

# BEAVER RUIN PARK SITE MASTER PLAN



**GWINNETT COUNTY DEPARTMENT  
OF COMMUNITY SERVICES,  
PARKS & RECREATION DIVISION**

**SEPTEMBER, 2008**

# **Beaver Ruin Park Site Master Plan**

## **Gwinnett County, Georgia**

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Parks & Recreation Division  
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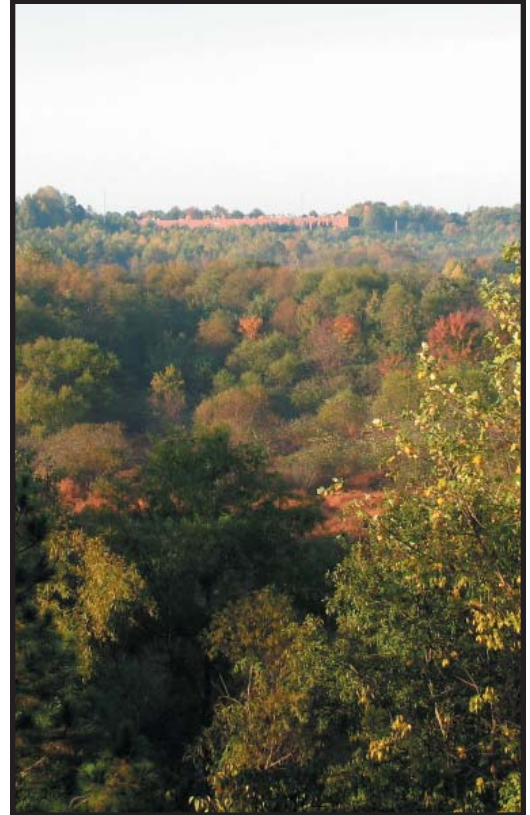
## SECTION PROJECT GOALS AND OBJECTIVES

1.0 The 2004 Gwinnett County Comprehensive parks and Recreation Master Plan included a recommendation for a new park classifications. The classification being a “Special Purpose Neighborhood Park”. The Special Purpose Neighborhood Park would provide an alternative form of parkland for the more desely populated and under-served areas. The park type would be a supplement to the standards

This park type would be an active or passive park with reduced parking standard, as it caters to a geographic area with a denser population and a greater potential for “walk to” utilization. Generally, the denser the population, the greater the demand for active recreational opportunities such as walking paths, and open areas for unstructured play, therefore these types of facilities (in small numbers) are considered for Special Purpose Neighborhood Parks.

This report addresses the need for park services in a vigorously growing area of Gwinnett County on a recently acquired 58-acre site on Beaver Ruin Road and Satellite Boulevard. The goals driving this master plan include the following:

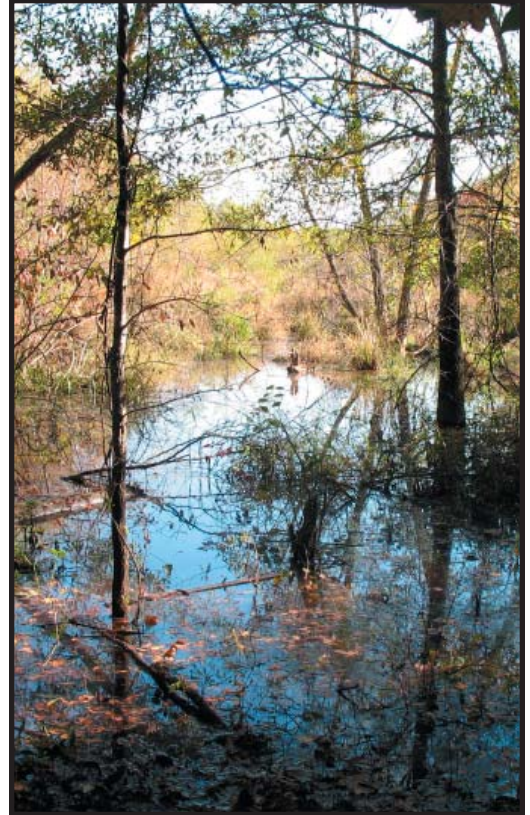
- Address need for park services in an underserved area to ensure that park services are provided to all areas of the County.
- Realize goals of 2004 Comprehensive Plan and the 2007 CIP Plan.
- Integrate a variety of diverse recreation activities which will serve all age groups.
- Create sidewalk, pedestrian or bike trail connections to surrounding neighborhoods.
- Maintain both passive and active areas of the park while providing safety.



## SECTION PROJECT UNDERSTANDING

2.0 The Beaver Ruin Park Site is historically a mitigation site composed of approximately 58 acres. The site is bounded on the north by Satellite Boulevard and a commercial property currently under construction, on the west and southwest by the Hickory Ridge Subdivision and Beaver Ruin Road, on the east by a wetland owned by Menlo Creek Apartments and on the southeast by Interstate 85. A floodplain corridor associated with blue-line Bromolow Creek, dominates the northern half of the site where the southern half of the site is comprised of developable uplands.

Bromolow Creek enters the site from the west in well-defined banks. Adjacent riparian areas support middle aged tree species such as river birch, and sycamore. Other areas along the creek show signs of black willow, alder, ironwood and herbaceous vegetation including cat tail, juncus, bulrush. There is significant evidence of backwater and sedimentation. The upland areas support a pine, hardwood mix with the stands of hardwood including sycamore, sweetgum, tulip poplar, and oak. The site is also home to numerous birds, water fowl, beavers, deer and numerous reptiles.



The park is intended to serve as the County's second "Special Purpose Neighborhood Park". The "Special Purpose Neighborhood Park" will provide an alternative for parkland for the more densely populated and under-served areas of the County. Typically the park will be a mixed activity park with reduced parking standards, as with a denser population there is a greater potential for "walk to" utilization or bussing opportunities.

The project site has a rich history of various owners, due diligence, conservation easements and buffers, as well as additional restrictions such as delineated wetlands, 100 year flood plains, blue-line stream setbacks, power easements, sewer easements, restrictive covenants.

## SECTION PROJECT APPROACH

3.0 Using a standard Master Planning project approach toward the Beaver Ruin Park project, the project passed through a series of design stages before a final Master Plan was approved. The following represent the milestones completed along the way.

- Notice to proceed issued to jB+a, inc.
- Flyers advertising public meeting distributed, public meeting sign erected.
- Consultant / County Representative Site walk
- Public Input meeting, Community Interest Forms and Steering Committee Membership applications distributed.
- Steering Committee Scheduling Meeting
- Steering Committee Park System Tour with Consultant and County Representatives
- Steering Committee Park Site Visit with Consultant and County Representatives
- Inventory / Analysis, Conceptual Plans Presentation to Steering Committee
- Preliminary Master Plan and Cost Estimate Presentation to Steering Committee
- Final Master Plan Presentation w/ phasing prioritization
- Presentation to Gwinnett County Recreation Authority

The following provides a brief description and timeline of sequence of Meetings. Please refer to Appendix I - Meeting Minutes (Page 71) for subsequent meetings.

### Preparation of Base Information

jB+a, inc. prepared AutoCAD base information utilizing GIS files and aerial photography obtained from Gwinnett County.

### Preplanning Site Visit

jB+a, inc., County Staff and Ecological Solutions, Inc. met at the park site on September 17, 2007 for an informative site walk. The intent of the site walk was to review the various restrictions and regulatory constraints associated with the site. Ecological Solutions was paramount in the initial consultation with the resource agencies specifically dealing with this mitigation site.

### Community Interest Meeting

The first Public Meeting was held at the Meadowcreek High School Theater on September 27, 2007 with a presentation of the park boundary survey, aerial photography, restrictive / regulatory constraints plan, a description of Special Purpose





Neighborhood Park type, a description and the receipt of Community Interest form surveys and Steering Committee Applications.

### Scheduling Meeting

The Steering Committee members met with the Consultant and Gwinnett County Staff on October 16, 2007 to schedule all meetings for the Beaver Ruin Park Site Master Planning Process.

### Tour of County Parks

Gwinnett County Staff, Consultants and Steering Committee members met at the Gwinnett Justice and Administration Center (GJAC) on October 27, 2007 to begin the Park system tour. The Park team visited 4 parks to discuss specific elements located at each park. These parks included the following:

**Melvin L. Newman Wetlands Center:** The Newman Wetlands Center, located in Clayton County, was opened by the Clayton County Water Authority in 1995. It was built to demonstrate the importance of preserving wetlands environments and to provide public education in matters of natural resource conservation. The site is 32 acres, includes a wetlands trail and a 4,800 sq/ft building complex comprised of an exhibit/learning area, a 50-seat auditorium, offices, and a conference facility. There are picnic facilities on site as well. The wetlands trail is a 0.5 mile loop, alternating between crushed stone and boardwalk. Along the boardwalk there are open and covered seating areas. During the walk, it was noted that the water level of the wetlands at this site is mechanically controlled. Also, it was discussed that any boardwalk built at the Beaver Ruin Site would be approximately 2 feet wider than the boardwalk at the Newman Center to allow for 2-way traffic.

**Sweet Water Park:** Gwinnett County's Sweet Water Park is a 25 acre park with a large concrete plaza area, a 3/4-mile multi-purpose trail, playgrounds, a



Boardwalk - Melvin L. Newman Wetlands Center



Melvin L. Newman Wetlands Center



Melvin L. Newman Wetlands Center

restroom building, two half-court basketball courts, two tennis courts, horseshoe pits, sand volleyball court, picnic tables, and porch swings. The plaza area boasts a nearly 2,000 square-foot open central pavilion with two 1,000 square-foot extensions on each side. The importance of providing playground equipment to accommodate a variety of ages, locating park elements with safety in mind; specifically the location of bathroom buildings in respect to playground areas, and the location of the basketball courts near the parking lot for passive policing were discussed. Also discussed was the relationship between the length of a trail and the trail use types, construction methods and coatings for dealing with vandalism.

**Five Forks Park/Ronald Reagan Park** – Gwinnett County's Ronald Reagan Park (previously known as Five Forks Park) is a 25 acre passive community park. The Park amenities are laid out to provide passive policing of the basketball court area and teen skate park by the parking lot and vice versa. The fenced dog park includes 3 specific areas, a dog run, a small dog area, and a large dog area. Adjacent to the dog park is a large open turf area that could be used for unstructured play by park visitors. A pedestrian connection to an adjacent neighborhood was pointed out at and discussed in relation to the opportunities at the Beaver Ruin Site. The difference between shelters and pavilions, selective clearing of underbrush to produce sight lines in wooded areas and the importance of providing fencing between the playground and parking area was discussed.

**Little Mulberry Park** – Gwinnett County's Little Mulberry Park is an 890 acre park site with amenities including, a 6 mile paved multi-use trail, a large rustic picnic pavilion, two smaller picnic pavilions, a playground, an observation terrace at the peak of the West Meadow; one of the highest elevations in Gwinnett County, equestrian trails, a lake with several fishing piers, and two separate



Playground - Sweetwater Park



Stormwater Management -  
Little Mulberry Park



Pavilion - Little Mulberry Park

entrances with parking and restroom areas. There is an additional parking lot, for equestrian use only. Little Mulberry Park is considered to be an Open Space Park. Natural materials and non invasive construction methods were used to construct the park to blend with the natural setting and to minimize disturbance of the existing woodlands.



Beaver Ruin Park Site

#### Park Site Visit

Gwinnett County Staff, Consultants and Steering Committee Members met at the project site on November 3, 2007 for an informative site walk. The intent of the site walk was to become familiar with the opportunities and constraints of the park site. Steering committee members actively participated in the site tour by voicing concerns and requests for their Special Purpose Neighborhood Park.

#### Inventory / Analysis, Concept Presentation

The Consultant presented the Park Site Inventory & Analysis diagrams to the Steering Committee on December 6, 2007. Diagrams included; Slope and Hydrology Analysis, Soils Analysis, Vegetation Analysis, Photographic Inventory, Opportunities and Constraints Analysis, and 3 Alternative Concept Plans.

#### Preliminary Master Plan

A Presentation of the Preliminary Master Plan graphic and cost estimate was given to the Steering Committee on January 10, 2008, by the Consultant. A number of comments from the Committee and staff were given and the Consultant was asked to incorporate the comments into the Final Master Plan.

#### Final Master Plan Presentation

On August 28, 2008 jB+a presented the Final Master Plan graphic, an Option B Graphic and cost estimates to Steering Committee. By majority acclamation the Steering Committee accepted the Final Master Plan as shown in the graphic presented (RE: Graphic page 32). The Committee voted to accept Option B as the minimal acceptable development for the park and prioritize park elements for development when funding becomes available, by means of discussion and majority vote. By majority vote, the Committee agreed to submit the Graphic Plan and their development priorities to the Recreation Authority for their acceptance.



### Presentation to Recreation Authority

The Steering Committee recommendations were presented to the Gwinnett County Recreation Authority on September 11, 2008. The plan was presented by the consultant with several committee members present. The Recreation Authority voted unanimously to accept the master plan as the guiding document for the development of the Beaver Ruin Park Site with only a minor revision.

## SECTION

### 4.0 SITE INVENTORY AND ANALYSIS

Prior to concept development a series of analyses were conducted. The following is a summary of each of these analyses; a graphic diagram accompanies each summarization.

#### Photo Inventory (RE: Graphic page 13)

Pictures taken during the various site walks and the location in which they were taken are illustrated in this inventory as a quick reference to conditions on the site at a variety of locations.

#### Slope (RE: Graphic page 14)

The site reflects abandoned agricultural slope formations. The majority of the site falls between 0% slope and 5% slope. The high point (elev. 990.0) of the site is located in the southwestern corner of the site near the existing gas station. The lowest point of the site runs along Bromolow Creek at an elevation of 882.0. This is a 108 foot elevation difference across the site.

As mentioned the majority of the site is between 0% and 5% slope, which is favorable for the proposed boardwalks and ADA compliance. The slopes from 5% to 15% can buildings with very little grading and will offer additional interest and challenge for the anticipated user. The portion of the site with 15% to 20% will need a significant degree of grading and earth moved in order to create anything more than foot paths and picnic sites. The edges of the site along Beaver Ruin Road and Interstate 85 South has slopes steeper than 30% which is not favorable for construction of any type.

#### Hydrology (RE: Graphic page 14)

The site possesses positive drainage patterns due to small ridges across the site which flow down into the wetlands. The water then moves through the site toward Menlo Creek apartment. Several Blue-line stream channels cross the site, the largest of these channels is Bromolow Creek. The streams cutting through the site are considered "Blue Line" streams and will therefore be regulated under state waterway laws. If rehabilitation of the stream banks is needed, a variance could be considered. The site amenities will have to be arranged so as not to interfere with any of these state waters or the designated stream buffers surrounding each one. There are existing beaver dams located in the western portion of the site.

### Soils (RE: Graphic page 15)

Also important in evaluating a site are the soil types, which help to determine the types of construction that can occur on those soils. The capacity of the soil to hold water, support vegetation, or to compact will determine the feasibility of each area for various types of recreation facilities. The soils within the Beaver Ruin Park Site are generally sandy loam and alluvial type soils which are not favorable for most types of construction due to their tendency to be poorly drained and wet. However, utilizing some engineering techniques these areas could support boardwalk type construction. Special emphasis will be needed to minimize the disturbance of the soils located within the conservation easement and delineated wetlands.

*NOTE: A Geotechnical Report has not been prepared for the site. However, due to the proximity of the Vulcan Quarry, it is likely that partially weathered or fractured rock may be encountered near Beaver Ruin Road and Interstate 85 South. It is highly recommended that geotechnical testing be performed prior to development of the park to determine engineering requirements for the boardwalk pier structures.*

### Vegetation (RE: Graphic page 16)

Vegetation across the site was analyzed and located on the Vegetation Analysis map. The site exhibits four different vegetation types; Upland, Wetland Edge, Wetland and grassland. The upland area encompasses the area nearest Beaver Ruin Road and Interstate 85 and exhibits successional forest, approximately 30 years old with a mixture of loblolly pines, hickory, sweetgum, oaks, tulip poplar and maples. Periodic flooding prevents the upland species from establishing along the wetland edge. These areas are dominated by alder and black willow. Species that can tolerate saturated soils dominate the wetland areas, including but not limited to cattails, bullrush, reeds, tear thumb and others. There are four areas that are designated as open space, that have been recently disturbed or seeded. These areas include the four sewer tie-ins which currently house low grasses and herbaceous perennials.

The banks along the existing streams may require bank restoration and stabilization to help improve the quality of the water, and functionality of these areas. Many invasives are also found throughout the site, principally privet. Selective clearing is necessary to improve the scenic qualities of these areas.

Opportunities & Constraints (RE: Graphic Page. 17)

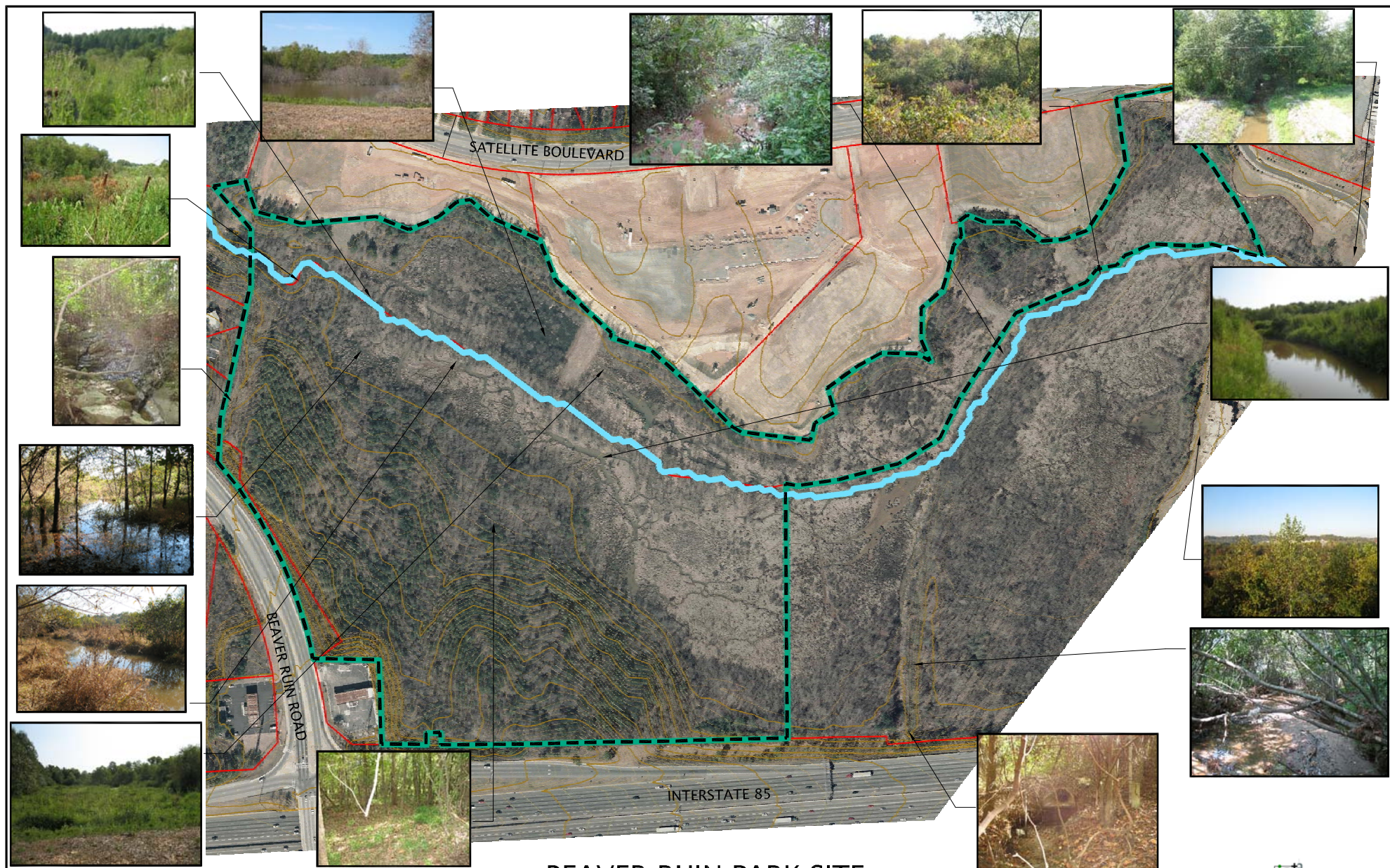
Constraints

- Park site bordered by busy Satellite Blvd, Beaver Ruin, and Interstate 85
- Excessive noise from Interstate 85
- 75' building setbacks on the streams
- A large floodway area
- Steep slopes along Beaver Ruin and Interstate 85
- Utility easements
- Conservation easement

Opportunities

- Linkages to neighborhood, Menlo Creek, Paragon Properties
- Pedestrian access from Satellite Blvd
- Great views into site from Menlo Creek Apartments and Beaver Ruin Road
- Interesting wetland areas, beaver dam ponds, open water areas, creeks





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Gwinnett County Department of  
Community Services

## BEAVER RUIN PARK SITE

### Site Photographs

December 6, 2007

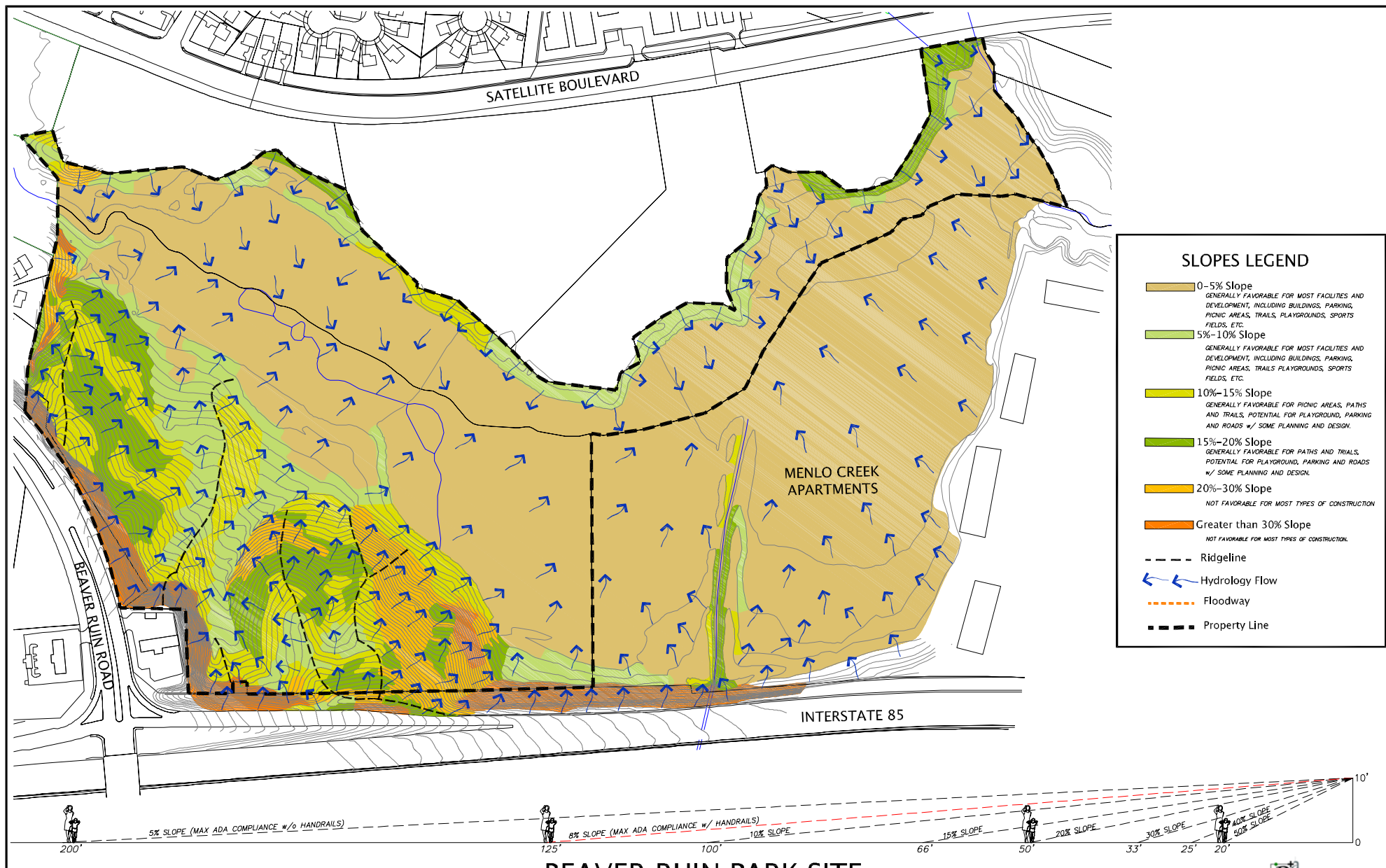
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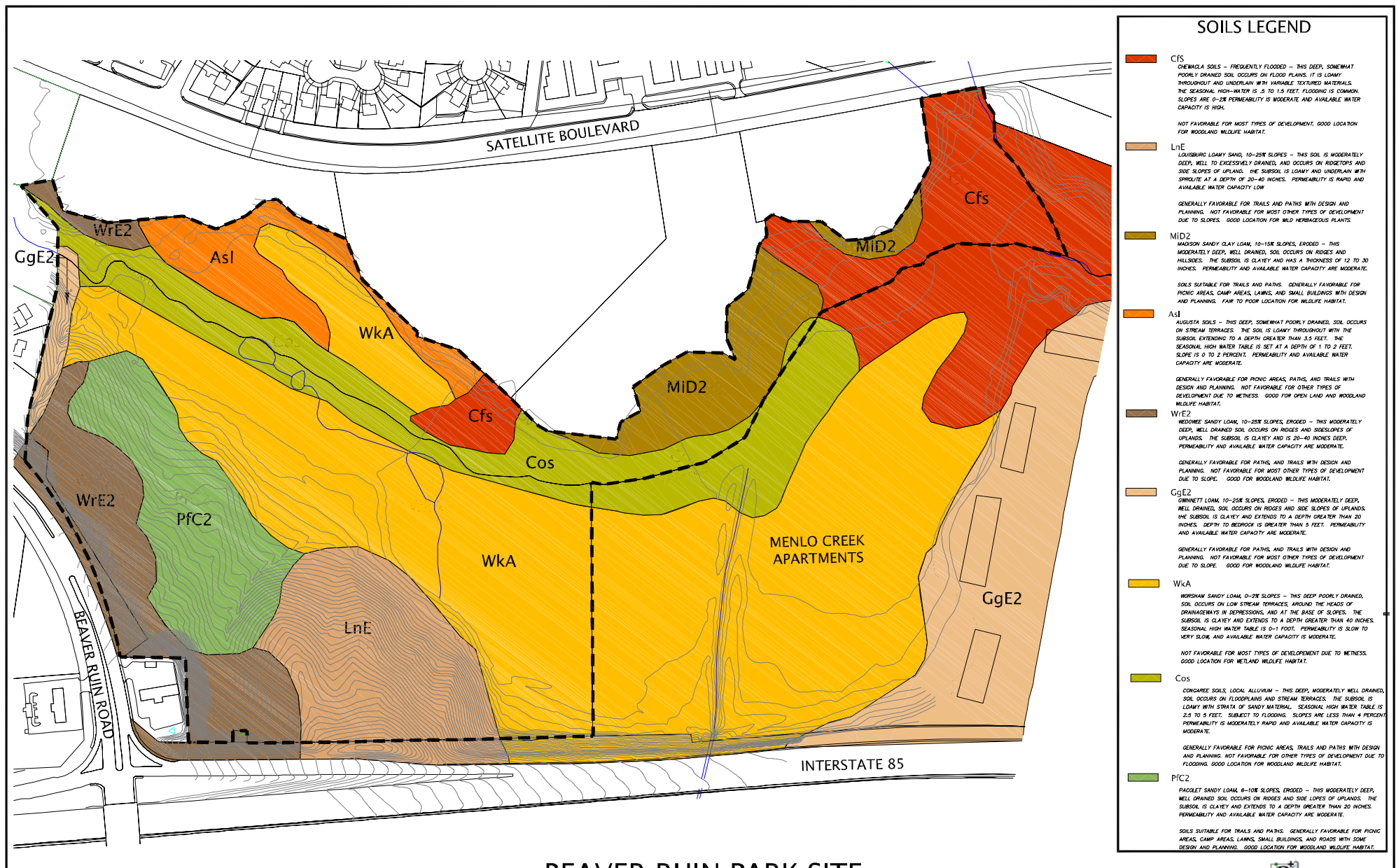
0 60 120 240 480



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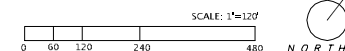


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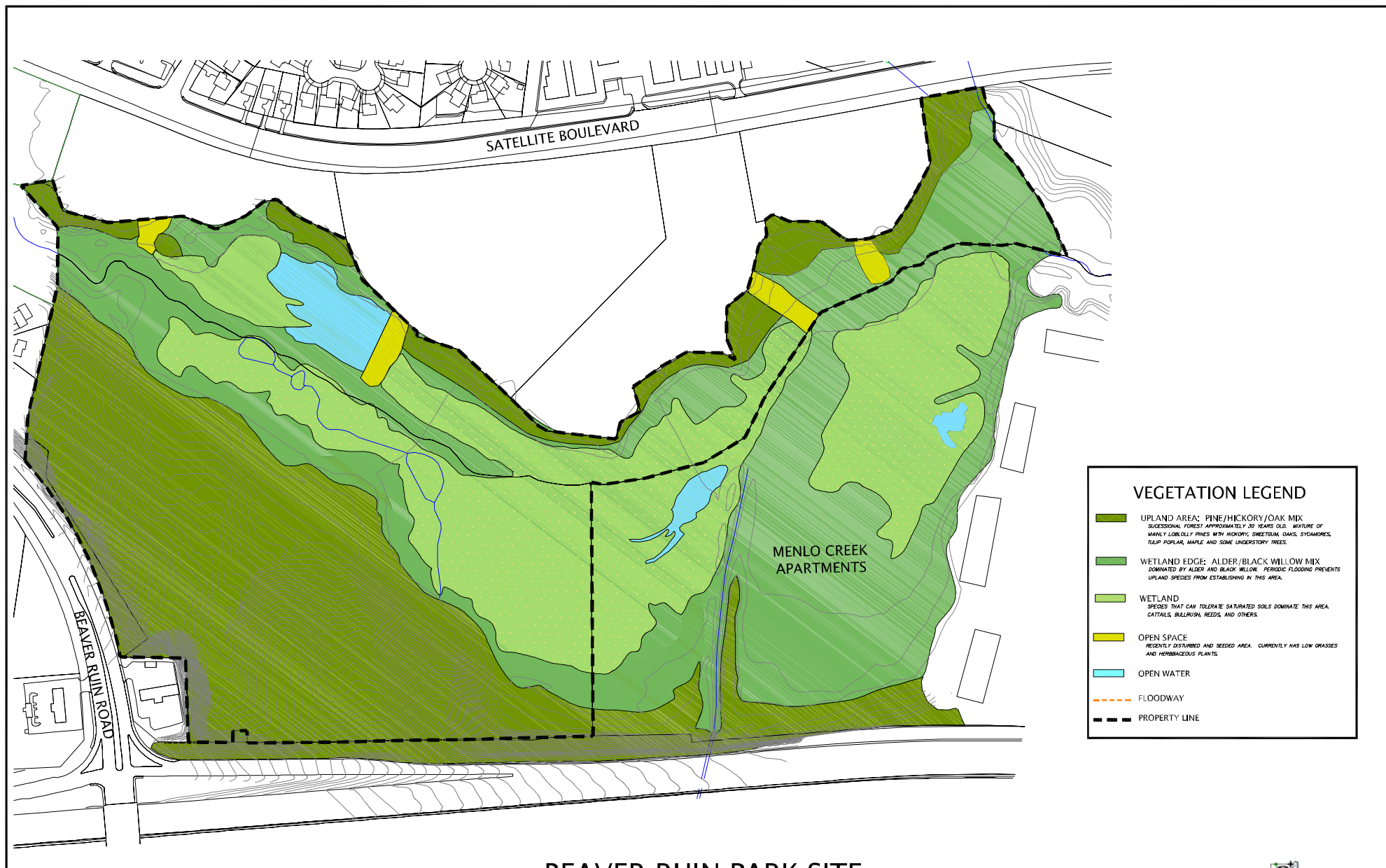
## BEAVER RUIN PARK SITE

### Soil Analysis Plan

December 6, 2007







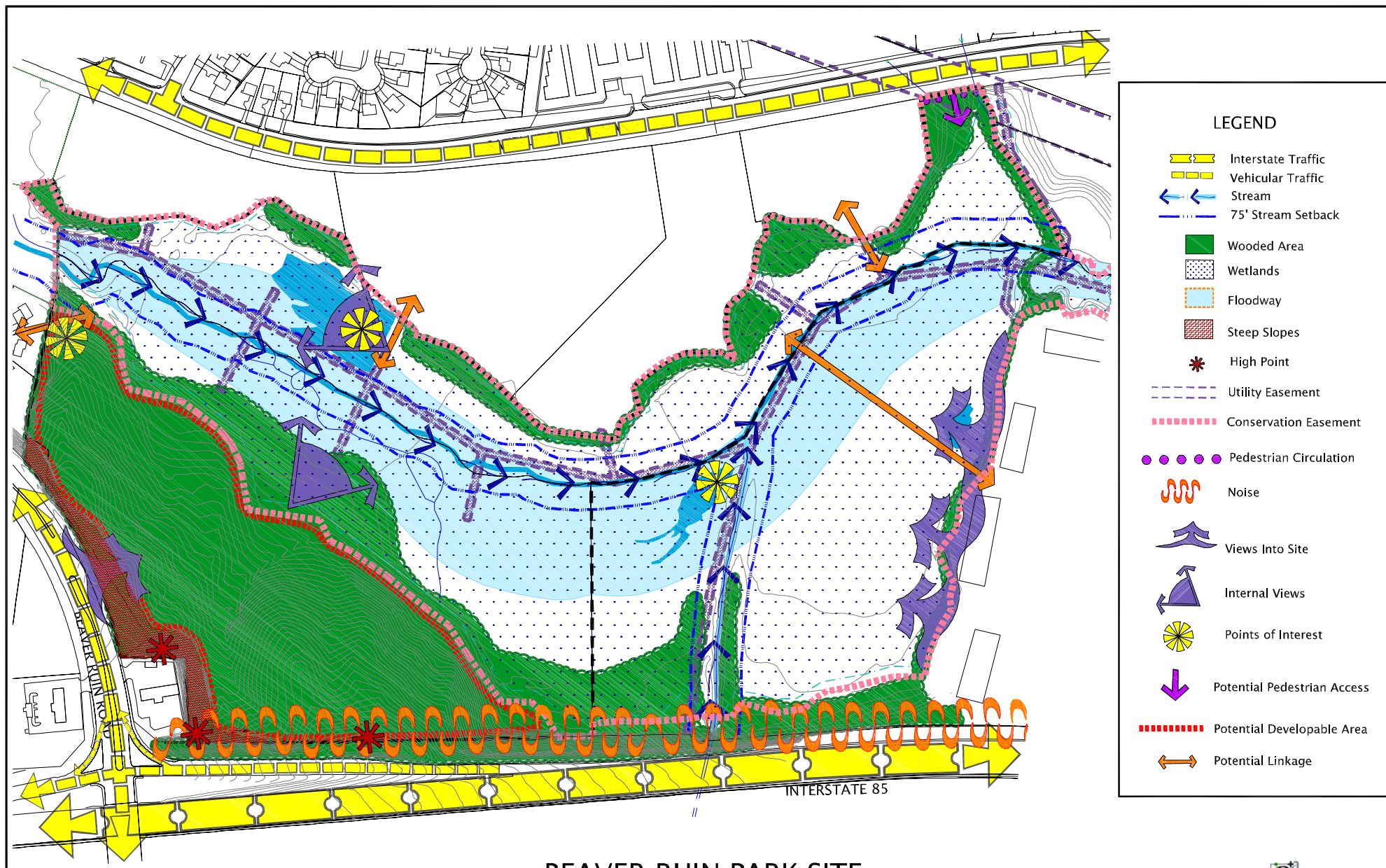
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## BEAVER RUIN PARK SITE Vegetation Analysis Plan December 6, 2007

SCALE: 1"=120'  
0 60 120 240 480



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## SECTION PROGRAM OPTIONS

- 5.0 In order to understand the changing needs and new recreation trends in the community, the Gwinnett County Department of Community Services developed a Public Interest Form to distribute at the first Public Input meeting held on September 27, 2007. These forms are used to assess the needs and wants of the local community. The interest forms are then collated, and tabulated. The information in Appendix D-Community Input Tabulation and Comments (Page 56), contains the complete results.

Top six community interests are as follows:

1. Unpaved nature trails including boardwalks
2. Picnic areas, pavilions, family gathering areas
3. Playground (multiple age groups)
4. Paved multi-use trails (walking, jogging, rollerblading)
5. Nature center / classroom facility
6. Information kiosk / Interpretive signage

During the Park Site Tour (November 3, 2008) a lunch discussion commenced at a local restaurant which included dialog regarding the results of the interest forms. Also included in the discussion was the County wide needs assessment survey (2002) and the County's definition of a Special Purpose Neighborhood Park. This information, supported by input from staff and Steering Committee members yielded the program of park elements that the Consultant was tasked with providing for the newly acquired park acreage. The program elements included the following:

- Boardwalk
- Nature Trail
- Interpretive areas
- Shelters to get out of the rain
- Outdoor Classroom
- Picnic areas
- Benches
- Sound abatement wall
- Park "Theme"
- Playground Area \*
- Parking area near Beaver Ruin \*
- Interpretive Center \*
- Restroom Building \*

*NOTE: At the time of the Park Site Tour a proposed vehicular entrance into the park was to occur off Beaver Ruin Road. Later developments prevented this from occurring and therefore the above highlighted elements were not included in the concept development.*

## SECTION

### 6.0 PROGRAM DEVELOPMENT

Working with the Citizen Steering Committee, and representatives from Gwinnett County, the consultant, jB+a, developed a program outline. What follows is the design stage progression from concept through the final master plan design. A description of each of the stages is included.

#### 6.1 Concept Development

A total of three concept plans were prepared and presented to the Steering Committee on December 6, 2007. Each concept was depicted utilizing bubble diagrams and each followed the same program requirements. They differed only through spatial relationships and layout locations. The main access to the park will be pedestrian access from Satellite Boulevard.



#### Concept 1 ( RE: Graphic page 22)

- “Sensory Garden in nature”
- Elements engage the senses through creating and noting site elements like colors, smells, sounds, textures, etc.
- Entry plaza at Satellite with seating areas and shade structures. Environmental/Sensory information expressed in paving and interpretive signage
- Viewing Towers/Outdoor Classroom- open air tower made of natural materials with benches for viewing. Outdoor classroom below with additional environmental and sensory information.
- Seating areas, with benches and trash receptacles.
- Shelters with benches and swings for viewing, picnic tables
- Boardwalk going through the ponded water area
- Plaza area near commercial district with pedestrian access
- Trellis shade structures on boardwalk with adult swings
- Natural surface nature trail within 150’ of boardwalk
- Small shelters with benches and trash cans along nature trail
- Noise reduction wall along Interstate 85
- Spur connection to Menlo Creek
- Interpretive signage
- Adult Swings
- Fairly straight boardwalk loop

Concept 2 ( RE: Graphic page 23)

- “Communing with nature”
- Information Plaza with seating areas and shade structures
- Lifetrail Wellness stations
- Viewing Tower with benches and swings for viewing, picnic tables, seating area below
- Plaza areas
- Shelter spur over ponded area
- Pedestrian access to commercial site
- Shelters with picnic tables or benches
- Interpretive signage
- Viewing platforms
- Group Pavilion on stilts at same elevation of boardwalk
- Seating areas
- Curvier boardwalk loop
- Shelter near wetland area
- Menlo creek spur trail

Concept 3 ( RE: Graphic page 24)

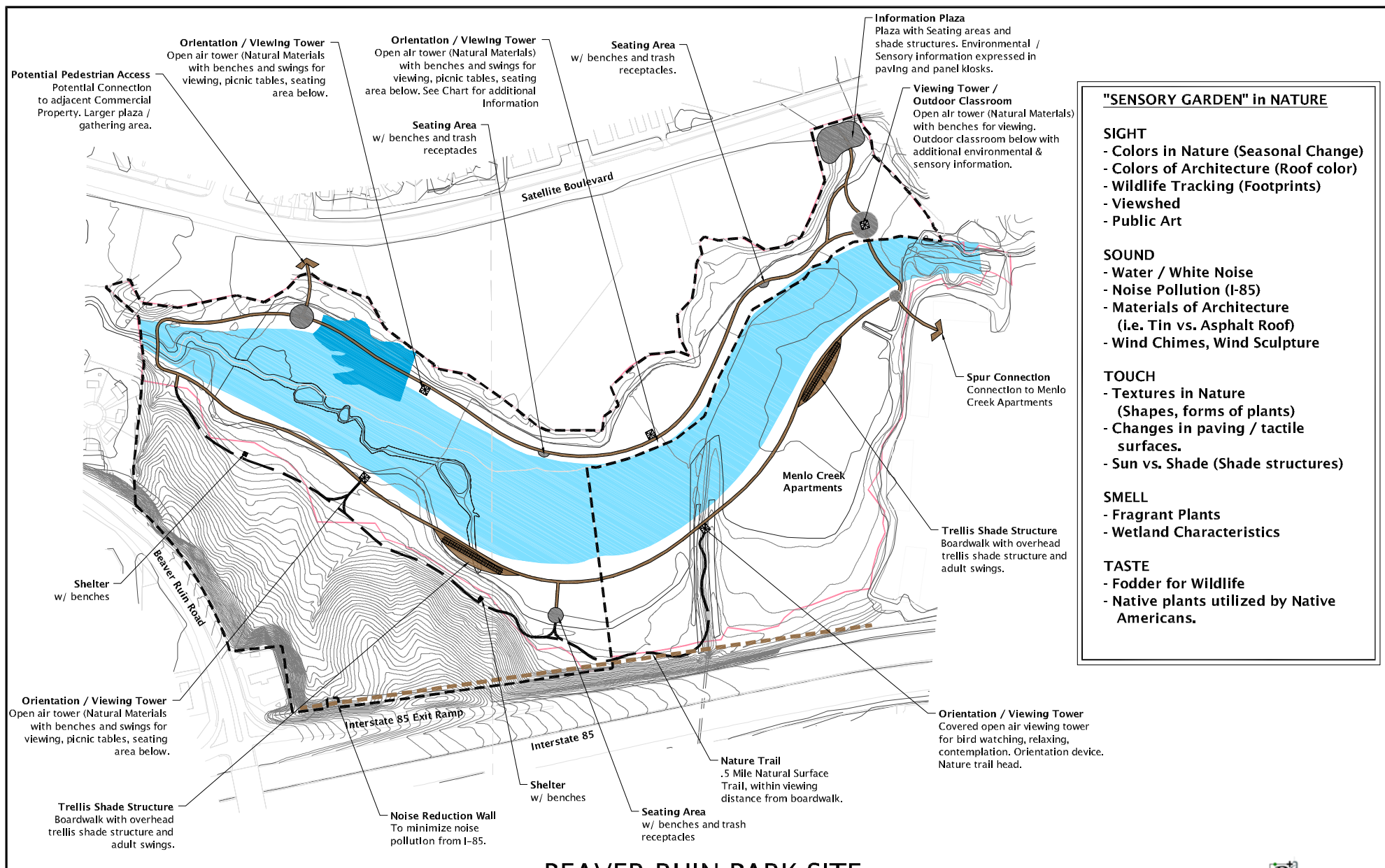
- “Environment”
- Trailhead plaza with seating area and shade structures and interpretive signage
- Elevated group pavilion
- Shade structures
- Seating areas
- Boardwalk trail on the edge of the lake
- Shorter nature trail within visual distance of boardwalk
- Outdoor classroom adjacent to nature trail
- Floodway crossing with Pavilion in middle
- Smaller boardwalk loop on Menlo Creek property
- Spur connection to Menlo Creek Apartments
- Two pedestrian accesses to commercial site.



Using the spatial bubble diagrams of all three concepts, real diagrammatic form was given to each of the park program elements. A compilation plan was adjusted based on comments from the Steering Committee and Staff, and further developed into the Preliminary Master Plan for the next meeting (January 10, 2008). The comments relating to the progression toward the Preliminary Master Plan are as follows:

- Lifetrail stations should be included in the plan
- Boardwalk alignment should be more sinuous than straight, and should be made as long as possible by including the smaller loop on the Menlo Creek property.
- Nature trail should be as long as possible.
- Sound abatement wall should be included in final plan
- Plan should include plazas, interpretive signage, seating areas, shelters and towers (2 open air towers for bird watching and 2 roofed towers. Location of the open air towers would need to be determined by further field assessment and should be noted in the project narrative.
- Include midrib crossing across the floodway.
- Picnic tables /areas should be kept on the Satellite Blvd. side of the stream.
- Include deck area for Tai Chi / Yoga instruction with adult swings and trellises.





### "SENSORY GARDEN" in NATURE

#### SIGHT

- Colors in Nature (Seasonal Change)
- Colors of Architecture (Roof color)
- Wildlife Tracking (Footprints)
- Viewshed
- Public Art

#### SOUND

- Water / White Noise
- Noise Pollution (I-85)
- Materials of Architecture (i.e. Tin vs. Asphalt Roof)
- Wind Chimes, Wind Sculpture

#### TOUCH

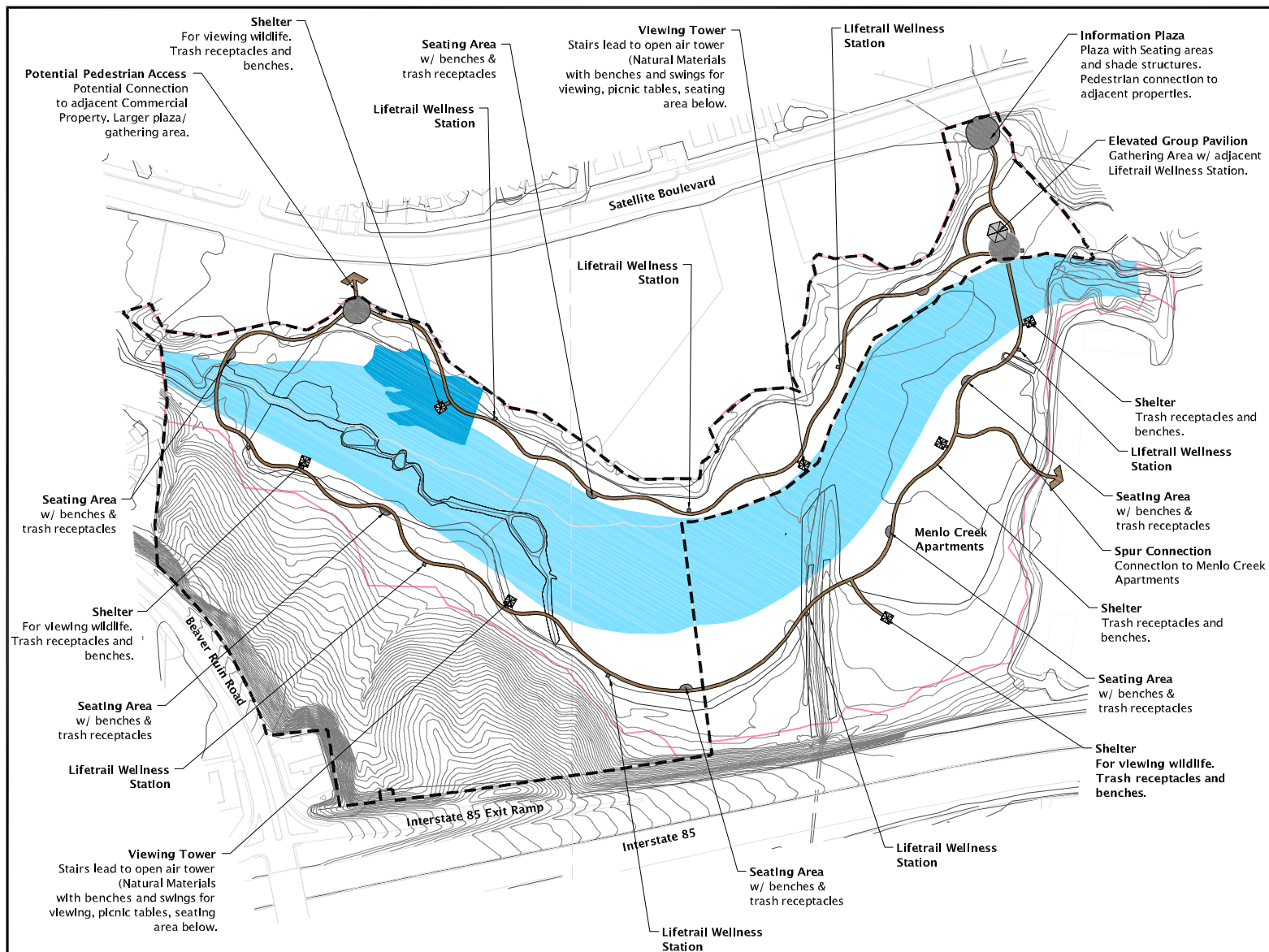
- Textures in Nature (Shapes, forms of plants)
- Changes in paving / tactile surfaces.
- Sun vs. Shade (Shade structures)

#### SMELL

- Fragrant Plants
- Wetland Characteristics

#### TASTE

- Fodder for Wildlife
- Native plants utilized by Native Americans.



### "Communing" with Nature

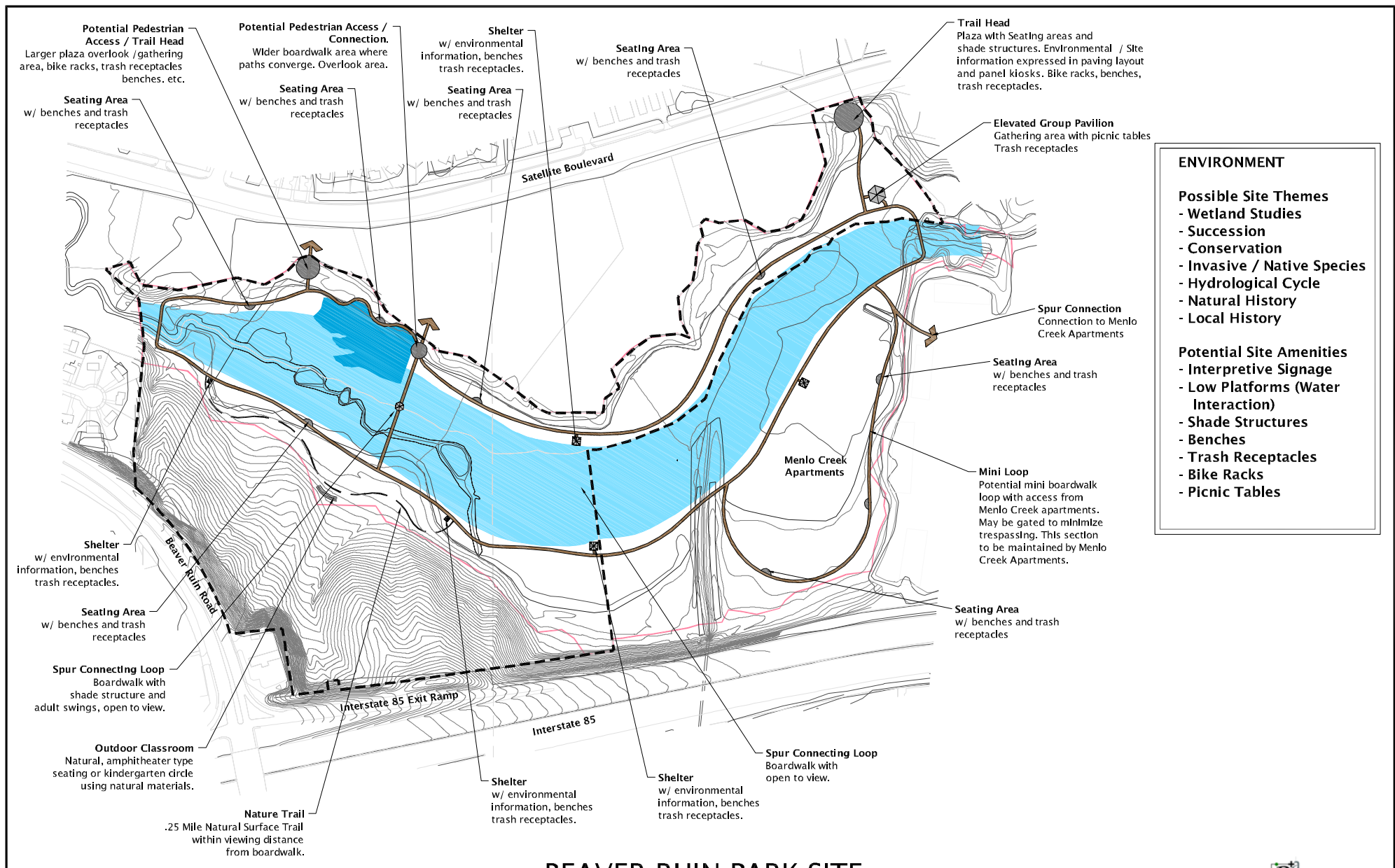
#### Potential Activities

- Lifetrail Wellness Circuit
- Walking / Jogging Circuit
- Bird watching
- Wildlife Viewing
- Yoga / Tai Chi
- Reading
- Contemplation
- Nature Studies
- Picnicking

#### Potential Site Amenities

- Interpretive signage
- Lifetrail Wellness Stations
- Trash Receptacles
- Benches
- Viewing platforms
- Picnic Tables
- Adult Swings
- Tripod Placement Areas



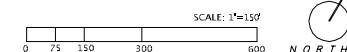


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Community Services

## BEAVER RUIN PARK SITE

### Concept 3

December 6, 2007





## 6.2 Preliminary Master Plan (RE: Graphic Page. 28)

The Preliminary Master Plan was presented and a preliminary cost estimate was distributed to the Steering Committee on January 10, 2008.

Based on comments from the Steering Committee and Staff, the Preliminary Master Plan was revised and further developed into the Master Plan for the next meeting (August 28, 2008). The comments relating to the progression of the Preliminary Master Plan toward the Master Plan are as follows:

- Relocate western most boardwalk section to other side of dogleg of creek
- Show symbolic connection to the cul-de-sac. (not currently shown on plan)
- Realign the boardwalk at the gathering area so that you don't have to pass through the gathering area to continue the loop walk.
- Add a line item to the cost estimate for landscaping at the cul-de-sac.
- Include in project narrative a recommendation about recycling and animal proof trash receptacles.

## 6.3 Secondary Pedestrian Entrance Study (RE: Graphic pages 29-31)

At the request of Gwinnett County, jB+a developed conceptual drawings for the secondary pedestrian entrance located on the western edge of the property adjacent to the Paragon Properties. The conceptual layout included pedestrian access to the park from a parking area on the Paragon Property, a standard Gwinnett County restroom building, plaza area and connection to the boardwalk. Given the location of the Conservation Easement, and 100 year floodplain; both of which extend to the property line, and the restrictions on developing within these protected areas, this configuration of development would require a small portion of the Paragon Property for this design to be fully realized.

## 6.4 Master Plan (RE: Graphic page 32)

jB+a developed and presented the final Master Plan graphic, which included the conceptual layout for the secondary pedestrian entrance to the Steering Committee on August 28, 2008.

The Steering Committee's intent is for the the full master plan to be developed. However, for the full master plan to be developed it will be necessary to have the cooperation from both adjacent property owners. A small portion of land would need to be obtained from Paragon Properties to site the secondary entrance and it's associated elements, and a larger easement would need to be agreed upon with the Menlo Creek Properties for the boardwalk loop and mini loop to be developed as shown in the master plan graphic. An Option B Plan (RE: Graphic Page 33) was developed to provide a solution in the event that

easements on the adjacent properties were declined. The Option B plan does not encroach upon the adjacent properties and illustrates the following revisions.

1. Secondary entrance would be a pedestrian entrance, and would not include the restroom facility.
2. The boardwalk would complete its loop at the eastern most Gwinnett County property line and would not continue onto the Menlo Creek Property.
3. The mini loop on the Menlo Creek Property would be eliminated.
4. The bird watching tower located on the Menlo Creek Property would be eliminated.
5. Spur connection to Menlo Creek Apartments would be eliminated.
6. Lifetrail wellness stations would be reconfigured so that all 10 stations would be sited within County lands.
7. Discovery Nature Trail would be shortened so as not to encroach upon Menlo Creek Property.
8. Sound reduction wall would be shortened so as to screen sound only on County Property.

The cost estimates for both the Final Master Plan and Option B were distributed. Using the Option B Plan as a starting point, discussion regarding the cost estimate and prioritization commenced. Phase 1 development will consist of the following:

1. Geotechnical testing to determine location and depth of boardwalk piers
2. Boardwalk loop with features only (excluding side closest to nature trail)
3. Mid-rib boardwalk crossing
4. Secondary entrance
5. One (1) bird watching tower
6. Nature Trail
7. Wetlands restoration / exotics removal (for the developed areas)
8. Site landscaping (for the developed areas not to exceed \$75,000)

Following phase 1 discussion, priorities for park construction were then discussed. Steering Committee members were asked to vote on the various elements of the park to help determine the order in which they would like to see the park elements constructed when funding become available. Priorities are as follows:

1. Neighborhood connection
2. Boardwalk Section with features (completing the full boardwalk loop) on Option B Plan
3. .35 mile boardwalk spur and features from Satellite Boulevard

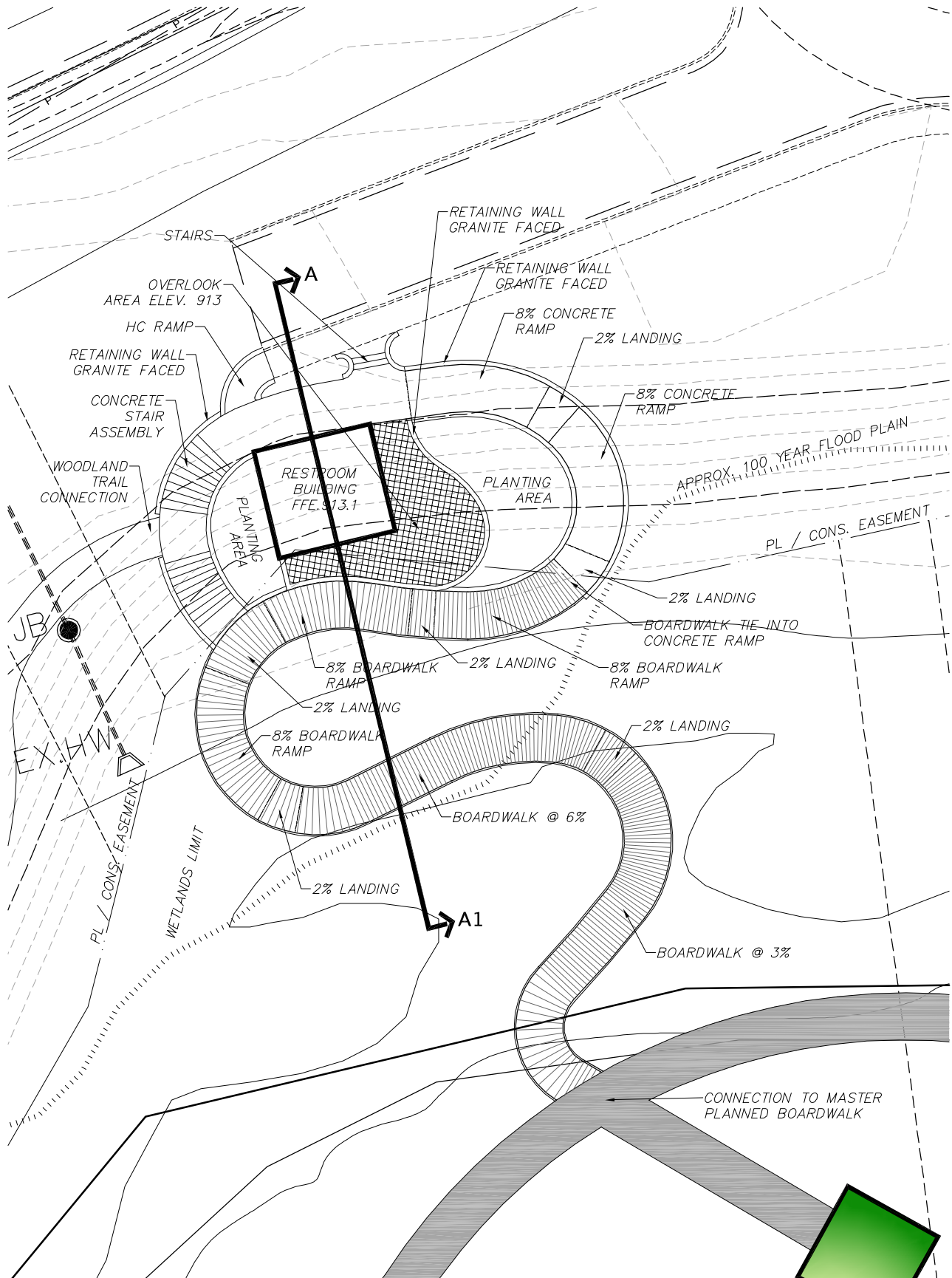
Following the prioritization of park elements a vote to accept the Phase 1 development and prioritizations as noted, and to submit it to the Recreation Authority was taken. By majority vote the Master Plan and order of phasing was approved for submission.

The final color master plan and cost estimate were prepared and presented to the Recreation Authority on September 11, 2008, and several Steering Committee members were in attendance. The Recreation Authority voted unanimously to accept the master plan and cost estimate, with the caveat that the neighborhood trail connection would be included in the Phase 1 development, as the guiding document for the development of the Beaver Ruin Park Site.









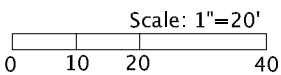
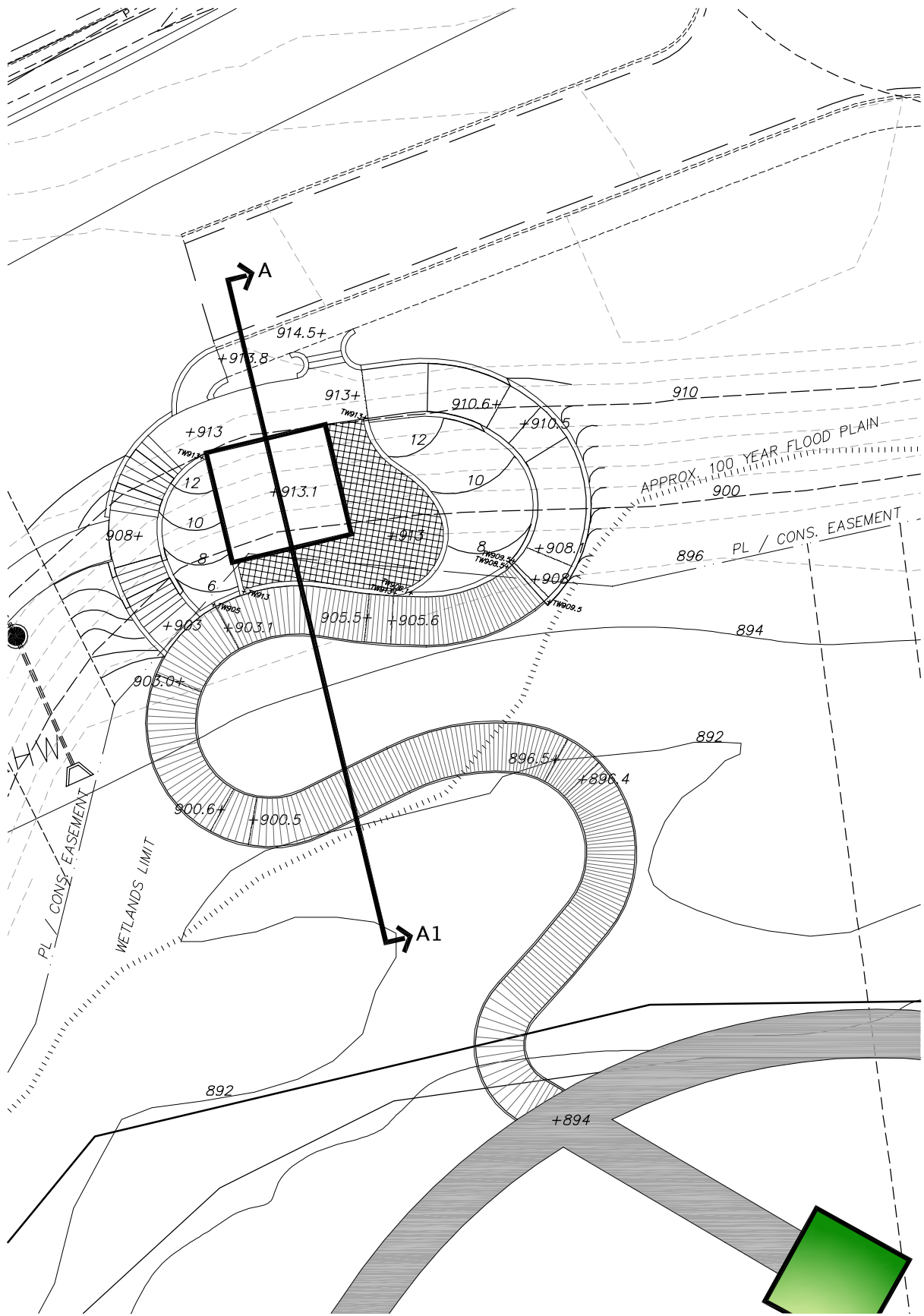
## Beaver Ruin Park Site

### Restroom Bldg. / Ped. Entrance Concept

Prepared for:  
Gwinnett County Department of  
Community Services

April 4, 2008

Prepared by:  
jB+a, inc  
park design studio



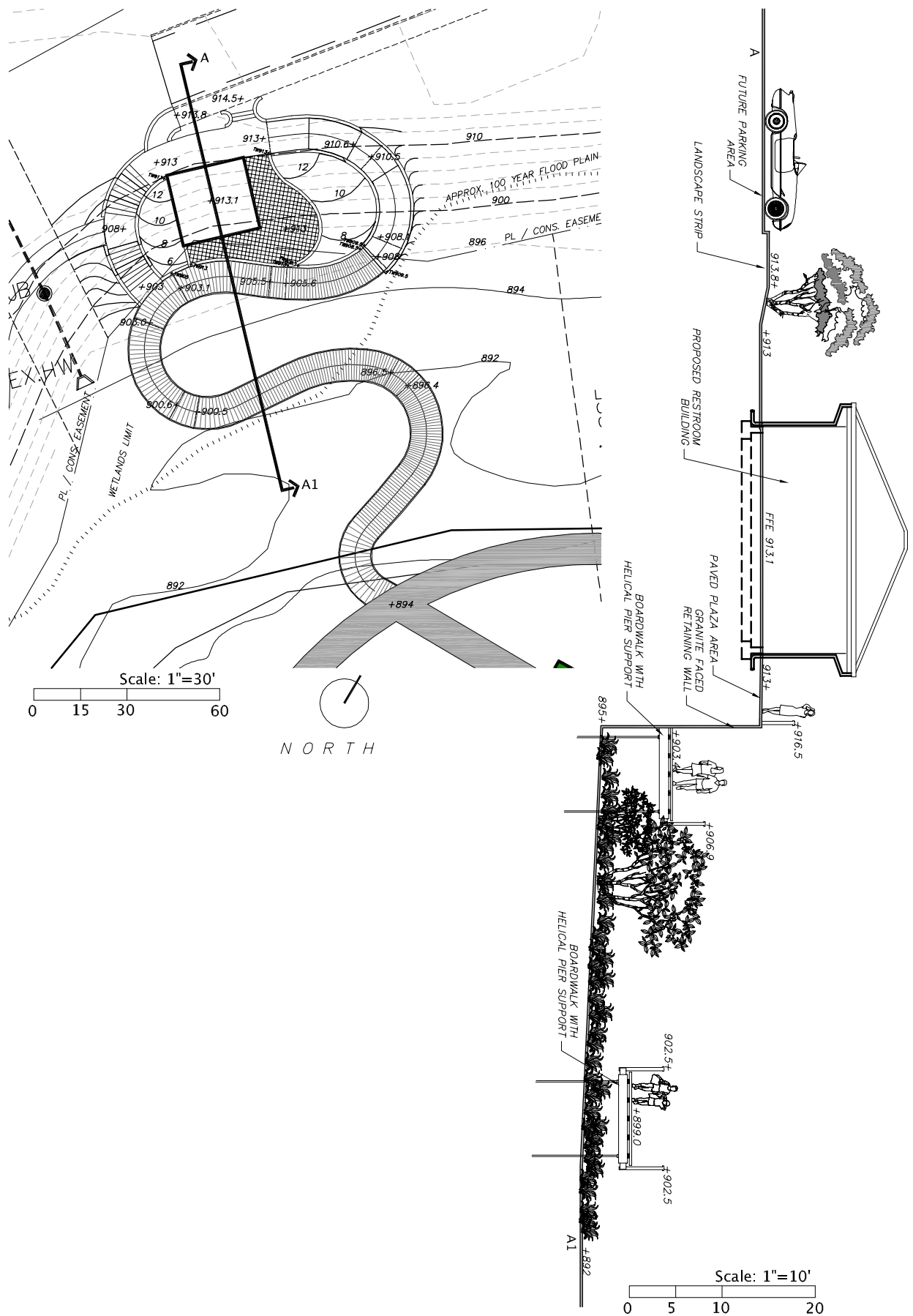
# Beaver Ruin Park Site

## Restroom Bldg. / Ped. Entrance Concept

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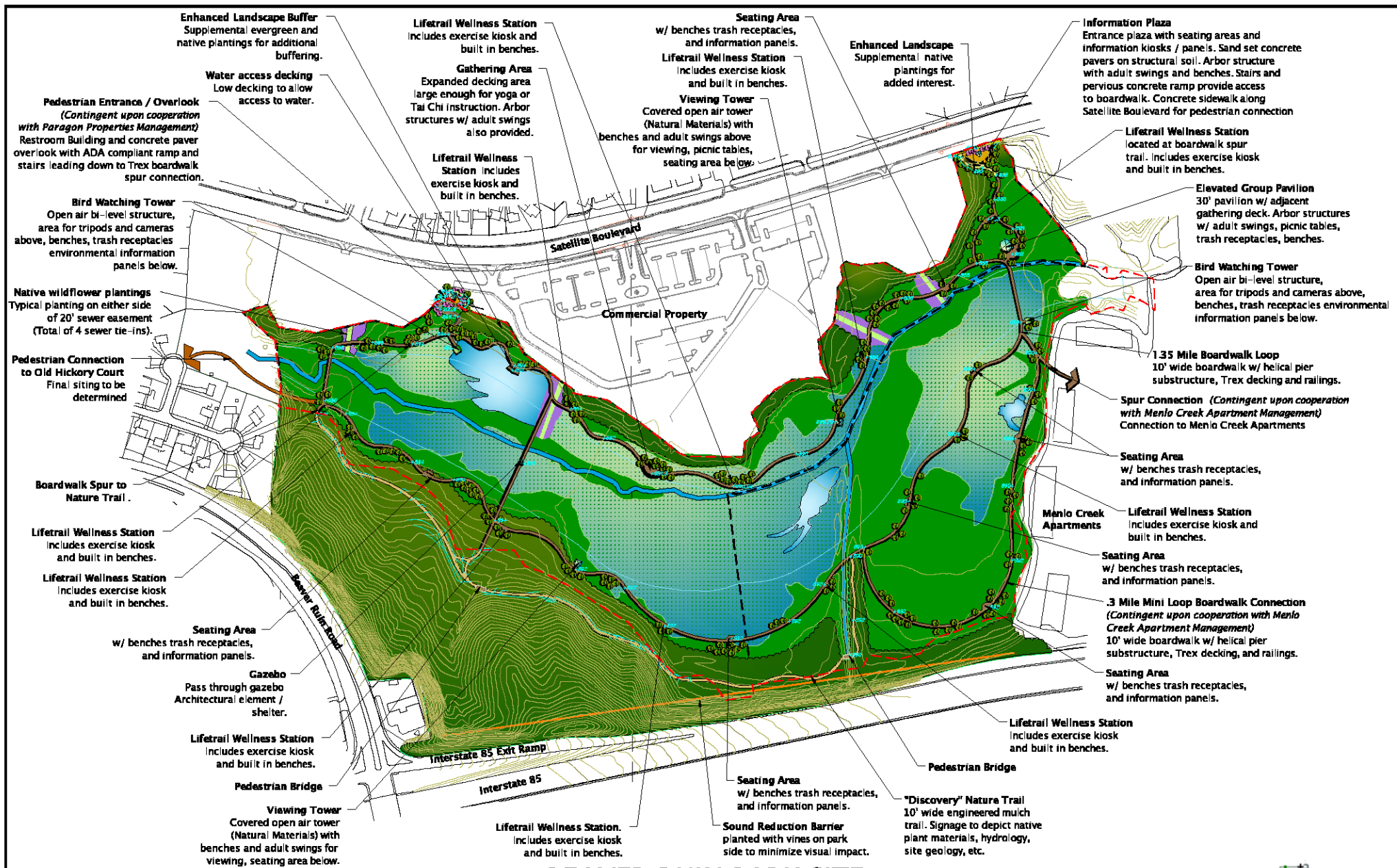


# Beaver Ruin Park Site Restroom Bldg. / Ped. Entrance Concept

Prepared for:  
Gwinnett County Department of  
Community Services

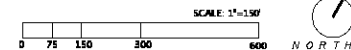
April 4, 2008

Prepared by:  
jB+a, inc  
park design studio



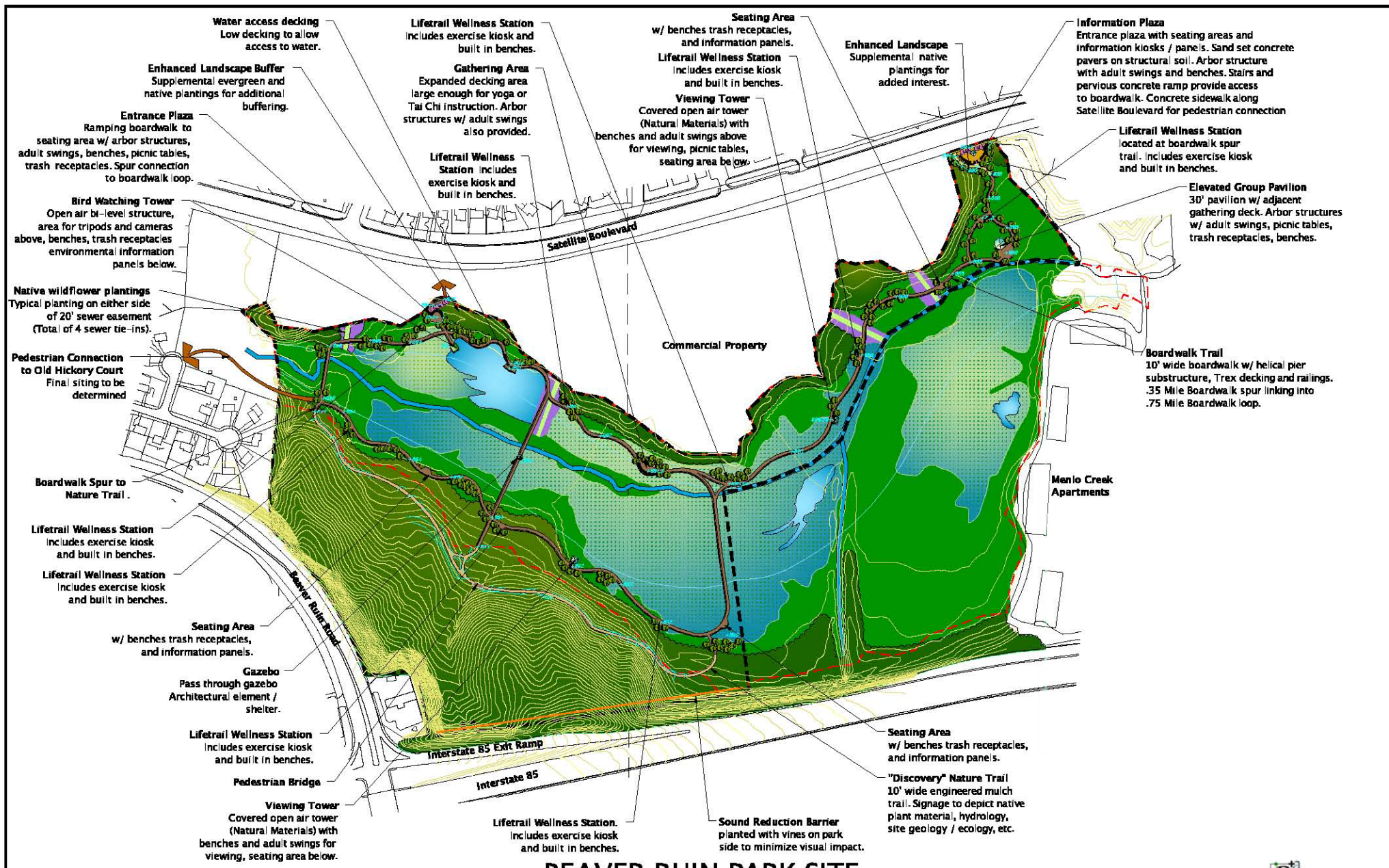
PREPARED FOR:  
Gwinnett County Department of  
Community Services

## BEAVER RUIN PARK SITE Master Plan August 28, 2008



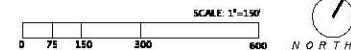
**JB** park design studio  
planning • landscape architecture





PREPARED FOR:  
Gwinnett County Department of  
Community Services

## BEAVER RUIN PARK SITE Master Plan-Option B August 28, 2008



**JB** park design studio  
planning • landscape architecture

## 6.5 Program Objective

The Steering Committee determined that the primary mission of the development program was to **protect the natural resources**, through wetlands restoration, exotics removal, protection of the delicate wetland ecosystem, and interpretation and education of the natural features, processes and wildlife.

## 6.6 Program Elements

The park will be supported by a variety of improvements that facilitate access, visitor comfort and use of the property. Vehicular access, parking and support facilities are to be confined to the proposed secondary entrance located on a small portion of the adjacent Paragon Property, contingent upon their cooperation with the County. Consequently, the extent of support infrastructure will be limited. These elements would include the following:

### **Vehicular Parking / Access**

Contingent upon cooperation from the adjacent Paragon Property, parking will be confined to an area provided by and for the commercial property at the proposed secondary entrance to Beaver Ruin Park. No portion of the Beaver Ruin Property will be designated specifically for vehicular use, excluding emergency vehicles.

### **Pedestrian Access**

Pedestrian access is to be provided at two entrances. The main entrance will be located off Satellite Boulevard. The secondary entrance will be located in the northwestern section and outside the conservation easement and 100 year flood plain on an easement donated by the adjacent Paragon Properties.

### **Main Entrance**

Provide pedestrian access only along Satellite Boulevard in the form of a 6' wide concrete sidewalk. The sidewalk should be located within the right of way and extend in both directions toward the adjacent properties of the Menlo Creek Apartments and Paragon Properties.

### *Plaza Area*

The plaza area, approximately 5500 square feet, is to be comprised of concrete pavers laid on top of structural soils to aid in permeability. A granite faced retaining wall at the back of the plaza is intended to make up grade as the plaza is to be set at the existing street elevation. An ADA compliant permeable concrete ramp and stair assembly will connect the plaza area to the boardwalk.

The plaza will be broken down into smaller gathering areas to allow for a variety of activities to take place. Trees placed in at-grade planters and arbor structures will provide shade for the spaces. An information kiosk will provide information about the site ranging

from hydrological cycles, site history, noted wildlife and native vegetation found on site. Additionally, bench swings, benches, trash receptacles and bike racks will be sited as amenities. The main focus of the plaza will be to serve as a welcome or trail head to the park as well as an overlook to the boardwalk.

### **Secondary Entrance**

Developed on land in cooperation with Paragon Properties, the secondary entrance will include pedestrian only access to the park from the parking area on the Paragon Commercial Property. A standard Gwinnett County restroom building, overlook area will be sited at the secondary entrance. A permeable concrete ramp and separate stair assembly will connect the secondary entrance to a boardwalk spur trail that will tie into the boardwalk loop.

### *Restroom*

A small 500-650 square foot restroom will be provided with three commodes or urinals per sex for a total of six fixture units, required sinks and diaper changing stations. This structure should exhibit more natural materials and colors to blend with the park environment. The restroom building should be sited so that the doors to the facilities are located with the most visibility for safety purposes.

### *Overlook*

A granite faced retaining wall with standard Gwinnett County handrails will help retain the soil that sites both the restroom building and overlook area. The overlook is comprised of concrete pavers set on structural soils to aid in permeability. Benches, trash receptacles, a bike rack, information kiosk and interpretive signage will be associated with the overlook. The main focus of this area will be to serve as a welcome and overlook to the park.

### *Boardwalk Spur Trail*

Provide a 10' wide boardwalk spur trail from the end of the concrete stairs and ramp at the secondary entrance to connect the entrance to the boardwalk loop. The spur will require some ramping and switch backs to make up grade. The ramps will be ADA compliant and are not to exceed an 8% grade or a length of 30 linear feet without a landing.

### **Boardwalk**

Provide a 10' wide boardwalk utilizing a helical pier and pressure treated lumber substructure. Decking and handrail should be TREX material. The handrail along the length of the boardwalk is to be Gwinnett County standard with a wire mesh barrier, similar to the pedestrian bridge located at Ronald Reagan Park. A total boardwalk loop length of approximately 1.35 miles is to be provided. The boardwalk will be ADA compliant. Additionally, a 500 linear foot midrib crossing and a .3 mile mini loop boardwalk connection are to be provided.

The first segment is a 520 linear foot spur connection from the main pedestrian entrance on Satellite Boulevard that links to the boardwalk loop. At the mid point of the spur a fork occurs. One tine of the fork leads to the elevated group pavilion and expanded deck the other tine bypasses the pavilion and expanded deck area and links directly to the boardwalk loop.

From this point the 1.35 mile boardwalk loop begins moving west along the Satellite Boulevard wetland edge and crossing over the 4 existing sewer tie-ins. The boardwalk will be sited outside the flood zone of Bromelow Creek and will wind through the landscape allowing for a variety of park experiences and views. Along the boardwalk several seating areas with benches and interpretive signage, LifeTrail Fitness stations and gathering areas are located. Additionally, a viewing tower and a bird watching tower are also sited. At the eastern edge of the existing pond, another fork in the boardwalk offers an opportunity to travel the midrib crossing or to continue along the pond edge. The boardwalk then skirts along the northwestern edge of the pond until it ties into the spur trail linking the boardwalk loop to the secondary entrance. The boardwalk continues west to just east of the Bromelow Creek dogleg where it turns south.

The next segment meanders outside the flood zone along the wooded area on the southern edge of the wetlands. A spur trail provides access to the “Discovery” Nature Trail in the south western corner of the loop and to the mid rib crossing. The boardwalk continues to meander toward the southeastern property line crossing over the property line onto the Menlo Apartment Property through more of the wetland landscape to tie back upon itself at the group pavilion area. Like the northern edge of the boardwalk, a viewing tower, bird watching tower, several seating areas and LifeTrail Fitness stations are located along the length of the boardwalk. As a portion of this section of boardwalk extends beyond County property onto the Menlo Creek Property, an agreement between the County and Menlo Creek Management will need to be agreed upon for this portion of the boardwalk to come to fruition.

### *Mid-rib Crossing*

The mid rib crossing is a segment of boardwalk that cuts across the flood zone to connect the northern section of the boardwalk to the southern section allowing for the creation of shorter walking circuits. Sited at the midpoint of the crossing is a small, open air gazebo. It is intended to be a pass through, architectural element and orientation device. The gazebo will also provide some shelter in the event users are caught out on site during inclement weather.



### *Mini-Loop Boardwalk Connection*

From the southern portion of the boardwalk loop a .3 mile boardwalk segment provides both additional length and a spur trail access to the boardwalk for residents at the Menlo Creek Apartments. This segment includes seating areas with built in benches-unlike the free standing benches along the boardwalk loop, trash receptacles and interpretive panels.

This segment of the boardwalk is contingent upon cooperation between Gwinnett County and the Menlo Creek Apartment Management.

### *LifeTrail Wellness Trail (Stations)*

Comprised of a series of 10 outdoor fitness stations, the life trail provides a series of enjoyable strengthening, flexibility and balance activities that address the major components of a well-rounded fitness program for predominantly older adults. Stations are to be installed at .1 mile intervals along the boardwalk to provide a variety of exercise options to boardwalk users. Each station will feature a 3 sided kiosk with 2 sides that are activity panels. The third panel could be customized to accommodate a wheelchair / ADA accessible activity or information about the site.

The boardwalk will be expanded slightly at each fitness station to accommodate the kiosk and movement around the 3 sided structure. Additionally each station area will include built in benches. Trash receptacles are to be distributed along the length of the trail.

### *Seating Areas*

The boardwalk will be expanded slightly at each seating area to accommodate 3 secured free standing benches. The seating area should be located at areas with good views or areas of interest and are intended to allow for rest and contemplation. Within each seating area, interpretive panels will be affixed to the boardwalk rail. The interpretive signage will contain education information about the site, wildlife, hydrology, etc., and are to be placed so as to not obstruct the view.

### *Gathering Area*

Sited at the approximate midpoint of the northern section of the boardwalk, the gathering area is an expanded decking area large enough to accommodate small group gatherings, yoga or tai chi instruction. The gathering area will be constructed in the same manner as the boardwalk with a helical pier and pressure treated lumber substructure and TREX decking and handrails. Provide an arbor structure with suspended bench swings for shade.

### *Water Access Decking*

An approximate 800 square foot water access deck is sited as a projection from the boardwalk at the existing pond. The intent is to allow access from the boardwalk to the waters edge and therefore will need to be void of handrails. The expanded deck area will

step down from the boardwalk elevation to the water surface. A low curb (2") should be constructed for edge safety.

### **Natural Surface Trails**

Two separate natural surface trails are included; a "Discovery" Nature Trail and the neighborhood trail connection to Old Hickory Court. The typical trail profile is a graded aggregate sub-base with engineered mulch topcoat, pitched to drain with high and low points to assure that whenever water accumulates on the trail it will shed to the down slope side before the water joins with the drainage pattern parallel to the trail.

The center line of the trail will be field located and flagged to follow the site contours in an effort to minimize grading and disturbance to the site. The trail will be cleared of hazards such as dead or leaning trees, which will be cut down and left in full contact with the ground to hasten decay. Small hanging branches will be chipped and spread as mulch. Roots, trunks and other trail debris may be placed as barricades to prevent users from straying too far from view.

#### *Discovery Nature Trail*

Located within viewing distance of the boardwalk for passive policing, the nature trail will be a 10' wide engineered mulch trail. The .5 mile trail will explore the interesting natural and physical features of the site. Interpretive signage will be placed along the trail calling attention to the various native plants, geology, hydrology, etc.

Where the trail crosses the natural drainage channels and tributary of Bromelow Creek a pedestrian bridge with handrail is to be placed. The style of the bridge should exhibit a rustic or natural theme to blend with the environment.

#### *Neighborhood Trail Connector*

Provide a 6' wide natural surface trail from the boardwalk to the cul-de-sac at Old Hickory Court. The trail will be placed with the contours to minimize grading and disturbance to the site. Where possible, the trail should be located to take advantage of the interesting natural and physical features of the route.

Where the trail crosses any natural drainage channels a pedestrian bridge with handrail is to be placed. The style of the bridge should exhibit a rustic or natural theme to blend with the environment.

### **Park Structures**

In an effort to maintain the naturalistic feel of the park, the structures within the park should be constructed using natural looking materials and colors as approved by Gwinnett County.

### *Elevated Group Pavilion*

Provide a 30' group pavilion on axis with the main entrance. The pavilion will be elevated utilizing a helical pier and pressure treated lumber substructure with concrete caps to prevent twisting of the structure. Space for 4-6 picnic tables should be provided. An expanded deck area, constructed similar to the boardwalk, is associated with the pavilion for larger group gatherings. Arbor structures with suspended bench swings, free standing benches and trash receptacle are included as amenities.

### *Viewing Towers*

Two (2) viewing towers will be located within Beaver Ruin Park. The tower will be a covered bi-level structure constructed of natural looking materials to blend with the park environment. A helical pier and pressure treated lumber substructure with concrete caps to prevent twisting of the structure will support the towers. Benches for viewing are to be provided on the upper level with benches and picnic tables provided on the lower level. One tower will be located on either side of the boardwalk loop. To minimize trash in the deeper sections of the site, picnic tables will only be located at the viewing tower located on the Satellite Boulevard side of the boardwalk loop. Additional amenities within the viewing tower include interpretive panels.

### *Bird Watching Towers*

The site is known for its migratory bird and water fowl populations. Therefore, two (2) bird watching towers will be located within Beaver Ruin Park. The Bird watching tower is a bi-level open air tower to allow for the viewing of birds in flight and on ground from all angles. A helical pier and pressure treated lumber substructure with concrete caps to prevent twisting of the structure will support the towers. Areas for tri-pods and cameras will be provided on the upper level, benches, trash receptacles and interpretive / information panels will be provided on the lower level.

### *Gazebo*

Provide a small gazebo structure at the midpoint of the mid rib crossing. The structure is intended to serve as an orienting device, pass-through, architectural element and shelter during inclement weather. The style of the gazebo should reflect a natural theme to blend with the environment.

## **General Features & Amenities**

### *Site Landscape*

Provide supplemental landscaping throughout the site. Native Trees and shrubs should be placed at key points along the boardwalk and nature trails to enhance the park and provide much needed shade.



### *Enhanced Landscape Buffer*

Provide supplemental landscaping along the berm at the secondary entrance and at the neighborhood connection. Selective plantings will include native plant materials. The intent is to provide an effective area of transition between adjacent land use zones and between conflicting land development. The transition zone shall mitigate or minimize land use impacts and promote visual and physical compatibility and harmony between adjacent areas.

### *Native Wildflower Plantings.*

As an aesthetic enhancement, provide wildflower testing areas at the sewer tie-ins and easements. Wildflowers should be a locally native wildflower mix in an effort to minimize maintenance associated with planting. Interpretive signage will be sited to illustrate the various flower types.

### *Furnishings*

In general, furnishing will be modest and of a natural theme as appropriate. Furnishings include bench swings, free standing benches, animal proof trash receptacles, bike racks and picnic tables. Grills are not to be provided.

### *Sound Reduction Barrier*

Provide a sound reduction barrier along the park edge closest to Interstate 85. The sound reduction barrier should be as aesthetically pleasing as possible. To minimize its appearance on both the I-85 side and the park side, vines should be trained to the barrier per Gwinnett Place CID request.

### *Signage*

Interpretive, direction and trail marking signage will be provided throughout the boardwalk / trail system as appropriate. This would include park maps at the information kiosks, interpretive signage placed along trails, UV protected interpretive panels at seating areas and towers that illustrate the natural process, vegetation, and wildlife of the site.

Standard Gwinnett County park signage including rules and regulation signage will also be provided at each entrance.

## **APPENDICES**

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## **APPENDICES**

Appendix A: Cost Estimate

Refer to the attached itemized Master Plan level Spreadsheet





# **COST ESTIMATE FOR BEAVER RUIN PARK GWINNETT COUNTY DEPARTMENT OF COMMUNITY SERVICES**

August 28,2008

Item Description	Quantity	Unit	Unit Price	Total
<b>INFRASTRUCTURE</b>				
<i>UTILITIES</i>				
	<i>QUANTITY</i>	<i>UNIT</i>	<i>UNIT PRICE</i>	<i>TOTAL</i>
A. SITE ELECTRICAL (Security lighting @ Satellite trailhead.)	1	JOB	\$15,000.00	\$15,000.00
B. SITE ELECTRICAL (Security lighting @ Secondary entrance)	1	JOB	\$15,000.00	\$15,000.00
C. 6" SEWER SERVICE (Restroom Building)	200	LF	\$50.00	\$10,000.00
D. POTABLE WATER SERVICE (Restroom Building)	200	LF	\$50.00	\$10,000.00
<b>UTILITIES SUBTOTAL</b>				<b>\$50,000.00</b>
<i>MISCELLANEOUS</i>				
	<i>QUANTITY</i>	<i>UNIT</i>	<i>UNIT PRICE</i>	<i>TOTAL</i>
A.. MONUMENT SIGNAGE (1 @ EACH PEDESTRIAN ENTRANCE)	2	EA	\$5,000.00	\$10,000.00
B. FRONTAGE - PEDESTRIAN ACCESS (6' Wide Concrete Sidewalk)	1,500	SF	\$4.00	\$6,000.00
<b>SUBTOTAL</b>				<b>\$16,000.00</b>
<b>INFRASTRUCTURE SUBTOTAL</b>				<b>\$66,000.00</b>
<b>PARK ELEMENTS</b>				
<i>SATELLITE BOULEVARD ENTRANCE PLAZA</i>				
A. STAKING	1	JOB	\$3,000.00	\$3,000.00
B. EROSION / SEDIMENT CONTROL				
1.) SILT FENCE "TYPE C" (Double Row)	500	LF	\$3.50	\$1,750.00
2.) MULCH / SEED	1	JOB	\$2,500.00	\$2,500.00
C. TREE PROTECTION FENCING	250	LF	\$3.00	\$750.00
D. FINE GRADING	1	JOB	\$5,000.00	\$5,000.00
E. PLAZA				
1.) CONCRETE PAVERS	5600	SF	\$6.00	\$33,600.00
2.) STRUCTURAL SOIL	200	CY	\$25.00	\$5,000.00
3.) ARBORS	2	JOB	\$40,000.00	\$80,000.00
4.) LIGHTING	4	EA	\$4,000.00	\$16,000.00
5.) PLAZA SHADE TREES	12	EA	\$500.00	\$6,000.00
6.) GRANITE FACED RETAINING WALL	450	FF	\$40.00	\$18,000.00
7.) STAIR ASSEMBLY	1	EA	\$4,000.00	\$4,000.00
F. INFORMATION KIOSK (Includes roof structure)	1	JOB	\$8,000.00	\$8,000.00
G. PERVIOUS CONCRETE ACCESS RAMP	2000	SF	\$7.50	\$15,000.00
H. AMENITIES				
1.) TRASH RECEPTACLES	3	EA	\$450.00	\$1,350.00
2.) BENCHES	4	EA	\$350.00	\$1,400.00
3.) BIKE RACK	2	EA	\$250.00	\$500.00
4.) BENCH SWING	4	EA	\$1,500.00	\$6,000.00
5.) SIGNAGE	1	JOB	\$1,500.00	\$1,500.00
<b>SUBTOTAL</b>				<b>\$209,350.00</b>
<i>SECONDARY PEDESTRIAN ENTRANCE PLAZA</i>				
A. STAKING	1	JOB	\$2,000.00	\$2,000.00
B. EROSION / SEDIMENT CONTROL				
1.) SILT FENCE "TYPE C" (Double Row)	600	LF	\$3.50	\$2,100.00
2.) MULCH / SEED	1	JOB	\$1,000.00	\$1,000.00
C. TREE PROTECTION FENCING	300	LF	\$3.00	\$900.00
D. FINE GRADING	1	JOB	\$10,000.00	\$10,000.00
E. GRANITE FACED RETAINING WALLS	850	FF	\$40.00	\$34,000.00
F. RESTROOM BUILDING (includes electric)	1	JOB	\$125,000.00	\$125,000.00

G. PLAZA				
1.) CONCRETE PAVERS	720	SF	\$6.00	\$4,320.00
2.) STRUCTURAL SOIL	30	CY	\$25.00	\$750.00
3.) LANDSCAPE	1	JOB	\$10,000.00	\$10,000.00
4.) LIGHTING	5	EA	\$4,000.00	\$20,000.00
5.) GRANITE FACED RETAINING WALL	500	FF	\$40.00	\$20,000.00
6.) RAILING ASSEMBLY	100	LF	\$15.00	\$1,500.00
G. CONCRETE STAIR ASSEMBLY (Curved pair)	1	JOB	\$4,000.00	\$4,000.00
H. CONCRETE STAIR ASSEMBLY (From Parking)	1	JOB	\$1,000.00	\$1,000.00
I. CONCRETE ACCESS RAMP	1200	SF	\$7.50	\$9,000.00
J. BOARDWALK CONSTRUCTION (Spur connection)				
1.) HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	27	EA	\$2,800.00	\$75,600.00
2.) TREX DECKING (Cost includes PT substructure and Gwinnett County standard rail system each side of boardwalk.)	2,700	SF	\$60.00	\$162,000.00
K. INFORMATION KIOSK (Includes roof structure)	1	JOB	\$8,000.00	\$8,000.00
L. AMENITIES				
1.) TRASH RECEPTACLES	3	EA	\$450.00	\$1,350.00
2.) BENCHES	3	EA	\$350.00	\$1,050.00
3.) BIKE RACK	1	EA	\$250.00	\$250.00
4.) WATER FOUNTAIN (freeze resistant)	1	EA	\$2,500.00	\$2,500.00
5.) SIGNAGE	1	JOB	\$1,500.00	\$1,500.00
6.) ENHANCED LANDSCAPE BUFFER	1	JOB	\$30,000.00	\$30,000.00
			<b>SUBTOTAL</b>	<b>\$527,820.00</b>
<i>BOARDWALK</i>				
	<i>QUANTITY</i>	<i>UNIT</i>	<i>UNIT PRICE</i>	<i>TOTAL</i>
A. STAKING	1	JOB	\$20,000.00	\$20,000.00
B. EROSION / SEDIMENT CONTROL				
1.) SILT FENCE "TYPE C" (Double Row)	17,000	LF	\$3.50	\$59,500.00
C. TREE PROTECTION FENCING	8,550	LF	\$3.00	\$25,650.00
D. BOARDWALK CONSTRUCTION (1.3 Mile boardwalk loop)				
1.) HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	898	EA	\$2,800.00	\$2,514,400.00
2.) TREX DECKING (Cost includes PT substructure and Gwinnett County standard rail system each side of boardwalk.)	89,800	SF	\$60.00	\$5,388,000.00
3.) TREX BENCH (42" Ht. w/ built in bench - at wellness station)	340	LF	\$21.00	\$7,140.00
E. LIFETRAIL WELLNESS STATION (Total of 10 stations)	1	JOB	\$50,000.00	\$50,000.00
F. GAZEBO	1	JOB	\$20,000.00	\$20,000.00
G. AMENITIES				
1.) TRASH RECEPTACLES	10	EA	\$450.00	\$4,500.00
2.) BENCHES	15	EA	\$350.00	\$5,250.00
3.) INFORMATION PANELS	10	EA	\$2,000.00	\$20,000.00
			<b>SUBTOTAL</b>	<b>\$8,114,440.00</b>
<i>MINI LOOP BOARDWALK</i>				
	<i>QUANTITY</i>	<i>UNIT</i>	<i>UNIT PRICE</i>	<i>TOTAL</i>
A. STAKING	1	JOB	\$5,000.00	\$5,000.00
B. EROSION / SEDIMENT CONTROL				
1.) SILT FENCE "TYPE C" (Double Row)	3,400	LF	\$3.50	\$11,900.00
C. TREE PROTECTION FENCING	1,700	LF	\$3.00	\$5,100.00
D. BOARDWALK CONSTRUCTION (.3 Mile boardwalk loop)				
1.) HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	170	EA	\$2,800.00	\$476,000.00
2.) TREX DECKING (Cost includes PT substructure and Gwinnett County standard rail system each side of boardwalk.)	17,000	SF	\$60.00	\$1,020,000.00
3.) TREX BENCH (42" Ht. w/ built into rail - at bumpout)	70	LF	\$21.00	\$1,470.00
E. AMENITIES				
1.) TRASH RECEPTACLES	2	EA	\$450.00	\$900.00
			<b>SUBTOTAL</b>	<b>\$1,520,370.00</b>

GROUP PAVILION /DECKING		QUANTITY	UNIT	UNIT PRICE	TOTAL
A.	STAKING	1	JOB	\$1,000.00	\$1,000.00
B.	EROSION / SEDIMENT CONTROL				
1.)	SILT FENCE "TYPE C" (Double Row)	600	LF	\$3.50	\$2,100.00
C.	TREE PROTECTION FENCING	300	LF	\$3.00	\$900.00
D.	30' PAVILION	1	JOB	\$40,000.00	\$40,000.00
E.	PAVILION PLATFORM CONSTRUCTION				
1.)	HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	13	EA	\$2,800.00	\$36,400.00
2.)	TREX DECKING (Cost includes PT substructure and Gwinnett County standard rail system each side of boardwalk.)	1,300	SF	\$60.00	\$78,000.00
F.	BOARDWALK CONSTRUCTION (Boardwalk Spur Connection)				
1.)	HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	41	EA	\$2,800.00	\$114,800.00
2.)	TREX DECKING (Cost includes PT substructure and Gwinnett County standard rail system each side of boardwalk.)	4,100	SF	\$60.00	\$246,000.00
G.	AMENITIES				
1.)	TRASH RECEPTACLES	3	EA	\$450.00	\$1,350.00
2.)	BENCHES	2	EA	\$350.00	\$700.00
3.)	PICNIC TABLES	4	EA	\$500.00	\$2,000.00
4.)	BENCH SWING	4	EA	\$1,500.00	\$6,000.00
5.)	INFORMATION PANELS	4	EA	\$2,000.00	\$8,000.00
6.)	ARBORS	2	EA	\$40,000.00	\$80,000.00
				<b>SUBTOTAL</b>	<b>\$617,250.00</b>
GATHERING DECK (Tai Chi / Yoga instruction area)		QUANTITY	UNIT	UNIT PRICE	TOTAL
A.	STAKING	1	JOB	\$1,000.00	\$1,000.00
B.	EROSION / SEDIMENT CONTROL				
1.)	SILT FENCE "TYPE C" (Double Row)	260	LF	\$3.50	\$910.00
C.	BOARDWALK DECKING CONSTRUCTION				
1.)	HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	12	EA	\$2,800.00	\$33,600.00
2.)	TREX DECKING (Cost includes PT substructure and Gwinnett County standard rail system each side of boardwalk.)	1,200	SF	\$60.00	\$72,000.00
D.	AMENITIES				
1.)	TRASH RECEPTACLES	2	EA	\$450.00	\$900.00
2.)	BENCH SWING	4	EA	\$1,500.00	\$6,000.00
3.)	ARBORS	1	JOB	\$60,000.00	\$60,000.00
				<b>SUBTOTAL</b>	<b>\$174,410.00</b>
BI-LEVEL VIEWING TOWERS (Covered bi-level)		QUANTITY	UNIT	UNIT PRICE	TOTAL
A.	STAKING	1	JOB	\$800.00	\$800.00
B.	EROSION / SEDIMENT CONTROL				
1.)	SILT FENCE "TYPE C" (Double Row) 600 LF per tower	1,200	LF	\$3.50	\$4,200.00
C.	TREE PROTECTION FENCING (Viewing tower inland)	300	LF	\$3.00	\$900.00
D.	VIEWING TOWER (Includes roof structure, rail, floor of top level)	2	EA	\$50,000.00	\$100,000.00
E.	PAVILION PLATFORM CONSTRUCTION (2 lower level platforms)				
1.)	HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	10	LF	\$2,800.00	\$28,000.00
2.)	PIER CAP (4 Per tower at corners)	8	EA	\$800.00	\$6,400.00
3.)	TREX DECKING (Lower level of each tower - 500sf) (Cost includes PT substructure and Gwinnett County standard rails sytem each side of boardwalk.)	1,000	SF	\$60.00	\$60,000.00
F.	AMENITIES				
1.)	TRASH RECEPTACLES (2 per tower)	4	EA	\$450.00	\$1,800.00
2.)	BENCHES (3 per tower)	6	EA	\$350.00	\$2,100.00
3.)	PICNIC TABLES ( Viewing tower Satellite Blvd. side)	2	EA	\$500.00	\$1,000.00
4.)	BENCH SWING (2 per tower)	4	EA	\$1,500.00	\$6,000.00
5.)	INFORMATION PANELS (3 per tower)	6	EA	\$2,000.00	\$12,000.00
				<b>SUBTOTAL</b>	<b>\$223,200.00</b>



<i>BIRD WATCHING TOWERS (Open air bi-level)</i>		<i>QUANTITY</i>	<i>UNIT</i>	<i>UNIT PRICE</i>	<i>TOTAL</i>
A.	STAKING	1	JOB	\$800.00	\$800.00
B.	EROSION / SEDIMENT CONTROL				
1.)	SILT FENCE "TYPE C" (Double Row) 600 LF per tower	1,200	LF	\$3.50	\$4,200.00
C.	TOWER (Includes overhead structure, rail, floor of top level)	2	JOB	\$40,000.00	\$80,000.00
D.	PAVILION PLATFORM CONSTRUCTION				
1.)	HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	10	LF	\$2,800.00	\$28,000.00
2.)	PIER CAP (4 Per tower at corners)	8	EA	\$800.00	\$6,400.00
3.)	TREX DECKING (Lower level of each tower - 500sf) (Cost includes PT substructure and Gwinnett County standard rails sytem each side of boardwalk.)	1,000	SF	\$60.00	\$60,000.00
E.	AMENITIES				
1.)	TRASH RECEPTACLES (2 per tower)	4	EA	\$450.00	\$1,800.00
2.)	BENCHES (3 per tower)	6	EA	\$350.00	\$2,100.00
3.)	INFORMATION PANELS (3 per tower)	6	EA	\$2,000.00	\$12,000.00
				<b>SUBTOTAL</b>	<b>\$195,300.00</b>
<i>NATURE TRAIL SYSTEM</i>		<i>QUANTITY</i>	<i>UNIT</i>	<i>UNIT PRICE</i>	<i>TOTAL</i>
A.	STAKING	1	JOB	\$5,000.00	\$5,000.00
B.	EROSION / SEDIMENT CONTROL				
1.)	SILT FENCE "TYPE C" (Double Row)	6,600	LF	\$3.50	\$23,100.00
2.)	MULCH / SEED	1	JOB	\$2,500.00	\$2,500.00
C.	TREE PROTECTION FENCING	6,600	LF	\$3.00	\$19,800.00
D.	FINE GRADING	1	JOB	\$20,000.00	\$20,000.00
E.	10' WIDE - SOFT SURFACE TRAIL				
1.)	4" SHREADED WOOD MULCH	28,000	SF	\$1.50	\$42,000.00
2.)	6" GAB	520	CY	\$15.00	\$7,800.00
F.	PEDESTRIAN BRIDGE	2	EA	\$60,000.00	\$120,000.00
G.	SOUND REDUCTION WALL	1	JOB	\$200,000.00	\$200,000.00
H.	SOUND REDUCTION WALL - LANDSCAPE SCREENING	1	JOB	\$20,000.00	\$20,000.00
I.	AMENITIES				
1.)	TRASH RECEPTACLES	4	EA	\$450.00	\$1,800.00
2.)	TRAIL MARKERS	1	JOB	\$1,500.00	\$1,500.00
3.)	SIGNAGE	1	JOB	\$1,500.00	\$1,500.00
				<b>SUBTOTAL</b>	<b>\$465,000.00</b>
<b>BEAVER RUIN PARK ELEMENTS TOTAL</b>					<b>\$12,047,140.00</b>
<b>MISCELLANEOUS</b>					
<i>RENOVATIONS / IMPROVEMENTS</i>		<i>QUANTITY</i>	<i>UNIT</i>	<i>UNIT PRICE</i>	<i>TOTAL</i>
A.	WETLANDS RESTORATION / EXOTICS REMOVAL	1	JOB	\$150,000.00	\$150,000.00
				<b>RENOVATIONS SUBTOTAL</b>	<b>\$150,000.00</b>
<i>GEOTECHNICAL TESTING</i>		<i>QUANTITY</i>	<i>UNIT</i>	<i>UNIT PRICE</i>	<i>TOTAL</i>
A.	TESTING / HELICAL PIER DEPTH / STRUCTURES / CONSTRUCTION OVERSITE	1	JOB	\$200,000.00	\$200,000.00
				<b>GEOTECH SUBTOTAL</b>	<b>\$200,000.00</b>
<i>SITE LANDSCAPING</i>		<i>QUANTITY</i>	<i>UNIT</i>	<i>UNIT PRICE</i>	<i>TOTAL</i>
A.	NATIVE LANDSCAPE (TREE, SHRUBS, )	1	JOB	\$75,000.00	\$75,000.00
B.	SEEDING FOR WILDFLOWERS	1	JOB	\$25,000.00	\$25,000.00
				<b>SUBTOTAL SITE LANDSCAPING</b>	<b>\$100,000.00</b>
<b>MISCELLANEOUS TOTAL</b>					<b>\$450,000.00</b>

	<b>GRAND TOTAL</b>	<b>\$12,563,140.00</b>
MOBILIZATION, FEES, BONDS, ETC. (10% TOTAL)		\$1,256,314.00
	<b>SUBTOTAL</b>	<b>\$13,819,454.00</b>
15% CONTINGENCY FOR MASTER PLAN LEVEL COST ESTIMATE		\$2,072,918.10
	<b>SUBTOTAL</b>	<b>\$15,892,372.10</b>
12% DESIGN, ENGINEERING AND PROGRAM MANAGEMENT FEES		\$1,907,084.65
	<b>BEAVER RUIN PROJECT TOTAL</b>	<b>\$17,799,456.75</b>
<b>NOTE:</b> <b>COSTING OF MOBILIZATION WILL BE CONTINGENT UPON LOCATION OF CONSTRUCTION ENTRANCE, AND IS NOT INCLUDED IN THIS COST ESTIMATE.</b>		
Note: Totals reflecting quantities different from those listed above, have not been approved by jB+a, inc. ( <b>jB+a, inc Project Total : \$17,799,456.75 - 08.28.08</b> )		
Note: this cost estimate is the Landscape Architect's opinion of probable cost but is not guaranteed because the Landscape Architect has no control over the market, the contractor's bid or the length of time between the estimate creation and the project bid.		

## **APPENDICES**

Appendix B: Prioritized Cost Estimate

Refer to Phase 1 Master Plan Graphic (Appendix C)





**COST ESTIMATE FOR  
BEAVER RUIN PARK-PHASE 1  
GWINNETT COUNTY DEPARTMENT OF  
COMMUNITY SERVICES**

September 11,2008

Item Description	Quantity	Unit	Unit Price	Total
<b>INFRASTRUCTURE</b>				
<i>MISCELLANEOUS</i>	<i>QUANTITY</i>	<i>UNIT</i>	<i>UNIT PRICE</i>	<i>TOTAL</i>
A.. MONUMENT SIGNAGE (1 @ PEDESTRIAN ENTRANCE)	1	EA	\$5,000.00	\$5,000.00
<b>SUBTOTAL</b>				<b>\$5,000.00</b>
<b>INFRASTRUCTURE SUBTOTAL</b>				<b>\$5,000.00</b>
<b>PARK ELEMENTS</b>				
<i>SECONDARY ENTRANCE PLAZA</i>				
A. STAKING	1	JOB	\$2,000.00	\$2,000.00
B. EROSION / SEDIMENT CONTROL				
1.) SILT FENCE "TYPE C" (Double Row)	600	LF	\$3.50	\$2,100.00
2.) MULCH / SEED	1	JOB	\$1,000.00	\$1,000.00
C. TREE PROTECTION FENCING	300	LF	\$3.00	\$900.00
D. BOARDWALK PLAZA CONSTRUCTION (Includes deck and spur)				
1.) HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	35	EA	\$2,800.00	\$98,000.00
2.) TREX DECKING (Cost includes PT substructure and Gwinnett County standard rail system each side of boardwalk.)	3,500	SF	\$60.00	\$210,000.00
E. AMENITIES				
1.) TRASH RECEPTACLES	2	EA	\$450.00	\$1,350.00
2.) BENCHES	2	EA	\$350.00	\$350.00
3.) BIKE RACK	1	EA	\$250.00	\$500.00
4.) BENCH SWING	2	EA	\$1,500.00	\$1,500.00
5.) SIGNAGE	1	JOB	\$1,500.00	\$1,500.00
6.) ARBORS	1	EA	\$40,000.00	\$40,000.00
7.) ENHANCED LANDSCAPE BUFFER	1	JOB	\$30,000.00	\$30,000.00
<b>SUBTOTAL</b>				<b>\$389,200.00</b>
<i>BOARDWALK</i>	<i>QUANTITY</i>	<i>UNIT</i>	<i>UNIT PRICE</i>	<i>TOTAL</i>
A. STAKING	1	JOB	\$15,000.00	\$15,000.00
B. EROSION / SEDIMENT CONTROL				
1.) SILT FENCE "TYPE C" (Double Row)	7,700	LF	\$3.50	\$26,950.00
C. TREE PROTECTION FENCING	4,000	LF	\$3.00	\$12,000.00
D. BOARDWALK CONSTRUCTION (1.3 Mile boardwalk loop)				
1.) HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	292	EA	\$2,800.00	\$817,600.00
2.) TREX DECKING (Cost includes PT substructure and Gwinnett County standard rail system each side of boardwalk.)	29,000	SF	\$60.00	\$1,740,000.00
F. GAZEBO	1	JOB	\$20,000.00	\$20,000.00
G. MID-RIB BOARDWALK CONSTRUCTION				
1.) HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	55	EA	\$2,800.00	\$154,000.00
2.) TREX DECKING (Cost includes PT substructure and Gwinnett County standard rail system each side of boardwalk.)	5,500	SF	\$60.00	\$330,000.00
H. AMENITIES				
1.) TRASH RECEPTACLES	7	EA	\$450.00	\$3,150.00
2.) BENCHES	7	EA	\$350.00	\$2,450.00
3.) INFORMATION PANELS	3	EA	\$2,000.00	\$6,000.00
4.) ARBORS	1	EA	\$60,000.00	\$60,000.00
<b>SUBTOTAL</b>				<b>\$3,187,150.00</b>

BIRD WATCHING TOWERS		QUANTITY	UNIT	UNIT PRICE	TOTAL
A.	STAKING	1	JOB	\$400.00	\$400.00
B.	EROSION / SEDIMENT CONTROL				
	1.) SILT FENCE "TYPE C" (Double Row)	600	LF	\$3.50	\$2,100.00
C.	TOWER (Includes overhead structure, rail, floor of top level)	1	JOB	\$40,000.00	\$40,000.00
D.	PAVILION PLATFORM CONSTRUCTION				
	1.) HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	5	EA	\$2,800.00	\$14,000.00
	2.) PIER CAP (4 Per tower at corners)	4	EA	\$800.00	\$3,200.00
	3.) TREX DECKING (Cost includes PT substructure and Gwinnett County standard rails sytem each side of boardwalk.)	500	SF	\$60.00	\$30,000.00
E.	AMENITIES				
	1.) TRASH RECEPTACLES	2	EA	\$450.00	\$900.00
	2.) BENCHES	3	EA	\$350.00	\$1,050.00
	3.) INFORMATION PANELS	3	EA	\$2,000.00	\$6,000.00
SUBTOTAL					\$97,650.00
NATURE TRAIL SYSTEM		QUANTITY	UNIT	UNIT PRICE	TOTAL
A.	STAKING	1	JOB	\$5,000.00	\$5,000.00
B.	EROSION / SEDIMENT CONTROL				
	1.) SILT FENCE "TYPE C" (Double Row)	4,000	LF	\$3.50	\$14,000.00
	2.) MULCH / SEED	1	JOB	\$2,500.00	\$2,500.00
C.	TREE PROTECTION FENCING	4,000	LF	\$3.00	\$12,000.00
D.	FINE GRADING	1	JOB	\$20,000.00	\$20,000.00
E.	10' WIDE - SOFT SURFACE TRAIL				
	1.) 4" SHREADED WOOD MULCH	22,000	SF	\$1.50	\$33,000.00
	2.) 6" GAB	407	CY	\$15.00	\$6,105.00
F.	PEDESTRIAN BRIDGE	1	EA	\$60,000.00	\$60,000.00
G.	SOUND REDUCTION WALL	1	JOB	\$100,000.00	\$100,000.00
H.	SOUND REDUCTION WALL - LANDSCAPE SCREENING	1	JOB	\$20,000.00	\$20,000.00
I.	AMENITIES				
	1.) TRASH RECEPTACLES	4	EA	\$450.00	\$1,800.00
	2.) TRAIL MARKERS	1	JOB	\$1,500.00	\$1,500.00
	3.) SIGNAGE	1	JOB	\$1,500.00	\$1,500.00
SUBTOTAL					\$277,405.00
BEAVER RUIN PARK ELEMENTS TOTAL					\$3,951,405.00
MISCELLANEOUS					
RENOVATIONS / IMPROVEMENTS		QUANTITY	UNIT	UNIT PRICE	TOTAL
A.	WETLANDS RESTORATION / EXOTICS REMOVAL	1	JOB	\$112,000.00	\$112,000.00
RENOVATIONS SUBTOTAL					\$112,000.00
GEOTECHNICAL TESTING		QUANTITY	UNIT	UNIT PRICE	TOTAL
A.	TESTING / HELICAL PIER DEPTH / STRUCTURES / CONSTRUCTION OVERSITE	1	JOB	\$150,000.00	\$150,000.00
GEOTECH SUBTOTAL					\$150,000.00
SITE LANDSCAPING		QUANTITY	UNIT	UNIT PRICE	TOTAL
A.	NATIVE LANDSCAPE (TREE, SHRUBS, )	1	JOB	\$55,000.00	\$55,000.00
B.	SEEDING FOR WILDFLOWERS	1	JOB	\$12,500.00	\$12,500.00
SUBTOTAL SITE LANDSCAPING					\$67,500.00
MISCELLANEOUS TOTAL					\$329,500.00
GRAND TOTAL					\$4,285,905.00
MOBILIZATION, FEES, BONDS, ETC. (10% TOTAL)					\$428,590.50
SUBTOTAL					\$4,714,495.50
15% CONTINGENCY FOR PRELIMINARY PLAN LEVEL COST ESTIMATE					\$707,174.33
SUBTOTAL					\$5,421,669.83
12% DESIGN, ENGINEERING AND PROGRAM MANAGEMENT FEES					\$650,600.38
PHASE 1 PROJECT TOTAL					\$6,072,270.20

ADD ALTERNATE ONE					
NEIGHBORHOOD CONNECTION		QUANTITY	UNIT	UNIT PRICE	TOTAL
A.	TOPOGRAPHIC SURVEY	1	JOB	\$10,000.00	\$10,000.00
B.	STAKING	1	JOB	\$5,000.00	\$5,000.00
C.	EROSION / SEDIMENT CONTROL				
	1.) SILT FENCE "TYPE C" (Double Row)	2,000	LF	\$3.50	\$7,000.00
	2.) MULCH / SEED	1	JOB	\$500.00	\$500.00
D.	TREE PROTECTION FENCING	1,000	LF	\$3.00	\$3,000.00
E.	FINE GRADING	1	JOB	\$3,000.00	\$3,000.00
F.	10' WIDE - SOFT SURFACE TRAIL				
	1.) 4" SHREADED WOOD MULCH	3,000	SF	\$1.50	\$4,500.00
	2.) 6" GAB	50	CY	\$15.00	\$750.00
G.	NATIVE LANDSCAPE (TREE, SHRUBS, )	1	JOB	\$10,000.00	\$10,000.00
ADD ALTERNATE ONE TOTAL					\$43,750.00
ADD ALTERNATE TWO					
BOARDWALK - SECTION NEAREST NATURE TRAIL		QUANTITY	UNIT	UNIT PRICE	TOTAL
A.	TESTING / HELICAL PIER DEPTH / STRUCTURES /	1	JOB	\$25,000.00	\$25,000.00
B.	STAKING	1	JOB	\$3,000.00	\$3,000.00
C.	EROSION / SEDIMENT CONTROL				
	1.) SILT FENCE "TYPE C" (Double Row)	5,000	LF	\$3.50	\$17,500.00
D.	TREE PROTECTION FENCING	2,500	LF	\$3.00	\$7,500.00
E.	BOARDWALK CONSTRUCTION (1.3 Mile boardwalk loop)				
	1.) HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	200	EA	\$2,800.00	\$560,000.00
	2.) TREX DECKING (Cost includes PT substructure and Gwinnett County standard rail system each side of boardwalk.)	20,000	SF	\$60.00	\$1,200,000.00
F.	AMENITIES				
	1.) TRASH RECEPTACLES	3	EA	\$450.00	\$1,350.00
	2.) BENCHES	6	EA	\$350.00	\$2,100.00
	3.) INFORMATION PANELS	6	EA	\$2,000.00	\$12,000.00
G.	WETLANDS RESTORATION / EXOTICS REMOVAL	1	JOB	\$19,000.00	\$19,000.00
H.	NATIVE LANDSCAPE (TREE, SHRUBS, )	1	JOB	\$10,000.00	\$10,000.00
SUBTOTAL					\$1,857,450.00
BI-LEVEL VIEWING TOWERS		QUANTITY	UNIT	UNIT PRICE	TOTAL
A.	STAKING	1	JOB	\$400.00	\$400.00
B.	EROSION / SEDIMENT CONTROL				
	1.) SILT FENCE "TYPE C" (Double Row) 600 LF per tower	600	LF	\$3.50	\$2,100.00
C.	TREE PROTECTION FENCING (Viewing tower inland)	300	LF	\$3.00	\$900.00
D.	VIEWING TOWER (Includes overhead structure, rail, floor of top level)	1	EA	\$50,000.00	\$50,000.00
E.	PAVILION PLATFORM CONSTRUCTION (2 lower level platforms)				
	1.) HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	5	EA	\$2,800.00	\$14,000.00
	2.) PIER CAP (4 Per tower at corners)	4	EA	\$800.00	\$3,200.00
	3.) TREX DECKING (Lower level of each tower - 500sf) (Cost includes PT substructure and Gwinnett County standard rails sytem each side of boardwalk.)	500	SF	\$60.00	\$30,000.00
F.	AMENITIES				
	1.) TRASH RECEPTACLES	2	EA	\$450.00	\$900.00
	2.) BENCHES	3	EA	\$350.00	\$1,050.00
	3.) BENCH SWING	2	EA	\$1,500.00	\$3,000.00
	4.) INFORMATION PANELS	3	EA	\$2,000.00	\$6,000.00
SUBTOTAL					\$111,550.00
ADD ALTERNATE TWO TOTAL					\$1,969,000.00

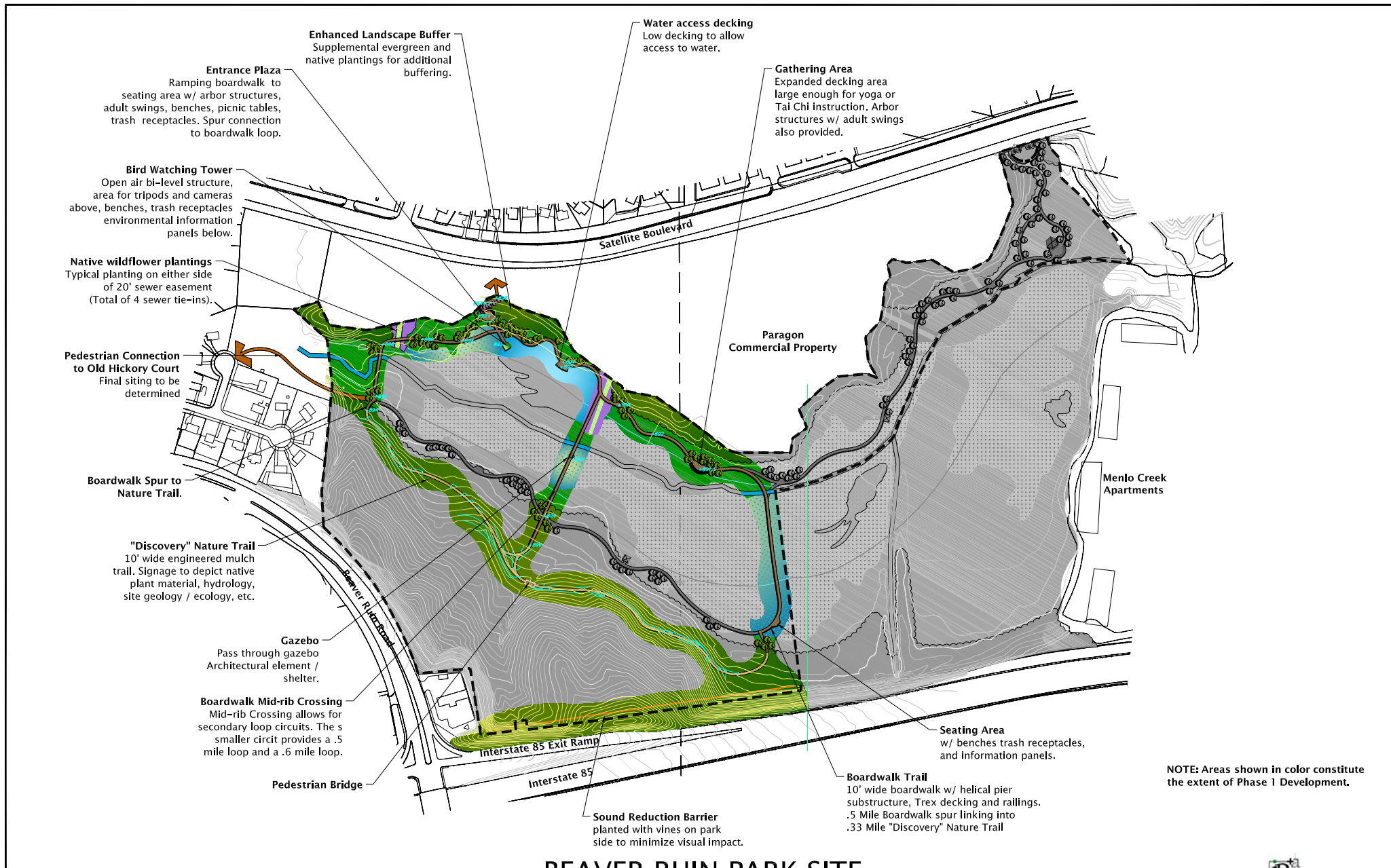


ADD ALTERNATE THREE					
BOARDWALK - SATELLITE BOULEVARD CONNECTION		QUANTITY	UNIT	UNIT PRICE	TOTAL
A.	TESTING / HELICAL PIER DEPTH / STRUCTURES /	1	JOB	\$25,000.00	\$25,000.00
B.	STAKING	1	JOB	\$3,000.00	\$3,000.00
C.	EROSION / SEDIMENT CONTROL				
	1.) SILT FENCE "TYPE C" (Double Row)	6,000	LF	\$3.50	\$21,000.00
D.	TREE PROTECTION FENCING	3,000	LF	\$3.00	\$9,000.00
E.	BOARDWALK CONSTRUCTION (1.3 Mile boardwalk loop)				
	1.) HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	220	EA	\$2,800.00	\$616,000.00
	2.) TREX DECKING (Cost includes PT substructure and Gwinnett County standard rail system each side of boardwalk.)	22,000	SF	\$60.00	\$1,320,000.00
	3.) TREX BENCH (42" Ht. w/ built in bench - at wellness station)	272	LF	\$21.00	\$5,712.00
E.	LIFETRAIL STATIONS (Include once full boardwalk is constructed.)	1	JOB	\$50,000.00	\$50,000.00
F.	AMENITIES				
	1.) TRASH RECEPTACLES	2	EA	\$450.00	\$900.00
	2.) BENCHES	3	EA	\$350.00	\$1,050.00
	3.) INFORMATION PANELS	3	EA	\$2,000.00	\$6,000.00
G.	WETLANDS RESTORATION / EXOTICS REMOVAL	1	JOB	\$19,000.00	\$19,000.00
H.	NATIVE LANDSCAPE (TREE, SHRUBS, )	1	JOB	\$10,000.00	\$10,000.00
I.	SEEDING FOR WILDFLOWERS	1	JOB	\$12,500.00	\$12,500.00
				SUBTOTAL	\$2,099,162.00
SATELLITE BOULEVARD ENTRANCE PLAZA					
A.	STAKING	1	JOB	\$3,000.00	\$3,000.00
B.	EROSION / SEDIMENT CONTROL				
	1.) SILT FENCE "TYPE C" (Double Row)	500	LF	\$3.50	\$1,750.00
	2.) MULCH / SEED	1	JOB	\$2,500.00	\$2,500.00
C.	TREE PROTECTION FENCING	250	LF	\$3.00	\$750.00
D.	FINE GRADING	1	JOB	\$5,000.00	\$5,000.00
E..	SITE ELECTRICAL (Security lighting only @ trailhead.)	1	JOB	15000	\$15,000.00
F..	MONUMENT SIGNAGE (1 @ EACH PEDESTRIAN ENTRANCE)	1	EA	\$5,000.00	\$5,000.00
G.	FRONTAGE - PEDESTRIAN ACCESS (6' Wide Concrete Sidewalk)	1,500	SF	\$4.00	\$6,000.00
H.	PLAZA				
	1.) CONCRETE PAVERS	5600	SF	\$6.00	\$33,600.00
	2.) STRUCTURAL SOIL	200	CY	\$25.00	\$5,000.00
	3.) ARBORS	2	JOB	\$40,000.00	\$80,000.00
	4.) LIGHTING	4	EA	\$4,000.00	\$16,000.00
	5.) PLAZA SHADE TREES	12	EA	\$500.00	\$6,000.00
	6.) GRANITE FACED RETAINING WALL	450	FF	\$40.00	\$18,000.00
	7.) STAIR ASSEMBLY	1	EA	\$4,000.00	\$4,000.00
I.	INFORMATION KIOSK (Includes roof structure)	1	JOB	\$8,000.00	\$8,000.00
J.	PERVIOUS CONCRETE ACCESS RAMP	2000	SF	\$7.50	\$15,000.00
K.	AMENITIES				
	1.) TRASH RECEPTACLES	3	EA	\$450.00	\$1,350.00
	2.) BENCHES	4	EA	\$350.00	\$1,400.00
	3.) BIKE RACK	2	EA	\$250.00	\$500.00
	4.) BENCH SWING	4	EA	\$1,500.00	\$6,000.00
	5.) SIGNAGE	1	JOB	\$1,500.00	\$1,500.00
				SUBTOTAL	\$235,350.00
GROUP PAVILION /DECKING		QUANTITY	UNIT	UNIT PRICE	TOTAL
A.	STAKING	1	JOB	\$1,000.00	\$1,000.00
B.	EROSION / SEDIMENT CONTROL				
	1.) SILT FENCE "TYPE C" (Double Row)	600	LF	\$3.50	\$2,100.00
C.	TREE PROTECTION FENCING	300	LF	\$3.00	\$900.00
D.	30' PAVILION	1	JOB	\$40,000.00	\$40,000.00
E.	PAVILION PLATFORM CONSTRUCTION				
	1.) HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	13	EA	\$2,800.00	\$36,400.00
	2.) TREX DECKING (Cost includes PT substructure and Gwinnett County standard rail system each side of boardwalk.)	1,300	SF	\$60.00	\$78,000.00
F.	BOARDWALK CONSTRUCTION (Boardwalk spur connection)				
	1.) HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	41	EA	\$2,800.00	\$114,800.00
	2.) TREX DECKING (Cost includes PT substructure and Gwinnett County standard rail system each side of boardwalk.)	4,100	SF	\$60.00	\$246,000.00

G. AMENITIES				
1.) TRASH RECEPTACLES	3	EA	\$450.00	\$1,350.00
2.) BENCHES	2	EA	\$350.00	\$700.00
3.) PICNIC TABLES	4	EA	\$500.00	\$2,000.00
4.) BENCH SWING	4	EA	\$1,500.00	\$6,000.00
5.) INFORMATION PANELS	4	EA	\$2,000.00	\$8,000.00
6.) ARBORS	2	EA	\$40,000.00	\$80,000.00
			<b>SUBTOTAL</b>	<b>\$617,250.00</b>
<b>BI-LEVEL VIEWING TOWERS</b>				
	<b>QUANTITY</b>	<b>UNIT</b>	<b>UNIT PRICE</b>	<b>TOTAL</b>
A. STAKING	1	JOB	\$400.00	\$400.00
B. EROSION / SEDIMENT CONTROL				
1.) SILT FENCE "TYPE C" (Double Row) 600 LF per tower	600	LF	\$3.50	\$2,100.00
C. TREE PROTECTION FENCING (Viewing tower inland)	300	LF	\$3.00	\$900.00
D. VIEWING TOWER (Includes overhead structure, rail, floor of top level)	1	EA	\$50,000.00	\$50,000.00
E. PAVILION PLATFORM CONSTRUCTION (2 lower level platforms)				
1.) HELICAL PIER SUBSTRUCTURE (Two 5' sections per pier, assumed 10' depth to resistance)	5	EA	\$2,800.00	\$14,000.00
2.) PIER CAP (4 Per tower at corners)	4	EA	\$800.00	\$3,200.00
3.) TREX DECKING (Lower level of each tower - 500sf) (Cost includes PT substructure and Gwinnett County standard rails sytem each side of boardwalk.)	500	SF	\$60.00	\$30,000.00
F. AMENITIES				
1.) TRASH RECEPTACLES	2	EA	\$450.00	\$900.00
2.) BENCHES	3	EA	\$350.00	\$1,050.00
3.) PICNIC TABLES ( Viewing tower Satellite Blvd. side)	2	EA	\$500.00	\$1,000.00
4.) BENCH SWING	2	EA	\$1,500.00	\$3,000.00
5.) INFORMATION PANELS	3	EA	\$2,000.00	\$6,000.00
			<b>SUBTOTAL</b>	<b>\$112,550.00</b>
			<b>ADD ALTERNATE THREE TOTAL</b>	<b>\$2,951,762.00</b>
			<b>GRAND TOTAL ADD ALTERNATES</b>	<b>\$4,964,512.00</b>
<b>NOTE:</b>				
<b>COSTING OF MOBILIZATION WILL BE CONTINGENT UPON LOCATION OF CONSTRUCTION ENTRANCE, AND IS NOT INCLUDED IN THIS COST ESTIMATE.</b>				
Note: Totals reflecting quantities different from those listed above, have not been approved by jB+a, inc. (jB+a, inc Phase 1 Total : \$6,072,270.20)				
Note: this cost estimate is the Landscape Architect's opinion of probable cost but is not guaranteed because the Landscape Architect has no control over the market, the contractor's bid or the length of time between the estimate creation and the project bid.				

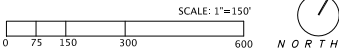
**APPENDICES**

Appendix C: Beaver Ruin Park Phase 1 Graphic  
Refer to the attached graphic.



PREPARED FOR:  
Gwinnett County Department of  
Community Services

# **BEAVER RUIN PARK SITE** **Master Plan-Option B** August 28, 2008





## **APPENDICES**

### Appendix D: Community Input Tabulations and Comments

Refer to the attached Spreadsheets for a summary of the tabulated Community interests and concerns information collected at the initial public meeting.

# Beaver Ruin Park Site Master Plan

## Park Concerns Form Tabulations

October 1, 2007

Gwinnett Dept. of Community Services

jB+a park design studio

Community Concern	Times Mentioned	Ranking
Crime/Vandalism/Gang Activity	15	1
Security in park	10	2
Overdevelopment/Too Much Active Recreation	9	3
Enforcing Park Hours	8	4
Parking	6	5
Preserving Passive Park Atmosphere	5	6
Location of Park Entrances/Access into Park	4	7
Trash	3	8
Pollution from adjacent sites	3	8
Adequate facilities	3	8
Light Pollution (from park and adjacent sites)	2	9
Securing Access from Adjacent Neighborhoods	2	9
Trespassing on adjacent properties	2	9
Security of surrounding neighborhoods	2	9
Noise from Park Users	2	9
Interstate Noise	2	9
Billboards	1	10
Unleashed Dogs	1	10
Grills	1	10
Traffic	1	10

# Beaver Ruin Park Site Master Plan

## Community Interest Form Tabulations

October 1, 2007

Gwinnett Dept. of Community Services

jB+a park design studio

Program or Facility	Times Mentioned	Ranking					
		First	Second	Third	Fourth	Fifth	No Rank
Unpaved Nature Trail including Boardwalks (walking, hiking)	24	14	2	3		1	4
Picnic Areas, Pavilions, Family Gathering Areas	14	1	2	2			9
Playground (multiple age groups)	13	2	2	3	1		5
Paved Multi-Use Trail, (walking jogging, blades, bike)	12	3	2	1	1		5
Nature Center/Classroom Facility	11	1	1	2		1	6
Information Kiosk/Interpretive signage (plant/animal identification)	9		2		1	2	4
Restrooms/Drinking Fountains	9				2	1	6
Security phone stations	5		1		1	1	2
Lighted areas	5		2	1			2
Dog Park (off leash area)	5			1	2	1	1
Adequate Parking	5		1				4
Benches	4			1			3
Preservation of Wildlife/ Plants	4	2	1				1
Basketball	4				1		3
Police Patrols	4	1		1			2
Swimming Pool	3	1		1		1	
Observation Deck/Tower	3			1	2		
Interactive Water Features (Fountains, splash park)	3	1					2
Grills	3						3
Educational Programs (guided hikes, lectures, etc.)	3				1		2
Baseball/Softball Field	3	1					2
Access from adjacent neighborhoods	2				1	1	
Soccer Field	2						2
Skate Park	2						2
Multi-Use Field (unstructured play, pick-up games)	2			1			1
Fishing Pond	2		1				1
Entry from Satellite Boulevard	2		1				1
Amphitheater	2		1				1
Landscaping	2			1			1
Sound Barriers	1				1		
Working with non-profits	1						1
Working with adjacent development for parking	1						1
Volleyball	1						1
Tennis Court	1						1
Special event facilities	1						1
Horseshoes	1						1
Holiday Activities	1						1
Handicap Access	1						1
Dog clean up stations	1						1
Cardio workout stations	1						1
Adult Swings	1			1			
Shelters Along Paths	1					1	
Kids Spinning Machine	1		1				
Access from Major Roads	1						1
Wildlife Food Dispensing Machine	1			1			
Rubberized Walking Trail	1	1					

Comments from the Beaver Ruin Park Site Master Plan  
Community Input Meeting 09.27.07

1. I would like to see fun kids stuff such as a trail for bikes, also a small water park with a lot of water slides. I would like to see swing sets, slides, playgrounds, fun activities for holidays (Halloween). Allow fishing.
2. I would like to see this remain as much of a nature center as possible. Hiking and trails (for dogs too.) Marker highlighting indigenous species. Water fountains (for people and dogs) and bathrooms. Cardio workout spots along trails. Satellite Boulevard entry so that neighbors can access without having to drive and park. Security to prevent this from becoming a drug gang hangout. Big swings that adults can swing on. Not all park users are little kids. Strategic Gazebos/Shelters and benches for stopping to enjoy a particular view.
3. I am concerned that gangs and drugs will take over. We all know we have this element in our neighborhood. I am concerned one access would be a problem. Access from Beaver Ruin only would be limiting. Satellite provides a more user friendly access (more people can walk to the park). I am concerned about overdeveloping and losing the inherent "Nature" (e.g. Use natural wood structures as much as possible). I am concerned that playground equipment would only be for children, my husband and I would like to walk there to swing on big swings and hike with our dogs. No grills or fires. Gangs, drugs, and parking could be a big problem here.
4. I would like to see a walking trail/bike path, conservation information booth or sign, natural sound/sight barrier (trees between the park and the interstate), use of paragon parking (more land preserved), preservation of wildlife (deer and turkey), restroom facility/nature center, elevated walkway along wetland (similar to path along Chattahoochee in Roswell, review similarities to Roswell Parks on Chattahoochee).
5. I do not want to see a huge playground, only a small playground. Preserve as much green space and wetlands as possible. Concerned about construction debris/runoff in the creek (also from Paragon), materials should be fireproof or fire resistant.
6. I would like to see rubber non-asphalt, no concrete, non-plastic wood track walking area that has lights that can be used at night. I would like to see a dog park, nature center that can be used for boy scouts/girl scouts and community meetings, playground, security pull station/phone station along the trail that dials 911 only, restrooms, nature trail along the river that is made of plastic wood (see Roswell Parks)
7. I am concerned about parking, lighting, security, restrooms. I do not want a skate park.
8. I would like to see groomed, low impact paths/boardwalks (no concrete), community nature instruction center, dog park, tree identification signs
9. Considering the gang activity in the area, restrict or monitor loitering and make any structures or fences be graffiti resistant and install 911 only phone and police office. A Beaver Ruin only access would minimize the access from the highest population density areas (and my bicycle route)
10. I would like to see trails (unpaved, minimum length 1 mile), a small 2-3 acre fenced area- wooded for a dog park, nature center with education opportunities, emergency call phones, flora and fauna identification signs.
11. I am concerned about security and graffiti.
12. I would like to see a paved track, a pond, an area for roller skating, a swimming pool, and indoor facility for classes and a walking trail.
13. I am concerned about the park becoming an area where gangs meet and hang out. Vandalism.
14. We wish to have a park with playgrounds, walking trails, and maybe a pool in the near future. Also we wish to have a space for basketball and soccer fields.
15. I think the Paragon Plaza will be so crowded- many people who do not live around will be coming and may make problems (such as garbage around and in the park). Close the park at 8pm so that teenagers won't trash the park.
16. I would like to see baseball fields and playground.
17. I am concerned about football camps.
18. I would like to see a nature walk/passive use only. No ball fields or other athletic facilities.



Comments from the Beaver Ruin Park Site Master Plan  
Community Input Meeting 09.27.07

19. I am concerned about how the park will be secured. By county police? Will paragon help with parking lot security?
20. I would like to see a picnic area (reserved and open) playground, walking trails, bicycle trail (separate from walking trail), security stations or call boxes, softball field, basketball court, tennis court.
21. I am concerned about security because in the current world that we live in we need to know that there is a way to police response ASAP. I would like to see curfew signs posted and handicap parking and restroom stalls.
22. I would like to see a bike trail (can share with walkers) a walking trail with bench offset areas, lighting and security, restrooms, open grass area, cooking/gathering area with shelter, children's play area, educational information on plants and animals. No sports facilities
23. I would like to see soft surface paths/boardwalks-minimal land disturbance and educational and directional signage. In the upland area I would like to see picnic tables, soft surface paths, outdoor classroom, and benches.
24. This is a passive park and should be approached as such. No Active recreation development. Minimal land disturbance
25. I would like to see walking trails/bike path, pick up basketball, minimal playground equipment, minimal parking, horseshoes, meadow/kite flying, dog park.
26. I am concerned about access to park from Hickory Ridge or Menlo Creek. Would it be controlled somehow? A gate card? Lighting should be unobtrusive to nearby residents. Would there be after hours access or would the gate be locked at dark. I am concerned about vandalism to structures and stream.
27. I would like to see nature center, trails, education center. I am concerned about crime.
28. I would like to see preservation of existing wildlife, preservation of trees and plant life, nature trails, and educational programs.
29. I am concerned about safety within the park including after hours activity. No transients, drug dealing, gang meetings. Minimum destruction of existing environment. No soccer, football, tennis courts. I am concerned about keeping the area clean. I do not want a lot of traffic close to my property.
30. I would like to see a nature center, boardwalks, bike trail access, observation decks/tower, and nature trails. I propose that the name be Hickory Ridge Park and Nature Center. Replant an abundance of small hardwood trees to replenish the damage done by clear cutting in the early 80's. Restore native plants to area. Work with Georgia native Plant Society for replanting project. Establish nature center, boardwalks over parks of wetland area and nature trails. Install bat box's to try and establish bat colonies. Work with bat conservancy center to purchase and properly establish this project. This is the perfect setting for this project and all the basic elements are there to make this a success. To create an identity for a park setting, plant crape myrtle flowering shrubs along the perimeter of the park along I-85 from the edge of the apartments to Beaver Ruin along the swale. Also plant Crape Myrtles along Beaver Ruin Road from I-85 to Satellite Blvd and along Satellite Blvd to the new commercial development. All this planting along the swale areas. Install Park sign in lot located at Satellite Blvd and Beaver Ruin Road. Also landscape the kudzu overgrown lot at the intersection. Establish dedicated bike paths to join this park with a connection to McDaniel Farm Park and Shorty Howell Park and club Drive Park. Have a bike path entrance to park from where it adjoins Hickory Ridge subdivision at Valley Ridge Drive at third left street, Old Hickory. Work with Hickory Ridge subdivision to establish tree and flower planting projects to visually extend the perimeters of the park. Use the Suwanee greenway and the Chattahoochee nature center as a template on the focus of the type of passive park and nature center that would be perfect for this parcel. Establish a working relationship with the Gwinnett Open Land Trust, the Sierra Club of Gwinnett, the Georgia native Plant Society, the Nature Conservancy to seek input and help with the educational aspect of the nature center and the existing wildlife of the parcel. Work with the future hickory ridge property owners group to help monitor and secure the park. Do not allow

## Comments from the Beaver Ruin Park Site Master Plan Community Input Meeting 09.27.07

- more permits for billboard along I-85 and higher or LCD TV type billboard close to this property. Eventually have the county pursue and acquire the property at the corner of I-85 and Beaver Ruin Road that is currently occupied by the ugly CITGO gas station and car wash. Add this parcel to the entire park project development. Restock the wetland and marsh area with small fish and frogs and work to restore wetland area with native plants. Add small water turtles to habitat. Build an observation tower to oversee the wetland and park area. Install birdhouse and establish habitat for birds and other small animals. Think of this as the crown jewel of the new parks in Gwinnett for the next decade. Have the focus that this is an educational park and work with the Gwinnett teachers to make this park a learning experience with the nature center.
31. Hopefully this park will be on some sort of fast track and not take many years to come to fruition. The parking issue needs to be resolved. I am concerned about runoff and trash coming from apartments and commercial property spoiling the park. Issues need to be resolved about CITGO gas station with all the years of tires and trash adjacent to the property hopefully this will be cleaned up. I am concerned about gas station tanks leaking into park property.
  32. An aquatic indoor and outdoor is long overdue for this area of Gwinnett.
  33. I would like to see a playground, picnic tables, drinking fountains, and paved trails. I know that you are going to make a wonderful park.
  34. I would like to see event use (special events), open pavilions, cooking, use after dark (lighting), an amphitheater.
  35. I am concerned about security in using facilities, access and parking, maintenance of the area, and perimeter protection/fencing.
  36. I would like to see a picnic area, benches, playground, pedestrian paths and lighting, multiuse trail, drinking fountain.
  37. I would like to see trails, educational venue, picnic areas, family settings, recreation area
  38. I am concerned about safety and making the area a family gathering area, not a "hangout"
  39. I would like to see nature trails, walking and jogging areas, picnic areas, small children's play areas, possibility of interactive guided nature walks.
  40. I am concerned about keeping out the athletic fields and swimming pools which seems to have been addressed. I am concerned about security after trails have been opened. I am concerned about keeping as much of the vegetation and stream intact as possible. I am concerned about parking areas and where they will be located.
  41. I would like to see trails (jogging/bicycle/walking/exercise), nature interpretive walking only trails. No motorized vehicles. Outdoor classroom for environmental education purposes. I would like to see picnic areas. A playground in a separate area from the natural area.
  42. I am concerned about crime, litter, and damage to the creek during construction activities.
  43. I would like to see picnic pavilions, walking trails, playgrounds and some basketball courts. I think it is important that these facilities area added so that the park will serve a broad range of people. During redevelopment of some parks these facilities were taken out, thus excluding a portion of the population. Some softball fields would be great too.
  44. My concerns are about the facilities being taken out or left out.
  45. We would like it to remain as passive as possible-walking trails and not a lot else. Maybe a couple of pavilions for picnics (small ones), restroom/water fountain.
  46. If structures are built, we are worried about graffiti.
  47. I would like to see walking trails/boardwalks, a dog run/poop duty stations, environmental protection! (preservation and enhancement), educational placards, observation tower and decking overviews, a safe approach from the neighborhood (sidewalks, crosswalks, etc.)
  48. I am concerned about potential overuse of area capacity/site limitations. It is a large area but needs limited and controlled access. Controlled/discreet access from Hickory Ridge and apartments. Sound limitations to preserve comfort and sustain natural wildlife. Time limitations of park use. Minimal, if naught family size pavilion, capacity 50-60 people, maybe only as a last addition, possibly grills and tables in sporadic spots. A playground should be away from residential (noise controls).

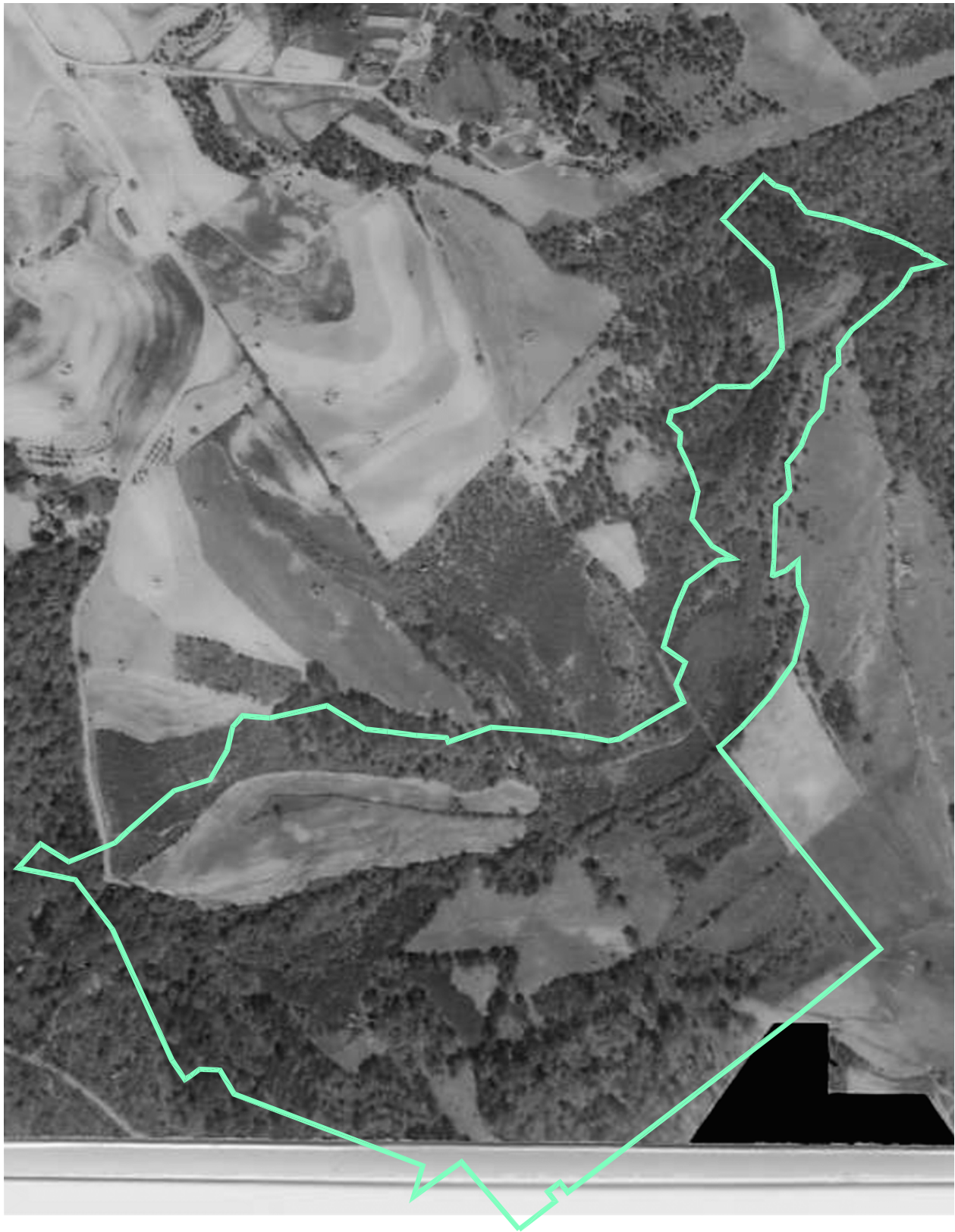
Comments from the Beaver Ruin Park Site Master Plan  
Community Input Meeting 09.27.07

49. I would like to see walking and nature trails, both left as natural as possible and very clearly signed. Very clearly designate areas which are not for the public to enter (to protect privacy of neighborhood and wildlife. A bike path.
50. I am concerned about access to the facility. Absolutely do not want there to be access through Hickory Ridge subdivision. Worried about encroachment/trespass of member of public onto rear of hickory ridge properties. Concerned about after dark access to the park, unleashed dogs (a danger to wildlife). Will the park be supervised by police/park staff and adequately? Maintain a delicate balance of conserving a relatively small area and opening it for public use. Concerned that the park might become a gathering point for youths or anyone looking for a site where they can just "hang out"
51. I would like to see LOTS of nature walks and boardwalks, playground areas, skate park sounds good, volleyball areas, water park (nothing TOO fancy or expensive, amphitheater, access from adjacent Menlo Creek/Paragon, pet-litter bag stations (like in George Pierce), bike path (separate from walking trail), trail signage(I got lost at night once...), sufficient parking. Residential access from Menlo Creek and Paragon properties
52. No basketball, baseball tennis, picnic areas (too much noise/trash), no excessive lighting (enough of that from i-85. How can we protect the diverse and probably fragile wildlife/ecosystem already present?
53. I would like to see picnic tables, skate park, lighting and hardscape and landscape, lots of parking, water fountains like at Suwanee town center, gazebo, walking trails
54. I would like to see an overlook, "Silver Comet" type trail, day parking only, "reservation" area, walking trail with names of trees, etc on signs, one or two meeting point areas for picnic-school lessons. I would like it to be a day park only.
55. I would like to see an entrance on Satellite Blvd and avoid too much congestion of roads. I would like a parking area, water fountains, soccer field, playground, swing sets, biking areas, indoor activity center, and picnic area for family. I would also like to see more vegetation, pedestrian entrance on Satellite blvd and emergency phones.
56. I am concerned about how late the park is going to be open and how we are going to prevent graffiti on park signs.

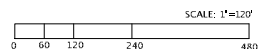
## **APPENDICES**

Appendix E: 1955 Beaver Ruin Park Site Aerial Photograph  
Refer to the attached aerial photo.





NORTH



PREPARED FOR:  
Gwinnett County Department of  
Community Services

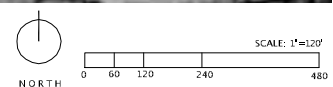
# BEAVER RUIN PARK SITE

## Circa 1955

September 27, 2007

**APPENDICES**

Appendix F: 1972 Beaver Ruin Site Aerial Photograph  
Refer to the attached aerial photo.



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Community Services

# BEAVER RUIN PARK SITE

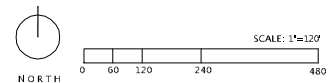
## Circa 1972

September 27, 2007

**APPENDICES**

Appendix G:2007 Beaver Ruin Site Aerial Photograph  
Refer to the attached aerial photo.





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Gwinnett County Department of  
Community Services

# BEAVER RUIN PARK SITE

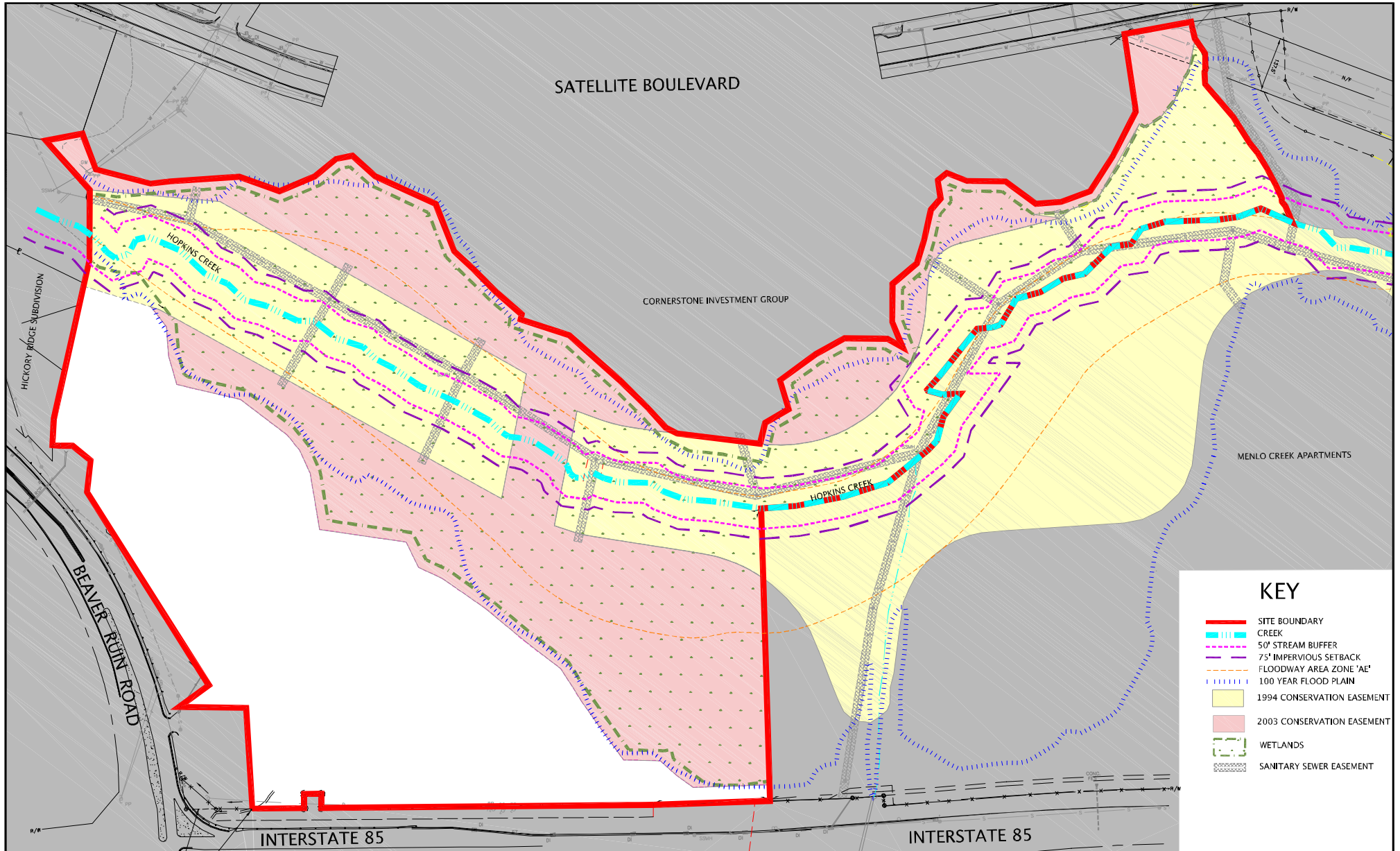
## Circa 2007

September 27, 2007



**APPENDICES**

Appendix H: Site Restrictions Graphic  
Refer to the attached graphic



# KEY

- SITE BOUNDARY
- CREEK
- 50' STREAM BUFFER
- 75' IMPERVIOUS SETBACK
- FLOODWAY AREA ZONE 'AE'
- 100 YEAR FLOOD PLAIN
- 1994 CONSERVATION EASEMENT
- 2003 CONSERVATION EASEMENT
- WETLANDS
- SANITARY SEWER EASEMENT

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Gwinnett County Department of  
Community Services

## BEAVER RUIN PARK SITE Base Plan September 27, 2007

SCALE: 1"=100'  
0 50 100 200 400



**JB** park design studio  
planning & landscape architecture

## **APPENDICES**

### Appendix I: Meeting Minutes

Refer to the attached meeting minutes for a summary of the discussion and presented materials at each steering committee meeting.

## **BEAVER RUIN PARK SITE MASTER PLAN – Community Interest Meeting**

Minutes from: 09.27.07 Community Input Meeting

Attendees: Commissioner Lorraine Green (District 1) Phil Hoskins, Grant Guess, and Rex Schuder– Gwinnett County Department of Community Services

Raigan Carr and Rachel Von Ins – jB+a, inc.

Approximately 40 Community participants

Location: Meadow Creek High School  
Gwinnett County, Georgia

Time: 7:00pm

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Meeting agenda, site location map, Club Drive Park master plan, and community interest form were distributed as public participants entered the meeting.

Grant Guess welcomed public participants and introduced Commissioner Green

Commissioner Green gave a brief welcome and discussed the importance of the site

Grant Guess introduced the representatives from Gwinnett County and Consultant representatives from jB+a. Mr. Guess explained the history of the park purchase, the easements held by Gwinnett Open Land Trust, and discussed the definition of a Special Purpose Neighborhood Park and the Comprehensive Plan.

Raigan Carr gave an overview of the site location and existing environmental conditions.

Rex Schuder explained the role of the public at the meeting utilizing the public interest form handed out at the beginning of the meeting. The form included an area where the public could list their interests, a priority list, and a concerns list. Mr. Schuder explained that the information listed in the community interest form would then be collated, tabulated, and organized by the consultant to be used in the master planning process. The attendees were then given time to fill out the form. Mr. Schuder explained why the area needs a park, further discussed the Special Purpose Neighborhood Park designation, and discussed the county's first Special Purpose Neighborhood Park, Club Drive Park. Mr. Schuder explained the master planning process and the role of the Steering Committee. Applications were handed out to those interested in serving on the committee.

The Floor was then opened for questions:

1. When will we know more about the regulations on the flood zone? *We currently know the regulations for building in the flood zone, but are continuing to do more research on the requirements of the conservation easements.*
2. The entrance will be off of Satellite Boulevard, correct? *The entrances have not been defined. There is the possibility of pedestrian access off of Satellite, but the only vehicular access to the interior of the park would be off of Beaver Ruin because we can not cross the wetlands with a road. Maximizing pedestrian access will be important. We will work with the adjacent neighborhoods if they would like to have access to the park from their properties, but the property owners must request it.*
3. How will the park be secured? *Gwinnett County has a division of the police force that patrols all county parks. When designing a park, safety issues are always addressed*



*through appropriate design and CPTED principles. The best policing comes from the eyes of the responsible users.*

4. Do the Paragon people have an interest in the security of the park? *Yes, they will be included on the steering committee.*
5. What about the driving range that is being built north of the site? Will the lighting be an issue? *Night time lighting is regulated by the County.*
6. Is vehicle access required? *Because it is a public property, public safety must be addressed. Ambulance and Police vehicles must be able to get to the site in order to maintain public safety. Access will be addressed through the planning process.*
7. What kind of parking lot capacity will be built or required? *The capacity has to be determined as part of the planning process. The parking area is a determining factor in the carrying capacity of any park. Opportunities to tie into the existing sidewalk system reduce the pressure on parking.*
8. Will the park be used for concerts or weddings? *There will not be room to develop event spaces.*
9. What is the likelihood of the county taking over the CITGO property? *Not likely.*
10. What about a sidewalk connecting to Beaver Ridge Elementary? *We are unable to put sidewalks on any property except our own. GDOT handles sidewalks and we can only encourage them to expand the sidewalk network.*
11. Do you envision a bridge above Satellite Boulevard to cross the street to the park? *That is outside of our scope because it would not be on our property.*
12. Have you received any indication from Paragon that they are interested in the steering committee? *They have representatives here tonight.*
13. Will a light be put in at the Hopkins Mill intersection with the Paragon development? *Paragon representatives stated that they are discussing with GDOT the possibility of doing that.*
14. Is naming the park part of the steering committee's tasks? *The steering committee can make recommendations, but the name is actually decided by the Recreation Authority.*
15. What is the timeframe for construction? *Right now there are no funds available for construction. The next chance for SPLOST funds will be in 2008. If SPLOST funds are available, they would begin being collected in 2009, and the earliest that construction could begin would be late 2009.*
16. Does a Special Purpose Neighborhood Park require a perimeter fence? *No, a fence is not required as part of the designation. There is currently a fence along the Interstate 85 side of the property. As part of the planning process, the need for fencing will be studied.*
17. Is there a difference between a reservation and a park? *This site will be a park.*
18. Have sound barriers been considered? *The steering committee can recommend sound barriers as part of the plan, but cannot force them to be built.*

If there are any additions or corrections to these meeting minutes, please contact Rachel Von Ins of jB+a immediately at 678.247.0735.

## **BEAVER RUIN PARK SITE MASTER PLAN – Scheduling Meeting**

Minutes from: 10.17.07 Scheduling Meeting

Attendees: Gwinnett County Department of Community Services – Grant Guess, Rex Schuder  
jB+a - Raigan Carr and Rachel Von Ins

Steering Committee participants – Rebecca Spitler, Linda Ursini, May Thompson, Dorsey Barrett, Jim Nicola, Tom Morrissey, Dennis Billew, Ellis Still, Linda Schieb, Adela Parra, Veronica Brickman, Carol Hassell, Sandra Fernandez, Gareth Allcott, Darren Lee, Betsey Dahlberg, Edward Bienkowski, John McHenry

Location: Gwinnett Environmental and Heritage Center (EHC) – Brown Thrasher Room #23

Time: 6:45 pm

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Rex Schuder welcomed everyone to the Gwinnett EHC and led a brief tour of the facilities.

The group returned to the Brown Thrasher Room and Rex Schuder went over age group data for the four census blocks surrounding the park site.

Rex Schuder explained that the purpose of the meeting was to schedule all following meetings for the Beaver Ruin Park Site Master Planning Process.

Scheduling of meetings then commenced, and are scheduled as follows:

- October 27<sup>th</sup> 2007 – Saturday, bus tour of Gwinnett Park System and boardwalk system in Clayton County. 8:30 am. Several park types will be visited and specific park elements will be highlighted. Participants are to meet at the Gwinnett Justice and Administration Center (GJAC) - 75 Langley Drive, Lawrenceville. Maps and directions will be mailed out.
- November 3<sup>rd</sup> 2007– Saturday, site walk. 8:30 am. The entire site will be hiked. After the hike, programming elements for the park will be discussed. Participants are to meet at the site on Satellite Boulevard. Maps and directions will be mailed out. Those unable to make the entire hike can meet the group during lunch for the programming discussion. Lunch location TBA.
- December 6<sup>th</sup> 2007– Thursday, 7:00 pm, GJAC Building – Inventory/Analysis, and Concept Meeting. jB+a will present site analysis (vegetation, hydrology, soil analysis etc), and 3 concept plans to Steering Committee for review and comment.
- January 10<sup>th</sup> 2008 - Thursday, 7pm GJAC Building – Preliminary Concept Meeting. jB+a will present a graphic of the Preliminary Concept for the Beaver Ruin Park Site and a preliminary cost estimate to the Steering Committee for review and comment.
- February 7<sup>th</sup> 2008 - Thursday, 7pm GJAC Building - Final Master Plan Meeting. jB+a will present the graphic for the Final Beaver Ruin Park Site Master Plan, and the final cost estimate. Based on the cost estimate, prioritization of park elements will be the main focus of this meeting.

- Feb 14<sup>th</sup> 2008 (TENTATIVE)- Presentation of Final Beaver Ruin Park Site Master Plan to the Recreation Authority.

Dates for presentations to the Recreation Authority and Board of Commissioners will be determined once the new scheduling occurs after the first of 2008. Rex Schuder will determine dates and inform the Steering Committee.

If there are any additions or corrections to these meeting minutes, please contact Rachel Von Ins of jB+a as soon as possible at 678.247.0735.

## **BEAVER RUIN PARK SITE MASTER PLAN – Park System Tour**

Minutes from: 10.27.07 Park System Tour

Attendees: Gwinnett County Department of Community Services - Rex Schuder, Grant Guess

jB+a, inc. –Raigan Carr, Rachel Von Ins, Rich Deckman, Chuck Ehmcke, Eric Carr

Community participants –Betsey Dahlberg, Sandra Fernandez, Jim Nicola, Ed Bienkowski, Dennis Billew, Adela Parra, Lee Thaubald, Linda Schieb, Linda Ursini, Veronica Brickman, Rich O'Keefe, Tom Morrissey, Rebecca Spitler, May Thompson, Mark Ursini

Location: Gwinnett Justice and Administration Center (GJAC)

Time: 8:30am

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Consultants and Steering Committee Members met at GJAC to begin a park tour that would include 4 existing park sites. Each park was visited to see different park elements that could potentially be sited on the Beaver Ruin Park site, and also to see existing facilities within in the county. These parks included the following:

**Melvin L. Newman Wetlands Center:** The Newman Wetlands Center, located in Clayton County, was opened by the Clayton County Water Authority in 1995. It was built to demonstrate the importance of preserving wetlands environments and to provide public education in matters of natural resource conservation. The site is 32 acres and includes a wetlands trail and a 4,800 sq/ft building complex comprised of an exhibit/learning area, a 50-seat auditorium, offices, and a conference facility. There are picnic facilities on site as well. The wetlands trail is a 0.5 mile loop, alternating between crushed stone and boardwalk. Along the boardwalk there are open and covered seating areas. During the walk, it was noted that the water level of the wetlands at this site is mechanically controlled. Also, it was discussed that any boardwalk built at the Beaver Ruin Site would be approximately 2 feet wider than the boardwalk at the Newman Center to allow for 2-way traffic.

**Sweet Water Park:** Gwinnett County's Sweet Water Park is a 25 acre park that has a large concrete plaza area, a 3/4-mile multi-purpose trail, playgrounds, a restroom building, two half-court basketball courts, two tennis courts, horseshoe pits, sand volleyball court, picnic tables, and porch swings. The plaza area boasts a nearly 2,000 square-foot open central pavilion with two 1,000 square-foot extensions on each side. The importance of providing playground equipment for a variety of ages was discussed. The importance of locating park elements with safety in mind, specifically the location of bathroom buildings in respect to playground areas, and the location of the basketball courts near the parking lot were discussed. The relationship between the length of a trail and they types of uses was discussed. Construction types and coatings for dealing with vandalism were discussed.

**Five Forks Park/Ronald Reagan Park** – Gwinnett County's Ronald Reagan Park (previously known as Five Forks Park) is a 25 acre passive community park. The Park amenities are laid out to provide passive policing of the basketball court area and teen skate park by the parking lot and vice versa. The fenced dog park includes 3 specific areas, a dog run, a small dog area, and a large dog area. Adjacent to the dog park is a large open turf area that could be used for unstructured play by park visitors. A pedestrian connection to an adjacent neighborhood was looked at and discussed in relation to the opportunities at the Beaver Ruin Site. The difference between shelters and pavilions was discussed. Selective clearing of underbrush to produce sight lines in wooded areas was discussed. Also discussed was the importance of providing fencing between the playground and parking area.

**Little Mulberry Park** – Gwinnett County's Little Mulberry Park is an 890 acre park site with amenities including, a 6 mile paved multi-use trail, a large rustic picnic pavilion, two smaller picnic pavilions, a playground, an observation terrace at the peak of the West Meadow that is one of the highest elevations in Gwinnett County, equestrian trails, a lake with several fishing piers, and two separate entrances with parking and restroom areas. There is also an additional parking lot, for equestrian use only. Little Mulberry Park is considered to be an Open Space Park. Natural materials and non invasive construction methods were used to construct the park to blend with the natural setting and to minimize disturbance of the existing woodlands.

County staff, Consultants, and Steering Committee Members will meet on November 3<sup>rd</sup> at 8:30 am at the Beaver Ruin Park Site on Satellite Boulevard for the Site Walk.

If there are any additions or corrections to these meeting minutes, please contact Rachel Von Ins of jB+a as soon as possible at 678.247.0735



## **BEAVER RUIN PARK SITE MASTER PLAN – Site Walk**

Minutes from: 11.03.07 Site Walk

Attendees: Gwinnett County Department of Community Services – Grant Guess, Rex Schuder

jB+a, inc. - Raigan Carr, Rachel Von Ins

Steering Committee participants – Carol Hassell, Rebecca Spitler, John McHenry, Betsey Dahlberg, Linda Schieb, Veronica Brickman, Sandra Fernandez, Holly Barrett, Dorsey Barrett, Ellis Still, Garreth Allcott, Mark Ursini, Linda Ursini, Richard O'Keefe, Adela Parra, Lee Thaubald, May Thompson, Ed Bienkowski

Location: Beaver Ruin Park Site

Time: 8:30 am

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Consultants and Steering Committee Members met at the Paragon property adjacent to the park site for an informative site walk. The intent of the site walk was to become familiar with the characteristics of the site including topography, vegetation types, drainage features, and the opportunities and constraints of the park site. The team walked to the Menlo Creek Apartments and got a bird's eye view of the site from the third floor of one of the apartment buildings. The team then walked into the wetland and wetland edge areas on the Menlo Creek property to experience these vegetation types. The team walked back to the Paragon property and entered the park site along one of the sewer easements to see the creek, then walked along the property line between the Paragon property and the park site property and returned to the cars. The team then drove over to the Hickory Ridge subdivision and entered the park property from the cul-de-sac on Valley Ridge Drive to see the upland area of the site. Steering committee members actively participated in the site tour by asking questions and voicing concerns and requests for the park. At the end of the site walk, the group met for lunch and was asked to voice the elements they would like to see in the park. These elements are as follows:

Betsey Dahlberg – Leave the area as natural as possible. The number one priority should be boardwalk trails and natural trails, possibly some shelters along the boardwalk. Include parking, bathrooms, and an interpretive center

Linda Schieb – As long of a boardwalk system as possible, natural mulch trails through the wooded area. A nature interpretive center if space allows, shelters. On the fence about a playground. One might be ok near the parking, but should not impact the natural area.

Veronica Brickman – Agree with keeping the site as natural as possible. Gazebo type resting areas like at Clayton County. Well constructed interpretive signage. Do not want the site to be a kiddie park. Hate the idea of a Beaver Ruin entrance, would prefer to enter off of Satellite because traffic is terrible on Beaver Ruin

-Gwinnett County Staff commented that there has to be a vehicular entrance on Beaver Ruin because there can be no vehicular access through the conservation easement and police, fire, and EMS would have to have vehicular access to structures on the upland side of the property. However, pedestrian access could be a possibility on Satellite Boulevard.

Sandra Fernandez – Agree with what Betsey said.

Holly Barrett – Extremely opposed to the site as a kiddie park. It should be a nature center with boardwalks and gazebos. There are other parks in the area with playgrounds. Need a sound barrier on I-85. Nature center to display plants and animals and how they benefit the land.

Dorsey Barrett – Boardwalk should be a priority, it will be expensive but we should make it the economic priority. Opposed to any playground equipment.

Ellis Still – Concerned about parking with the steepness of the site at Beaver Ruin Road, in favor of boardwalks, nature center, and minimal parking. The best use of the site will be to leave it in as natural a state as possible to learn about nature, a fieldtrip spot, and learning center for elementary schools. Show kids about diversity of plants and animals.

Garreth Allcott – Park development should be as minimally invasive as possible. Like the boardwalk at Clayton County. Would like an education center too.

Mark Ursini – A nature center with bus parking, outdoor classrooms, and indoor classrooms. Worried about security, need fencing and controlled access, video surveillance, gate that closes automatically. Iffy on subdivision access because worried about vandalism and trespassing. Get as much as we can on the plan now so that we can at least get some of it built. Think ahead and security is important. Like the rules at the Clayton County park of no smoking, no dogs, and no noise.

John McHenry – Agree with everyone's suggestions. The Gwinnett Village CID is happy to see good park land in the area because the area doesn't have much. Safety issues and CPTED need to be considered.

Linda Ursini – Agree that as much should stay natural as possible. In favor of nature trails, bathrooms, trashcans, security. Not in favor of a playground. Would like to see an education center, but not sure about what form it should be.

Richard O'Keefe – Agree with nature themed atmosphere of park. Opportunities for upland trail that is jogger/walker friendly. Great to access to the different types of plant communities on the site. Nature center and development in the center of park to not impact the neighborhood. Have a thick buffer and fence to keep out trespassers. Would like for people to enjoy the site without having much impact to enjoy the natural features. Overlooks and boardwalks.

Adela Parra – Do not envision an actual nature center. A playground would help to give security. All development surrounding parking to make it a passively secure parking area. Bathroom near parking area. A playground and picnic area really needs to be considered for security and keeping eyes on the parking lot. Would like to have parking, playgrounds, and nature center in a football field sized area. The rest of the property should be trails with interpretive signage about trees, etc. A hierarchy of trails. Shelters to get out of the rain.

Lee Thaubald – Security around parking, a couple of shelters, nature center. Stacked loops or spur trails to make a variety of areas to walk. A pedestrian entrance off of Satellite. ADA accessible. Interpret the history of the site, monitor and find out how it has changed and is changing. Interpret the environmental processes and make it an educational experience.

May Thompson – Nature preserve, highlight the history of the area and how it has changed. Nature trails and boardwalks with benches. Adult swings, natural amenities. Like the look of Little Mulberry's site furnishings. Because of the high percentage of people in the area under 18, maybe a small playground kept away from the neighborhood. Entrance to the park near the CITGO. No rentals pavilions, but shelters are ok. Passive security is important. Interpretive signage.

Ed Bienkowski – Consider bike lanes connecting the park to McDaniel Farm and Shorty Howell. Have bike parking at the site. Extensive mulch trails on the highland area. Use Trex for the boardwalks, it is more expensive but better in the long term. Small nature center that will serve as an educational tool for adults and children. Concentrate on passive elements, nature trails, and boardwalks with interpretive signage. Plant restoration, forest restoration. Pedestrian access from cul-de-sac in Hickory Ridge neighborhood. Have access controlled with a key code or something to make the park an extension of the subdivision, like what we saw at Ronald Reagan. Sound barriers on I-85, maybe the clear ones. Playgrounds detract from quiet and if in the wrong place would ruin the passive nature of the park. A playground would be a disaster. Birdhouses and bat houses to add educational value. A nature center with interchangeable exhibits on the wetland habitat. Restrooms. On trails have an adequate number of benches for resting and looking at views/contemplative areas. Create an identity for the park by planting a character tree along the entire perimeter and integrate that into iconography of signage, etc. Create a theme for the park.

Rebecca Spitler – Agree with Betsey, keep the site as natural as possible. Not in favor of a playground because there are others in the area. Agree to keeping it preserved as an educational facility.

Carol Hassell – Agree with Rebecca, this area of the county is particularly lacking in passive amenities. It is an iconic piece of land. This is a place that needs to be preserved because it was abused many years ago. The Board of Commissioners bought this land because they wanted it to remain natural and passive and we need to honor that. The Gwinnett Open Land Trust had this land on high priority as a place that needed to be preserved as passive and for habitat.

#### Questions / Comments:

Veronica Brickman asked if we could consider not having grills at the site. Gwinnett County staff responded that the location of picnicking affects that. Grills are only near parking areas for maintenance purposes and to not encourage people carrying a lot of items into the interior of the park. If you don't provide grills, people will bring them. Ed Bienkowski commented that Jones Bridge Park is the center of hell because there are huge groups picnicking, grilling, and being noisy and this element will send the passive atmosphere away.

Allowing dogs vs. prohibiting dogs was discussed. Gwinnett County staff stated that the issue was more of a programming issue and that the steering committee doesn't really have control over that.

If there are any additions or corrections to these meeting minutes, please contact Rachel Von Ins of jB+a as soon as possible at 678.247.0735.

## **BEAVER RUIN PARK SITE MASTER PLAN – Analysis / Concept Meeting**

Minutes from: 12.06.07 Analysis / Concept Meeting

Attendees: Gwinnett County Department of Community Services – Grant Guess, Rex Schuder

jB+a - Raigan Carr, Rachel Von Ins

Steering Committee participants – Mark Ursini, Linda Ursini, Betsey Dahlberg, Carol Hassell, Lee Thaubald, Adela Parra, Tom Morrissey, John McHenry, Gareth Alcott, Linda Schieb, May Thompson, Rich O'Keefe, Terrie Bunch, Edward Bienkowski, Testy Abdulwassy, Fakiha Osmon, Rebecca Spitler, Veronica Brickman, Dennis Billew, Ellis Still, Holly Barrett

Location: Gwinnett Justice and Administration Center (GJAC), Conference Room B

Time: 7:00pm

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Grant Guess opened the meeting. He told the committee that he had met with the district commissioner Lorraine Green to discuss the park site. Lorraine's vision for the site is that there would not be a staffed nature center building with classrooms and exhibits on the site, but rather that the site would serve as a nature experience through the use of boardwalks, interpretive signage, trails, and possibly outdoor classroom spaces. Also, she is not in favor of an access on Beaver Ruin Road due to the fact that it would take up a large amount of space on the site. She would prefer that the collaboration with Paragon for parking/access to the site and then only peruse Beaver Ruin access if an agreement with Paragon can't be worked out. Due to the need to have formal discussions with Paragon, this has somewhat delayed the planning process since we need to still work out access to the site. However, there are boardwalk and trail concepts that have been developed so those will be discussed.

Grant opened the floor to questions:

The committee asked that due to Lorraine's vision, does that mean that no structures can be on the site.

*We will have pavilions and shelters, but without staffing, there isn't the type of activity that would allow for a full building. Also, with no access off of Beaver Ruin, fire and safety access becomes a challenge.*

The Paragon representative isn't here. Do they expect and want to be a part of the park?

*They aren't necessarily concerned with the details of the park, but are indeed interested in the development of the park and being involved.*

What about access off of Satellite Blvd?

*The connections to satellite are low in elevation and virtually in the wetlands so anything other than pedestrian access isn't really feasible*

What about the "recreation set-aside" property that is adjacent to the subdivision?

*The recreation set aside property is all floodplain and doesn't gain us any buildable area or fix the problem of access.*

Can the “recreation set aside” area be a linkage between the neighborhood and park?

*Yes, but the neighborhood has to approve it and request it.*

Rex Schuder stated that Menlo is willing to incorporate their area into our planning, but at some point we will have to get recreation easements or some other type of agreement with them in order to have the boardwalk on their property.

Raigan Carr let everyone know that the meeting is being taped in order to make sure that everyone’s comments are included in the minutes and the future planning. No one stated that they had a problem with this.

The Beaver Ruin Park Site Analysis boards and Concept boards were presented by Raigan Carr of jB+a. Analysis boards included photo analysis, slope and hydrology analysis, soils analysis, vegetative analysis, and site opportunities and constraints.

#### Photo Analysis

- Pictures from the site and the location in which they were taken are put on this board to have a quick reference to conditions on the site

#### Slope and Hydrology Analysis

- Vast majority of site is less than 5% slope, which is good for boardwalks and ADA access
- The edges of the site along Beaver Ruin and I-85 have very steep slopes over 30%
- Site possesses positive drainage patterns due to small ridges across site which flow down into the wetlands, and the water moves through the site towards Menlo Creek Apartments

#### Soils Analysis

- The majority of our site has soils that aren’t favorable for building. They are mostly very wet. However, with boardwalk construction techniques we can build boardwalks in these areas
- The upland areas have soils that are suitable for trails and pavilions and other structures with design and planning

#### Vegetative Analysis

- Vegetation helps to determine if an area is wet, or if it is high and dry. The upland area has pine and hardwood trees. The edge of the wetland areas has alders and black willows. The wetland area has a lot of grasses and sedges.
- The vegetation also helps us determine some areas where we might put overlooks, bird watching areas, etc.

#### Site Analysis

##### Constraints

- Park site bordered by busy Satellite Blvd, Beaver Ruin, and Interstate 85
- Excessive noise from Interstate 85
- 75’ building setbacks on the streams
- A large floodway area
- Steep slopes along Beaver Ruin and Interstate 85
- Utility easements
- Conservation easement



### *Opportunities*

- Linkages to neighborhood, Menlo Creek, Paragon
- Pedestrian access from Satellite Blvd
- Great views into site from Menlo Creek Apartments and Beaver Ruin Road
- Interesting wetland areas, beaver dam ponds, open water areas, creeks

Questions were again taken from the floor:

What is the main disadvantage of Beaver Ruin Access?

*Beaver Ruin is so much higher than the site, there would be a large portion of the site that would be taken up by road in order to make the grade change.*

What about business at the corner of Beaver Ruin and Satellite? Could we park there?

*Since it is not contiguous to the site, we haven't really investigated it. We are going to try to exhaust our options with contiguous properties.*

Raigan Presented the three concept Plans

### Concept 1

- "Sensory Garden in nature"
- Elements engage the senses through creating and noting site elements like colors, smells, sounds, textures, etc.
- Entry plaza at Satellite with seating areas and shade structures. Environmental/Sensory information expressed in paving and interpretive signage
- Viewing Towers/Outdoor Classroom- open air tower made of natural materials with benches for viewing. Outdoor classroom below with additional environmental and sensory information.
- Seating areas, with benches and trash receptacles.
- Shelters with benches and swings for viewing, picnic tables
- Boardwalk going through the ponded water area
- Plaza area near commercial district with pedestrian access
- Trellis shade structures on boardwalk with adult swings
- Natural surface nature trail within 150' of boardwalk
- Small shelters with benches and trash cans along nature trail
- Noise reduction wall along Interstate 85
- Spur connection to Menlo Creek
- Interpretive signage
- Adult Swings
- Fairly straight boardwalk loop

### Concept 2

- "Communing with nature"
- Information Plaza with seating areas and shade structures
- Lifetrail Wellness stations
- Viewing Tower with benches and swings for viewing, picnic tables, seating area below
- Plaza areas
- Shelter spur over ponded area
- Pedestrian access to commercial site
- Shelters with picnic tables or benches
- Interpretive signage

- Viewing platforms
- Group Pavilion on stilts at same elevation of boardwalk
- Seating areas
- Curvier boardwalk loop
- Shelter near wetland area
- Menlo creek spur trail

### Concept 3

- "Environment"
- Trailhead plaza with seating area and shade structures and interpretive signage
- Elevated group pavilion
- Shade structures
- Seating areas
- Boardwalk trail on the edge of the lake
- Shorter nature trail within visual distance of boardwalk
- Outdoor classroom adjacent to nature trail
- Floodway crossing with Pavilion in middle
- Smaller boardwalk loop on Menlo Creek property
- Spur connection to Menlo Creek Apartments
- Two pedestrian accesses to commercial site.

Following the presentation of the concepts, the meeting was then open discussion. Questions and comments are as follows:

1. I like Concept 3 the best, but I like the longer walking trail from concept 1.
2. I like Concept 3, but I like the Life Trail too.
3. I like observation towers.
4. I like the floodway cut across with the shelter.
5. I like the way the third concept skirts the lake area.
6. Have an area to get closer to the water as part of the trail skirting the lake.  
*-Rex brought up that when skirting the trail we get close to the fill slope, so we might need to consider buffer plantings. Discussion ensued concerning skirting the interior of the pond? It was decided that the committee liked skirting the outside better*
7. I like the viewing towers.
8. I like the longer nature trail in the Concept 1 with the additional connectors back to the boardwalk
9. I like the curvier trail  
*-there was an extended discussion on the merits of curvier vs. straight*
10. I'd like to see the boardwalk trail move further towards the uplands so that the nature trail can move further into the uplands and still have passive security
11. What does a yoga/tai chi area involve?  
*-The requirements for this were discussed among the group (basically just an open area)*
12. I'm not sure that I like the idea of spending all that money on shelters and trail over at the Menlo Creek side  
*-as an option, the smaller loop shown on Concept 3 could be narrower, maybe 6 or 8 feet wide as a way to save costs.*
13. I want the sound barrier
14. What about the aesthetics of the sound barrier. Some would like to see something different than the standard sheet metal.

*-a discussion ensued and it was stated that we would most likely not get to pick the construction material and the vote was taken for including a sound barrier, regardless of construction.*

15. On Concept 1, how wide are the trellis areas?

*- They are shown very large on the concept 1 plan. They can definitely be smaller.*

A series of votes were taken throughout the course of the discussion. Votes were decided by the raising of hands and majority rules. The following was decided:

- Voted to include Lifetrail stations in final concepts
- Voted to make boardwalk alignment more toward sinuous than straight
- Voted to make nature trail as long as possible
- Voted to make boardwalk loop as long as possible by including the smaller loop on the Menlo property
- Voted to include Sound Barrier (the default is the standard sheet metal)
- Voted to include towers, plazas, interpretive signage, seating areas, and shelters.
  - Include two open air towers and 2 roofed towers. The location of the open air towers would need to be determined by further field assessment and will be noted in the project narrative.
- Voted to have connection across floodway.
- Voted to keep picnic tables on the Satellite Blvd side of the stream
- Voted to include a smaller trellis structure with swings

Rex closed discussion. At the next meeting, the Preliminary Master Plan will be presented which will include all of the comments from tonight's meeting. Committee members will be contacted regarding the January 10 meeting. Depending on negotiations concerning access to the park, we may need to postpone our next meeting until February 7. If this is the case, everyone will need to bring their calendars to schedule future meetings to finalize the process. The meeting was adjourned.

If there are any additions or corrections to these meeting minutes, please contact Rachel Von Ins of jB+a as soon as possible at 678.247.0735.

## **BEAVER RUIN PARK SITE MASTER PLAN – Preliminary Master Plan Meeting**

Minutes from: 01.10.08 Preliminary Master Plan Meeting

Attendees: Gwinnett County Department of Community Services –Grant Guess, Rex Schuder  
(jB+a) - Raigan Carr

Steering Committee Participants – Jim Nicola, Lee Thaubald, Adela Parra, Mark Ursini, Linda Ursini, John McHenry, May Thompson, Judy Allen (for Gareth Allen) Linda Schieb, Sandra Fernandez, Ed Bienkowski, Carol Hassell, Ellis Still, Richard O'Keefe, Tom Morrissey

Location: GJAC – Conference Room A

Time: 7:00pm

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Rex Schuder gave a brief recap of the Concept Meeting held on December 6, 2007, and then outlined the layout of the meeting. Rex mentioned that there would be the opportunity for additional refinements to the plan following this meeting. At the end of the meeting the preliminary cost estimate would be handed out again further refinements would be made. Received a package from the adjacent neighborhood with more than 50% residents signed requesting a pedestrian access to the park from the cul-de-sac. **Next iteration of the plan will show the location of the cul-de-sac and a symbolic linkage similar to line and arrows going to commercial property.** Will not be able to finalize a routing until the construction document phase and an existing conditions survey has been done, so that the connection can be made. Cannot do this at Master planning phase because we are using Aerial Topography (not accurate enough)

Raigan Carr then presented the Beaver Ruin Park Preliminary Master Plan as designed with the modifications discussed at the Concept Meeting.

The Preliminary Master Plan is a conglomeration of the concepts presented at the Concept meeting with the following majority vote elements included:

- Lifetrail stations in final concepts
- Boardwalk alignment more toward sinuous than straight
- Nature trail as long as possible
- Boardwalk loop as long as possible by including the smaller loop on the Menlo property
- Sound Barrier (the default is the standard sheet metal)
- Towers, plazas, interpretive signage, seating areas, and shelters.
  - Include two open air towers and 2 roofed towers. The location of the open air towers would need to be determined by further field assessment and will be noted in the project narrative.
- Connection across floodway.
- Keep picnic tables on the Satellite Blvd side of the stream
- Smaller deck area (suitable for Tai Chi) with trellis structure and swings.

### **Boardwalk Concept**

- Approximately 1.35 Miles in length. Loop circuit passing through a variety of landscapes throughout the site.
- Boardwalk is entirely sited outside the floodway zone area except at three points where it crosses the flood way; the western most section of the boardwalk, the eastern most section of the boardwalk and at the "Mid rib" crossing.
- Boardwalk is 10' wide with rails. Substructure to include helical piers (less invasive and less expensive than pile driving), pressure treated lumber beams, joists, and posts (railing), and TREX decking and railing (expensive in the short term).
- Boardwalk incorporates a more sinuous than straight profile for added interest.
- Boardwalk meanders along the outer edge of the exposed water area at the northwest side of the park.
- Main Pedestrian entrance to the boardwalk is off Satellite Boulevard at a pedestrian plaza area.
- Secondary Entrance proposed to connect in from adjacent commercial property

### **Pedestrian Plaza**

- Pedestrian plaza comprised of concrete pavers sand set on top of structural soils in an effort to maintain permeability.
- Information Kiosk with information panels illustrating facts about the site and or the environmental processes provided at the main entrance
- Two shade arbors on either side of the semicircle would include adult swings and benches
- Plaza situated approximately 4' above the boardwalk. Granite faced retaining wall elevates the plaza area. A stair assembly connects down to a permeable concrete walk through the midpoint of the semicircle. For ADA compliance a permeable concrete walkway at 4% grade slopes down from the sidewalk / plaza area at street elevation and connects to the board walk.
- Enhanced landscape at the plaza area creating a more inviting entrance to the site include supplemental native plantings and information tags for added interest.

### **Secondary Entrance**

- Northwestern edge of site connecting into Beaver Ruin Park via adjacent commercial property.
- Ramping boardwalk enters to seating / decking area with shade arbor structure.
- Amenities at the secondary entrance include benches, adult swings, picnic tables, information panels and trash receptacles.
- Spur connection ties this plaza area into the main boardwalk loop.
- Supplemental landscape comprised of native plant materials will be installed near slopes of commercial property to screen development from park.

### **Elevated Group Pavilion**

- First major structure encountered in park. Located on axis with the central stair area at the plaza.
- 30' Diameter elevated group pavilion. Open air with picnic tables, benches, trash receptacles.
- Gathering deck area with shade arbors on either side, Adult swings, benches, trash receptacles.
- Deck area is linked to the boardwalk and can be used as a pass through or gathering area.
- Spur trail further up toward Plaza area allows for bypass of Group Pavilion if in use

### **Boardwalk Elements**

- Seating Areas - Series of seating areas including benches, trash receptacles and information panels depicting information about the site, wildlife, ecological processes, etc.



Seating areas alternate with the LifeTrail Wellness Stations along the length of the boardwalk.

- LifeTrail Wellness Stations - LifeTrail Wellness Station bulb-outs (180sf) situated along the length of the boardwalk. . A total of 10 stations located approximately .1 mile apart. Each station will include an exercise kiosk and benches built into the rails of the bulb-out. LifeTrail Wellness Stations alternate with the seating areas along the length of the boardwalk.
- Viewing Towers – Two bi-level, open air towers with roof structures are sited along the boardwalk. Intended for wildlife viewing with benches and adult swings on the second level for viewing. Picnic tables (Satellite Boulevard side only) and seating below. Intended to be designed utilizing more natural like materials to blend with the site. Information signage and sensory elements may be incorporated at these locations.
- Gathering Area – Expanded decking area (bulb-out) large enough for yoga or Tai Chi instruction. Will include an arbor shade structure on the far side of the decking area with adult swings and benches. Decking area shown on plan scales at 1300sf, allows adequate area for Tai Chi movements and yoga poses without encroaching on personal space.
- Water access decking – Located at the exposed water area near the northwest section of the boardwalk, low decking provided intended to allow access to the water for added interest on site.
- Birdwatching Tower – Two, open air, roofless, bi-level structures are sited along the boardwalk; one on the open water in the western portion of the site, the other in the eastern section near Menlo Creek apartments. Towers are intended for bird watching with area for tripods and cameras above, benches, trash receptacles and environmental information panels below. Intended to be designed utilizing more natural like materials to blend with the site. The final location of these Towers will be determined during the construction document phase of the project.
- "Mid Rib" Crossing – Spur connection which cuts across the floodway near the open water area of the site. Provides a shorter loop circuit and sites a gazebo structure on the boardwalk itself. The gazebo is intended as an orienting architectural element and pass through.
- Mini Loop Connection - .3mile boardwalk mini loop that provides connection to the Menlo Creek Property as well as access to another area of the wetlands. Constructed with the same methods as the larger loop boardwalk and providing 2 separate seating areas (built in seating as opposed to freestanding benches) with spur connection into Menlo Creek Apartments. (Spur connection is a recommended connection. Menlo Creek Properties will need to ok these locations)

#### **Discovery Nature Trail**

- Discovery Nature Trail is 10' wide and comprised of engineered mulch. Signage that depicts native plant materials, hydrology, site geology, etc, are located along the trail as "discovery" elements.
- Access to the Nature trail is via spur connections of the boardwalk at three locations.
- Nature Trail is located outside the conservation easement but within viewing distance of the boardwalk for security.
- Nature trail follows the contours of the southwestern portion of the site to minimize disturbance of existing grades.
- Slope of trail is 5% or less.
- Two pedestrian bridges are located along the trail one to allow access over a natural swale, the other allows access over a tributary of the creek.

#### **Sound Reduction Barrier**

- Located on the property line at the Interstate 85 exit ramp and continuing along the ramp to the Menlo Creek Property to minimize the noise pollution created by the interstate.

- Intended to be planted with native, non invasive vines on the park side to minimize the visual impact of the wall (Sound reduction barrier will more than likely be the standard DOT corrugated metal wall)

#### **Native Wildflower Plantings**

- Located along the existing sewer tie-in's on the Satellite Boulevard side of the site. Currently devoid of plantings other than grass.
- Provide native wild flower plantings on either side of the 20' sewer easement (total of 4 sewer tie-in's) for visual interest.
- Optional information signage depicting types of wildflowers planted to be located on boardwalk near the plantings.

#### **Park Landscape**

- Native Trees are to be provided along Satellite Boulevard and at each of the entrances.
- Additional native trees will be provided along the boardwalk to provide shade, provide aesthetics and education.

#### **Questions / Comments**

1. On the LifeTrail Wellness stations, we have 10 stations, is there a recommended distance that should occur between stations? *Do not know of a recommended distance, will research more. We chose the .1 mile distance because it was a fairly round number that would allow an even space between the 10 stations.*
2. Can you describe the kiosk at the wellness stations? *Priced as a 3 panel kiosk (triangular in shape) with a roof on top. Panels can be customized with information about on how to use the various exercise equipment, information about general nutrition or health, can even include information about the site.*
3. Where is an example of the wellness station in one of our parks right now? *Nearest example is in Lawrenceville. In a City of Lawrenceville Park, off Highway 29 across from the Presbyterian Church as you are going south out of town. Small Park with a few stations, possibly intended for senior citizens.*

*Information about LifeTrail available on line at*

*<http://www.playworldsystems.com/lt/productCategories.asp>*

*Available for all age groups and abilities. Kiosk information teaches you how to use the equipment based on fitness level.*

4. The entrance plaza, is that at Satellite Boulevard elevation? *Yes.*
5. That area is in a big hole right now, is it not? What are they going to have to do to built that up? *We're going to have to do some grading. Currently showing retaining walls holding that plaza at elevation that will include permeable materials. Will more than likely have to go through a lot of permitting, develop compensatory mitigation plans to offset any impacts on wetlands and floodplain.*
6. Is there a plan B for the information plaza given the costs and the issues associated with building up the plaza area? *Yes, we could create an expanded boardwalk area, there would still be permitting issues just maybe not as bad.*
7. At this point there is not pedestrian access along the road. *We will have sidewalks along the frontage of the property to tie into the Commercial properties and Menlo Properties.*
8. The structures that are intended within the park, (bird watching towers, gathering pavilion, viewing towers, gazebo) how will they be constructed? *They will be*

*constructed on top of helical piers as well. Bi-level structures will include a concrete cap on top of the helical pier as a foundation to keep the structure from twisting.*

9. Question posed to Carol Hassel (Gwinnett Open Land Trust) from Grant Guess(Gwinnett County) – How do you feel about that type of construction within the conservation easement? *That is the way to go, helical piers are so much less invasive than any other type of construction.*
10. When we were at some of the other parks, it seemed like their property lines were fenced in, is that right? *Gwinnett County does not have a default condition for fencing perimeters.*
11. Some areas have built in benches and others don't, how will the freestanding benches be secured? *Free standing benches will be fastened down to keep them from migrating off site.*

*Note: There are built in benches at each of the LifeTrail fitness stations.*

12. Some areas have built in benches and others don't, how will the freestanding benches be secured? *Free standing benches will be fastened down to keep them from migrating off site.*

#### **Comments regarding revisions**

1. How difficult would it be to reroute the western most section of the boardwalk to the other side of the dogleg? That way it would be further away from the neighborhood. *Just adds a larger expense to the more expensive treatment (elements within the floodway need to be beefier because they have to withstand more pressures from moving water).*

*Community should be happy with the location of the trail, since it is a community park and if that means moving 50' east then lets make those accommodations.*

***\*\*Voted on and passed by majority vote to relocate the boardwalk to the eastern side of the dogleg.***

2. Will we show the connection to the cul-de-sac in the next plan? *Next iteration of the plan will show the location of the cul-de-sac and a symbolic linkage similar to line and arrows going to commercial property. Will not be able to finalize a routing until the construction document phase and an existing conditions survey, so that the connection can be made. Cannot do this at Master planning phase because we are using aerial photography.*
3. At the group pavilion there are three boardwalks coming in at the deck area, does the person have to walk through on the deck area and make their way to the other side, or does the path go around the side so you don't interfere with whatever group is participating in that area? *Current plan shows that you would walk through the deck area.*

***\*\*Voted on and passed by majority vote to realign the boardwalk so that one does not have to pass through the group gathering area to exit out.***

4. There are so many seating areas, too many seating areas in a place that is suppose to be natural. There are too many and they are only a 10<sup>th</sup> of a mile apart! *There are specific seating areas and then are built in benches the fitness stations that will most likely only be used by those participating in the LifeTrail exercises. The standard comment we (Gwinnett County) gets about our trails, specifically from the elderly population, is that there are not enough seating areas.*
5. In regards to theme landscaping, is there any type of consideration to integrate that into the signage, relating to brochures and things like that, has that been given any consideration? *We have included in the cost estimate costs for things like native landscaping, trail markers and things like that so that it is not just a boardwalk but also a nature walk. We don't get too detailed at this level as this is a master plan but there will be wording in the project narrative that states that the committee wants "Thematic use of native materials" and then just "broad use of Native Materials".*
6. I'd like to make a request for extensive landscaping at the cul-de-sac connection point to the park. *We'll put in the narrative wording that says we want a generous use of native materials to help heal in the construction impacts.*
7. At the berm connecting to the commercial properties will the landscaping there be resolved as well? *Yes, as mentioned during the review of the preliminary graphic, we will recommend that supplemental plantings be included at the berms for additional buffering.*
8. Has there been any thought to exotics removal? *Yes, we have included a line item in the cost estimate to include the removal of the invasive exotics.*
9. Are the trash cans on site animal-proof, and will there be recycling areas available? *Would expect that they be the standard County trash can, however, we will include in the project narrative a recommendation for animal proof trash cans and recycling opportunities.*

**\*\*Voted unanimously to advance the preliminary master plan (with the adjustments listed above) to the Final Master Plan with the proviso that Menlo Creek Properties (pedestrian connection) and Paragon Properties (Parking) must first be contacted before the final plan will be presented.**

The Preliminary Cost Estimate was then passed out. In depth discussion regarding park cost will take place at the next meeting (TBD). It was requested that the Steering Committee review the cost estimate and prepare for a phasing discussion.

If there are any additions or corrections to these meeting minutes, please contact Raigan Carr of jB+a as soon as possible at 678.247.0727.

## **BEAVER RUIN PARK SITE MASTER PLAN – Final Master Plan Meeting**

Minutes from: 08.28.08 Final Master Plan Meeting

Attendees: Gwinnett County Department of Community Services –Grant Guess, Rex Schuder  
jB+a - Raigan Carr

Community participants – Jim Nicola, ,Linda Schieb, Dale Higdon, Ellis Still, Mark Ursini, Linda Ursini, Holly Barrett, Dorsey Barrett, Tom Morrissey, Rebecca Spitler, John McHenry, Edward Bienkowski

Location: GJAC Building– Conference Room B

Time: 7:00pm

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Meeting opened with a status update regarding coordination with Paragon Properties and the Menlo Creek Apartment Management. It was stated that for the park to be developed as the full master plan intends it will be necessary to have the cooperation from both adjacent property owners. However, rather than wait for full cooperation to transpire, the County has decided to commence with the final master planning in an effort to continue to move the project and potential funding support for the park (AKA SPLOST funding) forward.

The Preliminary Master Plan was then reviewed as a point of departure for the Final Master Plan meeting. As a refresher, the revisions which led to the final master plan from the preliminary master plan were pointed out. These revisions included the following:

1. Reroute the western most section of the boardwalk to the other side of the dogleg
2. Show a connection to the adjacent cul-de-sac.
3. Realign the boardwalk at the group pavilion so that one does not have to pass through the group gathering area to exit out.

The Final Master Plan with the incorporated revisions was then presented. Also included in the final master plan presentation was a conceptual layout for the secondary entrance.

***Note:*** *Following the Preliminary Master Plan Review Meeting, the consultant had been asked to research a potential layout for the secondary entrance that would include a restroom building with connection to the boardwalk. This layout would require a small portion of land owned by Paragon Properties.*

The concept for the secondary entrance includes a standard Gwinnett County Restroom situated on a fill slope. The wall retaining the soil for the Restroom facility would also allow for an overlook plaza area. Two separate boardwalk access points consisting of a stairway access and an ADA compliant concrete ramp wrap the restroom and plaza area and lead down to the boardwalk.

**The intent is for the full master plan to be developed** however, for the full master plan to be developed it will be necessary to have the cooperation from both adjacent property owners. if easements on the adjacent properties are declined an Option B plan has been developed, by the consultant, to provide a solution that would not encroach upon the adjacent properties. Option B illustrates the following revisions.



1. Secondary entrance would only be a pedestrian entrance, and would not include a restroom facility.
2. The boardwalk would complete its loop at the eastern most Gwinnett County property line and would not continue onto the Menlo Creek Property.
3. The mini loop on the Menlo Creek Property would be eliminated.
4. The Bird Watching Tower located on the Menlo Creek Property would be eliminated
5. Spur connection to Menlo Creek Apartments would be eliminated.
6. Lifetrail wellness stations would be reconfigured so that all 10 stations could fit within County lands.
7. Nature Discovery Trail would be shortened so as not to encroach upon Menlo Creek Property.
8. Sound reduction wall would be shortened so as to only screen sound on County Property.

***\*\*VOTE*** – *Consensus to approve the graphic (total build out for park potential) as the guiding document for the development of Beaver Ruin Park. Approved Unanimously*

The cost estimates for both the Final Master Plan and Option B were distributed. Discussion regarding the cost estimate and prioritization commenced.

Phase 1 development will consist of the following.

1. Geotechnical testing to determine location and depth of boardwalk piers
2. Boardwalk loop with features only (excluding side closest to nature trail)
3. Mid-rib boardwalk crossing
4. Secondary entrance
5. One (1) bird watching tower
6. Nature Trail
7. Wetlands restoration / exotics removal (for the developed areas)
8. Site landscaping (for the developed areas not to exceed \$75,000)

***\*\*VOTE*** – *Discussion regarding the inclusion of the neighborhood connection in phase 1 resulted in a defeat with a committee majority vote to exclude the connection in phase 1.*

Following phase 1 discussion, priorities for park construction were then discussed. Steering Committee members were asked to vote on the various elements of the park to help determine the order in which they would like to see the park elements constructed when funding become available. Priorities are as follows:

1. Neighborhood connection
2. Boardwalk Section with features (completing full boardwalk loop)
3. .35 mile boardwalk spur and features from Satellite Boulevard

Following the prioritization of park elements a vote to accept the Phase 1 development and prioritizations as noted and to submit it to the Recreation Authority was taken. By majority vote the order of phasing was approved for submission.

jB+a will present the Beaver Ruin Park Site Master Plan to the Recreation Authority on Thursday, September 11<sup>th</sup>, at 3:00 pm in Conference Room B of the second floor conference center in the GJAC at 75 Langley Drive in Lawrenceville. Steering Committee Members are invited to attend.

If there are any additions or corrections to these meeting minutes, please contact Raigan Carr of jB+a as soon as possible at 678.247.0727

**Beaver Ruin Park Site – Recreation Authority Meeting**

Minutes from: 09.11.08 Recreation Authority Meeting

Attendees: Gwinnett County Recreation Authority  
(jB+a) –Raigan Carr

Location: GJAC – Conference Room B

Time: 3:00 PM

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The Steering Committee Final Master Plan, Option B and Phase 1 recommendations were presented to the Gwinnett County Recreation Authority by Raigan Carr of jB+a, inc. Four member of the Steering Committee were in attendance.

The Recreation Authority voted unanimously to approve the Final Master Plan as the guiding document for the development of Beaver Ruin Park with the recommendation that the trail connection from the park to the adjacent neighborhood at the western boundary be included in the Phase 1 development.

If there are any additions or corrections to these meeting minutes, please contact Raigan Carr of jB+a 678.247.0727.