



# AUBURN HILLS RIVERWALK MASTER PLAN

OCTOBER 13, 2009



# ACKNOWLEDGMENTS

## CITY MAYOR

James D. McDonald

## MAYOR PRO TEM

Mari Edwards

## CITY COUNCIL

Maureen Hammond

Robert Kittle

Henry V. Knight

Kevin McDaniel

Otis Newkirk

## RECREATION COMMISSION

Greg Ouellette, Chairperson

Veronica Mitchell, Vice Chairperson

Anne Doyle, Secretary

Sam Beidoun

Chauncey Hitchcock

Robert Kittle

Bob Pierce

Lacey Salerno

Cheryl Verbeke

## TAX INCREMENT FINANCE AUTHORITY MEMBERS

Clarence Bennett, Chairperson

Patrick Hassett

Charlotte Copple

Chad Creager

Steven Goodhall

Paul Landsberg

Kaye Thornton

## PREPARED FOR

City of Auburn Hills

City Administration Complex

1827 North Squirrel Road

Auburn Hills, MI 48326



## CITY MANAGER

Peter E. Auger

## ASSISTANT CITY MANAGER ADMINISTRATION

Thomas A. Tanghe

## ASSISTANT CITY MANAGER OPERATIONS

Mark K. Walterhouse

## RECREATION DIRECTOR

Brian Marzolf

## DIRECTOR OF COMMUNITY DEVELOPMENT

Steven J. Cohen

## WATER RESOURCES COORDINATOR

Shawn Keenan

## DEPARTMENT OF PUBLIC SERVICE

Ronald J. Melchert

Don Grice

## OAKLAND COUNTY ~ ENVIRONMENTAL STEWARDSHIP

Nina Misuraca Ignaczak

## PLANNING AND DESIGN ASSISTANCE

Lead Consultant, Ecological Planning and Design

Conservation Design Forum

375 West First Street 220 South Main Street

Elmhurst, Illinois 60126 Ann Arbor, Michigan 48103

630.559.2013 734.663.3751

David Yocca, Principal in Charge

Patrick J. Judd, Project Manager

Ryan Wilson, Project Assistant

Tom Price, Lead Civil Engineer

Gerould Wilhelm, Principal Botanist

Jenna Jones, Project Assistant

## ENGINEER ADVISORS

Orchard, Hiltz & McCliment

34000 Plymouth Road

Livonia, Michigan 48150

734.522.6711

Even Pratt, Principal Engineer

James Stevens, Project Engineer

## ENVIRONMENTAL DESIGNER

Caerulean Collaborative

W59N412 Hilgen Avenue

Cedarburg, Wisconsin 53012

262.909.0552

Margot Mazur, Program Designer

## DESIGN CONSULTANT

Pollack Design Associates

220 South Main Street

Ann Arbor, Michigan 48103

734.663.3751

Peter Pollack, Design Assistance







## TABLE OF CONTENTS

|       |  |
|-------|--|
| ONE   | INTRODUCTION   |
|       | Background   |
|       | Planning Process   |
| TWO   | VISION FOR A HEALTHY AUBURN HILLS                              |
|       | Riverwalk Goals  |
|       | First Principles - The Riverwalk as a Path to Community Health |
|       | Challenges, Opportunities, and Strategies                      |
|       | Healthy Natural Resources                                      |
|       | Healthy Outdoor Lifestyle                                      |
|       | Healthy Economy  |
| THREE | COMMUNITY CONTEXT  |
|       | Water / Hydrology  |
|       | Landscape Ecology  |
|       | Connections and Adjacencies                                    |
|       | History and Culture  |
| FOUR  | THE MASTER PLAN  |
|       | Overview   |
|       | Trails / Connections   |
|       | Landscape / Habitat  |
|       | Riverwalk Districts  |
|       | Riverside District   |
|       | River Woods District   |
|       | Up River District  |
|       | Riverwalk Design Guidelines                                    |
| FIVE  | NEXT STEPS & IMPLEMENTATION                                    |
|       | Phasing  |
|       | Budgeting  |
|       | Recommendations  |
| SIX   | APPENDIX   |
|       | i. Community Input   |
|       | ii. Sustainable Site Technologies + Green Materials            |
|       | iii. Funding and Grant Opportunities                           |
|       | iv. General Land Survey Notes                                  |







# chapter one 1 INTRODUCTION

## BACKGROUND

The City of Auburn Hills is one of Southeast Michigan's leading communities. Its' visionary, long-term thinking has helped to evolve the town from a small, rural hamlet to a thriving center of higher education, commerce, entertainment, and international business, mainly in the past two decades. As part of that evolution, in 2002, the City developed a plan for the Village Center, the historic heart of the community, and began to implement a new Downtown Core at the location of the first settlement in the township- the intersection of Squirrel Road, Auburn Road, and the Clinton River.

The Village Center area is blessed with three wonderful park sites that include significant reaches of the Clinton River. Immediately adjacent to the Downtown Core, *Riverside Park* dates to 1977. The City subsequently acquired and developed *Riverwoods Park* at the southeast corner of the Squirrel Road/M-59 interchange. The notion of connecting the three parks with a river walk trail first emerged over twenty years ago. It eventually became clear that a complete network of open space oriented to the river could serve as *the* primary amenity for the Village Center, support the uses in the Downtown Core, and to a larger degree, benefit the entire community. This vision underscores the need for a comprehensive, overall plan for the *Auburn Hills Riverwalk*, the basis of this document.

Auburn Hills has created this **Riverwalk Master Plan**, which is intended to guide the development and long-term operations of the entire river corridor and public realm in the Village Center and along the Clinton River. In the spirit of Auburn Hills' legacy of farsighted planning, it is a long-term vision for a sustainable community, which links the health and beauty of the River and the environment with the vitality of the Village Center neighborhoods, the businesses in the Downtown Core, and ultimately the citizens of Auburn Hills, now and in the future.



## PLANNING PROCESS

While the notion of an Auburn Hills Riverwalk is not new, the actual planning process commenced in the fall of 2008, when the City retained Conservation Design Forum to lead a consultant team to help develop the master plan. This process began with a review of the entire river corridor and Village Center area and context, including the assembly and review of background maps, studies, historical information, and other materials. One critical piece of background information is the *Downtown Economic Enhancement Strategy 2009*, a study recently completed by HyettPalma, which identifies the advantages of a downtown environment branded and connected to the unique natural feature that defines the community- the Clinton River.

In order to accomplish the Riverwalk plan to achieve successful implementation and enjoyment, the entire community will need to enthusiastically support and help realize the plan over time. Therefore, an essential part of the information-gathering included meetings and public open houses to present the idea of a Riverwalk to the community, and to learn of issues, opportunities, and concerns that the master plan would need to address.

These two sets of information- the physical, cultural, and ecological context, and the objectives and issues identified by the community, coupled with what is considered to be the leading edge in sustainable planning and design make up the basis for the plan.

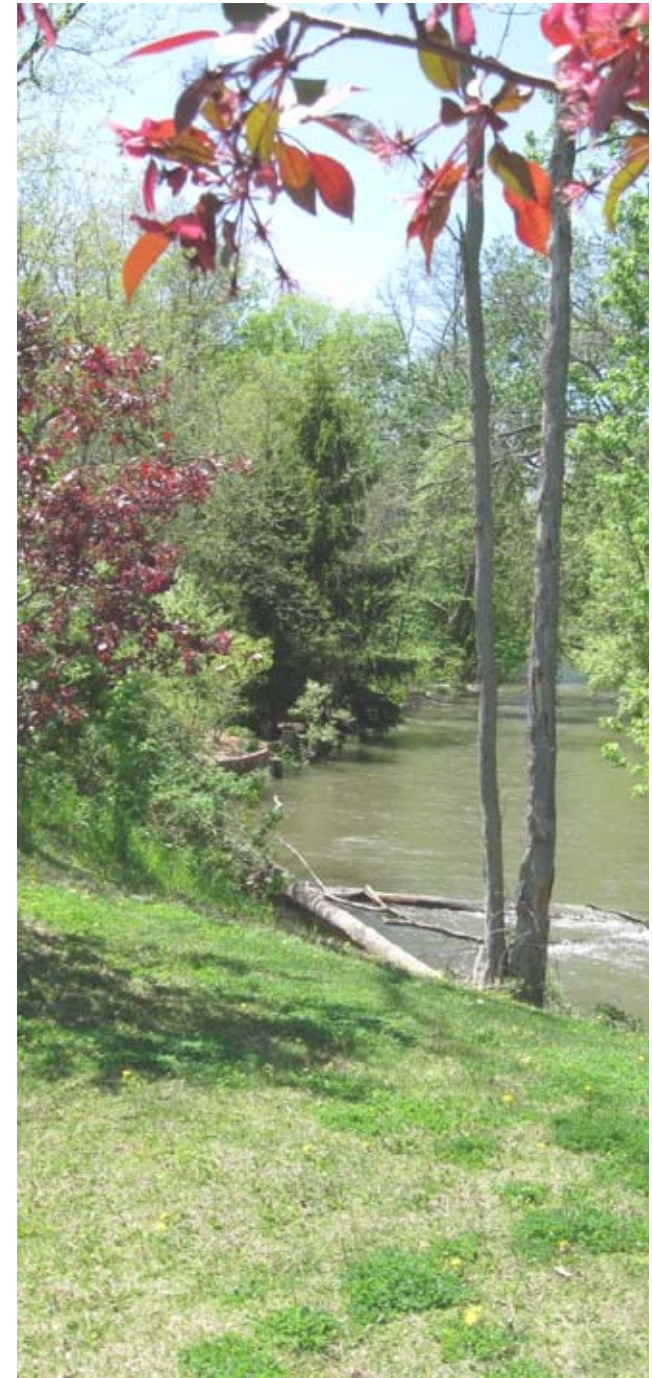
A draft plan was issued in the spring of 2009, and the final plan completed and accepted by the City Council on September 8th 2009.



*Excerpts from Auburn Hills Downtown Economic Enhancement Strategy 2009;*

**Downtown Auburn Hills (and the Riverwalk park system) will offer:**

- Auburn Hills' gathering place and the place for community celebrations;
- Strong pedestrian-orientation- a place with buildings, walks, and all public improvements developed and oriented to underscore Downtown's pedestrian character and charm;
- A unique destination, with a strong sense of place;
- A bold indicator of the character and overall quality-of-life enjoyed throughout Auburn Hills;
- A family-oriented place, with lots of activities for children;
- A riverfront park system that compliments the downtown core, with enhanced visibility and walking connections, performance area, ice rink, and other attractions for year-round activities and events;
- The most unique business district of Auburn Hills, with:
  - A quaint and charming atmosphere;
  - Cool restaurants
  - Unique boutiques;
  - Outdoor dining;
  - Entertainment;
  - Spectacular streetscape;
  - Choices;
  - Fun, lively, and good energy;
  - A small town feel that never goes out of style; and
  - Activity day and night.



*"A healthy social life is found only, when in the mirror of each soul the whole community finds its reflection, and when in the whole community the virtue of each one is living"*

Rudolf Steiner



## 2 chapter two

# VISION FOR A HEALTHY AUBURN HILLS

## RIVERWALK GOALS

The Riverwalk Master Plan is intended to guide the evolution of the public open space in the Village Center to serve multiple goals in the community. As it is developed, the Riverwalk will enhance the Clinton River's attractiveness as a natural and recreational resource while protecting and improving water quality and the City's cold water fishery. The Riverwalk will also help to create and support an economy based on healthy natural resources and healthy people, and local businesses that encourage healthy living.

The Riverwalk will be developed to:

**Encourage** additional river-based recreation

**Educate** the public about the history and ecology of the Clinton River

**Create** a catalyst for economic development

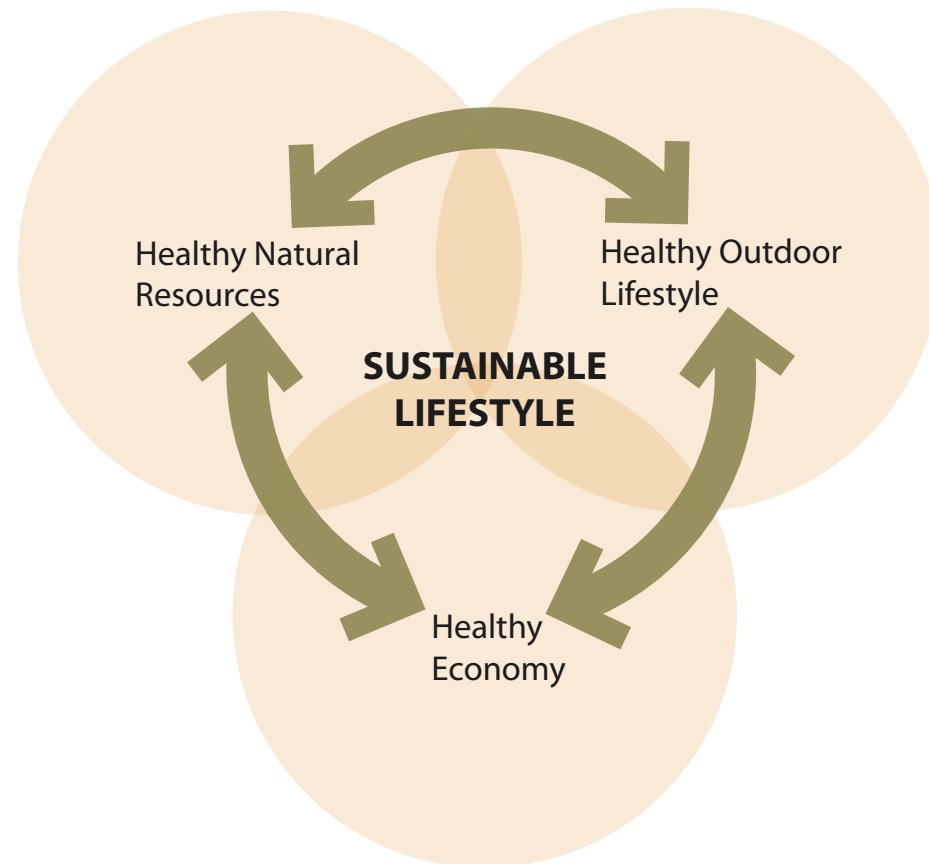
**Improve** the environmental quality of the riverfront





## FIRST PRINCIPLES - THE RIVERWALK AS A PATH TO COMMUNITY HEALTH

In order to achieve the Riverwalk goals, a set of guiding first principles have been articulated. First principles are broad, overarching, interrelated statements regarding the essential qualities of Auburn Hills and the desired aspects of the Riverwalk that everyone in the community would likely agree with. Ultimately, every aspect and detail of the Riverwalk will consistently build upon these qualities. The first principles are organized into what is typically recognized as the three facets of sustainability (Social, Environment, and Economic), re-labeled to underscore the direct link to the health and vitality of Auburn Hills. Built upon these principles, the Riverwalk will help to identify Auburn Hills as **A Wellspring for Health:**





### ▷ **HEALTHY OUTDOOR LIFESTYLE (SOCIAL)**

Enhance the River's attractiveness as a natural and recreational resource.

- Michiganders love their outdoors, rivers and lakes.
- Auburn Hills has a singular, special geology, geography, ecology, and cultural signature. This character is to be promoted, celebrated, and cared for, and is the inspiration for the Riverwalk design.
- Views, connections, and access to a living water landscape from built spaces foster better learning, faster healing, less stress, and overall health for people.
- When the children of Auburn Hills are raised to experience an authentic reconnection to the natural world, they will love and care for their community which, in turn, will help sustain it for generations to come.

### ▷ **HEALTHY NATURAL RESOURCES (ENVIRONMENT)**

*Protect and improve the water quality of the Clinton River and the City's cold water fishery.*

- The Clinton River and local ecology are vital to the health and well being of the people of Auburn Hills; community sustainability reflects the interdependence of the health of its people and the health of the environment.
- All of the rainwater that falls on Auburn Hills is a resource; the extent to which this water is kept clean, cool, and salt-free on its way to the river is the extent to which the river can be kept healthy.
- The people of Auburn Hills will benefit from this approach while providing the Southeast Michigan region tangible demonstrations of sustainable practices in planning, public space, and infrastructure.

### ▷ **HEALTHY ECONOMY (ECONOMIC)**

*Create an economy based on healthy natural resources and healthy people, and local businesses that support healthy living.*

- The Clinton River was historically the impetus for the settlement of the area, and the business enterprises for Auburn Hills. It is still important to Auburn Hill's economy and overall quality of life.
- Embedding the work of local artists and craftspeople into the Auburn Hills infrastructure will ensure an authentic beauty that will be loved and cared for in perpetuity and enhance the base of the economy.
- A healthy local economy is sustained by entrepreneurs and artisans who provide quality products and services to patrons who live in the area and visitors from near and far.



## CHALLENGES, OPPORTUNITIES, AND STRATEGIES

Like many Michigan communities, Auburn Hills faces a number of difficult **challenges** with regards to achievement of the goals that have been articulated. Currently, the economy is contracting, at a local, regional, and national scale. Funding for both capital improvement projects and on-going maintenance and management of community facilities is tight - numerous issues and needs compete for limited dollars. Citizens in the community need wholesome, affordable, family-oriented activities close to home.

However, Auburn Hills is blessed with an exceptional set of **opportunities** and resources within the community. The Clinton River flows through the heart of the city. The City owns a significant amount of open space adjacent to the river, including three great park features - Riverside Park, River Woods Park and Skate Park. The Clinton River Trail, a non-motorized bike/hiking trail extends over seven miles to the east and eight miles to the west, part of Oakland County's regional trail network. The City's Village Center, also adjacent to the river, has shops, eateries, offices and housing. These assets and conditions give Auburn Hills a distinct advantage to help overcome the challenges in the realization of the Riverwalk vision. **Auburn Hills has the ingredients necessary to create a sustainable, water-oriented/ waterfront Village Center that would be truly unique in Southeastern Michigan.**

A number of specific **strategies** have been identified which have been incorporated into the Riverwalk master plan. These strategies capitalize upon Auburn Hills' assets, contribute to the vitality and urban form of the Village Center, and provide wonderful river-based recreational experiences for children, adults, and seniors. The plan strategies also include leading edge, sustainable practices from around the world that have been adapted to Michigan. The integration of these strategies into the Riverwalk as it develops over time will yield a public amenity that will serve the community, protect its valuable natural resources, and provide great economic value and efficient operations costs.









## HEALTHY OUTDOOR LIFESTYLE

### CHALLENGES

- General decline in individual health and fitness.
- Degraded and diminished natural resources.
- Lack of access and connections to healthful experiences.
- Lack of early outdoor childhood experiences and exposure to the natural world.
- Dependence on remotely grown, industrial food that is depleted of nutrients.

### OPPORTUNITIES

- Reconnect to Upper Michigan's History of Outdoor Living and recreational activities including fishing, canoeing, hunting, and more recently, biking, hiking, and walking.
- Education and Advocacy.
- Active Living as a way of life that integrates physical activity into daily routines.
- Reconnect to the value of Play.
- Promote healthy, locally grown food in the community.



From "Obesity threatens shorter lifespan for Michigan children"

This is the first generation of children who could see shorter life spans than their parents. Researchers from the National Institute of Health (NIH) have reached similar conclusions. According to NIH data, obesity from a young age will probably cause a bigger decrease in average life expectancy than "the negative effect of all accidental deaths combined" - a decline of as much as five years.

Michigan consistently ranks above most states in the number of obese adults, with nearly 30 percent overweight.

Capital News Service, By Timothy P. Wardle



## STRATEGIES

- Provide a network of trails, paths and sidewalks that allow people to walk or bike to the Downtown Core, and to various park amenities. Connect trail system to the Clinton River Trail for regional accessibility and amenity.
- Provide a range of active and passive park spaces and features for all ages and abilities in the Riverwalk Park system, central to the community and adjacent to the Downtown Core.
- Increase access to the river for fishing, canoeing and kayaking.
- Provide a setting that encourages healthy, sustainable choices for dining, local produce, and services located in the Downtown Core and throughout the community.
- Incorporate lessons and opportunities to increase learning and awareness about the unique ecology of the Clinton River, the history of Auburn Hills, and the growing movement towards sustainability at all levels.





# HEALTHY NATURAL RESOURCES

## CHALLENGES

- Water pollution
- Excessive flood water
- Reduction of groundwater recharge results in low base flows
- Polluted water- sediments, oils, greases, fertilizers, pesticides, etc.
- Warm surface water temperatures
- Water entrained with de-icing salt
- Land and water management policies and ethics of upstream neighbors and Communities

## OPPORTUNITIES

- Create infrastructure that models the idea that Water is a Resource, and not a waste product.
  - Cold water fishery
  - Storm water management
  - Energy production
  - Weather shelters
  - Living machines
  - Green roofs
- Renewable energy sources- begin the integration of solar and wind power.
- Celebrate the unique characteristics of Auburn Hills through design and materials.
  - Genius Loci- the Spirit of the Place
  - Design Criteria

## STRATEGIES

- Incorporate multi-purpose, multi-benefit green infrastructure measures into every capital project to slow, cool, cleanse, and infiltrate rainwater, and return it as base flow to the Clinton River, mimicking natural, pre-settlement hydrology. Methods include porous pavement, bioretention (rain gardens, bioswales, constructed stormwater wetlands, etc.) that also create more durable, beautiful, long-lasting streets, parking areas, walkways, and other community infrastructure.
- Utilize leading edge green building practices for all park structures, and promote the use of green practices throughout the Village Center and entire community. Use LEED (Leadership in Energy and Environmental Design) and other green design tools. Facilities beautifully crafted with local talent and locally obtained, non-toxic, durable materials will be long lasting and support the local economy.
- On-site wastewater cleansing and re-use systems for restrooms.
- Restore and steward the natural landscapes to promote biodiversity and stability as ecological systems. Selectively thin and open the wooded areas to promote native grasses and flowers. Provide educational programs and information on the benefits of these practices.
- Begin to provide energy needs from renewable sources locally as a demonstration. Use wind and solar power to provide energy for Riverwalk features (lighting, water movement) in a visible way.
- Incorporate local artists and craftsmen in the implementation of the Riverwalk for signage, site furnishings, and other elements as an aspect of public art. Establish guidelines for the public realm that base materials, patterns, and forms from local history and ecology as a primary theme to reinforce the local sense of place and connectedness.







## HEALTHY ECONOMY

### CHALLENGES

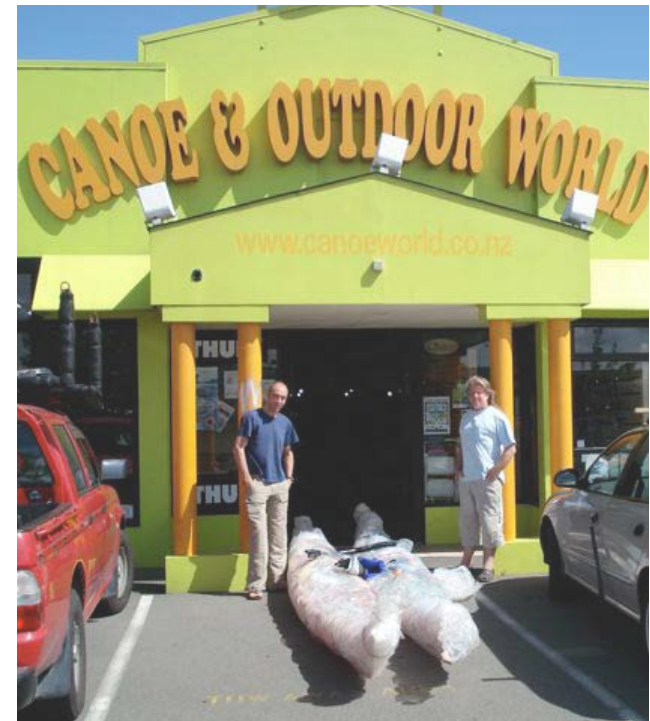
- More competition for most businesses in a contracting economy.
- Lack of destination appeal for shops and services.
- Generic branding.
- Missed sense of history and place.
- Lack of access to or knowledge of items and practices for sustainable living.
- Less disposable income.

### OPPORTUNITIES

- Create image of the community that connects to healthy living.
- Create incentives for local businesses to develop around health and recreation.
- Integrate the Downtown Core with Riverwalk through river and history-oriented public art.
- Improve Auburn Hills' quality of life, attractive to businesses, students, and talented workforce.
- Provide more quality goods and services locally.

## STRATEGIES

- Provide fun, affordable, leisure time activities within the community.
- Provide a setting for community events, performances, and activities that share infrastructure (parking, dining, etc.) with the downtown core.
- Create a direct link between the shops and services within the downtown core and the amenities of the Riverwalk park.
- Create synergies between local businesses and the Riverwalk. Encourage sustainable, local business enterprise that provide healthy food choices, support recreational activities (i.e. bike shop, canoe outfitter, bait and tackle, etc.), and shops that draw patrons from a larger region by providing unique goods and services.
- Develop the Riverwalk and downtown core to create the kind of amenity and atmosphere that draws a talented, creative workforce and investment in the community.









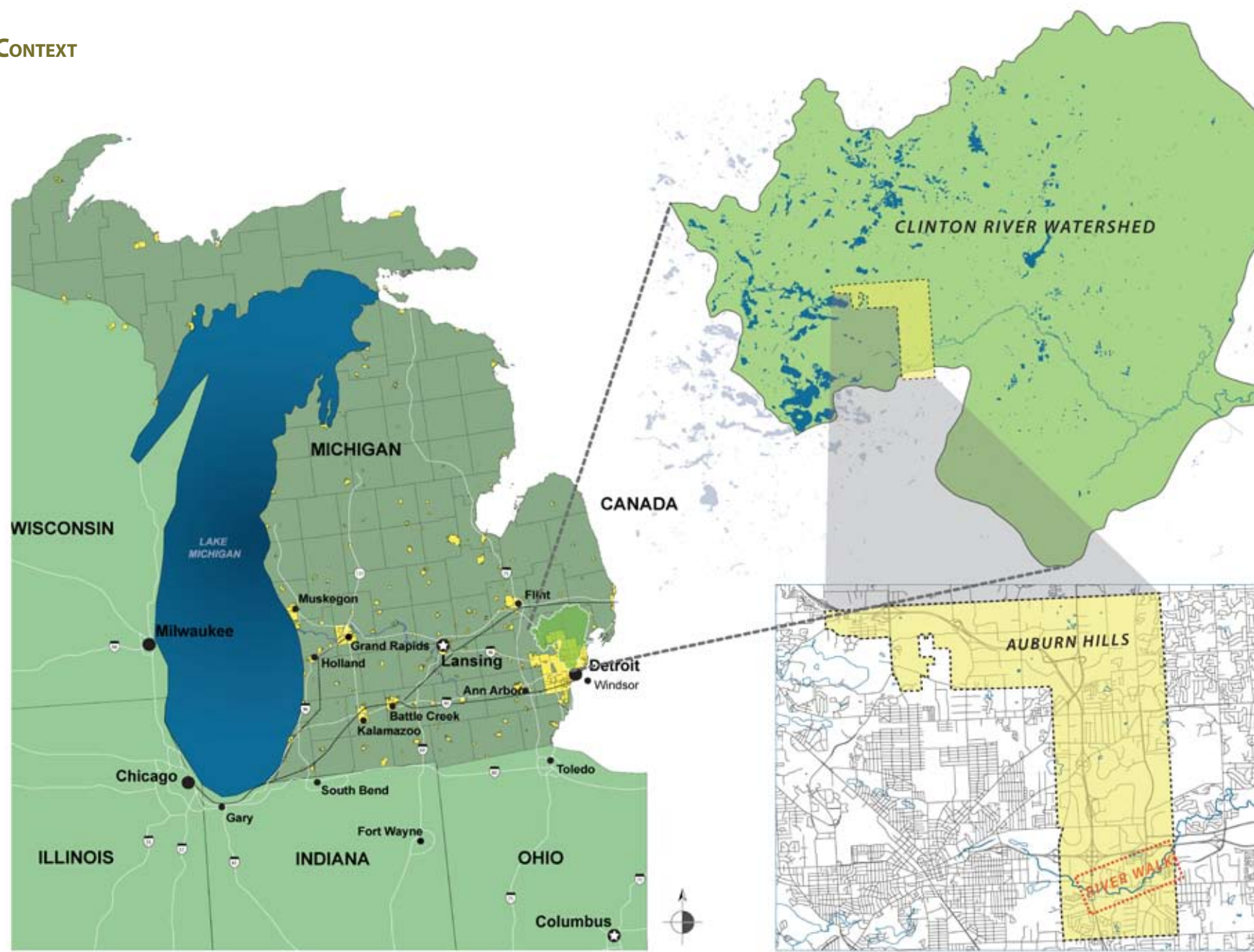
## chapter three

# COMMUNITY CONTEXT

## WATER / HYDROLOGY

One of the primary influences in the health and vitality of an aquatic resource such as the Clinton River flowing through Auburn Hills is the hydrology, or the way water moves through the landscape. Healthy natural river and wetland systems are fed by base flow, or rainwater that has percolated into the ground, and moves laterally to the open water. This allows the water the chance to be cooled, cleaned, and suitable for any water landscape. Rainwater that falls onto deep-rooted native landscapes like prairies and woodlands will behave this way. However, rainwater that falls onto impervious surfaces such as roadways, parking lots, rooftops, and even lawns will become hot in during summer months, and picks up any material that is on the surface. Sediment, grease, oil, detergent, herbicides, pesticides, de-icing salt, pet waste - whatever is on the surface becomes mixed with the water, and it is sent downstream.

The City of Auburn Hills recognizes the importance of restoring and maintaining natural, infiltration-based hydrology. The Riverwalk plan incorporates the latest practices in ecological landscape management to restore natural hydrology through the use of native plant communities where appropriate. The plan also incorporates green infrastructure, or practices for building roads, parking, trails, roofs, and other elements, in a way that enhances infiltration **and** provides better, longer-lasting, more beautiful surfaces.

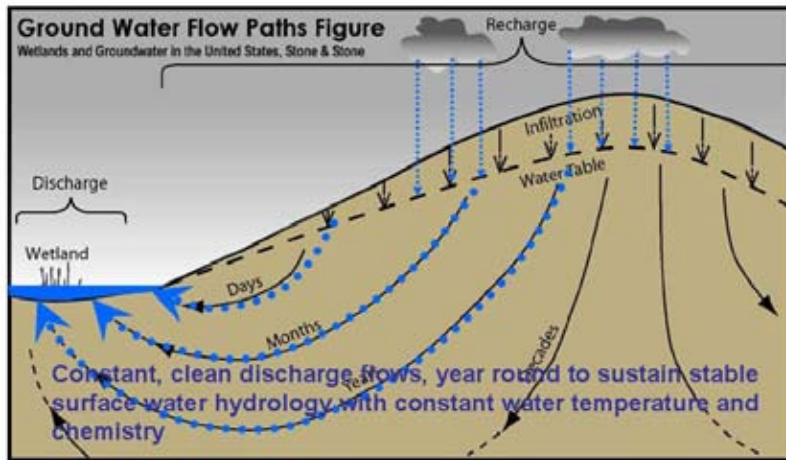


## WATER AND HYDROLOGY

### Historical Patterns of Hydrology

Recharge Zone: Uplands

Discharge Zones: Lowlands- rivers, streams, ponds, wetlands

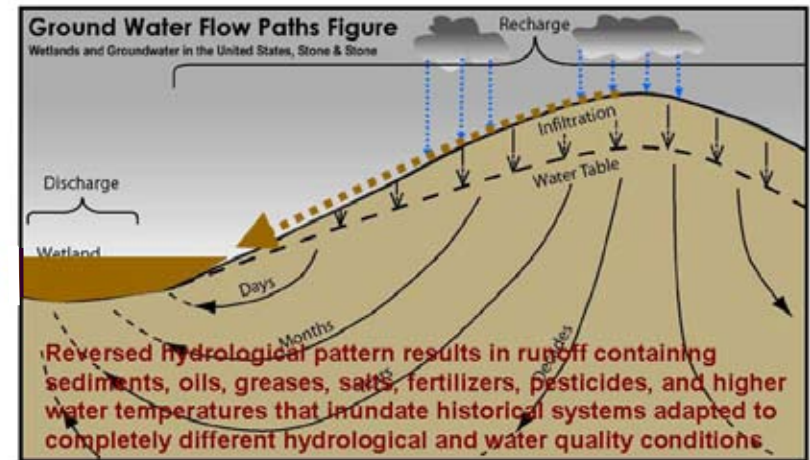


Historic Hydrology

### Contemporary Hydrology

Upland becomes discharge zone

Natural wetlands are expected to function as recharge zones



Conventional Hydrology





## LANDSCAPE ECOLOGY

The landscapes of the Riverwalk system include wooded areas, open fields, and riparian zones along the river edge. Some of these landscapes are remnant systems, which means that they are very similar to the way the land was when it was lived in by Native Michiganders, prior to Western settlement. They include a rich, diverse array of native trees, grasses, and flowering perennials, and provide habitat for a wide range of song birds, migratory waterfowl, butterflies, and beneficial insects. Remnant landscapes are extremely, especially in areas predominant with agriculture, development, and other land uses that have completely modified the original landscape. The remnant landscapes in the parks of Auburn Hills are an incredible treasure. Identification, protection, and long-term restoration and stewardship of these remnant landscapes is of the highest priority to the sustainable approach of this master plan.

The other landscapes falls into one of several categories. There are woodlands that have been significantly degraded or altered over time, and/or are in frequently flooded areas. These areas have habitat and tree canopy value, but will not exhibit the species diversity (health) of the remnant systems. They need a certain level of management and care, including selective thinning of invasive, woody trees and shrubs, in order to get light to the ground surface and promote the growth of perennial grasses. In frequently flooded areas, the vegetative cover will be limited to weedy, non-conservative species due to the unstable conditions.

Other portions of the sites are old fields, formerly build sites, and open meadows or turf areas. These areas are some of the best locations for built programs, since it is impossible to restore healthy native plant communities in these locations due to soil compaction, changes in hydrology, and other factors.

## LANDSCAPE RESTORATION



Before woodland restoration



After woodland restoration



Before



After





## CONNECTIONS AND ADJACENCIES

Another primary consideration in the riverwalk design is the opportunity for connections, physical or visual proximity to different land uses, and potential synergies or conflicts with adjoining sites. While a fundamental purpose of the riverwalk is to connect the two Village Center parks with each other, it is also to provide convenient, non-motorized trail or pathway access to the greatest number of Auburn Hills residents and visitors.

The design also takes into account the notion that the more people can see and are aware of the public spaces and the Clinton River, the more they will appreciate, enjoy, and care for it. Therefore, the plan includes many options for connections and opening up views and vistas to the river corridor. Incidentally, some of the same ecological landscape restoration practices of thinning and clearing invasive trees and shrubs will also serve to improve visibility and overall scenic beauty of the riverwalk.












## CITY OF AUBURN HILLS NON-MOTORIZED PATHWAY PLAN





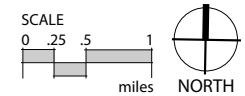
# CLINTON RIVER TRAIL PLAN

## Legend

-  Parking
-  Restrooms
-  Clinton River Trail
-  Railroads
-  Lakes & Rivers
-  Downtown Pontiac Spur
-  Temporary Pontiac Route
-  Downtown Rochester River Walk
-  School
-  Recreation Land
-  Municipal Boundaries



Study Area





## HISTORY AND CULTURE

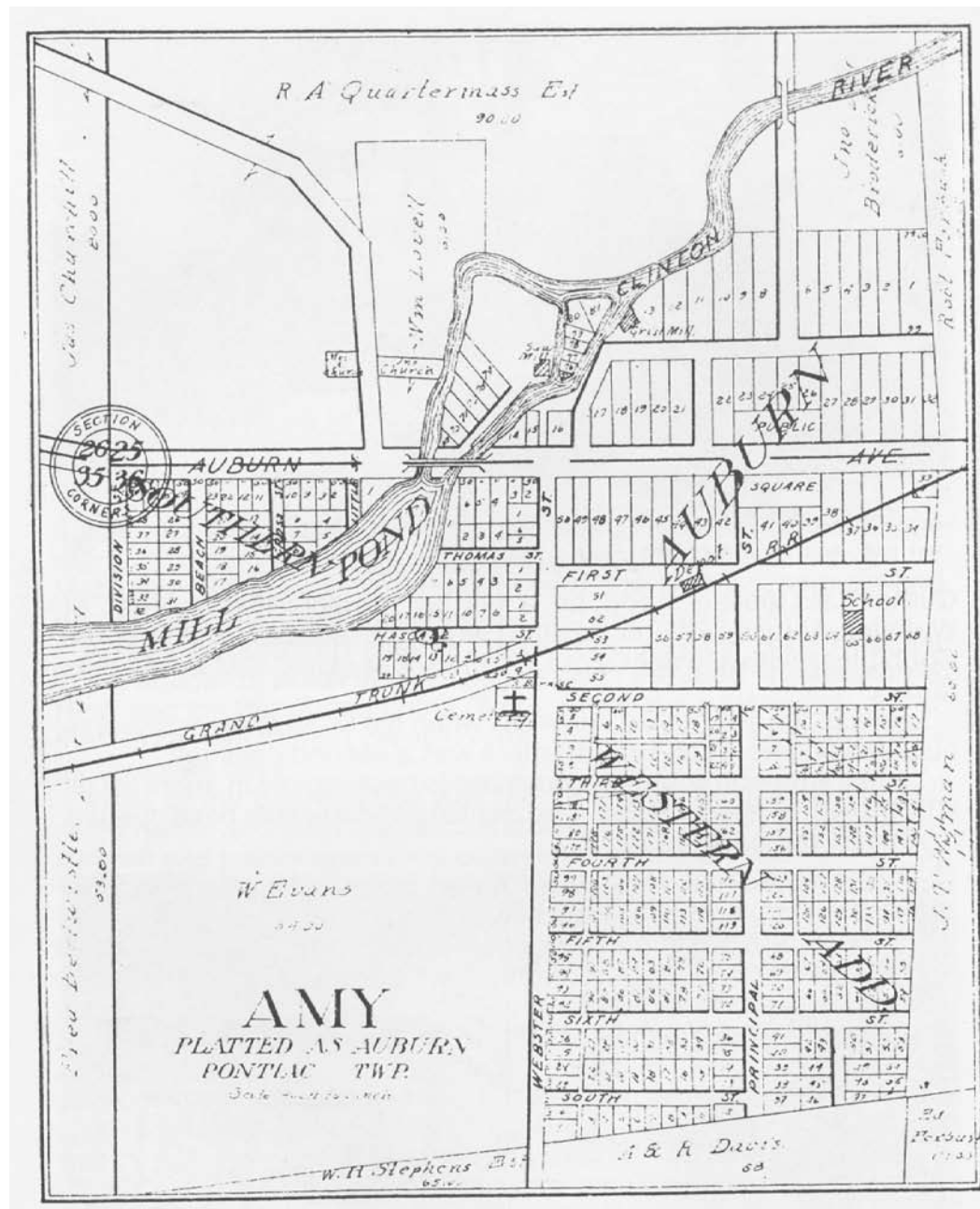
Like most of Southeast Michigan, the Riverwalk site and surrounding lands have undergone a series of dramatic transformations over the past two hundred years since the first written accounts were recorded. Prior to that time, the area was populated by Algonkian-speaking Native American tribes, including Ojibwa, Ottawa and Potawatomi. As an integral part of their culture and lifestyle, they relied on the landscape and the river to provide shelter, food, medicine, clothing, and wood for cooking, heating, and building. They hunted, fished, farmed, and harvested timber throughout the area at a rate that was kept replenished every season. They also burned the landscape regularly to keep the landscape safe and free of the previous year's dormant growth. Their cultural practices were an essential aspect of the ecosystem.

Early accounts paint a picture of what this landscape looked like. Open-grown trees, and a ground plane covered with a dense sward of native grasses and wildflowers provided forage for bison, elk, and deer, and contributed to clean, cool stable waters in the river. (refer to original land surveyor's notes).

The early Western settlers came mainly from the eastern part of the United States, and were seeking a livelihood. The rich growing conditions provided a basis for agriculture. The river rendered constant energy to mill grain, and timber and other resources offered the raw ingredients for industry and commerce. Eventually, Auburn Hills become home to Oakland University, one of the area's finest educational institutions, and a number of high-tech industries. Chrysler is the communities' largest employer, and many people in Auburn Hills work directly or indirectly in the auto industry.

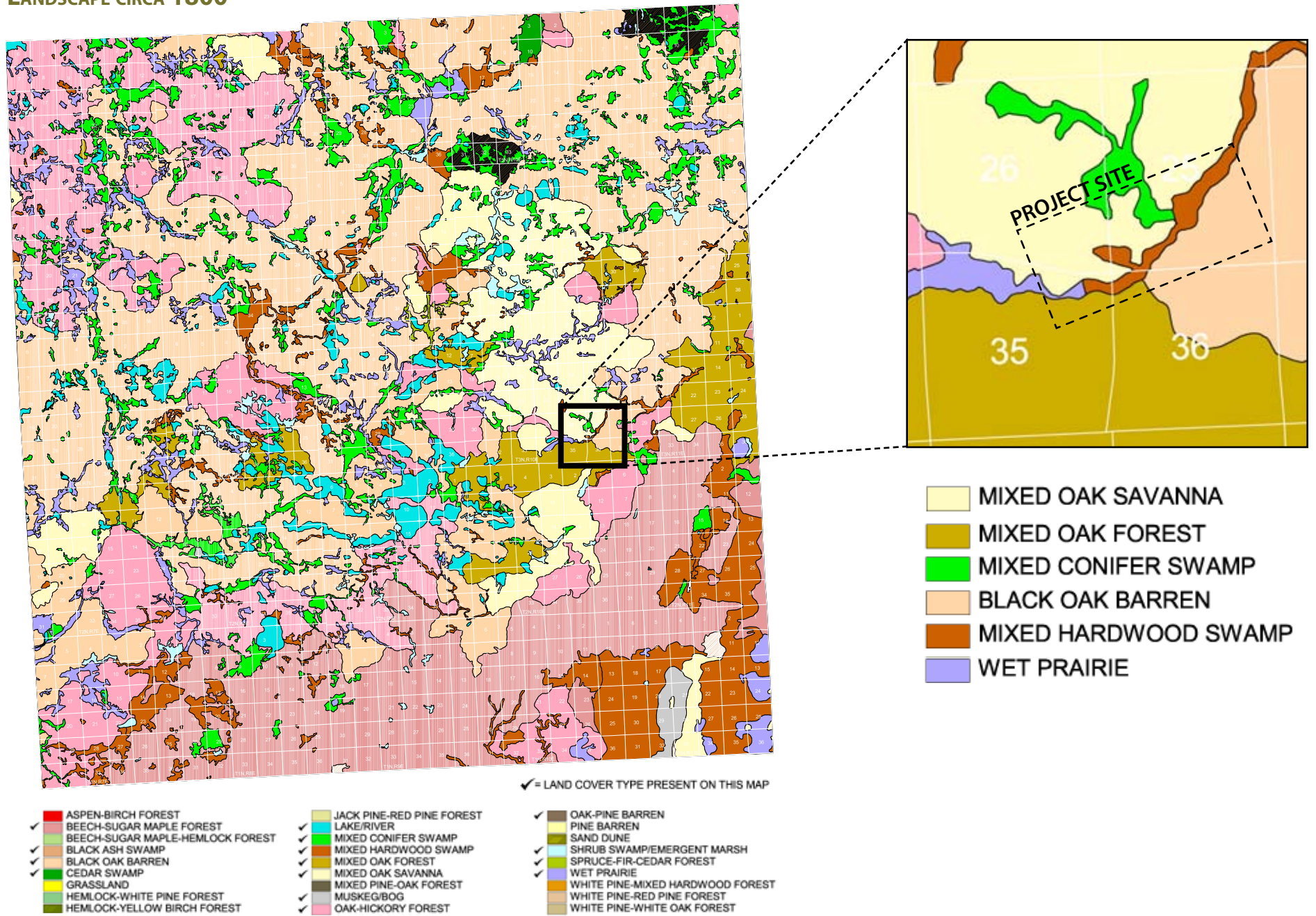
Education, industriousness, and savvy investment with long-term perspective, coupled with opportunities offered by the local resources, mark Auburn Hills cultural legacy since its' early settlement. These are some of the qualities and characteristics that will be expressed in the Riverwalk.

# HISTORIC PLAT MAP





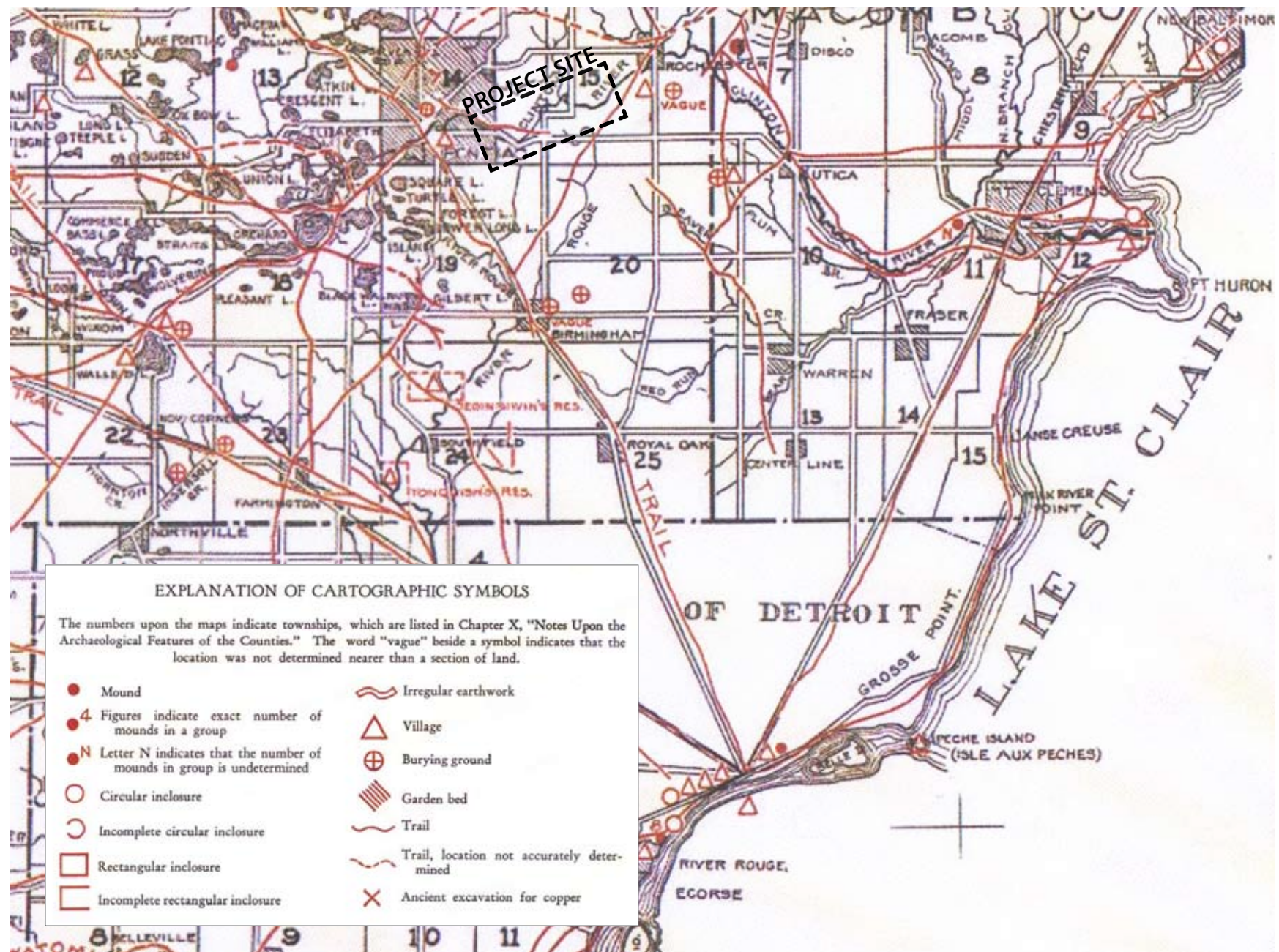
## LANDSCAPE CIRCA 1800



SOURCE: MICHIGAN NATURAL RESOURCES INVENTORY



## NATIVE AMERICAN TRAILS



SOURCE:



# HISTORIC LAND USE

**AERIAL 1940**



**AERIAL 1963**



**AERIAL 1974**

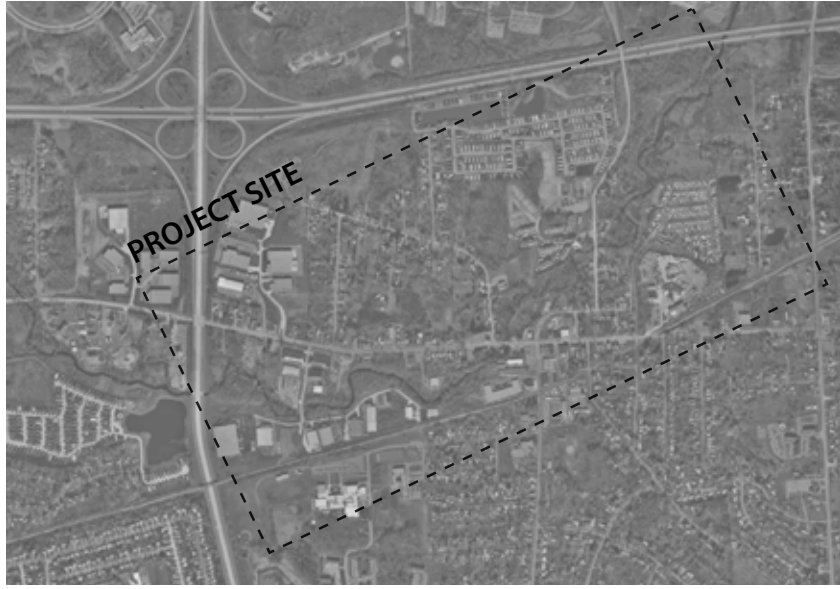


**AERIAL 1980**





**AERIAL 1990**



**AERIAL 2000**



**AERIAL 2005**



# AUBURN HILLS- A WELLSPRING FOR HEALTH

## Healthy Outdoor Lifestyle

- Provide a network of trails, paths and sidewalks that allow people to walk or bike to the Downtown Core, and to various park amenities. Connect trail system to the Clinton River Trail for regional accessibility and amenity.

*Provide a range of active and passive park spaces and features for all ages and abilities in the Riverwalk Park system, central to the community and adjacent to the Downtown Core.*

*Increase access to the river for fishing, kayaking, and canoeing.*

- Provide a setting that encourages healthy, sustainable choices for dining, local produce, and services located in the Downtown Core and throughout the community.

*Incorporate lessons and opportunities to increase learning and awareness about the unique ecology of the Clinton River, the history of Auburn Hills, and the growing movement towards sustainability at all levels.*

## Healthy Natural Resources

- Incorporate multi-purpose, multi-benefit green infrastructure measures into every capital project to slow, cool, cleanse, and infiltrate rainwater, and return it as base flow to the Clinton River, mimicking natural, pre-settlement hydrology. Methods include porous pavement, bioretention (rain gardens, bioswales, constructed stormwater wetlands, etc.) that also create more durable, beautiful, long-lasting streets, parking areas, walkways, and other community infrastructure.*

*Utilize leading edge green building practices for all park structures, and promote the use of green practices throughout the Village Center and entire community. Use LEED (Leadership in Energy and Environmental Design) and other green design tools.*

- Facilities beautifully crafted with local talent and locally obtained, non-toxic, durable materials will be long lasting and support the local economy.

*On-site wastewater cleansing and re-use systems for restrooms*

- Preserve riparian corridor and buffers.
- Restore and steward the natural landscapes to promote biodiversity and stability as ecological systems. Selectively thin and open the wooded areas to promote native grasses and flowers. Provide educational programs and information on the benefits of these practices.
- Begin to provide energy needs from renewable sources locally as a demonstration. Use wind and solar power to provide energy for Riverwalk features (lighting, water movement) in a visible way.
- Incorporate local artists and craftsmen in the implementation of the Riverwalk for signage, site furnishings, and other elements as an aspect of public art. Establish guidelines for the public realm that base materials, patterns, and forms from local history and ecology as a primary theme to reinforce the local sense of place and connectedness.

## Healthy Economy

- Provide fun, affordable, leisure time activities within the community.
- Provide a setting for community events, performances, and activities that share infrastructure (parking, dining, etc.) with the downtown core.
- Create a direct link between the shops and services within the downtown core and the amenities of the Riverwalk park.
- Create synergies between local businesses and the Riverwalk. Encourage sustainable, local business enterprise that provide healthy food choices, support recreational activities (i.e. bike shop, canoe outfitter, bait and tackle, etc.), and shops that draw patrons from a larger region by providing unique goods and services.
- Develop the Riverwalk and downtown core to create the kind of amenity and atmosphere that draws a talented, creative workforce and investment in the community.



## chapter four

# THE MASTER PLAN

### OVERVIEW

The Master Plan for the Riverwalk is a synthesis of the strategies determined to best achieve a Vision for a Healthy Auburn Hills (Chapter 2) with the unique qualities and attributes of the project site, described in the Community Context (Chapter 3). The following descriptions, diagrams, maps and vignettes illustrate the potential to reinforce the attributes outlined in the first principles towards creating a community environment like no other place. The plan envisions the combination of a Riverfront park system linked to the regional trail network connected to an authentic downtown core that together will host a wide range of recreational and leisure activities for community residents and visitors. The Riverwalk will also provide a healthy, vibrant setting for these activities through the restoration and long-term stewardship of a stable ecology and environment, resulting in a clean, clear river for the enjoyment of the community.

The plan includes a complete trail network, locations for new and enhanced existing park elements and features, connections to the downtown core, and guidelines for the detailed design and construction of the various park elements.





## TRAILS / CONNECTIONS

An extended trail system is one of the recreational amenities most requested by the community stakeholders in the initial part of the planning process. An essential component of the master plan is the development of a trail network to provide access to the various park elements. Generally, the trail system includes a primary multi-use trail on one or both sides of the entire Clinton River corridor within the project area, and connections to the Clinton River Trail to the south in two locations. This layout will provide safe, convenient access from all parts of the community to the Riverwalk park areas and the Downtown Core. A few key aspects of the trail system include:

### 1. MULTI-USE

The trails are designed to accommodate a range of uses and modes:

- Primary trails are fully accessible, hard-surface, a minimum of 12' wide, and suitable for walking, jogging, cycling, and in-line skating. Grade changes are addressed with gently sloping ramps.
- Secondary trails are fully accessible, a minimum of 8' wide, either hard surface or crushed stone surface, and suitable for walking, jogging, and cycling. Grade changes are addressed with gently sloping ramps.
- Footpaths and walkways will be ADA accessible to the fullest extent possible, and are a range of hardness of materials depending upon use. They may be stepping stones down to the river edge, small narrow paths in wooded areas, or maintenance paths. There may be steps to accommodate grade changes.

### 2. HIERARCHY OF TRAILS

The trail system is a hierarchy, starting with the existing Clinton River Trail. The primary trail system links to the Clinton River Trail in two places, creating a loop, and extends on one or both sides of the river north of Auburn Road. A potential future extension of the trail is indicated south of Auburn Road, which is dependant upon acquisition of easements and future development. The secondary trails provide loop off of the primary trail, and create a wide number of possible circuits of differing lengths and experiences. This system will provide a total of 4.0 miles of trails, and offers a great opportunity to stage races and events of differing lengths and skill levels.

### **3. WAYFINDING AND SAFETY**

The trail system will be well marked with directional signage and mileage indicators. Primary and secondary trails will be lit for nighttime use and safety. The landscape restoration described elsewhere will result in opening up the dense undergrowth in the wooded areas, increasing visibility and safety.

### **4. CONNECTIONS TO THE CLINTON RIVER TRAIL**

Connections to the Clinton River Trail provide for a direct link for the thousands of Oakland County trail enthusiasts that use the trail now and the Riverwalk and Downtown Core. It also provides safe, convenient access to the Clinton River Trail for residents in the Village Center area.

### **5. CONNECTIONS TO DOWNTOWN CORE**

A primary purpose of the Riverwalk is to support the shops, services, and eateries in the Downtown Core, and to encourage more businesses to locate their. Direct access for residents and regional trail enthusiasts will certainly help to accomplish this, as has been demonstrated in many other communities.

### **6. CONNECTIONS TO THE SURROUNDING NEIGHBORHOODS**

It is important for all of the residents within the Village Center area to be able to walk or bike to the Riverwalk and the Downtown Core. Connections to Forester Square, and the other neighborhoods east and west of Squirrel Road and north of Auburn Road are provided. Residents south of Auburn Road can take the Clinton River Trail to one of the two connections which cross Auburn Road at either end of the Downtown Core section of the street.

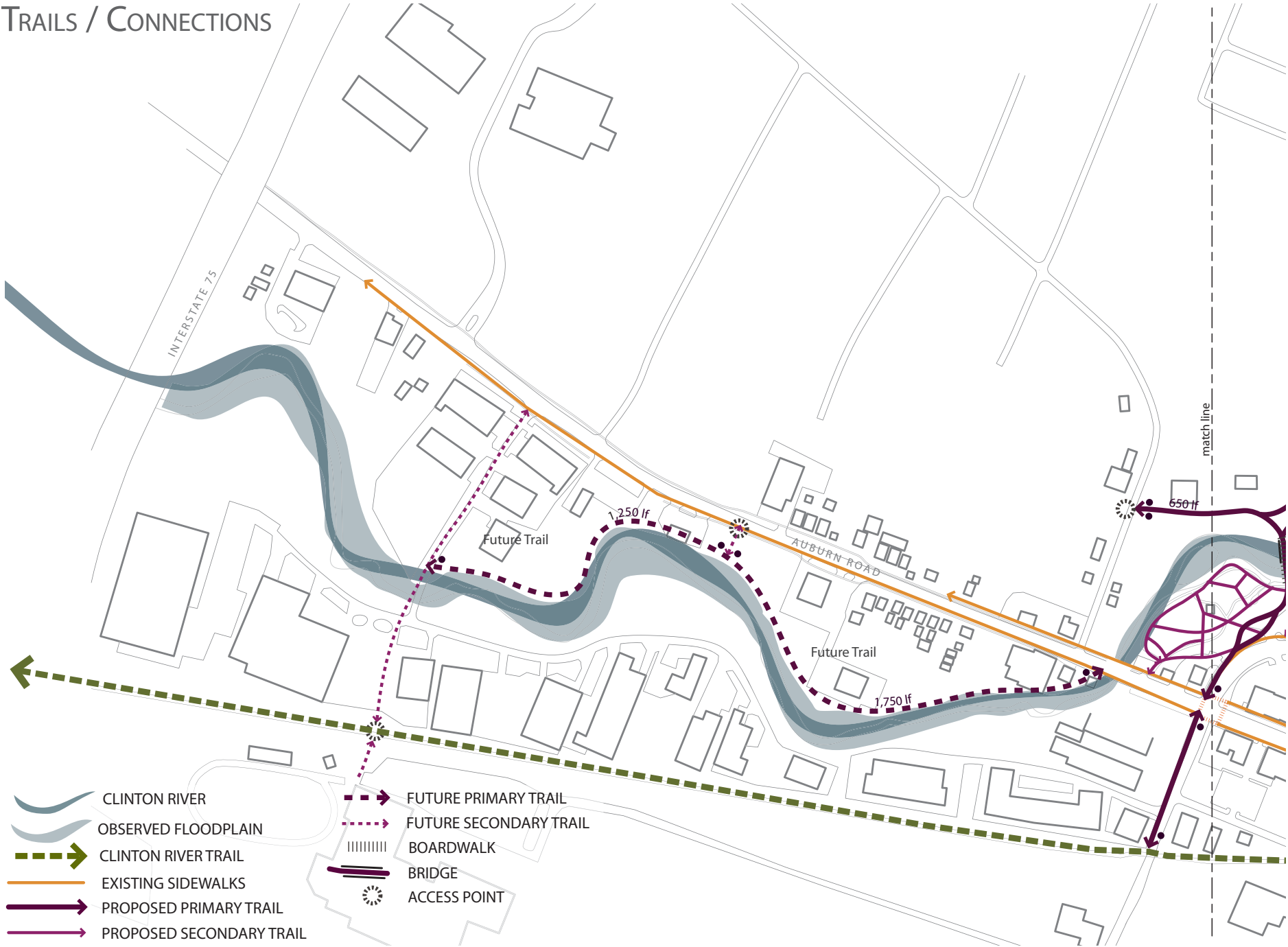
### **7. VARIETY OF EXPERIENCES AND BEAUTY**

In addition to safety, convenience, and being well-connected, trails that provide access to and through beautiful, interesting, authentic scenery are the most loved and well-used. The combination of the Riverwalk trail network with the natural beauty of the Clinton River, which will be greatly enhanced through the ecological restoration approach outlined in this master plan, will provide a dramatic, beautiful landscape setting that changes with the seasons, and becomes host to an ever-greater diversity of plant and animal life.

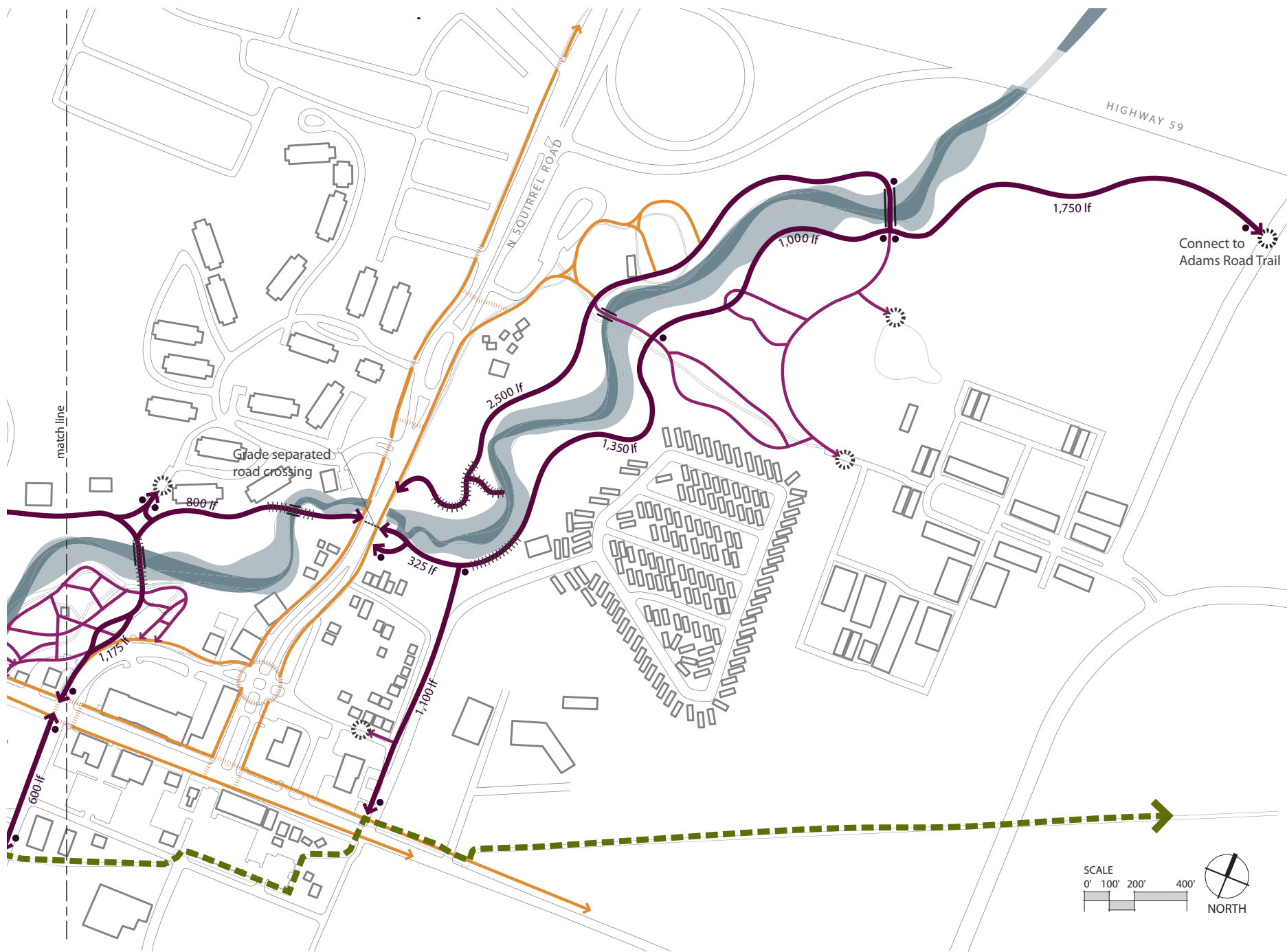
### **8. INTEGRATED GREEN APPROACH**

In order to achieve the ecological and water quality goals of the Riverwalk, the trail layout, construction, materials, and maintenance will follow leading edge green practices that minimize soil compaction, promote rainwater infiltration, and stabilize slopes.

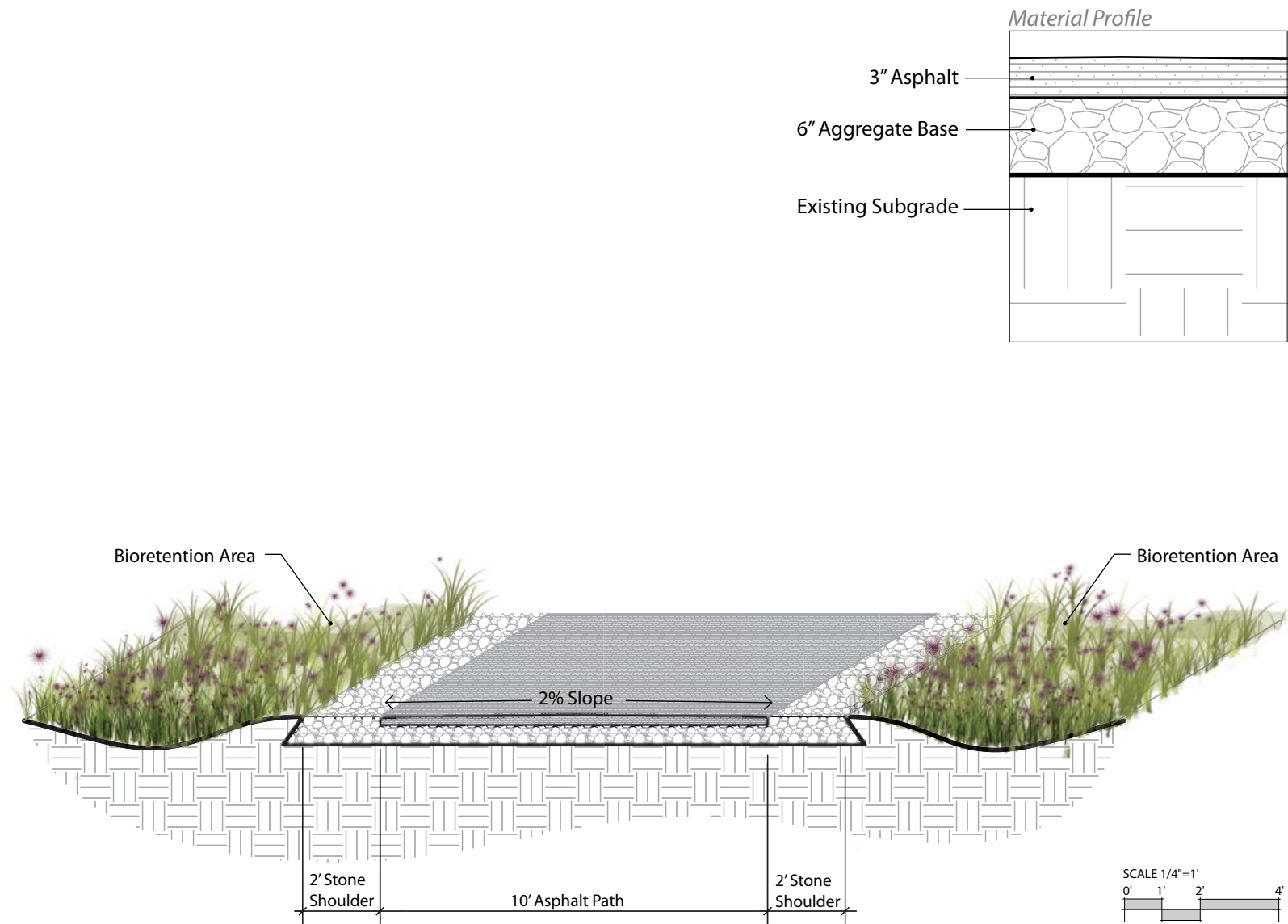
TRAILS / CONNECTIONS



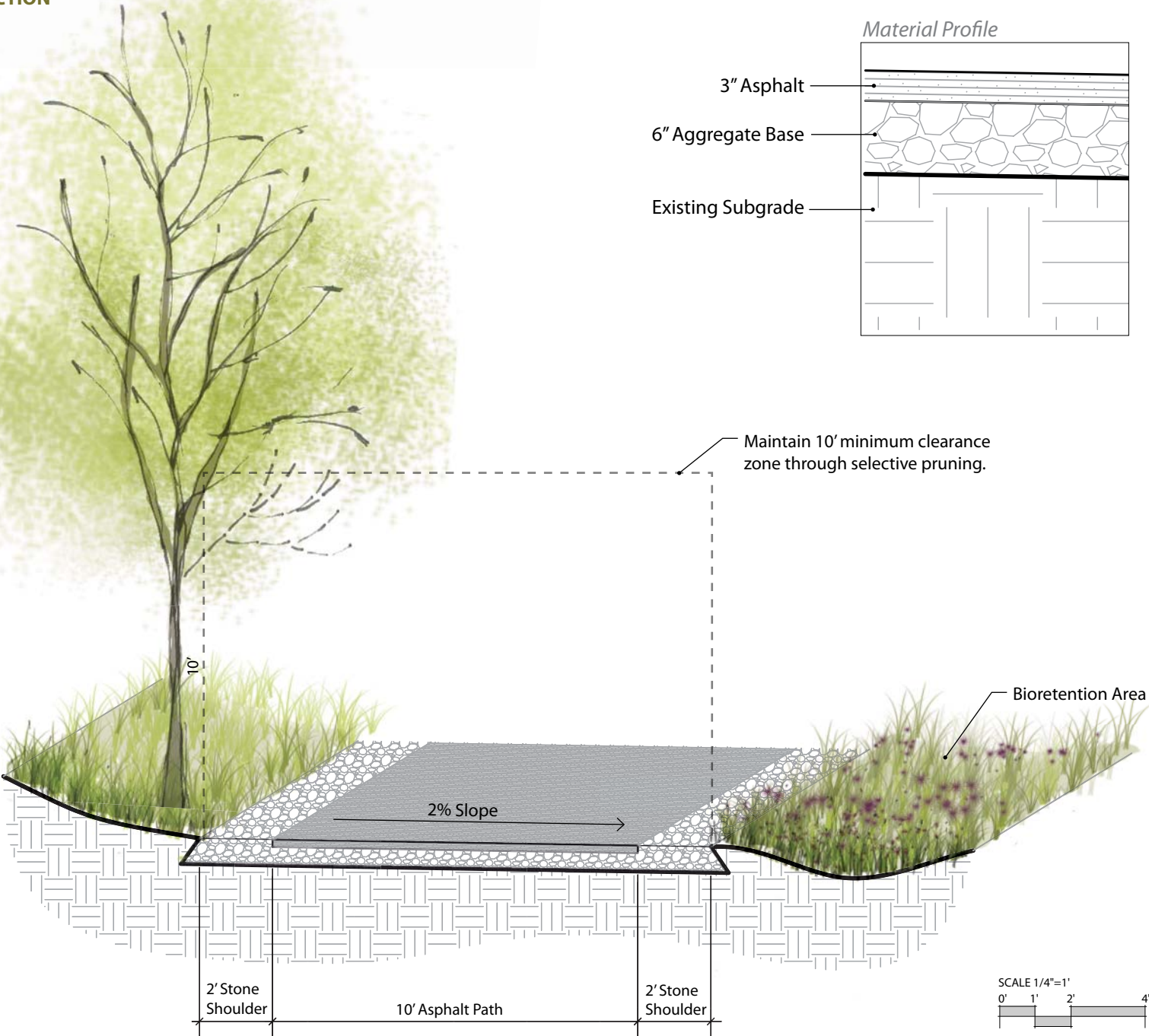




PRIMARY TRAIL CROSS SECTION

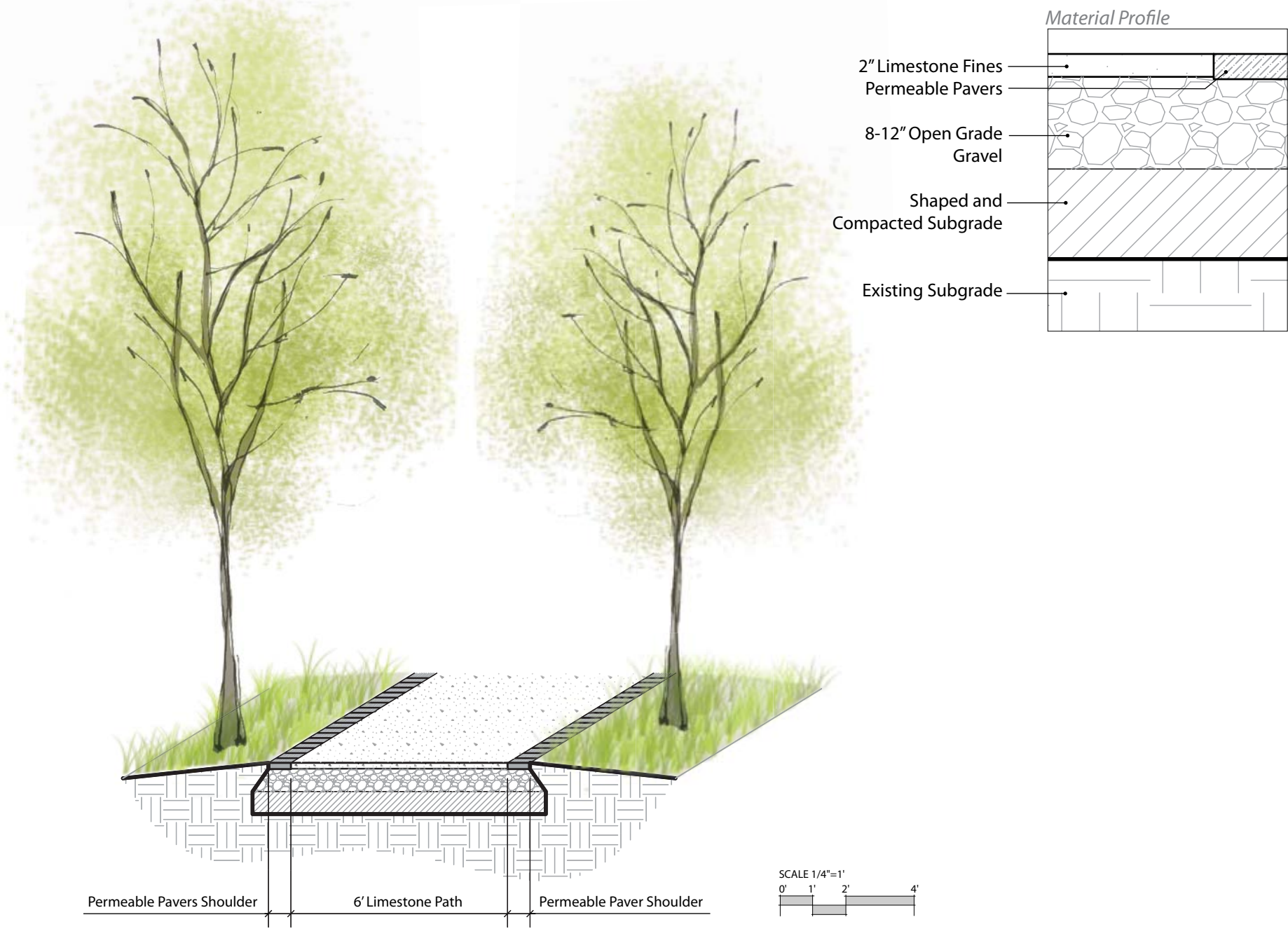


PRIMARY TRAIL CROSS SECTION

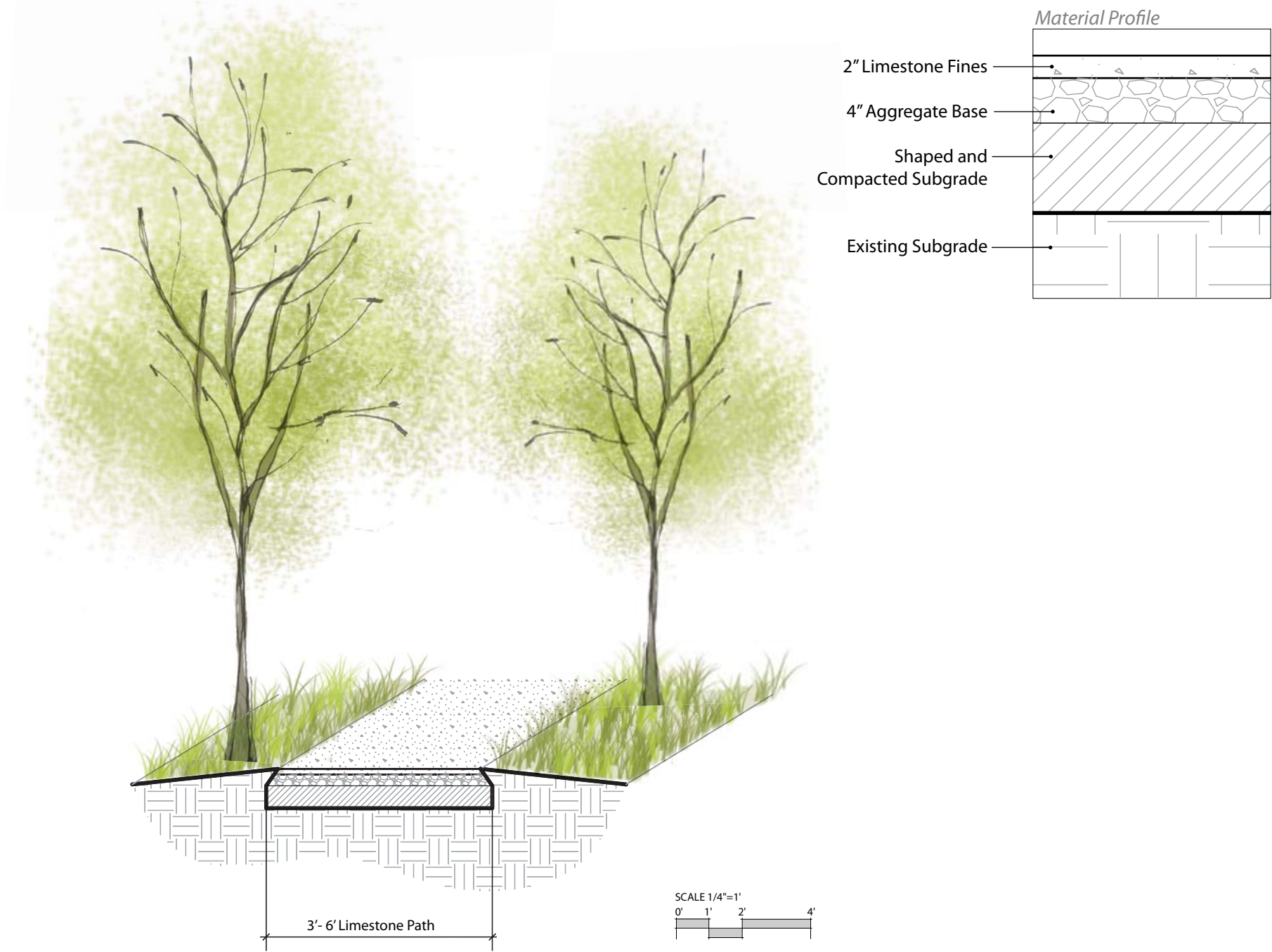




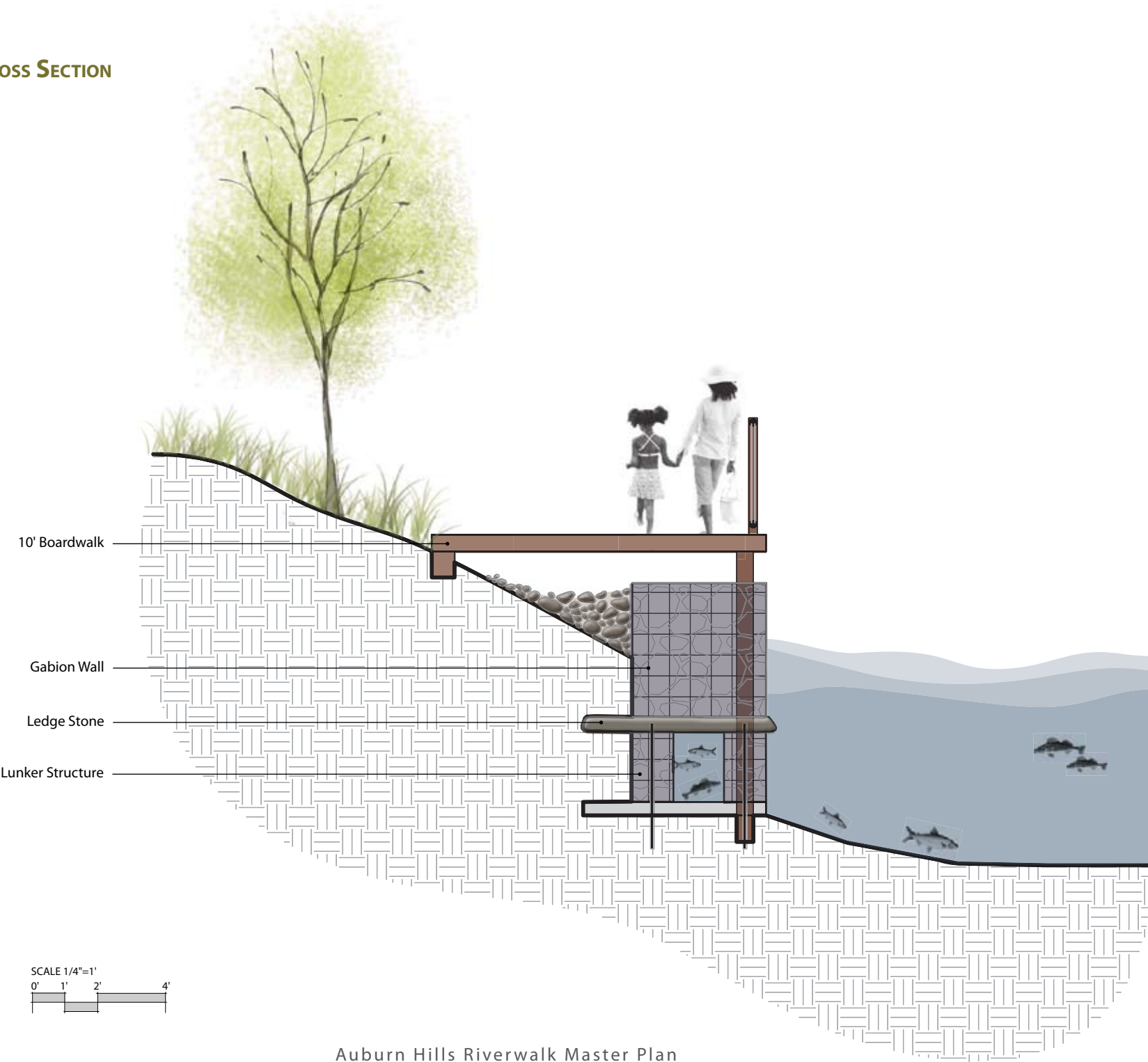
SECONDARY TRAIL CROSS SECTION



FOOT PATH CROSS SECTION



BOARDWALK CROSS SECTION









## LANDSCAPE / HABITAT

Another critical component of the master plan involves planning for the restoration and long-term stewardship, or management/maintenance, of all of the landscapes within the Riverwalk park area. As described in the Community Context (Chapter 2), the area includes a rich diversity of ecosystems, some of which are degraded due to development and unstable upstream hydrology, but many of which are magnificent examples of Southeast Michigan native landscapes. The overall strategy is to restore stability to the hydrology to the degree possible over time, and to restore healthy habitat appropriate for the varying conditions and features within different portions of the Riverside park area. Following is a list of the six general landscape conditions present within the area (labeled as Zones 1-6), and a diagram of the approximate locations of each condition, or type. Each Zone has a brief description, the uses appropriate or possible within that zone, and some general notes about long-term restoration and management practices:

### **ZONE 1. FLOODWAY**

*Description:* This is the area most prone to flooding following heavy rains, and represents the conveyance channel of the river in high water conditions. Most park features and activities listed below as suitable for Zone 2 are also suitable here. No unmitigated structures allowed; attention must be paid to regulatory strictures and requirements.

*Landscape Restoration/Management Approach:* The frequency of flooding within this area does not allow for high quality, native vegetation to survive. These areas should be kept free of fallen trees to the degree possible (to minimize flood back-up), and invasive species of trees and shrubs also kept down to the degree possible while maintaining the canopy to shade the river. A more open condition will improve visibility, appearance and re-establish the ground layer grasses and forbs to reduce erosion.

### **ZONE 2. FLOOD-PRONE AREA**

*Description:* This is the next most frequently flooded portion of the river following heavy rains and/or spring snow melt. This area tends to be inundated with water once or more during a 2-year period. This zone is also restricted by regulations as to the construction of structures that might impact or impede floodwater storage. Any constructed element within this zone must be built to withstand inundation of floodwaters.

## **ZONE 2. FLOOD-PRONE AREA (CONTINUED)**

- Low-level, at-grade infrastructure possible includes walks or paths to support:
  - Fishing
  - Birding
  - Canoe and kayak access
  - Exploration
  - Children's adventure play

*Landscape Restoration/Management Approach:* The frequency of flooding within this area also does not allow for high quality, native vegetation to survive. Similar to the floodway, these areas should be kept free of fallen trees to the degree possible (to minimize damming), and invasive species of trees and shrubs also kept down to the degree possible. Again, a more open condition will improve the ecological health, visibility and appearance. There should be no attempt to establish conservative native landscape restoration within this zone, as these plants will not flourish due to the frequency of flooding.

## **ZONE 3. RIVER SHADING ZONE**

*Description:* Twenty-five feet along both sides of the Clinton River in the Riverside and River Woods Districts. One hundred feet along both sides of the Clinton River in the Up River District. All of the activities programmable from Zone 2 are suitable here also, except that:

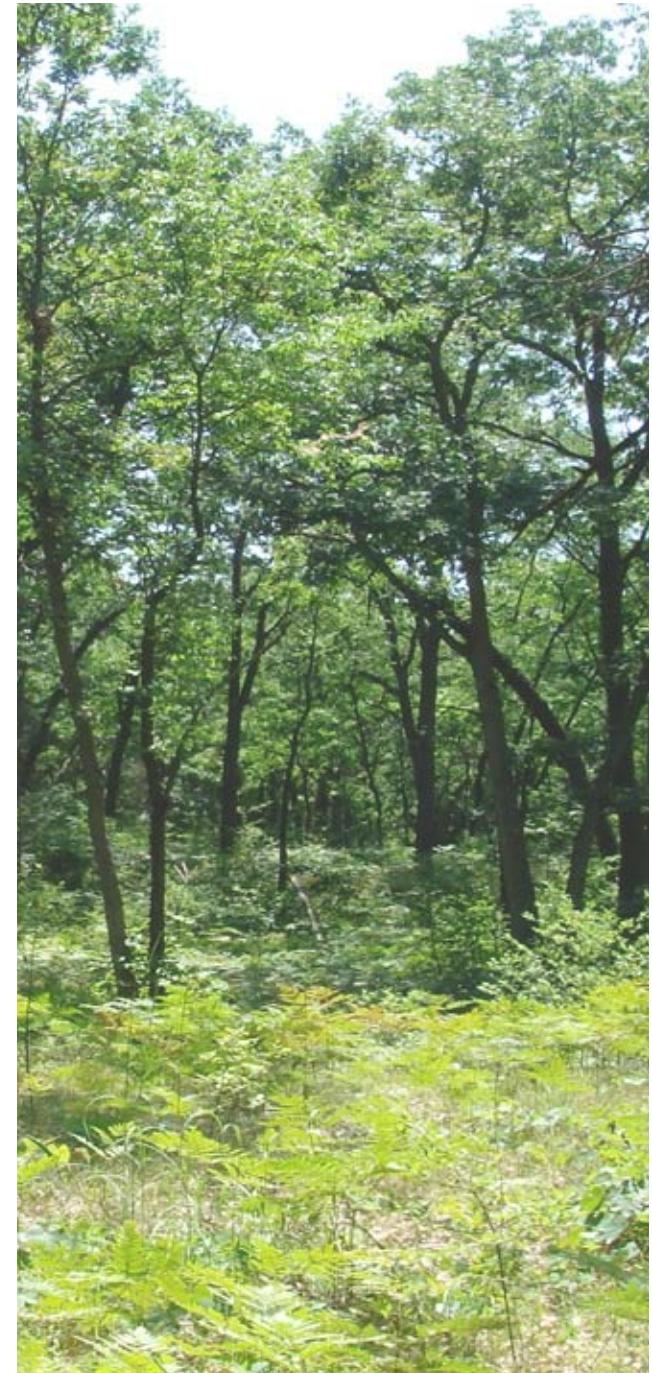
- No living canopy trees will be removed from this area, in accordance with DNR concerns over shading of the cold-water stream.

*Landscape Restoration/Management Approach:* same as Zone 2.

## **ZONE 4. FLOODPLAIN**

*Description:* The entirety of the 100 year floodplain except for Zones 1, 2, and 3. All of the activities programmable from Zone 2 are suitable here also. Structures and infrastructure that endure flooding are permitted under applicable restrictions and requirements.

*Landscape Restoration/Management Approach:* Similar to Zone 2. Again, keeping the invasive woody trees and shrubs thinned to the degree practical will help these areas to be more open and attractive. Some of these areas could be established with turf and mowed once or twice a season to keep them relatively open, and a ground plane vegetation in place to minimize erosion.







## LANDSCAPE / HABITAT (CONTINUED)

### ZONE 5. CULTURAL LANDSCAPES

*Description:* These are areas within the property that are above the 100 year floodplain elevation, and exhibit no sign of a native ecosystem. Some of them are already developed as park space with lawn and trees, other areas are degraded or fallow fields or former building sites. These are the best areas to locate the more active park features. The construction of trails, the amphitheater, pavilions, and overlooks will be done in a way to stabilize slopes, re-contour the site to maximize views, and other qualities.

*Landscape Restoration/Management Approach:* The landscapes within this zone will vary from very ornamental in certain areas to more naturalistic. Sustainable horticultural practices will be followed to avoid any negative impact on the river. The landscapes will be maintained with minimal mowing, either no irrigation, or irrigation with collected rainwater or floodwater, and without harmful chemicals.

### ZONE 6. REMNANT LANDSCAPES

*Description:* The remnant landscapes are those areas that exhibit biological integrity and a diversity of plant species native to the Auburn Hills area. These areas have uncompacted soil, and are not impacted by unstable hydrology (flooding or off-site runoff). These conditions are very rare throughout Oakland County, and Auburn Hills is quite fortunate to have remnant landscapes with the Riverwalk park area. They have a beautiful, authentic quality, and a rich display of flowers throughout the seasons. They are truly irreplaceable; one could not recreate these qualities with any amount of money. Therefore, these areas have been generally defined to be very passive in nature, and only paths with minimal impact located within them.

*Landscape Restoration/Management Approach:* While these areas are spectacular, they are in a state of slow decline. They are generally overgrown with too many trees and understory shrubs, and are in need to selective thinning and annual prescription burning as the two primary management practices. A detailed restoration and management plan will be developed, funded, and implemented as part of this master plan.