

Overcoming Obstacles to Trail Development

TRUST for PUBLIC LAND

GREATER CLEVELAND GREENWAYS AND TRAILS CONFERENCE JAMES KASTELIC, PROJECT MANAGER, TRUST FOR PUBLIC LAND JUNE 12, 2014





Potential Obstacles and Barriers to Trail Development

- Physical/Engineering
- Environmental
- Financial
- Real Estate
- Safety/Security
- Maintenance/Promotion

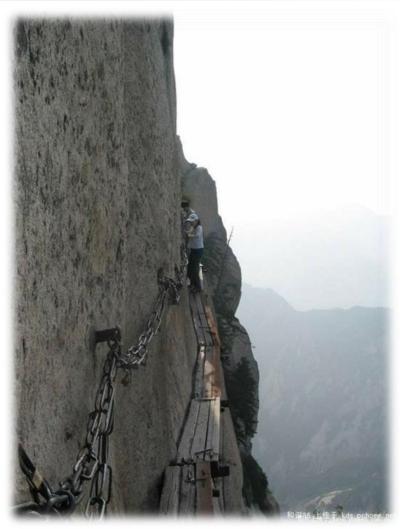






Physical and Engineering Challenges

- Soils
- Slope
- Limited Space
- Man Made Barriers
- Roads
- Railroads
- Utilities





Soil Erosion







Soil Erosion Remedies: Plantings





Soil Erosion Remedies: Geosynthetics







Slope Considerations





Slope: Trail Challenges







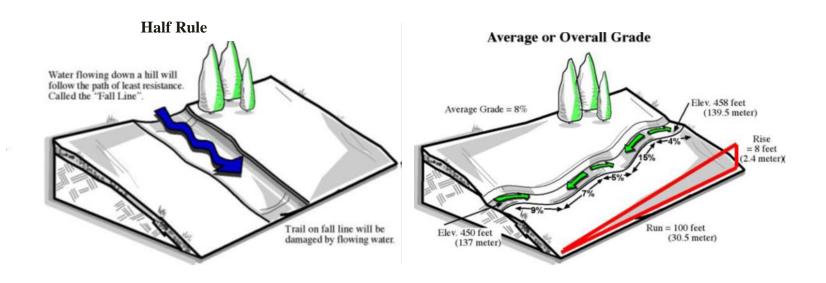
Slope Issues: Gravity







Slope Solutions

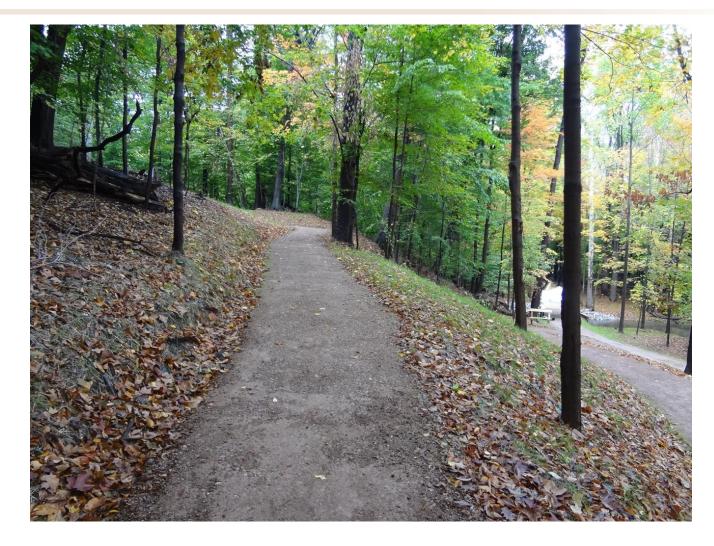


A trails grade should not exceed half the grade of the side slope the trail is traversing. For example, with a side slope of 20%, the trail's tread should not exceed 10%. Generally, a 10% average grade is the most sustainable.

Richard Havel, Trails Planner for Town of Castle Rock, Parks & Recreation Department ~ May 2009



Slope Solutions: Half Rule





Slope Solutions: Cut and Fill







Slope Solutions: Retaining Walls







Slope Solutions: Retaining Walls





Limited Space





Limited Space

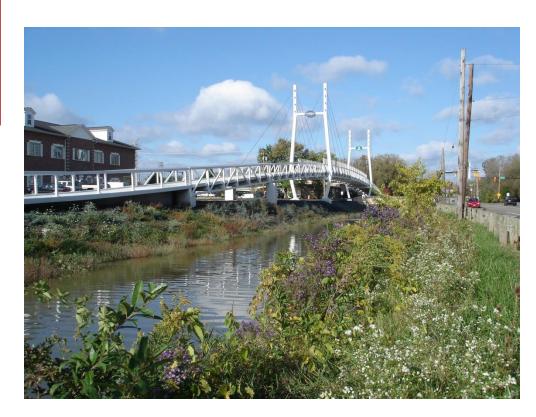






Barriers: Road Crossings







Barriers: Rail Crossings



CSX, Middleburg Heights







Barriers: Utilities









Environmental Issues

- Environmentally Sensitive Areas
- Brownfields/Former Industrial Sites
- Floodplains
- Stream Crossings
- Trees



Avoiding Environmentally Sensitive Areas







Traversing Environmentally Sensitive Areas





Traversing Environmentally Sensitive Areas









Brownfield Issues



Crissy Field, San Francisco

New York City High Line

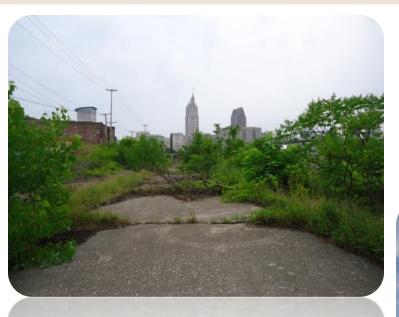


Former Industrial Sites – Dequindre Cut, Detroit





Former Industrial Sites – Scranton Peninsula







Trails in Flood Plains







Trails in Flood Plains







Stream Crossings – Park Areas









Trees







Financial Issues

- Competition for Scarce Funding
- Need for Partnerships
- Lack of Funding for Trail Maintenance

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Competitive Funding

Common Trail Funding Sources

- NOACA Transportation for Livable Communities
- Transportation Alternative Program
- Congestion/Mitigation Air Quality
- Surface Transportation Program
- Clean Ohio Trails Fund
- Recreational Trails Program





Towpath to Trail





Towpath Funding

OHIO & E	RIE CANAL TOWPATH TRA	IL PROJECT
1997-1998	National Recreational Trails Fund	Funding \$100,000
	*High Mill south to Tourpath Court Ohio & Erie Canal Association	\$125,000
	*Butterbridge south to CSX Railroad Bridge Ohio Department of Natural Resources / Project: STAR-017 *Lock 4 south to Tocepath Court	\$107,290
arvingannea	Ohio Department of Transportation County line to County line	\$376,219
STARK COUNTY PARK DISTRICT BOARD MEMBERS	Stark County Park District "County line to County line	\$437,738
William Cumler Metsa Stergios George Weimer, Jr.	Stark-Tuscawaras-Wayne Joint Solid Waste Management District *County line to County line	\$100,000



Partnership Opportunities – Towpath Trail













Real Estate Issues

- Land Acquisition
- Length of Process
- Utility Corridor Opportunities
- Rails to Trails Opportunities
- Other Corridor Opportunities
- Neighborhood Opposition

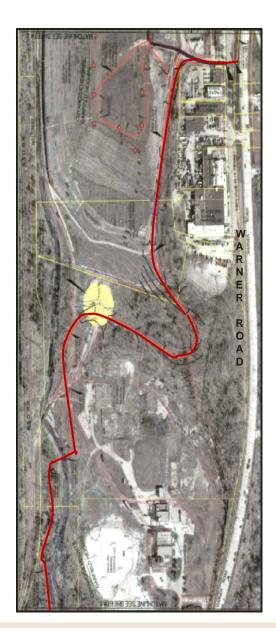


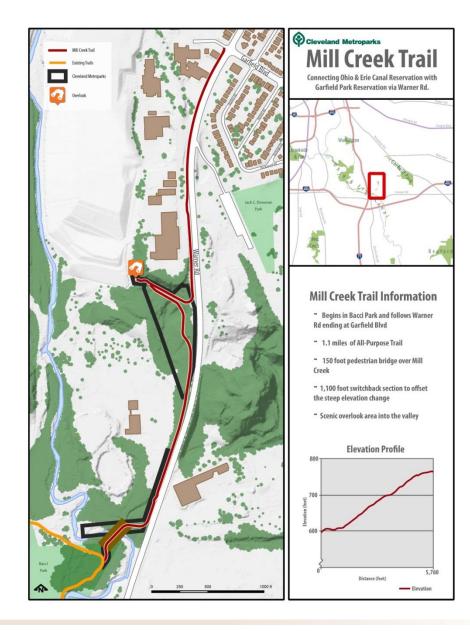
Land Acquisition Form

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roject Title			Date			
pplicant						
Parcel Number	Acreage	Estimated Value of Land to be Acquired	Estimated Value of Improvements to be Acquired	Estimated Relocation Cost	Total Estimated Purchase Price	
						-
						-
						-
						-
						1
						-
Total				Total		
			Total Estimated F	Relocation Cost		
				Grand Total		
Prepared by		_				
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Signed		_				
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Land Acquisition Issues: Mill Creek Trail



Length of Process

- Retain design/engineering consultants
- Identify stakeholders
- Prepare environmental analysis
- Identify preferred alignments with cost estimates
- Obtain environmental clearance
- Prepare detailed designs
- Identify opportunities for amenities, historic and cultural interpretation and environmental restoration
- Finalize right of way plans and legal documentation
- Secure funding
- Prepare final design plan package
- Award construction contract
- Construct trail segments



Utility Corridor Opportunities





Utility Corridor Example: Seven Hills





Rails to Trails Opportunities







Other Corridor Opportunities





Neighborhood Opposition

Bad idea, owners say Riverbank trails proposal draws protest By JOSEPH KOZIOL JR.

LETTERS

Orange bike path vote is a meaningless charade

To the editor:

Three cheers to Orange Village Council for allowing the fate of the bike paths to rest with us - the common people. After having missed a funding deadline, the first

Now somehow this aesthetically unpleasing paved asphalt walkway which will cut through my front yard is going to enhance my property value? Come on.

satisfy interests in

Sadly, I believe the bike path is

- d'an promitier ald raignment system connecting Rock River Municipal Court and the sub-

mittee studying the security issues based video unit with a 100 mega-

When fully installed, it will con-

court judges will conduct arraign bringing prisoners to the three "When prisoners are brought they here, there is no place for them to conbe separated from the public," said boo

Donna C. Fitzsimmons, presiding

Bicycle path is removed

Residents stand firm on removal of Crocker bike path wall. And bike path v

by Jacqi Templeton

NORTH OLMSTED - North Olmsted's newest Councilman, Thomas O'Grady, large was ready to take a stand in

Road to the Metroparks Bradley Woods

After much discussion, the decision Reservation. to remove the bike path was settled by council in 1992, at the request of two barrowners' associations for develop-

But the city has no intention of not paying. "It was an honest mistake,"

The city has introduced legislation said Bohlmann. that will authorize the work after the

· O'Grady saw that legislation as fact.

land acqui project 10 homes. Duane



Stranger Danger





It Takes a Thief.....









Safety/Security Issues

- Posted rules and regulations
- Emergency call boxes
- Cameras
- Security and volunteer patrols
- Lighting: dependent on location
- Fencing
- Eyes on the trail





Post Rules and Regulations

Pass on the left - Be sure that when you are passing someone, stay on their left side and move to the right after you have passed them. Call out "passing on your left" so you don't startle the person you are passing.

Pull completely off the trail if you need to stop - By pulling off the trail, you are less likely to get hit by bike trail traffic and cause an accident.

Wear a helmet - It's required for children under 18 years of age and it's a good idea for adults as well.

Obey all traffic signs - Be sure to yield to traffic signs and follow any detour signs. Make sure you watch for car traffic, particularly where it crosses the bike trail.

Pay attention when you ride - Don't wear headphones and make sure you keep your eyes on the road to look for potential hazards. Stay in your lane.

Ride in single file - Even if you are in a group, riding single-file helps keep the trail clear of congestion and reduces the chances of an accident.

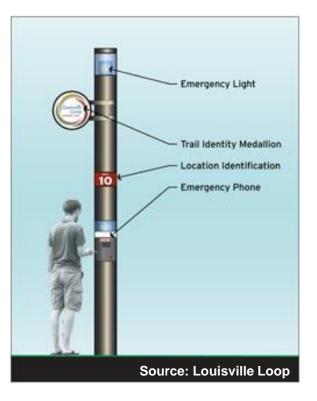








Emergency Call Boxes







Security Cameras

Security cameras considered for Pinellas Trail



American Tobacco Trail gets security camera



Monon Trail gets security cameras





Security and Volunteer Patrols



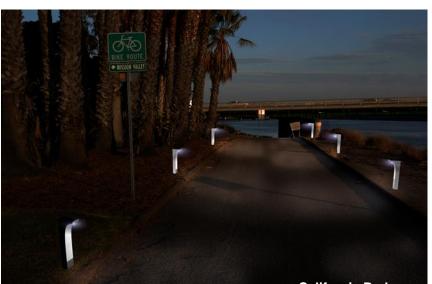


Cleveland Metroparks





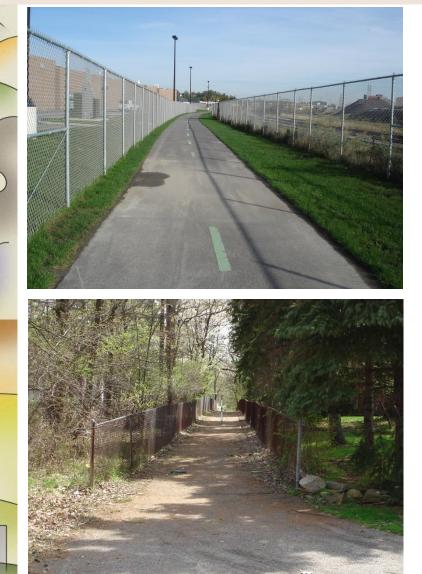
Lighting



California Parks



Fencing – Keeping people in....and out







Encourage eyes on the trail







Trail Maintenance and Promotion Issues

- Culverts
- Vegetation management
- Debris removal
- Snow removal
- Pavement maintenance
- Graffiti
- Promotion





Culverts





Vegetation Management







Debris Removal





Snow Removal







Pavement Maintenance





Pavement Maintenance





Graffiti Issues









Graffiti Prevention

- Reduce amount of flat surfaces
- Utilize graffiti resistant coatings
- Remove tagged surfaces quickly
- Establish reporting system
- Monitor graffiti prone locations
- Utilize public art as deterrent





Trail Marketing and Promotion



Grand Opening Event



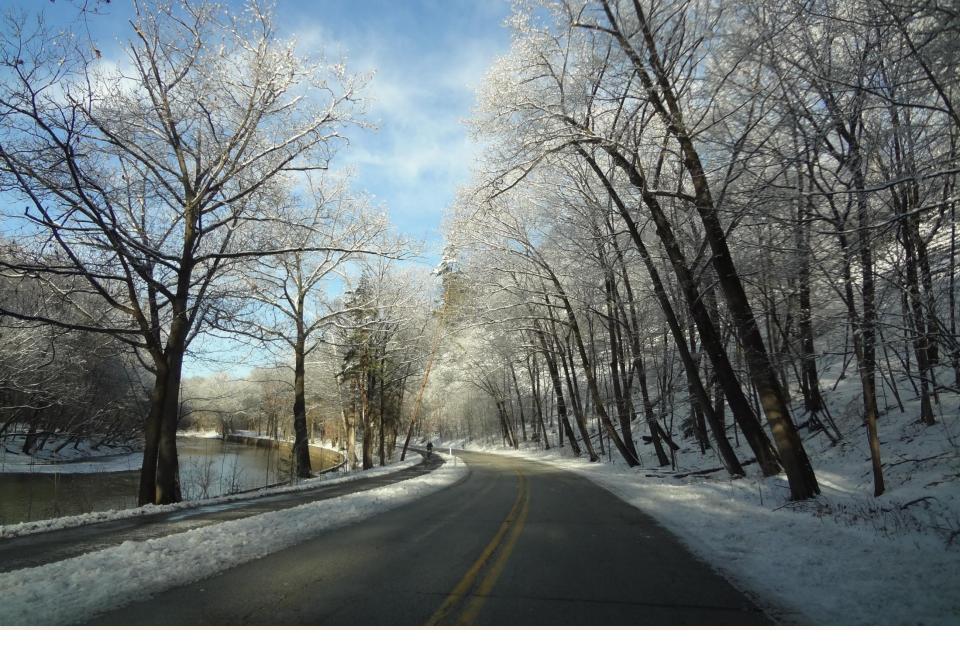
Bike Share Programs



GPS Technology



Special Events



Overcoming Obstacles to Trail Development