



Prepared for:
Allegheny County Parks Foundation
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North Park Lake Area Master Plan

Allegheny County, PA

April 2012

Prepared by:
GAI Consultants, Inc.
385 East Waterfront Drive
Homestead, PA 15120-5005
412.476.2000



gai consultants



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Allegheny County Parks Foundation

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The Community

- Friends of North Park
- Park User Groups
- Individual Park Users

Local Government

- The Office of Senator Oriente
- Town of McCandless
- Township of Hampton
- Township of Pine

County of Allegheny

- Allegheny County Economic Development
- Allegheny County Council
- Allegheny County Parks Department
- Allegheny County Public Works Department

Allegheny County Parks Foundation



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INTRODUCTION



historic photo from 1937 showing a view of the recently constructed Lake and Boathouse from North Ridge Drive (credit 1, see page 37)

HISTORY

The Allegheny County park system was adopted in 1927, and North Park was designed and developed under the direction landscape architect Paul B. Riis, along with South Park, in a picturesque style to provide pleasure grounds for residents. Under his direction, the former farmland was reforested with native plant species, and man-made elements were built using natural materials. Riis' commission ended in 1932 and the park was completed by the Works Progress Administration (WPA) and the Civilian Conservation Corps (CCC). North Park Lake, which is fed by Pine Creek and the North Branch, was primarily constructed as a fishing lake, was dedicated in 1937 and is the largest man-made body of water in the County. The stone-clad Boathouse, the park's signature architectural element, was completed in the same year.



historic drawing of the Lake Area from 1935 showing the design intent prior to construction of the Lake and Boathouse (credit 2, see page 37)

VISION

The main purpose in preparing this master plan for the North Park Lake Area is to create a blueprint for sound decision-making and redevelopment of the area in the years to come. The goals of the plan are to:

- transform the North Park Lake Area into a place that reflects the needs of today's park users.
- define a vision that makes the most of this significant public asset by building on its existing strengths and historic legacy.
- create an environmentally and fiscally sustainable plan that ensures park use for future generations.
- engage the public in a multi-stage stakeholder input process to build consensus throughout the process.

APPROACH

The preparation of the master plan is only the beginning of a comprehensive process that begins with an overall vision that defines project priorities, and progresses with the construction of distinct phases until project completion.

The planning methodology for developing the North Park Lake Area Master Plan was divided into four main work tasks:

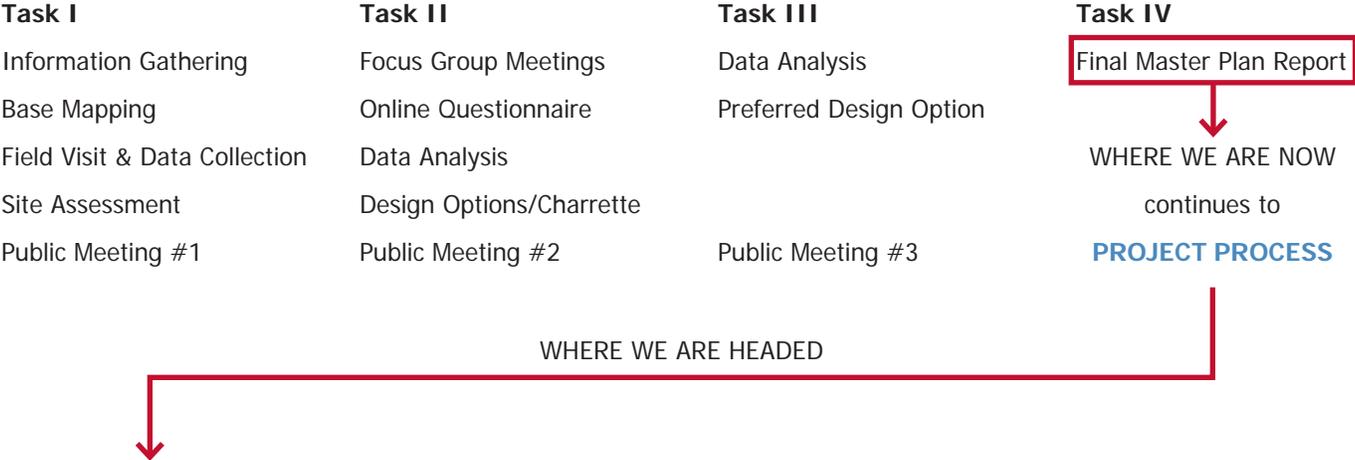
- Task I: Data Collection & Analysis - site assessment, public meeting, focus groups, and online questionnaire.
- Task II: Developing Proof of Concept - design workshop, design alternatives, and public meeting.
- Task III: Develop Recommendations - draft master plan recommendations and public meeting.
- Task IV: Final Deliverables - final master plan report.





the Boathouse today

MASTER PLAN PROCESS

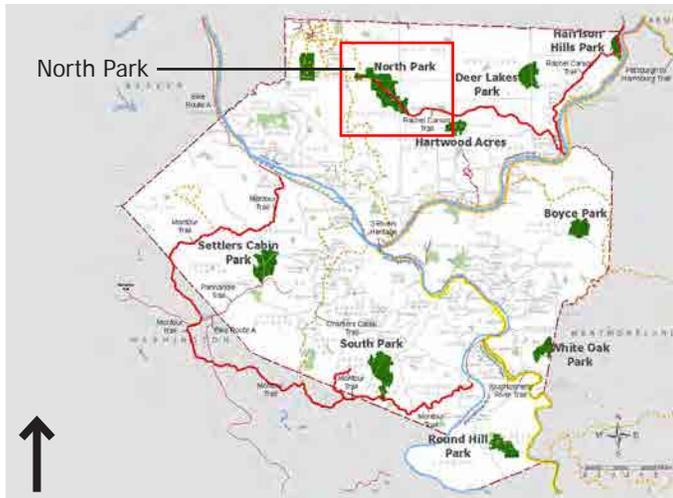


PROJECT PROCESS

Phase I	Phase II	Phase III	Additional Phases
Define Scope	same process as Phase I	same process as Phase I	as needed
Fundraising			
Design with Public Input			
Permits & Approvals			
Bidding & Construction			
Phase Completion			



SITE ASSESSMENT



Allegheny County parks system with North Park outlined in red (credit 3, see page 37)

CONTEXT

The Lake Area is situated in the middle of 3,075-acre North Park, the largest of Allegheny County's nine regional parks. The 650-acre study area, which is 21% of the park, is generally bounded by Babcock Boulevard, Pearce Mill Road, Walter Road, Kummer Road, and Ingomar Road. The Lake Area lies entirely within McCandless Township.

The focus of the study area is North Park Lake, a man-made body of water that is fed by Pine Creek, the North Branch of Pine Creek, and Irwin Run. The lake is anchored by the stone-clad Boathouse, built in 1937, which is accessed from Pearce Mill Road. Many groves, shelters, and playgrounds are situated within lawn areas encircling the lake that lead to steeply-sloping wooded areas. The land use around North Park is primarily residential.

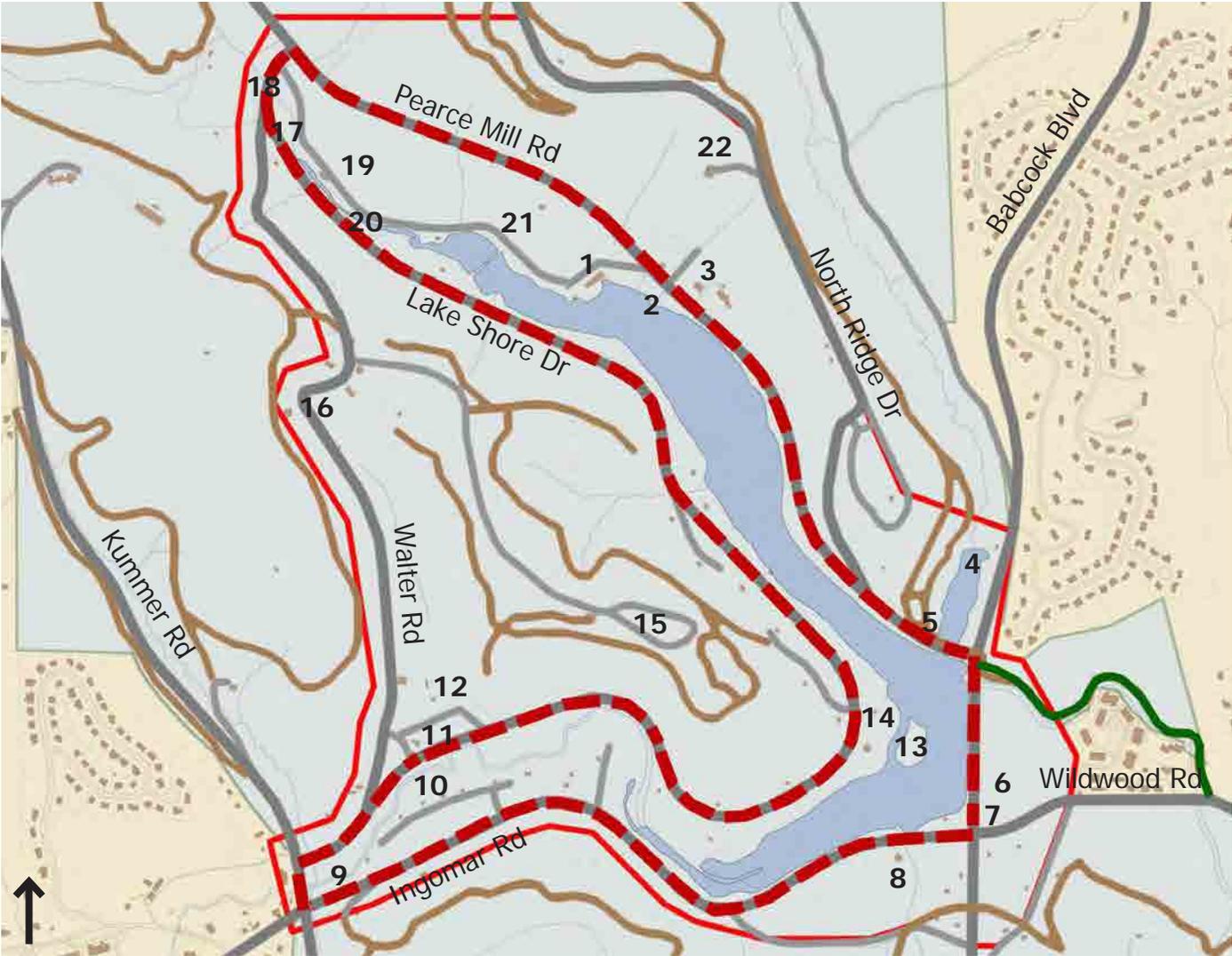
NORTH PARK

3,075 ACRES



North Park map with Lake Area outlined in red (credit 4, see page 37)





map of the Lake Area with 650-acre study area outlined in red

PROJECT COMPONENTS

- | | |
|---------------------------------|-------------------------------|
| 1. Boathouse (rental/bathrooms) | 12. J.C. Stone Field (rental) |
| 2. Accessible Fishing Pier | 13. "Bird Sanctuary" |
| 3. Rose Barn (rental) | 14. The Point |
| 4. Irwin Pond/Run | 15. Compost Area |
| 5. Boat Ramp | 16. Parish Hill (rental) |
| 6. 80th Division Monument | 17. Rain Garden |
| 7. Flag Retirement Area | 18. Dog Run |
| 8. Cabin (rental) | 19. Tennis/Paddle Courts |
| 9. Pine Creek | 20. North Fork Pine Creek |
| 10. "Municipal Row" | 21. Wagner Playground |
| 11. Old Fire House (rental) | 22. Ball Field |



SITE ASSESSMENT



1 Ingomar Road



2 Pearce Mill Road



3 Lake Shore Drive



4 Babcock Boulevard



5 Dog Run



6 Rose Barn



SITE ASSESSMENT



7 Stone Pavilion



8 Timber Pavilion



9 Tennis Courts



10 Wagner Playground



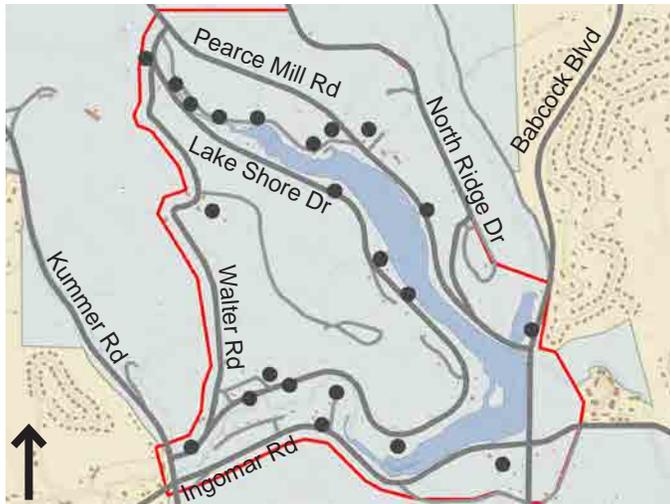
11 Park Lawn



12 Wooded Areas



SITE ASSESSMENT

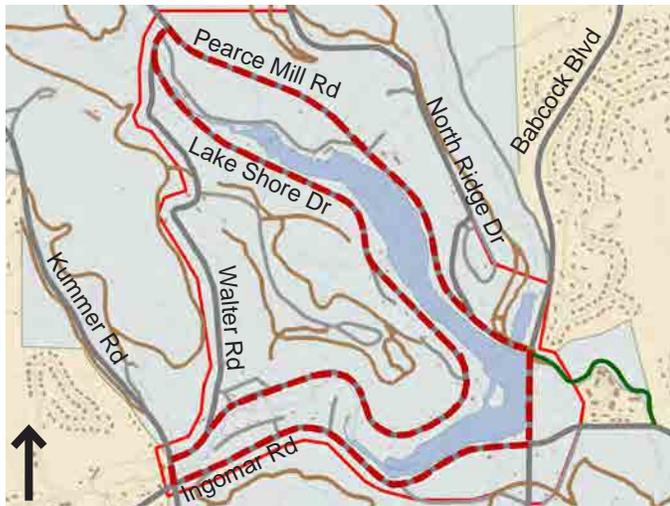


parking areas, major roads, and minor roads and drives

VEHICULAR NETWORK

- parking areas
- major roads
- minor roads and drives

The project area contains six major roads: Babcock Boulevard, Ingomar Road, Kummer Road, Walter Road, Lake Shore Drive, Pearce Mill Road, and North Ridge Drive. Of these, only Babcock Boulevard and Ingomar Road are state roads. It is important to note that Lake Shore Drive is one-way south to north for motor vehicles from J.C. Stone Field to Walter Road. Minor roads and drives typically connect the major roads to the park facilities. Many stakeholders expressed concern over the amount and speed of traffic on the roads that traverse the park, especially during morning and evening peak times and the summer season.

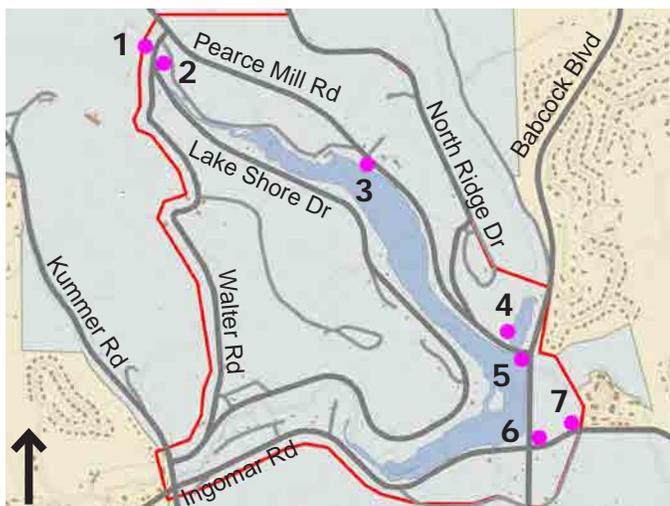


Lake Trail, Rachel Carson Trail, and blazed trails

PEDESTRIAN NETWORK

- Lake Trail
- Rachel Carson Trail
- blazed trails

The Lake Trail, shared by walkers, joggers and cyclists year-round, is the study area's main attraction. It is a 5-mile loop located on roads around the lake. On Babcock, it consists of a 9' walk and separate 5' bike lane. It is located on the shoulder of Ingomar, Kummer, and Pearce Mill. There is a dedicated north and south bike lane and separate pedestrian trail on the Lake Shore cartway. The Rachel Carson Trail, connecting North Park to Harrison Hills Park 34 miles to the east, enters the project area near the Babcock/Pearce Mill intersection and parallels North Ridge Drive. Many blazed trails, used by hikers and mountain bikers, exist in the Lake Area.



special interest areas

SPECIAL INTEREST AREAS

- special interest areas

The Lake Area has several unique attractions including:

1. Dog Run - A fenced off-leash area with available water.
2. Rain Garden - Located across Walter Road from the Dog Run, and is an excellent educational opportunity.
3. Fishing Pier - Universally accessible with dedicated parking and good views of the Boathouse and lake.
4. Boat Ramp - Recently renovated for access to the lake from Irwin Pond.
5. Lake Trail - 5-mile loop for pedestrians and cyclists.
6. 80th Division Memorial - Honors WWI and WWII.
7. Flag Retirement Facility - Incorporated into the 80th Division Memorial.



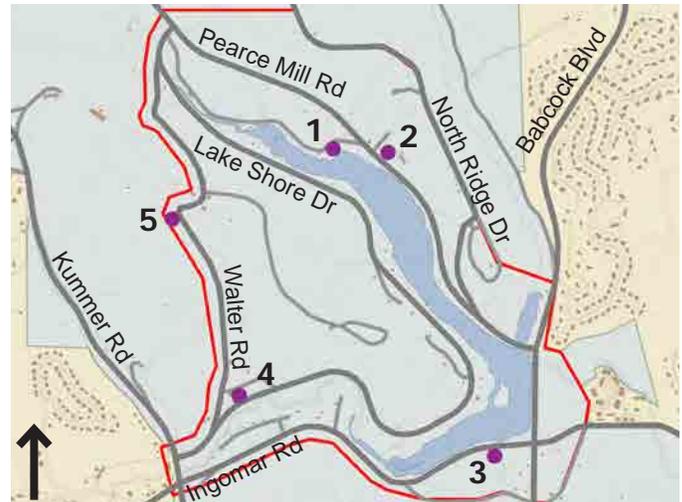
RENTAL FACILITIES

rental facilities

The are five rental buildings within the Lake Area:

1. Boathouse
2. Rose Barn
3. Cabin
4. Old Fire House
5. Parish Hill

All of the buildings are adequately maintained. They are typically located away from the lake with the exception of the Boathouse, which is located at the water's edge. Boats are stored on the ground level and the second level is available for rent. The Cabin, Old Fire House, and Rose Barn are the most frequently rented facilities.

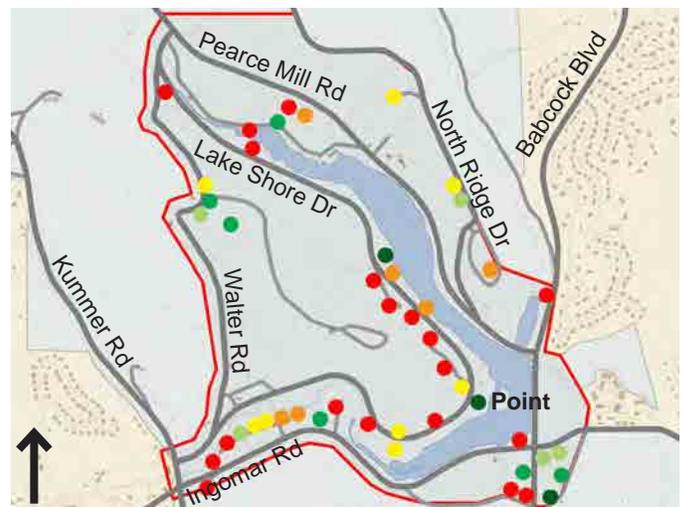


rental facilities

GROVES & SHELTERS

- 51+ rentals/year (20% of yearly total)
- 41-50 (27%)
- 31-40 (17%)
- 21-30 (21%)
- 11-20 (9%)
- 0-10 (6%)

There are 47 groves and shelters that lie within the Lake Area. They vary in size and style, but the majority are constructed of either stone or timber. Most facilities are adequately maintained but some are in need of minor to major repair. Just two of the shelters account for almost half of the yearly rentals, with the Point being the most popular. The most frequently rented facilities are typically located next to parking areas and playgrounds.



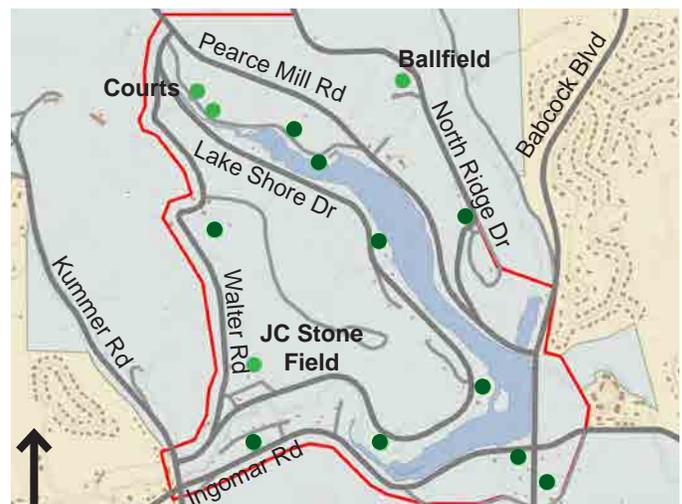
groves & shelters

RECREATIONAL FACILITIES

- ball fields and courts
- playgrounds

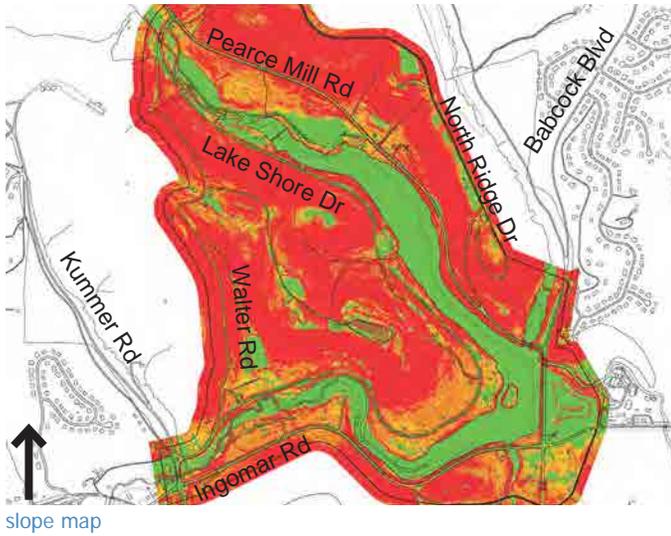
Most of the recreational facilities within the Lake Area are playgrounds for younger children. They are evenly distributed and generally located next to parking areas and shelters. Conditions of the play structures and surfaces are generally good but some should be replaced or repaired.

The Lake Area also contains three active recreation areas. J.C. Stone Field, which is available for rental, has been recently renovated. Sixteen tennis courts, scheduled to be repaired in 2012, and four elevated paddle tennis courts are located along the North Fork of Pine Creek near the Boathouse. There is another ball field along North Ridge Drive.



recreational facilities

SITE ASSESSMENT



SLOPES

- 0-5% slope (level)
- 6-8% slope
- 9-14% slope
- 15%+ slope (steep)

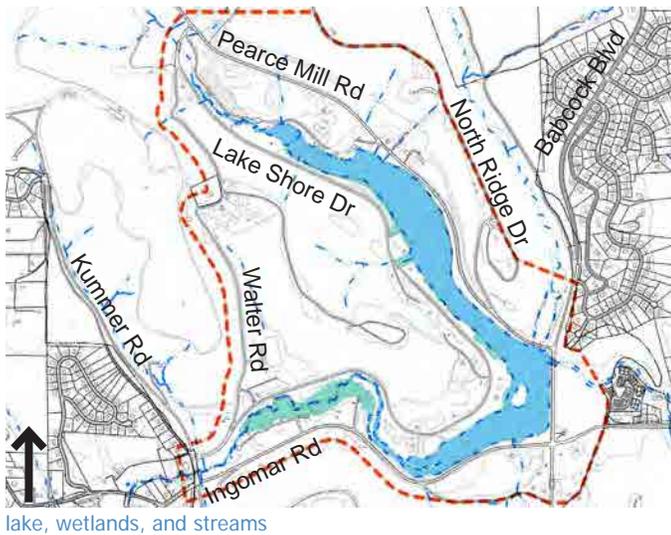
The topography of the Lake Area can be generally characterized as having gently rolling to steep slopes. Most of the level to rolling areas are located adjacent to the lake in the Point, Municipal Row, Court, and Boathouse areas. In general, the site slopes from higher points to the north, south, and west towards Pine Creek and the North Fork of Pine Creek, which flow into the lake. The steepness of some areas of the site presents a challenge to providing universal accessibility but also gives it a unique character.



VEGETATION

- park lawns
- wooded areas
- play fields

The wooded areas, consisting primarily of deciduous trees, are typically located on the steep slopes, mimicking the site's topography pattern. Most of the areas that are currently wooded were originally farmland that was reforested during the park's early years under the direction of Riis. The park lawns and play fields are prevalent on level and gently sloping terrain closer to the lake shore.

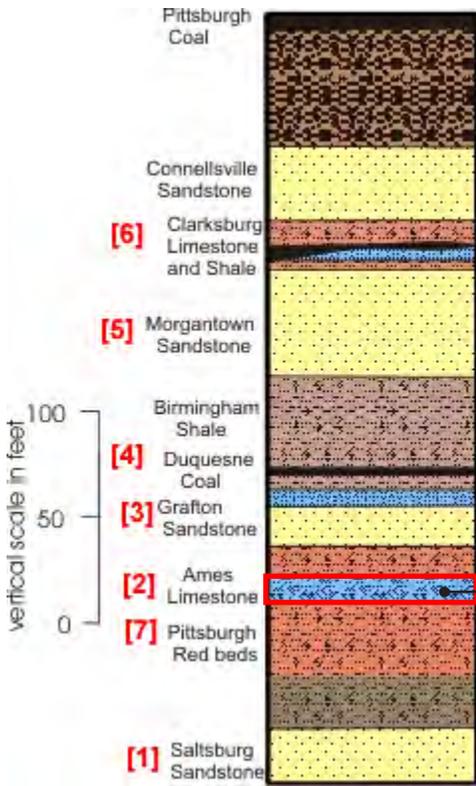


WATER RESOURCES

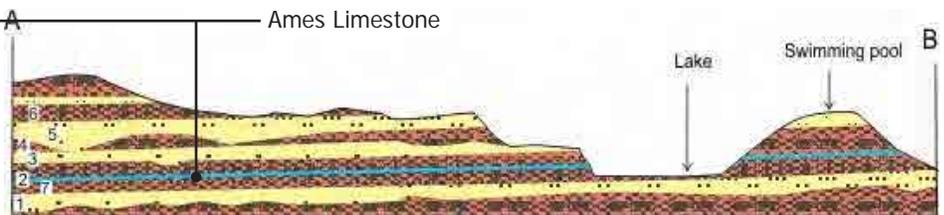
- lake
- wetlands
- streams

North Park Lake is a man-made lake that is fed by Pine Creek, to the south, and the North Fork of Pine Creek to the north. The original surface area of the lake was 75 acres when it was built in 1935. Urbanization increased sedimentation into the lake resulting in a loss of 12 acres of surface area and severely degraded the aquatic habitat. A lake restoration project, sponsored by the Army Corps of Engineers and Allegheny County, was completed in 2011. It resulted in increased lake surface area and depth through sediment removal, enhanced and new wetlands, and improved aquatic habitat.





Ames Limestone photo (above), stratigraphic section (left), and geologic cross section (below)



(credit 5, see page 37)

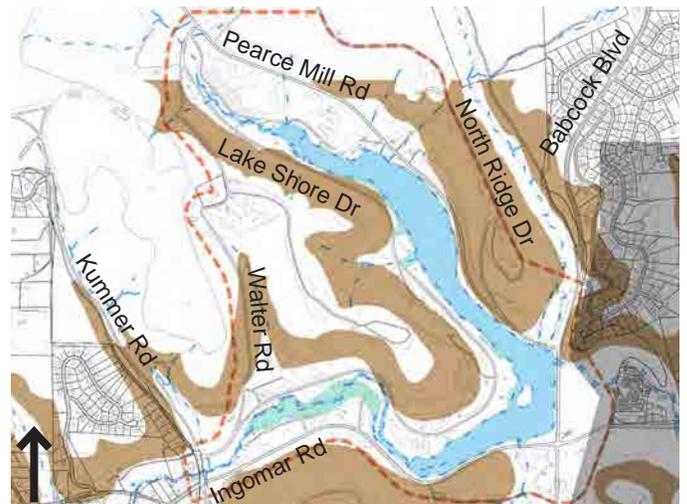


Pittsburgh Red Beds (left) and ancient landslide (right)

GEOLOGY

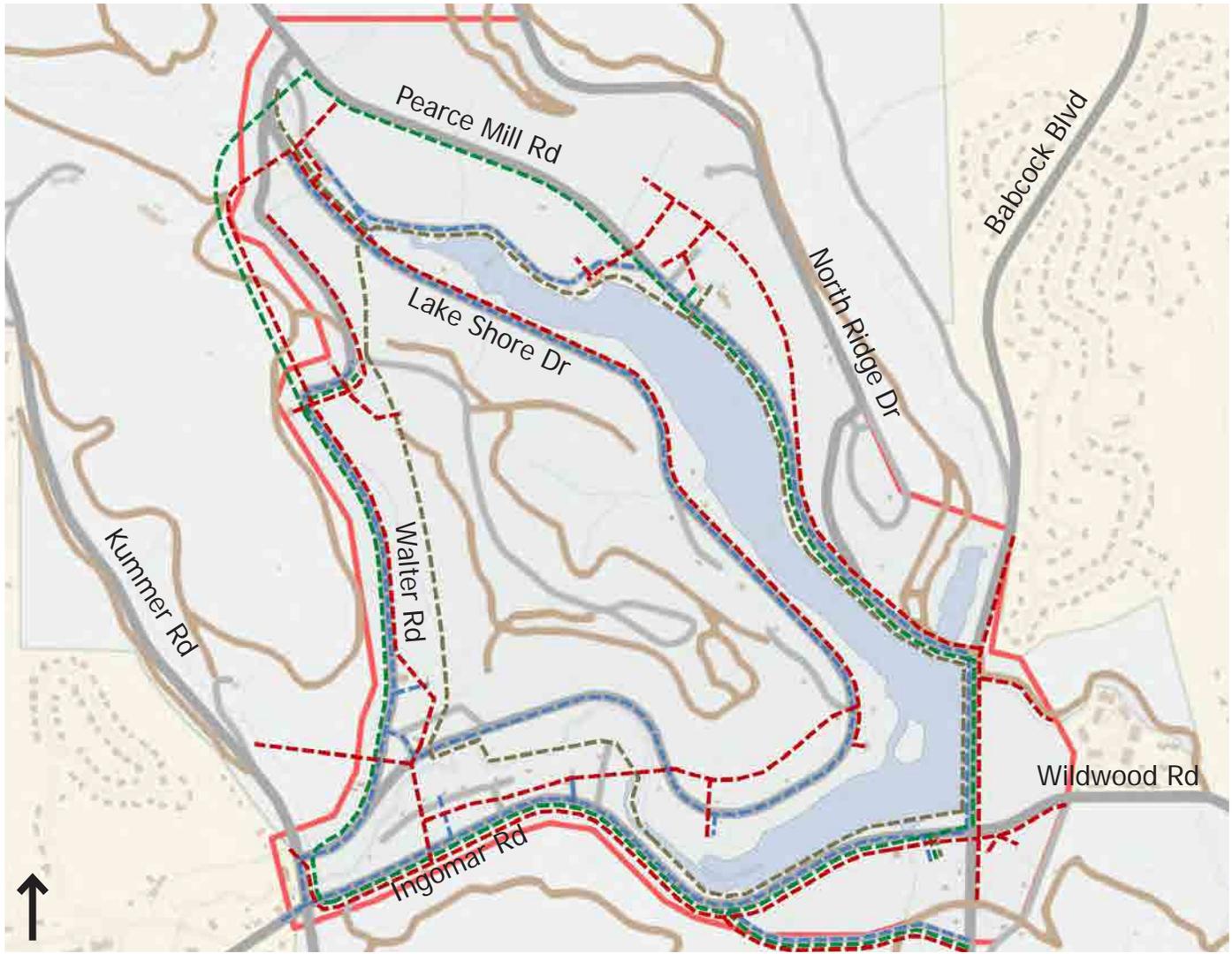
- landslides and landslide prone soils
- undermined areas

Rock formations, each several hundred feet thick, within the project area are separated by the Ames Limestone, which is several feet thick and outcrops on the hillsides above the roads surrounding the lake. Ames Limestone lies within the Pittsburgh Red Beds layer that is prone to landslides. Projects built in these areas need to investigate site conditions to mitigate risks to proposed and existing facilities associated with existing landslides and landslides that could be triggered or reactivated by proposed construction. There are dozens of existing ancestral landslides that are presumably associated with the Pittsburgh Red Beds.



landslides & landslide prone soils and undermined areas

SITE ASSESSMENT



utility service lines

UTILITIES

- potable water
- - - natural gas & oil
- - - electric/phone/cable TV
- - - sanitary sewer

Potable Water: Potable water service lines extend throughout the project area to most of the developed buildings and a limited number of picnic pavilions. Smaller service lines probably serve the numerous drinking fountains and water spigots observed in the picnic areas.

Natural Gas & Oil: Natural gas service lines are located along Ingomar Road, Kummer Road, Walter Road, Babcock Boulevard, and Pearce Mill Road. Lines along Kummer, Walter, and Pearce Mill appear to supply J.C. Stone Field and the Boathouse. An oil transmission line passes through the project area. Markers were observed near the Tennis Courts.

Electric Power: Numerous overhead electrical service lines throughout the project area provide electricity to many larger park buildings and sports facility buildings, a limited number of picnic pavilions, and outdoor lighting. The majority of the electrical service is single-phase.

Telephone & Cable TV: In general, these lines correspond with overhead electric lines and share the same poles. A larger, separate set of lines is located along Ingomar Road.

Sanitary Sewer: Sanitary sewer service is available within many low-lying portions of the project area. Most or all bathroom facilities with running water and flush toilets are tied into park sanitary sewers. It appears that trunk lines run along the north shore of the north branch and along the south shore of the south branch of North Park Lake.



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PUBLIC ENGAGEMENT

PUBLIC ENGAGEMENT PROCESS

A three-step process to engage the community for input about the Lake Area was utilized to serve as the basis for recommendations. This included three public meetings: presentation of 1) analysis, 2) options, and 3) final alternatives; an online questionnaire; and focus group meetings. During the first public meeting and in the focus groups, three questions were asked of the participants:

1. What works well in the Lake Area?
2. What should work better in the Lake Area?
3. What is your vision of the future in the Lake Area?

The results of this exercise are documented on the two maps below. Each dot represents a single participant's input. A higher concentration of dots indicates areas of consensus.



public meeting

WHAT WORKS WELL

The most common elements of the Lake Area that the public and focus group participants indicated work well are:

- Lake Trail is popular
- Value of North Park Lake
- Varied uses and activities
- Trail connections
- Boathouse character
- Lake Shore Drive character
- Lake environment & wetland habitat
- Landscape character of the lake
- Ample, convenient parking



green dots represent elements that the public indicated work well

WHAT SHOULD WORK BETTER

The most common elements of the Lake Area that the public and focus group participants indicated should work better are:

- Safety on roadways
- Separate Lake Trail traffic
- Rachel Carson Trail connection
- Babcock landscape character
- Kummer/Ingomar intersection
- Composting area
- Wayfinding signage



red dots represent elements that the public indicated should work better

PUBLIC ENGAGEMENT

ONLINE QUESTIONNAIRE SUMMARY

An online questionnaire was made available to the public from to October 13 to November 20, 2011 to better understand, for North Park and the Lake Area, the users, what they do and how often, and level of satisfaction in various areas. A total of 253 responses were received and tabulated.

1. What is your gender?

- 68% Men
- 32% Women

2. What is your age?

- 0% 15 or less
- 11% 16-30
- 30% 31-45
- 45% 46-60
- 14% 61-75
- 0% 75 or more

4. Do you belong to any groups that use North Park?

- 66% No
- 34% Yes

5. How do you get to North Park?

- 63% Car
- 25% Bike
- 12% Walk

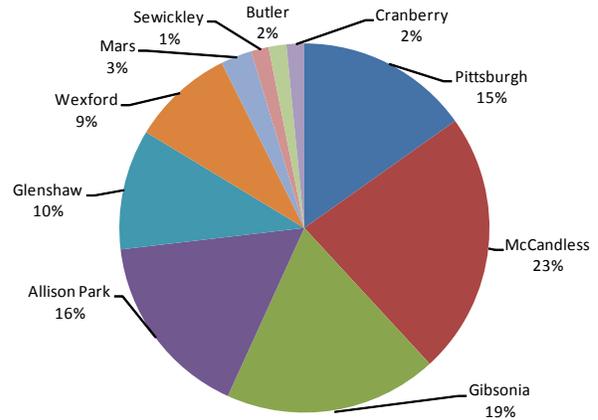
6. How often do you use North Park?

- 14% Daily
- 40% More than once a week
- 12% Once a week
- 18% A few times each month
- 4% Once a month
- 9% Every few months
- 3% Once or twice a year
- 0% Rarely
- 0% Never

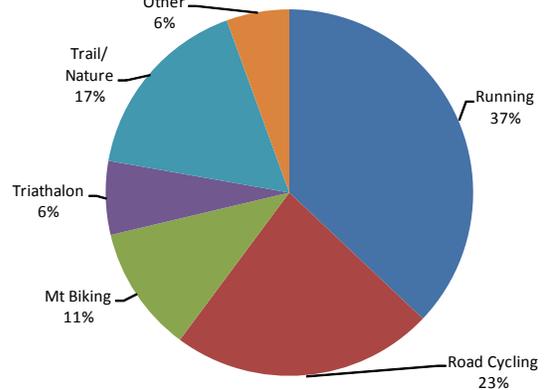
7. For which reasons do you most frequently use North Park?

- 3% Organized athletics (football, baseball, soccer, tennis)
- 46% Independent athletics (running, hiking, walking, cycling)
- 24% Park attractions (lake, skating, swimming, golf course)
- 5% Specialized programming (Latodami Nature Center, Boathouse)
- 22% Other activities (boating, fishing, birding, picnicking)

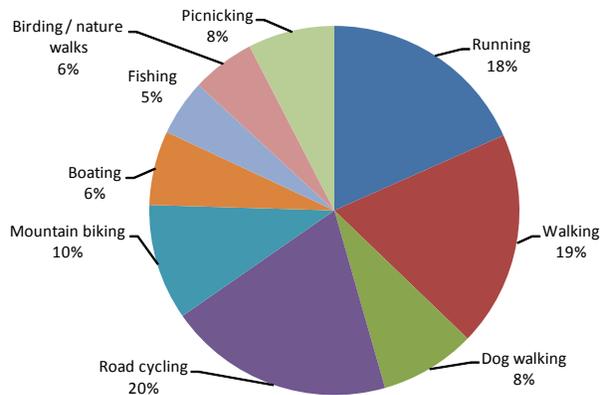
3. Where do you live?



Type of Groups



8. For which activities do you most frequently use the area around North Park Lake?

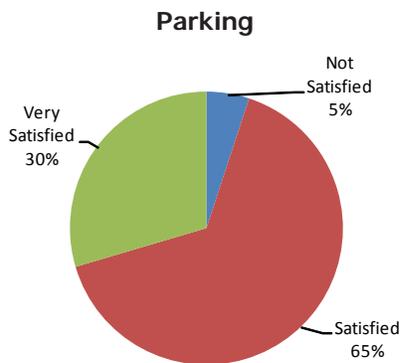
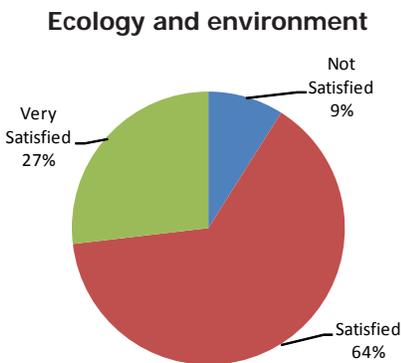
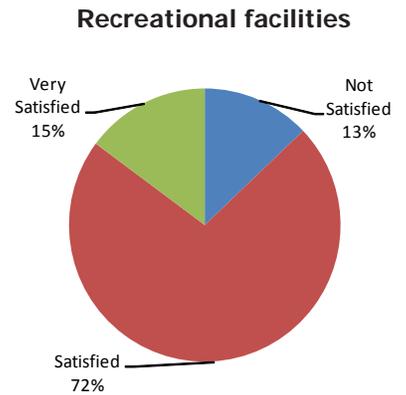
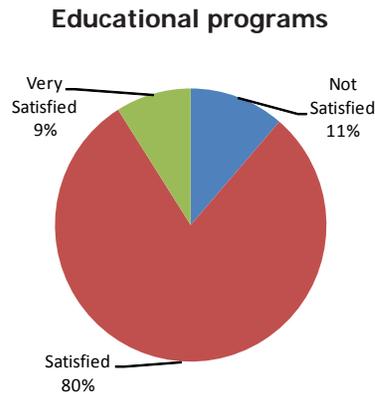
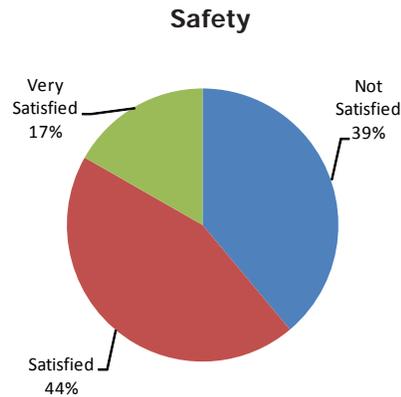


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9. Rate your level of satisfaction regarding the area around the Lake in North Park in each of the following categories.



10. What I think works well in the area around the Lake in North Park is...

Top 10 Responses

1. Lake Trail is a community amenity.
2. Character and function of Lake Shore Drive.
3. Natural setting and atmosphere of the park.
4. Hiking and mountain biking trails.
5. North Park Lake.
6. Park access and plentiful parking spaces.
7. Many groves and shelters available for public use.
8. Playgrounds.
9. Diversity of activities.
10. Dog Park.

11. What I think could/should work better in the area around the Lake in North Park is...

Top 10 Responses

1. Widen Lake Trail for added safety.
2. Separate Lake Trail from road traffic for added safety.
3. Address traffic and safety issues on Ingomar Road.
4. Enforce and control vehicular speeds on park roads.
5. Add signage on Lake Trail to educate users on trail etiquette.
6. Address trail safety.
7. Improve maintenance of facilities.
8. Address traffic issues on roads.
9. Improve groves and shelters.
10. Add more park amenities such as water fountains, benches, etc.

12. What I would like to see most as part of future plans for the area around the Lake in North Park is...

Top 10 Responses

1. Widen Lake Trail and separate from road traffic.
2. Better enforcement of speed on park roads.
3. Better maintenance of park areas.
4. New trails away from park roads.
5. More and improved pedestrian and jogging trails.
6. More and improved bike lanes and trails.
7. Protection and restoration of natural areas of the park.
8. Improved signage and placement.
9. Better maintenance of groves.
10. More boat ramps/fishing piers.

Note: See Appendix for a complete tabulation of responses for questions 10 through 12.

RECOMMENDATIONS

PARK PRINCIPLES

In early November 2011, after the first public meeting, a two-day design charrette, or workshop, with members of the Project Committee and Consultants was conducted to generate initial design options for the Lake Area based on the input received from the community during the public engagement process.

Guiding Park Principles

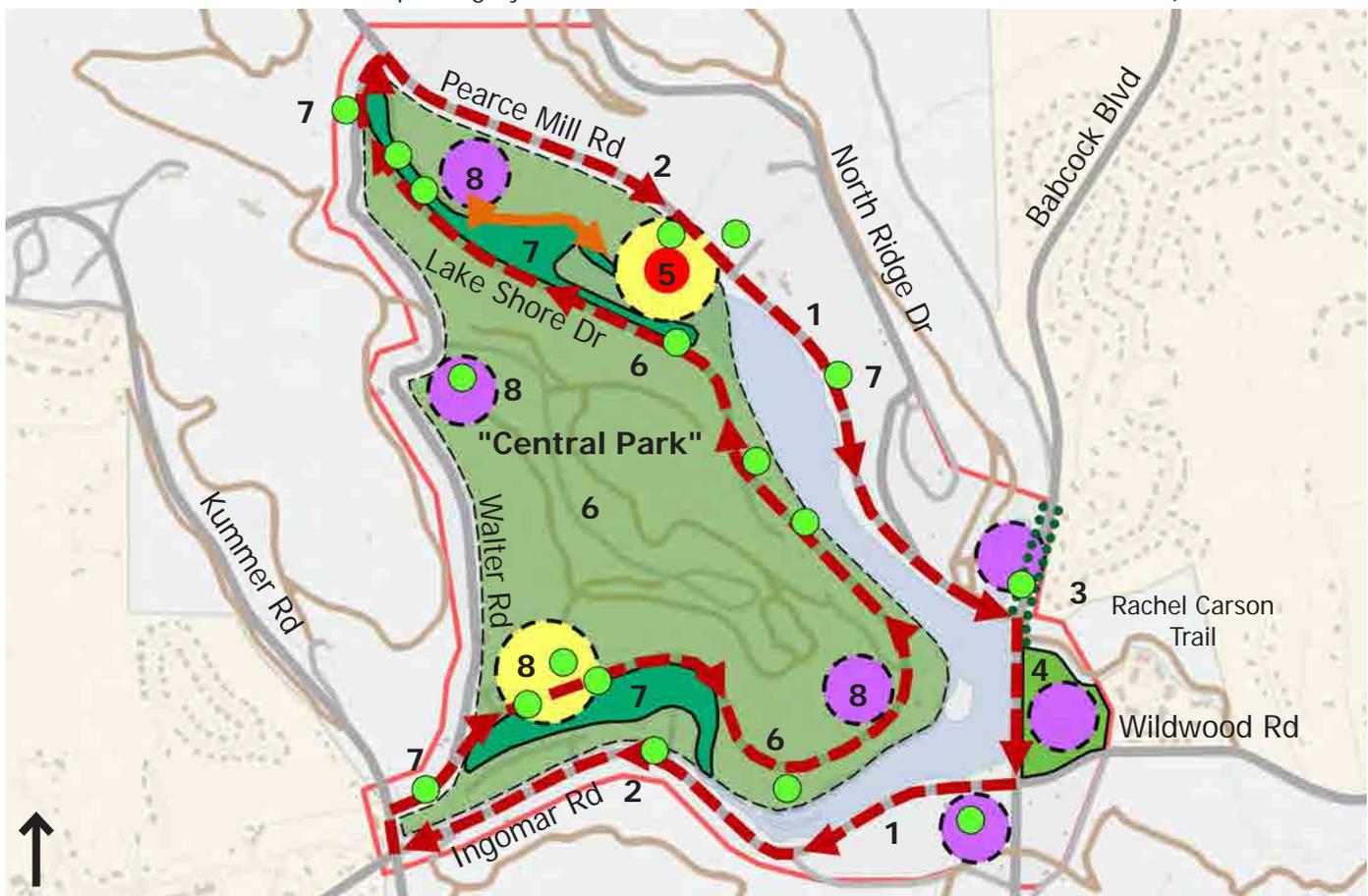
The following principles, a result of the public engagement process, were developed at the charrette to help guide future decision-making and development of the Lake Area.

- Enhance safety
- Educate users about proper trail etiquette
- Create and enhance connections
- Enhance visual park character/place-making
- Provide varied park experiences and uses
- Enhance sustainability and ecological services
- Promote environmental education
- Promote economic sustainability
- Preserve historic character and park legacy

OVERARCHING IDEAS

To support the principles, ten overarching ideas were flushed out to transform the Lake Area into a facility that meets the needs of today's park users. These prioritized ideas will serve as the basis for the recommendations moving forward.

1. Improve Lake Trail safety by widening and separating trail from road traffic and providing etiquette signage.
2. Transform roads into parkways to enhance character.
3. Provide additional pedestrian and bicycle connections (especially Rachel Carson Trail).
4. Improve the entry experience along Babcock Boulevard as a true park gateway.
5. Enhance the Boathouse's image as the "Heart of the Park" through programming opportunities.
6. Create a "Central Park" within the Lake Area by capitalizing on Lake Shore Drive's positive character.
7. Preserve and enhance the natural park character and sustainability (especially wetlands).
8. Provide varied park experiences for users (including enhancement of the J.C. Stone area).



plan of overarching ideas



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RECOMMENDATIONS

1. IMPROVE LAKE TRAIL SAFETY

Babcock Boulevard Assessment

In 2011, Babcock Boulevard, a State road, was modified to improve safety for all transportation modes by separating bicycles from the Lake Trail into a one-way bike lane. A similar concept should be implemented on Ingomar and Pearce Mill Roads, transforming them from roads to parkways.

Highlights

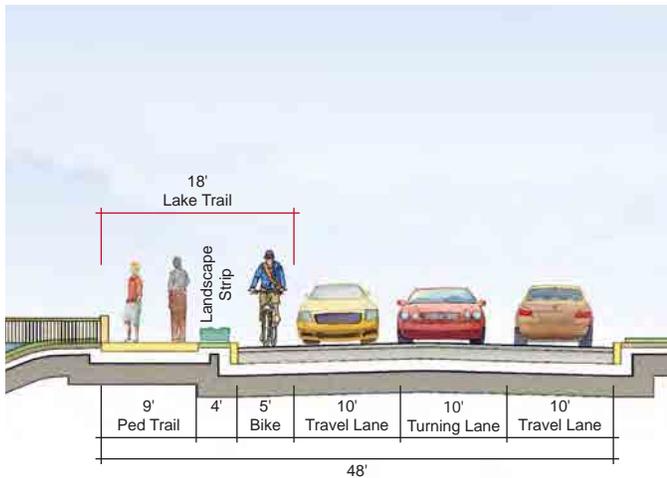
- 5-foot wide one-way bike lane clockwise around lake.
- 9' wide two-way, pedestrian trail.
- Vertical curb and planter strip separates bike lane from pedestrian trail and provides added pedestrian safety.
- Existing steel guiderail behind pedestrian trail provides added vehicular safety.
- Traffic signals were upgraded to improve congestion.



GOALS

1. Improve safety for pedestrians, bicycles and automobiles.
2. Improve the traffic signal efficiency reducing congestion, pollution and fuel consumption.
3. Projects was proposed and designed with careful consideration of the local land use (regional park), environmental, and social contexts.
4. Accommodate all modes of traffic, pedestrian, bicycle and car / truck.

Funding by: Pennsylvania Community Transportation Initiative
North Park Trail Enhancement Project sign



existing Babcock Boulevard section



existing Babcock Boulevard



existing Babcock Boulevard plan (credit 6, page 37)

RECOMMENDATIONS

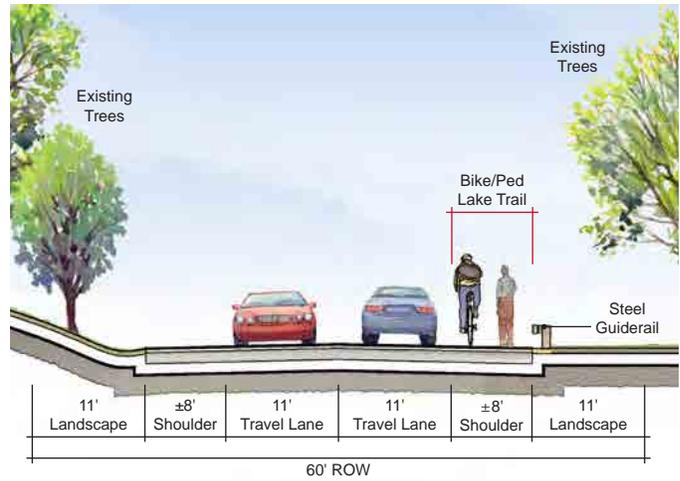
1. IMPROVE LAKE TRAIL SAFETY

Existing Condition

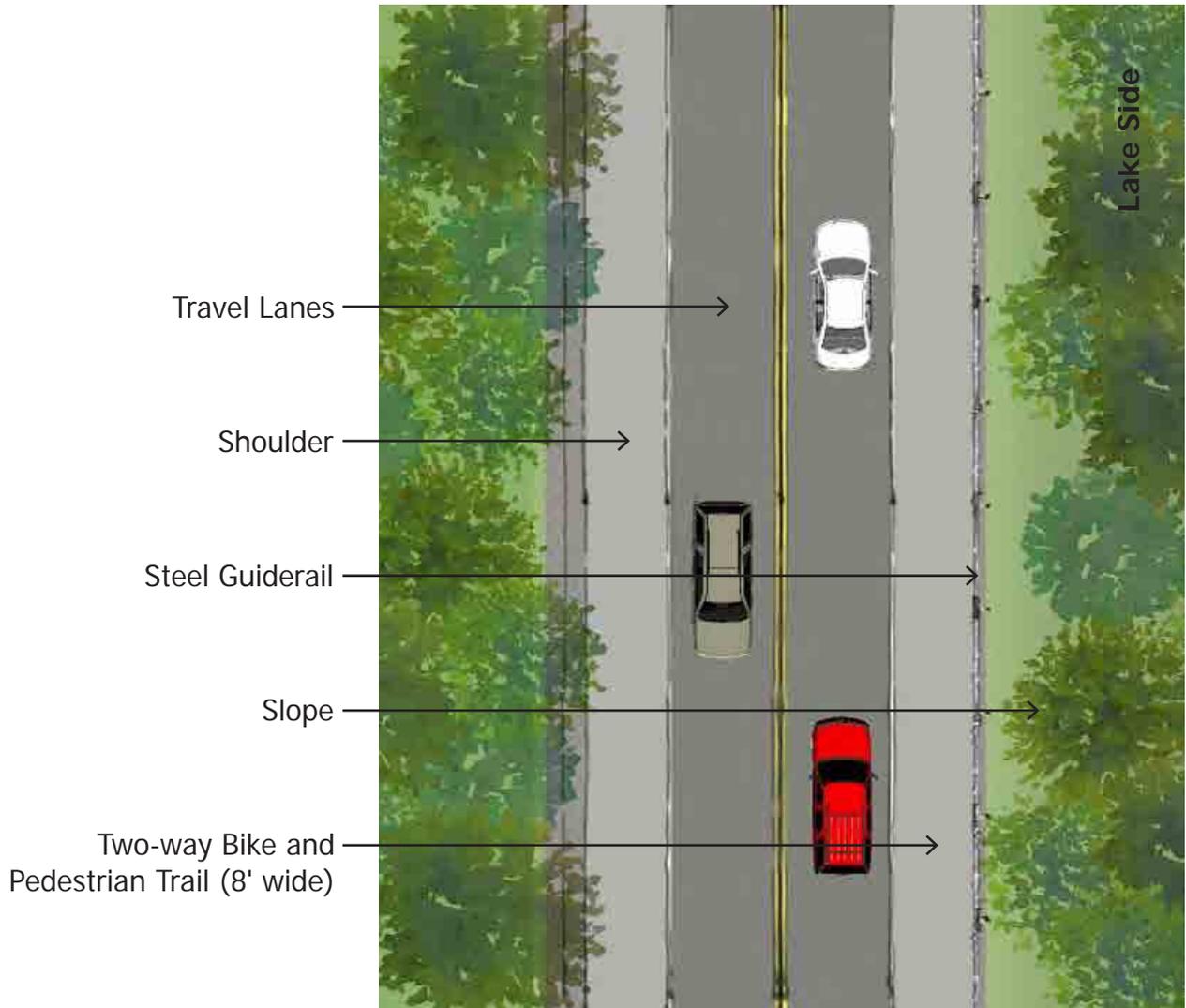
The current trail is too narrow to accommodate multi-use activity on the existing road shoulder.

Highlights

- Approximately 8-foot wide combined bicycle and pedestrian trail.
- Lake Trail flush with vehicular traffic creates a potential hazard for cyclists and pedestrians.
- Steel guiderail behind Lake Trail provides added vehicular safety.



existing Lake Trail typical section along Pearce Mill Road and Ingomar Road



existing Lake Trail typical plan along Pearce Mill Road and Ingomar Road



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RECOMMENDATIONS

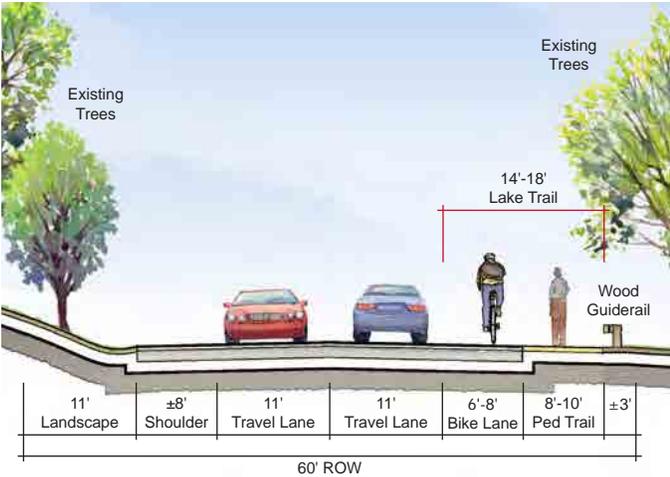
1. IMPROVE LAKE TRAIL SAFETY

Proposed Option

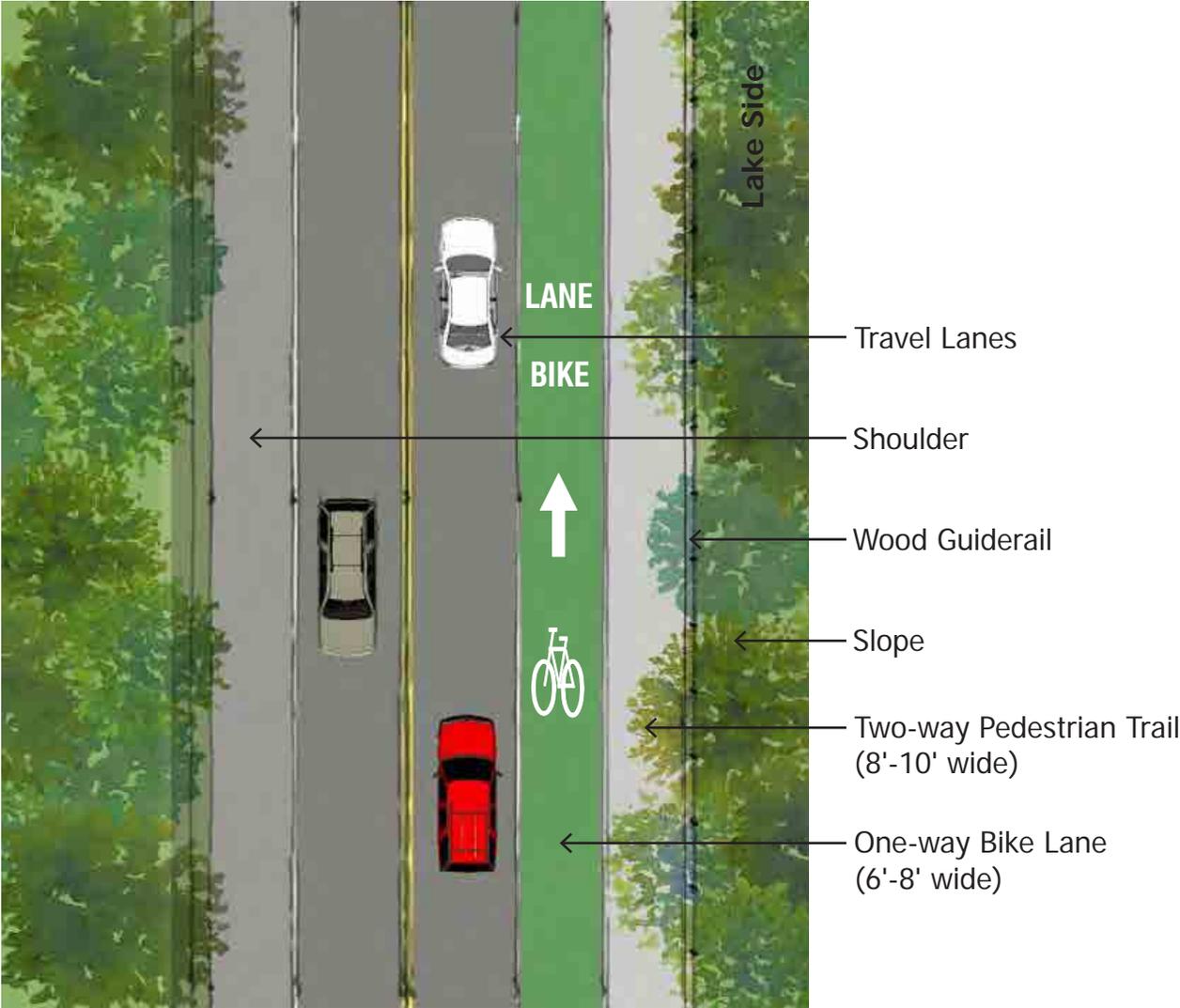
Expand the road shoulder to accommodate a wider, dedicated pedestrian path separated from a one-way bike only lane. The trail would be available for year-round activity.

Highlights

- 6'-8' wide one-way bike lane clockwise around lake.
- 8'-10' wide two-way, pedestrian, soft surface trail.
- Wood guiderail behind pedestrian trail enhances park character and provides added vehicular safety.
- Green wall retains pedestrian trail as needed in areas restricted by steep slopes.



proposed Lake Trail typical section along Pearce Mill Road and Ingomar Road



proposed Lake Trail typical plan along Pearce Mill Road and Ingomar Road

RECOMMENDATIONS

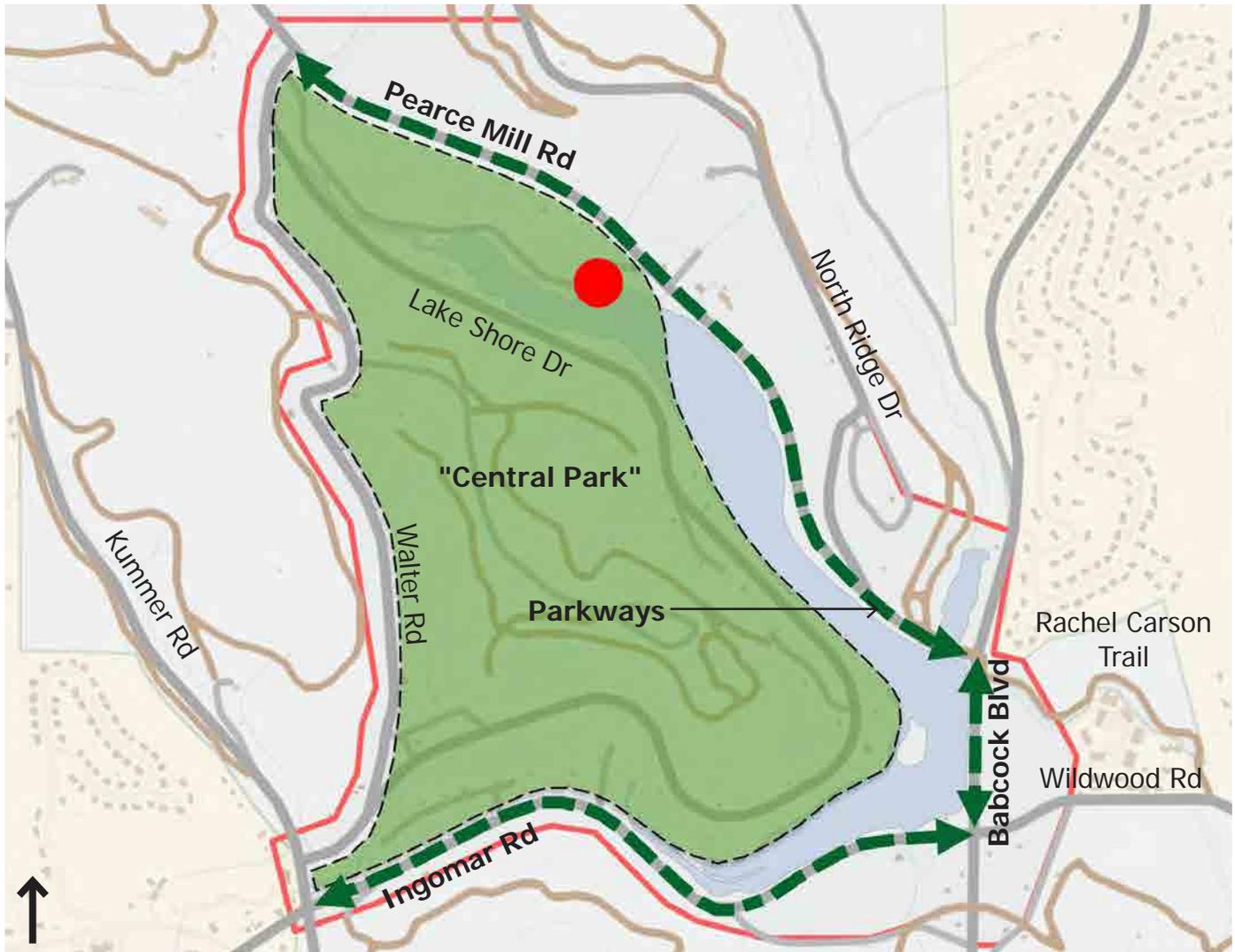


parkways precedent (credit 7, see page 37)

2. TRANSFORM ROADS TO PARKWAYS

The character of Babcock Boulevard, Pearce Mill Road, and Ingomar Road should be improved to reflect their naturalistic park setting through use of consistent detailing and landscaping throughout. For instance, the metal guiderails could be replaced with a steel-backed timber design that is currently being used by the National Park Service on the Blue Ridge Parkway and in other areas.

In addition, the community expressed a desire to make the Lake Trail experience safer and more enjoyable by separating the pedestrian trail from the adjacent bicycle and vehicular lanes. The public also feels that year-round maintenance of the trail should be a priority due its use during all seasons.



proposed parkway concept



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RECOMMENDATIONS

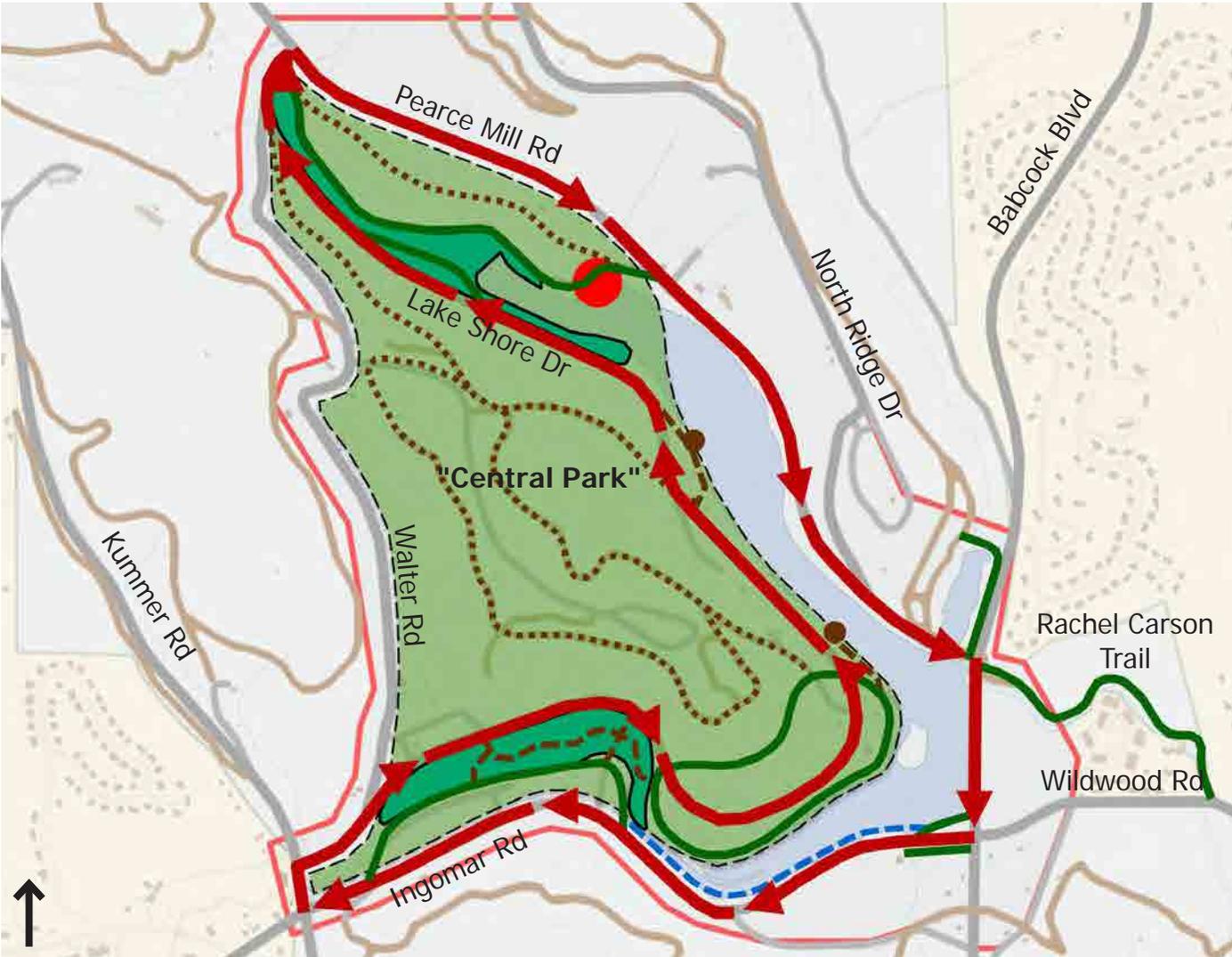
3. PROVIDE ADDITIONAL CONNECTIONS

Currently, only the existing Lake Trail provides users an opportunity to walk, jog, or run on an improved surface. Park paths, wetland boardwalks and a potential lakeside boardwalk are proposed to provide park users with varying abilities an opportunity to use the park for aerobic activity. Additional woodland trails are proposed to make better connections within the Lake Area.

- █ Lake Trail (width varies - one-way bike lane & two-way pedestrian path)
- █ Park Paths (6'-8' wide)
- █ Wetland Boardwalks (4'-6' wide)
- █ Woodland Trails (2'-3' wide)
- █ Lakeside Boardwalk (4'-6' wide - optional)

Type	Width	Length	Ability	Uses
Lake Trail	8'-10'	5-mile loop	fitness	walking, jogging, road cycling and skating
Park Path	6'-8'	med. loops	fitness/casual	walking and jogging
Wetland Boardwalk	4'-6'	short loops	casual	walking nature experience
Woodland Trail	6'-8'	med. loops	fitness/casual	walking and jogging nature experience
Lakeside Boardwalk	4'-6'	4'-6'	casual	walking nature experience

connections for a variety of experiences and user abilities



proposed park connections concept

RECOMMENDATIONS

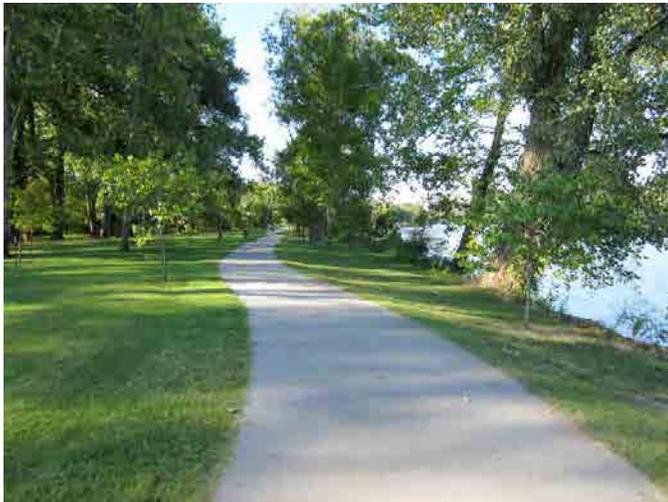
3. PROVIDE ADDITIONAL CONNECTIONS

Park Paths: Soft-surface, "peel off" paths will be added at various locations to provide alternate, smaller loops for the wide range of visitors that use the park.

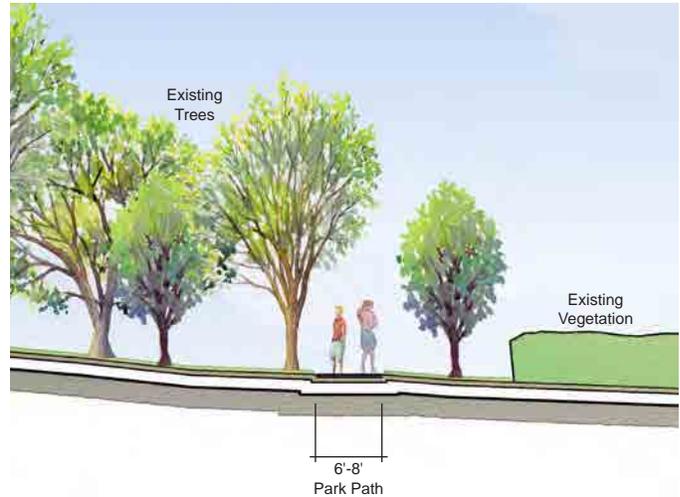
Wetland Boardwalks: Elevated boardwalks through wetlands will provide opportunities to educate visitors about the ecology of the park.

Woodland Trails: New, minimum-width, blazed trails will improve pedestrian connections within the Lake Area from the water's edge to forested hilltops.

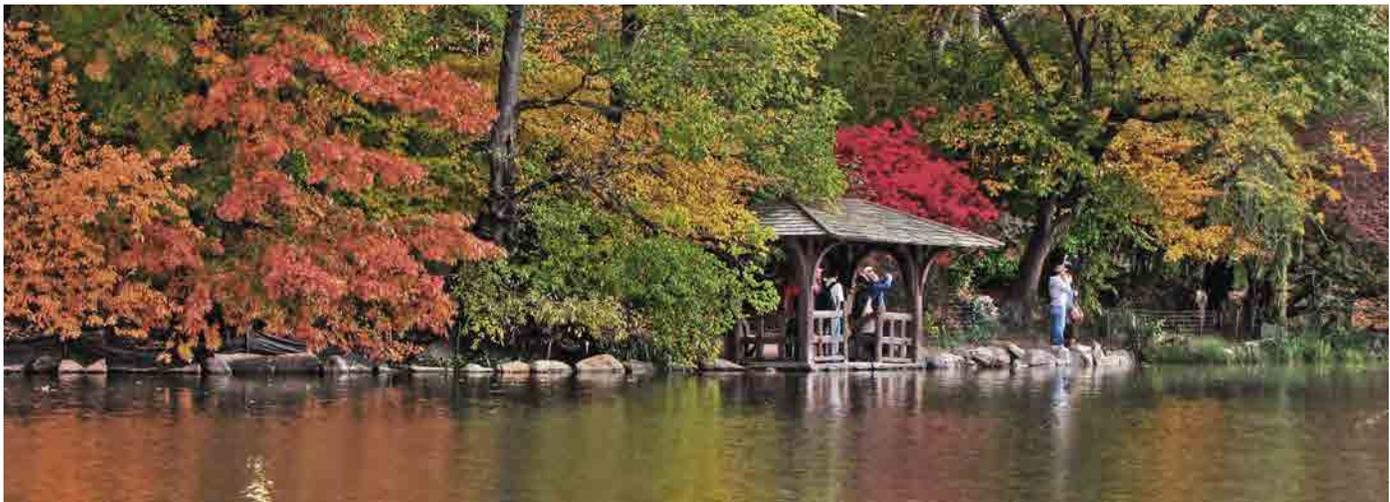
Lakeside Boardwalk: The possibility exists to add an elevated boardwalk at the lake's edge to provide visitors to the park with a more intimate nature experience.



park path precedent (credit 8 , see page 37)



proposed two-way, pedestrian, soft-surface park path (6'-8' wide)



shelter overlook off a park path (credit 9 , see page 37)

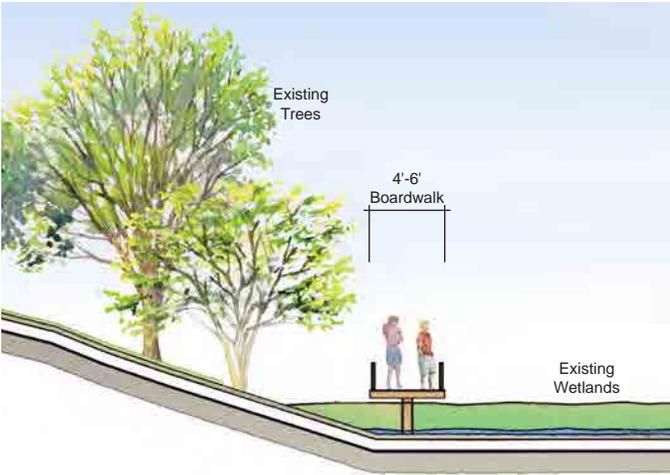


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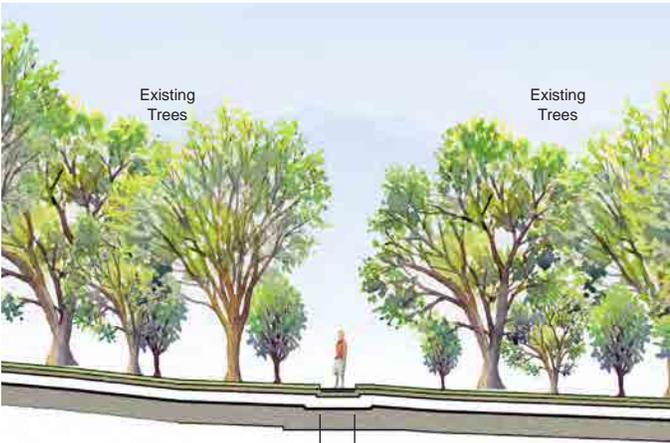
RECOMMENDATIONS



proposed two-way, pedestrian, structural wetland boardwalk (4'-6' wide)



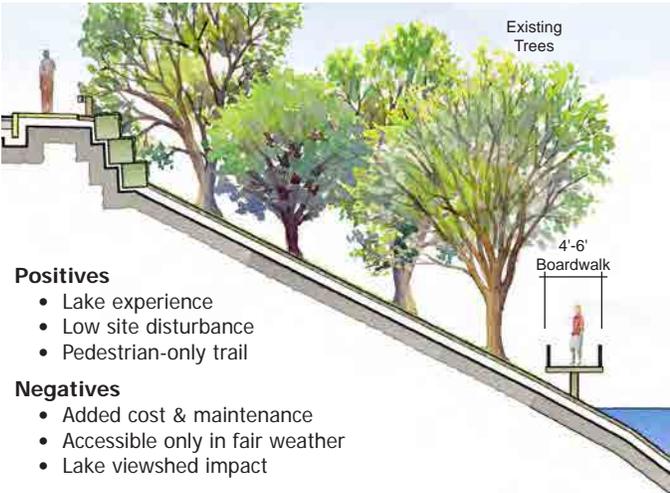
wetland boardwalk precedent (credit 10, see page 37)



proposed two-way, pedestrian, soft surface trail (2'-3' wide)



woodland trail precedent



Positives

- Lake experience
- Low site disturbance
- Pedestrian-only trail

Negatives

- Added cost & maintenance
- Accessible only in fair weather
- Lake viewshed impact

optional pedestrian boardwalk adjacent to lake edge (4'-6' wide)



lakeside boardwalk precedent (credit 11, see page 37)



RECOMMENDATIONS

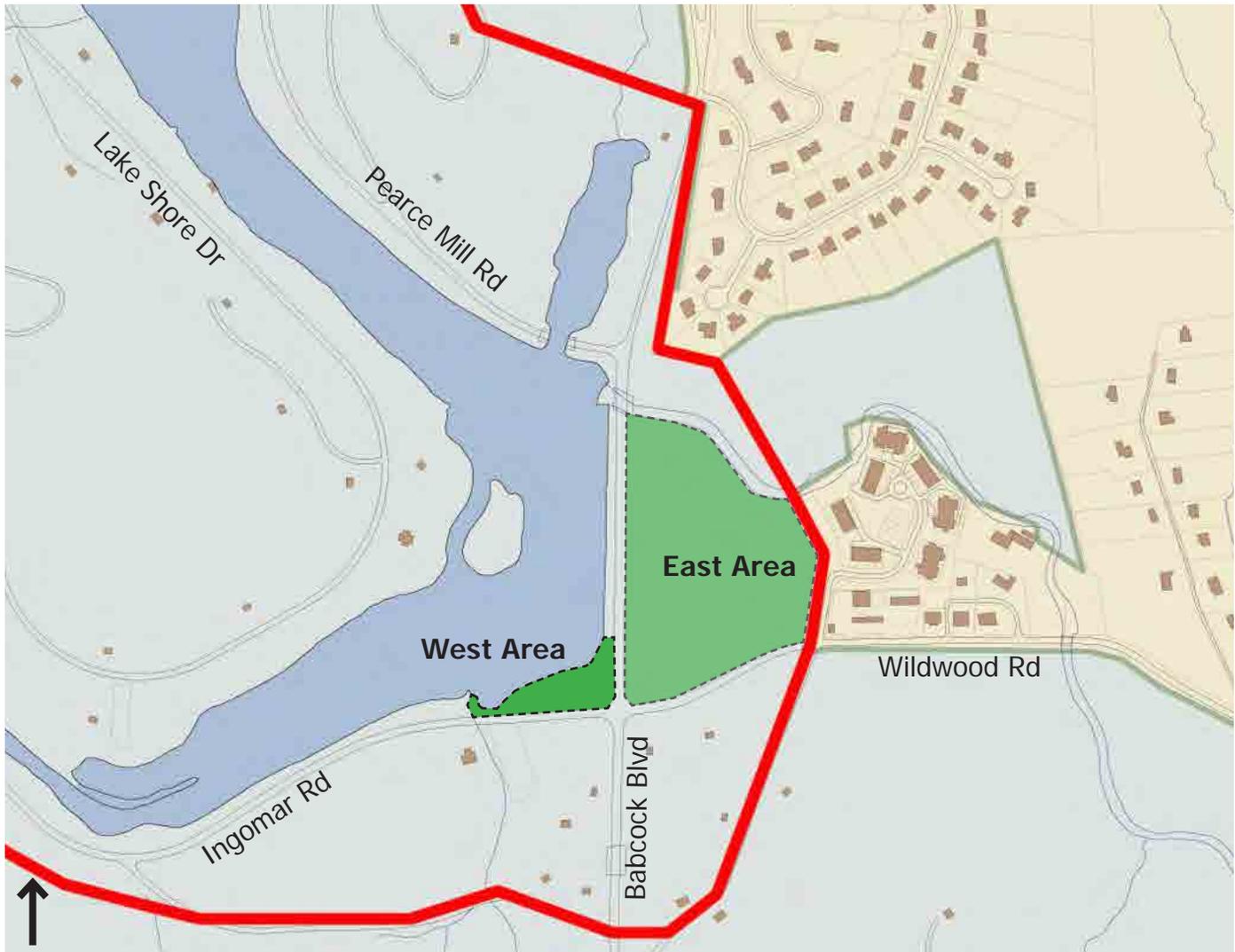


east area along Babcock Boulevard between Ingomar and Pearce Mill

4. IMPROVE ENTRY EXPERIENCE

The landscape at the entrance into the Lake Area along Babcock Boulevard should be upgraded to reflect the park's overall character and also its prominent location. The western area lies between North Park Lake and the Lake Trail, and contains Babblebrook shelter, which is underused. The eastern area has historically received dredging material from the lake, and cannot be developed for a few years.

The eastern area could be immediately transformed into a trailhead for the Lake Trail with a park path along the lake edge leading to Babblebrook shelter from the Lake Trail. Interpretive signage could be installed to educate users about the park and lake, and wetland preservation. The western area may be developed as a gateway landscape that contains various natural plantings interconnected by paths.



proposed plan of the Boathouse and parking lot renovations



5. ENHANCE THE BOATHOUSE

The Boathouse and surrounding area needs to be studied in more detail, by means of a feasibility study, to determine potential improvements and programming opportunities that could build on its character and realize its full potential.

Alternative uses for the building could include a concessions area or park cafe with an outdoor dining terrace overlooking the lake, bike and boat rental facility, fishing/bait shop, and satellite nature center office. Improvements to the restrooms are also needed. New site amenities may include playgrounds, picnic areas, pavilions, and Lake Trail trailhead.

The large asphalt parking lot could be reconfigured to improve circulation. Parking areas only used during peak times should be converted into pervious, green parking lots with rain gardens that reduce stormwater velocities and runoff.



Boathouse and parking lot



proposed plan of the Boathouse and parking lot renovations



RECOMMENDATIONS

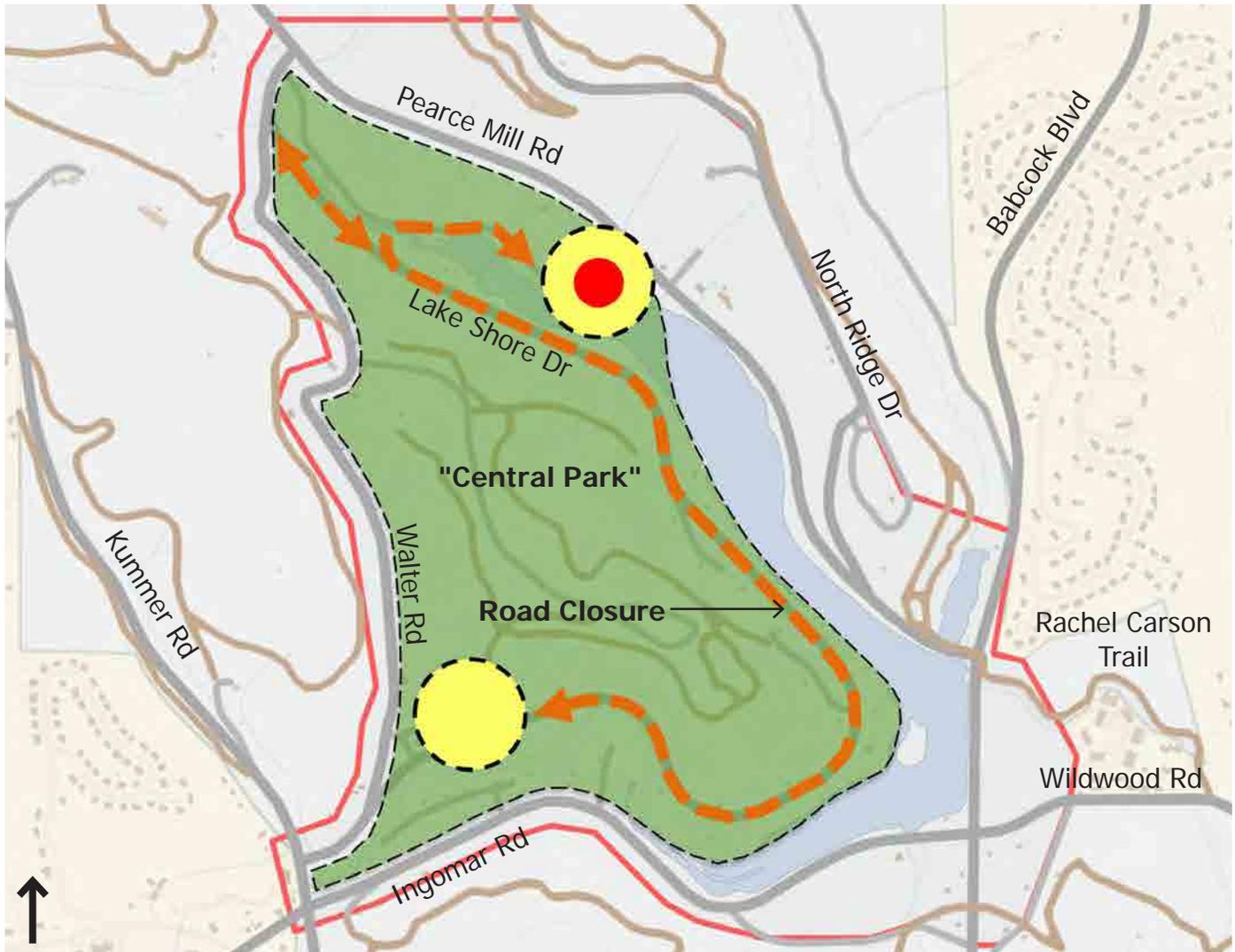


intermittent road closure precedent

6. CREATE A "CENTRAL PARK"

The intermittent closure of Lake Shore Drive to vehicular traffic would create a "Central Park" area, allowing walkers, skaters, cyclists and picnickers to enjoy this popular and scenic 2-mile stretch from the J.C. Stone Field to Walter Road without interference from automobiles. During closure times:

- Lake Trail traffic on other roads would be reduced, making it a more pleasurable, safer experience for all.
- Inexperienced trail users would feel more comfortable from having additional width.
- Road races and special events could be relocated to Lake Shore Drive to maximize the utilization and positive impact of the closure.
- Shelter access will not be impacted and the road will be open to emergency vehicles and users with disabilities.



proposed Lake Shore Drive re-imagined concept



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7. PRESERVE THE LANDSCAPE

Over the decades, the picturesque landscape that Riis originally envisioned has all but vanished due to the lack of awareness of the park’s design heritage and from the County’s ongoing financial constraints. Some efforts to restore habitat are underway, but other issues need to be addressed if the park is to remain a valuable resource to the community.

Ongoing management practices that should be implemented to ensure the park’s legacy include habitat restoration, invasive species and low intensity management, opening up of historic views lost due to overgrown vegetation, and lake-shore preservation. Individual projects to enhance park sustainability could include converting asphalt parking lots to pervious, green lots and repurposing the compost area.

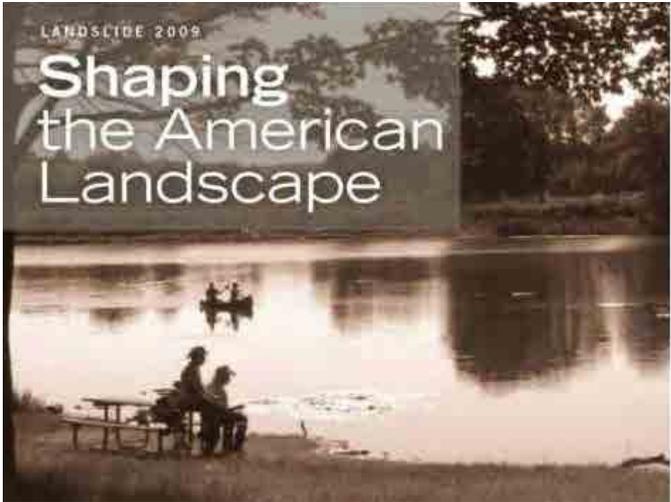


photo of lake on the cover of Landslide 2009 published by the Cultural Landscape Foundation (credit 12, see page 37). Photo © Daniel Parisi.



projects are underway within the park to restore habitat for wildlife and native species



existing parking lot with large expanses of impervious paving that enables stormwater to pollute the lake and streams



pervious paver lot allows water to recharge into the soil (credit 13, see page 37)



pervious, grass-cell paver parking lot, which remains green, can be utilized during peak use times of the year (credit 14 see page 37)

RECOMMENDATIONS



J.C. Stone Field

8. PROVIDE VARIED PARK EXPERIENCES

One of Lake Area's strengths is the variety of places and uses that park visitors can experience. Places include both natural (such as lake edge, wetlands, forests) and activity (play fields, sport courts, playgrounds, etc.) areas. This diversity should be maintained and enhanced to keep the park as a viable destination for the broadest spectrum of users. Some of the more popular spaces within the Lake Area include:

- Point
- Boathouse
- Cabin
- J.C. Stone Field
- Tennis & Platform Tennis Courts
- Irwin Pond
- Flagstaff Hill



Flagstaff Hill



wetland areas



The Point



platform tennis



INITIAL PROJECTS: SHORT-RANGE PLAN

The following projects have been determined to be the first projects carried forward to implementation based on the feedback we received during the public engagement process.

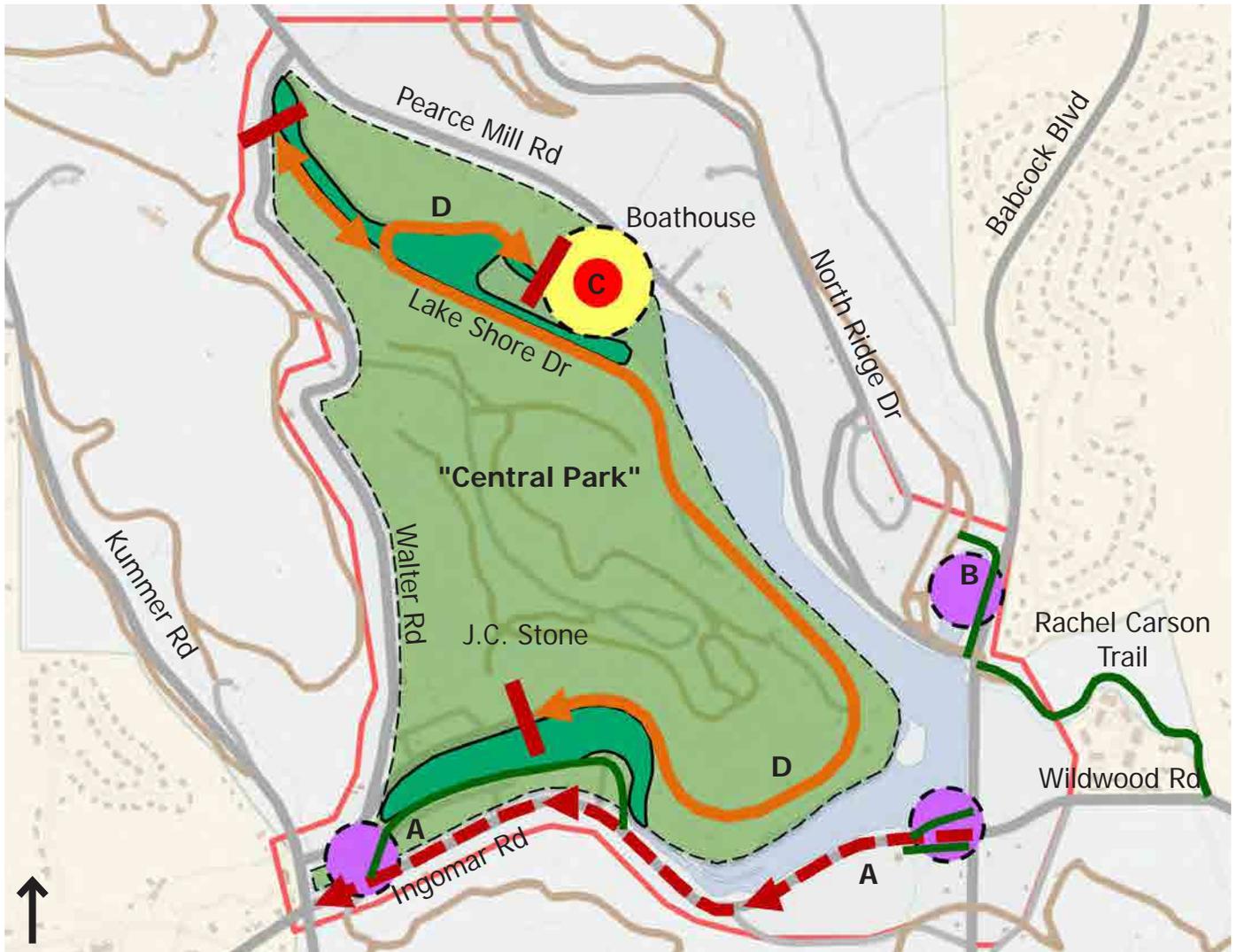
PROJECTS	2012 BUDGET
A. Ingomar Road Lake Trail	\$2,889,000
B. Rachel Carson Trailhead	\$209,000
C. Boathouse Feasibility Study	\$50,000
D. Lake Shore Intermittent Closure Trial	\$11,000
Total	\$3,159,000

Note

All of the budget figures presented herein include costs for construction, mobilization (5%), contingency (20%), administration, design and engineering fees, and permitting.

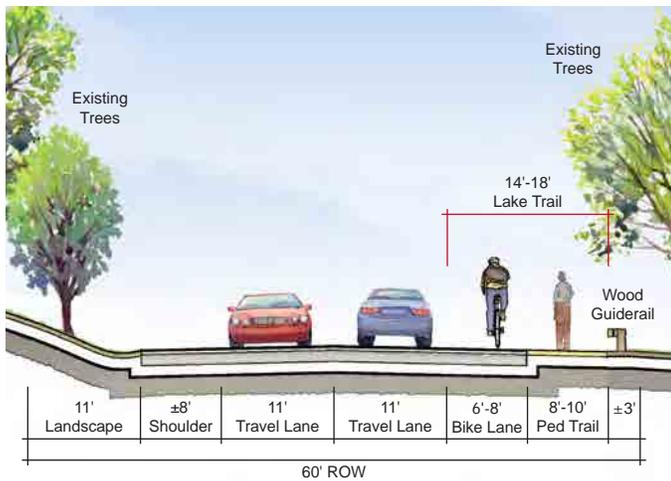


Irwin Pond near the Rachel Carson Trail



proposed short-range projects

INITIAL PROJECTS



proposed Lake Trail typical section along Pearce Mill Road and Ingomar Road

A. INGOMAR ROAD LAKE TRAIL

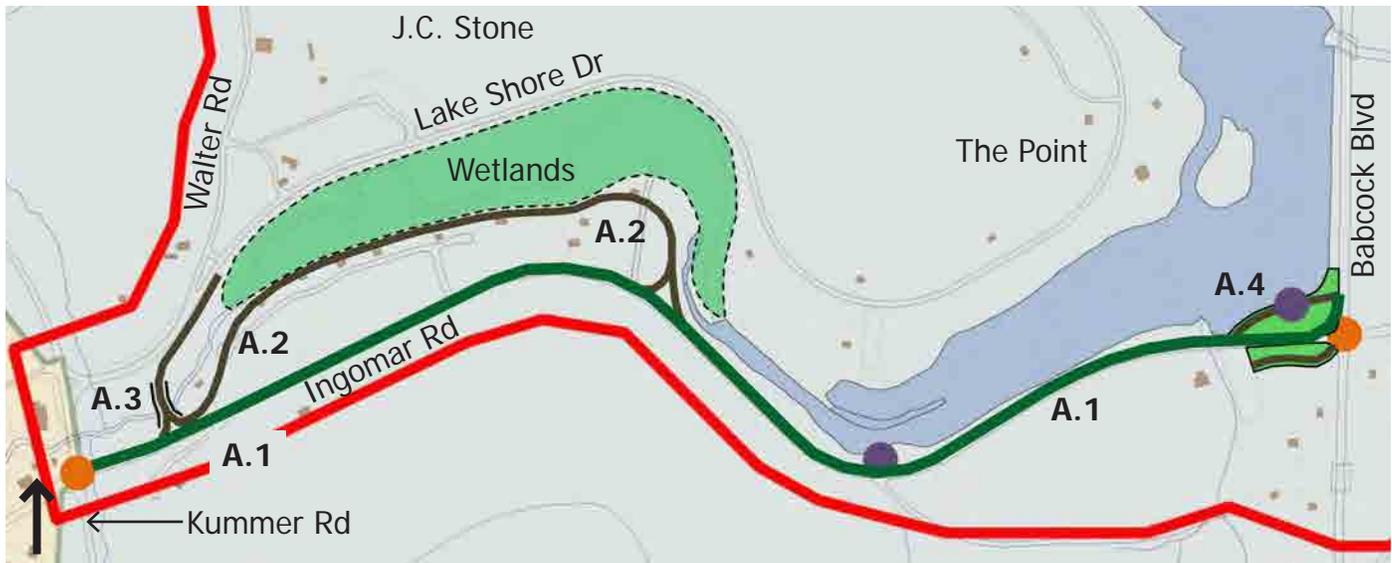
Throughout the planning process, there was consensus among the public that the Ingomar Road section of trail was a top priority. The preferred option includes an expanded road shoulder to accommodate a wider, dedicated pedestrian path separated from a one-way bike only lane. Ingomar Road falls under the PennDOT's jurisdiction so coordination with District 11-0 throughout the design and construction process will be critical for the project's overall success.

HIGHLIGHTS

1. Ingomar Road Lake Trail
2. Municipal Row Park Path
3. Kummer Road Gateway
4. Babcock Boulevard Gateway

2012 BUDGET

1. Ingomar Road Lake Trail	\$2,071,000
2. Municipal Row Park Path	\$218,000
3. Kummer Road Gateway	\$416,000
4. Babcock Boulevard Gateway	\$184,000
Total	\$2,889,000



proposed Ingomar Parkway initiative

PENNDOT INITIAL REVIEW

A meeting with the PennDOT District 11-0 was held on January 4, 2012 to review the recommendations for Ingomar Road.

Comments

- Consider adding a 5' minimum bike lane in the shoulder of the eastbound lane to accommodate commuter traffic.
- Shoulders should be 6' minimum. A 14' shared lane, which would provide a better cross-slope for users may also work.
- Travel lanes could be reduced from 11' typical to 10' depending on existing traffic counts.
- The road centerline could shift south towards the eastbound lane to widen the lake trail. There appears to be enough right-of-way to accommodate the road relocation, which may minimize potential 4f issues.
- Multi-purpose trails should be 8' minimum, however 10' is preferred based on traffic volume.
- The use of curb and gutter is not preferred. The Township of McCandless would have to agree because they maintain Ingomar Road. New regulations require a barrier at the face of curb. The use of wood guiderails may be possible.
- The use of pervious pavement for the pedestrian trail is permitted.
- The use of an edge-line rumble strip on the painted white line and reflectors to delineate the bike lane is acceptable.



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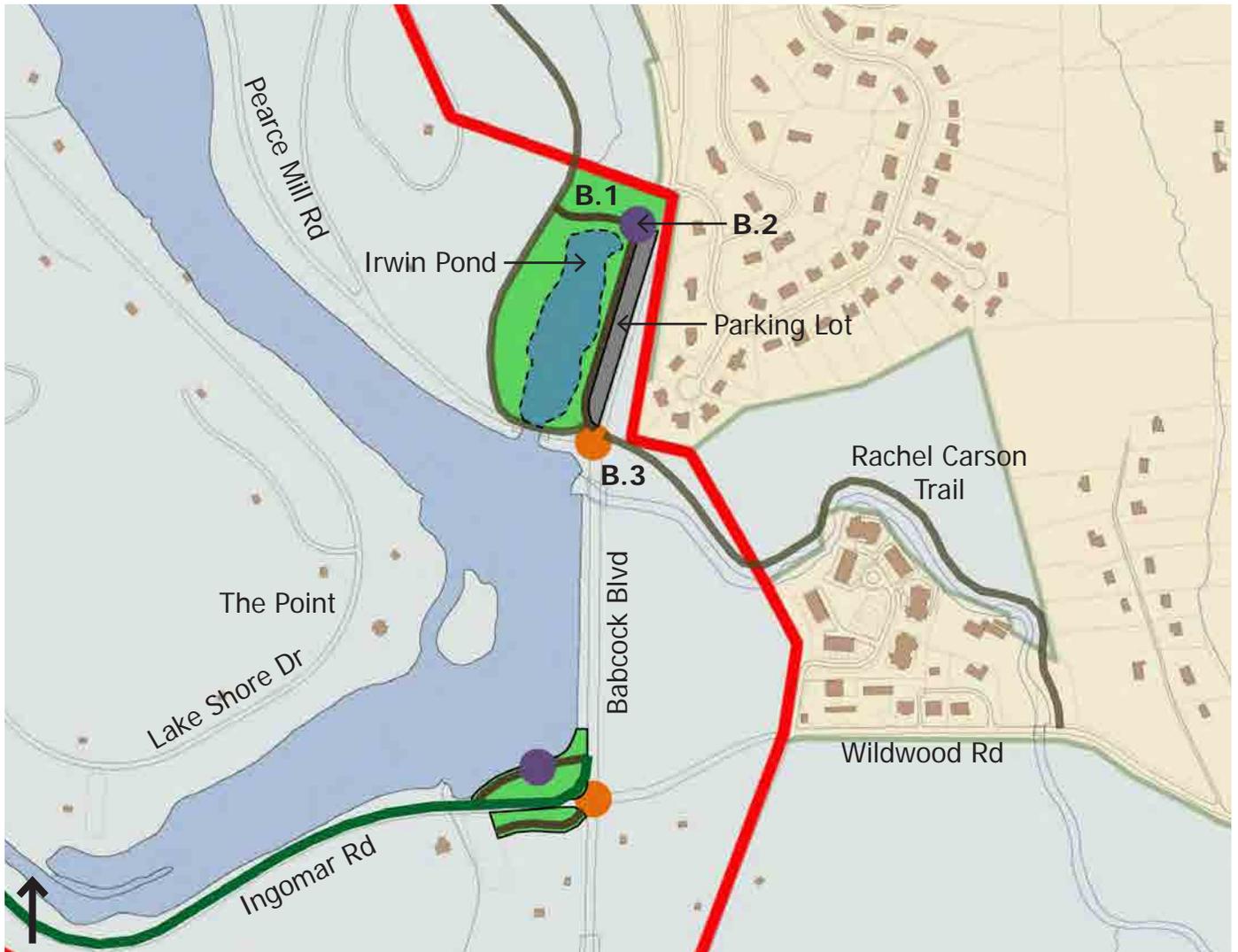
B. RACHEL CARSON TRAILHEAD

The community expressed a need to improve and provide additional trail connections within the park. An opportunity exists to make a better connection of The Rachel Carson Trail, which connects North Park to Harrison Hills Park, across Babcock Boulevard by upgrading the intersection, adding a new trail between the parking lot and Irwin Pond, and rebuilding the berm from an upgraded Beaver pavilion across the edge of the pond. At the end of the existing pavement life cycle, the parking lot could be upgraded to a permeable, green lot.



Rachel Carson Trail Western Terminus with Beaver pavilion in the background

HIGHLIGHTS	2012 BUDGET
1. Pedestrian Trail Enhancements	\$167,000
2. Beaver Pavilion Trailhead Renovations	\$38,000
3. Intersection Upgrades	\$4,000
Total	\$209,000



proposed Rachel Carson Trailhead initiative



INITIAL PROJECTS



Boathouse and parking lot

C. BOATHOUSE FEASIBILITY STUDY

Throughout North Park's history, the Boathouse has been its defining element. This was reinforced during the public engagement process. Many potential reuse and expansion possibilities exist for the Boathouse facility and surrounding grounds. A feasibility study to determine the highest, best, and most appropriate uses for this landmark facility should be conducted prior to any leasing arrangements and physical improvements.

HIGHLIGHTS

1. Feasibility Study

Total

2012 BUDGET

\$50,000

\$50,000



proposed Boathouse Feasibility Study initiative



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D. LAKE SHORE DRIVE INTERMITTENT CLOSURE TRIAL

Closure testing on Lake Shore Drive, from J.C. Stone Field to the pedestrian bridge across the North Fork of Pine Creek, would be an economical first step to develop the "Central Park". Testing would begin on a limited basis on a weekday or Sunday morning from dawn to 11:00 AM when access to pavilions is not a priority. The program could incrementally progress as needed if successful. The road would remain open to disabled visitors and emergency vehicles at all times.

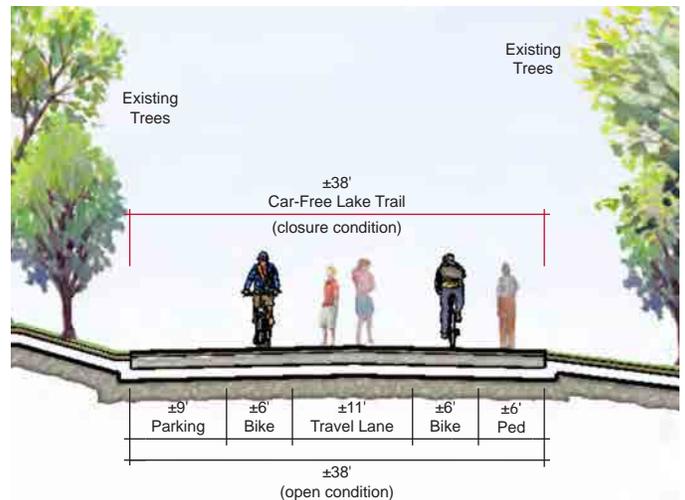
HIGHLIGHTS

1. Trail Signs
2. Temporary Barricades
3. Amenities

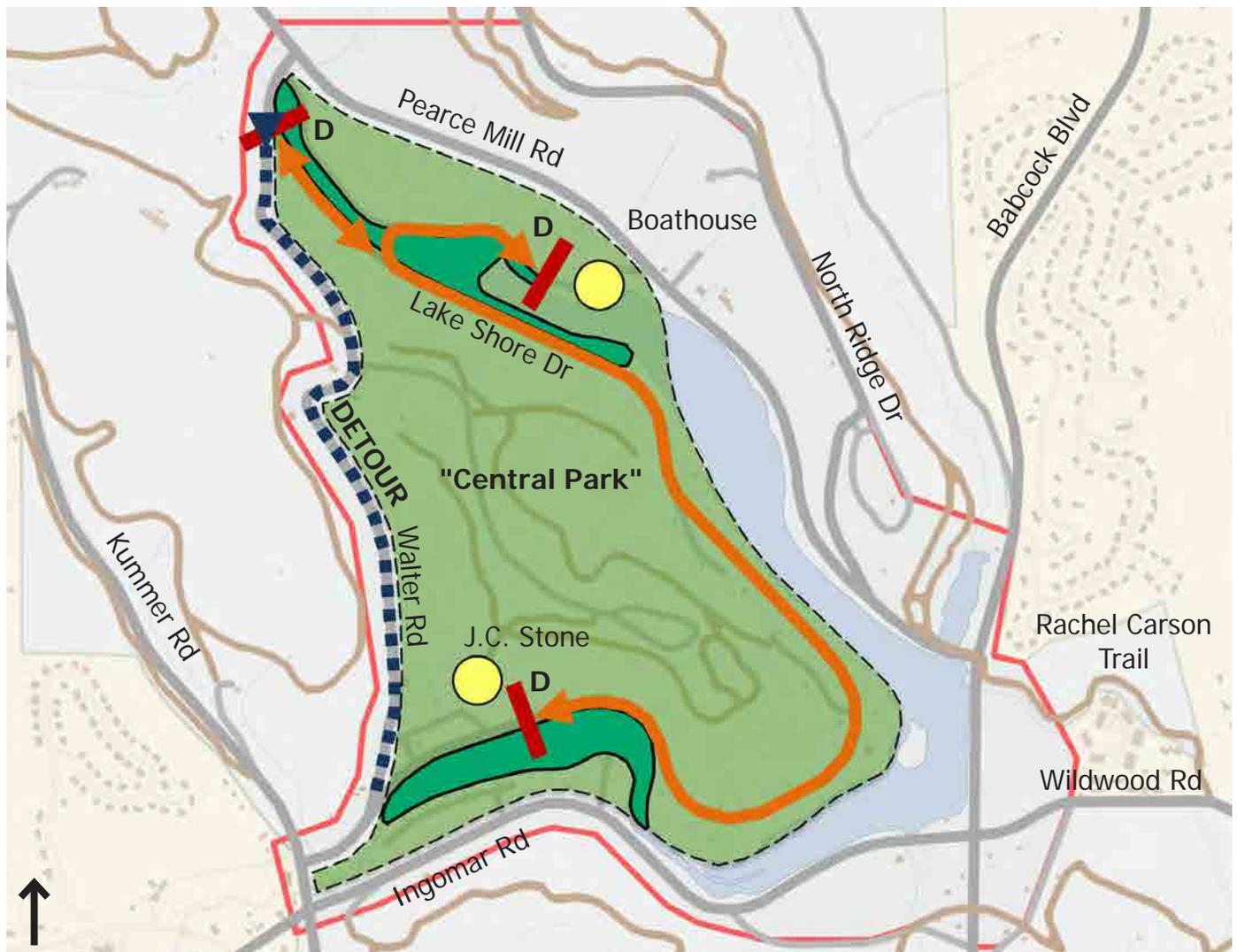
Total

2012 BUDGET

- \$2,000
- \$7,000
- \$2,000
- \$11,000**



proposed Lake Shore Drive intermittent closure typical section



proposed Lake Shore Drive intermittent closure initiative

FUTURE PROJECTS



park path precedent (credit 8 , see page 37)

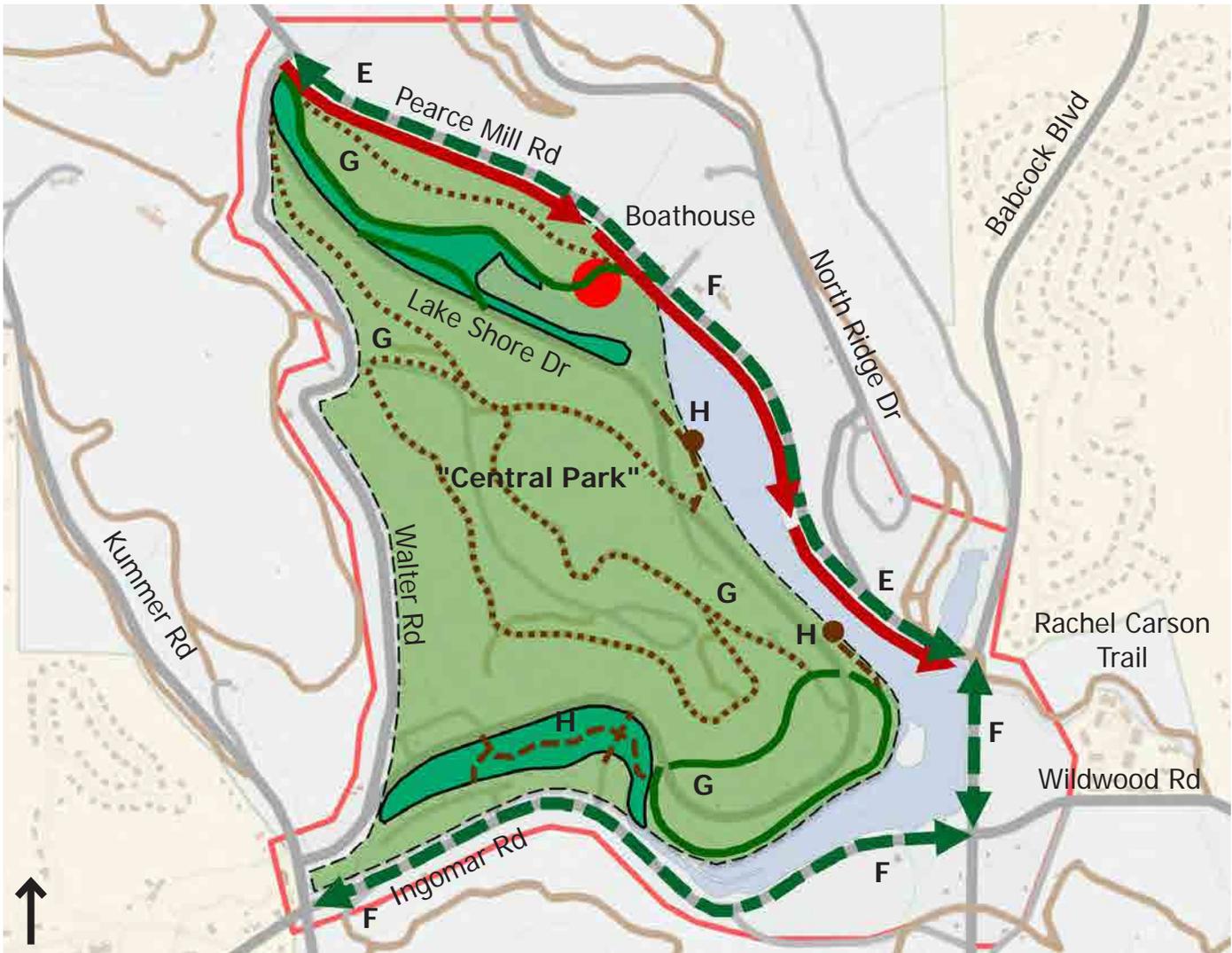
MID-RANGE PLAN

The following projects have been determined to be the second round of projects to be implemented based on the feedback we received during the public engagement process.

PROJECT	2012 BUDGET
E. Pearce Mill Road Lake Trail	\$1,016,000
F. Parkways	\$1,051,000
G. Park Paths & Woodland Trails	\$764,000
H. Wetland Boardwalks	\$823,000
Total	\$3,654,000

Note

All of the budget figures presented herein include costs for construction, mobilization (5%), contingency (20%), administration, design and engineering fees, and permitting.



proposed mid-range projects



LONG-RANGE PLAN

The following projects have been determined to be the last round of projects to be implemented based on the feedback we received during the public engagement process.

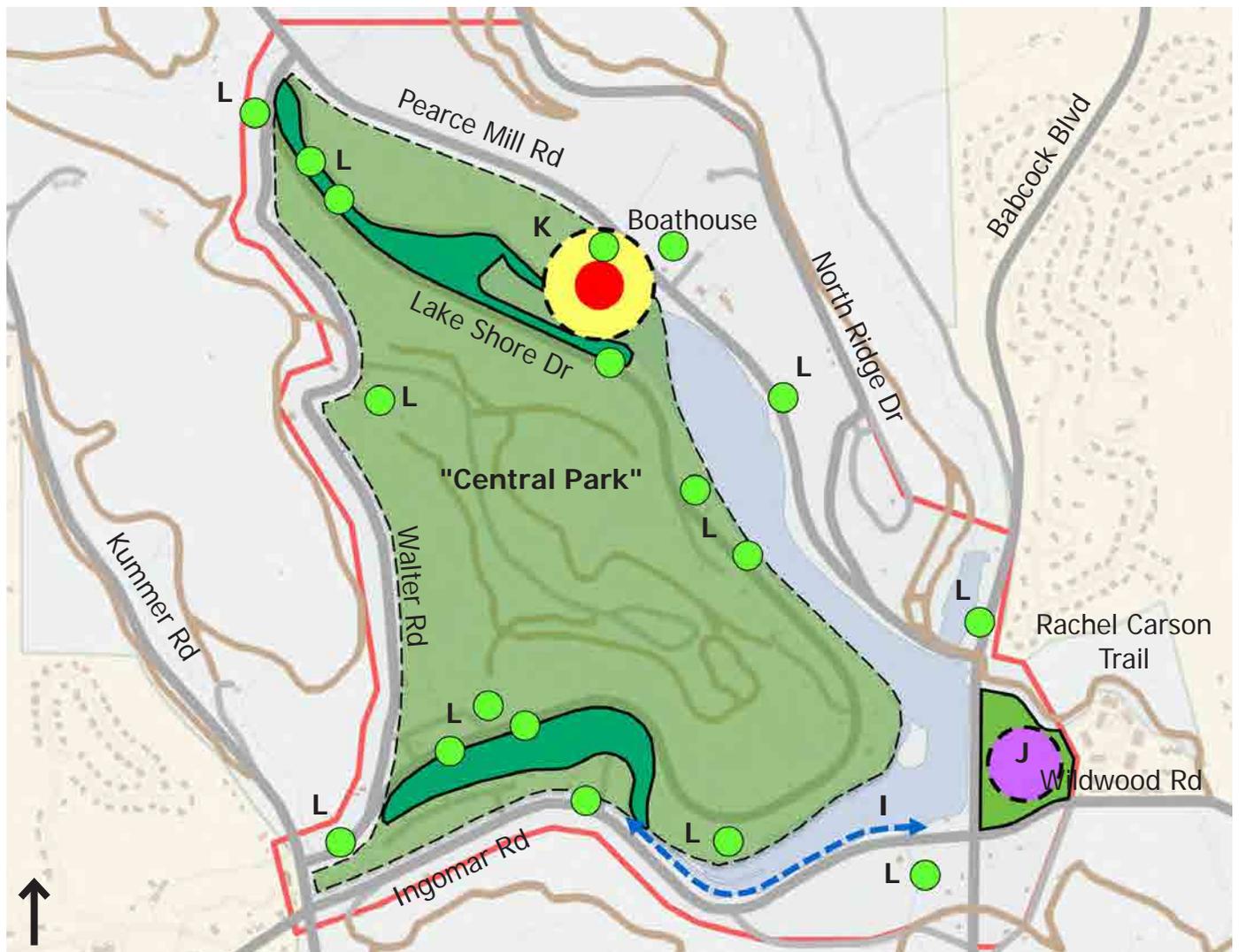
PROJECT	2012 BUDGET
I. Lakeside Boardwalk	\$847,000
J. Babcock & Ingomar Gateway	\$650,000
K. Boathouse Improvements	\$956,000
L. Sustainability Improvements	\$1,024,000
Total	\$3,477,000

Note

All of the budget figures presented herein include costs for construction, mobilization (5%), contingency (20%), administration, design and engineering fees, and permitting.



lakeside boardwalk precedent (credit 11, see page 37)



proposed long-range projects

SUMMARY

The historic legacy of North Park is profound. It was conceived and constructed during a time when the leaders of Allegheny County saw a need to provide natural places for citizens to get away from the rapidly industrializing city. In 1927, the County commissioners hired Paul B. Riis, a leader in the picturesque style of park design popular the 1920's, to carry out a vision for North Park. He oversaw every aspect of park development including construction of roads and shelters, acres of reforestation, and ornamental landscaping. Even though his tenure at the County was short-lived, Riis' lasting impact is visible in North Park to this day.

Other popular amenities that were conceived after Riis' departure in 1932 include the Boathouse and North Park Lake, dedicated in 1937, and a 5-mile Lake Trail that loops around the lake on perimeter roadways. However, a decades-long reduction in staffing levels and current economic constraints has created an ongoing maintenance challenge for the County, which has led to many functional and aesthetic deficiencies throughout the Lake Area. Recently though, a joint project between Allegheny County and the U.S. Army Corps of Engineers was completed that resulted in thousands of cubic yards of sediment being removed from North Park Lake. This significant public investment will greatly improve the aquatic habitat and recreation experience of the lake.

The main purpose of this master planning process was to create a framework for sound decision-making to transform the North Park Lake Area into a sustainable place that reflects the needs of today's park users, makes the most of this significant public asset by building on its existing strengths and historic legacy, and also works within the maintenance capabilities and budgets of the County's Park and Public Works departments.

During the public engagement process, it was made evident that the Lake Trail is the most popular feature within the Lake Area by far. Walkers, runners, and cyclists of all ages and abilities use the trail on a regular basis, and many races,

walks and charity events are scheduled there throughout the year. The public also stressed that the function of the Lake Trail does not need to change dramatically but safety upgrades are necessary, a recommendation of previous reports conducted for North Park. To this end, Allegheny County recently completed an enhancement project, funded by the Pennsylvania Community Transportation Initiative (PCTI) through PennDOT, on the Babcock Boulevard section of the Lake Trail with the primary goal being improved safety for pedestrians, cyclists and vehicles.

As shown in this report, a careful reassessment of the Lake Trail along with thoughtful reconsideration of adjacent roadway character, park connections and entry experiences, uses and amenities, including the Boathouse, and landscape preservation can improve the user experience in the Lake Area while, at the same time, enhance and promote North Park's historic legacy. This approach will significantly heighten the importance, accessibility and enjoyability of the naturally occurring environmental assets like the forests, lake, wetlands and streams, and will dramatically increase the site's overall sustainability and maintainability for future generations of park users.

In the Short-Range Plan, initial project priorities were chosen based on input from the public, focus group participants and the Project Committee, and adjusted based on reasonable construction sequencing and broad impact within the Lake Area. The Mid- and Long-Range Plans build further on the prioritized overarching ideas and the foundation of the Short-Range Plan.

As such, efforts are underway to obtain funding for the initial projects recommended in this report, which is focused on the Ingomar Road section of the Lake Trail (projects A through D). Having a feasible master plan in place, with a series of smaller projects defined in a rational sequence, allows for a more efficient means of raising capital, from both government and private sources, for successful implementation.



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PHOTO & IMAGE CREDITS

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2. Hefelfinger and Austen. "3829-North Park Lake from No. Ridge Drive." June 23, 1937. Allegheny County Department of Public Works. PDF file.
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9. "Look out point on the lake at Central Park, NYC." Photograph. *wikipedia.org*. Wikipedia Foundation, Inc., 2010. Web. November 10, 2011.
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12. Parisi, Daniel. "North Park." Photograph. *tclf.org*. The Cultural Landscape Foundation, 2011. Web. 2011. September 25, 2010.
13. "Permeable Paving Parking Lot, Hubble Middle School." Photograph. *warrenville.il.us*. City of Warrenville, 2005. December 6, 2011.
14. "Phipps Breaks Ground on Green Overflow Parking Area." Photograph. *geocheminc.com*. GeoCHEM, Inc., 2012. Web. December 1, 2010.

NOTES

Statements concerning probable construction cost and/or detailed cost estimates contained herein and in the Appendix prepared by GAI represent its judgment as a professional familiar with the construction industry. It is recognized, however, that GAI has no control over the cost of labor, materials or equipment, over the contractors' methods of determining bid prices, or over competitive bidding or market conditions. Accordingly, GAI cannot and does not guarantee that bids, proposals, or actual costs will not vary from any statement of probable construction cost or other cost estimate prepared by it.



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A: Conduct Site AnalysisA1
B: Develop AlternativesB1
C: Develop Final Master Plan.....C1
D: Cost OpinionsD1

