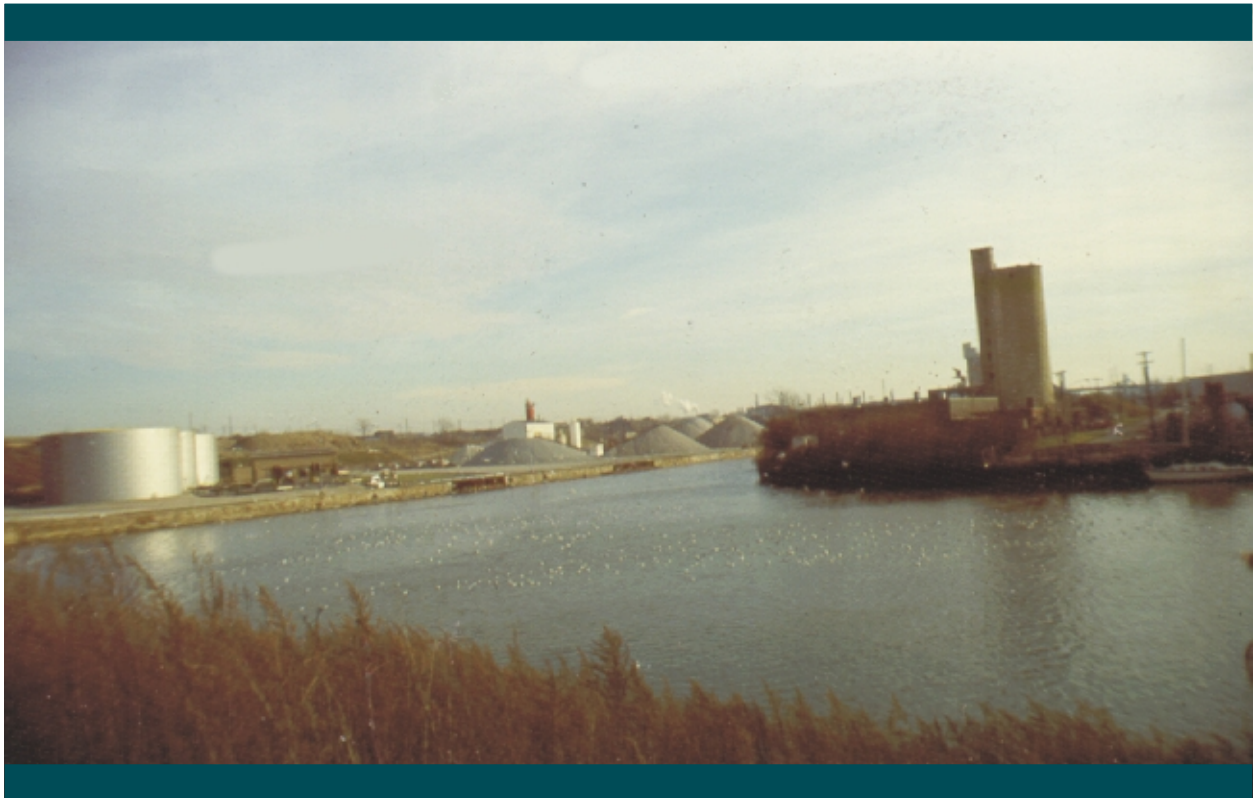
Culture and History

All of the objects in the man-made environment, such as houses, stores, factories, churches, cemeteries, bridges, and roads, tell the story of a community. Greenways and trails can be perfectly suited to provide access to these locations, objects, and structures. In particular, if a greenway is a separate route from the current street network, it may offer physical access unavailable until now, or present an uncommon interpretive opportunity. In addition, a greenway can encourage preservation of cultural and historic resources by drawing attention to them and their importance. The Towpath Trail in the Cuyahoga Valley National Recreation Area is a fine example of preservation and interpretation of cultural heritage. For example, the towpath can be used to tell the history and impact of the Ohio & Erie Canal, and as a starting point of discussion for diverse topics such as stone quarrying, farmhouse architecture, canal boat building, and railroad history, all of which can be garnered from the structures and objects in the valley.

Trails and greenways are important factors that can contribute to the overall success of a community and region. The development of the Towpath Trail has an opportunity to bring these benefits here.

Chapter One

Existing Conditions



COVER: Cuyahoga River north of Central Furnace

Existing Conditions

This report inventoried various elements within the study area. As a whole, the inventory provides a baseline of data to utilize in the feasibility analysis of route alternatives and neighborhood connections through the North Cuyahoga Valley corridor. The inventory also outlines concept statements that should be considered as part of planning the trail route, such as the potential for enhancing existing resources or significance, or topics in need of additional study to determine strategies.

The inventory is divided into three sections: Natural Resources, Environmental Resources, and Planning Resources.

Natural Resources

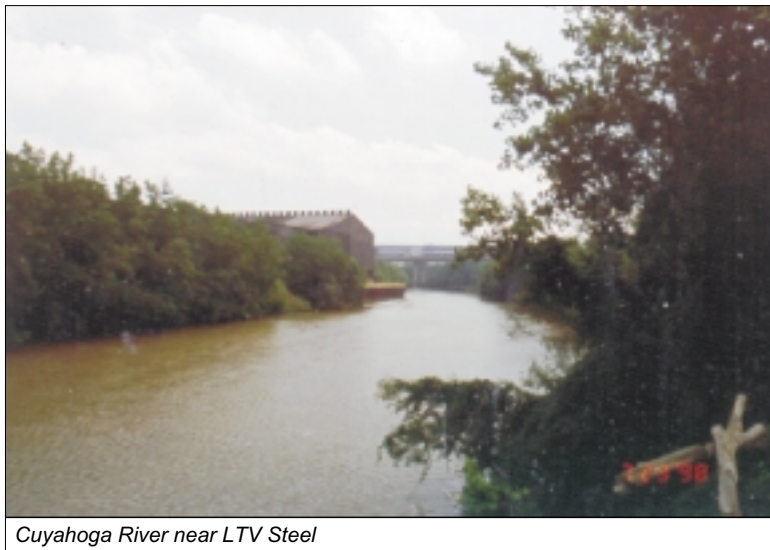
Natural resources within the study area of the North Cuyahoga Valley Corridor are influenced by the topography of the valley, as well as specific land uses. In addition, some natural resources may be degraded or underutilized due to their existing urban setting. This section will discuss various natural resources and features, as well as outline opportunities to retain and improve resources.

Cuyahoga River

The most distinctive natural resource along the corridor study area is the Cuyahoga River. Its winding natural form defines the Cuyahoga Valley both within the study area and beyond on its entire 100 mile journey from Geauga County. The Cuyahoga River traverses seven miles within the study area and is the main artery for various tributaries within the Cuyahoga River watershed, which encompasses 813 square miles. This section of the river however,

has far greater utilization than segments upstream. From river mile 5.6 to the mouth at Lake Erie, the Cuyahoga serves as a navigational channel for freighters, which requires ongoing dredging of the river's base. The navigation channel of the river is also heavily used for recreational boating, particularly during the summer. The river's natural beauty is often forgotten due to its use as an industrial waterway, however efforts should continue to enhance it as a unique natural resource.

Due to the large freighters on the Cuyahoga River, all road and railroad crossings of the waterway at river bank level must be made on movable bridges that allow for passage of ships. In addition, upstream of the navigation channel, there are fixed railroad and road crossings at river bank level. These situations have several impacts on a trail route. For example, upstream of the navigation channel, potential conflicts involving trains, vehicles, and trail users must be resolved. Within the navigation channel, the number of available road crossings of the river are limited, which in turn funnels automobile and truck traffic to these specific points. The trail route needs to address this issue by identifying methods to cross the river in a non-obstructive manner.



Existing Conditions

An important feature of the route, however, should be to take advantage of the river's natural beauty and winding form when feasible. The Cuyahoga River is a resource that identifies the region, past and present, and should be celebrated along the trail route.

Lake Erie

Lake Erie's presence along the northern border of the study area signifies the region's important relationship to water resources for recreation, business, and transportation. It is the smallest and shallowest of the Great Lakes, but Lake Erie is an active waterway for recreation and shipping serving the Upper Midwest of the United States and Canada. The 1999 *Lakewide Management Plan* reported that 11.6 million people live in the Lake Erie watershed, and the lake provides drinking water for about eleven million of these inhabitants. Thus, it serves as an important resource to the local ecosystems and economies surrounding it.

Lake Erie's shoreline along the Cleveland area is primarily privately owned, but there are public beach and recreation access in specific areas. The trail route, as part of its development, needs to provide connections to these public resources on the Lake Erie shore.

The lake has many tributaries—including the Cuyahoga River—which affect the ecological integrity of the lake. Activities along the tributaries impact both water quality and the fish and plant species that provide the biological makeup of the basin. Lake Erie needs to be intruded upon less by the environmental impacts of urban development, including erosion, combined sewer overflows, and nonpoint source pollution.

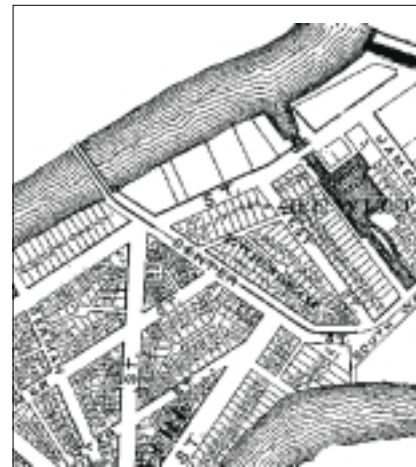
Access to and information about Lake Erie needs to be incorporated into the trail route as

it descends to the mouth of the Cuyahoga River near the lake. The Towpath Trail should make users aware of Lake Erie's vital importance to the environment and economy of the region, and advocate for the protection and enhancement of this natural resource for future generations.

Ohio & Erie Canal

The Ohio & Erie Canal had a dramatic impact on the North Cuyahoga Valley. Constructed from 1825-1832, it extended from the mouth of the Cuyahoga River at Lake Erie to Portsmouth on the Ohio River. It was constructed on the east side of the Cuyahoga River, with the towpath for animals pulling canal boats located between the canal and the river.

The canal was significant because it created the nation's first inland waterway link between the Great Lakes and the Gulf of Mexico. The interchange of agricultural products and manufactured



Ohio & Erie Canal Basin and vicinity, Atlas of Cuyahoga County, Ohio, 1874

goods where the Ohio & Erie Canal, Cuyahoga River, and Lake Erie met at downtown Cleveland created a thriving local economy. From the 1870's through the early 20th century, the outlet of the canal gradually moved southward as its original canal bed became occupied by the next transportation revolution, the railroad, as well as industries that came to dominate the Cuyahoga Valley, including iron,

steel, oil refining, and chemicals. The existing outlet of the canal into the Cuyahoga River is located south of the study area of this report, in the Cleveland Metroparks Ohio & Erie Canal Reservation. In the study area, the canal was primarily located on what is now the property of LTV Steel and railroad lines. A section of original canal bed, with an abandoned railroad track, is still visible near the canal's original outlet to the Cuyahoga River. It is situated in an undeveloped area between the Sherwin Williams facility, near the old Baltimore & Ohio railroad station, and extends north to the Cuyahoga River. The potential of reclaiming this section of the canal is high, providing an opportunity to educate trail users of the cultural and historic significance of the Ohio & Erie Canal for the region.

Floodplains, Wetlands, and Coastal Zone

Due to the presence of the Cuyahoga River Valley and Lake Erie within the study area, floodplains, wetlands, and the coastal zone boundary are important to note, in order to minimize the potential impact on these resources.

The Federal Emergency Management Agency's 100-year floodplain follows the Cuyahoga River channel, although some areas adjacent to the river near Harvard Avenue may also be subject to flooding (*Map 1.1*). Proper design and construction practices need to be undertaken in areas that the proposed Towpath Trail travels near or within the floodplain.

In terms of wetlands, the Ohio Department of Natural Resources compiles data on indicators such as soil type and vegetation to identify wetland areas. Various sites are noted throughout the Cuyahoga River Valley, such as in the lowland areas near Harvard Avenue and

the ravines that traverse the walls of the valley. Due to the fact that wetlands include areas that may only be saturated for part of the year, in contrast to the more traditional notion of wetlands as areas that have standing water year-round, field work should be used to make a definitive conclusion concerning the presence or absence of a wetland. Wetland areas along or near the proposed Towpath Trail route should be protected and restored/enhanced where possible to promote and educate trail users of the importance of wetlands.

The coastal zone boundary was established by the Ohio Department of Natural Resources through its Ohio Coastal Management Program, using the following definition: "The zone extends inward from the shorelines only to the extent necessary to control shorelands, the uses of which have a direct and significant impact upon coastal waters." For the Cuyahoga River Valley, the coastal zone boundary extends upstream to Harvard Avenue, generally encompassing the lowland areas from the river to the base of the valley walls. The coastal zone is within the study area, and projects recommended as part of this plan need to be attentive to minimizing impact and preventing added sedimentation, erosion and runoff into the Cuyahoga River and Lake Erie.

Topography

A high natural ridgeline defines the broad Cuyahoga Valley. The walls of the valley have slopes that range from 20% to 40% in relief. Nearer the Cuyahoga River, the topography is fairly flat with minimal relief (*Map 1.2*). These ridges have a high potential for views throughout the Cuyahoga Valley, including the industrial areas, the downtown Cleveland skyline, Cuyahoga River, and Lake Erie. These views create opportunities for a visually exciting trail for users, as well as the

Existing Conditions

Map 1.1, Coastal Zone, Floodplain and Wetlands



SOURCE: State of Ohio Coastal Management Program, 1997; Ohio Wetlands Inventory, 1987; FEMA, 1996

Existing Conditions

Map 1.2, Topography



SOURCE: Cuyahoga County Engineer, 1993

potential for interpretive exhibits explaining these views and previous land uses.

These slopes are highly erodible in some areas, due to a lack of vegetation, poor development practices, or unstable soils. Addressing these situations in relationship to connections to the route, the physical stability of the route, and viewsheds will be crucial in developing a sustainable trail that will not add neither sedimentation in the Cuyahoga River nor cause erosion along the ridgelines.



Cuyahoga River near Innerbelt bridge

Wildlife and Vegetation

The North Cuyahoga Valley is a densely developed urban environment that includes early 20th century neighborhoods, heavy industry, and transportation networks such as railroads and highways. Although plants and animals are part of this urban landscape dominated by mown grass and small yards, additional flora and fauna can be found in isolated areas that have evolved with less intrusion from development, such as the steep slopes of the valley walls or little used distant corners of large parcels. Another set of issues concerning the quality of plant and animal habitat are the presence of invasive plants, as well as areas that have not recovered due to the activities of previous development.

There is, however, the potential to reintroduce high quality native plant communities to areas in the valley, which would improve the ecosys-

tem and enhance the experience of trail users. For example, the trail route could include a swath of greenspace, appropriate in width for the specific location. Higher quality habitat may also expand the

local bird population, assist migratory birds, and encourage the influx of animals into an improved ecosystem.

Viewsheds

One of the benefits of having a large, dramatic natural feature such as the Cuyahoga River Valley is to utilize the topography to maximize views. There are areas that have a high potential to provide expansive views across, into, or along the valley. One consideration of route selection should be the opportunity to capture viewsheds. In addition, where the route will be away from the existing road network, the available views will be unique and largely unknown at this point to the public.

The views along the proposed route should be capitalized upon for interpretive opportunities, along with serving as a geographic aide for users relative to the location of the lake, river, valley, and landmarks of the built environment. Trail users could also have ability to learn more about diverse topics such as geography, transportation systems, industrial heritage, air and water quality management, the

Existing Conditions

local economy, and the cultural history of neighborhoods.

Summary/Recommendations

The following are recommendations relevant to the development of the Towpath Trail.

- ✓ Where feasible, increase access to the Cuyahoga River through trail routing.
- ✓ Provide connections to public beach and recreation areas on the Lake Erie shore.
- ✓ Increase access and awareness of current environmental impacts on Lake Erie.
- ✓ Provide an opportunity to reclaim a section of the original Ohio & Erie Canal for interpretation.
- ✓ Protect natural features, minimize impacts on them, and improve and restore where feasible.
- ✓ Provide an opportunity to reintroduce high quality plant and animal communities at appropriate locations.
- ✓ Utilize topography to highlight viewsheds.
- ✓ Provide opportunities to educate users about these natural resources and features, their significance to the region, and measures to protect and enhance them.

Environmental Issues

For a number of generations, the study area has been a densely urban environment, with a high

concentration of industry. This setting has created environmental issues that are not as prevalent in other sections of the Cuyahoga River Valley. This section will discuss existing situations, describe efforts to improve the environmental quality of the coastal zone area, and outline how the trail routing and construction should minimize negative impacts and promote strategies to improve conditions in the future.



Cuyahoga Valley from Tremont neighborhood

Water Quality

Portions of the proposed trail route will be situated on the banks of the Cuyahoga River, and the route will cross the Cuyahoga River via bridges. Therefore, the present environmental quality of the river and lake should be reviewed for any potential affects on the trail and its route.

Cuyahoga River

The environmental quality of the Cuyahoga River has improved dramatically since 1969, when oil and debris caught fire on the water's surface and initiated massive water quality improvement efforts. The seven mile section of the Cuyahoga River within the study area is significantly impacted by a combination of is-

sues that do not occur along the rest of the river's course, including the influence of Lake Erie, the impact of the navigational channel, and the densely developed surrounding urban area.

Dredging Activity

The U.S. Army Corps of Engineers reports that 300,000 to 350,000 cubic yards of sediment is dredged from the Cuyahoga River on an annual basis between the mouth of the river and the head of the navigational channel at LTV Steel. The operation dredges the river to “25 feet below the low water datum,” which provides water depths accessible for industrial shipping. The Ohio EPA has noted that there are “habitat restrictions in this river segment resulting from physical factors such as continual dredging, steel shoring of banks, and the total lack of riparian buffer and shallow water habitat.” The “physical habitat and dissolved oxygen levels in the ship channel are inadequate to support warmwater aquatic life habitation.” (NEORS from Ohio EPA, 1993)

Sedimentation and Debris

The continuing impact of urban development practices upstream, which have increased water runoff into tributaries of the Cuyahoga River, has resulted in significant sedimentation deposits in the river within the study area. These deposits are disposed of at various local sites through the annual dredging process. In addition, the runoff carries large and potentially damaging debris into the river, such as entire trees. Construction of the Towpath Trail will need to avoid soil disruption that would add to the sedimentation problem. In addition, trail structures crossing the river or near it should be designed to avoid snagging debris that will impede water flow.

Fish Habitation

Aquatic activity within the study area section of the Cuyahoga River is limited due to the presence of the navigational channel for industrial uses. The Northeast Ohio Regional Sewer District reports however, that fish do use the navigational channel as a migratory route during the spring to reach spawning locations upstream. The trail route should encourage complementary projects to enhance this activity, such as in the vicinity of the northern end of the Cleveland Metroparks Ohio & Erie Canal Reservation, which is just upstream of the head of navigation.

Combined Sewer Overflows

Combined sewer overflows are piping systems that combine wastewater and stormwater in a single line, which discharge directly into streams, the Cuyahoga River, and Lake Erie during heavy rainfalls when stormwater volumes are high. These overflows increase the pollutants and bacteria being deposited in the river and lake, which has an adverse effect on water quality.

There are approximately twenty combined sewer overflows that empty directly into the river within the study area (NEORS). There are also many other overflow locations within the Cuyahoga River watershed, whose contents reach the river via tributaries.

The Northeast Ohio Regional Sewer District has initiated a long-term program to eliminate combined sewer overflows. This effort should be encouraged, because it will improve water quality and thus enhance the experience of trail users interacting with the river.

Lake Erie

Lake Erie's environmental quality is impacted by the rivers that feed it, including the Cuya-

hoga River. Therefore, the issues of the river and its watershed affect the future quality of the lake.

The overall condition of Lake Erie is always changing due to the influence of many factors. The 1999 *Lakewide Management Plan*, a joint project of the United States and Canadian governments, reports “key issues that are greatly affecting the

Lake Erie ecosystem include, but are not limited to: loss of wetlands, changes in fish populations, presence of exotic species, PCB’s, phosphorus and effects of certain chemi-

cals on human health. These issues are of considerable importance and have seriously affected or will affect the Lake Erie ecosystem.”

Another recent concern is that the lake depth continues to fluctuate, which affects erosion rates and shoreline access. Low water levels appear to be a continuing trend at present, which may alter future lake resources.

Protecting the quality of the lake will require ongoing and accurate assessment of situations. For example, redevelopment and/or land use changes along the shoreline, as well as the future function of the Cuyahoga River, will impact the lake. The Towpath Trail needs to avoid inadvertently degrading the Lake Erie Basin and provide opportunities to promote protection of the Lake, even indirectly, whenever possible.

Air Quality

The trail route will traverse a highly industrial and urban environment where air quality has been a concern. The air quality of the Cuyahoga Valley was once much worse due to the lack of regulatory standards and industrial practices. Over the past generation, the situation has shown continuing improvement, which has benefitted the quality of life of

nearby communities and the health of residents.

As shown in **Table 1.1**, the U.S. EPA has reported a steady decline in the emission of six major pollutants in Cuyahoga County. The Pollutant Standard Index, which measures overall air quality, has also documented improvements since 1994 (**Table 1.2**). The trail

route should include revegetation projects and greenway development to improve air quality.

Brownfields

Brownfields are defined by the U.S. EPA as “abandoned, idled or underused industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination.” Due to the historically heavy industrial uses of the study area, brownfields currently exist.

Map 1.3 illustrates brownfield locations within the study area at this time and is subject to both the deletion or addition of sites. The “Master Sites” list is administered by the Ohio EPA and is defined as locations where there is evidence, or suspicion, of contamination of air,



Lake Erie near Downtown Cleveland

Existing Conditions

Table 1.1, Air Quality Summary, Cuyahoga County

Year	CO (ppm) Carbon Monoxide	NO2 (ppm) Nitrogen Dioxide	SO2 (ppm) Sulfur Dioxide	O3 (ppm) Ozone	PM10 (ug/m3) Particulate Matter	PB (ug/m3) Lead
	2nd Max 8-hr	Annual Mean	Annual Mean	2nd Max 1-hr	Annual Mean	Quarterly Mean
1999	3.9	0.025	0.008	0.104	45.5	0.38
1998	6.4	0.027	0.009	0.113	45.4	0.65
1997	6.1	0.027	0.010	0.104	43.4	4.32
1996	9.4	0.026	0.011	0.108	41.4	1.06
1995	8.2	0.027	0.009	0.112	51.7	2.87
1994	7.7	0.028	0.014	0.125	60.3	1.29

SEE APPENDIX FOR DESCRIPTION OF DATA
SOURCE: U.S. EPA, Airs Data, November, 1999

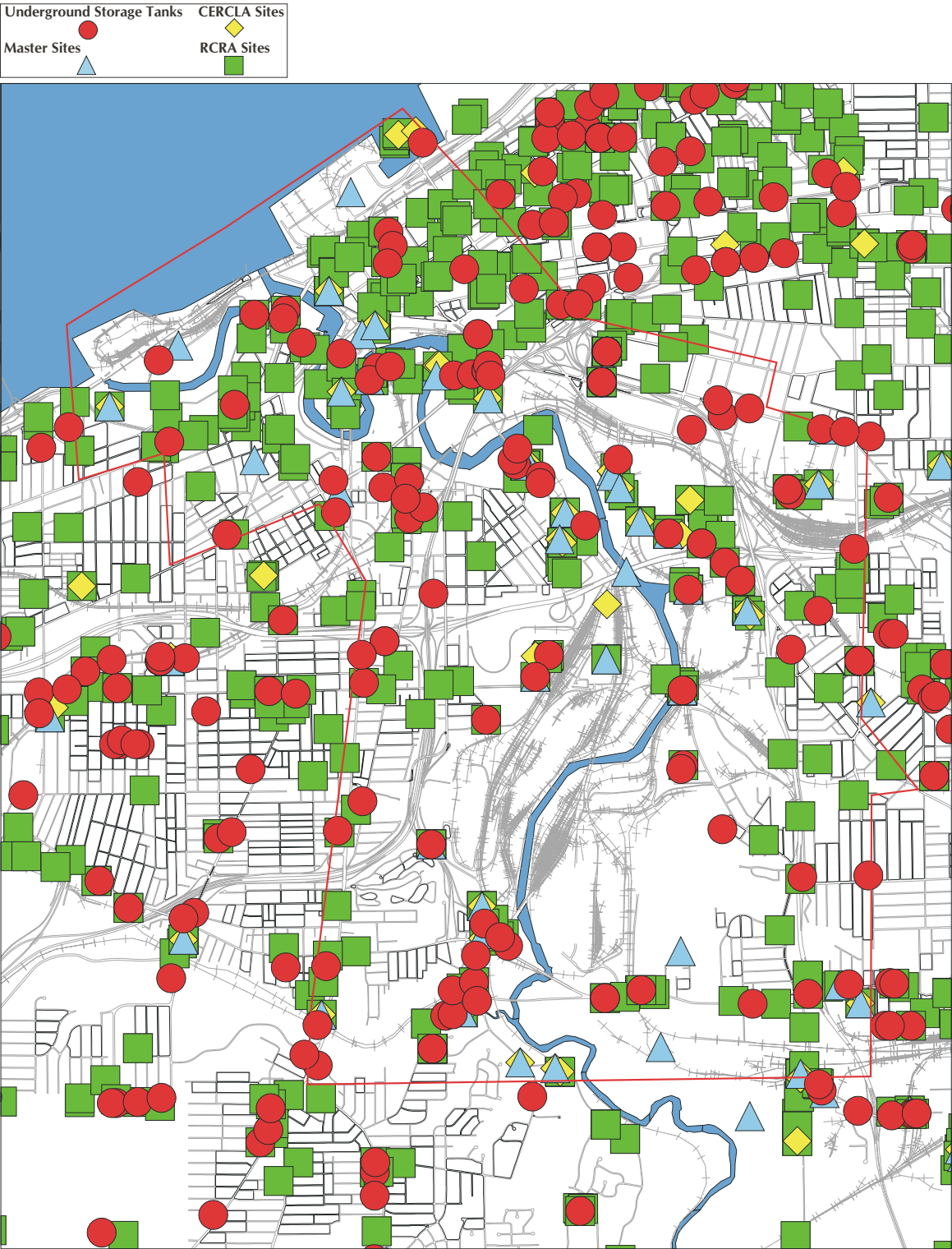
Table 1.2, Pollutant Standard Index Monitor, Cuyahoga County

Year	# Days with PSI	Percent of Days when Air Quality Was:			PSI Statistics		
		Good	Moderate	Unhealthful	Maximum	90th Percentile	Median
1999	274	49	50	0	142	68	51
1998	365	57	42	1	111	70	47
1997	365	62	38	0	102	68	46
1996	366	57	42	1	127	68	47
1995	365	54	45	1	112	75	48
1994	365	49	49	2	124	74	51

SEE APPENDIX FOR DESCRIPTION OF DATA
SOURCE: U.S. EPA, Airs Data, November, 1999

Existing Conditions

Map 1.3, Potential Brownfield Locations



SOURCES: Ohio EPA, U.S. EPA, Bureau of Underground Storage Tanks, 1996

Existing Conditions

water, or soil. The "CERCLA Sites" list is administered by the U.S. EPA and is defined as locations of abandoned and uncontrolled hazardous waste sites, commonly referred to as Superfund sites. The "RCRA Sites" list is administered by the Ohio EPA and is defined as locations where there are regulated handlers of hazardous waste. RCRA Sites are not necessarily contaminated. The "Underground Storage Tank list is administered by the State of Ohio Fire Marshall and is defined as locations where there are underground storage tanks. Underground Storage Tank sites are not necessarily contaminated.

The trail route may traverse property that is environmentally contaminated. Although the impact of a trail is considered moderate due to the fact that it is typically pavement installed on top of soil that has needed only surface grading, this is an issue that should be considered during trail routing and construction. In addition, the trail route should be used as an impetus for other neighborhood revitalization, quality of life, and economic development projects, which may have the benefit of remediation of brownfields sites. For example, trail construction could be incorporated as an amenity into new commercial, residential, or light industrial development. In addition, remediation of riverbank property could provide direct public access to the Cuyahoga River.

Potential Erosion Areas

The walls of the Cuyahoga River Valley are steeply sloped. Most of these slopes have existing vegetative cover, which prevents soil erosion. Portions of the trail route will utilize these slopes and ridge-



Tremont Neighborhood

lines of the valley. In order to avoid having an adverse impact on these sensitive areas, design and construction measures need to be employed that provide slope protection, including erosion control during construction and reintroduction of appropriate native plant species for long-term improvement.

Summary/Recommendations

The following are recommendations relevant to environmental issues and the development of the Towpath Trail.

- ✓ Avoid increasing sedimentation and debris in the Cuyahoga River by taking erosion control measures.
- ✓ Restore stabilized slopes along the valley ridgeline.
- ✓ Encourage projects that improve plant and fish habitat and reduce water pollution.
- ✓ Promote remediation and redevelopment of brownfield sites.
- ✓ Assist in improving air quality within the region by adding new vegetation and plant communities along the route.
- ✓ Provide opportunities to educate trail

users about the environmental quality issues of an urban setting.

Planning Resources

Downtown Cleveland and its neighborhoods are experiencing a renewal as a place to live

Existing Conditions

and work. These revitalization efforts and the trail route will have an important influence on each other. Current issues and trends, as well as the local cultural and historic character, need to be addressed to ensure that the trail extension complements these neighborhoods and enhances the corridor.

Current Land Use

The study area is a densely developed section of the City of Cleveland (*Map 1.4*). Heavy industry encompasses a large percentage of land cover within the study area. Surrounding this large industrial core within the Cuyahoga River Valley are 19th and early 20th century neighborhoods that include one- to three-family homes, apartment buildings, commercial districts, schools, churches, and parks. Initiatives such as renovated housing and new housing construction, as well as business investment, are attracting both residents and visitors. Near the mouth of the Cuyahoga River, the Flats area represents an intensely utilized area of entertainment, industrial, and housing uses. Undeveloped land within the study area consists mostly of the steep terrain forming with walls of the Cuyahoga River Valley and its tributaries. Scranton Peninsula, a large area on the west bank of the Cuyahoga River that is mostly vacant land, is currently being examined for redevelopment as a mixed use area.

The combination of heavy industry, developed neighborhoods, and entertainment uses pose a challenge for the development of the Towpath

Trail. The route must provide an easily accessible and enjoyable experience for residents and visitors, but also be safe and nonobstructive to the daily activity of business and industry which brings economic vitality to the North Cuyahoga Valley Corridor.

Parks/Recreation/Open Space/Marinas

Parks and recreational space are an integral part of Cleveland neighborhoods. In order to capitalize on these resources, this project should have two goals. First, the trail route should connect to these neighborhood resources in order to create links to regional amenities that the residents of these urban neighborhoods currently do not have. Second, the neighborhood connectors should improve, when feasible, the integration of a park with its neighborhood.

The parks within or adjacent to the study area are shown on *Map 1.5*. In addition, there are several marinas within the study area, which are also shown on the same map.

Future Land Use

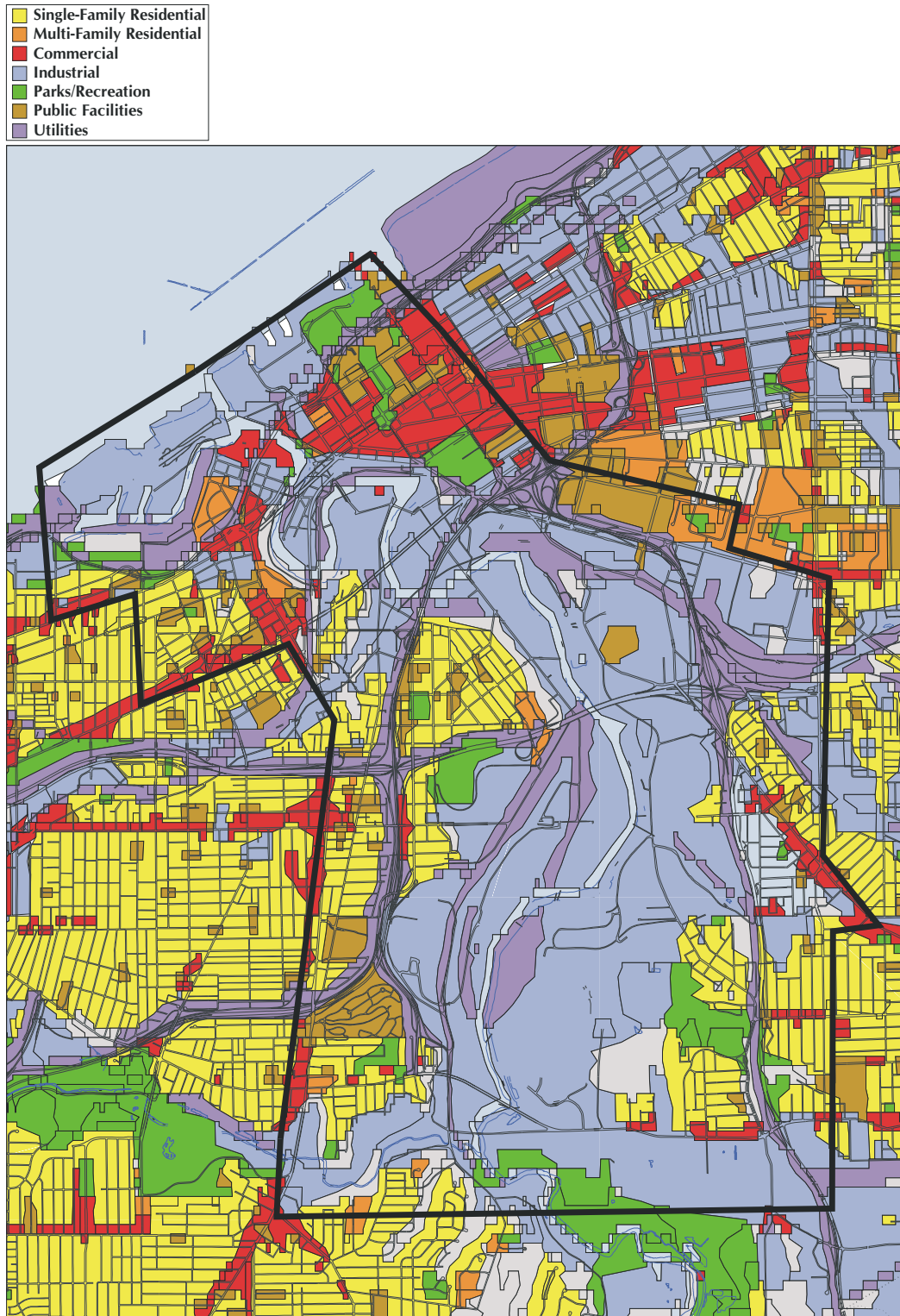
From an overall perspective, the future land use relationships of heavy industry, developed neighborhoods, and entertainment are not likely to change markedly. It should be antici-



Lincoln Park, Tremont Neighborhood

Existing Conditions

Map 1.4, General Land Use



SOURCE: City of Cleveland, 1992 Civic Vision

Existing Conditions

Map 1.5, Parks and Recreation Areas



SOURCE: City of Cleveland, 1992 Civic Vision

Existing Conditions

pated however, that land uses will continue to evolve through efforts such as the adaptive reuse of buildings and new housing construction. The largest land use change that may occur is the implementation of the proposed mixed use development of the Scranton Peninsula. The ridges along the Cuyahoga Valley will most likely remain undevelopable for buildings due to their steepness.

The proposed Towpath Trail has the potential of providing opportunities for economic development of new shops that complement the bike path, such as bike shops, restaurants, and specialty shops.

Zoning

The current zoning of the study area reflects the existing land use patterns (*Map 1.6*), with a large area within the valley zoned for industry and the surrounding areas zoned primarily for residential use. Any future zoning changes would be administered through the City of Cleveland.

Demographics

When compared to Cuyahoga County as a whole, 1990 U.S. Census data showed that the study area had a higher percentage of minority residents, a lower median income level, and a higher percentage of renters.

The 1990 U.S. Census counted more than 43,500 persons within the study area (*Map 1.7*). As of 1990,

approximately 60% of the population was 18-64 years of age, which is similar to Cuyahoga County as a whole. In addition, 31% of the persons in the study area were minorities, which is higher than the 28% figure for Cuyahoga County in 1990. Similarly, 10% of the persons in the study area were of Hispanic origin, which is higher than the 2% figure for Cuyahoga County in 1990.

The study area also has a much lower income level than Cuyahoga County (*Map 1.8*). Based on the 1990 Census, the estimated median household income for the study area in 1989 was \$14,279, which is about one-half of the \$28,595 median for Cuyahoga County. Approximately 73% of all households in the study area had a 1989 income at or below the Cuyahoga County median of \$28,595.

As of 1990, there were approximately 17,500 households in the study area. According to the 1990 Census, 60% of those households were renters, which is much higher than the 190 Cuyahoga County figure of 38% of all households being renters (*Map 1.9*).

Cultural/Historic Resources

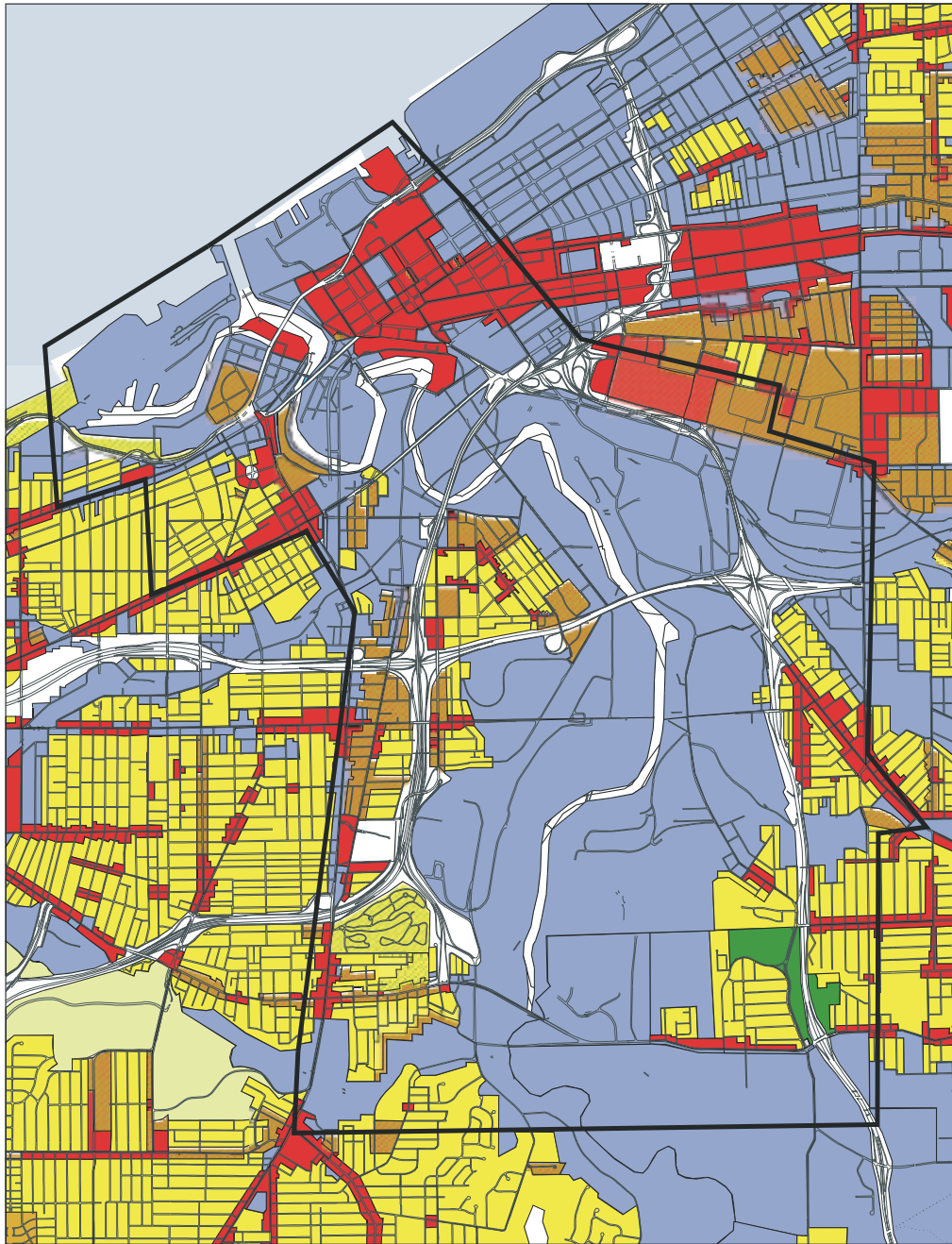
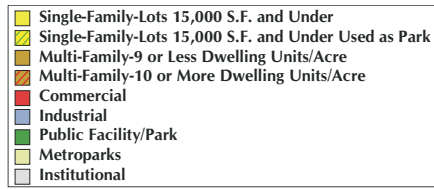
The study area has an abundance of historic and cultural resources located in the Cuyahoga River Valley, its surrounding neighborhoods, and downtown Cleveland. The resources include individual structures and districts listed on the National Register of His-



New housing, Tremont neighborhood

Existing Conditions

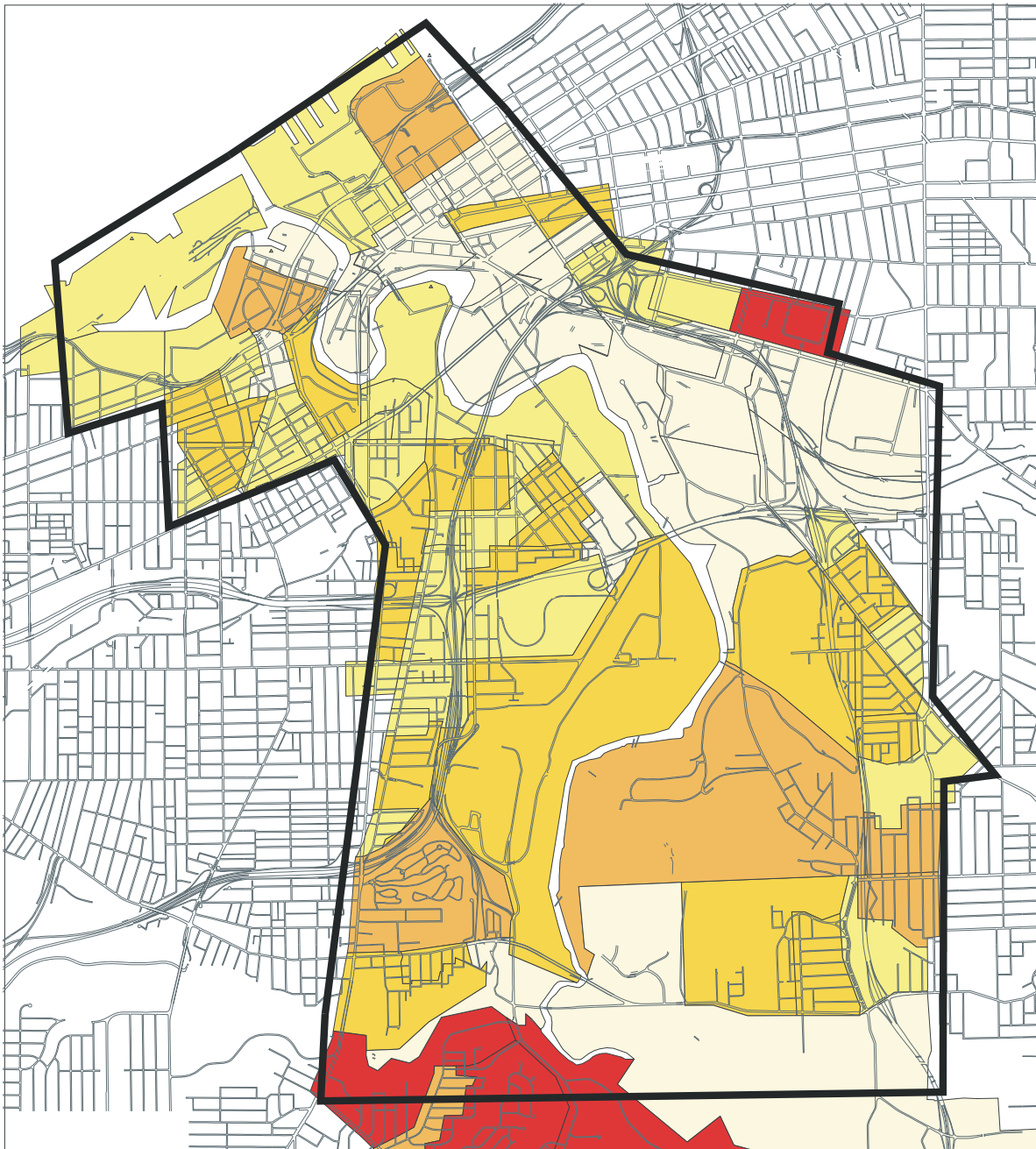
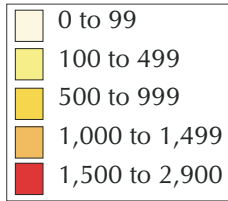
Map 1.6, General Zoning



SOURCE: Cleveland City Planning Commission

Existing Conditions

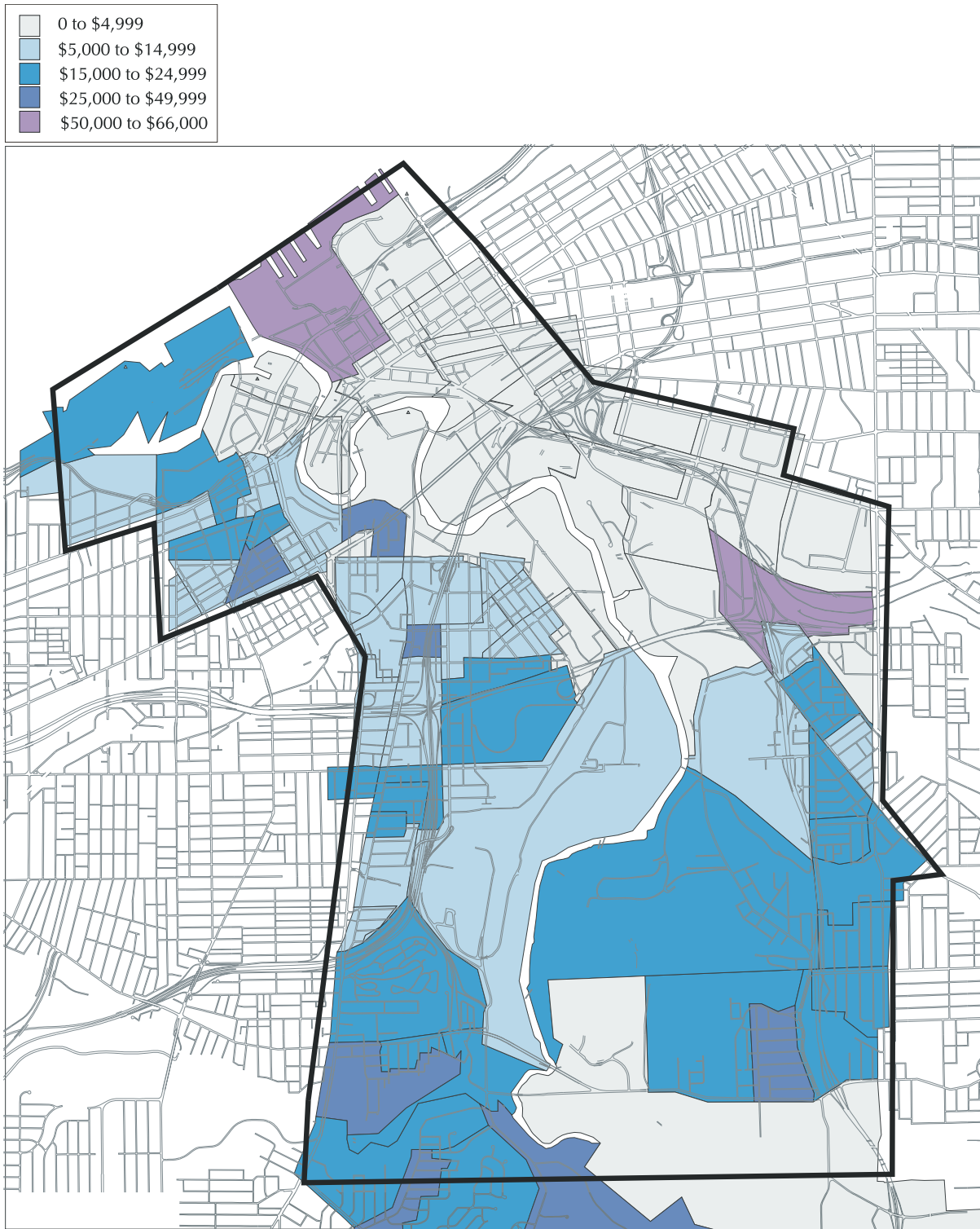
Map 1.7, Population Distribution by Census Block Group, 1990



SOURCE: U.S. Census, 1990

Existing Conditions

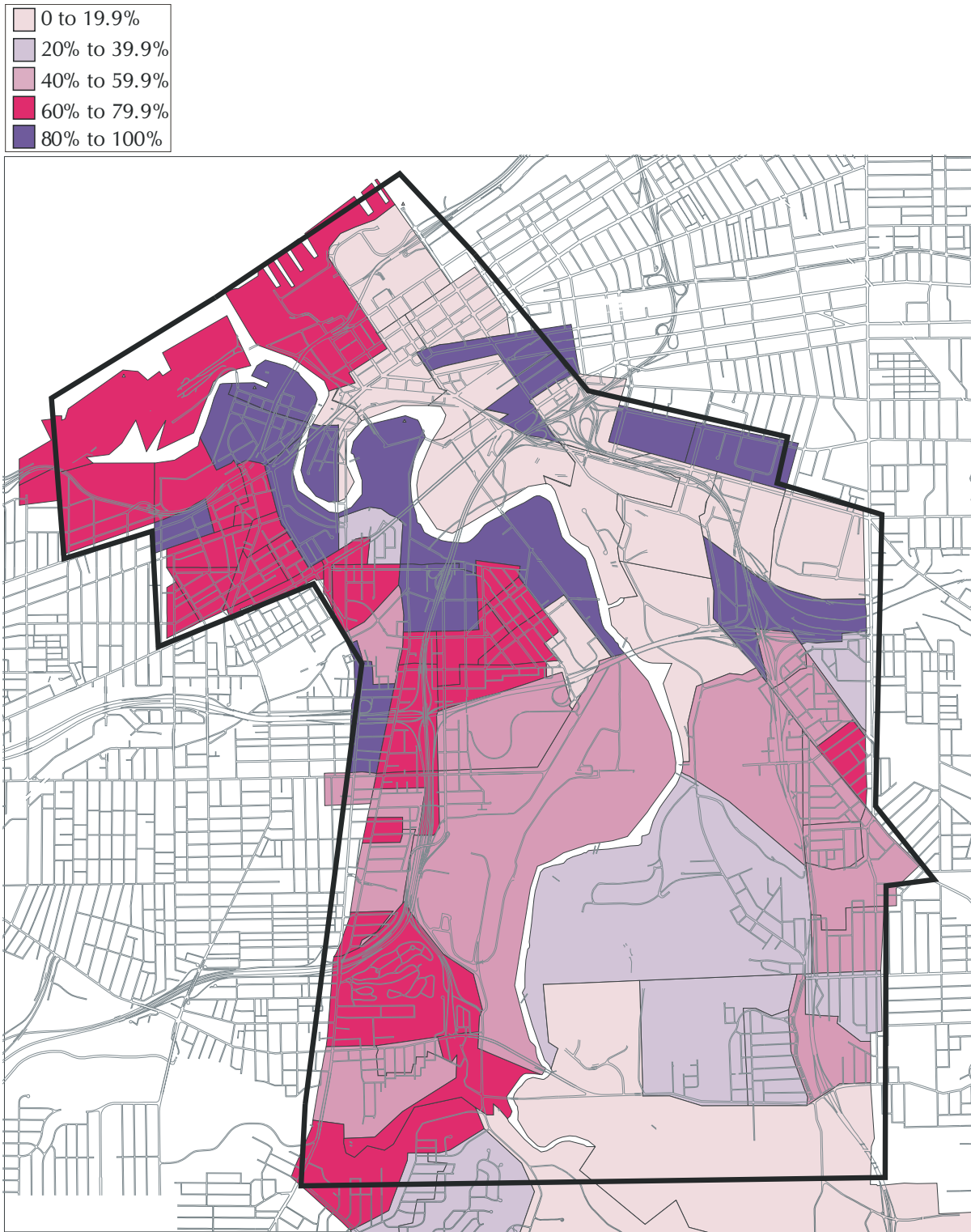
Map 1.8, Median Income by Census Block Group, 1989



SOURCE: U.S. Census, 1990

Existing Conditions

Map 1.9, Percent Renter Occupied Housing Units by Census Block Group, 1990



SOURCE: U.S. Census, 1990

Existing Conditions

toric Places and/or designated as Cleveland Landmarks (*Map 1.10*). These buildings and districts illustrate the history, architecture, culture, neighborhood identity, and industrial heritage of Cleveland and the region.

The Towpath Trail route should provide access to and interpretive opportunities for these resources to assist trail users to more fully experience the cultural and historic heritage of the area through which they are traveling.

Business Community

There are hundreds of businesses located within the study area, as diverse as small neighborhood retail stores, machine shops, restaurants, two major hospitals, a zoo, and a steel mill that occupies several square miles. The number of employees can range from a few to several thousand, representing firms that operate forty hours per week, or twenty-four hours per day, year round. The proposed trail route should avoid disrupting business activities within the study area, as well as seize the opportunity to create



Baltimore & Ohio Railroad Depot

a new recreational activity for tens of thousands of employees.

Entertainment/Recreation Interests

During the 1990's, Cleveland has emerged as a tourist destination

with plentiful entertainment and recreation opportunities. For example, the Flats entertainment district draws millions of visitors annually and is a regional destination. Downtown Cleveland also attracts many visitors to destinations such as Tower City, the historic Warehouse District, the Rock and Roll Hall of Fame, the Great Lakes Science Center, the sports complexes at Gateway, and Cleveland Stadium. Nearby neighborhoods such as Tremont are also becoming destinations for dining and art through reuse of structures.

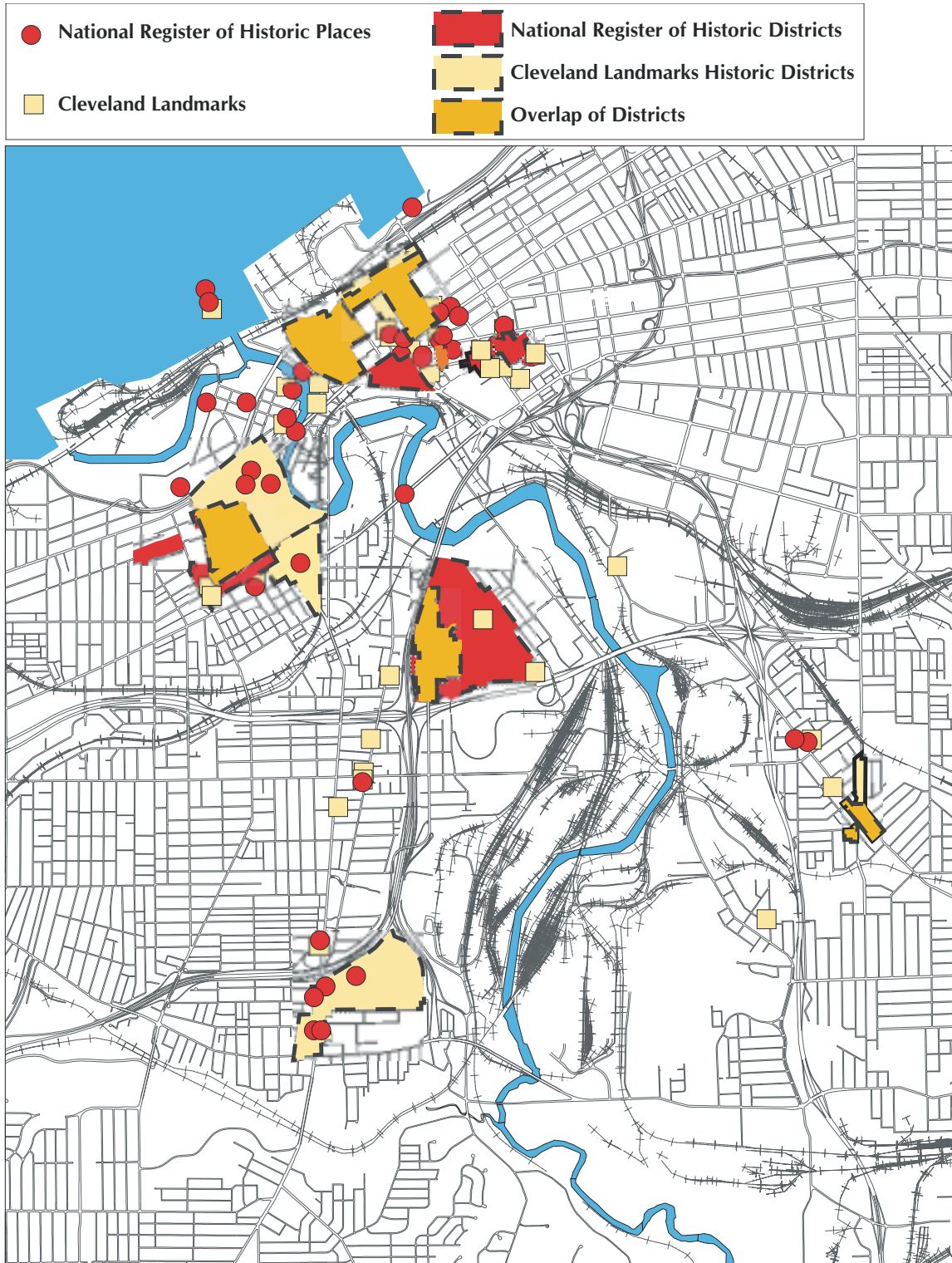
These locations should be publicized in connection with the trail route, both to encourage attendance at attractions, as well as make trail users aware of services such as restaurants. In turn, these locations should make themselves bike friendly through simple measures such as the installation of bicycle racks. In addition, entertainment and recreation opportunities that complement the trail should be encouraged.



LTV Steel

Existing Conditions

Map 1.10, Historic Resources



SOURCE: Cleveland Landmarks Commission and National Register of Historic Places, 1999

Nonprofit Sector

Cleveland has a strong network of neighborhood-based community development organizations, which function as a key point of contact and ongoing participation for projects proposed within their service areas. In addition, there are nonprofit organizations structured around larger geographic areas and/or specific topics that have an interest in the planning and implementation of the proposed trail route. The study area includes a number of nonprofit organizations, and they should be involved during the entire process of planning, designing, and constructing the proposed trail route. For a list of the organizations that assisted in the preparation of this plan, please refer to the Appendix.

Public Sector

The successful planning and implementation of the proposed trail route will require funding support and administrative assistance of agencies at the local, county, regional, and state levels. In addition, the study area includes the wards of several members of Cleveland City Council, who should be involved as the proposed project evolves. For a list of the agencies and Cleveland City Council members that assisted in the preparation of this plan, please refer to the Appendix.

Transportation Issues

The portion of the Cuyahoga River Valley within the study area is challenging in that it contains transportation routes serving the central business

district of Cleveland, extensive industrial areas, entertainment areas, and neighborhoods, all on a street system laid out in the 19th century. These numerous transportation activities should be considered as part of routing the Towpath Trail and its neighborhood connectors.

Rapid Transit Stations

The local public transit network, managed by the Greater Cleveland Regional Transit Authority, has both bus and rapid transit service within the study area. Connections between the trail route and public transportation should be encouraged. In addition, connectivity should be encouraged through the implementation of policies such as installation of bicycle racks and lockers at rapid transit stations, installation of bicycle racks mounted on buses, and allowing boarding with bicycles on rapid transit trains during off-peak hours.

Truck Traffic

Due to the industrial nature of much of the study area, a large amount of truck activity is present. In addition, the existing street network does not provide optimal connections from industrial locations to the freeway network. The Flats Oxbow Association and the

Cleveland City Planning Commission are currently coordinating a study of potential truck routes within the Flats. The goal of the project is to identify and construct truck routes that will provide efficient connections to the freeway network and that will



Truck traffic on Merwin Avenue in the Flats

not have a negative impact on adjacent neighborhood commercial and residential areas. The potential Towpath Trail routes outlined in this document incorporate current thinking concerning the location of potential truck routes. As both the trail route and truck route planning progresses, project coordination should be continued in order to ensure public safety is considered for all parties involved.

Traffic Counts

The urban development patterns of the study area mean that the street network ranges from heavily traveled arterial roads to quiet side streets. A number of intersections within the study area have 24-hour volumes of 15,000-30,000 vehicles (*Map 1.11*).

High traffic counts need to be considered as part of the feasibility and safety of potential trail routes and neighborhood connectors. The route review should also assess additional appropriate safety features that may need to be implemented, including signage, marked crossings, striped lanes, and/or pedestrian/bikeway signalization.

Planned Infrastructure Projects

The road transportation network within the study area contains numerous bridges and roads servicing the core of Cuyahoga County. Due to factors such as high traffic activity, including a large number of trucks on some routes, and the age of the infrastructure, rehabilitation work is an ongoing necessity. *Map 1.12* shows the location of bridge and major road infrastructure projects scheduled for implementation over approximately the next five years by the City of Cleveland and the Cuyahoga County Engineer's Office. Other infrastructure projects scheduled by these two agencies for the same time period that will impact the study area include traffic signal up-

grades, sewer system evaluation, catch basin/manhole projects, and scenic byway sign installation.

Proposed infrastructure projects should be reviewed during trail route planning for two reasons. First, the infrastructure work has the potential to positively or negatively impact the location, operation, and safety of a trail route. Second, there may be opportunities during the planning phase to coordinate bicycle/pedestrian improvements with road and bridge design and construction.

Central Viaduct/Innerbelt Corridor

The most complicated infrastructure improvement that will impact the study area over the next ten years is the reconstruction of the Central Viaduct. The project boundaries extend from the West 25th Street/Fulton Road exit of I-71 to the curve on the lakefront known as Dead Man's Curve, including interchanges involving, I-71, I-77, I-90, I-490, and the Jennings Freeway. The lead agency for the project, the Ohio Department of Transportation, will initiate the first step in the planning process for the Central Viaduct/Innerbelt Corridor during 2000, a Major Investment Study. This study may have a significant impact, positively or negatively, on the trail route and project planning should be coordinated with the Ohio Department of Transportation.

Railroads

By the 1880's, Cleveland had the most dense network of railroad connections between New York and Chicago. Every railroad crossed, made connections with, or terminated in the Cuyahoga Valley. This network of tracks, bridges, and rail yards remains today, with significant use by LTV Steel and other industrial businesses, as well as railroad-owned facilities. Railroad companies range from small

Existing Conditions

Map 1.11, Traffic Intersection Volumes (24-Hour)



SOURCE: Cuyahoga County Engineer, 1999

Existing Conditions

Map 1.12, Planned Infrastructure Projects



SOURCE: Cuyahoga County Engineer and City of Cleveland, 1999

Existing Conditions

firms working internally in LTV Steel, to the major carriers CSX and Norfolk Southern.

Crossing railroad tracks at-grade with a bicycle route can be a difficult project to implement. Utilizing an existing crossing, such as a public street, is feasible. Receiving permission from a railroad to establish a new crossing location at-grade is very difficult.

Trail route planning should avoid at-grade crossing of railroad lines, which will ensure the safety of trail users. In addition, the design of elevated sections of the trail will be influenced by the height clearance required where railroad tracks will be spanned.

Shipping

The Cuyahoga River and Lake Erie serve as important economic resources for domestic and international shipping. The river banks also serve as a storage location for bulk materials such as iron ore and limestone. During the 1998 navigation season, the Cuyahoga River handled over sixteen million tons of commodities carried on almost 1,000 ships. The trail route should avoid contact with locations where bulk materials are unloaded due to the nature of these industrial operations.

Summary/Recommendations

The following are recommendations relevant to planning resources and the development of the Towpath Trail.

- ✓ Encourage development opportunities that are compatible with the Towpath Trail.
- ✓ Provide access to the main trail route from adjacent neighborhoods and beyond to develop linkages with their recreational resources, historic/cultural resources, and entertainment locations.
- ✓ Coordinate with ongoing transportation studies and infrastructure projects to provide the safest and most feasible trail route, as well as integrate potential design and construction opportunities.
- ✓ Incorporate appropriate design and construction precautions to ensure safe crossing of railroad tracks and roadways along the proposed trail route to minimize impact with traffic.
- ✓ Avoid contact with navigation channel activities, such as bulk material unloading facilities.



Freighter on the Cuyahoga River

Chapter Two

Proposed Route Alternatives



COVER: Cuyahoga River near LTV Steel

Proposed Route Alternatives

Proposed Route Alternatives

Examination of the natural resources, environmental conditions, and planning resources of the study area assist in identifying route locations for the Towpath Trail route extension.

Map 2.1 shows the route alternatives examined in detail in this chapter. Each route has been examined for accessibility, views, visitor experience, design and construction challenges, economic revitalization potential, and safety issues.

In addition, this chapter also includes identification of potential neighborhood connectors. These connectors are defined as linkages from the main trail route to the adjacent urban neighborhoods. The goal is to provide safe, convenient access to the main trail for neighborhood residents and employees, and permit trail users to discover the heritage, character, and amenities of these neighborhoods.

Segment A – Old Harvard Avenue to Holmden Avenue

Description

This segment of the proposed Towpath Trail extension route would begin at the northern boundary of the Cleveland Metroparks Ohio & Erie Canal Reservation at Old Harvard Avenue just east of Jennings Road. From Old Harvard Avenue, the route would travel north adjacent to the Cuyahoga River, then turn west along the southern edge of the LTV Steel property and cross over the LTV entrance drive. The route would continue along the LTV Steel/State of Ohio property line adjacent to I-71 northward to Holmden Avenue. This entire segment is anticipated to be an elevated route, due to the need to cross active railroad tracks, the LTV entrance drive, and accommodate the retaining walls and embankments that are part of the I-71 right-of-way.



CSX Railroad bridge to clear near Harvard-Denison Bridge



LTV entrance drive



Interstate 71 retaining wall along LTV Drive

The area surrounding Old Harvard Avenue Road is being proposed as an activity center for various aspects of the Towpath Trail. The Cleveland Metroparks is proposing a Trailhead Area with parking south of Old Harvard Ave-

Proposed Route Alternatives

Map 2.1, Overall Route Alternatives



Proposed Route Alternatives

nue, west of the Cuyahoga River. In addition, Metroparks is proposing a canoe takeout area and small parking lot on the east side of the Cuyahoga River, north of Old Harvard Avenue. Finally, the National Park Service is considering a future stop for the Cuyahoga Valley Scenic Railroad at the southeast corner of Old Harvard Avenue and Jennings Road. Connection to these proposed facilities and activities should be addressed as the Towpath Trail extension begins at this point.

Other Routes Researched

A number of other routes were researched for this segment. First, staff from Behnke and Associates, National Park Service, Ohio Canal Corridor, and the Cuyahoga County Planning Commission worked with LTV Steel representatives to review various potential routes through the LTV Steel complex. Due to the configuration of buildings and structures, as well as dangerous manufacturing processes in some portions of the complex, it was mutually agreed that the only suitable route to ensure the safety of trail users would be along the western edge of LTV Steel property.

A second route researched was along the railroad right-of-way paralleling Jennings Road to its east. An at-grade route was not feasible due to the need to cross active railroad tracks. In addition, fluctuations in the railroad right-of-way width made it difficult to position the trail at a consistently safe distance from the railroad tracks.

A third route studied was placing the route on-street on Jennings Road from Old Harvard Avenue to the LTV Steel entrance drive. This option was discarded due to the heavy vehicular traffic on Jennings Road, including numerous trucks.

A fourth route studied was along the ridgeline west of Jennings Road. The route was considered undesirable due to the fact that it steered trail users away from the Cuyahoga River before it was necessary. Due to the topography, it would also be difficult to provide a basically level route for trail users.

A fifth route studied was to follow the Cuyahoga River to the Harvard-Denison Bridge, turn westward under the bridge toward Jennings Road, cross Jennings Road at Old Denison Road, and use the embankment on the west side of Jennings Road to the LTV entrance drive. The need to cross railroad lines and Jennings Road at-grade made this route undesirable due to safety conditions.

Ownership Outline

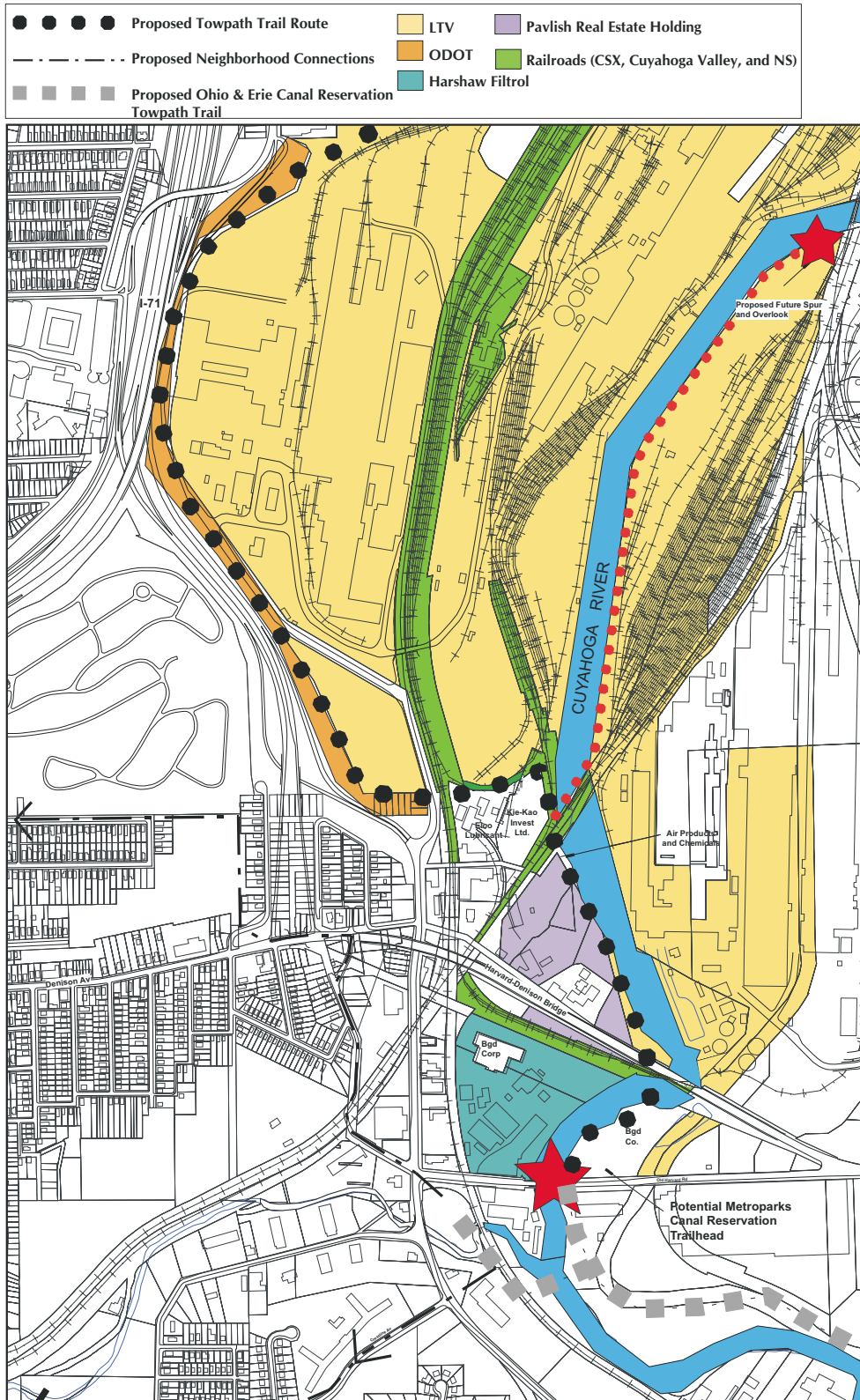
This route segment shown on *Map 2.2* is mostly in private ownership. North of Old Harvard Avenue, there are various active railroad lines that cross in the area, along with several industrial firms. As the route crosses the LTV Steel entrance drive, the proposed route would be in the vicinity of the LTV Steel/State of Ohio property line adjacent to I-71, with the exact location subject to finalization.

Strengths

This route segment provides access to the Cuyahoga River, as well as views across the Cuyahoga River Valley and to the downtown Cleveland skyline (*Map 2.3*). The route also provides interpretive opportunities for the history of the steel industry in the valley, the production of steel, and air quality management. The segment along the Cuyahoga River provides interpretive opportunities for the role of floodplains and the issues of erosion and floating debris.

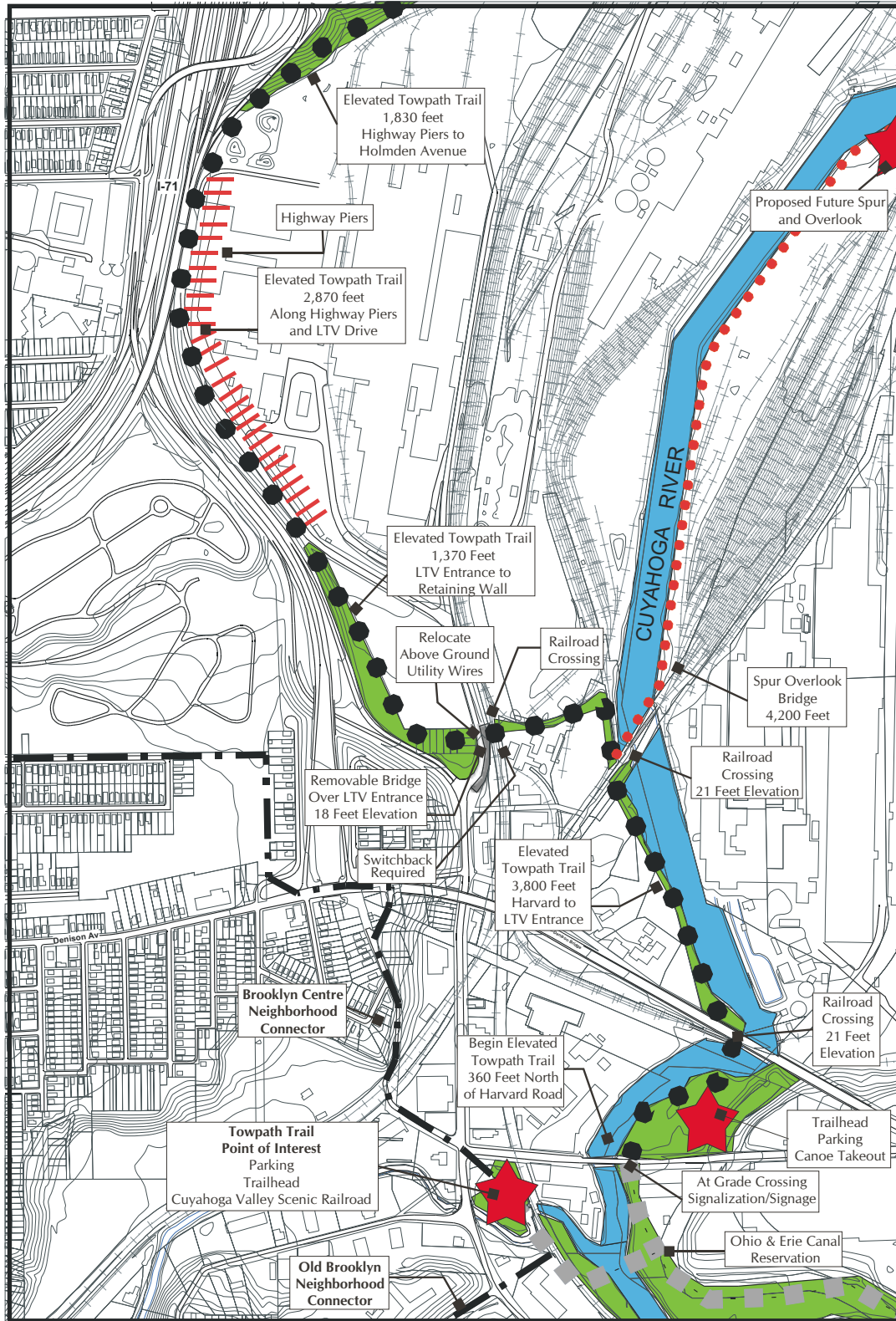
Proposed Route Alternatives

Map2.2, Land Ownership, Segment A - Old Harvard Avenue to Holmden Avenue



Proposed Route Alternatives

Map 2.3, Route Evaluation, Segment A - Old Harvard Avenue to Holmden Avenue



Proposed Route Alternatives

Additional strengths include the ability to have a seamless connection to the trail route in the Metroparks Reservation, along with crating a collaboration for visitor activity with a potential Cuyahoga Valley Scenic Railroad station.

Challenges

Acquisition of private property, if needed, may be costly. Donation of property or granting of easements may be possible due to the fact that the suggested route occupies land at the edges of parcels.

This entire segment is anticipated to be an elevated route, due to the need to cross active railroad tracks, the LTV entrance drive, and accommodate the retaining walls and embankments that are part of the I-71 right-of-way. A minimum clearance of 21 feet over active railroad tracks is required, as well as 18 feet above the LTV entrance. As the route approaches the LTV entrance from the Cuyahoga River, a second elevation change may require a switchback or ramp to lower the overall height of the elevated trail route. Above ground utility poles at the LTV entrance will need to be buried. Along I-71, retaining walls, embankments, and LTV operations constrict the space for a trail route. Additional design and engineering study needs to be undertaken to determine the exact location of the trail and whether any sections can be built at-grade rather than elevated.

Impact on Land Uses

The impact of the Towpath Trail on existing land uses within this segment will be minimal due to the recommendation for an elevated bikeway structure. For example, the elevated route will limit conflicts with vehicular and railroad traffic. The proposed route placement near the edge of parcels should minimize disruption of business operations. In addition, the Towpath Trail may spur additional investment,

particularly near Old Harvard Avenue and Jennings Road, as this area evolves into a major activity location.

Design Ideas

The cost associated with this proposed, lengthy, elevated segment creates opportunities for innovative design and construction solutions. For example, a sustainable development concept could produce a national model for innovative design solutions and materials usage in this type of structure.

The elevated design of this segment also creates specific issues that need to be addressed:

- ✓ a railing system for the safety of users, however not the design of the standard chain link enclosure used on highway pedestrian overpasses.
- ✓ emergency and maintenance vehicle access.
- ✓ trail access for LTV Steel employees.

Future Spur Route

A spur route has also been proposed, which would provide trail users with a more direct view of some activities within the LTV Steel complex that are not visible from the main trail route. This spur, which would also be elevated, would terminate in an overlook in the vicinity of the head of navigation. The completion of this spur is considered secondary to the completion of the main trail route.

Cost/Expense

Total Segment length: 10,230 feet

Total Cost: \$9 million

Spur Overlook Segment Length: 4,200 Feet

Spur Overlook Cost: \$3.8 million

Proposed Route Alternatives

Neighborhood Connections

There are three connections proposed within this segment to provide access from surrounding neighborhoods to the Towpath Trail extension.

Access from the Cleveland neighborhoods east of the Cuyahoga River would be through the main entrance of the Cleveland Metroparks Ohio & Erie Canal Reservation East 49th Street just south of Harvard Avenue. Planning efforts by neighborhood organizations in the Broadway Avenue area are focusing on improving Fleet Avenue as a bicycle friendly link. Fleet Avenue provides bridge access across I-77 and connects to Washington Park Boulevard and East 49th Street. An on-street connection utilizing Harvard Avenue to the Towpath Trail is not feasible due to heavy traffic, including truck and bus activity. An off-road connection through Washington Park in Newburgh Heights is also not feasible due to the industrial land uses and topography changes just west of the park.

The second neighborhood connection within this segment would provide access to the Old Brooklyn neighborhood. The preferred route would be an off-road segment east of Jennings Road that would eventually align opposite Crestline Road. The route would proceed west on Crestline Road to its terminus at Valley Road. The route would then cross Val-



Old Brooklyn connection along Crestline Avenue

ley Road and enter the Big Creek Valley to connect to the Cleveland Metroparks Zoo. This route would also provide access to nearby Harmody Park.



Brooklyn Centre connection along Willowdale Avenue

The third neighborhood connection within this segment would provide access to the Brooklyn Centre neighborhood. This connection would begin at the Old Harvard Avenue Trailhead and proceed west through the Jennings Road intersection. The route would continue north on West 14th Street up the embankment to Denison Avenue. It is recommended that this steep and winding section of West 14th Street be vacated and reserved solely for trail use. A

similar nearby traffic connector, Old Denison Avenue, remains available for vehicular use. The neighborhood connector would then travel briefly on Denison Avenue to cross the Jennings Freeway interchange, to Denison Park. It may be feasible for the design and safety concepts under consideration for Fleet Avenue over I-77 to be applied to the Denison Avenue/Jennings Free-

way location. The route would proceed north

Proposed Route Alternatives

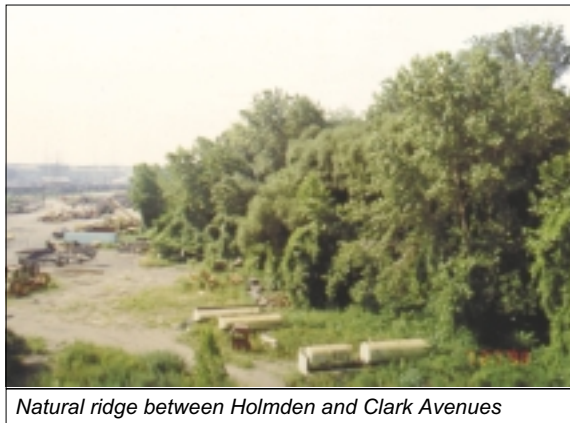
and west through Denison Park to Willowdale Avenue, which abuts historic Riverside Cemetery. The link would then follow Willowdale Avenue to Pearl Road at the heart of the neighborhood. Connections to other areas further west of Pearl Road, such as historic districts, Brookside Park, and the Cleveland Metroparks Zoo can be created from this access point.

Segment B – Holmden Avenue to Literary Drive

Description

This segment of the proposed Towpath Trail extension route begins at the north end of Segment A at Holmden Avenue and continues north at-grade along the natural ridgeline of the Cuyahoga Valley. The route would travel under the Clark Avenue bridge and enter Tremont Playfield. After following the perimeter of the park, adjacent to I-490, the route would become elevated to cross West 7th Street and then return to grade adjacent to Quigley Road. The route would pass under the I-490 bridge and turn to follow the abandoned West 4th Street right of way to Literary Avenue.

There are two activity centers proposed for this segment of the route. First, an overlook is recommended for the general area between Holmden and Clark Avenues to take advantage of the views into and across the Cuyahoga River Valley from the ridgeline. Second, a trailhead consisting of a new parking area and informational kiosk is recommended for Tremont



Tremont Playfield



Abandoned West 4th Street right-of-way

Playfield near West 7th Street. Cleveland City Planning Commission staff believe a separate small parking area at a distance from the main parking lot is appropriate in order to help ensure parking availability for trail users. The location near West 7th Street also affords a close link to freeway access.

Other Routes Researched

A number of other routes were researched for this segment.

The first route researched was to travel on, or adjacent to, Quigley Avenue from the base of Holmden Avenue to the West 4th Street right-of-way. This route was considered un-

Proposed Route Alternatives

desirable because it does not provide views of the valley and minimizes access to neighborhoods and parks.

A second route researched was crossing the West 11th Street pedestrian bridge over I-490, turning east, and traveling along the ridge on the north side of I-490. This option was discarded because the ridge is severely steep and could require significant stabilization. In addition, the design of the I-490 interchange at West 7th Street blocked access down to West 4th Street.

The third route researched was to utilize property along the west bank of the Cuyahoga River north of I-490. This route was not feasible because this river bank area remains in active use for shipping and industry. No space exists to insert a trail.

Ownership Outline

Most of the route in this segment is publicly owned by entities such as the City of Cleveland, State of Ohio, and the Cuyahoga Metropolitan Housing Authority (*Map 2.4*). Between Holmden Avenue and Tremont Playfield are two industrial landowners situated where the route is proposed, however the ridgeline area is undevelopable for building structures.

Strengths

Due to the significant amount of property that is publicly owned in this segment, land acquisition costs would be minimized. In addition, the topography of this segment would permit most of the route to be at-grade, which would reduce design and construction costs.

An additional strength would be the ability to travel along the ridgeline, enjoying views of the Cuyahoga Valley, the LTV Steel complex,

and the downtown Cleveland skyline. These views, combined with the proposed overlook at an appropriate location between Holmden and Clark Avenues, would also provide opportunities for interpretation of the region and its history.

Finally, access to a large city recreation area and the ability to locate a trailhead for the route approximately midway between the Metroparks Ohio & Erie Canal reservation and downtown Cleveland provides additional amenities for trail users (*Map 2.5*).

Challenges

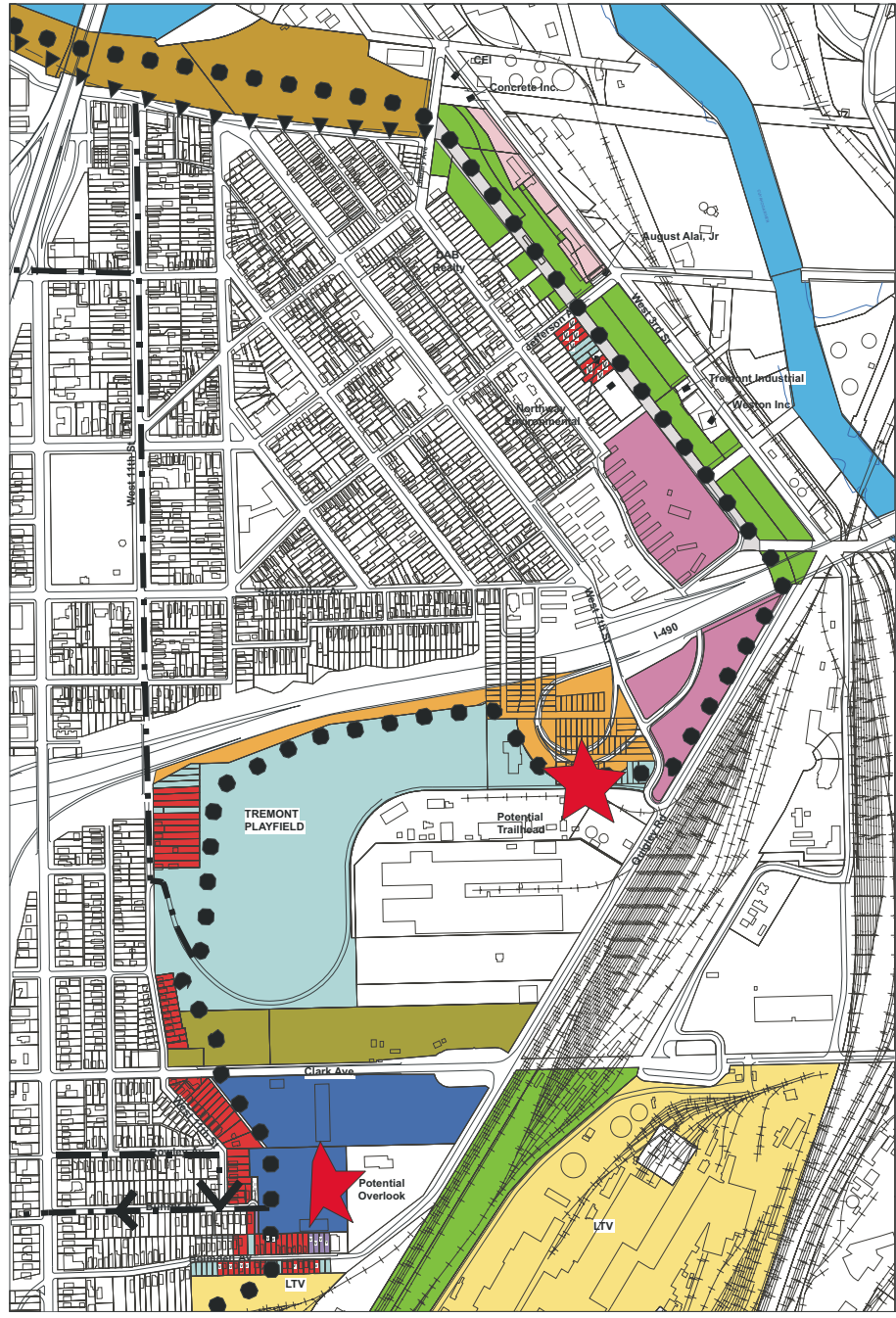
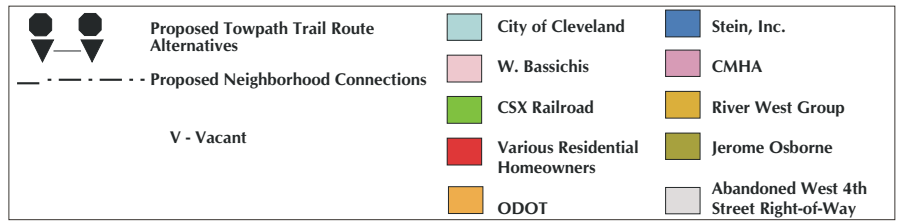
Acquisition of private property may be costly if donation of property or granting of easements is not feasible. For the section along the ridgeline between Holmden and Clark Avenues, additional design and engineering study needs to be undertaken to determine the exact location of the route and avoid potential erosion. Finally, there are housing rehabilitation and appearance issues in abutting residential locations (Holmden Avenue, Buhner/Rowley Avenues, and the Valleyview Homes CMHA facility) that could be addressed as part of broader neighborhood revitalization efforts coordinated with the trail route project.

Impact on Land Uses

The use of publicly owned property will minimize the impact on existing land uses. For privately owned property, the steep terrain recommended for the route is not utilized for daily business operations, which also minimizes land use impact. The availability of the route as a neighborhood amenity, along with the increased exposure for adjacent residential locations, could be used to spur investment in housing rehabilitation and new construction.

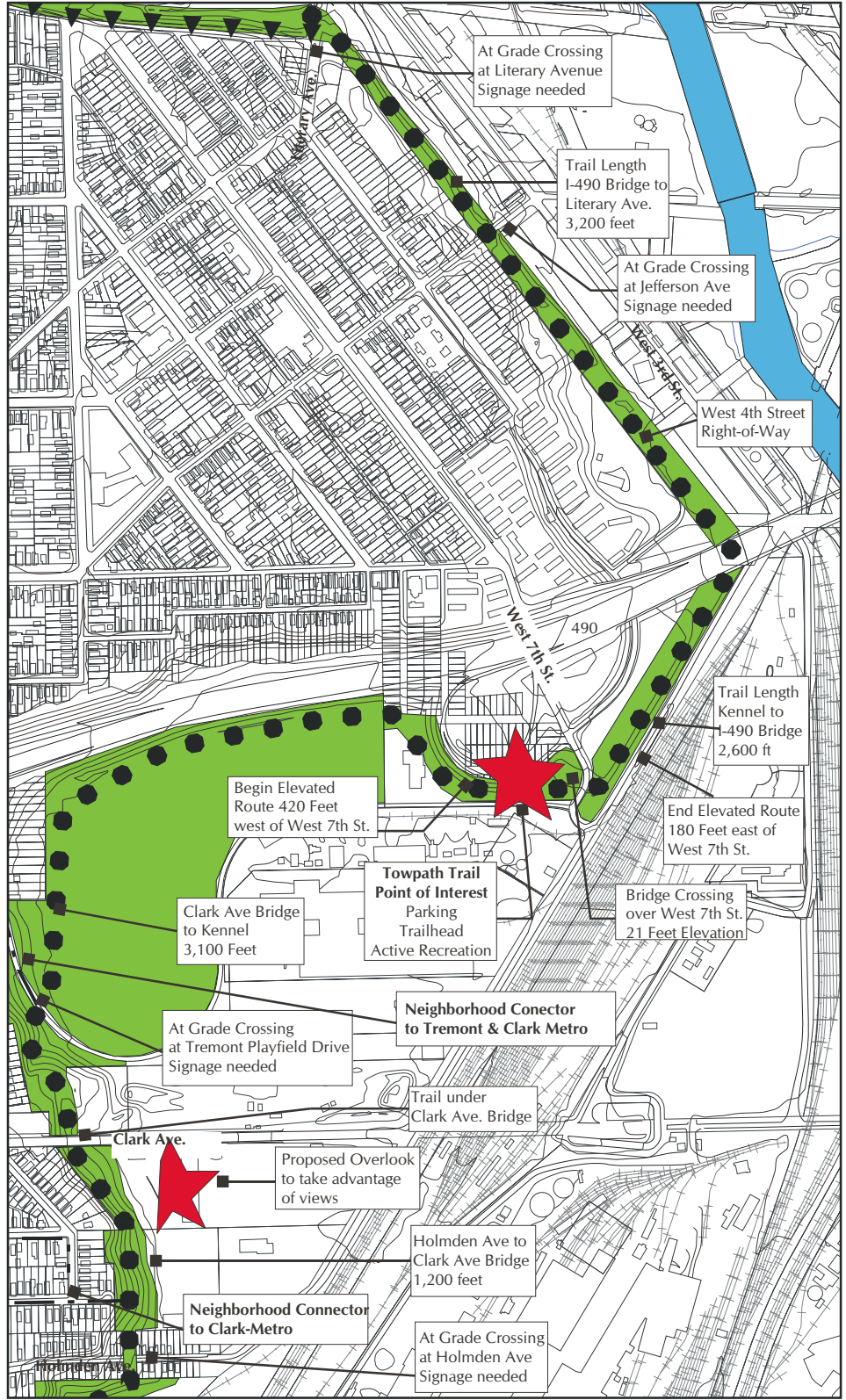
Proposed Route Alternatives

Map 2.4, Ownership Information, Segment B - Holmden Avenue to Literary Avenue and Segment C - Literary Avenue to Scranton Peninsula



Proposed Route Alternatives

Map 2.5, Route Evaluation, Segment B - Holmden Avenue to Literary Avenue



Proposed Route Alternatives

Design Ideas

In general, this segment of the route creates the opportunity to reintroduce plant communities to beautify the Towpath Trail, avoid erosion problems, and improve the ecosystem of the area. Along the ridgeline between Holmden and Clark Avenues, innovative trail design could be employed to minimize the impact on the slope. In addition, the design of the proposed overlook could echo the industrial heritage that could be a major interpretive theme at that location.

Cost/Expense

Total Segment Length: 10,100 feet
Total Cost Estimate: \$1.3 million
Trail length along ridge: 1,200 feet = \$210,000
Trail length at-grade: 8,900 feet = \$330,000
Trailhead with 20 parking spaces and kiosk: \$40,000
Overlook along trail ridge: \$100,000
West 7th Street bridge @ 600 feet : \$600,000
On-street markings @ 4 streets @ \$2,000 each: \$8,000
Interpretive signs: 2 @ \$2,000 each: \$4,000

Neighborhood Connections

There are three connections proposed within this segment to provide access from surrounding neighborhoods to the Towpath Trail extension.

The first neighborhood connection within this segment would provide access to the Clark-Metro neighborhood. The connector would begin at the terminus of Buhrer Avenue, cross West 14th Street, and traverse the pedestrian bridge over I-71 to



Clark-Metro connection along Buhrer Avenue



Clark-Metro connection along Train Avenue

Scranton Road. Due to the fact that Buhrer Avenue is one way, adjacent Rowley Avenue would be used to complete the full route.

The second neighborhood connection within this segment would provide access to the Tremont neighborhood. Where the main trail route enters the south end of Tremont Playfield, a connector could branch north on West 11th Street and use the pedestrian bridge over I-490 into the Tremont neighborhood. The connector would continue north on West 11th Street, which has safer traffic conditions than West 14th Street. The connector would be adjacent to Lincoln Park and continue to its terminus at University Road.

The third neighborhood connection within this segment would provide access to the Clark-

Metro neighborhood. The preferred route would travel west on Kenilworth Avenue from West 11th Street and Lincoln park, and turn southwest on Train Avenue.

Proposed Route Alternatives

Segment C - Literary Drive to Scranton Peninsula - Route 1



View from Railway Avenue



Railway Avenue along ridgeline

Description

This segment alternative of the proposed Towpath Trail extension route begins at the north end of Segment B and would cross Literary Avenue at grade. It would be located to the north side of Railway Avenue and University Road, traveling along the ridgeline of the northern edge of the Tremont neighborhood. Upon reaching the Innerbelt Bridge, a ramp would allow trail users to descend to the base of the slope, and the route would continue at-grade to Scranton Road. This lower route would allow trail users closer to the Cuyahoga River.

Other Routes Researched

Several other routes were researched for this segment. The first route was placing the route on-street on University Road from the Innerbelt Bridge to Scranton Road. This option was discarded because the top of the University Road hill is too steep, winding, and narrow to permit safe bicycle travel.

A second route studied was placing the route on-street westward on Abbey Avenue, turning on Columbus Road, and entering the Flats via the Columbus Road Bridge. This route was considered undesirable because it was a higher priority to create an off-street route and remain nearer to the river.

A third route studied was placing the route on-street westward on Abbey Avenue, turning north at Abbey Playground into the West 17th through West 20th Streets area, and finding a route on-street or off-street to the Scranton Peninsula. This route was considered undesirable because the ridge along the south side of the Scranton Peninsula was isolated from the surrounding area and the configuration of existing buildings would make it difficult to identify a route.

A fourth route studied was placing the route on-street westward on Abbey Avenue, and at Columbus Road descending to a vacant track area adjacent to the RTA West 25th Street station. Although space was available adjacent to the active tracks heading north, the elevation change at the steep wall of the valley above Franklin Avenue made it unfeasible to place a route that could descend safely to the valley floor.

Ownership Outline

From Literary Avenue to the Innerbelt Bridge, the route would be located on part of the public right-of-way of Railway Avenue and Uni-

Proposed Route Alternatives

versity Road. From the Innerbelt Bridge to Scranton Road, the land is privately owned but primarily vacant (*Map 2.4 and Map 2.8*).

Strengths

This route does not disturb any current operating businesses or existing residences for implementation (*Map 2.6*). The trail would also coordinate with the Tremont neighborhood master plan to develop this area along the ridgeline as a public park (*Sketch 2.1*), creating a focal point for the Tremont and Clark-Metro neighborhood connectors. This route also affords magnificent views of the Cleveland skyline and the Cuyahoga River. These views create a strong opportunity for an interpretive experience of both the Cuyahoga River Valley and the Tremont neighborhood. Finally, the trail and park may serve as a catalyst for additional neighborhood investment.

Challenges

With park and trail construction at the ridgeline, slope stabilization would need to be addressed. Trail users would also be brought through major elevation changes at Literary Road and the Innerbelt Bridge in order to link through the proposed park. The ramp structure under the Innerbelt Bridge may be costly and need additional engineering study.

Land Use Impact

As part of a proposed park on vacant land, the impact of the trail route on existing land uses would be minimal. On the section from the Innerbelt Bridge to Scranton Road, the narrow strip of land at the base of the slope needed for the trail should not interfere with any potential building development on the site or construction of a new truck route.

Design Ideas

Opportunities to complement a proposed park within a neighborhood would create a strong connection between a regional trail network and a local resource. Innovate slope stabilization and landscape reclamation efforts would avoid negatively impacting natural resources and improve the ecosystem. Interpretive exhibits could highlight the rich relationship of the Tremont neighborhood and the Cuyahoga River Valley.

Cost/Expense

Total Length of Segment: 2,900 feet
Total Cost: \$1 million
Trail along ridge: 2,100 feet = \$380,000
Trail at-grade: 400 feet = \$70,000
Ramp: 300 feet = \$300,000
Bridge @ Scranton Road (if needed): \$250,000

Neighborhood Connections

The West 11st Street neighborhood connection within Tremont would terminate directly into the proposed park. The Clark-Metro neighborhood connection via Kenilworth and Train Avenues would be in proximity to the proposed park.

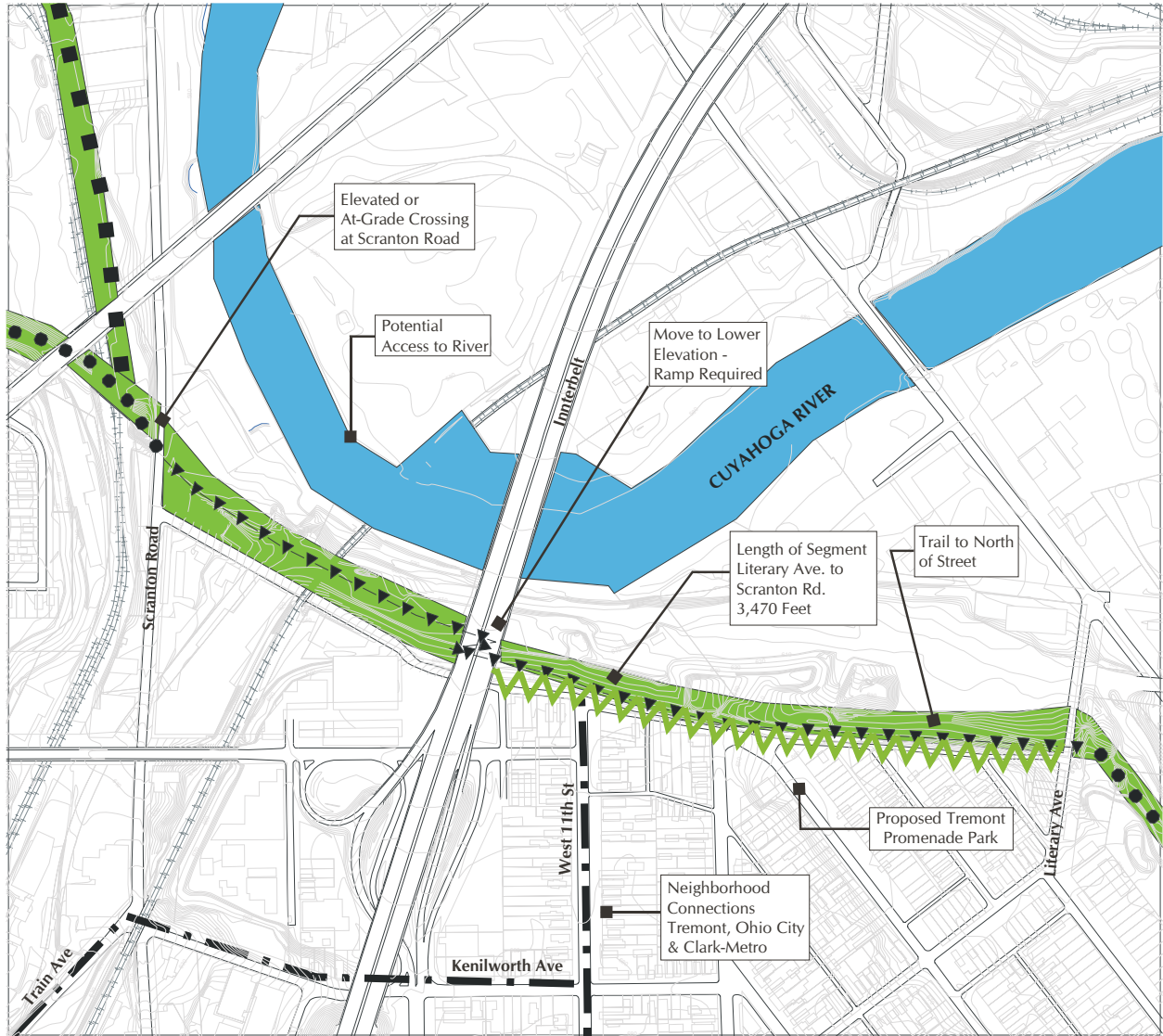
Segment C - Literary Avenue to Scranton Peninsula - Route 2

Description

This segment alternative of the proposed Towpath Trail extension route begins at the north end of Segment B and would cross Literary Avenue at grade. This proposed route would continue along the bottom of the existing slope, under the Innerbelt Bridge, and to Scranton Road. If a truck route is constructed in the future through this same area, the bike-

Proposed Route Alternatives

Map 2.6, Route Evaluation, Segment C - Literary Avenue to Scranton Peninsula - Route 1



Proposed Route Alternatives

Sketch 2.1



SOURCE: City Architecture

Proposed Route Alternatives



View from Literary Avenue into existing asphalt plant

Road, the land is primarily vacant (*Map 2.4 and Map 2.8*).

Strengths

This route is situated close to the Cuyahoga River, which improves the opportunity for greater visibility and potential access. The route location at the bottom of the slope would minimize its impact on the slope. If the proposed truck route and trail were planned at the same time, potential design conflicts could be avoided. Finally, there are only minor elevation changes from Literary Avenue to Scranton Road with this option (*Map 2.7*).

Challenges

Due to the nature of the asphalt plant operation, this route would likely be feasible only if the current use ceased. Acquisition of a strip of private property may be costly. Truck route planning, which is underway, will have an important influence on the feasibility of this route alternative.

Land Use Impact

This route is likely to be feasible only if the current heavy industrial land use has ceased. If the proposed truck route is implemented, some portions of the area may be developed with light industrial uses. These new uses would potentially be located closer to the river, whereas the proposed trail route would be situated at the bottom of the slope.

way would be located in a separate right-of-way.

Other Routes Researched

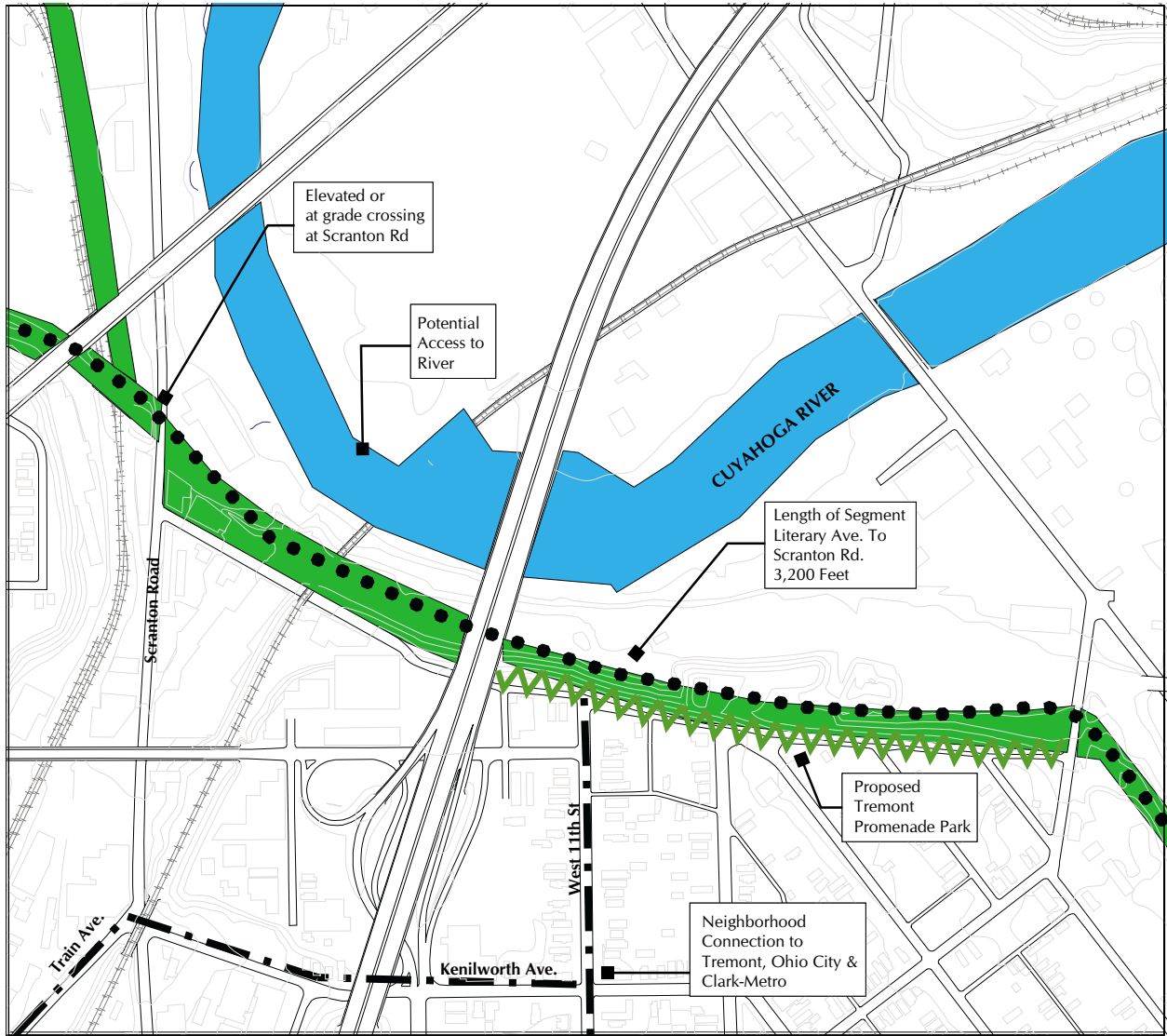
Please refer to Segment C - Route 1.

Ownership Outline

All of the land in this segment is privately owned. An asphalt plant is in operation on the section from Literary Avenue to the Innerbelt Bridge. From the Innerbelt Bridge to Scranton

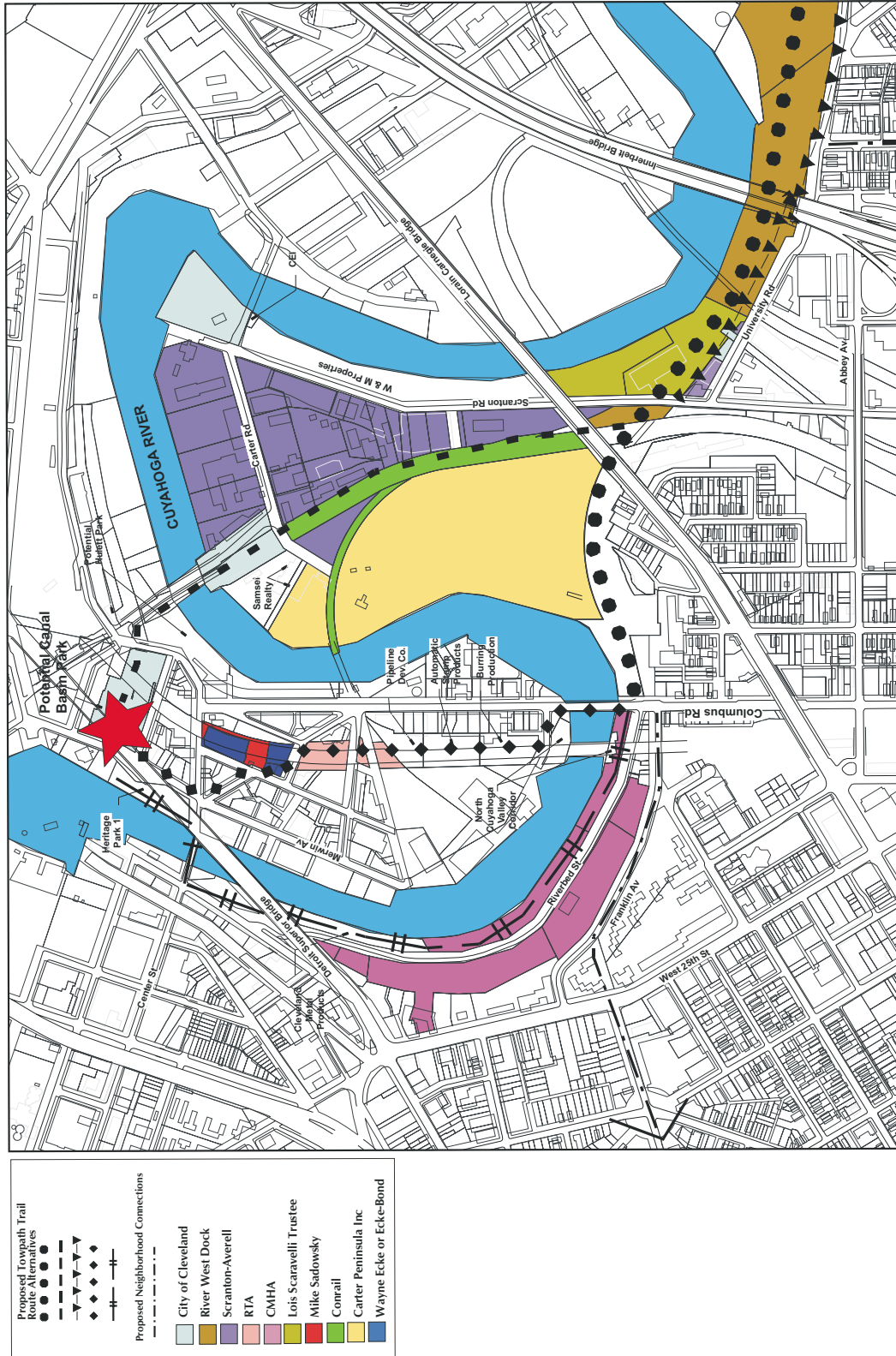
Proposed Route Alternatives

Map 2.7, Route Evaluation, Segment C - Literary Avenue to Scranton Peninsula - Route 2



Proposed Route Alternatives

Map 2.8, Ownership Information, Segment D - Scranton Peninsula to Canal Basin



Proposed Route Alternatives

Design Ideas

With the trail route near the river, potential access opportunities exist, such as seating areas and interpretive exhibits. Creative landscape reclamation of the industrial site would enhance aesthetics along this segment, as well as improve the ecosystem.

Cost/Expense

Total Segment Length: 3,200 feet

Total Segment Cost: \$400,000

Trail length 3,200 feet = \$150,000

Bridge at Scranton Road (if needed)=\$250,000

Interpretive exhibits = \$2,000

Neighborhood Connections

The neighborhood connections with this option are not as direct when compared to the Segment C - Route 1. In this Route 2 option, the neighborhood connections would only be available at the end points of this segment: Literary Avenue and Scranton Road. City streets could be utilized to reach West 11th Street. At this time, Scranton Road is not indicated as a neighborhood connector due to its unknown future location, design, and capacity if the Scranton Road Peninsula is redeveloped.

Segment D - Scranton Peninsula to Canal Basin - Route 1

Description

This segment of the proposed Towpath Trail extension route begins at the end of Segment C at the south end of the Scranton Peninsula, turns



West 11th Street connection in Tremont neighborhood

north, and traverses the center of the peninsula. The route would be located adjacent to the east side of the active railroad track. The trail would cross the Cuyahoga River on the abandoned B & O railroad bridge owned by the City of Cleveland, which is adjacent to the Carter Road Bridge. After crossing to the east bank of the Cuyahoga River, a switchback or ramp would allow access down to the original bed of the Ohio & Erie Canal. Trail users could proceed off-road on the original canal bed to the proposed Canal Basin Park and the original outlet of the canal to the Cuyahoga River.



Scranton Peninsula

Proposed Route Alternatives



Carter Road Bridge and B&O Railroad Depot at Sherwin-Williams



Original bed of Ohio & Erie Canal under Columbus Road at Sherwin-Williams

Other Routes Researched

On the Scranton Peninsula the route could be placed in various locations, depending upon the street network and arrangement of land uses in the final development plan. The recommended location does not cross the active railroad line, provides a short, direct route across the peninsula, and could be incorporated into a transportation spine for the peninsula, consisting of a parallel but separated placement of the railroad line, trail, and roadway.

Another route researched was to follow Scranton Road on the peninsula, cross the river on the Eagle Avenue Bridge, and turn toward the Canal Basin by following the railroad tracks that were original location of the canal. This route was considered undesirable due to the circuitous path and location of the Sherwin Williams facility, which occupies land extending from Canal Road to the river.

Ownership Outline

This segment would be located primarily on the land of the development partnership for the Scranton Peninsula. On the east bank of the river, the trail would use a small undeveloped portion of a privately owned property, along with publicly owned land (*Map 2.8*).

Strengths

This route alternative would eliminate conflicts between trail users and vehicular traffic by being designed as a separate right-of-way.

This route would also provide trail users the rare opportunity to travel on the actual location of the Ohio & Erie Canal. In addition, coordination with the proposed mixed use development on the Scranton Peninsula creates an opportunity to develop the trail in a cohesive and attractive manner. The Scranton Peninsula developer has indicated an interest in exploring benefits of having trail on the peninsula.

Finally, the route would bring trail users directly to several proposed projects: the Canal Basin park, the Hulett ore unloader park, and the rehabilitation of the B & O railroad station

Proposed Route Alternatives

into an interpretive center serving the National Heritage Corridor (*Map 2.9*).

Challenges

The timeframe for development decisions concerning the Scranton Peninsula is uncertain, therefore it would be difficult to make final decisions concerning the trail. Rehabilitation, maintenance, and operation of the abandoned B & O railroad bridge could be costly. The elevation change and constricted space from the railroad bridge level to the canal level needs additional engineering study.

Land Use Impact

Currently, the Scranton Peninsula is primarily vacant land. Planning is currently underway for a major mixed use redevelopment including residential and retail uses, which would provide an unusual opportunity to integrate the trail for design compatibility and to promote use. On the east side of the river, the main existing use at the proposed Canal Basin park is a parking lot owned by the City of Cleveland.

Design Ideas

The reuse of the abandoned B & O railroad bridge would create a unique experience for trail users and illustrate the industrial heritage of the Cuyahoga River Valley. Operationally, the bridge controls could be linked to the controls of the Carter Road bridge, which is manned year-round. If the use of the railroad bridge is not feasible, an alternative could be

creation of a separate bike lane as part of the Carter Road bridge. The Carter Road Bridge has a 46.5-foot roadway with two five-foot sidewalks.

Restoring and/or recreating the Ohio & Erie Canal along the route would provide interpretive opportunities for visitors. The design aesthetics of the Scranton Peninsula redevelopment and the trail could be coordinated.

Cost/Expense

Total trail length: 3,800 feet
Total Segment Cost: \$1.4 million
Trail cost at-grade : \$140,000
Railroad bridge rehabilitation: \$1 million
Switchback/ramp: \$250,000
Interpretive signs: \$4,000

Neighborhood Connections

The neighborhood connection with this segment would provide access to the Ohio City neighborhood. This connection would begin near Scranton Road at the south end of the Scranton Peninsula and con-

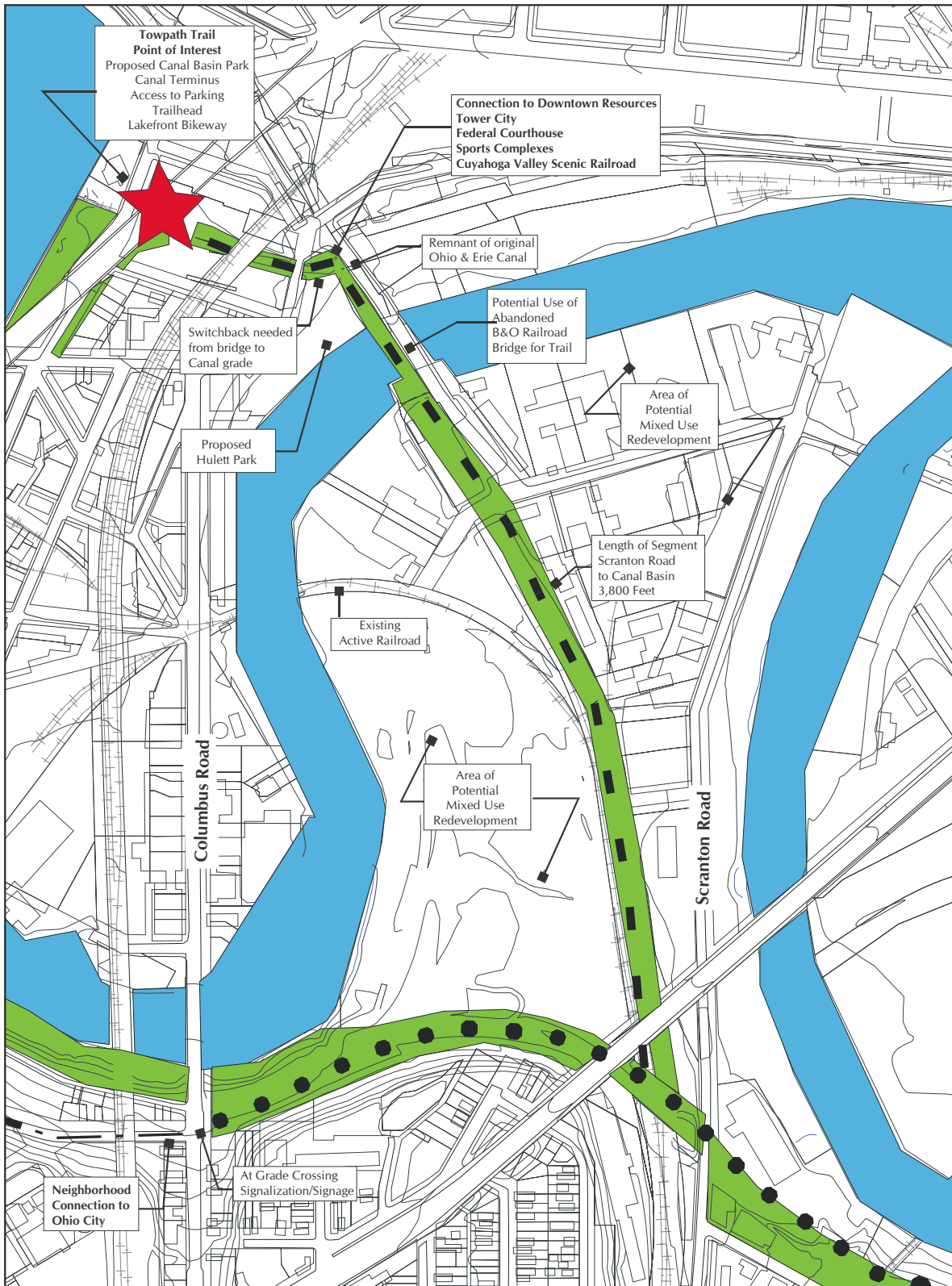


Ohio City connection along Franklin Avenue

continue toward Columbus Road. The connector would cross Columbus Road and use Franklin Avenue to reach West 25th Street. If the low-rise Cuyahoga Metropolitan Housing Authority units on West 25th Street are redeveloped, the connector could be shifted to align directly with Franklin Boulevard, which would provide

Proposed Route Alternatives

Map 2.9, Route Evaluation, Segment D - Scranton Peninsula to Canal Basin - Route 1



Proposed Route Alternatives

convenient access for the residential areas west of West 25th Street.

In addition, efforts should continue to create vertical connections from potential activity generators at river level, such as the trail route, Cuyahoga Valley Scenic Railroad station, Canal Basin park, Hulett ore unloaders park, and B & O railroad station rehabilitation, to upper levels such as Tower City, the new federal courthouse, Huron Road, and Detroit/Superior Avenues.

Terminating the trail route at the proposed Canal Basin park would also promote additional use of adjacent public parks on the riverfront, such as Heritage Park and Settlers Landing, as well as provide a link to the Settlers Landing rapid transit station.

Segment D – Scranton Peninsula to Canal Basin - Route 2

Description

This segment of the proposed Towpath Trail extension route begins at the end of Segment C at the south end of the Scranton Peninsula and



RTA Viaduct



Leonard Avenue



Merwin Avenue and Center Street intersection

continues along the south edge of the peninsula to Columbus Road. The route would cross the Cuyahoga River on the Columbus Road Bridge, turn west along the edge of Harte Crane Park, and turn to travel north under the RTA Viaduct. At Leonard Avenue, the route would return to the street network and continue to Merwin Avenue. On Merwin, the route would cross Center Street and use either Merwin Avenue or the Cuyahoga County-owned land and Heritage Park on the Cuyahoga River bank to reach the proposed Canal Basin park.

Other Routes Researched

A number of other routes were researched for this segment. The first route researched was to turn east after crossing the Columbus

Road Bridge and travel north along the riverbank. This option was discarded due to the bulk material unloading facility and railroad bridge structure on this section of the river.

A second route researched was to cross the Columbus Road Bridge and continue on-street toward the proposed Canal Basin park. The

Proposed Route Alternatives

volume of traffic, including trucks, as well as haphazard on-street parking, made this route undesirable due to safety conditions.

A third route researched was to continue under the RTA Viaduct north of Leonard Avenue. The presence of buildings and operating businesses in this section made this route undesirable.

A fourth route researched was to continue west from Harte Crane Park to reach Merwin Avenue as close as possible to its southern terminus. This route was not feasible due to the industrial business on Merwin Avenue that is forced to use the street as both a parking and unloading area for tanker trucks.

A fifth route researched was to cross the valley on top of the RTA Viaduct. Access to the elevation of the viaduct is available at the West 25th Street rapid transit station. This option was discarded due to safety issues, such as the fluctuating placement of tracks and trail users sharing the viaduct with trains and electrified operating systems. In addition, at the east end of the viaduct, a vertical connection would need to be constructed to bring users from the viaduct elevation down to the level of Canal Road.

Ownership Outline

The area under the RTA Viaduct is mostly under private ownership, although some is owned by RTA. The City of Cleveland has jurisdiction for the route segments on public streets.

Strengths

This route alternative would be on-grade, with no elevation changes. The route would provide access to one public area on the riverfront, Harte Crane Park. The use of the existing

street network may reduce implementation costs (*Map 2.10*).

Challenges

This route alternative provides minimal views of the Flats, downtown, and the Cuyahoga River. The route would cross the river on the Columbus Road Bridge, which is a busy traffic route. The irregular alignment of the RTA Viaduct piers would create a meandering route. This route alternative would require acquisition and alteration of existing business operations under the viaduct, which could be detrimental to local employment. The route would need to cross an active railroad line under the viaduct, which could result in a blocked crossing and increased safety risks for trail users.

The multiple turns required on the street network could be confusing to trail users. There are poor sight lines on the street network due to narrow streets, location of buildings, driveways, traffic, and on-street parking. The Merwin Avenue/Center Street intersection poses safety issues due to poor sight lines, traffic volume, and on-street parking.

Land Use Impact

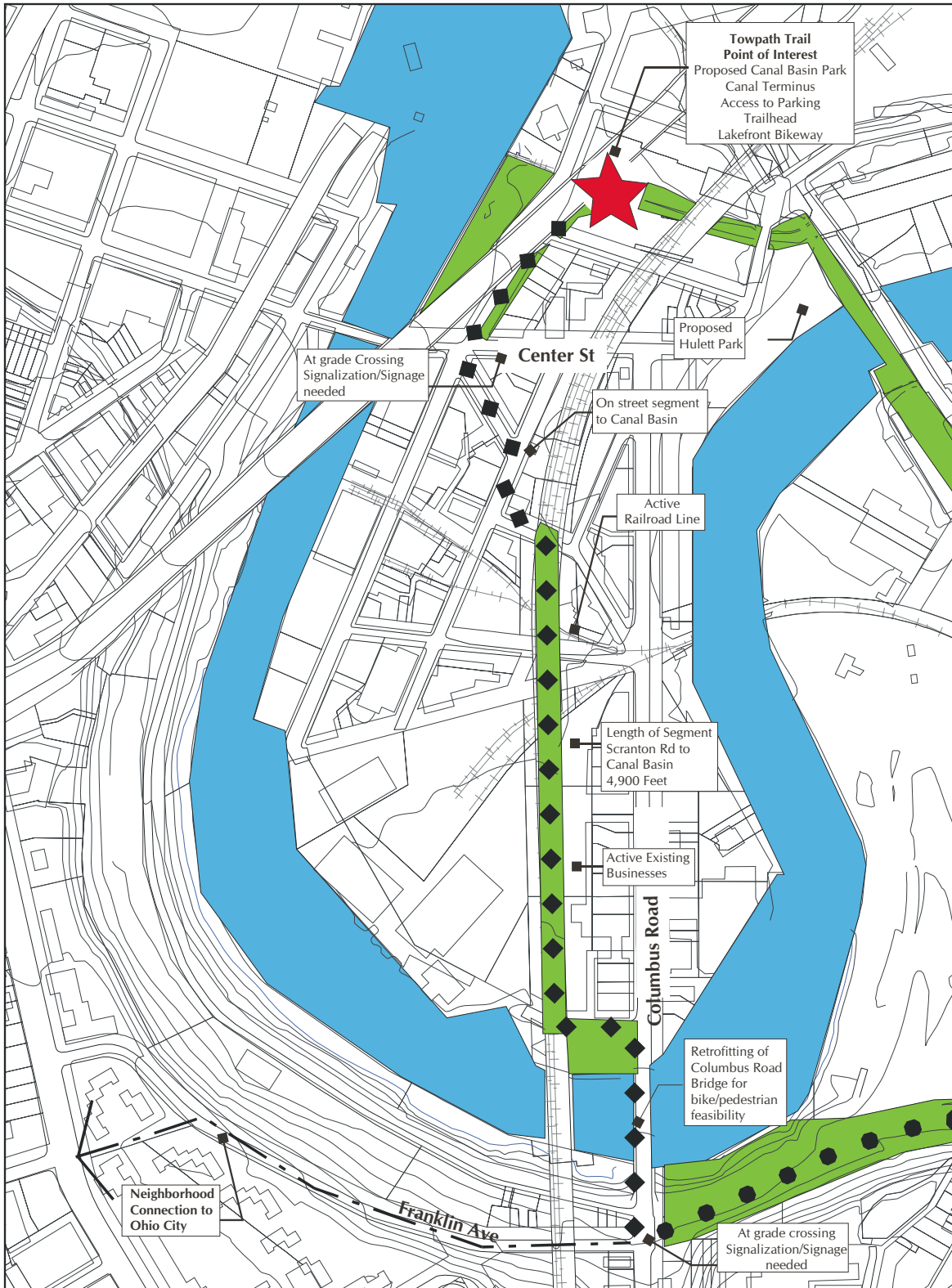
The trail route would disrupt business activity and could have a negative impact on local employment. The significant amount of loading and unloading by trucks and rail may impact the trail. Traffic flow could be impacted by increased safety precautions needed for the trail.

Design Ideas

The RTA Viaduct piers could be used for public art, providing an opportunity for public involvement in the trail design. Partnerships could be formed with adjacent businesses to

Proposed Route Alternatives

Map 2.10, Route Evaluation, Segment D - Scranton Peninsula to Canal Basin - Route 2



Proposed Route Alternatives

work for design integration. Introduction of landscape elements could improve the aesthetics of the area.

Cost/Expense

Total Trail Length: 4,900 feet
Total Segment Cost: \$200,000
Trail Cost: \$180,000
Railroad crossing improvements: \$20,000

Neighborhood Connections

Please refer to Segment D - Route 1.

Segment D – Scranton Peninsula to Canal Basin - Route 3

Description

This segment of the proposed Towpath Trail extension route begins at the end of Segment C at the south end of the Scranton Peninsula and continues along the south edge of the peninsula to Columbus Road. The route would cross Columbus Road at-grade and continue off-road in the area between Riverbed Road and the Cuyahoga River.

The route would follow the river to the Center Street Bridge and cross the river on the bridge to the Merwin Avenue intersection. The route would turn north and use either Merwin Avenue or the Cuyahoga County-owned



Center Street Bridge

land and Heritage Park on the Cuyahoga River bank to reach the proposed Canal Basin park.

Other Routes Researched

No additional routes were available in the vicinity of this alternative.

Ownership Outline

Most of this route is owned by the Cleveland Metropolitan Housing Authority, as a continuation of their property holdings extending up the valley wall to West 25th Street. There is privately owned vacant land as the route approaches the Center Street Bridge. From the Bridge to the Canal Basin, publicly owned street right-of-way and property would be utilized.



Riverbed Road along the Cuyahoga River

Strengths

This route alternative would allow trail users the opportunity to travel a considerable distance on the bank of the Cuyahoga River. Historic areas such as Irishtown Bend provide an interpretive opportunity. The off-road alignment would avoid conflict with existing traffic and potential traffic if



Vacant land adjacent to Center Street Bridge

Proposed Route Alternatives

Riverbed Road is used in the future as a truck route (*Map 2.11*).

Challenges

The Center Street Bridge has a 23-foot eight-inch roadway with two six-foot side-walks. At the Center Street Bridge, users would be expected to walk their bicycles across the bridge. At the Merwin Avenue/Center Street intersection, poor sight lines, traffic volume, and on-street parking may pose an unsafe environment for trail users. This route is longer than the other alternatives in Segment D, however it is not the most expensive.

Land Use Impact

The land use for this proposed route along the river is vacant. Future redevelopment and traffic circulation in the Flats area may impact the route and needs to be coordinated.

Design Ideas

The creation of a greenway along the Cuyahoga River would create significant public access to the riverfront. There are numerous cultural and natural resources available along this route for interpretive exhibits. Landscape and ecosystem restoration along the river would provide an opportunity for innovative design solutions.

Cost/Expense

Total Trail Length: 5,060 feet
Total Segment Cost: \$215,000
Trail Cost: \$190,000
Railroad crossing improvements: \$20,000
Interpretive Signs: \$5,000

Neighborhood Connections

Please refer to Segment D - Route 1.

Assessment of Route Alternatives

Various route alternatives can be combined to create the eventual Towpath Trail extension route. *Table 2.1* compares the options in terms of eleven factors. The factors are not arranged in a specific priority order.

Each factor in each segment is assigned a rating of one, two, or three. A rating of one is considered a positive or high impact. A rating of two is considered a moderate or neutral impact. A rating of three is considered a low or negative impact.

The table should be used only as a general guideline. For that reason, the eleven ratings for each column are not averaged as a single score.

Route Criteria Summary and Recommendations

- ✓ Prioritize the creation of an off-road route.
- ✓ Maintain access to the Cuyahoga River whenever possible, and if access to the Cuyahoga River is not feasible, maintain the route as part of the Cuyahoga Valley.
- ✓ Utilize the ridgelines of the valley walls to create viewsheds.
- ✓ Provide access to nearby neighborhoods and landmarks to develop connections with local activity centers.
- ✓ Encourage innovative efforts such as sustainable development to solve environmental issues and design challenges in an urban setting.

Proposed Route Alternatives

Map 2.11, Route Evaluation, Segment D - Scranton Peninsula to Canal Basin - Route 3



Proposed Route Alternatives

- | | |
|--|--|
| <ul style="list-style-type: none"> ✓ Utilize the route as a catalyst for neighborhood revitalization and economic development. ✓ Encourage partnerships along the route to allow individuals, businesses, and organizations the opportunity to share in the success of the project. ✓ Celebrate the natural resources and cultural history of the Cuyahoga River Valley and its environs through interpretive exhibits and overlooks. | <ul style="list-style-type: none"> ✓ Incorporate a variety of design initiatives for the route such as public art, environmental education, and restoration of plant communities. ✓ Create design elements such as directional signage and wayside exhibits that are consistent with other portions of the Towpath Trail, in order to provide a consistent identity. |
|--|--|

Table 2.1
Comparison of Route Alternatives

	Segment A	Segment B	Segment C-Rte 1	Segment C-Rte 2	Segment D-Rte 1	Segment D-Rte 2	Segment D-Rte 3
Access to Neighborhoods	1	1	1	2	1	1	1
Access to Parking Areas (Existing/Proposed)	1	1	3	3	2	2	2
Environmental Impact (Slope)	3	2	3	2	1	1	2
Land Use Impact (Existing/Proposed)	2	1	1	3	1	3	2
Interaction with Other Modes of Transportation	1	1	2	2	1	3	2
Opportunity for Economic Development/Neighborhood Revitalization	2	1	1	2	1	3	2
Opportunity for Ecological Restoration	1	1	1	2	1	2	1
User Experience	2	1	1	1	1	3	1
Opportunity for Interpretive Resources	1	1	1	2	1	2	1
Connection to Other Amenities (Parks, Attractions, Scenic Railroad)	1	1	1	3	1	1	1
Views	1	1	1	2	1	3	1
Estimated Cost (Trail Construction Only)	\$9 million	\$1.3 million	\$1 million	\$400,000	\$1.4 million	\$200,000	\$215,000
Scoring: 1 = Positive/High Impact 2 = Moderate/Neutral Impact 3 = Low/Negative Impact							

Chapter Three
Implementation Strategies for
Development



COVER: Towpath Trail, CVNRA

This guide plan provides a base for the development of the Towpath Trail extension route from Harvard Road to Lake Erie. The actual construction of this segment may be three to five years away. In the interim, details of the proposed concept plan may alter due to factors such as property ownership changes, infrastructure projects, and development opportunities. This plan however, can serve as a tool to continue the momentum of the Towpath Trail development in the Cuyahoga River Valley.

This section outlines strategies to guide this trail concept through the next phases of design, construction, and use.

Funding

The cost estimate of approximately \$12 million for this five mile extension of the Towpath Trail is higher than the average cost per mile for most trails due to its urban setting and existing conditions. Therefore, funding for this segment will need to be an ambitious endeavor, with the likelihood that moneys will be combined from various sources. To provide sufficient funding, phasing the trail by segment may be an option. The following are potential funding opportunities that may be available to assist in developing the Towpath Trail extension.

Federal Funding Sources

DOI - Ohio & Erie Canal National Heritage Corridor Grant Program

This program provides funding to projects that “help preserve and interpret the unique and significant contributions to our national heritage of certain historical and cultural lands, waterways and structures and encourage a broad range of economic opportunities enhancing the

quality of life for present and future generations within the Ohio & Erie Canal National Heritage Corridor.” A substantial portion of the approximately \$1 million annual allocation to the National Heritage Corridor is assigned to this grant program. The grants are administered through the National Park Service, Department of the Interior. Grant awards have a maximum of \$150,000, and there is a 50% match requirement. The current funding preference is for the design stage of a project.

FHWA- Technology Deployment Innovative Bridge Construction Program

This program offers funding through the Federal Highway Administration to “demonstrate the application of innovative material technology in the repair, rehabilitation, replacement and new construction of bridges and other highway structures.” The program also includes the goal of “developing cost-effective and innovative techniques to separate vehicle and pedestrian traffic from railroad traffic.” If the design of a structure is approved by the program, design costs are reimbursed and construction funding is provided. This funding program may be an option for the elevated section of the route from Old Harvard Avenue to Holmden Avenue.

FHWA – Transportation Enhancement Activities Program

This program was established through the Transportation Equity Act for the 21st Century, which authorized Federal surface transportation programs for the period 1998-2003. The program funds enhancement activities, which are defined by three categories: historic and archeological, scenic and environmental, and pedestrian and bicycle facilities. The program provides 80% of the construction or implementation cost of a project, with a 20% match requirement. The Towpath Trail is an

Implementation Strategies for Development

eligible applicant for this funding, because it provides alternative modes of transportation and is an enhancement to the community.

USEPA - Sustainable Development Challenge Grants Program

This fund is administered through the U.S. Environmental Protection Agency. It focuses on the “encouragement of creative, locally developed projects which address serious environmental problems through sustainable development strategies.” Congress has appropriated approximately \$4.7 million nationally for funding of projects. Generally, individual projects are awarded up to \$200,000, with a 20% match requirement. The combination of innovative design opportunities and environmental challenges on the proposed Towpath Trail extension route may be applicable to this grant.

State of Ohio Funding Sources Ohio Department of Natural Resources

Lake Erie Protection Fund

This program provides funding for “activities that serve to protect and enhance Lake Erie, including research, monitoring, demonstration, education and implementation of coastal management projects concerning Lake Erie, its shoreline and watershed.” There are two grant cycles available through this program. The quarterly cycle has a funding limit of \$7,500, with a 10% match requirement. The annual cycle does not have a specific dollar maximum, and also has a 10% match requirement. The annual fund has two cycles, research and implementation, which are utilized in alternate years.

Land & Water Conservation Fund

Congress is in the process of reestablishing this fund in 2001 or 2002. The fund may have approximately \$15 million available annually statewide for park and recreation projects, including construction and acquisition related costs. The program requires a 50% match.

NatureWorks

This is a matching grants programs focusing on parks and recreation projects. The year 2000 will have \$3 million available statewide for these specific projects. This program will continue over the next few years higher funding amounts, estimated at \$5 million in each of 2001 and 2002. The program requires a 25% match.

Ohio Coastal Management Assistance Grant Program

This program focuses on Ohio’s Lake Erie coastal area. Its purpose is to “integrate management in order to preserve, protect, develop, restore and enhance the lake’s valuable and sometimes vulnerable resources.” The U.S. Department of Commerce, National Oceanic and Atmospheric Administration oversees this program, which is administered by ODNR. Ohio receives approximately \$200,000 annually for this program. There is a 50% match requirement. This program may be a funding source for sections of the Towpath Trail that are within the Coastal Zone area.

Recreational Trails Program

This program provides funding for the “development of urban trails, of trail head and trail-side facilities, maintenance of existing trails, restoration of trail areas, improving access for people with disabilities, acquisition of ease-

ments and property, development/construction of new trails, environment and safety education programs related to trails.” The amount of funding to be allocated annually from 2000 through 2003 is estimated at \$1.2 million. The program requires a 20% match.

Ohio Department of Transportation

Central Viaduct Project

Over the next ten years, major improvements will be undertaken on the infrastructure of the Central Viaduct and its related transportation network. The area for the Major Investment Study extends from the West 25th Street exit of I-71 through Dead Man's Curve on I-90.

Situations may arise when the Central Viaduct and the Towpath Trail projects interact. The trail sponsor should be aware of funding sources that may become available for these infrastructure improvements and how they may relate to the trail route.

Cuyahoga County Funding Sources

Brownfield Redevelopment Fund

The Brownfield Redevelopment Fund assists in funding cleanup and redevelopment of environmentally compromised properties, including land or buildings. This program is a combination of loans and rebates. This fund may be suitable for use if any environmental remediation is needed in conjunction with trail construction.

Partnerships With Local Resources

Design and Construction Assistance

From the standpoint of design, two potential local partners are the Environmental Studies program at Oberlin College, and the Green Building Coalition. The Environmental Studies program at Oberlin is a regional leader in the field of sustainable development. The Green Building Coalition is a new organization of architects, developers, builders, engineers, city planners, facilities managers, and other persons interested in advancing the development of green design in Cleveland.

From the aspect of construction, local manufacturers may be a source of partners. For example, numerous firms in the steel, metalworking, asphalt, and concrete fields have had, or currently have, facilities in proximity to the proposed trail route. For example, LTV Steel has indicated an interest in discussing the design and construction of the elevated sections of the trail route relative to the product lines of their corporation.

Community Building

Public involvement in the planning, design and construction phases of the trail project is essential. The input of the public, neighborhood organizations, local businesses, and elected officials will provide direction that will lead to a more successful and sustainable trail. Volunteer efforts, partnerships and public meetings are suggested strategies to involve people in the process and create a sense of ownership.

Management and Maintenance

Management

Selection of an official agency sponsor for the Towpath Trail extension route will be an important step for continuing the planning process and eventually constructing the trail. This entity will need to have an established capability to build, manage, and maintain a complex linear trail route. The Cleveland Metroparks may provide this capability, although there has been no official commitment at this time. Metroparks continues to create and manage successful recreational areas that have become an identifying element in the landscape of the Cleveland metropolitan area. Cleveland Metroparks would be a qualified choice as a lead sponsor for this segment of the Towpath Trail, with the potential to foster partnerships for appropriate roles with entities, such as the National Park Service, Ohio & Erie Canal Association, Ohio Canal Corridor and the City of Cleveland.

Maintenance

Maintenance and operation issues for the Towpath Trail extension route will need to be considered early in the planning process, because they may influence design and construction de-

isions by the project sponsor. Access for emergency vehicles and various safety precautions may also need to be reviewed to determine the best strategies to provide solutions along the trail route. As part of maintenance and operation issues, the sponsor will need to determine staffing needs, as well as potential partnerships, to meet the desired goals.

Summary/Recommendations

- ✓ Explore programs from various sources for funding assistance for the design and construction of the trail route.
- ✓ Establish a management sponsor to take responsibility for the implementation of the trail route.
- ✓ Develop partnerships and emphasize public involvement along the proposed route to assist in achieving a successful project.
- ✓ Determine maintenance, operation, and safety needs as part of the design phase to help ensure the long-term success of the trail route.

Chapter Four

Conclusion/Summary



COVER: Cuyahoga River from the Carter Road Bridge

Conclusion/Summary

For millennia, the Cuyahoga River Valley has been used as a transportation route, both via water and traversing its slopes and ridgelines on foot. European settlement brought a canal, railroads, and streets to the valley, but crossing the river was still accomplished on bridges at riverbank level. During the 20th century, engineering and construction advances freed the transportation network of the constraints of topography, resulting in bridges spanning the valley rim-to-rim and freeways that reshaped the landscape for the benefit of travel by automobile, truck, and bus. An ancient connection to the landscape, plants, animals, and water of the Cuyahoga River Valley slipped away.

At the turn of the 21st century, the region is rediscovering the valley, its river, and its canal. The prescient creation of the Cuyahoga Valley National Recreation Area a generation ago protected land that would have evolved very differently without that effort. The rediscovery of the canal has extended south through Akron and into the Tuscarawas River Valley, a full

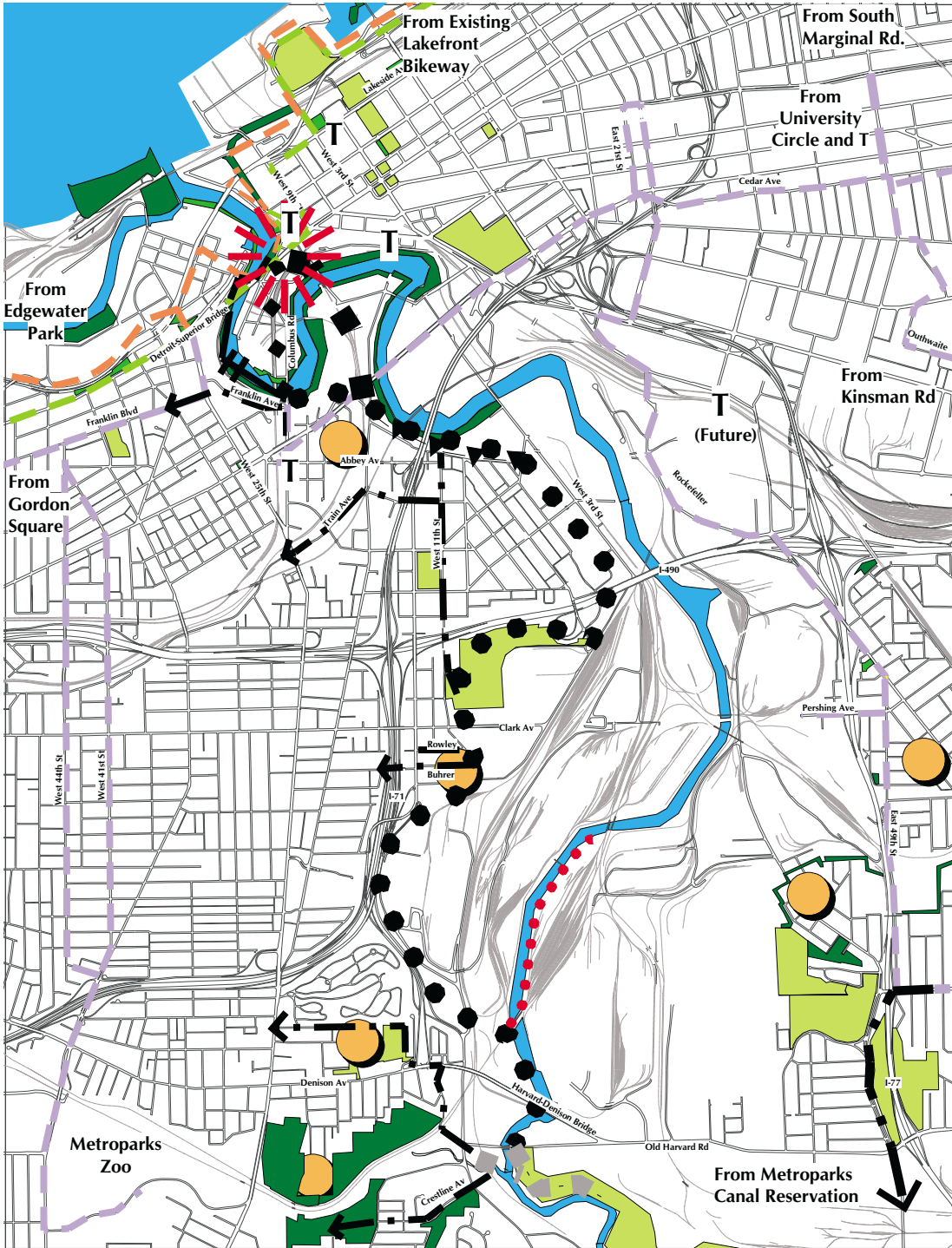
100 miles from the terminus of the canal near the mouth of the Cuyahoga River and Lake Erie. To the north of the Cuyahoga Valley National Recreation Area, Cleveland Metroparks has created a reservation weaving together the stories of nature and man at work.

For its final few miles, the river valley is filled with the activity of steel mills, shipping, turn of the century neighborhoods, and an entertainment district, but without a route through which to explore and reach the city skyline that marks the endpoint of the canal, along with the Lake Erie shoreline. The Towpath Trail extension, through its educational capacity, recreational opportunity, quality of life enhancement, economic revitalization potential, and environmental improvement can be a linear connection for projects and locations forming an exciting array of resources anchoring the north end of the Ohio & Erie Canal National Heritage Corridor for generations to come.

Appendix

Appendix

Cleveland Lakefront Bikeway Proposed Phase II		Cleveland Bikeway Master Plan		Existing Recreation Areas
Interim Alignment	Ultimate Alignment	Rapid Transit Station = T		Proposed Recreation Areas
				Playgrounds



SOURCE: Cleveland City Planning Commission and City of Cleveland Division of Research, Planning and Development, 1999

Appendix

Consulting Agencies and Organizations

The following persons and organizations assisted the Cuyahoga County Planning Commission with the development of this guide plan. Their time, effort and resources are appreciated.

Behnke Associates

Tom Zarfoss

City of Cleveland

Cleveland City Council

Joe Cimperman

Nelson Cintron

Merle Gordon

Timothy Melena

Edward Rybka

Cleveland City Planning Commission

Hunter Morrison

Martin Cader

Scott Frantz

Layton Washburn

Department of Community Development

Nora McNamara

Robert Laycock

Department of Parks, Recreation & Properties, Division of Research, Planning, and Development

Carrie Hansen

Clark Metro Development Corporation

Frank Johaneck

Cleveland Area Bicycling Association

Bill Trentel

Cleveland Metroparks

Steve Coles

EcoCity Cleveland

Brad Flamm

Flats Industry

Jim Cox

Flats Oxbow Association

Jim Pressler

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Robert Dyer, Jr.

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Robert Johnson

Michael LaWell

John Mack

Ray Witkiewicz

David Wozniak

National Park Service/Cuyahoga Valley National Recreation Area

John Debo

Ohio Canal Corridor

Tim Donovan

Ohio City Near West Development Corporation

John Wilbur

Ohio Department of Natural Resources, Ohio Coastal Management Program

Yetty Alley

Ohio Department of Transportation - District 12

Leslie McCafferty

Paul Taylor

Old Brooklyn Community Development Corporation

Gerald Preseren

Schmidt Copeland Parker Stevens

Patty Stevens

Tremont West Development Corporation

Emily Lipovan

Eileen Longo

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Greater Cleveland Area Environmental Water Quality Assessment Plan, Northeast Ohio Regional Sewer District, 1995

Lake Erie Lakewide Management Plan, 1999

North Cuyahoga Valley Corridor Concept Plan, Cuyahoga County Planning Commission, 1992

Ohio Air Quality Report, Ohio EPA, Division of Air Pollution Control, 1997

Ohio & Erie Canal Reservation - Neighborhood Links & Open Space Connections, Trust for Public Land, Cleveland Metroparks, Ohio Canal Corridor, and Clean-Land Ohio, 1997

Ohio Department of Natural Resources, various information

Ohio Environmental Protection Agency, various information

Rails-to-Trails Conservancy, various information

A Route to Prosperity - The Ohio & Erie Canal Corridor Special Resource Study, National Park Service, 1993

Tonnage Report, Lake Carriers Association, 1998

U.S. Army Corps of Engineer, Buffalo District, various information

U.S. Bureau of the Census, various information

Air Quality Monitoring Table Information

Source: U.S. EPA, Airsdata

Air Quality Summary Table

Carbon Monoxide- 2nd Max 8 -hr = Second highest daily max values. This value should not exceed the one hour standard (0.12 ppm).

Nitrogen Oxide - Annual Mean = arithmetic average of all one-hour values for the year. This value should not exceed the annual standard (0.053 ppm).

Sulfur Dioxide- Annual Mean = arithmetic average of all 1-hour values for the year. This value should not exceed the annual standard (0.03 ppm).

Ozone - 2nd Max 1-Hour = Second highest daily max values. This value should not exceed the one hour standard (0.12 ppm).

PM10, Particulate Matter smaller than 10 micrometers - Annual Mean = Weighted arithmetic mean of 24-hour values for the year. This

value should not exceed the annual average standard (50ug/m³).

Lead - Quarterly Mean = Highest of the quarterly mean values, arithmetic average of 24-hour values. This value should not exceed quarterly average standard (1.5 ug/m³).

Pollutant Standard Index Monitor Table Information

Source: U.S. EPA, Airsdta

of days with PSI = number of days in the year having a Pollutant Standards Index value.

Percent of days when air quality was:

Good = calculated as $100 * (\text{days with PSI values 0 through 50}) / (\text{total days with PSI values})$.

Moderate = calculated as $100 * (\text{days with PSI values 51 through 100}) / (\text{total days with PSI values})$.

Unhealthful = calculated as $100 * (\text{days with PSI values above 100}) / (\text{total days with PSI values})$.

Statistics:

Maximum = highest daily PSI value in the year.

90th Percentile = 90 percent of daily PSI values during the year were less than or equal to the 90th percentile value.

Median = half of daily PSI values during the year were less than or equal to the median value, and half equaled or exceeded it.