

Barwell Road Park

Master Plan

May 2017



Acknowledgments

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A SPECIAL PARK FOR A DESERVING COMMUNITY

Establishing a Citizen Planning Committee:

One of the first steps in the planning process is to identify community members and other stakeholders willing to serve on the Citizen Planning Committee (CPC) that provides guidance to the master plan process. Using information provided through community surveys, the following list of individuals were recommended to the Raleigh Parks Recreation and Greenway Advisory Board and City Council to serve on the CPC:

<u>Name</u>	<u>Neighborhood</u>
Bailey Allred	Brandywood/Anderson Pointe
Gladys Bonilla	Wake County Human Services
Tanielle Brown	John’s Pointe
Tina Certo	Eaglechase
Gabriela Cobos	Uribe Consulate General of Mexico
Patrick Faulkner	Tanglewood
Alesha Garrett	Battle Ridge
Jaqueline Griffin	Eaglechase
Ulysses Lane, VMD	Brandywood
Clifton Lavenhouse	Maybrook Crossing
Jerry Mangum	Eaglechase
Taty Padilla	Wake County Smart Start
Rev. Kevin Seymour	Ebenezer Methodist Church
Latonia Williams	Chastain
Dexter Hebert	PRGAB Member

The CPC provided great insight and optimism to the process and worked openly with the Planning and Design Team to express ideas that were practical, while also capturing the vision and spirit of the community. In that regard, it was a highly rewarding process for all involved and the CPC deserves much credit for the master plan that was created.

Introduction:

The City of Raleigh Parks, Recreation and Cultural Resources Department (PRCR) in collaboration with the Citizen Planning Committee (CPC), the surrounding neighborhoods and the Planning and Design Team has created a special master plan for Barwell Road Park that provides much needed playgrounds, gathering spaces, opportunities for sports, recreation, open space, learning, health and wellness.

The master plan is supported by previous studies and captures the vision, spirit and needs of the residents of Southeast Raleigh. It is based on an iterative process that engaged the community at every step. Once complete, the park will become a centerpiece for the PRCR and will serve the needs of the community, provide environmental stewardship and promote health and wellness for generations to come.

The park is planned to provide a variety of activities for all ages, derived and prioritized from the community engagement process and located on the site in concert with its natural condition. It provides a destination and point of connection for the Neuse River Greenway Trail and other proposed or potential greenways in the immediate context. It includes portions that preserve nature, which will become more and more of an asset as new developments are located around the park, as well as areas that will provide active recreation. As part of planning for the park, recommendations are given to improving the city’s streets that surround it to include bike facilities, sidewalks, and safe crosswalks to encourage more multi-modal and safe access to the park.

It is expected that the park will evolve through development phases as funding is made available. As such, this master plan considers the development of a first project area as well as long term phases that can be developed over time.

VISION / MISSION / ORGANIZING THEME

Park Vision: Play – Learn – Discover:

The CPC established a simple, yet powerful, phrase: **“Play- Learn- Discover”** to guide the design, programming, maintenance and use of the park. The existing school and community center already establish “Play” and “Learn” and the master plan of the park continues with this expression. “Discover” is expressed through engaging with nature, adventure oriented activities and from the journey one will take through the woods and topography to get to different activity areas and features of the site.

Park Mission: A Thoughtful, Reflective and Inviting Place

The CPC established a compelling mission for Barwell Road Park:

“Barwell Road Park has open space for a variety of outdoor activities. It is inviting to residents of all ages and abilities to play, learn, discover, or to just pass the time. The rolling landscape is home to wildlife, a mix of hardwood trees, and wetlands that flow to the Neuse River. Beneath the grounds are rocks that were once molten lava. Accessible by trails for walking and bikes, Barwell Park honors its natural past and protects the present so that generations to come will enjoy all it has to offer.”

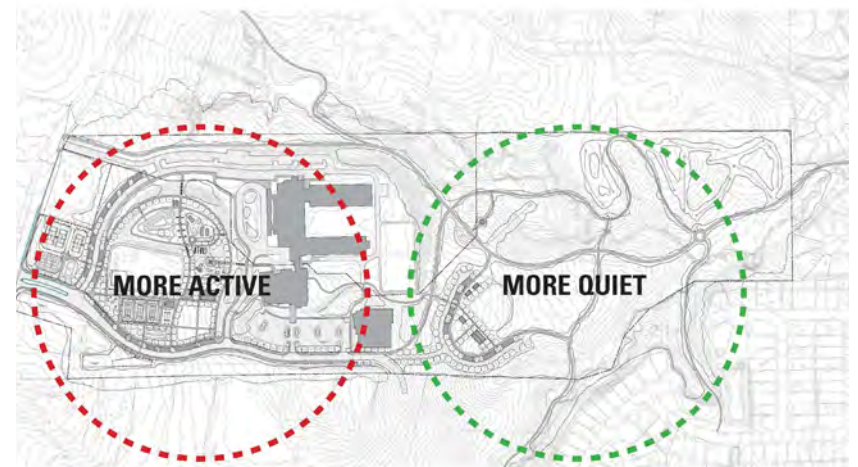
Park Design Theme – Active West / Mellow East:

The park’s character is easily divided into east and west sides due to:

- The location of the community center and elementary school at the site’s mid-point and at the high point of the site.
- The “developed” landscape of the west side vs the natural landscape of the east side.
- Natural riparian areas and site drainage of the east side vs controlled storm water management on the west side.



Play/ Learn / Discover creates a simple yet powerful description of how the park design, management and programming should be considered to provide a meaningful experience for the park users.



In response to the natural character of the site, the west side of the park is programmed with more structured activities and development, while the east side preserves the natural forest and promotes activities that are less structured and self-directed.

BARWELL PARK MASTER PLAN

Goals, Principles and Concepts:

Several goals, principles and concepts surfaced as part of the community engagement process that in summary provide direction for master plan:

- Create a park that is a reflection of the community and serves the communities needs.
- Create something unique and special and distinguish the park from other surrounding parks in the area.
- Provide a variety of activities from structured play to informal discovery.
- Make the park fun for all age groups and use it to bring neighbors and families together.
- Consider ways to make walking and biking to the park safer and more convenient.
- Work with the natural features of the site and protect sensitive lands, forests and riparian areas.
- Better link the school, in compliance with joint use agreement, Community Center and Park with circulation and activities.
- Create a place for organized sports and flexible use too.
- Create a place for family gatherings, reunions and picnics.
- Create a system of walkways and trails that link the activities together and provide loops to walk , bike or run on.
- Provide parking spaces where it is needed, but do it efficiently and in an environmentally sensitive way.
- Create a first phase that is visible, promotes the park and includes a variety of activities.
- Providing a place that was safe and secure.
- Integrate environmental responsibility into the design, engineering and maintenance.
- Make the park accessible and easy to navigate for people of all ages and abilities.

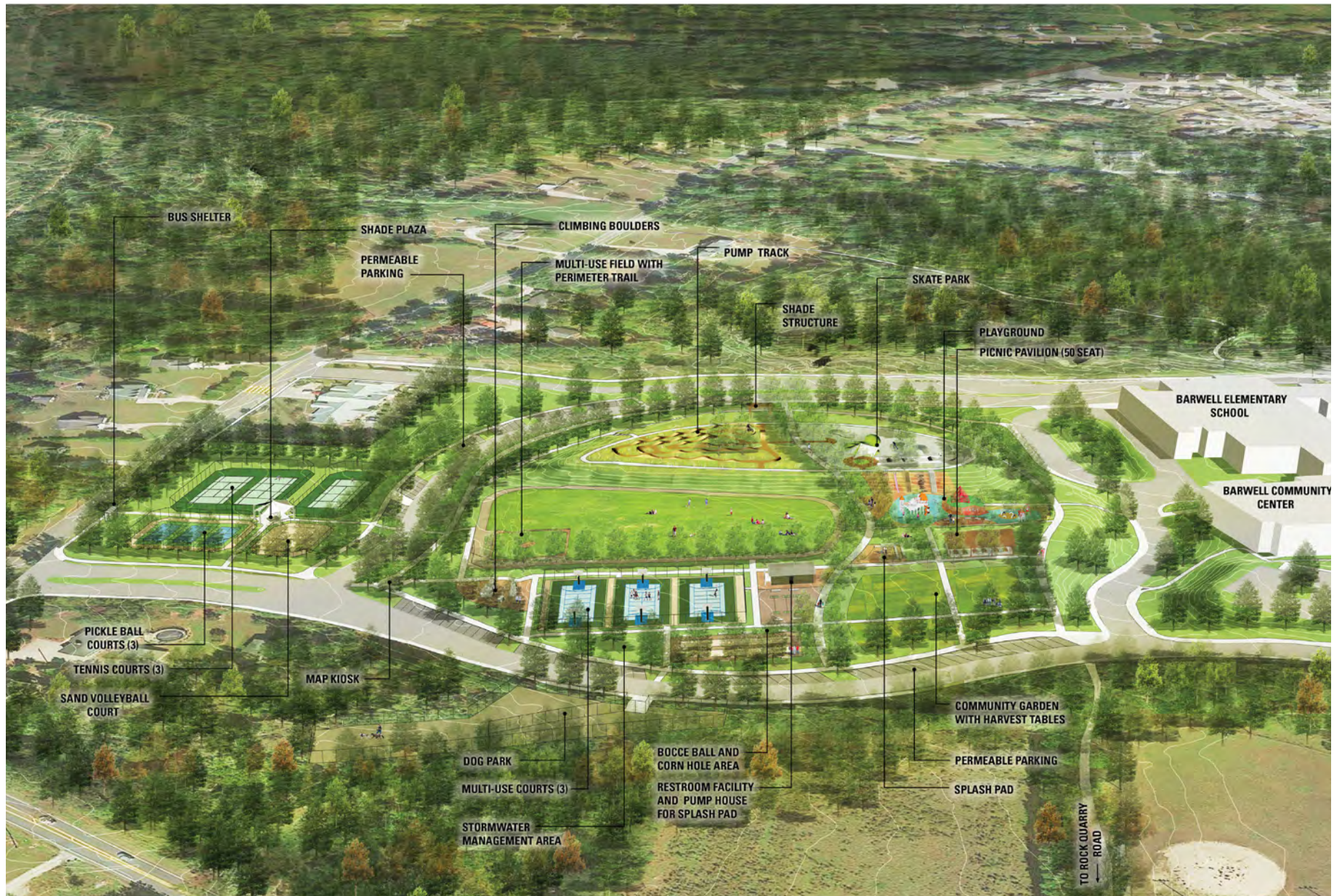
Development Principles and Standards:

In addition to the goals, principles and concepts outlined previously, there are several key development standards to guide the detailed design and engineering of the project. At minimum, these key standards include:

- Protect existing trees from unnecessary development or construction impacts.
- Provide erosion control as part of site construction.
- Respect all buffer areas from sensitive portions of the site.
- Utilize stormwater BMPs such as permeable paving, rain gardens and bio-retention.
- Protect the night sky with downward facing light fixtures.
- Filter run off from parking areas via permeable paving or use of rain gardens.
- Use low maintenance, low water use, native landscape materials.
- Use sustainable building methods and materials for park structures and buildings.
- Place activities and programs on land with suitable topography to minimize site disturbance.
- Re-vegetate disturbed areas with native, non-invasive plants.
- Develop an Integrated Pest Management program to reduce the use of chemicals.
- Develop a program to remove non-native invasive vegetation.
- Use local materials and products.
- Minimize and control construction vehicle access points.
- Select appropriate materials and construction techniques and minimize impacts associated with trail construction.
- Make as many portions of the site accessible as possible for people with abilities of all types.



The Barwell Park Master Plan captures the vision, mission and organizing principles established by the Community. Activities are drawn from discussions with the Community that included keypad polling, online surveys, using sticky dots and group conversations. The Master Plan successfully responds to the existing site conditions, while promoting a variety of exciting and fun activities, both structured and flexible, for all ages to enjoy. It can become the centerpiece of this growing community.



THE WEST SIDE - A variety of activities at the park's front door



THE EAST SIDE - A variety of activities that celebrate being in nature

THE FIRST FOCUS AREA

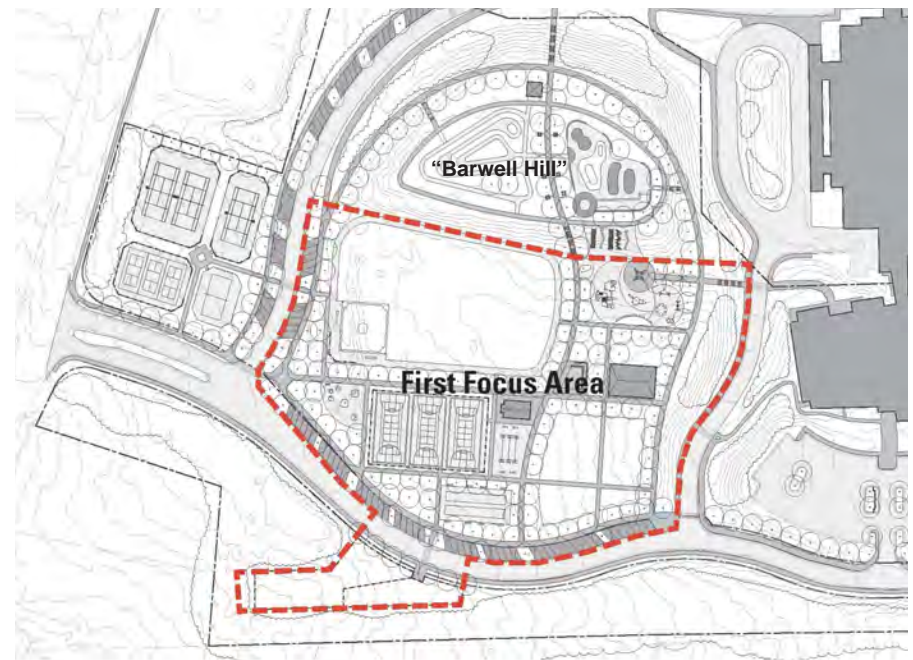
First Project Focus Area – A Representation of the Vision:

Following a facilitated discussion, the CPC determined that the area below “Barwell Hill” should be the priority location to begin the park development based on the following criteria:

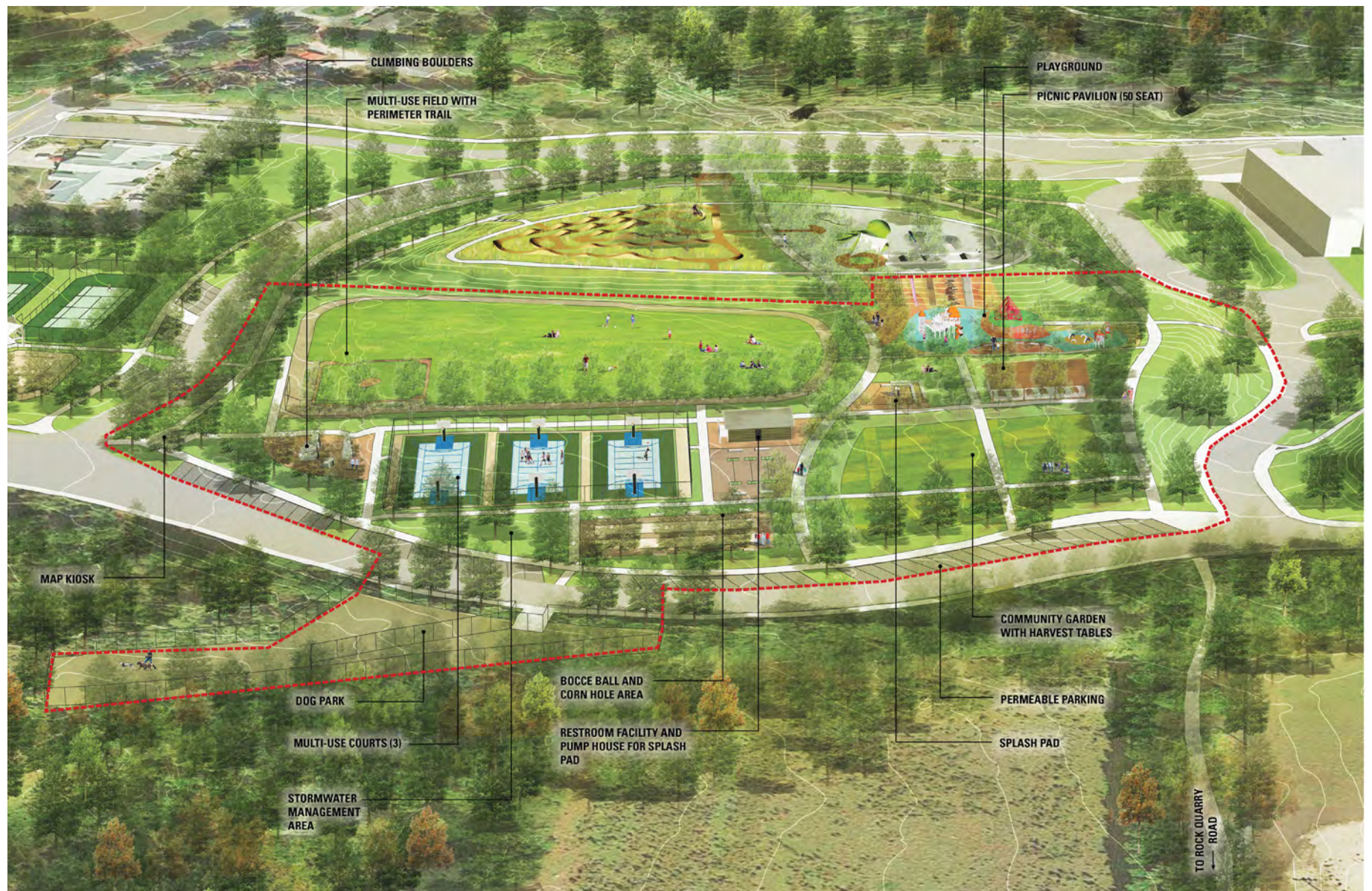
- This location captures the vision and many of the activity and program elements prioritized by the community and provides an opportunity to Play, Learn, and Discover.
- Using one spot on the plan would create the expression of activity and “body heat” instead of spreading people across a larger area.
- It is visible to people driving along Barwell Road, a gateway into the park and a beacon for what is to come.
- Existing roads create opportunity.
- It is a foreground to the school and community center.
- It is near existing utility lines and storm water management facilities that were installed as part of the school and community center development.
- The land is highly developable in its current condition.
- In many respects, it is a complete idea that would serve the community well until future funds become available to continue forward with more phases of the park.

The First Project Focus Area includes the activities most desired by the community. Choices will need to be made in the next stages of design and programming to determine which of parts of the First Focus Area moves forward with the initial funds that are available:

- 1 amazing playground on the side of and below “Barwell Hill”.
- A 50-100 person picnic shelter with grills and a small play lawn.
- A decorative community garden and harvest table.
- A dynamic “splash pad” adjacent to the picnic shelter.
- A restroom facility that includes a utility closet.
- A place for bocce ball, corn hole or other games.
- 3 multi-purpose courts
- Multi-use field with perimeter trail



The First Focus Area is located at the Park's front door, building off of existing access and land that has already been disturbed by development.



The First Focus Area is a complete representation of what Barwell Road Park will become and provides courts and fields for both sports and free play in either a structured or unstructured format; provides a place for family gatherings and a network of trails and sidewalks that can be used for fitness or strolling. An amazing playground is located on the side of and below “Barwell Hill”.



The 54 acre Barwell Road Park Site builds upon the previous development of the Barwell School and Community Center. As referenced in the System Integration Plan created for the project, the site is divided into east and west portions because of the elevation, school, community center and the nature of the landscape and riparian systems. Creating safer and easier access to the park from the surrounding neighborhoods is important to the community. The Park site will create connections to the Neuse River Greenway Trail System in the future.

Issues and Opportunities – Situation Assessment Report:

The community expressed the need for outdoor amenities of all types, along with places for families and groups to gather for reunions, picnics and family time in a place that is unique and special. An initial survey that was part of the Situation Assessment Report (SAR) revealed that most people were interested in participating in the following activities or facilities:

- Fitness programs (69%),
- Use of the fitness room (61%),
- Playgrounds (55%)
- Walking trails (55%).

Activities or facilities described in the initial SAR included picnic shelters, educational programs, greenway trails, and athletics. The community also shared concerns about the lack of pedestrian and bicycle access to the park from the surrounding neighborhoods. Construction of the Neuse River Greenway Trail extension to the park would provide a safe pedestrian connection for the communities to the east of the park. Pedestrian and bicycle access for communities along Barwell Road and within the surrounding context should be considered.

Supportive Plans and Studies:

Previous efforts inform and support the master plan and provide a reference for future work. The key plans and studies include:

- The Public Participation Policy for Park Planning. Department of Parks, Recreation and Cultural Resources. City of Raleigh North Carolina. December 2014. The Public Participation Guidelines for Park Planning describes best practice formats, methods, and techniques for the Raleigh Parks, Recreation and Cultural Resources Department and citizens to work together to plan, design, and develop parks, greenways and recreation facilities.
- System Integration Plan Barwell Road Community Park, Raleigh Parks and Recreation Land Stewardship. Raleigh, North Carolina. March 19, 2013. The System Integration Plan (SIP) documents existing site conditions and develops a set of guidelines for interim management of the park property. The SIP includes background research on the property. The SIP was prepared with input by the Parks, recreation and Greenway Advisory Boards.
- The Joint Use Agreement City of Raleigh for Barwell Road Elementary School and Park between the City of Raleigh and Wake County Board of Education. This agreement describes the nature and joint use of parking, facilities, roadways, maintenance etc for the Park, the Community Center and the School site.
- The Barwell Road Park Master Plan Situation Assessment Report. Raleigh Parks, Recreation and Cultural Resources. 2016. This assessment includes site analysis and documentation, research and data collection on the surrounding neighborhoods and other land uses, an introduction of the master plan process to the Southeast Citizen Advisory Council, establishing a project website and conducting a community needs assessment.

Nearby Neighborhoods:

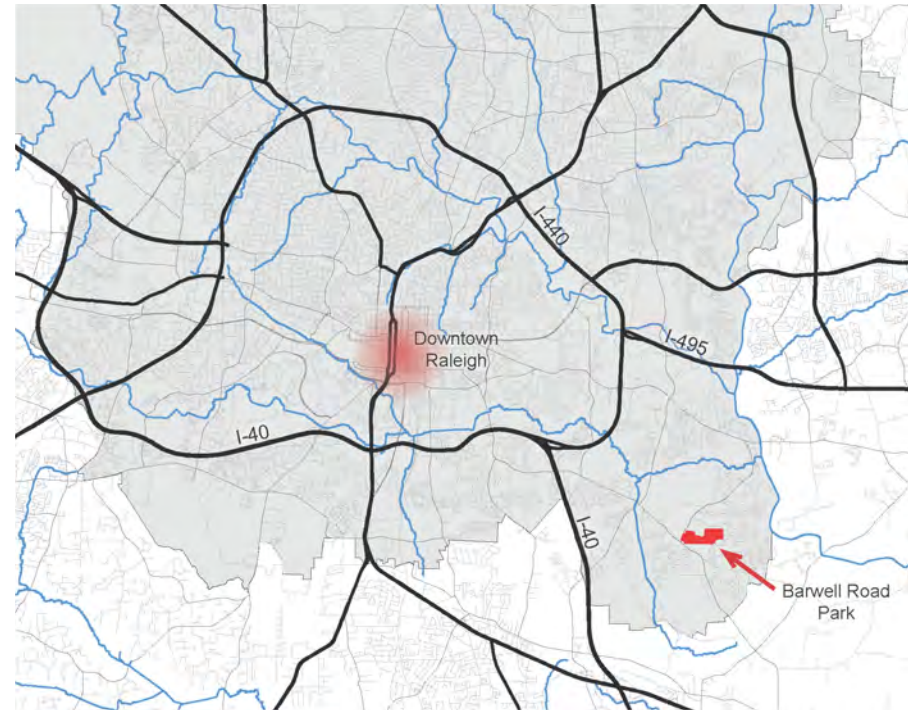
Within a two-mile radius of Barwell Road Park are over 30 neighborhood subdivisions. Chastain and Johns Pointe are directly adjacent to the park on the east side. Access to the park from these neighborhoods is primarily limited to cars due to a lack of pedestrian connectivity. No sidewalks exist along Barwell Road. Investments in complete streets and more greenway connections will help address this issue long term and make the park more accessible.

Nearby Schools:

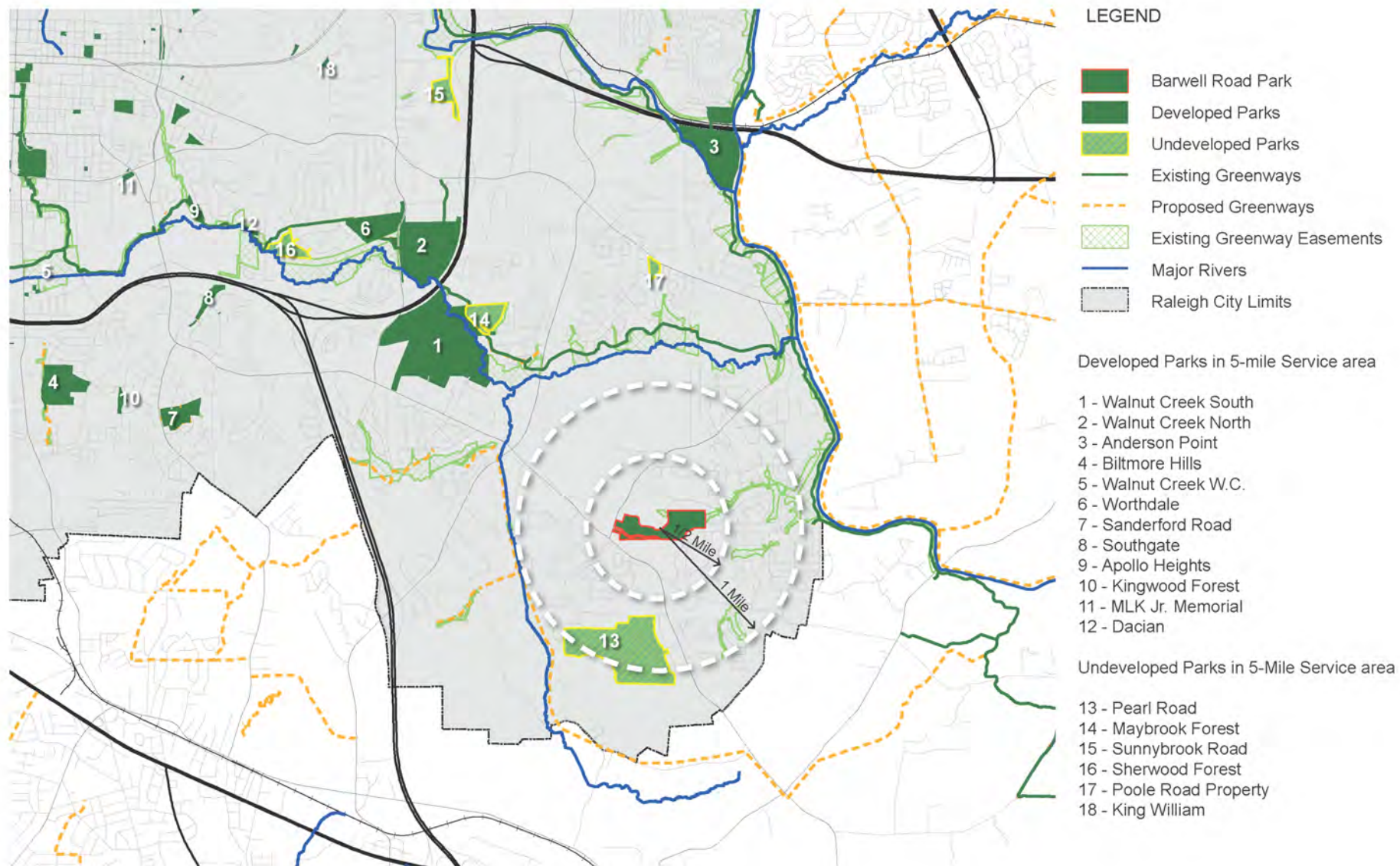
Barwell Road Elementary School is directly north of the park and shares an interior spaces as well as exterior amenities with Barwell Road Community Center and Park. The school was open in coordination with the park and operates on a year-round calendar. Barwell Road Elementary School, East Garner Middle School and Southeast Raleigh High School are the base schools for much of the community around the park.

Nearby Parks and Greenway Trails:

Worthdale Park, located 4.25 miles northwest, is the nearest park to Barwell Road. In 2016, the City of Raleigh purchased a 155 acres site on Pearl Road to serve the recreation needs of growing population. Planning for this property is not expected to begin for at least ten years. A greenway corridor is also planned to connect Barwell Road Park east to the Neuse River Greenway Trail system. This corridor will also serve a community connection to the park.



Barwell Road Park is in southeast Raleigh, which is seeing continued growth and new neighborhood development. Barwell Road Park can become the centerpiece of this evolving community.

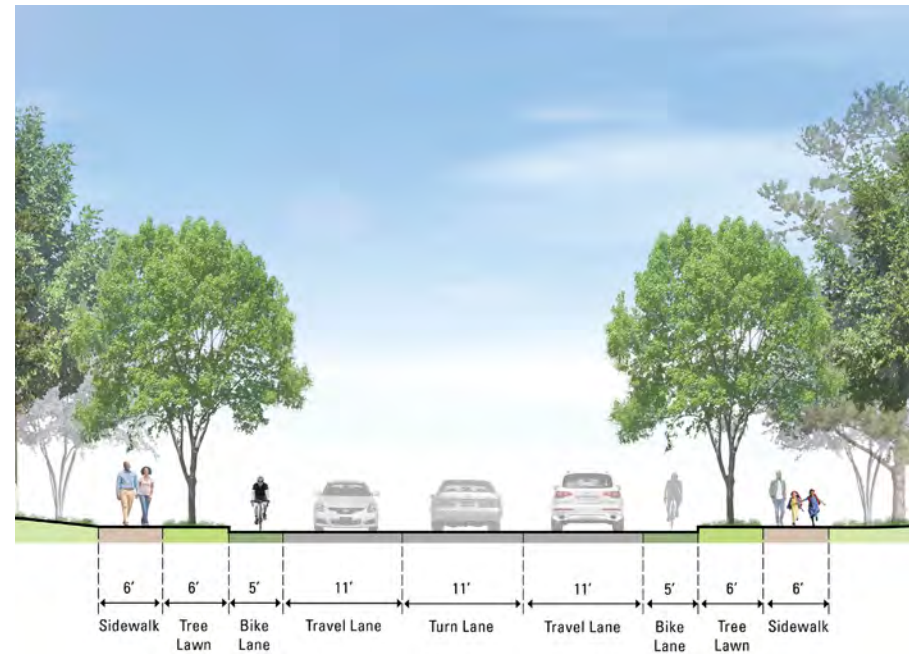


Barwell Road Park is located with connectivity to the Neuse River Greenway in southeast Raleigh. In the quadrant created by I-40, I-440 and the Knightdale Bypass. Barwell Road Park is critical to provide a neighborhood park within biking and walking distance of the residents of this part of Raleigh.

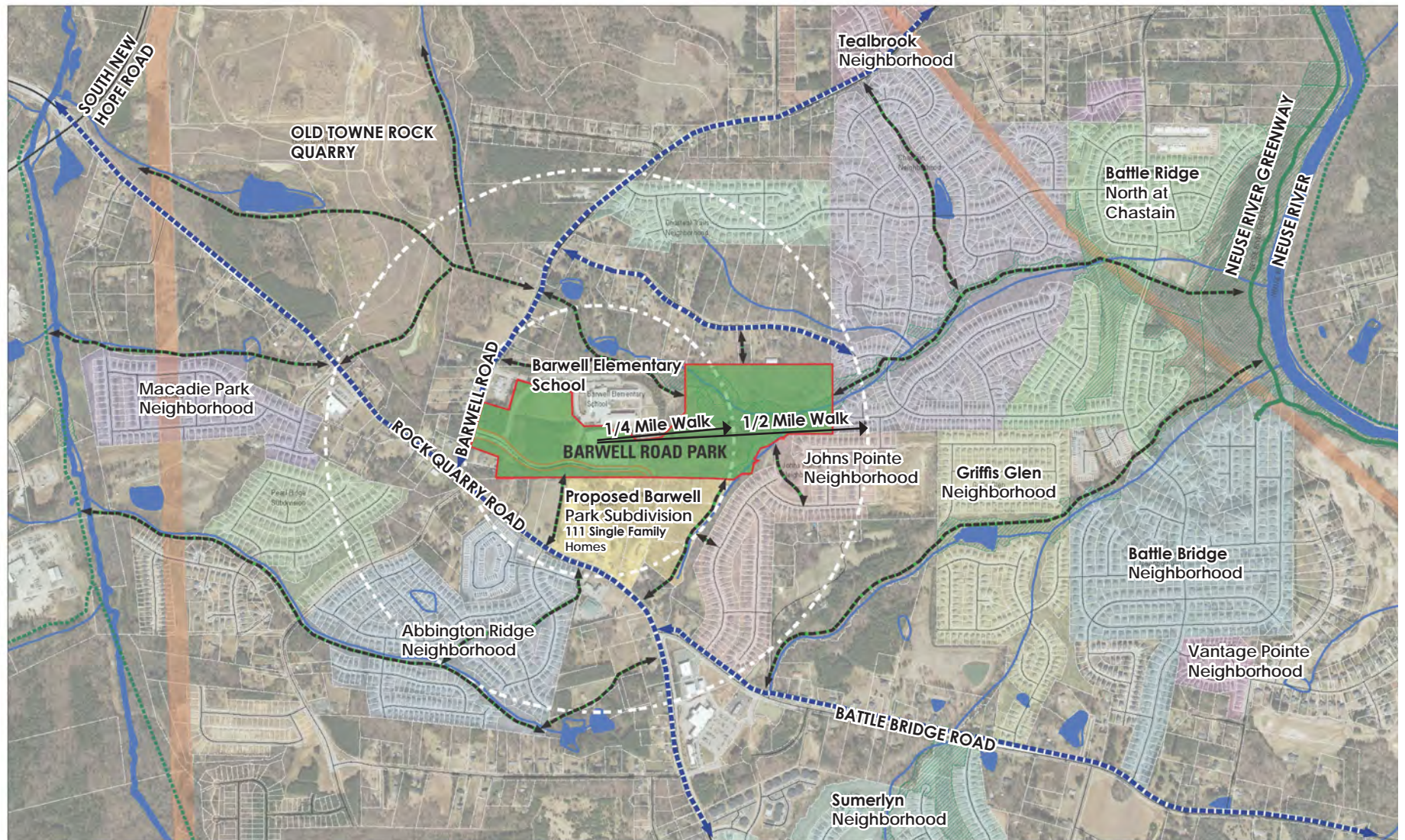
Opportunities for Higher Levels of Connectivity:

The community expressed a need for Barwell Park to become more accessible for bikers, walkers and people that would prefer to use transit. Neighborhoods such as Johns Pointe, Abbingtion Ridge, Chasteal Trails and Chastain are within proximity and would benefit from safer multimodal connectivity. However, many neighborhoods that the park will serve are further than ½ mile away (10 minute walk) from the park, which is considered the outer limits of what someone would be willing to walk. Consistent with this, the polling taken during the community engagement process suggests that many people will still need or want to use their car.









Investments in multimodal infrastructure will encourage more choices, create a safer bike and pedestrian environment and serve new neighborhoods as they develop around the park boundaries, thus increasing the number of people able to walk. Fortunately, the City of Raleigh shares the concerns of the community and has created plans to improve Barwell Road and Rock Quarry Road so that they include bike and pedestrian facilities, line up a key intersection at Barwell Road and Pearl Road and include a transit stop within walking distance of the park. Additionally, the connections to the Neuse River greenway, once complete will expand the parks connectivity. Finally, additional greenways can be considered surrounding the park that would make a grid of greenway connectivity that would provide more linkages for more neighborhoods.

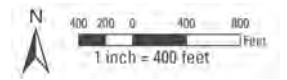


Barwell Road and Rock Quarry Road can become “complete streets” that include street trees, bike lanes, sidewalks, crosswalks, and access management where needed to promote more opportunities for walking and biking to the park.



LEGEND

	Park Boundary		Greenway Easement		Complete Street Opportunities
	Blue Line Streams/Rivers		Existing Greenways		Additional Trail Linkages
	Major Utility Easements		City Proposed Greenways		

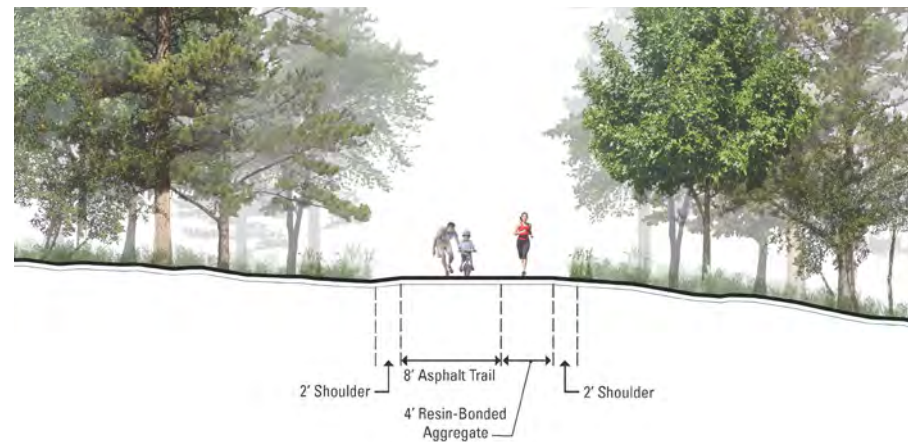
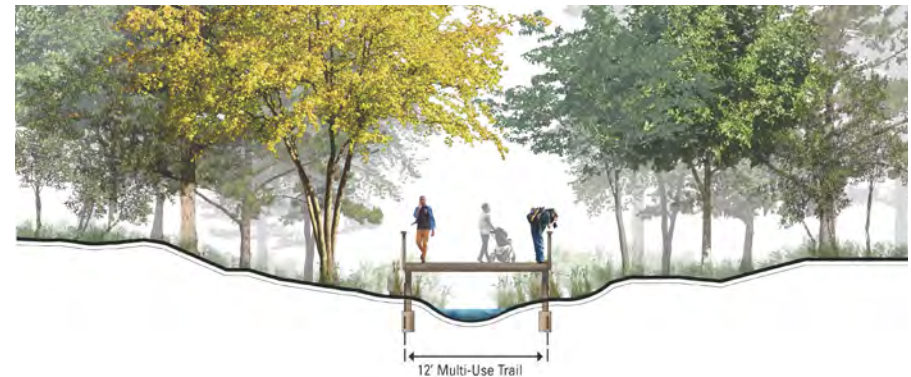


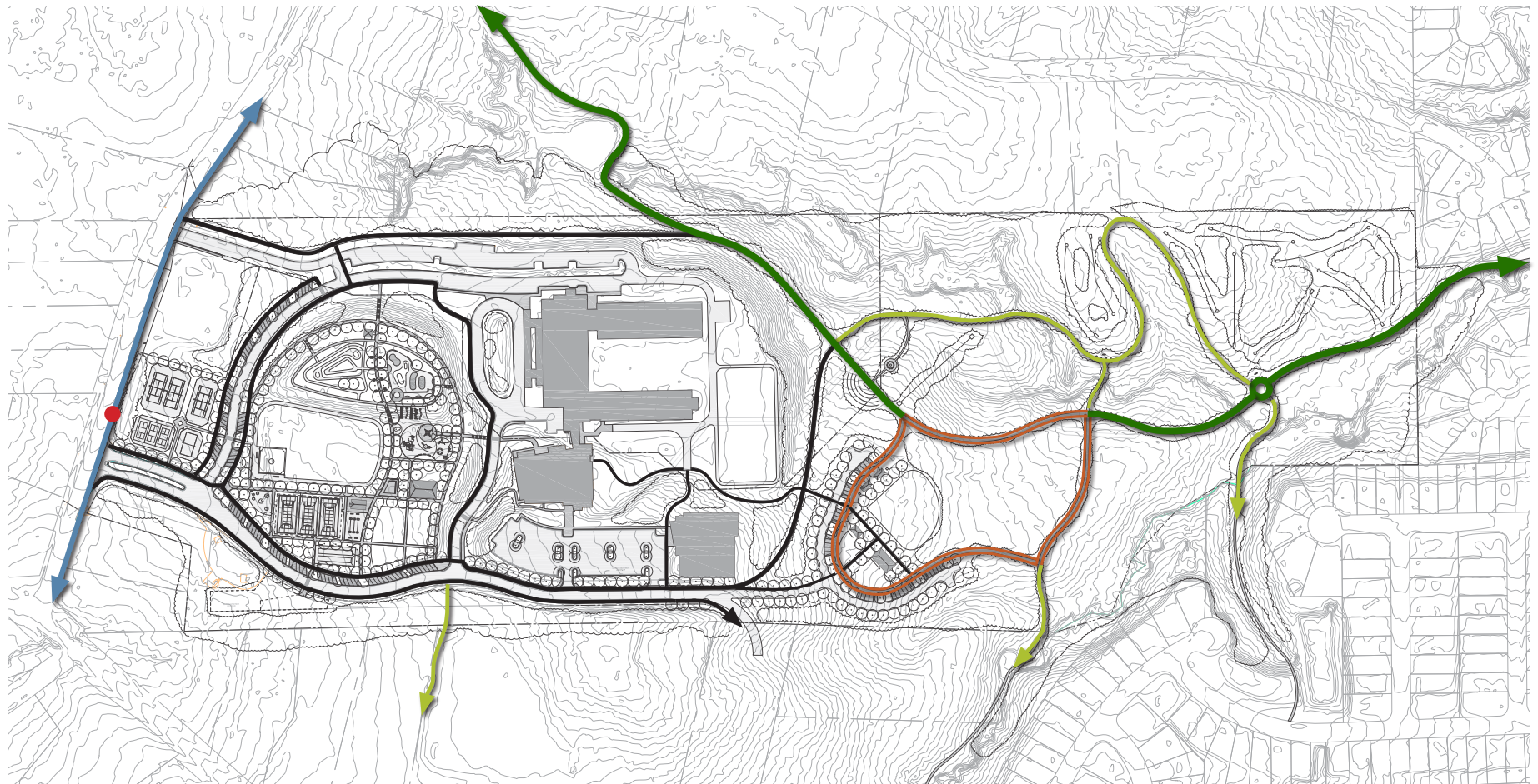
Additional greenways and trails can link neighborhoods with the park in the future. The Neuse River Greenway Trail creates an important link to the park and beyond.

WALKWAYS and TRAILS







The Master Plan proposes a high level of accessible connectivity within the park through the development of trails and sidewalks of varying types. The network builds off of existing walkways developed as part of the school and community center. As much as possible, new trails and sidewalks will be designed to enable access for people of all abilities. New trails include:

- Sidewalks that connect the various activity areas of the east and west sides of the plan.
- Crosswalks that enable safe crossing of Barwell Park Drive and other streets.
- The extension of the Neuse River Greenway Trail through the park with a multipurpose trail .
- A portion of the multipurpose trail that has a soft shoulder to allow comfortable jogging.
- Sidewalk extensions from the existing sidewalks that create access east to west.
- Smaller connective nature oriented trails that connect elements on the east side.
- A soft track around the multi-sport play-field located on the West Side plan.





LEGEND

-  Barwell Road Sidewalk and Bike Lane
-  Multipurpose Greenway Trail
-  Multipurpose Trail with Soft Shoulder
-  Sidewalk Extensions
-  Smaller Connecting Trails
-  Proposed Bus Stop

A hierarchy of trails are planned within the park to create connectivity and recreation. The Neuse River Greenway Trail connects through the park from east to west.

A DYNAMIC SITE READY FOR A PARK

Existing Site Conditions:

The entrance to the park is located at Barwell Park Drive, east of the intersection of Rock Quarry Road and Barwell Road. The existing 30,000 square foot community center provides multiple classrooms for community programs and meetings and two gymnasiums that offer league and pick-up basketball. A parking lot sits to the south side of the community center and a half-mile walking trail loops around “Barwell Hill”, the name we have given to the large pile of overburden from the development of the school, located to the west. Citizens have access to the elementary school’s playground, multipurpose field, and play courts outside of school hours as part of the joint use agreement.

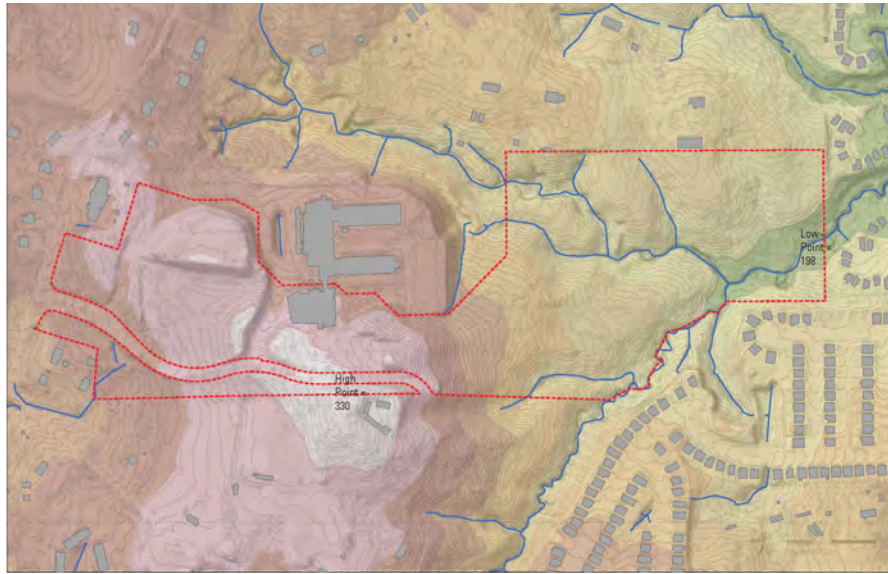
The site is bisected into an east and west side by the school and community center. Each side, east and west, is unique based on its landscape, topography, accessibility and environmental condition. The west side of the site is developed with the access and circulation associated with the school, bio-retention, and a large mound of stockpiled spoils from the school’s construction. Utilities enter the site from this end to serve the school and community center.

The eastern portion of the site is undeveloped with dedicated 75’ riparian buffer for the Capital Area Greenway corridor running from east to west along a stream channel. Property for the development of the greenway trail from the park to the Neuse River Greenway has been procured through dedicated easement or fee-simple purchase. Sewer easements are located on the eastern portion of the park property, generally following the orientation of stream channels.

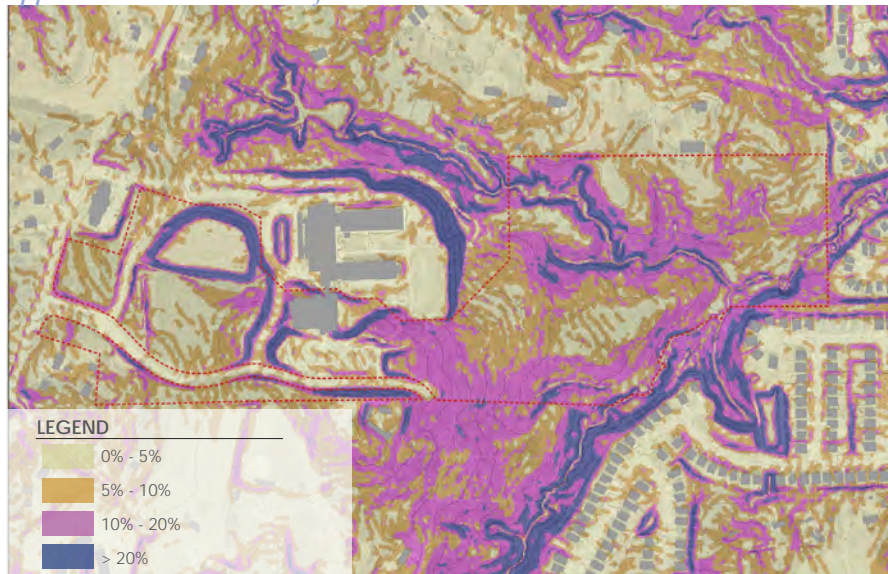


The site has areas that have been developed and areas that are natural forest. The school and community center occupy the center of the site.

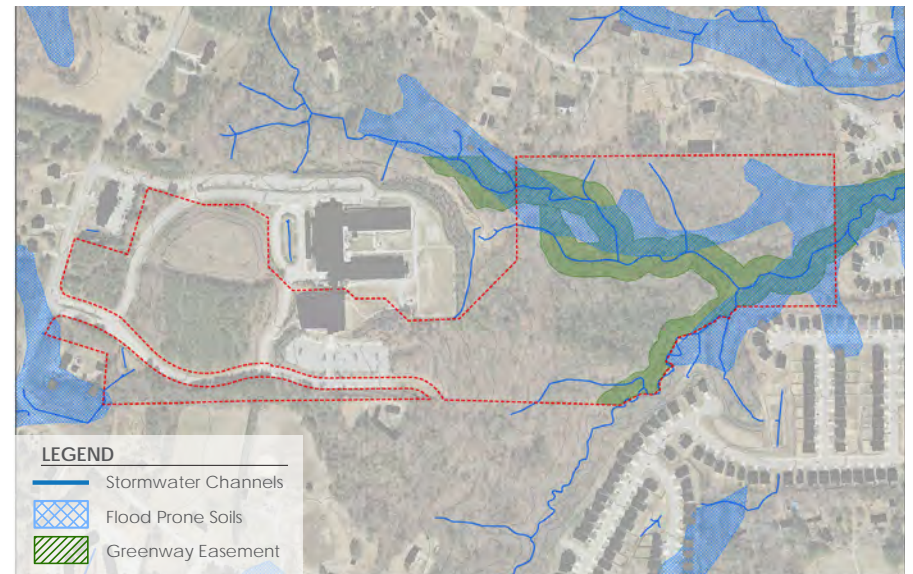
A large stockpile of dirt and rubble is located in front of the school. We have coined this “Barwell Hill” and refer to it as such throughout the document.



ELEVATION AND LANDFORM: The site drops from 132 feet from its highest point near the community center to its lowest point on the far eastern border. The mounded landform of “Barwell Hill” offers view opportunities to the rest of the site.



SLOPE: Areas in pink and purple should be avoided, while areas in yellow and orange are flatter and can handle more development.



HYDROLOGY: A stream, small wetlands and natural drainages braid the eastern portion of the site. These areas should be avoided as it relates to development.



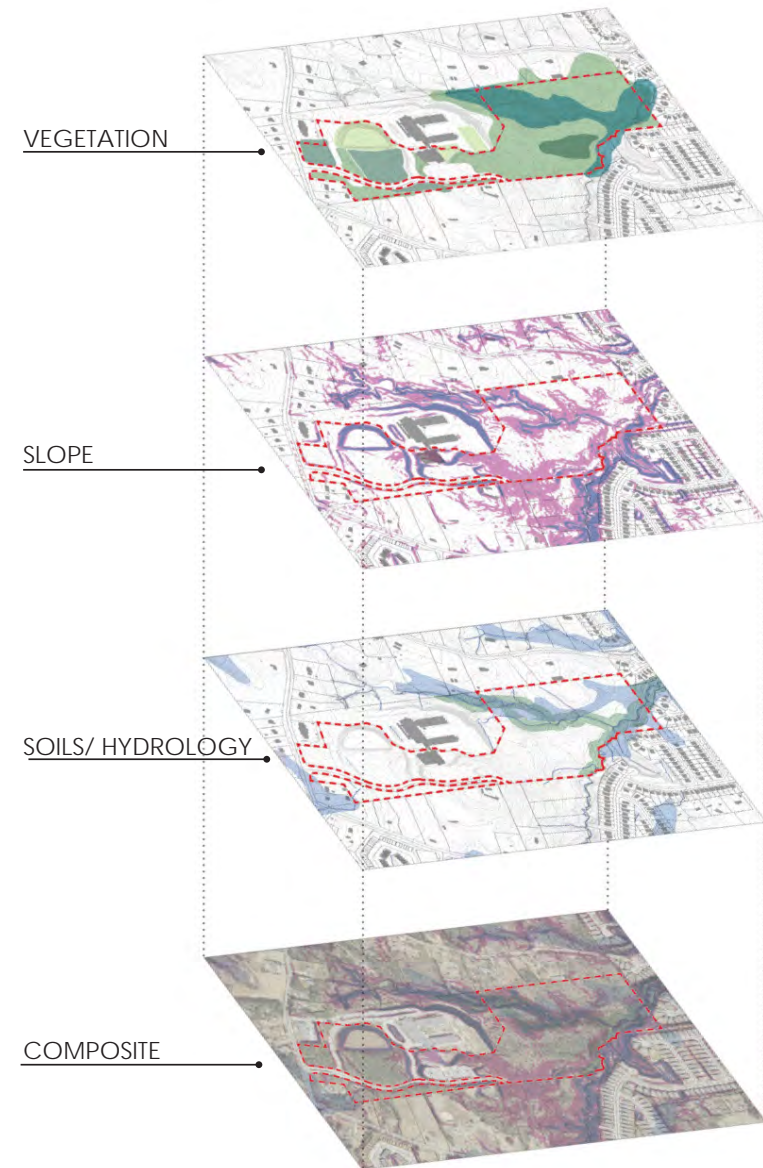
VEGETATION: The eastern portion of the site has a quality upland forest. The western portions of the site has a lesser quality forest.

A DYNAMIC SITE READY FOR A PARK

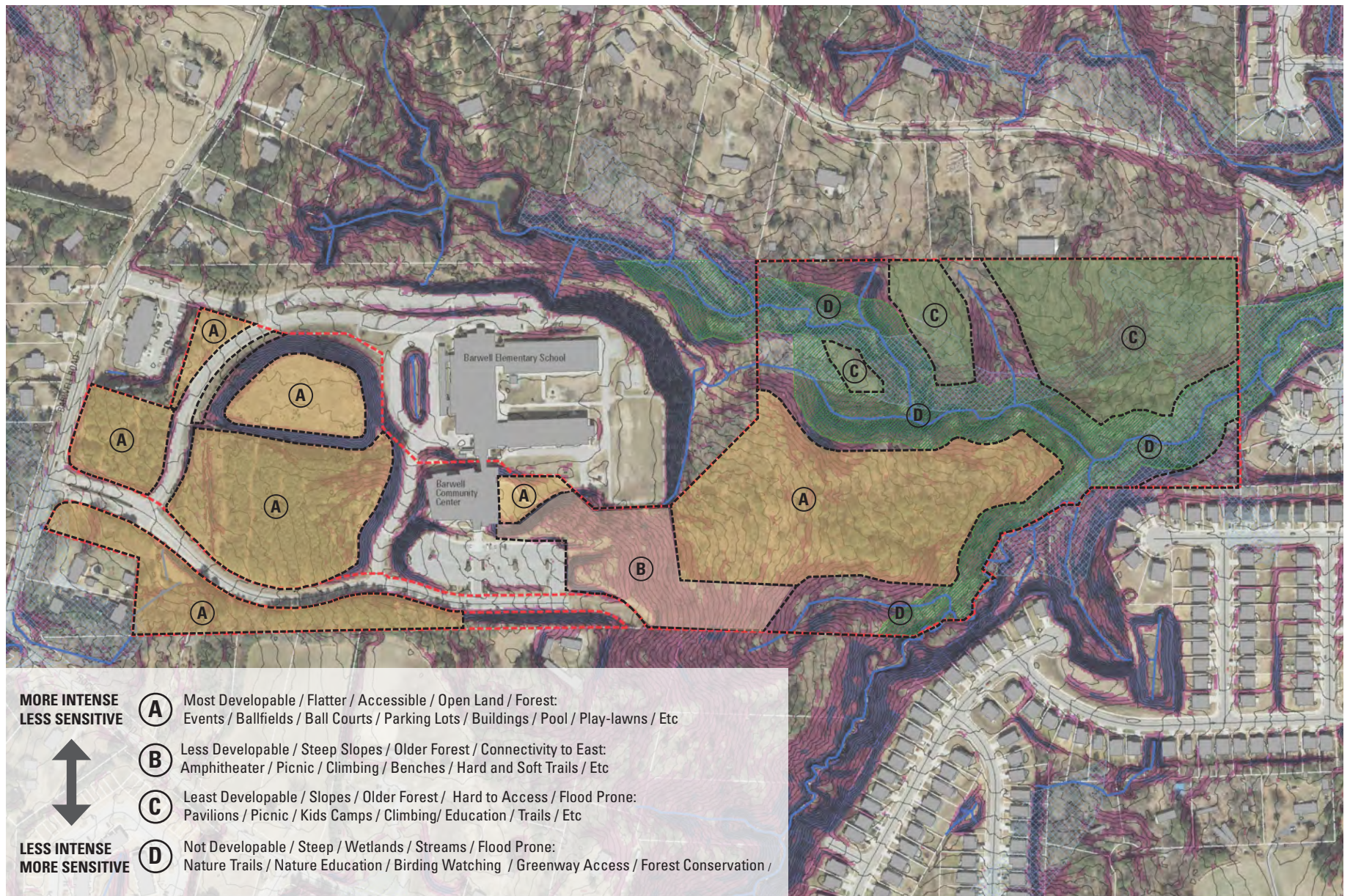
Development Suitability Analysis

A summary map, created by interpreting the existing conditions overlays and composite site analysis map, describes the suitability of various portions of the site for different levels of development:

- Category A: includes land that is generally flat and suitable for all types of development
- Category B: includes land that has developable slopes that can benefit from the topography
- Category C: includes land that is reasonable from a topography standpoint, but has high quality forest and requires crossing creek for access
- Category D: includes the creek, wetlands, site drainages and buffer areas and should not be developed.



A composite Site Analysis Plan describes where park development is best suited and where the existing landscape should be preserved.



DEVELOPMENT SUITABILITY ANALYSIS: The site was broken into compartments based on their development suitability which enabled a discussion with the community about where to locate various program elements.



Barwell Park Drive looking east. There is space on the left side to consider parking.



View looking at "Barwell Hill". The hill is made of stockpiled dirt and rocks from the development of the school and community center.



View looking at the area below "Barwell Hill". The land is generally flat with a forest of lesser quality, which enables it to be considered for development.



View looking from the base of "Barwell Hill" toward the school.



View looking into the woods on the east side of the park. Barwell Park Drive extension will be oriented in this direction.



A stream, small wetlands and natural drainages braid the eastern portion of the site and should be protected from development.



View looking into the east side forest. The forest is a nice upland forest with a clean forest floor. Preserving the forest will add value to the park experience.



The topography on the east side is gently sloping with some areas of steeper topography. Development should be limited to preserve the high quality forest.

A PARK FOR A COMMITTED COMMUNITY

Community Engagement – Summary of Key Input:

The master plan was created through a facilitated process with the Southeast Raleigh community that surrounds the park. The role of the planning and design team was to listen to the needs and desires of the citizens and prepare alternative plans that reflected what we heard. Each stage of the process included touch points with the CPC, DRT and Community so that the vision, concepts and plans evolved based on the direction received at the touch point meetings.

The process included:

- An initial meeting with the Southeast Citizen Advisory Council (SE CAC) Park Working Group and regular staff updates at the SE CAC Meetings.
- An initial survey prepared as part of the Situation Assessment Report
- A public survey prepared as part of the master planning process
- Using Keypad polling questionnaires
- 3 public meetings timed with project initiation, activity programming, site organization, and final design
- 1 meeting with youth groups from the community center
- 1 public site walk to discuss site features and how they could inform the design
- Posting exhibits at the Barwell Community Center for public comment and posting plans and questionnaires online on the project's web site
- Conducting “Chip Game” exercises at one of the DRT meetings as well as with the YMCA. The chip game allowed participants to create alternative plans using scaled activity “chips”.
- Engagements of local residents at the YMCA ComFest
- 5 meetings with the CPC throughout the process to receive input on activity programming, site design, project cost and phasing, and final master planning.
- 4 meetings with the DRT that tied with the CPC and public meetings and enabled staff to review progress and provide input.

Activities, Facilities and Programs:

The community provided input and choose activities that were the most needed or desired for Barwell Road Park. Ideas for activities and programs were discussed at a public meeting, at a work session with school age kids, via the project's web site and with exhibits hanging in the community center. The activities that received the most noticeable support include:

- A great, fun, unique playground
- A place for family picnics and gatherings large and small
- An outdoor classroom / amphitheater to bring education outside
- An aquatic center
- A splash pad for kids to play in the water
- Basketball courts for informal games
- Tennis courts and other types of courts
- Open lawn areas for free play – ideally near picnic areas
- Connections to the greenway
- Trails of all types for walking, hiking and running
- A climbing structure or climbing boulders
- Health and Wellness activities
- A dirt bike track
- Multipurpose sports/play field(s) for baseball, soccer and football
- Nature activities, such as bird watching
- Zip Line, ropes course or obstacle course activity
- A dog park
- Restroom facility
- Benches and other types of park furniture



ENVIRONMENT

• Birding / habitat viewing -----	19
• Outdoor classroom / amphitheater -----	11
• Night sky protection -----	7
• Low maintenance / low water use plants-----	6
• Native plants -----	5
• Constructed wetland landscape -----	3
• Capturing roof water for reuse -----	3
• Forest management – invasive removal-----	2
• Arboretum – interpretive landscapes -----	2
• No/low mow grass areas -----	2
• Stormwater BMPs -----	1

COMMUNITY

• Aquatic center / swimming pool -----	35
• Playground -----	31
• Picnic shelters and grills -----	28
• Benches -----	18
• Dog park -----	13
• Splash pad -----	13
• Other lawn games -----	5
• Pavilion / band stand -----	4
• Community garden -----	4
• Bocce -----	3
• Horseshoes -----	2
• Cornhole -----	1



RECREATION

• Nature trail-----	21
• Climbing wall / bouldering -----	19
• Greenway connectivity -----	19
• Walking trail -----	16
• Open lawn / free play -----	16
• Basketball -----	14
• Tennis -----	13
• Multi-purpose play field(s) -----	12
• Running track -----	12
• Skatepark -----	11
• Parcourse / fitness park -----	9
• Running trail -----	9
• “Art in the park” trail -----	8
• Disc Golf -----	7
• Pickleball -----	1

Potential activities and programs were discussed and prioritized with the community. The most popular activities and programs were then considered by the CPC and subsequently captured in the master plan for Barwell Road Park, organized to fit with the vision and mission and the design concept.



ACTIVITIES

• Tai chi / Yoga / Wellness -----	18
• Art classes -----	13
• Obstacle course -----	11
• Special interest classes -----	8
• Nature classes -----	7
• Remote controlled things -----	2
• Tennis courts -----	1

FACILITIES

• Aquatic Center -----	46
• Bathroom -----	22
• Pavilions -----	20
• Concessions -----	12
• Shade structures -----	9
• Maintenance / Storage -----	8
• Sculpture garden -----	2

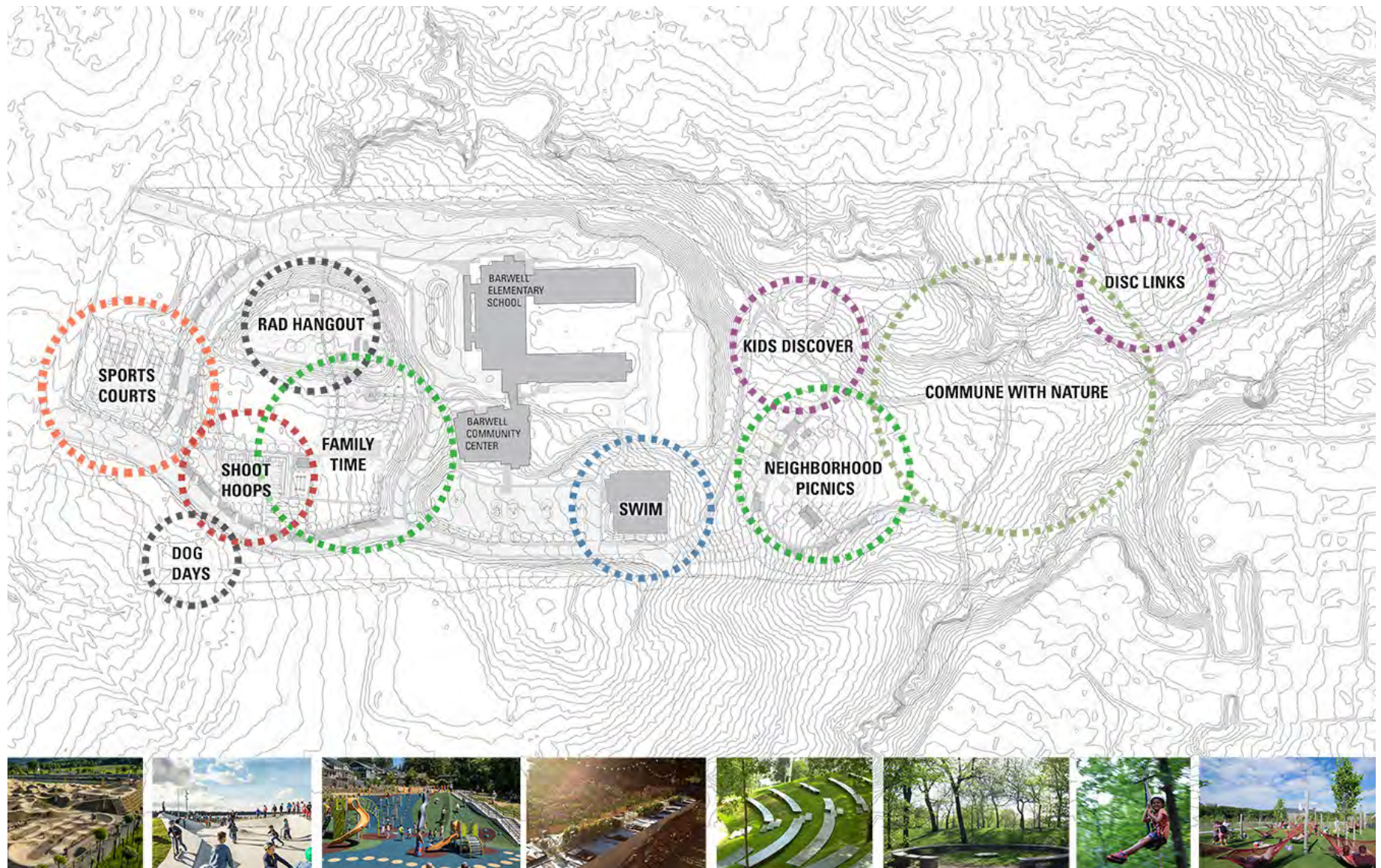


OTHER

• BMX Track -----	18
• Baseball Field-----	13
• Indoor Swimming Pool-----	11
• Special interest classes -----	8
• Nature classes -----	7
• Zip Line -----	5
• Rock Climbing -----	1
• Volleyball -----	1

KIDS

• Pool / Aquatic -----	50
• Hanging Out (Hammock image)-----	40
• Fun and Exotic Playgrounds -----	45
• Nature Stuff (Birding, Fishing, Creek) -----	35
• Basketball -----	40
• Climbing Wall -----	29
• Splash Pad -----	26
• Walking / Bike Trails -----	17
• Fort -----	14
• Dog Park-----	8
• Volleyball-----	6
• Running Track-----	6



The activities were located on the site based on site conditions and to provide a variety of experiences in each area of the project. Consideration was given to the unique activities that would make the park special and distinguish it from other nearby parks.

THE COMMUNITY ENGAGEMENT PROCESS

The “Chip Game”:

The CPC, the DRT and a focus group from the YMCA prepared alternative plans for discussion using a method called “Chip Game”.

Small groups were given a base map of the site that located the best areas for developing activities, based on the site analysis, along with individual “chips” that represented the desired program elements.

The chips and base map were at a consistent scale, which enabled the groups to consider site impact, adjacency, quantity and location, just like the planning and design team would.

After each group prepared their plan, they were asked to present it back to the group for discussion.

From this exercise, the planning and design team was able to proceed with synthesizing the Chip Game ideas into four alternative plans that could be reviewed and discussed with the community.



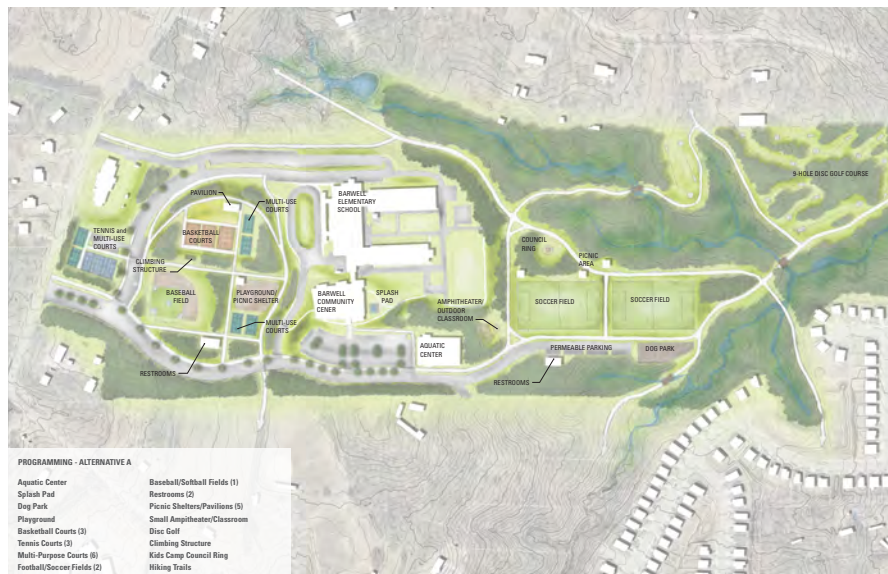


The Chip Game produced several alternative ideas and allowed a discussion regarding the extent of development on the site as well as where certain activities might best be located. It allowed the community to become park planners along with the Planning and Design Team.

THE COMMUNITY ENGAGEMENT PROCESS

Alternative Concept Plans:

The planning and design team created four alternative concept plans inspired by the Chip Game. The concept plans were prepared to show a range of ideas. Each of them incorporated the community feedback received thus far and expressed the vision of Play/Learn/Discover. The alternative plans were presented to the community to determine which one best captured the vision, principals and goals for the project. The plans were also posted onto the projects web site for broader input. Finally, a discussion occurred with the CPC which narrowed down the alternatives into one general direction for the project.



Alternative A promoted more development of fields on the eastern portion of the site along with a dedicated baseball facility on the west side of the park. It included a tennis facility along Barwell Road and an Aquatic Center located on the east end of the Community Center Parking Lot. In many respects this was the more structured and developed of the alternatives.



Alternative B created a destination on “Barwell Hill” that would be attractive for teens in particular. It included a zip line on the east side and developed less of the east side with ball fields. This alternative did not include an Aquatic Center. Tennis courts front on Barwell Road. The west portion of this scheme was determined by the community to be the most appropriate to pursue.



Alternative C offered more variations in terms of how the activities were organized on the site. This one promoted a more “formal” design on the western portion of the site with an aquatic center located along Barwell Road. The eastern portion of this plan is less intense as the previous two alternatives. The Community liked the eastern portion of this plan.



Alternative D is the least developed alternative. It preserves most of the eastern portion of the site and provides simple activities on the western portion. The item in this plan that the community liked was the running trail located on the east side.

THE COMMUNITY ENGAGEMENT PROCESS

Pre-Final Master Plans:

The planning and design team prepared two pre-final master plans that incorporated the CPC's direction from the four alternative plans and met with the DRT and CPC to review them in preparation for preparing a final master plan that could be presented to the public. The difference between the two plans was focused on the location and extent of roadway and parking on the east side of the project. One scheme considered a road that was more centrally located on the east side, the other considered a road and parking that did not impede foot traffic as much. Eventually, a scheme that was a hybrid of the two was settled on by the CPC and moved forward into final planning.



This alternative plan located the access road and parking down the center of the eastern side for convenience.



This alternative plan located the access road and parking along the southern edge of the eastern portion, which reduces the need to cross the road and parking to get to activities.



Pre-final Master Plan

THE COMMUNITY ENGAGEMENT PROCESS

Final Master Plan:

Following review and input from the DRT and CPC, the Planning and Design Team prepared a Final Master Plan for Barwell Road Park. The Final Master Plan includes a hybrid solution for the roadway access and parking on the east side of the park to reduce the length of roadway and parking infrastructure and reduce the impact that roads and parking will have on the park. The Final Master Plan includes:

- Tennis, pickleball and volleyball courts along Barwell Road
- An ADA accessible dog park for small and large dogs
- Activities on top of “Barwell Hill” that would be exciting for teens
- Multi-use fields, multi-use courts and playfields
- A dynamic playground located on the side of and below “Barwell Hill”
- 2 restroom facilities - one on the east and one on the west side of the park
- 2 picnic shelters for 50 people each
- Picnic areas near the picnic structures
- An aquatic center located near the community center
- 1 small amphitheater and “council ring”
- 1 hammock grove for relaxing in
- 1 small playground on the east side of the park
- A nine hole casual disc golf course
- A small zip line or ropes course activity
- Trails of various widths and materials



The final master plan creates a hybrid that minimizes the need to cross the road and parking, while also enabling convenience.

THE WEST SIDE - A COMPLETE PARK

The West Side:

In addition to the First Focus Area, which occupies the heart of the west side park area and is described previously in the master plan, special activities are located on top of “Barwell Hill” and within the parcel of land adjacent to Barwell Road. Together with the First Focus Area, they create a significant opportunity for recreation and family fun. The master plan for this area takes advantage of the built environment that it sits in as well as the adjacency to the school and community center. It takes advantage of existing roadway, sidewalk, lighting and utility infrastructure, which makes the cost of initiating the project less onerous. It packs in lots of activities and uses the space efficiently so that less pressure is put on the east side of the park, which will enable it to remain more natural.

“Barwell Hill” Area:

The “Barwell Hill” offers a great opportunity for kids and teens seeking alternative sports. Once on the hill, the land is flat and without trees which makes it highly developable. It is programmed with high energy and alternative sports and creates a special destination up on the hill. The landscape is more natural than down below, and the activities are placed into a low mow meadow rather than turf grass. Included in the activities are:

- A bicycle pump track made of sculpted earth
- A skate park or skate spot
- Benches and seat walls
- Pathways and trails
- Access to the slides that are part of the playground
- Low maintenance landscaping
- Stormwater rain gardens

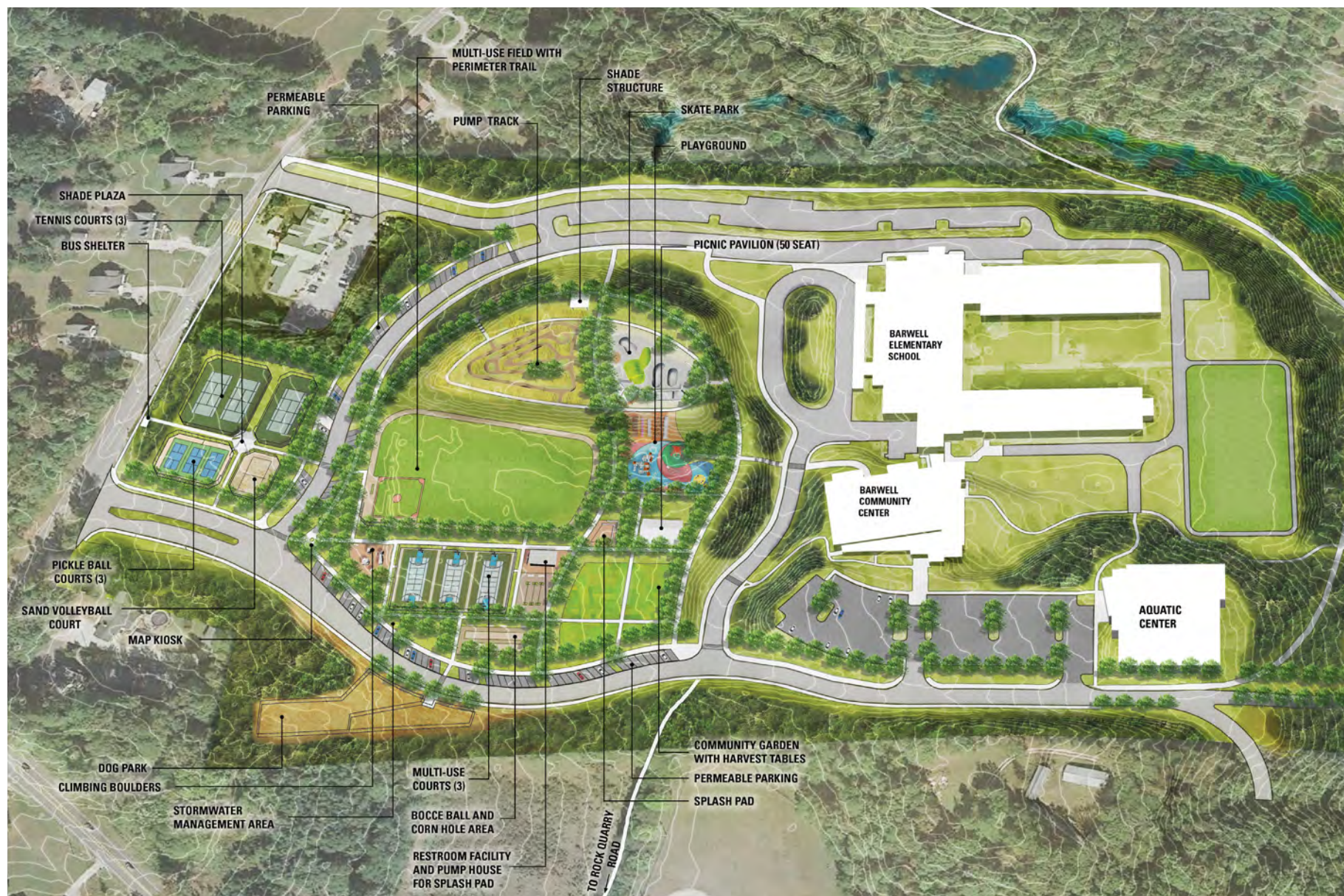
Barwell Road Courts Area:

The area along Barwell Road was determined to be used for tennis and other court games. The land is flat and accepting of activities that require flat ground. It has existing tree cover which will be required to be removed. Included in the program for this 1 acre area are:

- 3 regulation tennis courts
- 3 regulation pickle ball courts
- 1 sand volleyball court
- 1 shade plaza with seating and a shade structure
- Sidewalks
- Approximately 33 permeable parking spaces
- Landscaped buffering from Barwell Road
- Stormwater rain gardens

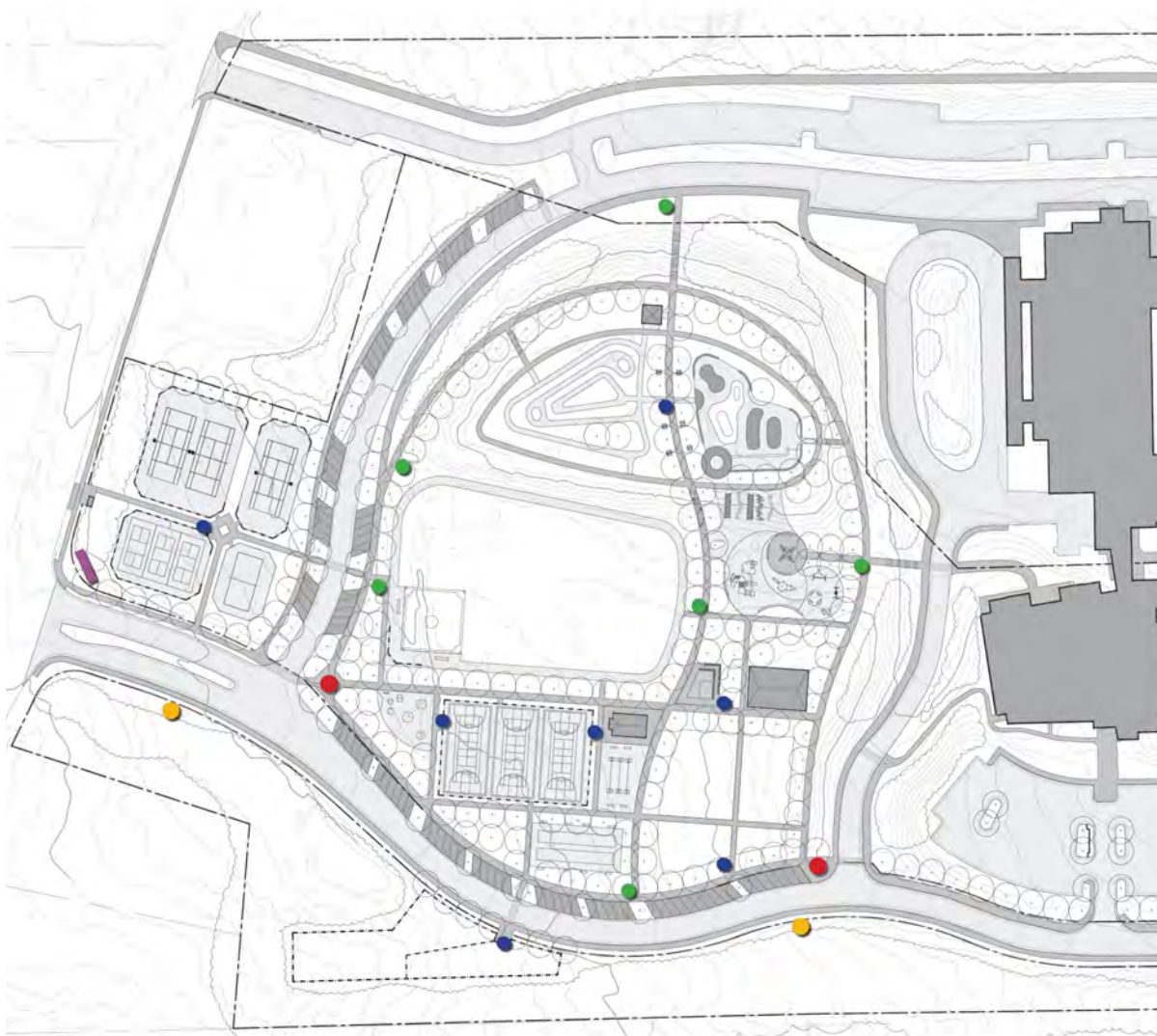
Aquatic Center Area:

An Aquatic Center is located near the Community Center, framing the existing parking lot. The Aquatic Center is an important facility for the community and received the most robust support from the surveys, polling and questionnaires. Creating an Aquatic Center at this location will require more careful study giving the complexity of program, architecture, engineering, parking requirements, cost etc. Showing it on the master plan will enable it to be considered in the future as the park and the surrounding community evolves.








The West Area Master Plan creates a dynamic front door to the park and offers a wide variety of activities for all ages.

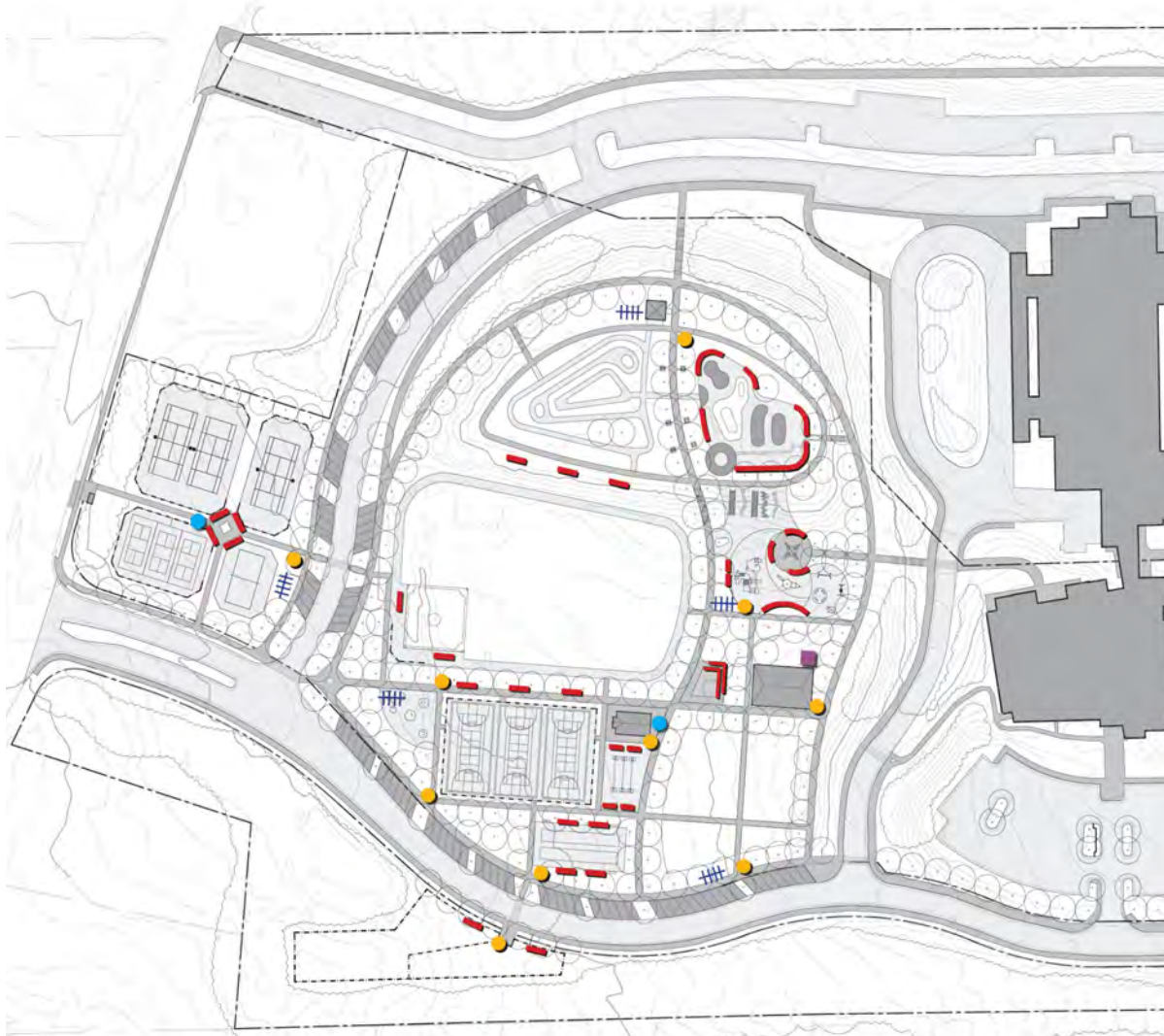




Proposed West Area Signage Plan:

Signage is located to announce the park, orient users to the location of activities, direct people to different parts of the park, and to explain the rules and requirements of using particular activities or facilities. The signage should be nicely designed and cohesive throughout the park.

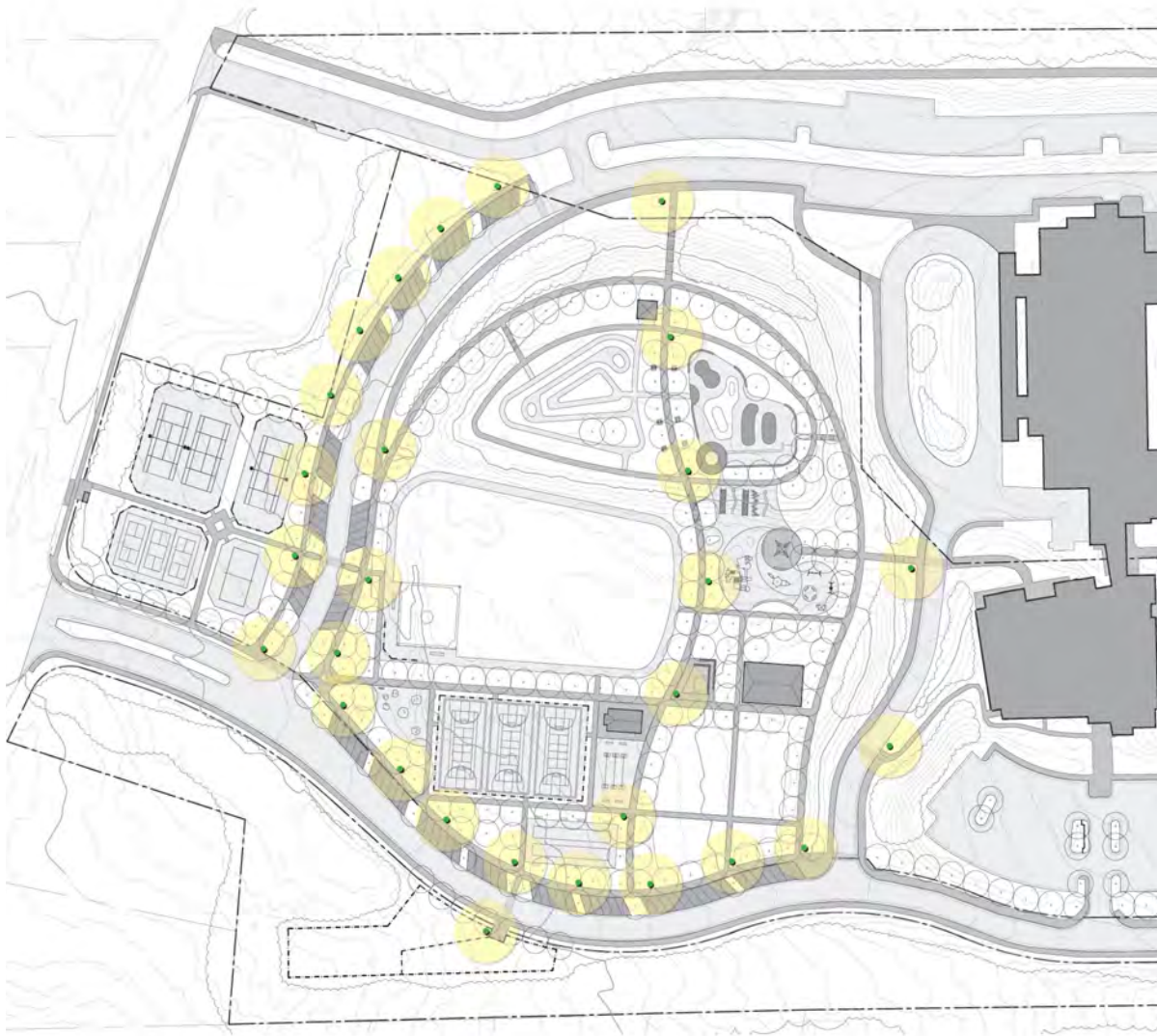
-  Monument Sign
-  Kiosk
-  Pedestrian Wayfinding Signage
-  Vehicular Wayfinding Signage
-  Facility Information Sign (Posted Rules)



Proposed West Area Furnishings Plan:

Furnishings are provided to provide convenience. Seating is provided in various forms such as benches and seat walls. 2 Drinking Fountains are located at central locations. Trash receptacles and bike racks are located at entrances and exits to the park. Grills are located next to the Picnic Pavilion.

- Benches/Seat Walls
- Drinking Fountain
- Trash/Recycling Receptacles (10)
- +++ Bike Racks (5)
- Grill Area

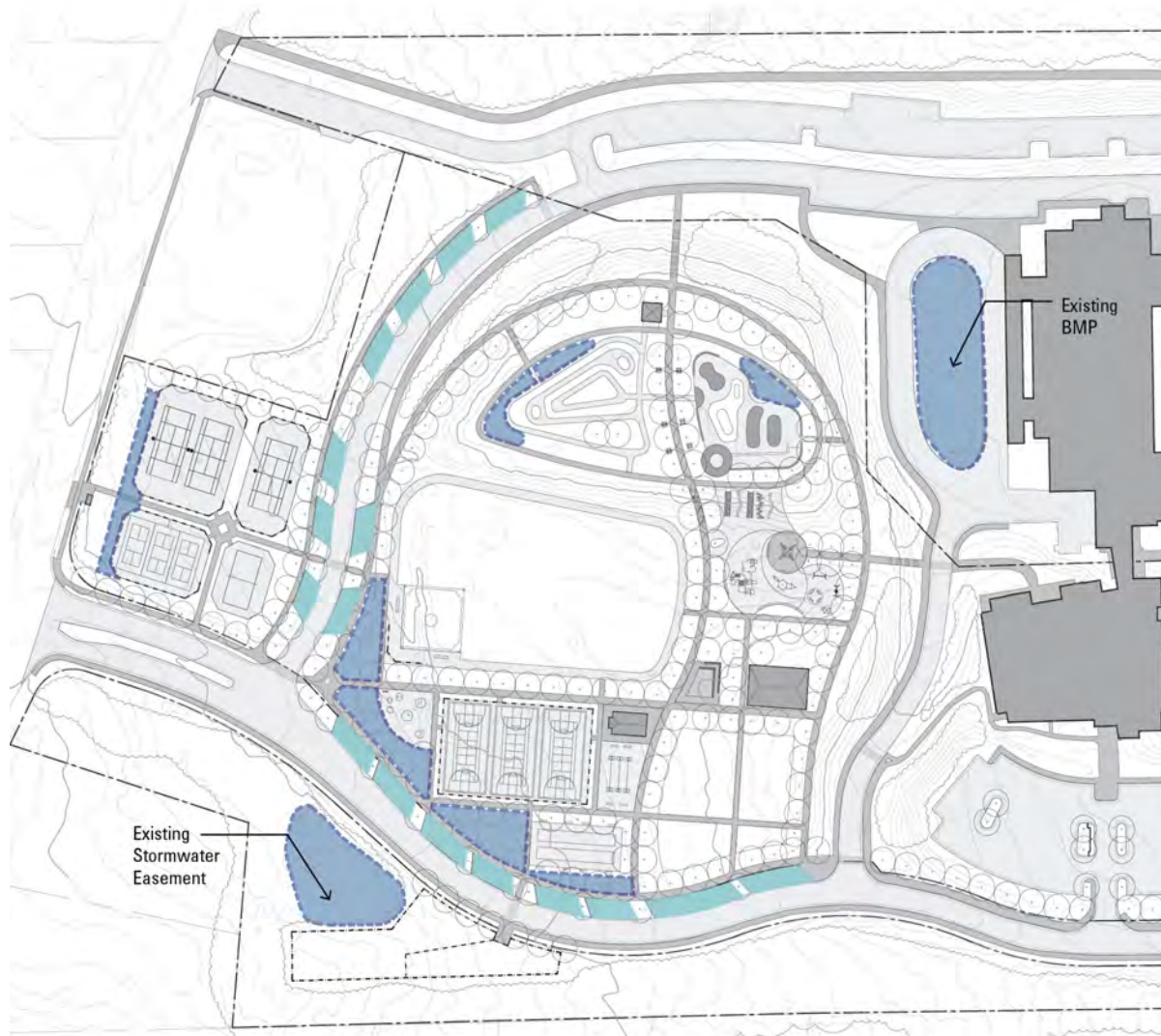


Proposed West Area Lighting Plan:

The lighting concept is to provide pole mounted lighting with downward facing fixtures at the parking lots and key connective walkways to provide minimal but safe lighting.





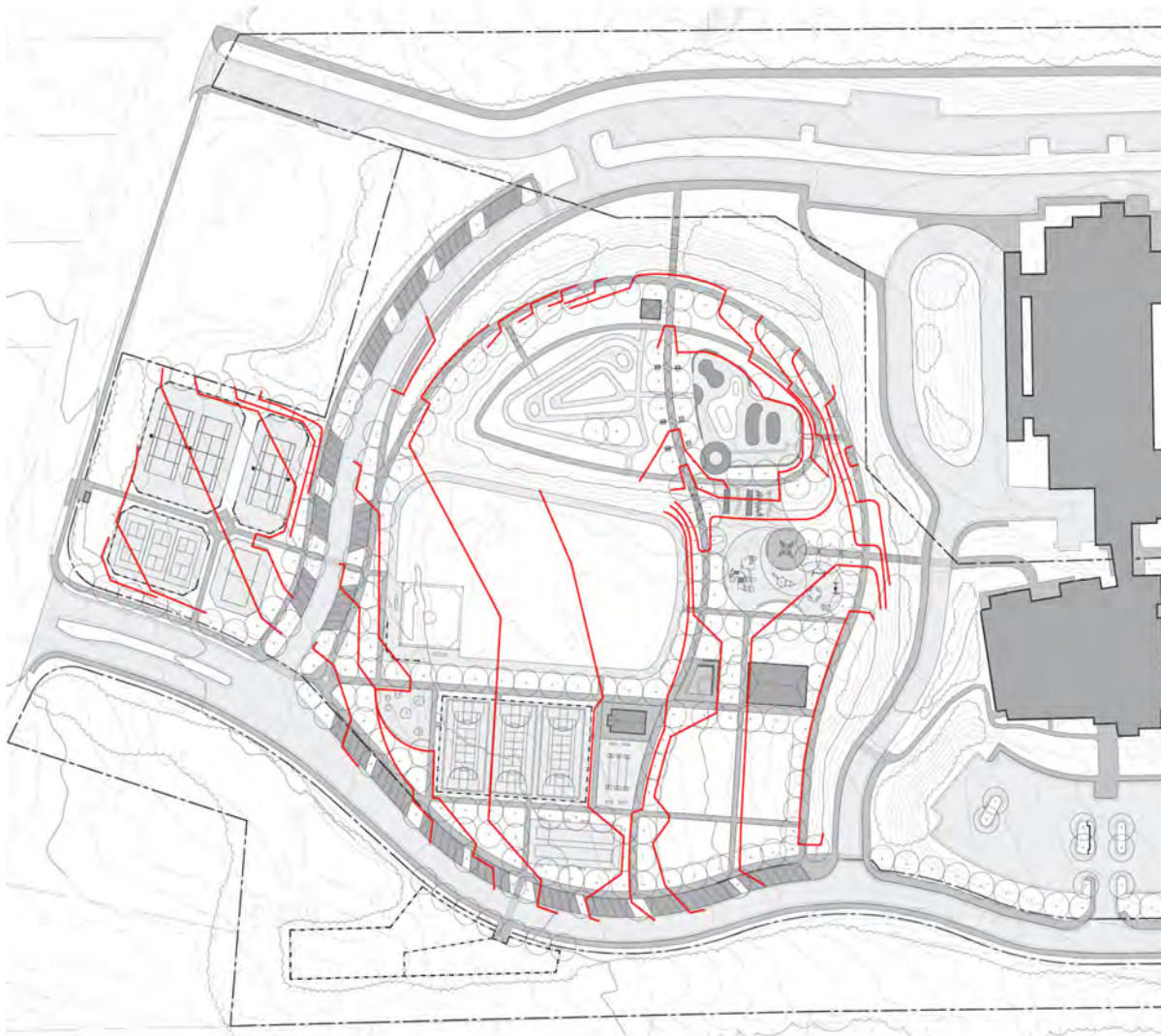
Street / Path / Parking Lighting



Proposed West Area Stormwater:

Stormwater should be managed by reducing permeable surface types and by using rain gardens and permeable pavement. Locations are shown where opportunities for storm water BMPs such as rain gardens, bi-retention areas and permeable paving can be located that can also enhance the parks aesthetics and expression of the projects vision. Further design and engineering is required to finalize the storm water plan.

-  Bioretention Areas
-  Permeable Parking



Proposed West Area Grading Plan:

The West Area site is reasonably flat, which reduces site grading. Fields and courts require flat areas, so some grading is required to make those work. “Barwell Hill” will remain as is. Walkways will be graded to allow for accessible routes between activities.

THE EAST SIDE - GATHERING, NATURE , ADVENTURE

The East Side:

The East Side takes advantage of its mature forest, riparian areas, topography and future access to greenways. It supports activities that use the land gently and that are low key or environmentally oriented pursuits. It too is a place for families to get together, hold reunions and offers places for open play. Most of the forest is preserved for the benefits of experiencing nature, with no additional development beyond the conceptual master plan. As the land surrounding the park develops into neighborhoods, the East Side will offer a wonderful escape into nature. Access will need to be created, along with the trail network, so activating this portion of the site is most likely longer term.

Included in the program for The East Side is:

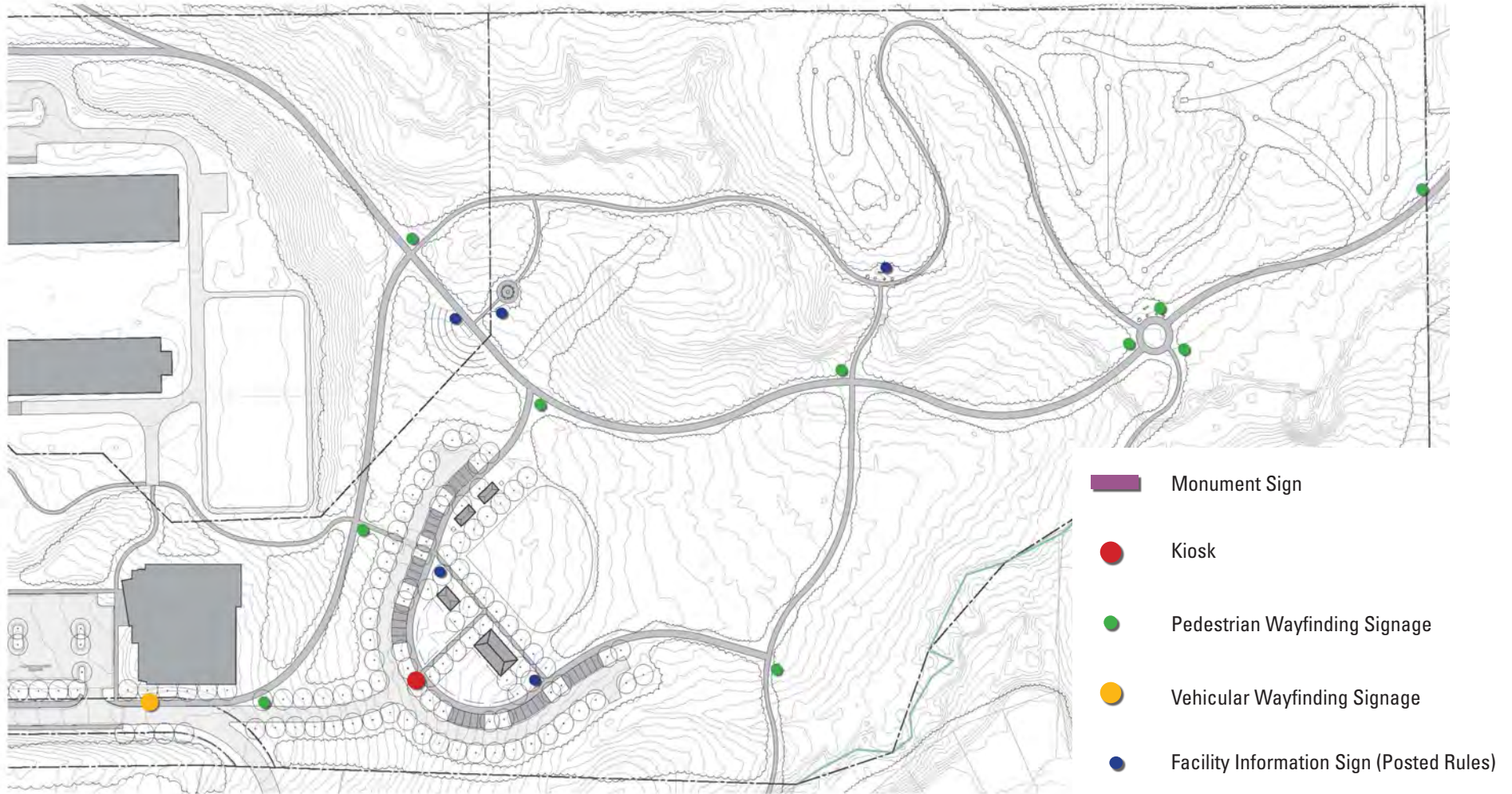
- An access road extension of Barwell Park Drive
- Permeable parking spaces
- 1 attractive picnic shelter pavilion for 50-100 people
- 2 picnic areas with tables
- 1 comfort station restroom facility
- 1 open lawn for free play, softball or flying kites
- 1 hammock grove associated with the picnic shelter
- 1 small playground associated with the picnic shelter
- 1 restroom facility
- 1 outdoor classroom / small amphitheater
- Space and program allocations to support experiential elements, such as low element ropes and obstacles, and potentially higher elements like a zipline
- 1 “9 hole” disc golf course for casual play
- Trails and greenway connections
- Preserved forest and riparian areas



The East Side Master Plan presents an opportunity to play, learn, and discover in nature. The plan for this side of the park preserves the important hydrology and protects the forest, providing an oasis of nature for the future.

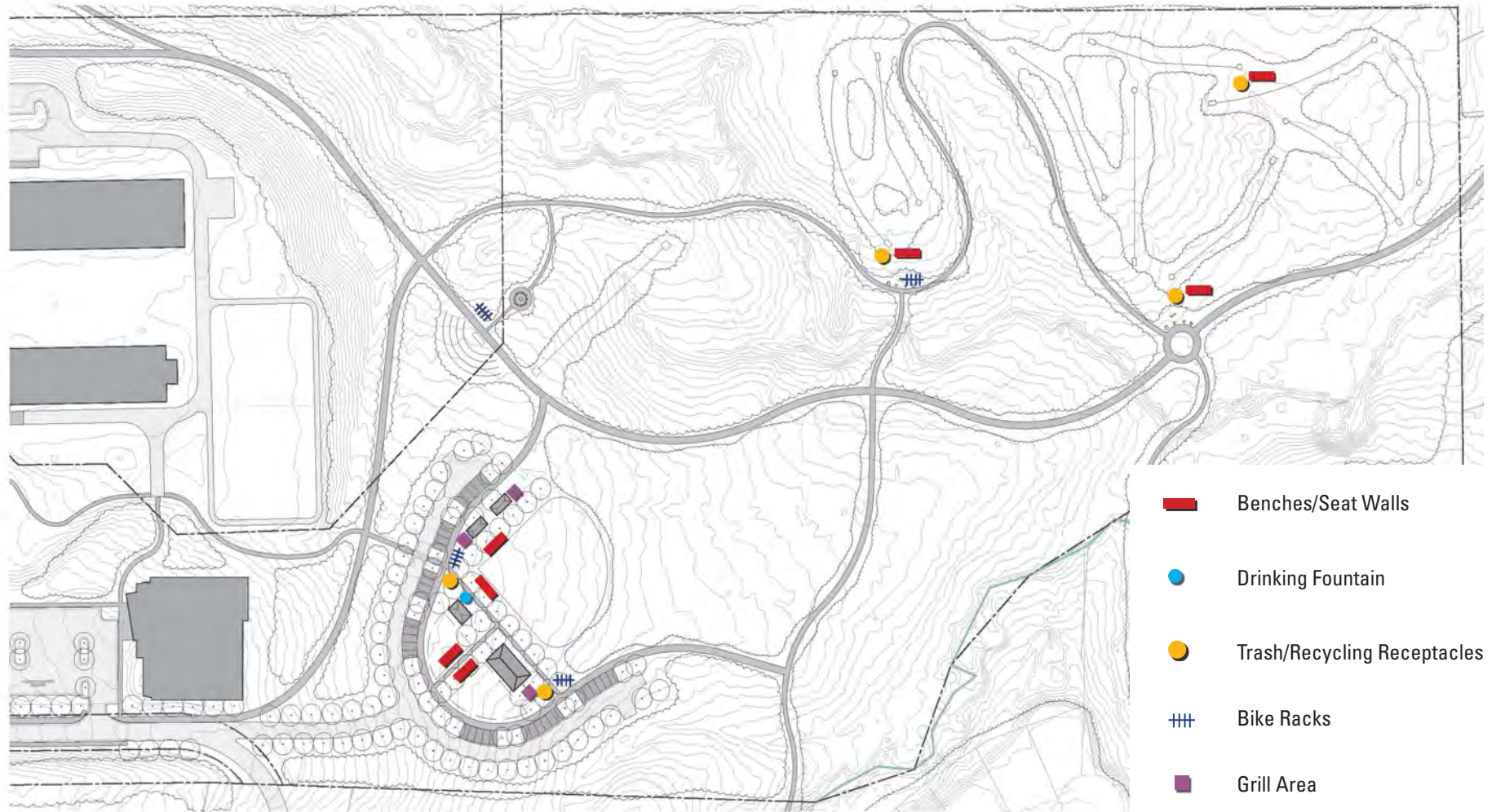
Proposed East Area Signage Plan:

Signage is located to orient users to the location of activities, direct people to different parts of the park, and to explain the rules and requirements of using particular activities or facilities. The signage should be nicely designed and cohesive throughout the park.



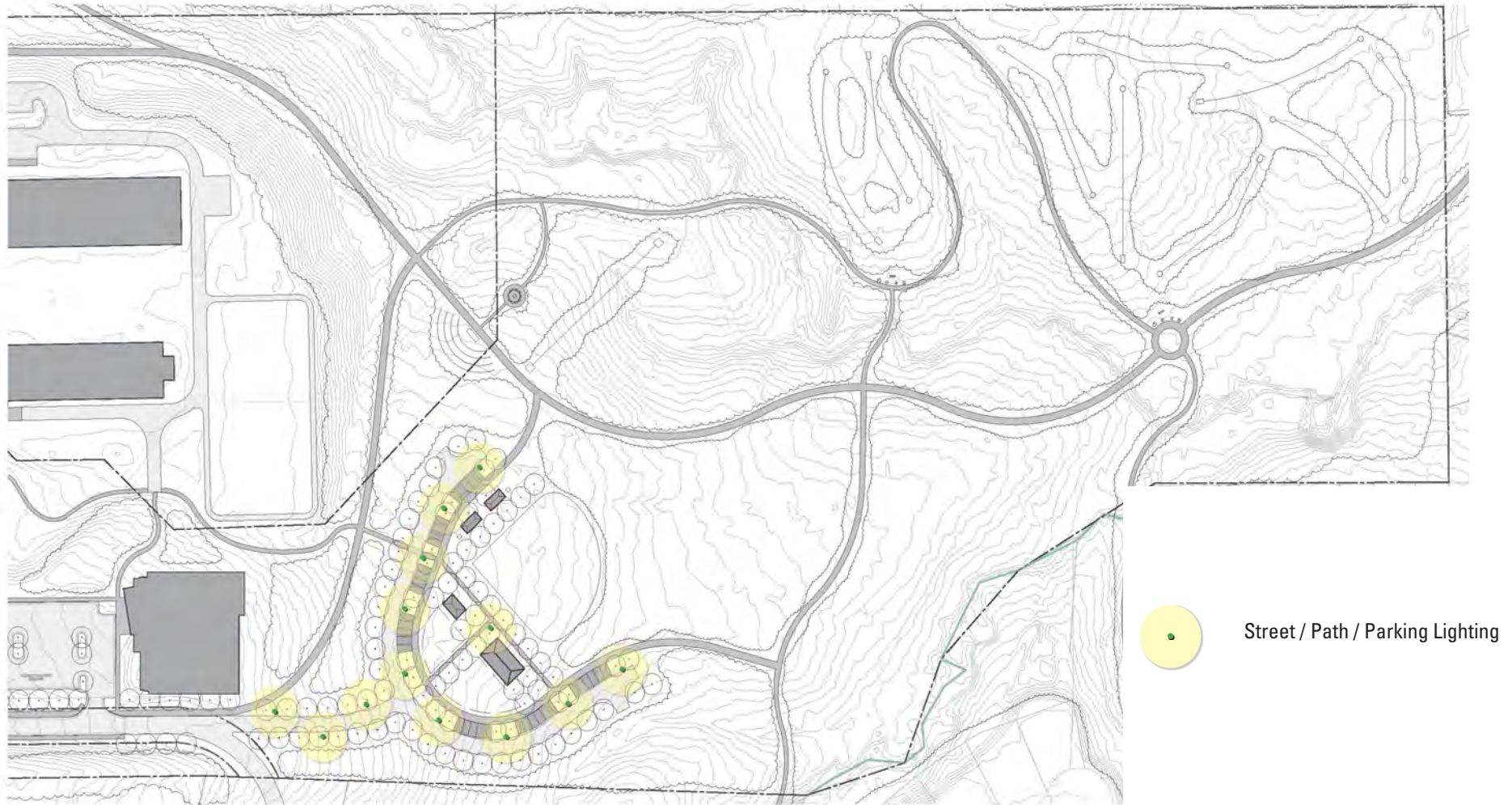
Proposed East Area Furnishings Plan:

Furnishings are located to provide convenience. Seating is provided in various forms such as benches and seat walls. A Drinking Fountain are located at central locations. Trash receptacles and bike racks are located at entrances and exits to the park. Grills are located next to the Picnic Pavilion.



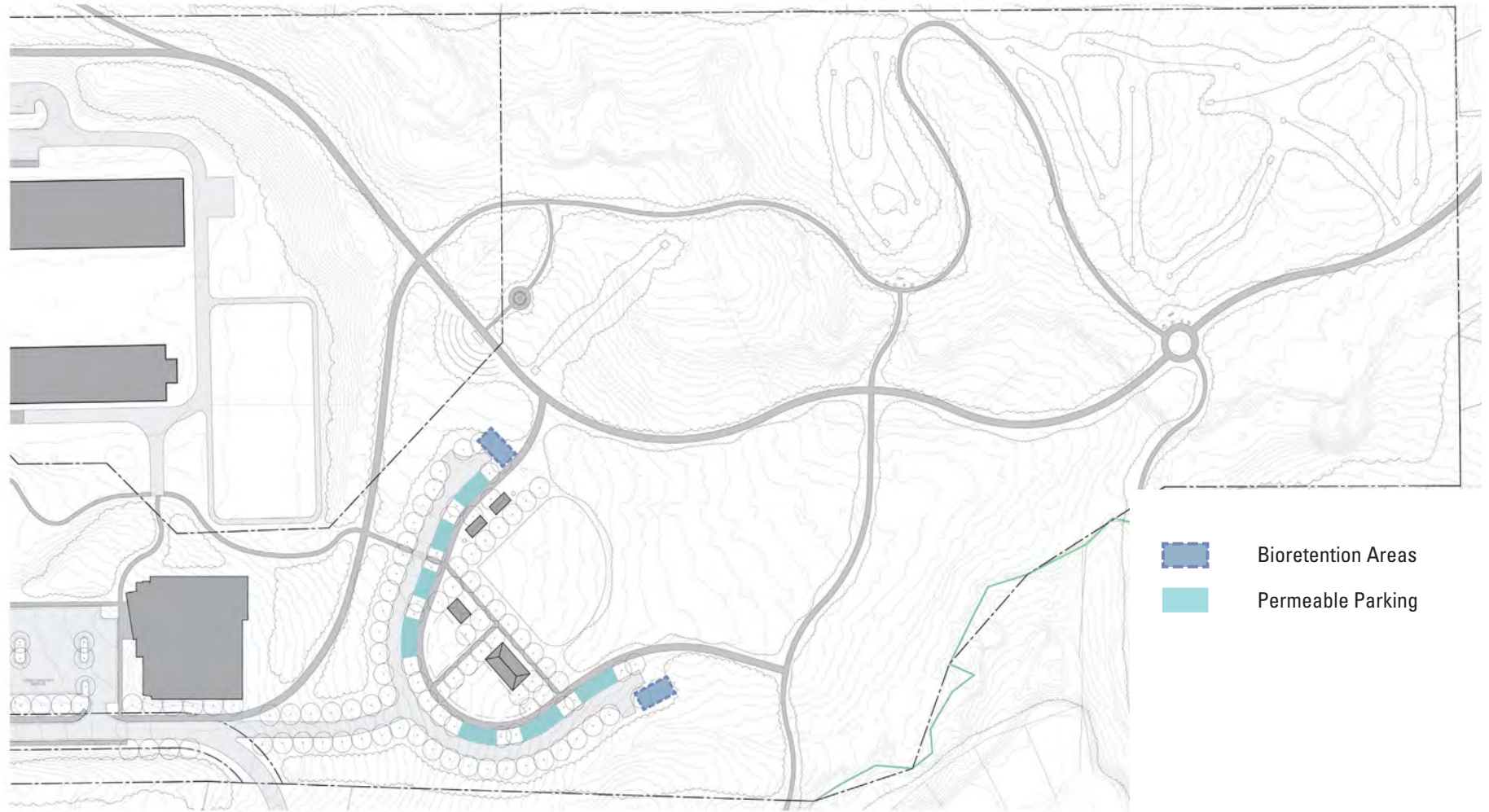
Proposed East Area Lighting Plan:

The lighting concept is to provide pole mounted lighting with downward facing fixtures at the parking lots and key connective walkways to provide minimal but safe lighting.



Proposed East Area Stormwater Plan:

Stormwater should be managed by reducing permeable surface types and by using rain gardens and permeable pavement. Locations are shown where opportunities for storm water BMPs such as rain gardens, bio-retention areas and permeable paving can be located.

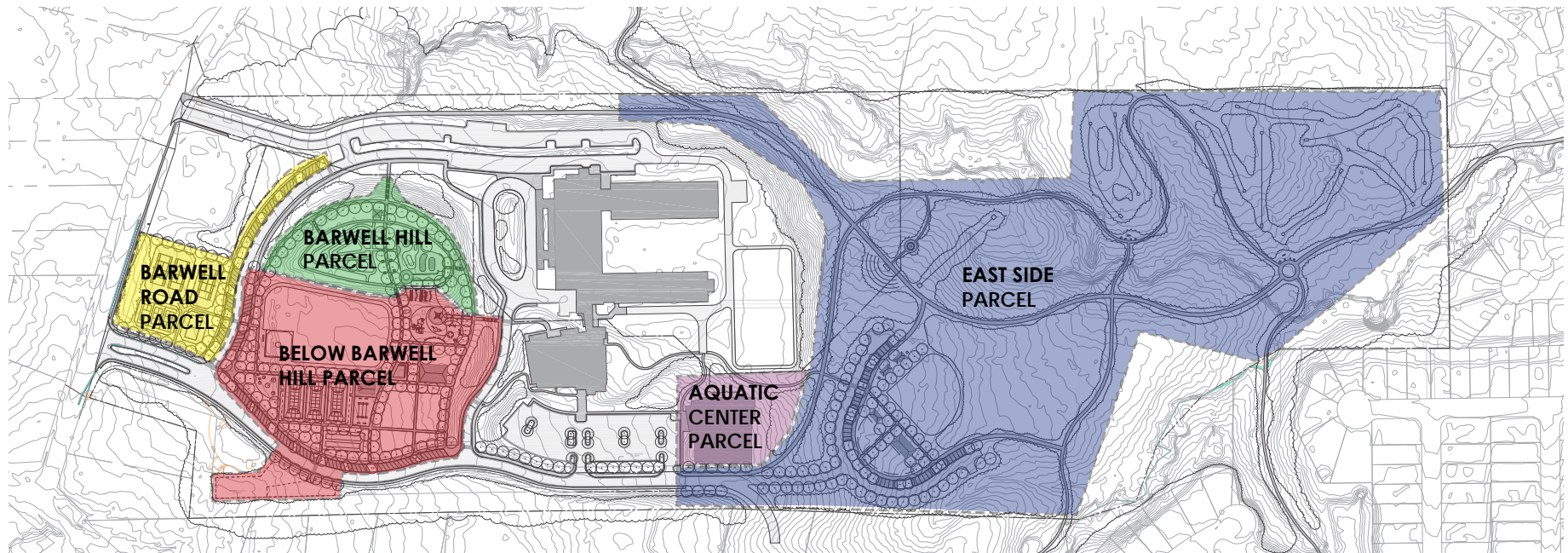


PHASED IMPLEMENTATION

The Barwell Road Park Master Plan supports the bundle of activities that the community desires and it should be constructed over time as funding becomes available. Phasing will allow the park to become a reality and the planning and design team, along with the community determined that it was logical to create specific project areas (parcels) that generally represented expressions of the park vision and mission within specific geographies of the property. The phasing areas (parcels) include: the “Barwell Road Parcel”, which fronts along Barwell Road; the “Below Barwell Hill Parcel”, which is the generally flat and forested area below the stockpiled fill site in front of the school, the “Barwell Hill Parcel”, which is the area on top of the stockpiled fill area in front of the school, the “Aquatic Center Parcel” adjacent to the Community Center Parking Lot, and the “East Side Parcel”, which is the wooded natural area east of the school and Community Center.

Following a facilitated discussion, the CPC determined that the

“Below Barwell Hill Parcel” should be the “First Focus Area” to begin the park development, recognizing that the entire parcel won’t be able to be funded with the first increment of funding. It would be advisable, however, to design the “First Focus Area” in total to ensure that it will fit together from a design and engineering standpoint in the future. In order to determine which portion of the First Focus Area is to be developed as Phase I, it was determined that further discussions with the community should occur to gain a consensus over initial program needs and desires relative to available funding. Following the completion of Phase 1, the City should continue to expand the park development to include the remainder of the “First Focus Area” (“Below Barwell Hill Parcel”) in Phase 2. Following that, discussions with the community should occur to determine which areas of the park (Parcels) to develop next based on need, desired activities, cost to construct, available budgets and other considerations.



ESTIMATED CONSTRUCTION COSTS BY PARCEL

ACTIVITY	QTY	UNIT	UNIT COST	TOTAL COST
Below Barwell Hill Parcel				
Clearing / Grading / Drainage	5	acres	\$ 50,000	\$ 250,000
Permeable Parking Spaces	10,800	sq.ft.	\$ 8.00	\$ 86,400
Sidewalks and Trails	10,360	sq.ft.	\$ 6.00	\$ 62,160
Multi-Sports Field with Perimeter Trail	59,500	sq. ft. ft.	\$ 5.00	\$ 297,500
Basketball Courts (unlit)	3	ea.	\$ 50,000.00	\$ 150,000
Bocce	2	ea.	\$ 15,000.00	\$ 30,000
Splash Pad	1	ea	\$ 200,000.00	\$ 200,000
Picnic Shelter (50 person)	1	ea.	\$ 106,250.00	\$ 106,250
Restroom	1	ea.	\$ 250,000.00	\$ 250,000
Utility Line Connections	1,160	lin ft	\$ 60.00	\$ 69,600
Playground	1	ea.	\$ 175,000.00	\$ 175,000
Community Garden	10,000	sq.ft.	\$ 2.00	\$ 20,000
Dog Park	15,000	sq.ft.	\$ 2.00	\$ 30,000
Climbing Area with Safety Surface	1	allowance	\$ 78,000.00	\$ 78,000
Benches Allowance	1	ea.	\$ 25,000.00	\$ 25,000
Other Furnishings (bike racks, grills, tables, signage, etc.)	1	allowance	\$ 30,000.00	\$ 30,000
Site Lighting	17	ea	\$ 5,000.00	\$ 85,000
Wifi at Picnic Shelter	1	ea	\$ 15,000.00	\$ 15,000
Landscape (Trees, Shrubs, etc.)	1	allowance	\$ 163,350.00	\$ 163,350
Subtotal				\$ 1,873,260
Contingency	20%			\$ 374,652
Permit Fees	1%			\$ 18,733
Design, Engineering, Geotech	18%			\$ 404,624
TOTAL PROJECT - BELOW BARWELL HILL PARCEL				\$ 2,671,269

ESTIMATED CONSTRUCTION COSTS BY PARCEL

ACTIVITY	QTY	UNIT	UNIT COST	TOTAL COST
Barwell Hill Parcel				
Clearing / Grading / Drainage (+ additional for potential rock)	2	acres	\$ 75,000	\$ 112,500
Sidewalks and Trails	13,040	sq.ft.	\$ 6.00	\$ 78,240
Pump Track	18,000	sq.ft.	\$ 2.50	\$ 45,000
Skate Park	1	ea.	\$ 400,000.00	\$ 400,000
Shade Structure	1	ea	\$ 20,000.00	\$ 20,000
Benches Allowance	1	ea.	\$ 15,000.00	\$ 15,000
Other Furnishings (bike racks, signage, etc.)	1	allowance	\$ 10,000.00	\$ 10,000
Site Lighting	6	ea	\$ 5,000.00	\$ 30,000
Landscape Allowance	1	allowance	\$ 39,204.00	\$ 39,204
Subtotal				\$ 749,944
Contingency	20%			\$ 149,989
Permit Fees	1%			\$ 7,499
Design, Engineering, Geotech	18%			\$ 161,988
TOTAL PROJECT - BARWELL HILL PARCEL				\$ 1,069,420

ESTIMATED CONSTRUCTION COSTS BY PARCEL

ACTIVITY	QTY	UNIT	UNIT COST	TOTAL COST
Barwell Road Parcel				
Clearing / Grading / Drainage	1	acres	\$ 50,000	\$ 50,000
Permeable Parking Spaces	7,200	sq.ft.	\$ 8.00	\$ 57,600
Sidewalks and Trails	4,100	sq.ft.	\$ 6.00	\$ 24,600
Tennis Courts (unlit)	3	ea.	\$ 50,000	\$ 150,000
Pickleball Courts	3	ea.	\$ 25,000	\$ 75,000
Sand Volleyball Court	1	ea.	\$ 30,000	\$ 30,000
Shade Plaza with Shade Structure	1,000	sq.ft.	\$ 20.00	\$ 20,000
Site Lighting	8.00	each	\$ 5,000	\$ 40,000
Landscape (Trees, Shrubs, etc.)	1	allowance	\$ 26,136	\$ 26,136
Subtotal Construction				\$ 423,336
Contingency	20%			\$ 84,667
Permit Fees	1%			\$ 4,233.36
Design and Engineering	18%			\$ 91,441
TOTAL PROJECT - BARWELL ROAD PARCEL				\$ 603,677

ACTIVITY	QTY	UNIT	UNIT COST	TOTAL COST
Aquatic Center Allowance				\$15,000,000 - \$22,000,000

Note: The 2008 Raleigh Aquatic Facilities Study recommends an Indoor/Outdoor Community Aquatic Center in Southeast Raleigh as a Phase 2 development project (see Chapter 5.4, pp. 176-202). This type of facility is consistent with the needs and preferences of the community as expressed during the Barwell Road Park master plan public engagement process. The estimated cost for this type of facility, as documented in the Aquatics Study, is approximately \$15-\$22 million (see Chapter 4, p. 159-160). Significant further study would be necessary to assess the suitability and feasibility of locating an Indoor/Outdoor Community Aquatic Center at Barwell Road Park.

ESTIMATED CONSTRUCTION COSTS BY PARCEL

ACTIVITY	QTY	UNIT	UNIT COST	TOTAL COST
East Side of Park				
Roads	10,080	sy.	\$ 20.00	\$ 201,600
Permeable Parking Spaces	7,200	sq.ft.	\$ 8.00	\$ 57,600
Clearing / Grading / Drainage	5	acres	\$ 50,000	\$ 250,000
Restroom Facility + Piping	1	ea.	\$ 250,000	\$ 250,000
Utility Line Connections	1,200	lin ft	\$ 60	\$ 72,000
Picnic Shelter (50 person)	1	ea.	\$ 106,250	\$ 106,250
Picnic Area	1	ea.	\$ 30,000	\$ 30,000
Play Lawn	32,400	sq.ft.	\$ 5.00	\$ 162,000
Zip Line / Ropes Course	1	ea.	\$ 62,500	\$ 62,500
Hammock Grove	1	ea.	\$ 16,000	\$ 16,000
Outdoor Classroom	1	ls	\$ 65,000	\$ 65,000
Council Ring	1	ea.	\$ 12,000	\$ 12,000
Small Rustic Playground	1	ea.	\$ 35,000	\$ 35,000
Disc Golf	9	holes	\$ 4,000	\$ 36,000
Benches Allowance	1	ea.	\$ 25,000	\$ 25,000
Other Furnishings (bike racks, grills, tables, signage, etc.)	1	allowance	\$ 20,000	\$ 20,000
Sidewalks and Trails	35,000	sq.ft.	\$ 10.00	\$ 350,000
Stream Crossings	3	ea	\$ 202,666.67	\$ 608,000
Site Lighting	13	ea.	\$ 5,000.00	\$ 65,000
Wifi at Picnic Shelter	1	ea	\$ 15,000.00	\$ 15,000
Landscape (Trees, Shrubs, etc.)	1	allowance	\$ 150,000	\$ 150,000
Subtotal East Side of Park				\$ 2,588,950
Contingency	20%			\$ 517,790
Permit Fees	1%			\$ 25,890
Design, Engineering, Geotech	18%			\$ 559,213
TOTAL PROJECT - EAST SIDE OF PARK				\$ 3,691,843

ESTIMATED CONSTRUCTION COSTS BY PARCEL

PARCEL	TOTAL COST
BELOW BARWELL HILL PARCEL	\$ 2,671,269
BARWELL HILL PARCEL	\$ 1,069,420
BARWELL ROAD PARCEL	\$ 603,677
AQUATIC CENTER ALLOWANCE	\$15,000,000 - \$22,000,000
EAST SIDE OF PARK	\$ 3,691,843
GRAND TOTAL	\$23,036,209 - \$30,036,209

Note: The costs provided above represent an order-of-magnitude estimate, rather than an Engineering estimate. Further analysis is recommended to determine actual figures for cost of construction and implementation.