

# Shared Use Trail Pilot Program: Tryon Park and Irondequoit Bay Park West



Prepared for: Monroe County Department of Parks, Monroe County, NY  
Prepared by: Environmental Design and Research



# Shared Use Trail Pilot Program: Tryon Park and Irondequoit Bay Park West

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Project background

Ellison Area Master Plan Updates 2009

Site Inventory, Ecological Assessments, Public Input, Recommendations

Shared Use Trail Pilot Program:

Tryon Park

Irondequoit Bay Park West

Signage and Education

Sustainable Trail Design Guidelines

Trail Construction Process

Trail Maintenance

Trail Monitoring Process and Criteria

Timeline



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## Master Plan Updates: Key Issues

- Access and Community Connectivity
- Conservation & Sustainability
- Active Living to Address Preventable Health Problems
- Green Infrastructure
- Shared Use of Trails
- Waterfront Use and Access
- Dog Parks

### IRONDEQUOIT BAY PARK WEST:

#### FACILITIES

Improvements to entry signage and directional signage.  
 Improvement to surface conditions of existing road.  
 Abatement of existing drainage and storm water management issues.  
 Possible new launch area for small boats at north end of park.  
 Establish a mixed circuit of waterfront destinations for paddlers around Irondequoit Bay.  
 Possible utilization of old RR bed to provide trail corridor from Empire Blvd. into Irondequoit Bay Park West.  
 Possible pedestrian/bike crossing of Empire Blvd.

#### PROGRAMS

**MANAGEMENT & MAINTENANCE:**  
 Stream bank stabilization strategies along riverine draining to Irondequoit Bay.  
 Control of invasive species (possible utilization of community labor).  
 Sustainable trail practices for nature surface trails.  
 Establish monitoring program to record trail use patterns and problem areas.  
 Survey and delineate park boundaries.

### TRYON PARK:

#### FACILITIES

Identify additional access, parking and trailhead opportunities for Tryon Park.  
 Investigate possible additional land acquisitions to expand Tryon Park.  
 New signage system:  
 entry signage  
 regulatory signage  
 interpretive signage  
 wayfinding signage

#### PROGRAMS

Open nature surface trails in Tryon Park to off-road cycling.  
 (Requires amendment to Monroe County parks law.)  
 Establish educational programs and workshops for safe and responsible riding.

#### MANAGEMENT & MAINTENANCE:

Create a detailed inventory of existing trails in Tryon Park.  
 Identify unsustainable or dangerous trails to be closed.  
 Identify opportunities to establish new sustainable shared-use trails.  
 Application of Sustainable Trails guidelines to control erosion and environmental impacts on existing trails.  
 Design and implement a Monitoring Plan to evaluate use and impacts to trail conditions and natural resources.  
 Establish a 36-month evaluation period to monitor impacts of policy changes.  
 Establish partnerships between Monroe County Parks Dept and community trail user groups for appropriate trail development and maintenance.  
 Survey and delineate park boundaries.



### DEVIL'S COVE:

#### FACILITIES

Majority of public comments support the continuation of Devil's Cove as a boat access day facility.  
 Unique condition on Irondequoit Bay.  
 Land access, if eventually provided, can be walk-in trail access only from a small parking area off of Bay Road.  
 Investigate potential access arrangements and/or property acquisitions.

#### PROGRAMS

**MANAGEMENT & MAINTENANCE:**  
 Monitor water quality issues in the Cove.  
 Environmental enhancements to increase habitat value.

### IRONDEQUOIT BAY PARK EAST:

#### FACILITIES

Possible new access, parking, entry signage and trailhead at 1505 Empire Blvd.  
 Requires asbestos abatement, demolition and removal of existing houses, barn and out-buildings.  
 Provide additional park entry signage at Smith Road.  
 Provide surface repairs and improvements to park access road.  
 Provide a graphic with trail maps and interpretive information on nature and historical resources within the park.  
 Investigate the potential of additional parking spots along the park access road.  
 Possible future addition of playing fields on paved or old nursery area.  
 In partnership with Town of Penfield and/or local sports groups.  
 (1980 Master Plan recommendation)  
 Inventory and protect horticultural resources of the Old Line Nursery.

Possible future construction of new multi-use building and enhanced seasonal recreation opportunities near the Quaker Hill.  
 Establish a mixed circuit of waterfront destinations for paddlers around Irondequoit Bay.

#### PROGRAMS

**MANAGEMENT & MAINTENANCE:**  
 Stream bank stabilization strategies along stream draining to Irondequoit Bay.  
 Control of invasive species (possible utilization of community labor).  
 Sustainable trail practices for nature surface trails.  
 Survey and delineate park boundaries.

### ELLISON WETLANDS:

#### FACILITIES

Possible construction of new access, parking and trailhead east of Empire Blvd.  
 Possible new parking and access on north side of Stowcroft Blvd. at Landing Road.  
 Minor parking and access improvements on Old Stowcroft Blvd.  
 Note: removal of the existing weir and installation of the Narrows Bridge is likely in 2009.

#### PROGRAMS

Emphasize ecological conservation and environmental education in this area.  
 Increased use of existing Monroe County Wetland Center.  
 Additional nature-oriented programs and events.

#### MANAGEMENT & MAINTENANCE:

Stream bank stabilization strategies along Irondequoit Creek.  
 Control of invasive species (possible utilization of community labor).  
 Sustainable trail practices for nature surface trails (Old Rifle Range area).  
 Establish monitoring program to record trail use patterns and problem areas.

### ELLISON PARK:

#### FACILITIES

Construction of dog park.  
 (To be funded by Dog Park Trust Fund)  
 Structural improvements to existing building.  
 (see spreadsheet)  
 Upgrades to Pavilion Lodge are a priority.

Provide seating areas for paddlers on Irondequoit Creek.  
 Identify potential areas along the creek for paddlers to disembark and utilize Ellison Park facilities. Strengthen connectivity between Ellison Park and Ellison Wetlands.

Improve trail from south entrance.  
 Possible enhancements of trail surfacing on high-use trails (Coyote Trail, etc.)

#### PROGRAMS

**MANAGEMENT & MAINTENANCE:**  
 Stream bank stabilization strategies along Irondequoit Creek.  
 Restoration of stream bank areas damaged by frequent dog use.  
 Control of invasive species.  
 Possible utilization of community labor.  
 Establish sustainable trail practices for nature surface trails.  
 Survey and delineate park boundaries.

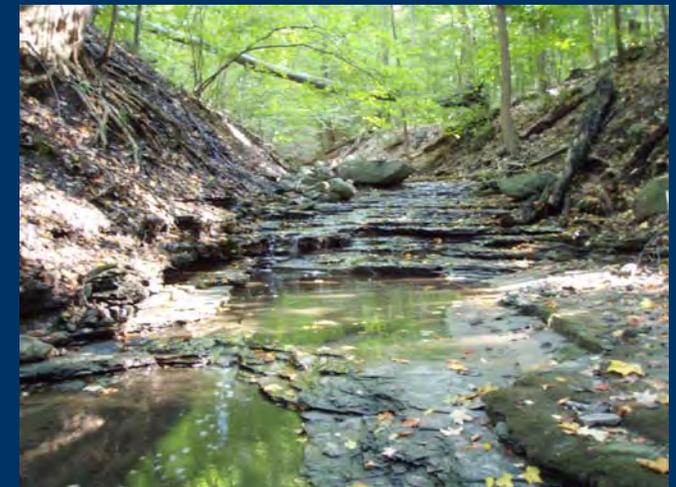
- \*Engineering
- \*Education
- \*Encouragement
- \*Enforcement



# Ellison Park Area Master Plan Updates 2008-2009



I Bay West



Tryon Park



# Ellison Park Area Master Plan Updates

## Key Issues

Access and Community Connectivity

Active Living to Address Preventable Health Problems

Green Infrastructure

Shared Use of Trails

Waterfront Use and Access

Dog Parks

Sustainability & Conservation



# SITE INVENTORY AND ANALYSIS

Soils

Topography

Hydrology

Vegetation

Wildlife

Building  
Inventory

Access and  
Circulation

Historical  
Resources

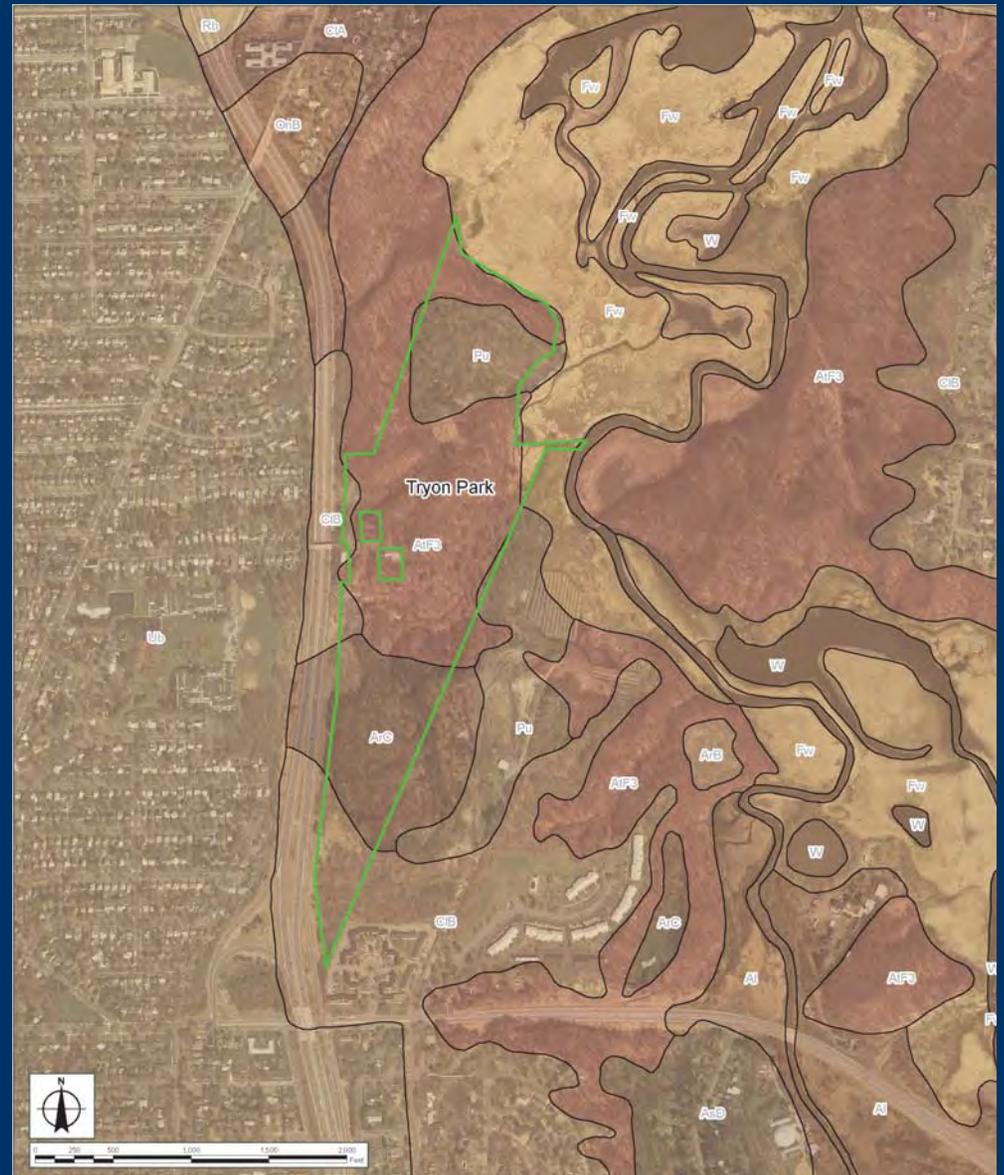
Demographics



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Prepared by: Environmental Design and Research



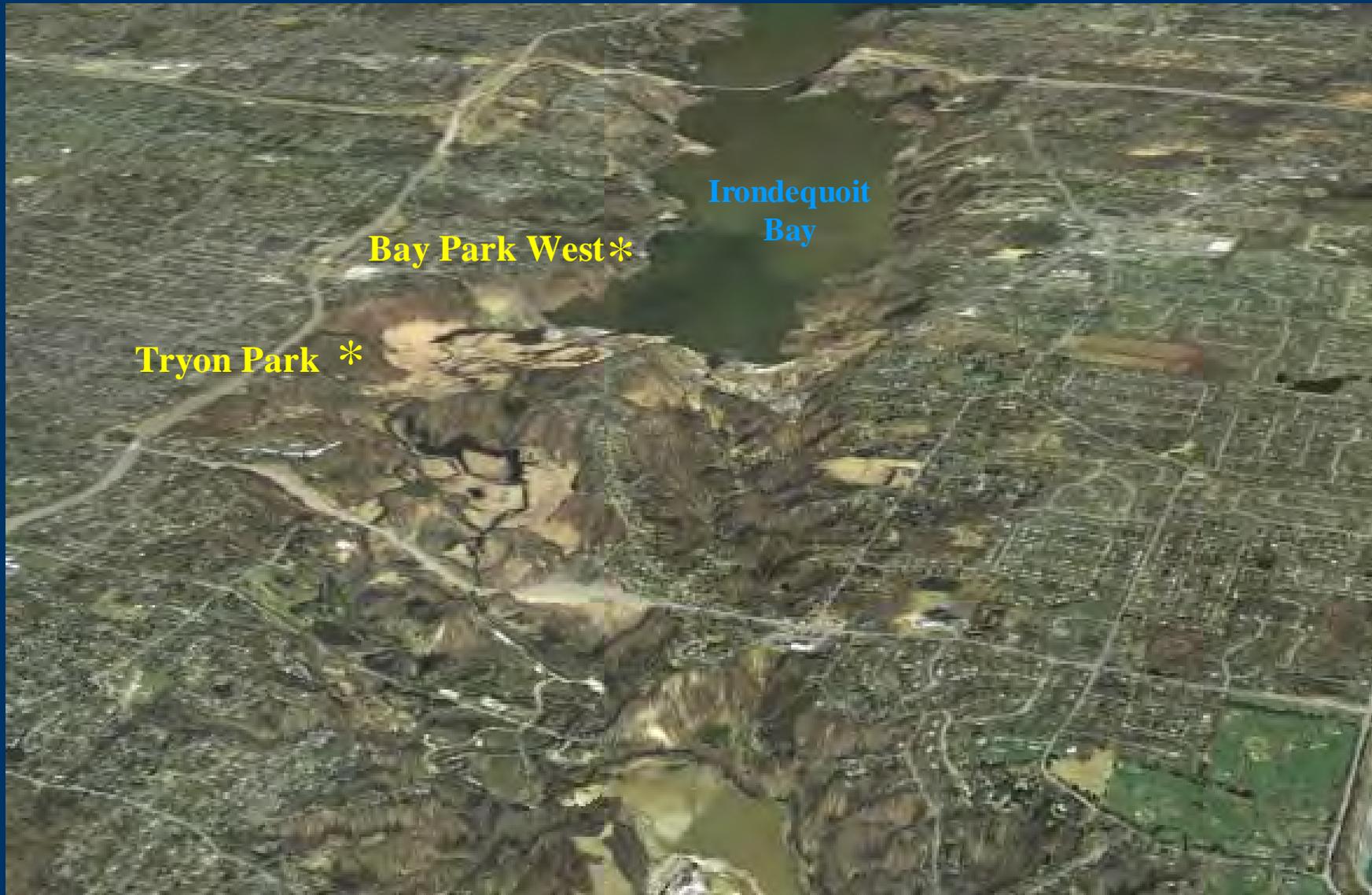
# NATURAL RESOURCES INVENTORY



Prepared for: Monroe County Department of Parks, Monroe County, NY  
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# EXISTING TRAILS ASSESSMENT



Terra Viewer Aerial Imagery



Prepared for: Monroe County Department of Parks, Monroe County, NY  
Prepared by: Environmental Design and Research

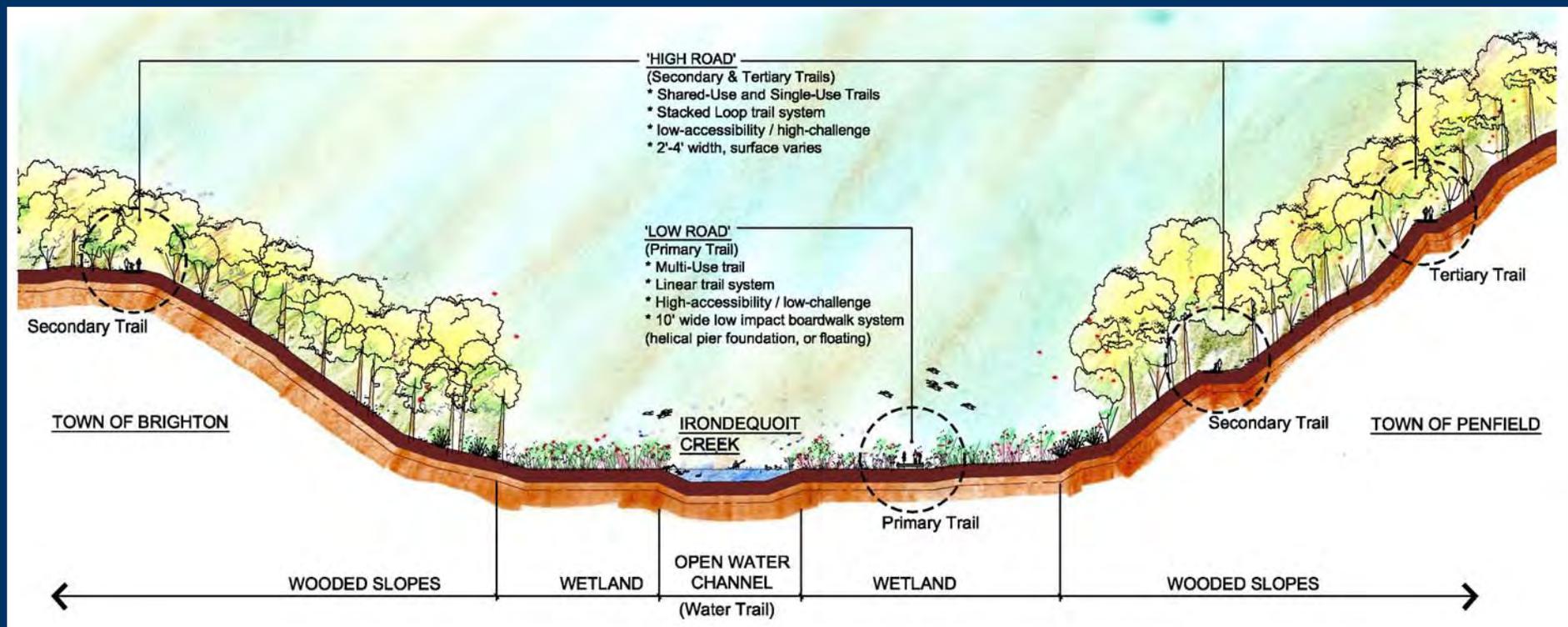


Compilation of base-line data for shared-use trail pilot program.

GPS trail inventory. 100' interval points.  
Geo-tagged photos. Five different trail assessment criteria.

### 1- Trail position –

categorized as one of three types:  
valley bottom,  
ridge top, or  
mid-slope.



## TRAIL ASSESMENT CRITERIA



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## 2- Tread surface material:

Natural surface/ packed earth

Gravel

Asphalt

Woodchip

Other

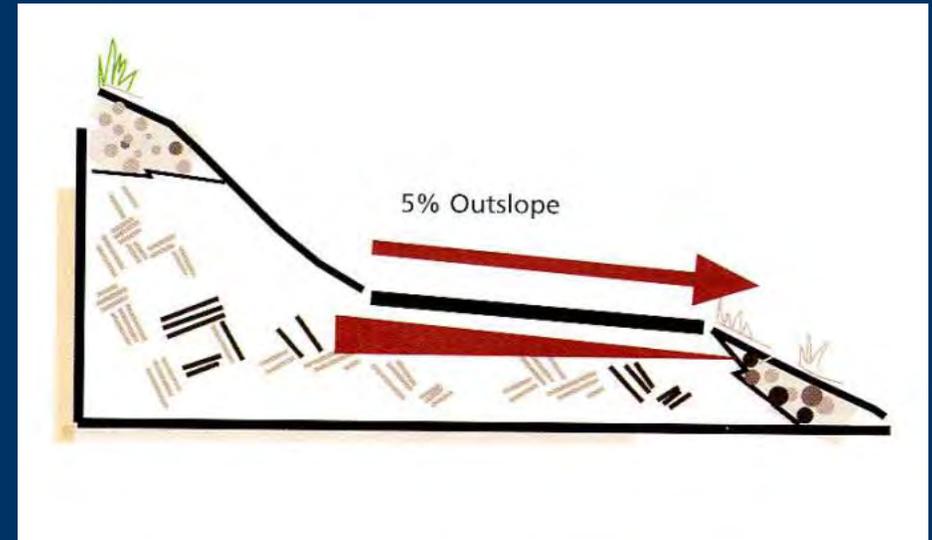


## 3- Tread cross-section

Out-slope

In-slope

Neutral



# TRAIL ASSESMENT CRITERIA



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**4- Tread grade** – percent slope of the trail at the sample point :

0-4%

5-10%

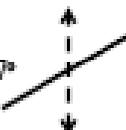
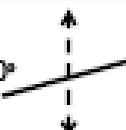
1-15%

16-20%

21-25%

> 25%

**5- Trail Slope alignment angle**- orientation of the trail (0-90°) to the prevailing grade of the landform. A low slope alignment angle trail is oriented up- and down-slope, a high slope alignment angle trail is oriented along the contour.

Slope Alignment Angle	Degradation Potential	Trail Profile
0-22° 	Very High – erosion from water draining along tread and muddiness from water trapped on treads	
23-45° 	High – draining water will be difficult in most places	
46-67° 	Low – easy to drain water while still changing elevation	
68-90° 	Very Low - easy to drain water but trail can't change elevation very fast	

## TRAIL ASSESMENT CRITERIA



In addition to sample points at 100' intervals, record GPS position and geo-tag photos of the following conditions wherever they occur along established trail corridors:

1-Any **constructed features** including steps, retaining walls, drainage features (water bars, etc.), and ditch or stream crossings.

2-Significant **exposed rock**

3-Significant **exposed tree roots**

4-**Erosion**. Caused by water

5-**Soil displacement**. Caused by trail use

6-**Muddy or poorly drained areas**

7-**Trail widening** (where visitors are moving off of the established trail centerline, usually to avoid an undesirable condition.)





**Maggie Brooks**  
County Executive

# Tryon Park



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# Tryon Park Trail Baseline Data (partial)

OBJECTID	Trail_Position	Tread_Surface_Material	Tread_Cross_Section	Tread_Grade	Problem_Area	Trail_Slope_Alignment_Angle	Comments	Photo_Numbers	Date_Collected	Park
339	Ridge Top	Gravel	Out Slope	0-4%	No Problem	0-22	Start of Trail	0314 Facing E; 0315 Facing W	9/14/2009	Tryon
340	Ridge Top	Woodchip	Neutral	16-20%	No Problem	0-22		0316 Facing E; 0317 Facing W	9/14/2009	Tryon
341	Ridge Top	Woodchip	Neutral	0-4%	No Problem	23-45		0318 Facing N; 0319 Facing S	9/14/2009	Tryon
342	Ridge Top	Woodchip	Neutral	16-20%	No Problem	46-67		0320 Facing N; 0321 Facing S	9/14/2009	Tryon
343	Ridge Top	Natural surface/ Packed earth	Neutral	16-20%	No Problem	23-45		0322 Facing N; 0323 Facing S	9/14/2009	Tryon
344	Ridge Top	Natural surface/ Packed earth	Neutral	5-10%	No Problem	23-45		0324 Facing N; 0325 Facing S	9/14/2009	Tryon
345	Ridge Top	Natural surface/ Packed earth	Neutral	0-4%	Constructed Features	23-45	Building Fondation	0326 Facing N; 0327 Facing S	9/14/2009	Tryon
346	Ridge Top	Natural surface/ Packed earth	Neutral	5-10%	No Problem	68-90		0328 Facing N; 0329 Facing S	9/14/2009	Tryon
347	Ridge Top	Natural surface/ Packed earth	Out Slope	5-10%	Constructed Features	0-22		0330 Facing E; 0331 Facing W	9/14/2009	Tryon
348	Ridge Top	Natural surface/ Packed earth	Out Slope	>25%	Exposed Tree Roots	23-45		0332 Facing E; 0333 Facing W	9/14/2009	Tryon
349	Mid-Slope	Natural surface/ Packed earth	Out Slope	>25%	Exposed Tree Roots	0-22		0334 Facing S; 0335 Facing W	9/14/2009	Tryon
350	Mid-Slope	Natural surface/ Packed earth	Out Slope	>25%	Exposed Tree Roots	0-22		0336 Facing S; 0337 Facing N	9/14/2009	Tryon
351	Mid-Slope	Natural surface/ Packed earth	Out Slope	0-4%	No Problem	0-22		0338 Facing S; 0339 Facing N	9/14/2009	Tryon
352	Mid-Slope	Natural surface/ Packed earth	Out Slope	>25%	No Problem	23-45		0340 Facing S; 0341 Facing N	9/14/2009	Tryon
353	Mid-Slope	Natural surface/ Packed earth	Neutral	11-15%	Trail Widening	0-22	SideTrail	0342 Facing W; 0343 Facing W	9/14/2009	Tryon
354	Mid-Slope	Natural surface/ Packed earth	Out Slope	5-10%	No Problem	0-22		0344 Facing S; 0345 Facing N	9/14/2009	Tryon
355	Mid-Slope	Natural surface/ Packed earth	Out Slope	5-10%	No Problem	0-22		0346 Facing S; 0347 Facing N	9/14/2009	Tryon
356	Mid-Slope	Natural surface/ Packed earth	Out Slope	11-15%	No Problem	0-22		0348 Facing S; 0349 Facing N	9/14/2009	Tryon
357	Mid-Slope	Natural surface/ Packed earth	Out Slope	>25%	Trail Widening	0-22	Side Trails	0350 F S; 0351 F N; Side Trails 0352 F W; 0353F E	9/14/2009	Tryon
358	Mid-Slope	Natural surface/ Packed earth	Out Slope	16-20%	No Problem	0-22		0354 Facing W; 0355 Facing E	9/14/2009	Tryon
359	Mid-Slope	Natural surface/ Packed earth	Out Slope	>25%	No Problem	0-22		0356 Facing W; 0357 Facing E	9/14/2009	Tryon
360	Mid-Slope	Natural surface/ Packed earth	Neutral	0-4%	No Problem	0-22		0358 Facing W; 0359 Facing E	9/14/2009	Tryon
361	Mid-Slope	Natural surface/ Packed earth	Neutral	0-4%	No Problem	0-22		0360 Facing W; 0361 Facing E	9/14/2009	Tryon
362	Mid-Slope	Natural surface/ Packed earth	Neutral	21-25%	No Problem	0-22		0362 Facing W; 0363 Facing E	9/14/2009	Tryon
363	Ridge Top	Natural surface/ Packed earth	Neutral	21-25%	Constructed Features	0-22		0364 Facing N; 0365 Facing S	9/14/2009	Tryon
364	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	No Problem	0-22	Start Of Trail	0366 Facing E; 0367 Facing W	9/14/2009	Tryon
365	Valley Bottom	Gravel	Neutral	11-15%	No Problem	0-22		0368 Facing E; 0369 Facing W	9/14/2009	Tryon
366	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	No Problem	0-22		0370 Facing E; 0371 Facing W	9/14/2009	Tryon
367	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	No Problem	0-22		0372 Facing E; 0373 Facing W	9/14/2009	Tryon
368	Valley Bottom	Natural surface/ Packed earth	Out Slope	5-10%	Muddy or Poorly Drained Areas	0-22		0374 Facing S; 0375 Facing N	9/14/2009	Tryon
369	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	Exposed Tree Roots	0-22		0376 Facing E; 0377 Facing W	9/14/2009	Tryon
370	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	No Problem	0-22		0378 Facing E; 0379 Facing W	9/14/2009	Tryon
371	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	Trail Widening	0-22		0380 Facing E; 0381 Facing W	9/14/2009	Tryon
372	Valley Bottom	Natural surface/ Packed earth	Neutral	5-10%	No Problem	0-22		0382 Facing N; 0383 Facing S	9/14/2009	Tryon
373	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	No Problem	0-22		0384 Facing N; 0385 Facing S	9/14/2009	Tryon
374	Valley Bottom	Natural surface/ Packed earth	Neutral	5-10%	No Problem	0-22		0386 Facing E; 0387 Facing W	9/14/2009	Tryon
375	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	No Problem	0-22		0388 Facing N; 0389 Facing S	9/14/2009	Tryon
376	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	No Problem	0-22		0390 Facing N; 0391 Facing S	9/14/2009	Tryon
377	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	Trail Widening	0-22		0392 Facing N; 0393 Facing S	9/14/2009	Tryon
378	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	No Problem	0-22		0394 Facing N; 0395 Facing S	9/15/2009	Tryon
379	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	No Problem	0-22		0396 Facing N; 0397 Facing S	9/15/2009	Tryon
380	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	No Problem	0-22		0398 Facing W; 0399 Facing S	9/15/2009	Tryon
381	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	No Problem	0-22		0400 Facing W; 0401 Facing E	9/15/2009	Tryon

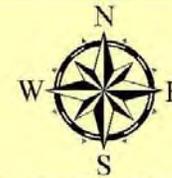
- Tryon Park
- area= 83 acres / trails=2.6 miles
- 287 sample points
- 34 posted signs placed.





Maggie Brooks  
County Executive

# Irondequoit Bay West



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# Bay Park West Baseline Data (partial)

OBJECTID	Trail Position	Tread Surface Material	Tread Cross Section	Tread Grade	Problem Area
74	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	No Problem
75	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	No Problem
76	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	Trail Widening
77	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	Constructed Features
78	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	Soil Displacement
79	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	Constructed Features
80	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	Soil Displacement
81	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	No Problem
82	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	No Problem
83	Valley Bottom	Natural surface/ Packed earth	Neutral	0-4%	Trail Widening
84	Mid-Slope	Natural surface/ Packed earth	Out Slope	5-10%	No Problem
85	Mid-Slope	Natural surface/ Packed earth	Neutral	5-10%	No Problem
86	Mid-Slope	Natural surface/ Packed earth	Neutral	11-15%	No Problem
87	Mid-Slope	Natural surface/ Packed earth	Neutral	11-15%	Bike Jumps
88	Mid-Slope	Natural surface/ Packed earth	Neutral	16-20%	Trail Widening
89	Mid-Slope	Natural surface/ Packed earth	Neutral	16-20%	No Problem
90	Ridge Top	Natural surface/ Packed earth	Neutral	0-4%	Bike Jumps
91	Ridge Top	Natural surface/ Packed earth	In Slope	>25%	No Problem
92	Ridge Top	Natural surface/ Packed earth	Neutral	0-4%	No Problem
93	Ridge Top	Natural surface/ Packed earth	Neutral	0-4%	No Problem
94	Ridge Top	Natural surface/ Packed earth	Neutral	0-4%	No Problem
95	Ridge Top	Natural surface/ Packed earth	Neutral	16-20%	No Problem
96	Ridge Top	Natural surface/ Packed earth	Neutral	21-25%	No Problem
97	Ridge Top	Natural surface/ Packed earth	Neutral	>25%	No Problem
98	Ridge Top	Natural surface/ Packed earth	Neutral	0-4%	No Problem
99	Ridge Top	Natural surface/ Packed earth	Neutral	>25%	No Problem

## • Irondequoit Bay Park West

area= 182acres / trails=3.3 miles / bay shoreline=1.3 miles

251 data points

46 posted signs



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# SHARED-USE TRAILS: Management Goals



# SHARED-USE TRAILS: Management Tools

Trail Design

Information & Education

User Involvement

Regulation & Enforcement



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# TRAIL SIGNAGE: Safety \* Education \* Identity



Educational Signage: Trail etiquette is the most important factor in creating a positive experience for all trail users. Educational signage helps users to know the rules on shared use trail; bikes yield to hikers and should always make a hiker aware that they are approaching. The same rules for a multi-use paved path apply on single track trails. Clear designations are made for shared-use trails and feet-only trails. All trail user groups must follow the same rules of trail etiquette.

## Way finding \* Regulatory \* Interpretive



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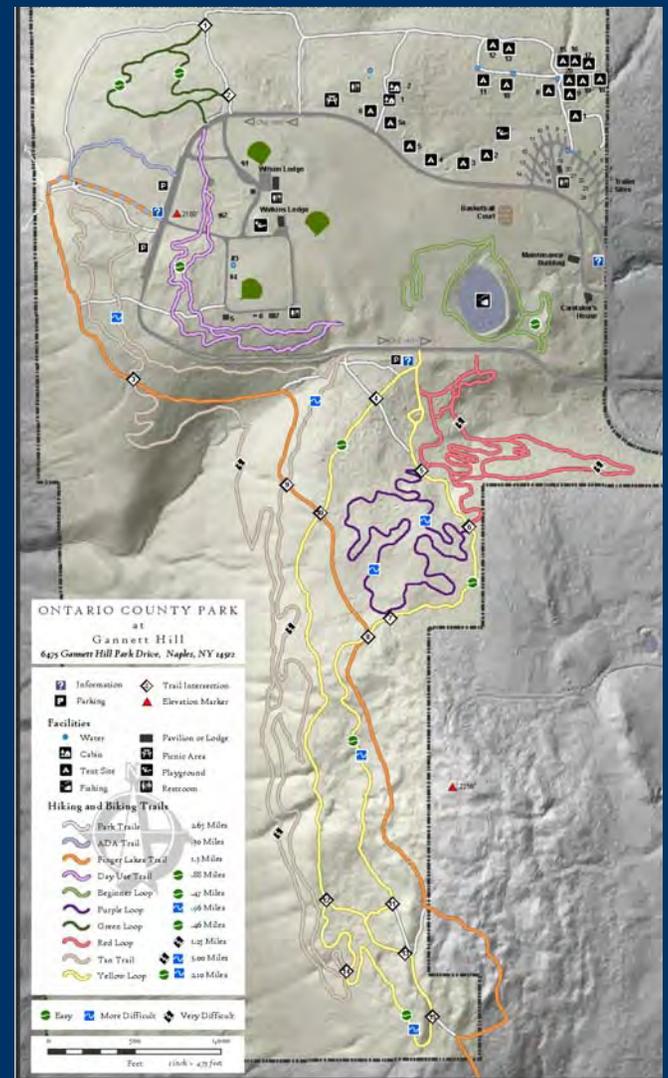
# Trailhead educational signage: creating a safe and enjoyable experience for all trail users.



Bike Helmet Required Signs – One of the most critical safety elements is the bike helmet. This is something that needs to be clearly marked and encouraged.



Understanding the **rules of Shared-use trails** is critical when introducing multiple users groups. Bikes yield to everyone on the trail system.



**TRAIL SYSTEM MAP** – Having a trail system map located at the trail head helps users understand the park's general layout and gives them visual landmarks as well as defining park boundaries. Mileage and trail difficulty info and helps visitors chart a course according to their ability level.



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**Trail Difficulty signs** at trail entrances help define for users how to interpret trail markings.



**Beginner Trail:** Minimal challenge. Suitable for beginners. Gentle terrain.



**Intermediate Trail:** More challenging. Mixed terrain that may include steeper slopes.



**Advanced Trail:** Steep, challenging terrain. Requires highest mobility and skill levels.

## On-trail signage: information and way finding



**Trail Blazes** – Colored blazes on trees to designate the area or trail a user is on. These correspond with the trail maps.



**Intersection Markers** – A simple numbering system can be used to help orient users. A numbering system that corresponds to a trail will mark major intersections of trails.



### Trail Use Designations

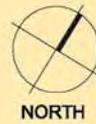




# Tryon Park

Proposed Shared-Use Trails  
Prepared for Monroe County  
Base map provided by Monroe County

08-26-2010



NORTH



Prepared for: Monroe County Department of Parks, Monroe County, NY  
Prepared by: Environmental Design and Research



## Tryon Park Initial Projects

6 initial projects are proposed to address the areas of Tryon requiring the most attention. These projects will dramatically improve the trail system. They will also demonstrate how the successful use of sustainable trail design techniques can provide safer, more interesting, and more fun solutions to common problems.

**1-New Trail from Parking Lot** Will provide much needed access to the trail network from the new parking lot trailhead. Example of rolling contour trail that sheds water effectively. Safer alternative to the erosive and steep ridge trail above it. Ridge trail above will be taken offline.

**2-Decommission of the “Double Down”**The current trail to be taken offline consists of two steep fall-line descents that are erosive and badly widened. The new alternate trail will be more fun for hikers and off-road cyclists. New trail will demonstrate bench cutting and rolling contours to divert water. Sight lines will be better than the original trail. End of new trail will bypass an area of flat land that is known to collect water.

**3-North-South Connector** The end of current trail consists of many exposed roots and a fall-line descent that is highly erosive, dangerous, and badly widened. The new alternate trail will be more fun for hikers and off-road cyclists. New trail will demonstrate bench cutting and rolling contours to divert water. It may incorporate short sections of boardwalk to span known wet areas. It may employ sections of rock armoring to create a safe and stable trail surface.

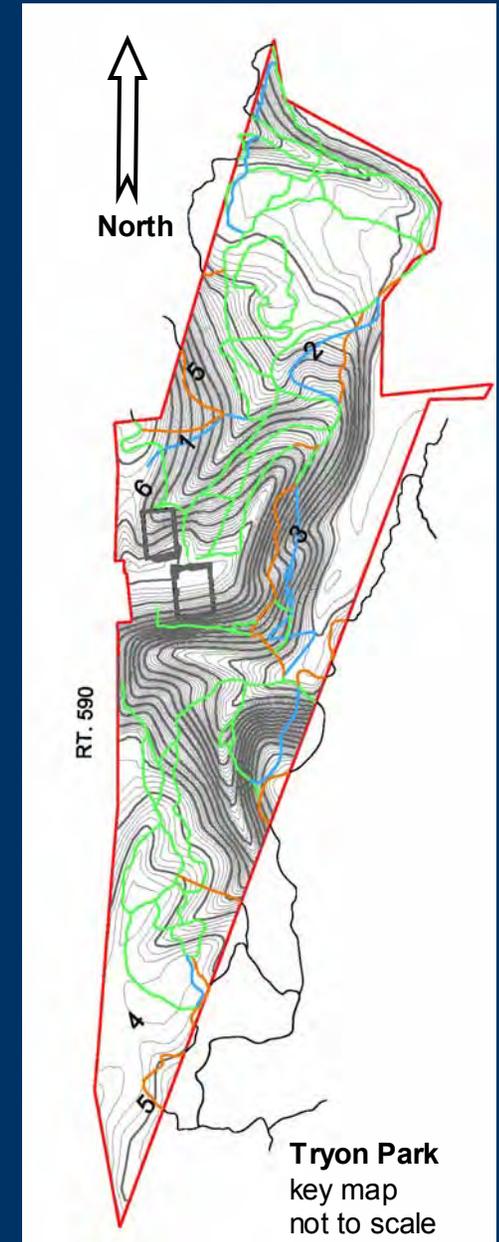
**4-South End Clean-Up** There is a large amount of junk in the South End of Tryon Park. Consolidate and remove the assortment of lumber, wooden palettes, etc. Dismantle rickety stunts and bike jumps to provide a safer environment for young and beginning riders.

### **5-Decommission off-site trail connections:**

Decommission existing off-property trail connections. Re-align and revise existing trails to establish a connected trail loop system entirely on County property.

### **6-Establish a foot-traffic only sustainable trail loop**

Identify and/or establish on-site a sustainable trail loop to be designated for foot traffic only. Location to be determined.





## EVALUATION OF TRAILS:

In addition to the initial projects in Tryon Park, a full evaluation of the trail network will be made concurrent with the priority trail projects.

Using mapped data and in-field analysis, trails will be classified as “Good, Acceptable, and Close”.

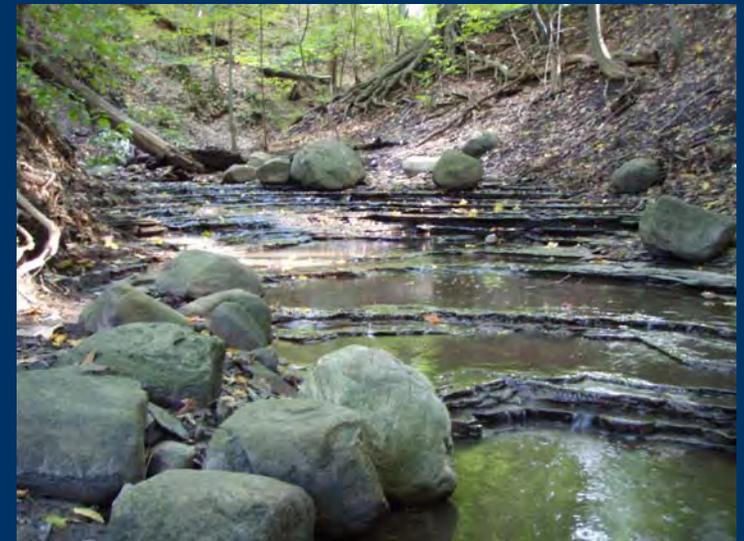
**GOOD:** Trails that meet or exceed the criteria for “sustainable” trails.

**ACCEPTABLE:** Trails with minor issues that can be resolved.

**CLOSE:** Trails that are highly unsustainable and need to be decommissioned.

## ADJACENT PROPERTIES:

Trails leading off County parkland will be clearly marked, and decommissioned where practical.



Tryon Park

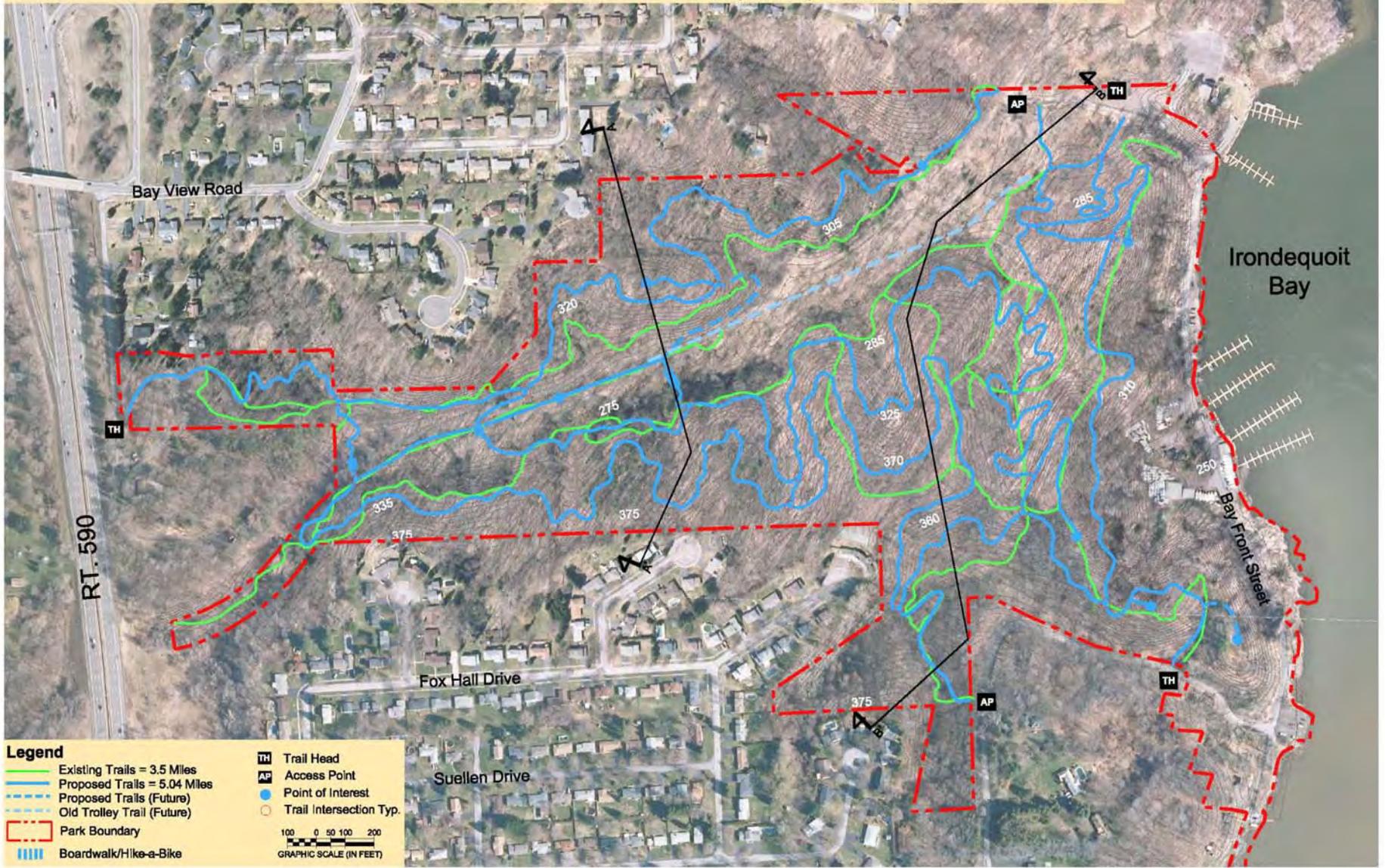




# Irondequoit Bay West

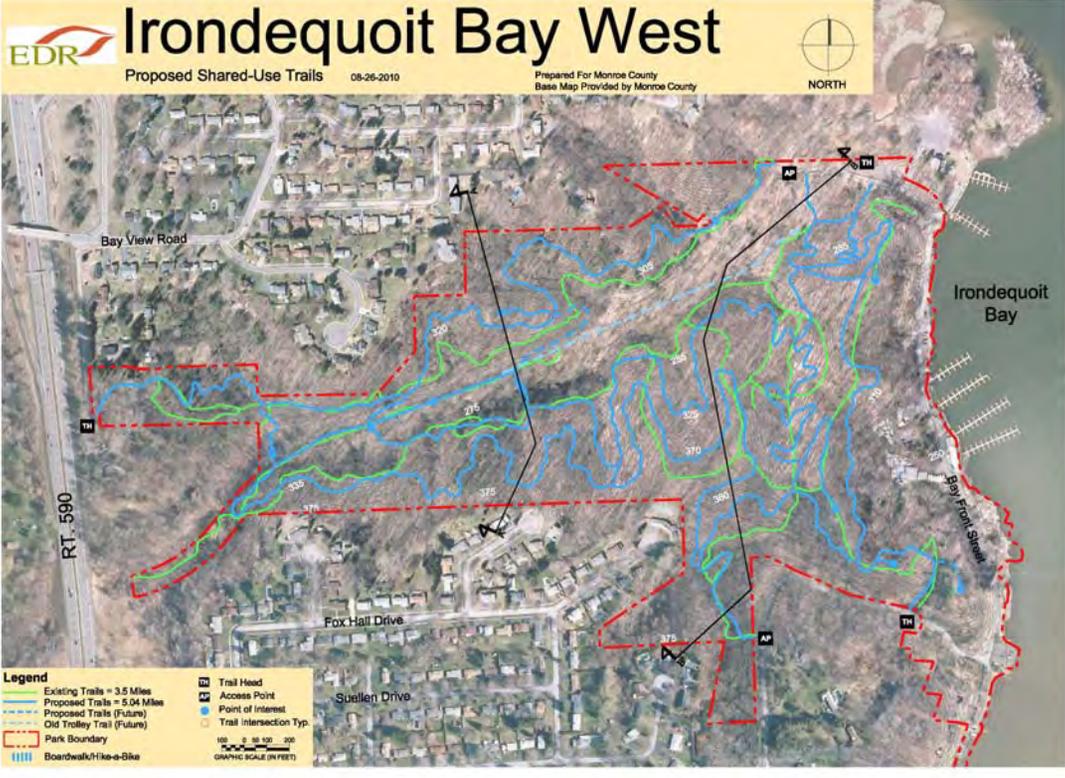
Proposed Shared-Use Trails 08-26-2010

Prepared For Monroe County  
Base Map Provided by Monroe County



Prepared for: Monroe County Department of Parks, Monroe County, NY  
Prepared by: Environmental Design and Research





Approximately 5 miles of new shared-use trails are proposed.

All new trails will be constructed according to sustainable trail design guidelines.

Visitor safety and minimizing environmental impacts are primary goals.

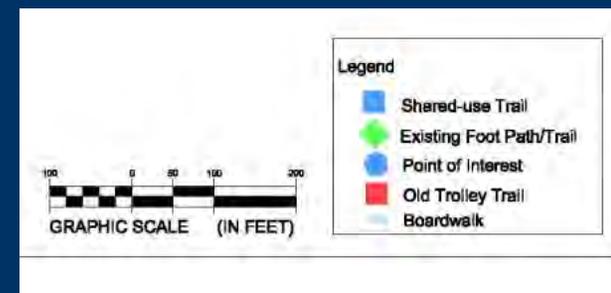
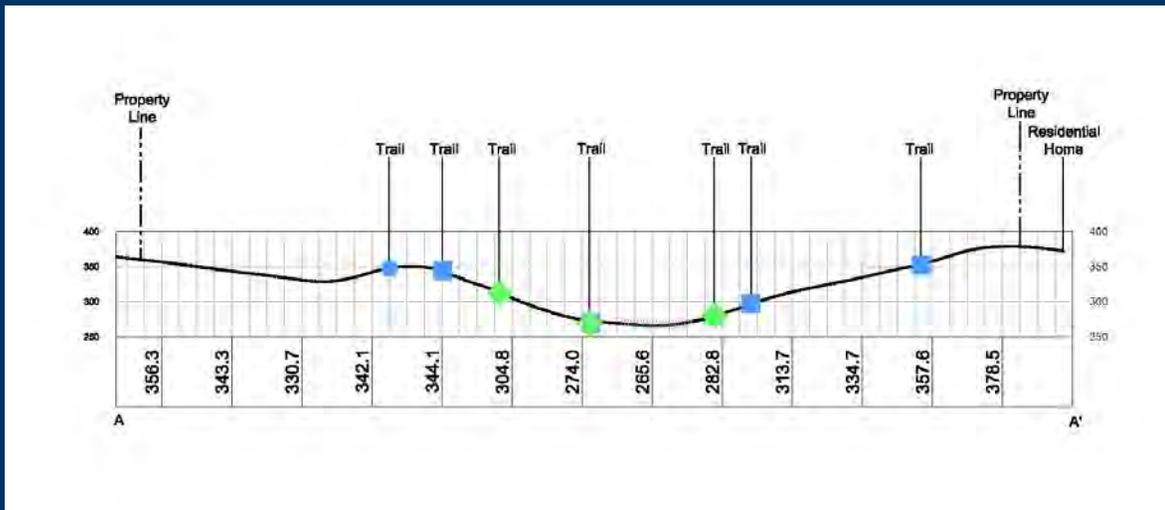
The system will provide sufficient trailhead and access points, moderate challenges (easy to intermediate level), and safe, fun trail experiences for all visitors.

Existing footpaths will remain, be enhanced, and will be signed for foot traffic only. Connections will be constructed as needed to establish an integrated loop system for footpaths.

Select Viewpoints will be identified and accessed by footpaths.

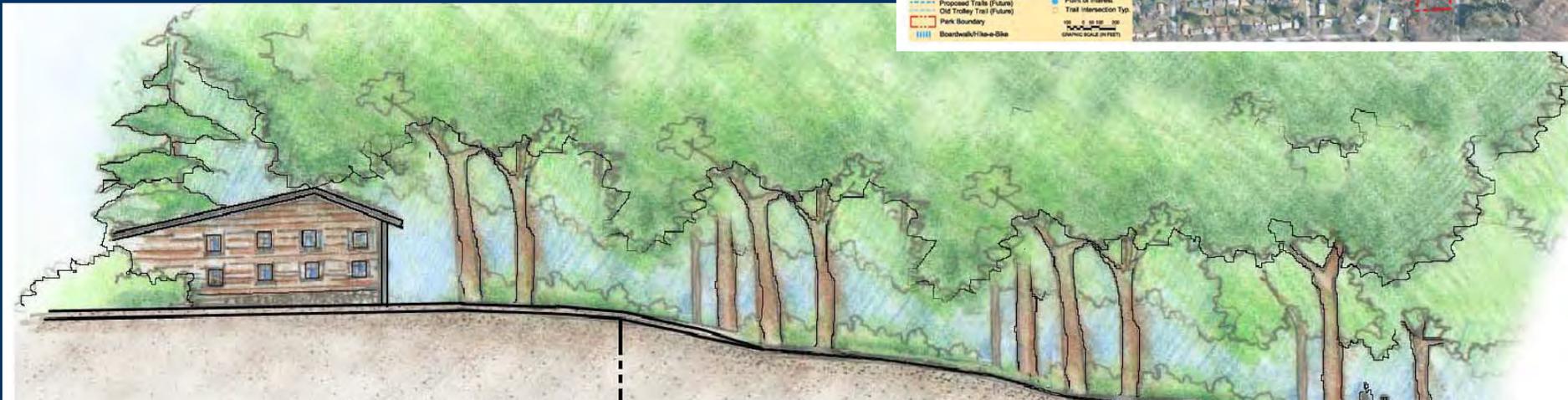
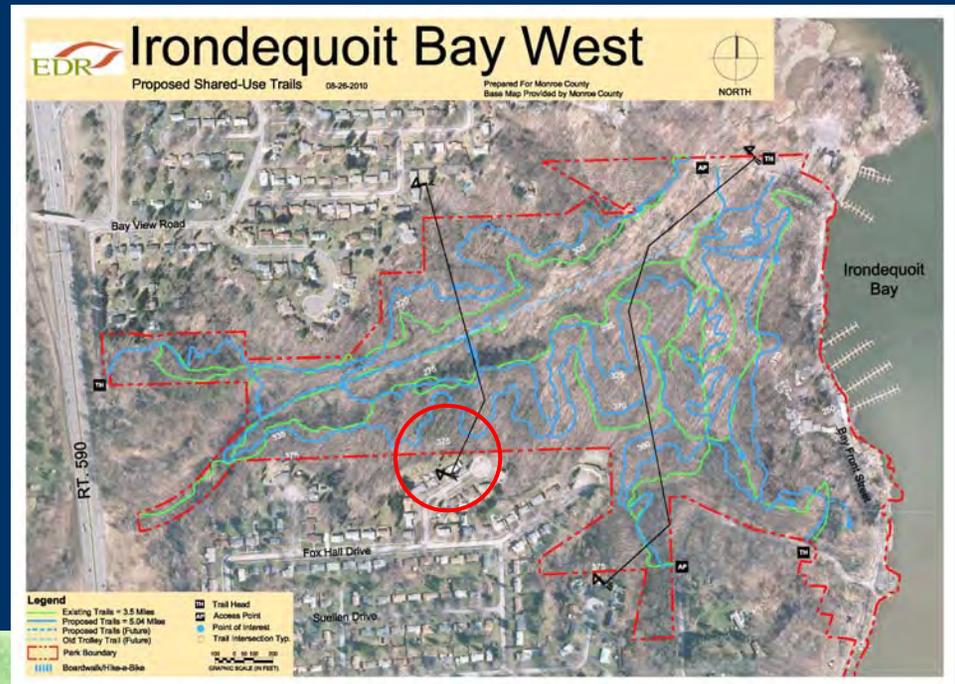
Five Trailhead and Access Points are proposed.

The primary trailhead will be the large gravel parking area west of the fish and game club.





Design guidelines dictate that buffer zones be established between trails and adjacent private property. 100' is the preferred buffer width, where existing site conditions allow. Trails have been designed to utilize existing land form as natural screening.

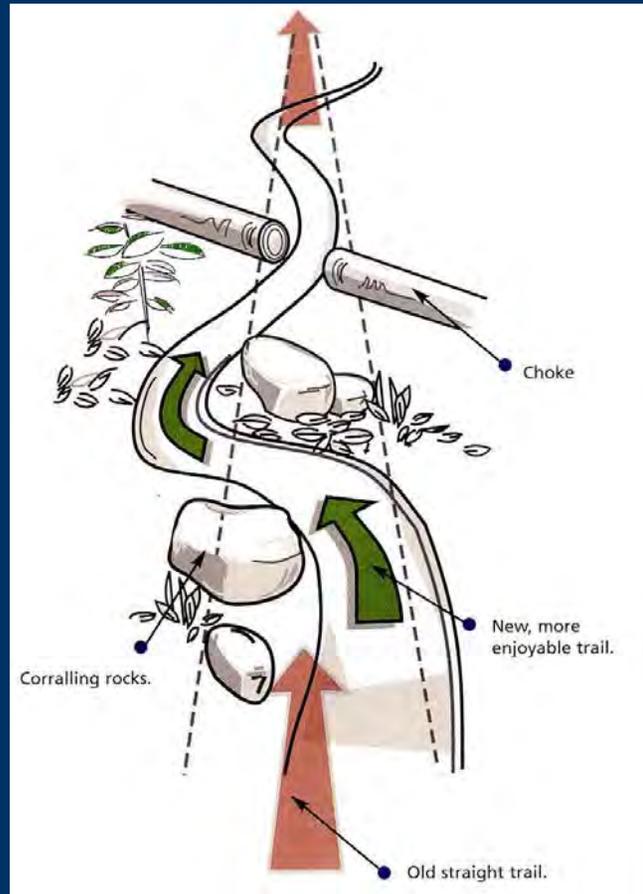
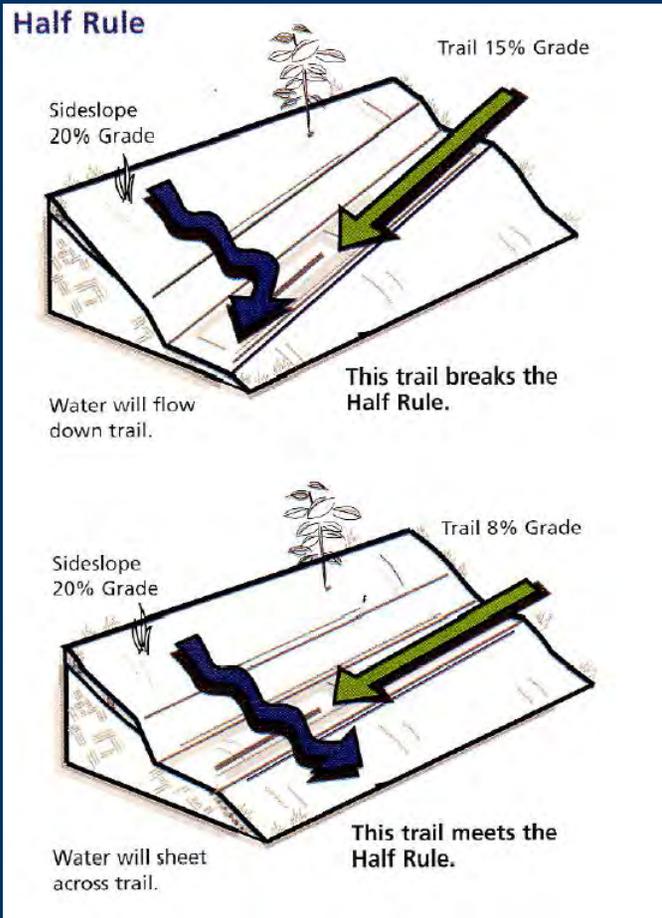


Prepared for: Monroe County Department of Parks, Monroe County, NY  
 Prepared by: Environmental Design and Research



# Sustainable trail practices for natural surface trails.

Sustainable trails are defined by the US Forest Service as trails having a tread that will not be easily eroded by water and use, will not affect water quality or the natural ecosystem, meet the needs of the intended users and provide a positive user experience, and that do no harm to the natural environment.

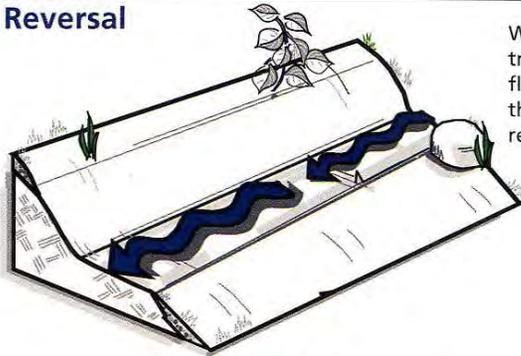


Prepared for: Monroe County Department of Parks, Monroe County, NY  
Prepared by: Environmental Design and Research

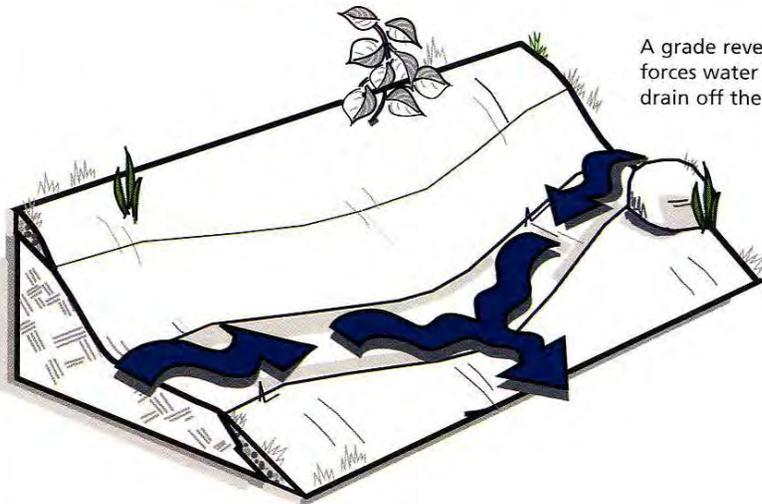


# Sustainable trail practices for natural surface trails.

## Grade Reversal



Water may become trapped on trail and flow long distances if there are no grade reversals.

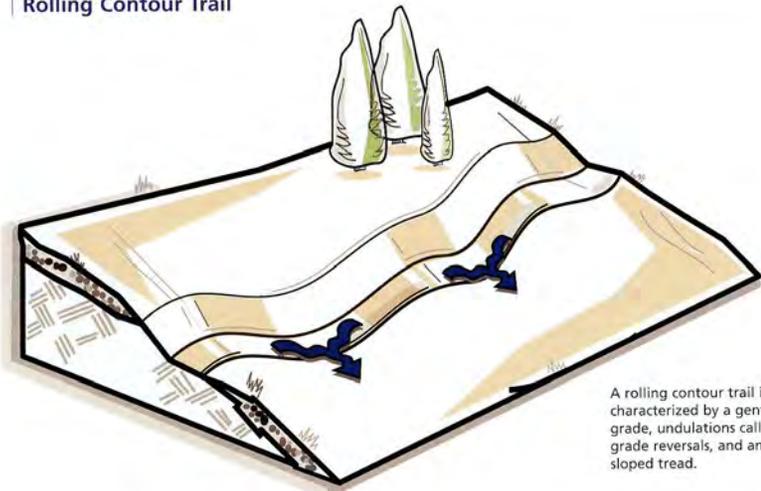


A grade reversal forces water to drain off the trail.

- **Maintain open sight lines to enhance safety**
- **Build shared-use trails to control speeds**
- **Avoid disturbance to mature vegetation**

- **Keep average grades at 10% or less.**
- **Out slope trail for drainage if the soils are stable and the slope is <50%.**
- **Use climbing turns if the slope is 8% or less.**
- **Use switchbacks to gain elevation on steeper slopes.**
- **Use rolling dips, and grade reversals where practical.**
- **Use a full bench cut not a partial bench.**

## Rolling Contour Trail



A rolling contour trail is characterized by a gentle grade, undulations called grade reversals, and an out-sloped tread.

IMBA



# Monroe County Sustainable Trail Construction Process

1. Site Evaluation:
  - Topography Soil Type Drainage
  - Vegetation Control Points Adjacent properties
2. Layout trail system
3. Plan contour routes using site evaluation data
4. Walk and flag the corridor
5. Field verify minimization of site disturbance
6. Flag alignment using pin flags along the path to visually see grade, grade reversals and flow.
7. Field review, and revise as needed.
8. Final approval and construction authorization.
9. Install temporary signage. Build a section at a time by:
  - Clearing the trail corridor
  - Walk/run corridor
  - Review for drainage and outslope
  - Clear surface to expose tread
  - Evaluate tread and needs
10. Use this construction time to educate all volunteers with regards to sustainable practices
11. Install trailhead kiosks and on-trail signage
12. Review & approve final trail prior to use
13. Open the trail system for all user groups
14. Continue to monitor and improve trail, trail design and maintenance to mitigate problems early if they should arise



## DEVELOPMENT/ IMPLEMENTATION/ DOCUMENTATION

Development will be a series of design and review cycles.

Documentation of the development & implementation process will be provided.



## TEMPORARY SIGNAGE:

Temporary signage is needed to let trail users know:

The Shared Use Trail Pilot Program has not officially begun.

Trail work is being done by Monroe County, in collaboration with authorized groups ONLY.

Respect trail closures (decommissioned trails) by order of Monroe County.

How to volunteer and get involved with work efforts.

## CLEAN UP:

Monroe County will oversee a coordinated effort by trail volunteers to remove surface debris from the parks.



## Volunteer Recruitment

- Trail workdays will be held weekly.
- Recruit from all trail user groups.



## National Mountain Bike Patrol

The National Mountain Bike Patrol (NMBP) is a volunteer organization of dedicated individuals whose mission is to help provide a safe and fun trail experience for all trail users. Certified patrollers will be present in both Tryon and Irondequoit Bay Park West.

The NMBP will help assist with the following:

- Assist all trail users with medical (First Aid and CPR) and informational assistance.
- Educate trail users on proper etiquette and environmental considerations.
- Monitor and inform Monroe County land manager of trail conditions and any other issues that may arise.



## TRAIL MAINTENANCE:

All trails benefit from routine maintenance. Foresight, care and hard work should also go into the maintenance of a trail and the trail system. The following are suggestions that help to keep trails, trail stewards and volunteers active, engaged and sustainable for all users.

Periodically assess trails

Maintain the trail corridor to keep the trail clear and users on the trail

Remove down trees and obstacles that would force users off the trail

Use these opportunities to educate volunteers on proper trail design, use and maintenance

Recognize volunteers and create stewards of our public lands



I Bay West



## 18 Month Trail Monitoring and Evaluation:

Trail evaluations every 3 months, by Monroe County

Trail evaluations will utilize base line data at known GPS reference points to assess changes to trail conditions.

### Evaluation criteria:

Erosion and soil displacement

Drainage

Trail widening

Trail system integrity

Impacts to vegetation

User Conflicts

Other...



## TIMELINE

<b>Public Meeting</b>	<b>5-25-10</b>
<b>Design workshop</b>	<b>7-15-10</b>
<b>Tryon Field Workshop</b>	<b>7-27-10</b>
<b>Bay West Field Workshop</b>	<b>8-5-10</b>
<b>Final proposal meeting (PAC)</b>	<b>8-26-10</b>
<b>Monroe County approval</b>	<b>8-30-10</b>
<b>Construction start</b>	<b>9-3-10</b>
<b>Monitoring start</b>	<b>Spring 2011</b>
<b>Monitoring end</b>	<b>Fall 2012</b>

