



# JONATHAN CREEK PARK MASTER PLAN

June 2010

**BWSC** | BARGE  
WAGGONER  
SUMNER &  
CANNON, INC.®

# Jonathan Creek Park Master Plan

June 2010

Prepared by  
Barge Waggoner Sumner and Cannon, Inc.

**BWSC**

for Haywood County Recreation & Parks  
North Carolina

Funding provided in part by the  
Haywood County Tourism Development Authority



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# 1. Introduction

This report presents the master planning process for a new park at Jonathan Creek near Maggie Valley, in Haywood County, North Carolina. This 22-acre site is located on Jonathan Creek Road (US Highway 276) approximately 1.5 miles north of Soco Road (US Highway 19) and 3.8 miles south of Interstate 40. Barge Waggoner Sumner and Cannon, Inc. (BWSC) facilitated the planning process and prepared the master plan for the park under contract to Haywood County. In 2007, BWSC also completed a Comprehensive Parks and Recreation Master Plan for Haywood County that is referenced in this document. The comprehensive master plan recommended the acquisition of land in Jonathan Creek for sports complex. The County, with financial assistance from Maggie Valley, purchased the property in 2008. This master planning effort was funded in part by the Haywood County Tourism Development Authority.

The planning process began with a site evaluation of the existing features and amenities, and the generation of a site inventory and analysis map. This analysis was presented at a public meeting to gain input on the community's vision for the development of the park. BWSC then prepared several conceptual plans for the development of the park. These plans were presented to the Haywood County Recreation and Parks Advisory Board. After refinement, three alternatives were presented to the public for comment. A preferred plan was selected and refined and presented to the Advisory Board for comment. The plan was refined further and the final Master Plan was presented at a public meeting. Following these presentations, BWSC prepared the final master plan, opinion of probable costs, and this document and presented them to the Haywood County Commission, culminating the master planning process.

## 2. Inventory AND ANALYSIS



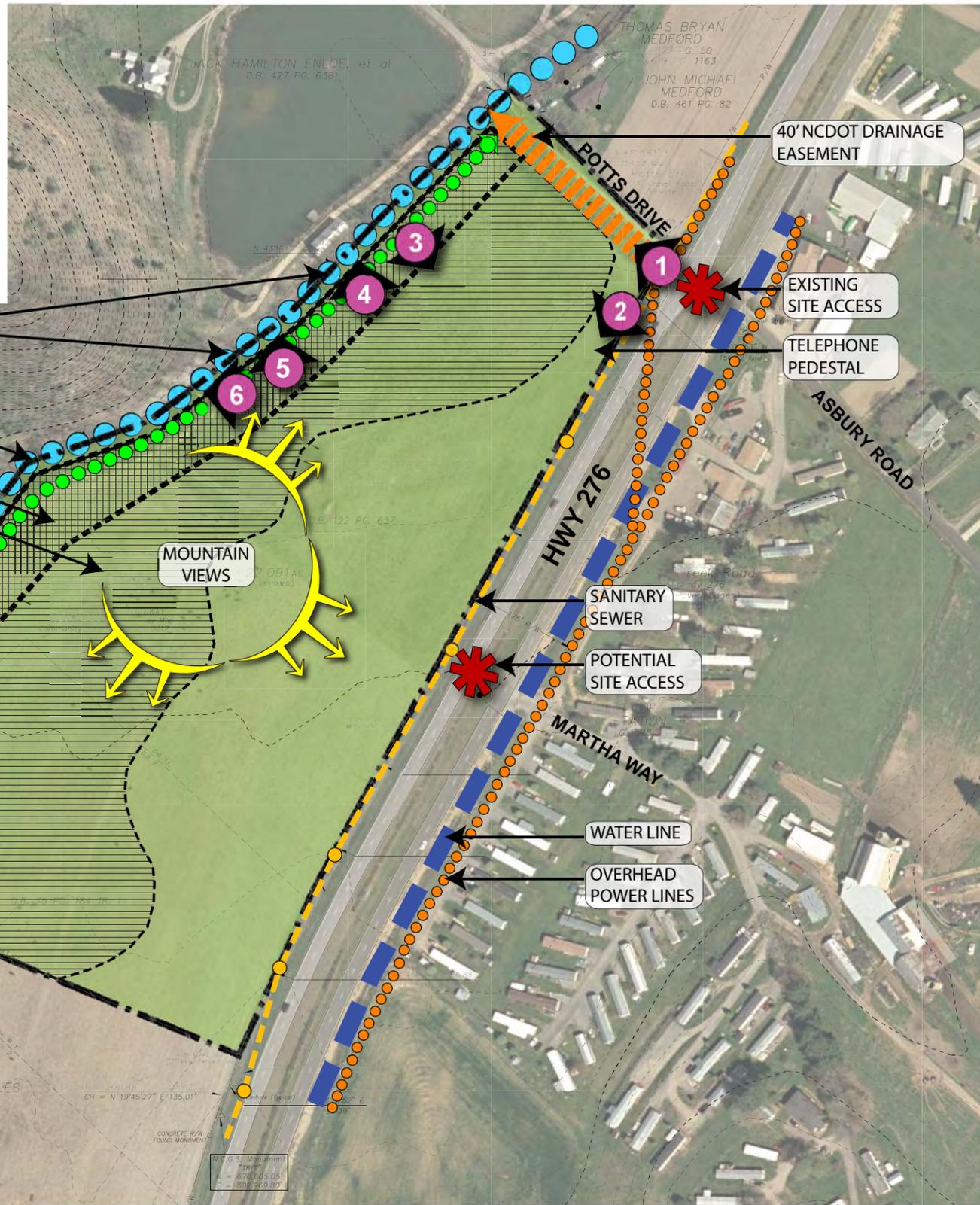
Mountain Views from the North East Corner of the Site

Bordered by Jonathan Creek Road (US 276) to the east and Jonathan Creek to the West, the 22-acre park site has been historically used for crop production. The Jonathan Creek location provides for an uncharacteristically flat topography for Haywood County. Figure 1 is the Site Analysis map that depicts many of the features discussed in this section.

The accessibility of the site from Interstate 40 and its proximity to the hotels, restaurants, shopping, attractions, Blue Ridge Parkway, Pisgah National Forest and the Great Smoky Mountains National Park make this site an especially attractive site for tournament play. The relatively mild climate in the summer also is a plus. Nestled in the broad Jonathan Creek, mountain views are prevalent from the site, which enhances its attractiveness as a park site.



Access to the park is from Jonathan Creek Road. The access would be from a current median crossover along the 4-lane Jonathan Creek Road on the northern boundary of the site or possibly from a new median crossover further to the south. This will be discussed further in Section 4. A water line and sanitary sewer line are located in the right of way along the west side of Jonathan Creek Road at the site. Electrical service also exists on site. Thus, all utilities necessary to serve the site are on the eastern boundary of the site. There are no existing improvements on the site.



# SITE INVENTORY & ANALYSIS

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View of Site Looking South Along Jonathan Creek Road

A drainage easement exists on the northern boundary of the site. A significant amount of the site area lies below the 100 year flood plain; a narrow band of floodway is present along Jonathan Creek. According to the Haywood County Flood Damage Prevention ordinance, any structure placed within the 100 year flood plain must be elevated at least one foot above the base flood elevation or flood-proofed in accordance with the regulation. The ordinance does not prohibit placing fill in the flood plain. No encroachments (including fill) can be placed in the floodway unless a flood study by a professional engineer demonstrates that there would be no increase in flood levels as a result of the encroachment. Thus, the development of the park could include the placement of fill in the floodplain in order to raise the elevation of the park improvements above the flood elevation. Any encroachments in the floodway would require the aforementioned study.

The location of a park in the floodplain is a common occurrence across the country. In fact, parks are one of the best uses of floodplain property. However, there are issues that need to be understood in putting a park in the floodplain, particularly a sports complex. Flooding can damage ball field fencing and damage infields. Debris and mud can be left after a flood event that requires clean up. If at all possible, the park should be designed to mitigate these negative effects of flooding, including placing fill to elevate the playing fields out of the floodplain.



Jonathan Creek Riffle and Pool

The topography presents opportunities and constraints. The gently sloping topography would require less grading for a sports complex than on steeper properties but to achieve proper drainage of the site, underground storm drainage will be necessary and fill from off-site may also be required.

The presence of Jonathan Creek is a wonderful asset to the site. It provides the potential for passive use activities along the stream and for trout fishing. Jonathan Creek is a stream classified by the North Carolina Environmental Management Commission as “Trout Waters”. Therefore, an undisturbed buffer zone at least 25 feet wide between construction activity and the stream must be maintained. The trout buffer zone is measured horizontally from the top of the bank. If the top of the bank is not easily discerned, the “top of the bank” is considered the “normal high water mark” or the edge of the “bank-full” condition. If 25 feet is not wide enough to protect the stream from sedimentation damage, a buffer zone of sufficient width must be provided to confine visible siltation within the 25% of

the buffer zone nearest the land-disturbing activity. However, in no event shall sediment be allowed to enter the 25-foot trout buffer zone.

Soils on the site consist of moderately well drained, very permeable soils formed in course textured alluvium in the flood plain. They are shallow to sandy material that has more than 35% by volume of gravel and cobbles. The seasonal high water table is at depths of 2 to 4 feet in winter and spring. These soils present opportunities (well drained, good fertility) and also constraints (lots of cobbles and high water table). The constraints will have to be considered in the detailed design of the park.



No soil survey was conducted for this site. **Therefore, it is strongly recommended that a geotechnical investigation be undertaken before detailed design and construction activities commence to determine the suitability of the soils for the planned improvements and to gain recommendations for dealing with any issues relating to the soil conditions, ground water and pavement/foundation requirements.**

While no archaeological investigation has taken place, the location of the site along a stream, in a broad stream valley in the mountains suggests the potential presence of Native American cultural resources on the site. Given the historic presence of the Cherokees in the area, this is a real possibility. BWSC understands that grant funding is a prime target for funding of construction for the park. Most state and federal grants will require that a cultural resource evaluation be made of the site. This should be undertaken prior to submitting for any state or federal grant. Depending upon the outcome of the study, modifications to the master plan may or may not be necessary.

In summary, although constraints exist, the park presents unique opportunities for future development.

### 3. Public Input AND DEVELOPMENT OF ALTERNATIVE PLANS

On March 4, 2010, a public input meeting was held to kick-off the master planning process. The meeting was held at the Haywood County Administrative Building; it was very well attended by over 40 people. During this meeting, the Site Analysis map was presented, previously suggested uses for the site, and ideas for the future development of the park were discussed.

The following is a list of uses that had been previously suggested for the site that was presented to the public:

1. **Recommendations from the 2007 Haywood County Comprehensive Parks and Recreation Master Plan**
  - Minimum acreage of 60 acres
  - Minimum 7 softball/baseball fields (3 – 200’, 1 – 350’, 3 – 300’)
  - Minimum 2 multi-use fields (soccer, football, lacrosse & open play)
  - Artificial turf for multi-use fields
  - Lighting for all sports fields
  - Sand volleyball
  - Splash pad
  - Picnic shelter(s)
  - Individual picnic sites
  - Walking trails
  - Playground
  - Horseshoe pit
  - Disc golf course
  - Open play areas
  - Open natural areas
  
2. **Elements Included in the Preliminary Concept prepared in July, 2008, by BWSC for the 22-acre Site**
  - 4 – 200’ baseball fields
  - 1 – Multi-use field

- Concession/restroom building
- 2 – Picnic shelters
- Individual picnic sites
- Splash pad
- Playground
- Sand volleyball court
- Open play area
- Walking trails
- Parking lot with new access from Hwy. 276

**3. Additional Recommendations by the Recreation Advisory Board**

- Tennis court
- Creek access
- Educational component regarding Jonathan Creek
- Office/meeting space
- Sustainable storm water design
- Safe access from Hwy. 276
- Adequate parking for active & passive uses
- Maximize the number of large baseball/softball fields for tournaments
- Maintenance building
- Separate storage area

To facilitate the discussion and visioning, the participants were asked to respond to a series of questions. The responses were recorded on flip charts and posted on the walls around the room. After completing this session, participants were supplied with four red “sticky dots”. They were then asked to place the dots on the four items on the flip charts that were most important to them.

The following are the questions posed at the public meeting along with the recorded responses from the participants. The number in parentheses beside each response indicates the number of “sticky dots” that were placed on each response during the prioritization exercise. The lists under each question are based on the number of “dots” placed on each element by the participants.

### Question #1

What do you think about including the suggested program elements in the park?

The participants were asked which of the previously suggested elements they would like to see in the park.

- Baseball/Softball Fields (21)
- Soccer Fields (14)
- Trail (13)
- Sports Field Lighting (12)
- Splashpad (7)
- Playground (6)
- Concessions/Restroom (6)
- Tennis Courts (3)
- Picnic Sites (2)
- Meeting Space (2)
- Storage (2)
- Picnic Shelters (2)
- Concession/Restroom Building (1)
- Open Play Areas (1)
- Horseshoes (1)
- Sand Volleyball

### Question #2

Which of the suggested elements should not be included?

- Disc Golf (1)
- No Passive Recreation Facilities (1)
- Open Natural Areas
- Office Space

### Question #3

What other elements should be included in the park, space permitting?

- Handicapped Fishing Facility (10)
- Batting Cages (8)
- Fit Course (8)

- Dog Park (6)
- Adult Swings Along the River (3)
- Community Center (1)
- Butterfly Garden (1)
- Water Fountains (1)
- Benches (1)
- Bus Parking (1)
- Sustainable (Green) Elements
- Shade

#### **Question #4**

What is it about the site that you think needs to be preserved, enhanced or “showcased”?

- Jonathan Creek
- Re-Use River Cobbles in the Construction of the Park

#### **Question #5**

What are the key issues that need to be considered in developing the park?

- Maximize Revenue Potential (12)
- Provide for Local Recreational Use (11)
- Expansion (2)
- Top Quality Facilities
- Avoid Impacts to Highway (balls)
- Facilities for Older People
- Consider Surrounding Neighborhood (light, traffic, noise)
- Security

Following the public meeting, a Survey Monkey online survey was activated. 75 people completed the online survey regarding the development of the park. The survey was kept on-line from March 5 to 22, 2010. From the results it was evident that the soccer community was somewhat mobilized to complete the survey. This is not unusual for an interest group to be encouraged to participate to make their message heard and their interests advanced. The following is a summary of the results of the online survey.

**Question 1: What do you think about including the suggested program elements in the park?**

Approximately 21 respondents advocated for soccer fields. Other uses which received multiple support included baseball/softball and tennis, however in much lower numbers than soccer. Many liked the mix of uses. Some respondents (approximately 3) suggested that the existing Canton, NC, baseball complex should be completed before this park is developed and some (approximately 2) were opposed to the project as a whole. These two points of view were evident in the responses to every question and thus will not be mentioned again in the discussion of the other question results.

**Question 2: Which of the suggested elements should not be included?**

Many of the same respondents who supported soccer in Question 1 suggested that the baseball/softball fields be eliminated or reduced in number. This response was the one mentioned most (approximately 13 times). Several respondents suggested elimination of soccer. Other facilities mentioned multiple times that should not be included in the park included disc golf, the splash pad, sand volleyball, and tennis courts.

**Question 3: Which other elements should be included in the park, space permitting?**

The soccer supporters were vocal again on this question suggesting more soccer fields. Other suggested uses included creek access facilities, batting cages, a bike path, outdoor pool, a BMX track, skate park, and dog park, although none was mentioned more than a few times.

**Question 4: What is it about the site that should be preserved and enhanced?**

Jonathan Creek and access to it were the top priority responses. Other responses mentioned multiple times were preservation of the trees and views on the site.

**Question 5: What are the key issues that should be considered in developing the park?**

The development of a facility that could host revenue generation tournaments was mentioned several times. Other issues mentioned included the provision of lighting on the fields, traffic, the provision of equitable facilities in the eastern and western portions of the county, facilities for children, safety, quality of the facilities, the provision of a range of facilities at the site and sustainable design.

## SUMMARY

Overall, the responses from the online survey were somewhat skewed towards emphasizing soccer in the development of the park; however those attending the public meeting favored baseball/softball. No other single issue rose to the level of soccer support in the online survey, although it received support from only 28% (approximately) of the respondents, which is substantially less than a majority. Overall, the results of the survey and the public meeting input were at best, mixed. Therefore the survey results and the input gathered at the public meeting provide valuable insight into the public's desires for the development of the park, however they do not provide a compelling, clear direction with regard to a decision regarding the mix of uses to be included in the park.

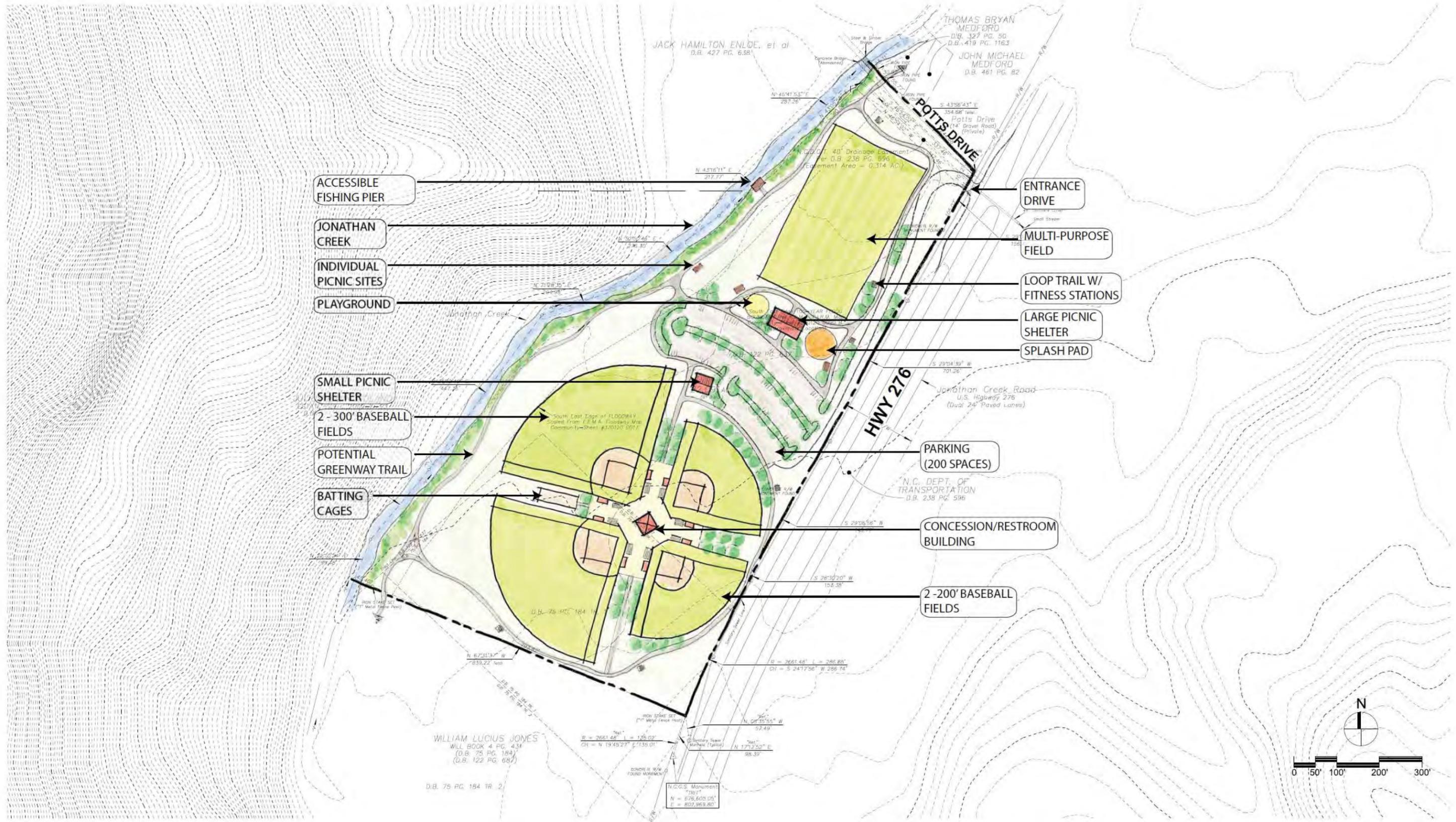
## DEVELOPMENT OF ALTERNATIVE PLANS

Following the public meeting, BWSC prepared seven alternative concept plan sketches. These sketches were reviewed with the Recreation Advisory Board on March 18, 2010. The Board selected three alternative plans to be presented to the public and asked that slight modifications be made to the alternatives.

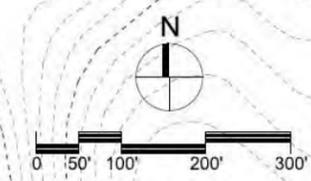
On March 25, 2010, a public presentation of the Alternative Plans was made to a group of approximately 51 attendees at the Haywood County Administration Building. A summary of the 2007 Comprehensive Plan recommendations relating to soccer and baseball/softball and the results of public input from the first meeting and the survey was presented. Figures 2, 3, and 4 on the following pages illustrate Concepts A, B, and C that were presented at the meeting.

Concept A included 2-300' softball/baseball fields, 2-200' youth baseball/girl's softball fields, a multi-purpose field, parking and passive uses. Concept B also included 2-300' softball/baseball fields, 2-200' youth baseball/girl's softball fields. The layout differed from Concept A in that the fields were oriented along Jonathan Creek Road. This allowed for more contiguous passive uses along Jonathan Creek. A multi-purpose field, parking, and passive uses were also included in Concept B. Concept C included 1-300' softball/baseball fields, 3-200' youth baseball/girl's softball fields, a multi-purpose field, parking and passive uses.

One of the primary differences in Concepts A and C is the location of the entrance to the park; A enters at the northern boundary at the existing median cross-over; C enters near the center of the property.



- ACCESSIBLE FISHING PIER
- JONATHAN CREEK
- INDIVIDUAL PICNIC SITES
- PLAYGROUND
- SMALL PICNIC SHELTER
- 2 - 300' BASEBALL FIELDS
- POTENTIAL GREENWAY TRAIL
- BATTING CAGES
- ENTRANCE DRIVE
- MULTI-PURPOSE FIELD
- LOOP TRAIL W/ FITNESS STATIONS
- LARGE PICNIC SHELTER
- SPLASH PAD
- PARKING (200 SPACES)
- CONCESSION/RESTROOM BUILDING
- 2 - 200' BASEBALL FIELDS

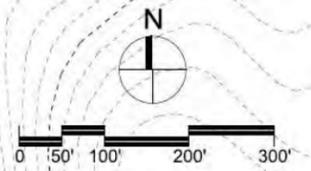


**CONCEPTUAL MASTER PLAN - OPTION 'A'**

**JONATHAN CREEK PARK MASTER PLAN**  
 HAYWOOD COUNTY, NORTH CAROLINA

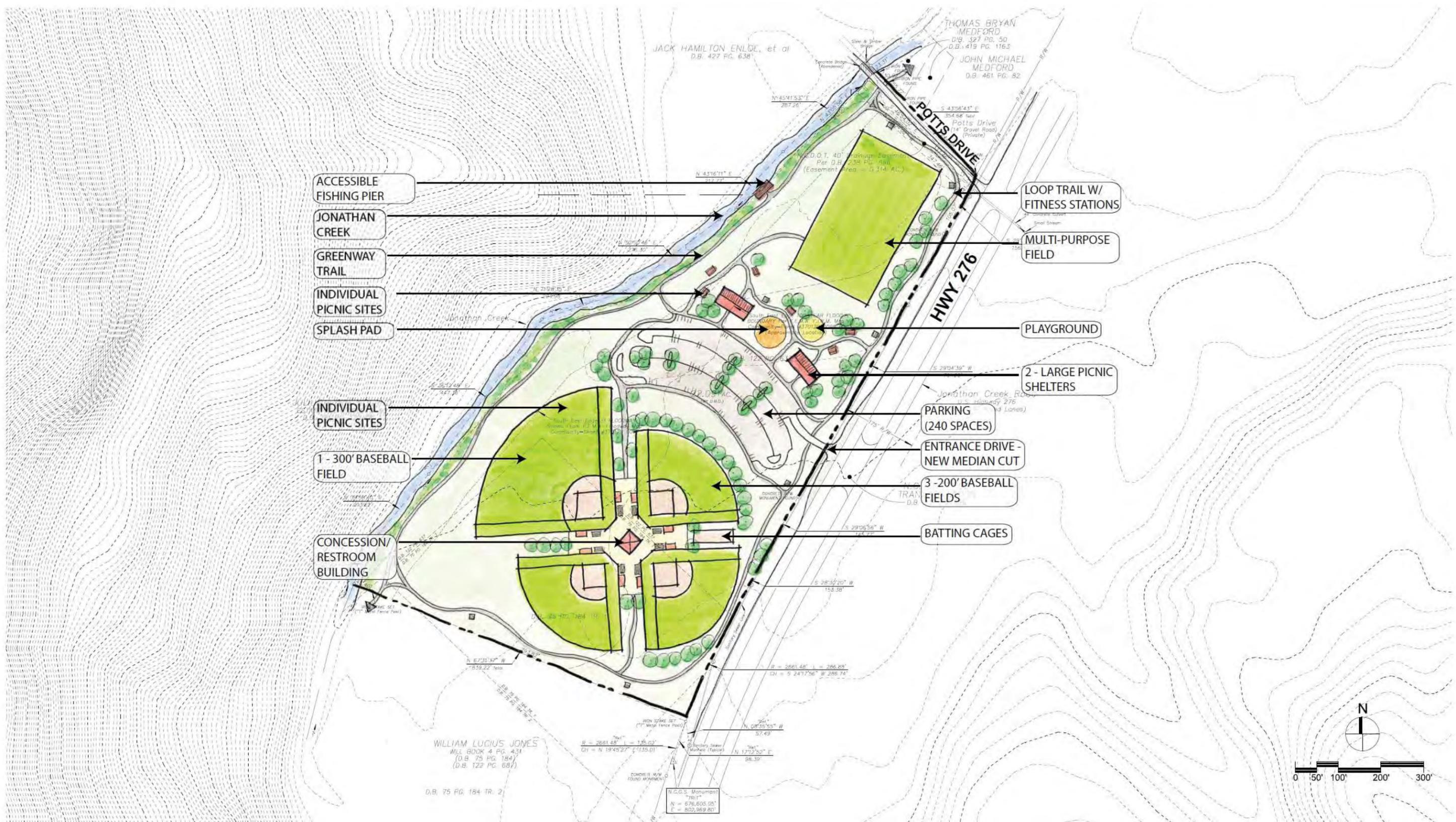


- ACCESSIBLE FISHING PIER
- JONATHAN CREEK
- GREENWAY TRAIL
- PARKING (240 SPACES)
- LOOP TRAIL W/ FITNESS STATIONS
- INDIVIDUAL PICNIC SITES
- LARGE PICNIC SHELTER
- PLAYGROUND
- MULTI-PURPOSE FIELD
- ENTRANCE DRIVE
- 2 - 200' BASEBALL FIELDS
- CONCESSION/RESTROOM BUILDING
- 2 - 300' BASEBALL FIELDS
- BATTING CAGES

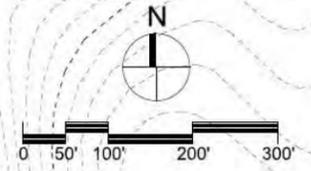


## CONCEPTUAL MASTER PLAN - OPTION 'B'

JONATHAN CREEK PARK MASTER PLAN  
HAYWOOD COUNTY, NORTH CAROLINA



- ACCESSIBLE FISHING PIER
- JONATHAN CREEK
- GREENWAY TRAIL
- INDIVIDUAL PICNIC SITES
- SPLASH PAD
- INDIVIDUAL PICNIC SITES
- 1 - 300' BASEBALL FIELD
- CONCESSION/RESTROOM BUILDING
- LOOP TRAIL W/ FITNESS STATIONS
- MULTI-PURPOSE FIELD
- PLAYGROUND
- 2 - LARGE PICNIC SHELTERS
- PARKING (240 SPACES)
- ENTRANCE DRIVE - NEW MEDIAN CUT
- 3 - 200' BASEBALL FIELDS
- BATTING CAGES



**CONCEPTUAL MASTER PLAN - OPTION 'C'**

**JONATHAN CREEK PARK MASTER PLAN**  
 HAYWOOD COUNTY, NORTH CAROLINA

Then each of the three concepts was described. During a question and answer period the following salient points were made:

- Concern was raised about the safety of Concept B regarding the close proximity of spectators to the highway; a barrier would have to be installed to prevent a car leaving the highway and entering the spectator area. Concern was also expressed about the traffic noise impacts.
- It was pointed out that Little League is going to change their field standards to require that facilities that host district tournaments and above to have minimum field lengths of 225' instead of 200'. Thus, it would be desirable to have 225' fence lengths.
- It was noted that two high school football fields were resurfaced with artificial turf and are available for community use.

Following the presentation, participants were asked to respond to two questions.

**Question #1**

Which of the 3 concepts do you prefer? (Participants raised their hands to vote for each concept)

- Concept A: 15
- Concept B: 13
- Concept C: 23

**Question #2**

What, if any, change would you like to see made to your preferred concept?

- Concept A & C: Add more parking
- Concept B: Add splash pad
- Concept B: Add dog park
- Concept C: Change fields to 4-225' fence lengths
- Concept C: Change fields to 1-200', 2-225' and 1-300'
- Concept C: Add tennis court
- All Concepts:
  - Include additional handicapped fishing access
  - Add more shade trees
  - Add disc golf
  - Add horseshoe pits

Following the meeting, the three alternative concept plans were placed on Haywood County’s website, as was a link to a Survey Monkey online survey. Unfortunately, a glitch on the website only displayed two of the alternative concept plans for several days after they were posted. Therefore, the results of the online survey were compromised.

Based on the results of the public input and input from the Advisory Board, Concept C was refined and presented to the Advisory Board on April 15, 2010. During the discussion with the Board, BWSC recommended that Concept B be eliminated from consideration due to safety concerns if barriers along Jonathan Creek Road were not put in place and the cost of the barriers and the potential lack of aesthetic appeal if they were. Some minor modifications were made to the refined Concept C based on Board input.

The Final Master Plan and Opinion of Probable Cost were presented during a public meeting on April 27, 2010 at Maggie Valley City Hall. Approximately 50 people attended. The Final Master Plan was very well received by those in attendance.

## 4. FINAL MASTER PLAN

Figure 5 on the following page depicts the Final Master Plan for the park. A major feature of the park is the use of sustainable or “green” design features that are intended to reduce impacts on the environment. This is particularly true with respect to the reduction of storm water run-off and in non-point source pollution entering Jonathan Creek. The sustainable features in the park are described in this section.

The park entrance is proposed near the center of the site. According to the North Carolina Department of Transportation, they will not at this time consider a new full movement median crossover at this location because it would not be greater than 2,000 feet from the existing one to the north. They would prefer to see a right in/right out only driveway connection to US 276 with left turn storage improvements at the existing crossovers to accommodate the volume of U-turn movements expected to be generated by the proposed park. The NCDOT could consider approving a directional crossover at this location if adequate justification is provided that shows the existing crossovers to the north and south are not sufficient to provide reasonable access. This would have to be justified by a traffic study to be completed by a licensed engineer.

Therefore, an entrance is feasible at the center of the site whether it be a right turn in, right turn out only, or possibly at a new crossover. This entrance location maximizes the function and use of the site as the parking for the site needs to be adjacent to the softball/baseball complex; the complex can only be located on the southern end of the site due to space restrictions to the north.

Because the scope of any required turn lane storage modifications to the existing median crossover, and requirements for possible deceleration and acceleration lanes at the entrance to the park is not known at this time, an allowance for construction of these is included in the cost estimate.

A parking area that would accommodate 240 cars and the entrance drive would be built using pervious concrete pavers, as would the entrance drive. These pavers dramatically reduce the need for storm water detention (although detention is

not required by County ordinances) and the volume of run-off that would enter Jonathan Creek. This is important for several reasons, including the fact that rainfall that hits a traditional asphalt parking lot would be heated by the pavement in the summer months before entering the stream. Trout are very sensitive to water temperature. The pervious pavers would eliminate this concern and would also protect the water quality in the stream by eliminating washing of oil and other contaminants from the parking lot into the stream. A geotechnical report including information regarding the permeability of the soils will be necessary to determine if any underground storage/transport of water beneath the pavers will be required.

The master plan, shown on the following page, features a wagon wheel style baseball/softball complex containing 1-200' youth baseball/girls softball field, 1-225' youth baseball/girls softball field, 2-300' softball/baseball fields with a two-story central building. All infields would be skinned to make the fields as flexible in terms of use as possible. The 200' and 225' fields could be used for youth baseball up to age 12, and for girl's softball through high school and college. The 300' fields could be used for adult softball, youth baseball up through age 14, and girls softball. For the 300' fields, portable fencing would have to be installed for youth baseball through age 12 and girls softball. Portable mounds would have to be used for baseball. The use of the fields for youth baseball ages 13-14 would require the infields to be pushed out to accommodate 90' base paths. While possible, this is not ideal because the skinned infield depths would not be conducive for youth baseball through age 12 and girls softball.



Example 2-Story Scorer's Tower

The cost estimate includes screening the existing topsoil for placement on the playing fields. This is necessary to eliminate the river cobbles that are prevalent in the soil. 30' high netting is included for the 200' field to keep home run balls from going onto US 276 and for the northern 300' field to protect cars in the parking lot. Even with the netting, it is probable that some balls will end up in the lot. Signage should provide a warning that people park in the lot at their own risk.

The bottom floor of the central building would house concessions, restrooms, mechanical and electrical equipment, and a field maintenance storage room. The second floor would house scorer's stations and meeting room space. If meeting room space is included on the second floor, an accessible lift would have to be

- 10' CONCRETE GREENWAY TRAIL
- ACCESSIBLE FISHING PIER
- JONATHAN CREEK
- 40' x 80' PICNIC SHELTER
- PLAYGROUND
- 40' x 80' PICNIC SHELTER
- 25' TROUT BUFFER
- INDIVIDUAL PICNIC SITES
- 2 - 300' BASEBALL FIELDS
- SMALL SOCCER FIELD
- 8' ASPHALT LOOP TRAIL W/ FITNESS STATIONS
- MULTI-PURPOSE FIELD W/ SYNTHETIC TURF
- TENNIS COURTS (2)
- HORSESHOE PITS
- MAINTENANCE FACILITY
- PARKING (240 SPACES)
- PARK ENTRANCE
- BATTING CAGES (4)
- 2-STORY SCORER'S TOWER W/ CONCESSIONS & RESTROOMS
- 1 - 200' BASEBALL FIELD
- 1 - 225' BASEBALL FIELD



# FINAL CONCEPTUAL MASTER PLAN

JONATHAN CREEK PARK MASTER PLAN  
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APRIL 27, 2010

installed to provide for handicapped access to meet the Americans with Disabilities Act (ADA) requirements. If the second floor space is only used for judging or scoring, it would not have to be accessible under the ADA guidelines. A wrap-around porch on the building would provide shade and protection from foul balls.



Example Black Vinyl Fencing, Bleacher and Dugout Covers

The interior plaza space between the fields would also be constructed using pervious concrete pavers. Raised planters with landscaping including trees should be provided in this space to add visual interest and provide shade. Aluminum bleachers at each field would be covered with a fabric structure to provide shade and protection from foul balls for spectators. Dugouts would be covered with a roof matching the scorer's tower. Four batting cages are also provided. Fencing would be provided between the fields such that a single access point could be provided from the parking lot to allow for ticketing during tournaments.

All the fields would be lit using the latest in lighting technology that reduces energy consumption as well as light spill and glare coming from the fields. The fields would be constructed using laser grading technology that provides for a smooth and well-drained playing surface, and all would be irrigated. An irrigation pump station is included in the cost estimate for withdrawing water from Jonathan Creek. No research was undertaken to determine if this is feasible from a permitting standpoint; this will need to be accomplished during detailed design. Fencing would include black vinyl coated fabric. Infields would be constructed using imported specialized soil specifically blended for this purpose; specialized imported material would also be used for warning tracks. It is assumed that scoreboards would be furnished by Pepsi or Coke as they are at virtually every complex that BWSC designs. At this point, the cost estimate includes the use of Bermuda grass on the outfields. Further research should be undertaken to select the most appropriate grass variety for the fields. There is some concern about the use of Bermuda grass due to the elevation and cold winter temperatures. However, Bermuda grass varieties such as Quickstand have been proven to withstand harsh winters with temperatures as low as 20 degrees below zero without damage to the turf. Bermuda provides a superior playing surface and its use is recommended.

While no underground drainage is proposed for the fields, this should be considered as planning progresses to cut down on the potential for rain-outs. If underdrains are not used, provisions for storage of tarps to cover the infields should be considered.

There are a variety of new technologies that could be considered for the complex including the use of webcams on each field so that games could be viewed on the Internet and the provision of wireless internet. If the complex is truly intended to be a tournament destination, these should be considered. Once again, costs for either of these features are not included in the cost estimate.

A loop trail circles the property. Fitness stations would be provided on the trail. The trail along Jonathan Creek would be concrete and 10' in width to withstand flooding and to provide for a truck to use the trail for stocking trout in the creek. The balance of the trail would be 8' asphalt. Connections to a future greenway along the creek are provided to the north and south. There is particular interest in extending the trail to the south towards Maggie Valley. Picnic sites including a table and grill would be located along the stream along with a handicapped accessible fishing pier/platform. Benches would be located along the stream as well.

Two 40' x 80' picnic shelters are provided north of the parking lot. These could serve the community for events and tournament users. One of the shelters would include men and women's restrooms. Having a place in the shade under these shelters between tournament games is a positive. A large playground, two lighted tennis courts, and horseshoe pits are also planned in this area. These elements combined provide a pleasant passive park for local residents.

A multi-purpose field large enough to host high school and adult soccer would be at the northern end of the site. This field would be constructed using artificial turf to allow for year-round use during all weather conditions. This field would not be lighted. A small youth soccer field is located to the southwest of the 4-plex. This field would be Bermuda and not lighted. Both fields would be laser graded; the smaller one irrigated.

A small maintenance facility (900 square feet) is located adjacent to the parking lot. This building would have a roll-up door to allow for indoor storage of maintenance equipment (mowers, etc.) and supplies. A paved access drive would connect to the parking lot.

Common areas outside the playing fields would be seeded with turf-type fescue. Landscaping, particularly trees, are planned throughout the site.

Overall, the Final Master Plan attains the goal of providing for a baseball/softball complex that can accommodate local league play, as well as serve as a tournament destination. It also provides passive uses that would serve the community and tournament users. The plan also provides a large multi-purpose field that could accommodate a variety of uses. The plan provides for much needed facilities in Haywood County that would serve recreational needs and the potential for revenue generating tournaments for years to come.

## 5. OPINION OF PROBABLE COST

The complete master plan level Opinion of Probable Costs can be found on the following pages. The total estimated cost for development of the entire park is \$6,810,700. This number represents a park that would be constructed as a top-notch tournament facility. A facility of lesser quality could be built for substantially less money, however this is not recommended as the facility is intended as a tournament destination. Given the growing competition to host tournaments, the provision of top quality facilities is very important in order to be successful in attracting tournaments. In addition, several features are included that increase costs but add to the sustainability and playability of the facility. These include the use of pervious pavers in the parking lot and plazas, the artificial turf multi-purpose field, state-of-the-art lighting, a 2-story scorer's tower, etc. As planning progresses and available funding is identified, value engineering could be completed to potentially reduce the costs if necessary.

As with most park projects, the development of the park will likely be phased in over time as grant and other funding is available. The actual phasing of the proposed improvements, that is what elements of the park will be developed when, has not yet been determined. Decisions regarding the phasing will be made at later date. The estimate is broken down such that elements of the park can be identified and grouped in phases. It should be pointed out that during the public presentation of the master plan, comments were received favoring the construction of the parking lot and the 4-plex baseball/softball complex as the first phase.

This estimate should be viewed as a preliminary budget figure only. No grading and drainage plan or other detailed drawings have been prepared as a part of this master plan process and therefore no detailed quantity take-offs were prepared and the estimate of earthwork (grading) is, at this point, simply an educated guess. The costs are largely based on BWSC's historical experience with other projects of the same type. A more accurate estimate should be completed at each phase of the detailed design and engineering of the project. The costs are in 2010 dollars, thus, this estimate should be updated on a yearly basis to account for inflation.

At the bottom of the estimate are costs for certain general contractor costs, contingency and design, and other fees that add 39.15% to the total of the individual estimate line items. The user of the estimate is cautioned against using the cost for any individual line item without applying the additional 39.15% to that item.

# JONATHAN CREEK PARK

Haywood County, North Carolina

Master Plan

Preliminary Opinion of Construction Costs

26-Apr-10



Description	Qty.	Unit	Unit Price	Subtotal	Extended Total
<b>225' Baseball Field Construction - 1 Field</b>					
Mar Mix infield material	360	Tons	\$50.00	\$18,000.00	
Mule Mix calcined clay	7	Tons	\$211.00	\$1,477.00	
SAF Trac warning track material	54	Tons	\$72.50	\$3,915.00	
Laser grading	50,000	SF	\$0.15	\$7,500.00	
Irrigation	1	EA	\$10,000.00	\$10,000.00	
Screen topsoil	759	CY	\$15.00	\$11,385.00	
Bermuda grass sprigs and grow-in	41,000	SF	\$0.25	\$10,250.00	
Black vinyl coated field fencing	1	EA	\$55,000.00	\$55,000.00	
Field Lighting	1	EA	\$85,000.00	\$85,000.00	
Concrete dugout floors	600	SF	\$6.00	\$3,600.00	
Dugout covers	2	EA	\$8,000.00	\$16,000.00	
Bleacher covers	2	EA	\$5,600.00	\$11,200.00	
Equipment (foul poles, bases, dugout benches, etc.)	1	AL	\$3,500.00	\$3,500.00	
<b>Subtotal</b>				<b>\$236,827.00</b>	<b>\$236,827.00</b>
<b>200' Baseball Field Construction - 1 Field</b>					
Mar Mix infield material	360	Tons	\$50.00	\$18,000.00	
Mule Mix calcined clay	7	Tons	\$211.00	\$1,477.00	
SAF Trac warning track material	60	Tons	\$72.50	\$4,350.00	
Laser grading	41,000	SF	\$0.15	\$6,150.00	
Irrigation	1	EA	\$8,000.00	\$8,000.00	
Screen topsoil	592	CY	\$15.00	\$8,880.00	
Bermuda grass sprigs and grow-in	32,000	SF	\$0.25	\$8,000.00	
Black vinyl coated field fencing	1	EA	\$45,000.00	\$45,000.00	
Field Lighting	1	EA	\$80,000.00	\$80,000.00	
Concrete dugout floors	600	SF	\$6.00	\$3,600.00	
Dugout covers	2	EA	\$8,000.00	\$16,000.00	
Bleacher Covers	2	EA	\$5,600.00	\$11,200.00	
Outfield netting to protect US 276	1	AL	\$20,000.00	\$20,000.00	
Equipment (foul poles, bases, dugout benches, etc.)	1	AL	\$3,500.00	\$3,500.00	
<b>Subtotal</b>				<b>\$234,157.00</b>	<b>\$234,157.00</b>
<b>300' Softball/Baseball Field Construction - 1 Field</b>					
Mar Mix infield material	360	Tons	\$50.00	\$18,000.00	
Mule Mix calcined clay	7	Tons	\$211.00	\$1,477.00	
SAF Trac warning track material	77	Tons	\$72.50	\$5,582.50	
Laser grading	85,500	SF	\$0.15	\$12,825.00	
Irrigation	1	EA	\$16,000.00	\$16,000.00	
Screen topsoil	1,388	CY	\$15.00	\$20,820.00	
Bermuda grass sprigs and grow-in	75,000	SF	\$0.25	\$18,750.00	
Black vinyl coated field fencing	1	EA	\$65,000.00	\$65,000.00	
Field Lighting	1	EA	\$130,000.00	\$130,000.00	
Concrete dugout floors	600	SF	\$6.00	\$3,600.00	
Dugout covers	2	EA	\$8,000.00	\$16,000.00	
Bleacher covers	2	EA	\$5,600.00	\$11,200.00	
Outfield netting to protect parking lot	1	AL	\$25,000.00	\$25,000.00	
Equipment (foul poles, bases, dugout benches, etc.)	1	AL	\$4,000.00	\$4,000.00	
<b>Subtotal</b>				<b>\$348,254.50</b>	<b>\$348,254.50</b>
<b>300' Softball/Baseball Field Construction - 1 Field</b>					
Mar Mix infield material	360	Tons	\$50.00	\$18,000.00	
Mule Mix calcined clay	7	Tons	\$211.00	\$1,477.00	
SAF Trac warning track material	77	Tons	\$72.50	\$5,582.50	
Laser grading	85,500	SF	\$0.15	\$12,825.00	
Irrigation	1	EA	\$16,000.00	\$16,000.00	
Screen topsoil	1,388	CY	\$15.00	\$20,820.00	



**BWSC** | BARGE  
WAGGONER  
SUMNER &  
CANNON, INC.®

10133 Sherrill Boulevard, Suite 200  
Knoxville, Tennessee 37932  
865.637.2810 *phone*  
865.673.8554 *fax*

[bargewaggoner.com](http://bargewaggoner.com)

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