







Martin Marietta

Park Master Plan

for

City of New Bern

NORTH CAROLINA



NEW BERN

PARKS & RECREATION

Family, fitness and fun come together here.



Acknowledgements

The City of New Bern wishes to express its sincere appreciation for those entities and individuals, who, in any way, contributed to the creation of the Comprehensive Recreation Master Plan, some of which are identified below. Without the knowledge and expertise of these persons, in both individual and team settings, this document would not be possible.

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Section 1 Project Overview

1.1 INTRODUCTION

The City of New Bern recognizes the importance of planning as a means of improving recreation opportunities for all its residents and visitors. As a result, the City desired to plan park development for an existing undeveloped parcel that was graciously donated to the City by the Martin Marietta Corporation. Subsequently, McGill Associates, P.A., was hired as the site and Master Plan consultants. With this recommendation the City has moved forward with the development of the Site-specific Master Plan as part of their planning efforts.

Public input played a key role in understanding user needs and desires for the Park Master Plan. This effort supported conceptual design and recommendations for the Martin Marietta Park site.

As part of the community outreach, two (2) public meetings were held to solicit public opinion about possible improvements to the Martin Marietta Park property. As part of these meetings, participants were asked to identify and prioritize the recreation amenities and programs that were desired for this new facility.

A Parks and Recreation Survey/Questionnaire was distributed to the community to gather additional input such as demographics and opinions. A reoccurring theme among the study findings was the need for nature based passive and active recreation opportunities.

McGill Associates and the City Recreation Staff worked with the Steering Committee to further analyze and evaluate the study findings along with other data collected throughout the planning process. These meetings highlighted the needs of both the community and the Parks and Recreation Department. Final recommendations and conceptual designs, which were drawn from these collaborative efforts, will be discussed in further detail within this document.





1.2 CITY HISTORY

According to the City's website: "New Bern was settled in 1710 by Swiss and Palatine immigrants led by Christoph von Graffenried. They named the settlement after Bern, the capital of Switzerland. Long before the Europeans arrived, the Tuscarora Indians also lived along New Bern's riverbanks in a village they called Chattoka. New Bern is the second-oldest colonial city in North Carolina and was the capital of the North Carolina colonial government. For a short period of time it was also the state capital. Given its picturesque setting and growing political prestige, New Bern quickly became known as "the Athens of the South."

Due to its location, nestled between the Neuse and Trent Rivers, New Bern became a bustling seaport boosting its economy with industries such as: turpentine, seafood, and lumber. Though it faced a setback after World War II, generations opted for more urban living. The City is seeing positive projected population growth as new families are seeking the more relaxed coastal lifestyle within the inner banks of New Bern.





1.3 LOCAL SETTING

The City of New Bern is located in the coastal region of North Carolina. It is the largest city in Craven County, as well as one of the oldest in the state. New Bern boasts in the exuberant waterfront lifestyle, laced with historical attractions that makes up the community. The city has been home of many successful endeavors, such as Pepsi-Cola which started as a locally enjoyed beverage as well as a number of logging ventures. Keeping up with its past, New Bern offers many opportunities and according to the 2016 Census Bureau estimates project a total population of 30,075.

As of the 2010, according to the U.S. Census Bureau, the City of New Bern is home to approximately 29,524 people. Projections gathered in 2016 indicates that about 24% of city residents are under the age of 18 and around 18% are age 65 or older. Race data shows 57% of city residents are white, 31% black, 6% Asian, and less than 1% Native American.

A review of the demographic information for the City of New Bern has been evaluated to better understand the characteristics of the community. It also serves as a tool to identify future trends and projections that may influence recreation and park planning. Information concerning age and gender are important factors in determining the needs for recreation in the community. The table (below) contains the *general* demographic characteristics for residents of New Bern as a whole, as ascertained by the 2016 US Census Bureau ACS.

CATEGORY	NUMBER	PERCENT
SEX		
Male	14,399	47.9%
Female	15,676	52.1
Total:	30,075	100%
<u>AGE</u>		
Under 5 years	2,158	7.2%
5 to 9 years	2,071	6.9%
10 to 14 years	2,026	6.7%
15 to 19 years	1,620	5.4%
20 to 24 years	2,012	6.7%



25 to 34 years	4,933	16.4%
35 to 44 years	2,768	9.2%
45 to 54 years	3,253	10.8%
55 to 59 years	1,834	6.1%
60 to 64 years	1,868	6.2%
65 to 74 years	2,803	9.3%
75 to 84 years	1,762	5.9%
85 years and over	967	3.2%

- END OF SECTION -



Section 2 Site Analysis



The Martin Marietta property is located on the Neuse River and is approximately 2 miles from Downtown New Bern.

General

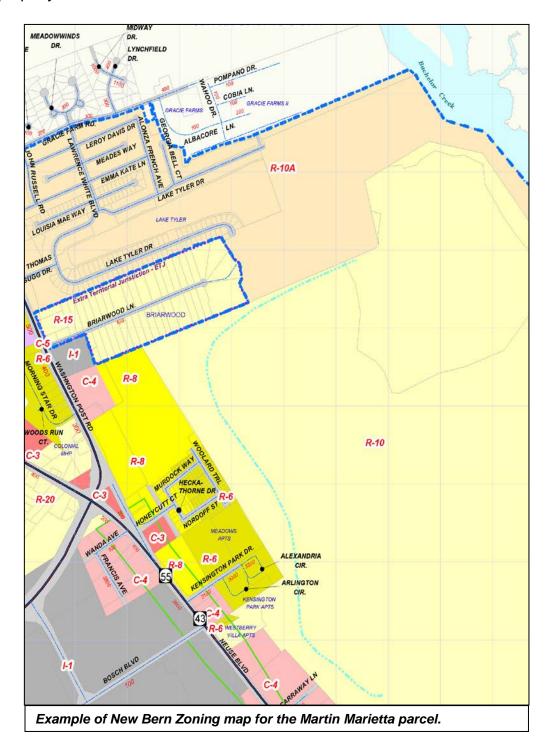
Martin Marietta has donated land to the City of New Bern for the future Martin Marietta Park. The property, which was formerly used as a quarry is located on S. Glenburnie Road (across from the NCDOT Bridge Maintenance office and was formerly used as a rock quarry). This site is approximately 888 acres in size. 55+ acres of land are available for multi-recreational opportunities.

The existing park property is predominately open space. The site is largely undeveloped with exception of an existing paved entry drive, a graded perimeter road consisting of some crushed stone and sand and limited utilities. The site consists largely of lakes with one main peninsular land mass and perimeter lands varying in width.



Zoning

The site is zoned a R-10 Residential. The property is bordered to the north by the Neuse River. The land use zones surrounding the site are: Residential R-10A, R-15, R-8, R-6, Commercial C-4, C-3, to the Northwest, West and South of the property and Industrial I-1 and I-2 to the Northeast.





Surrounding Land Use

The surrounding properties consist predominantly of residential uses (single and multi-family units), an assisted living community and a number of churches. The commercial property consists of a skating rink, small shops and a dental office. Commercial uses include the Hatteras Yacht Factory and boat yard.

Utilities

The Park is served by public utilities. A service waterline extension from South Glenburnie Road extends approximately 533 linear feet into the property along the entry drive, and is the only water service for the park. A reclaimed water line extends from South Glenburnie Drive 3,846 linear feet into the site along the entry road.

Sanitary sewer is managed via the City's public sewer system via a force main line at South Glenburnie Road.

Electrical power is provided via the City of New Bern. A power line extends from South Glenburnie Road all the way to the north end of the property which feeds the reclaimed water tank station on the property and then continuing to the neighboring Lake Tyler Residential development.

Parking

The existing Martin Marietta Park site will provide ample space for patron parking as the site is not yet developed.

Existing Structures

The site has no existing structures. There is one (1) existing fenced, reclaimed water tank situated on the north end of the site.





Natural Features

Topography

The topography of the land at Martin Marietta Park is mainly flat, sandy and dry with a couple high points assumed to be created as spoils mounds from the original quarry. These high points provide nice views of the site. The site drains predominantly to the inner lakes, but eventually Northeast towards the Neuse River.

Vegetation

Vegetation on the site consists largely of grasses (Broom Sedge, Switchgrass, Indian Grass, Smooth Cordgrass, Tall Fescue, and Bermuda). Clover, Crabgrass, Dogfennel, Horseweed, Amarnath, Pokeweed, Ragweed, and Lambsquarter were also found on site. Rushes are also found near the water's edge.

Trees are limited on the peninsula area but some Cedars exist. The perimeter of the site contains typical bottomland tree species which include: Cypress, Oak, Gum, Wax Myrtle, and a few Cherry Laurel. Higher elevations surrounding the site contain stands of Pine.





Wildlife

Wildlife on the site consist of animals that are indigenous to an inner coastal ecosystem. Mammals consist of deer, raccoons, possum, nutria, and other mammals that are typical of a large semi-wooded ecosystem. The lakes attract a



diverse assortment of birds including loons, herons, egrets, osprey, and other birds that rely on inner coastal water systems. The lakes also provide a habitat for a wide array of fish.

Wetlands

The site contains wetland areas around the existing lakes. Wetlands are also found along the Neuse River and at the former barge channel that enters the site. Some wetlands are found in the wooded areas to the Northwest end of the property and are typically found as minor moist depressions where presumably past agricultural operations took place. Some small wetland areas exist on the west end of the property along the lake between Bosch Boulevard and Midyette

Avenue.



Wetland areas are shaded in a blue cross-hatch.

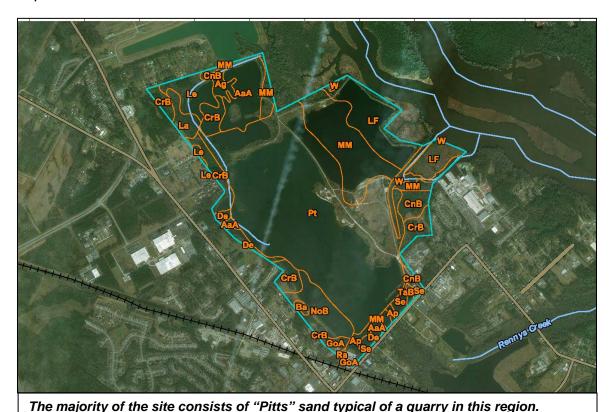


Soils

The site contains a variety of soils that are indigenous to the coastal plains region of North Carolina.

The soil analysis completed (USDA Natural Resources Conservation Service) show predominately Pt (Pitts) with comprise approximately 48.5% of the site soils. The remaining soils in order of percentage of the total site include: MM (Masontown muddy fine sandy loam - 11%), LF (Longshoal muck - 9.5%), CrB Craven silt loam - 7%), AaA (Altavista fine sandy loam - 5.5%), NoB (Norfolk loamy fine sand - 4%), Le (Lenoir silt loam - 3%) the remaining 11.5% of the soils consisted of (Conetoe loamy sand, Leaf silt loam, Agusta and Arapahoe fine sandy loams, Deloss fine sandy loam, and Seabrook loamy sand, etc.).

These soils do not limit a majority of recreational amenities from being developed. More detailed soil analysis will need to be made at locations where proposed structures are to be situated to identify the need for any structural soil improvements.





Drainage

Due to the sandy soils of the proposed Martin Marietta Park site, the site does not appear to have any significant drainage problems. Development of buildings, septic systems and ponds would be somewhat limited.

Flooding Hazard

According to the North Carolina Flood Risk Information System (See flood hazard map on next page), portions of the proposed park site are within the 100-year flood zone. Some smaller portions are in the 500-year flood zone. Much of the site is not at flood risk. The image below shows the extent of the flood zone areas.



Areas shaded in blue are in the 100-year flood zone and those shaded in yellow are in the 500-year flood zone.

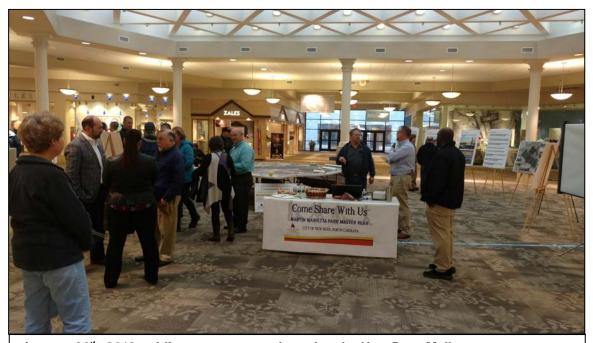
- END OF SECTION -



Section 3 Community Input

Community Meetings

To facilitate community input, three (3) public input events were conducted during the initial phase of the Martin Marietta Park Master Plan process. The workshops were held on January 29th, 2018, March 12th, 2018, and March 19th, 2018. Through the use of a questionnaire, interactive exercises, and open group dialog participants were given the opportunity to share their ideas and concerns for how future development at Martin Marietta Park should occur. The first community meeting was held at the New Bern Mall. Over 200 people attended the event. The second community meeting was held at the West New Bern Recreation Center with over 100 people in attendance. The third public event was a work session with the City Board of Alderman at City Hall.



January 29th, 2018 public event was conducted at the New Bern Mall.

Due to the open nature of the first public meeting, participants were shown various boards, which familiarized the viewers with the Master Planning process. The group then reviewed a map of the park site and its various features. The existing conditions and limitations of the park were discussed. Precedent images of possible park improvements were shown. Possible amenities that could be further developed at Martin Marietta Park were then debated.

Participants were given a park survey/questionnaire to complete. The questionnaires solicited their opinions on existing improvements and future



additions to existing park facilities as well as various programs offered by the City Parks and Recreation Department.

A second public meeting was held on March 12th, 2018 at the West New Bern Recreation Center. During the second public meeting over 100 people were shown a presentation that gave people an understanding of the design process and how decisions were made. The presentation showed that information from the community, both from the survey and the first public meeting, was vital in the design process. A conceptual master plan of Martin Marietta park was shown as well as example of various design elements and park amenities. Participants were then able to ask questions, make comments, and discuss the opportunities that will be provided by the park. The Park design, presentation, and opportunities were well received by participants in attendance.

The third public meeting held on March 19th, 2018 was a Board of Alderman work session that was open for public comment. A presentation master plan was presented which described the public process including input received from the public, proposed recommendations for the park, as well as opportunities for funding and implementation of the park. Comments expressed by the Board were positive and enthusiastic about the wide variety of recreational opportunities that the park would provide. There was a strong desire to implement recreational amenities that would offer opportunities for the community as soon as possible. Amenities mentioned that could be achieved initially included walking and biking trails, playground areas, fishing areas, and non-motorized boat access.

Martin Marietta Park Community Meetings - Participant Exercises

Participants in the various exercises at the first public meeting were given the opportunity to provide their input and ask questions. A large map of the site was presented on a table and people were encouraged to place scaled images of

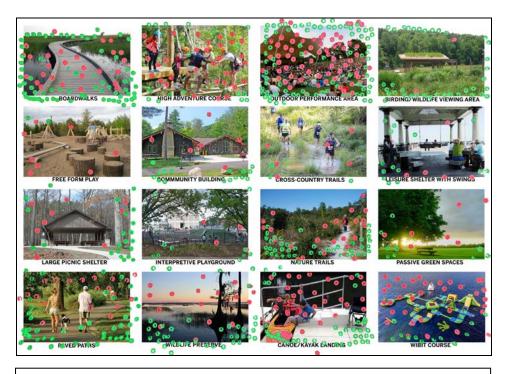
amenities to work out ideas. There were also boards with examples of various precedent images where people could place a sticker dot on the images that they would like to see incorporated into the park planning processes. The park amenities that were most desired from the members



Participants were able to discuss opportunities for Martin Marietta Park.



of the community included trails, water access, fitness opportunities, education, adventure activities, and outdoor entertainment.



Results from the Park amenity preference exercise.





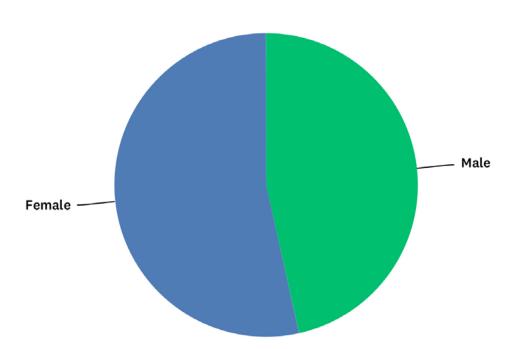
Community Meetings Questionnaire

The Master Plan survey/questionnaire was posted on the New Bern web page, City Facebook page, and provided at the first Public Meeting. The returned surveys represented 1,556 community members.

The following portion of Section 3 display results of each participant's responses to survey questions.

Your Gender?

Answered: 849 Skipped: 10

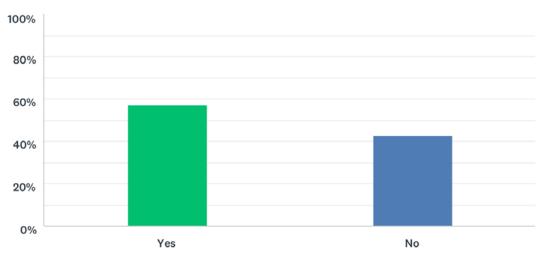


According to the results of the survey there was an almost equivalent number of women and men that responded.



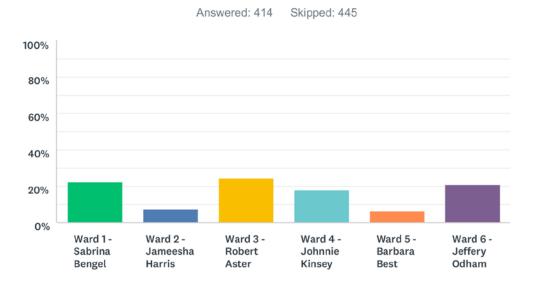
Do you reside in the city limits of New Bern?

Answered: 853 Skipped: 6



It is interesting to note that less than 60% of respondents lived within the city limits. This shows that the park will have a much larger influence than just people who live within New Bern's city limits.

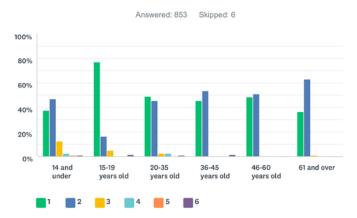
If you do reside in the city limits, what Ward do you live in?



Martin Marietta park is located in the boundaries of Ward 5.



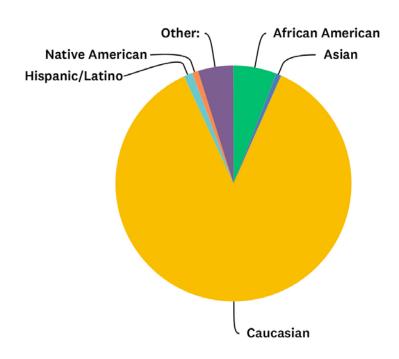
Select the number of persons in your household, including yourself, who are in the age brackets below:



There is an balanced spread of age ranges among respondents. This indicates that the park will serve people from all age ranges.

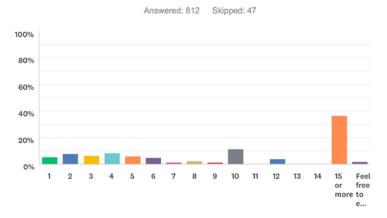
Please specify your ethnicity

Answered: 844 Skipped: 15





Within the last year, how many times have you visited one of New Bern's Parks?



Q9 Which park do you visit the most?

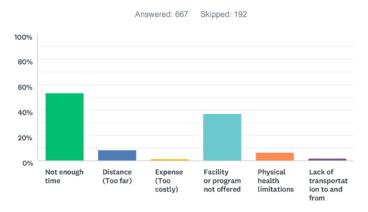
Kidsville Waterfront Creek Side West New Bern Park

Downtown Union Point Latham Whitehurst

Lawson Creek Rec Center Glenburnie Fort Totten

The existing parks currently being utilized by respondents was addressed as an open-ended question. The word cloud above shows which facilities are most often visited by survey participants.

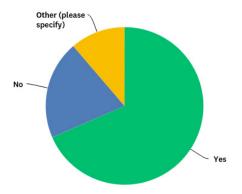
What is the greatest barrier to your regular use of New Bern's Parks and recreation facilities?



According to the survey, other than time, the greatest barrier for not using existing parks and recreation facilities is that either the facility or program is not offered. This aids in determining what types of facilities and programs should be considered for park expansion.



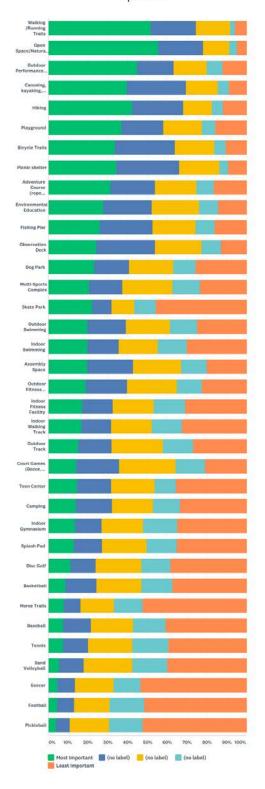
If one of our facilities offered rentals such as canoe, kayak, and/or paddle board rentals, would you use this service?



This shows that a large percentage of respondents would use paddle sport related activities if they were available. According to the following results, other high ranking activities are walking/jogging trails, open space, and outdoor performance areas.



Q12 The following is a list of recreation activities that you could engage in at a park or recreation facility. Please select all activities you are interested in and rank them by importance.





Do you support or oppose expanding recreational opportunities in New Bern?

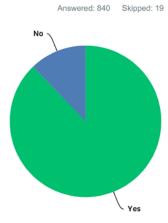
Answered: 840 Skipped: 19

Oppose

A majority of respondents reported they would support expansion of New Bern's parks and recreation facilities.

Support

Would you be willing to pay a nominal fee to attend an event or use a special facility?



A majority of respondents stated that they would be willing to pay a nominal fee for events or to use special facilities. This is valuable information that will help in funding certain amenities within the park.



What, if any, sources of funding are you willing to support in order to develop the proposed Martin Marietta Park? Check all that apply.



There are a multitude of ways that respondents are willing to support the development of Martin Marietta Park.







Site images (examples above) were shown via revolving PowerPoint presentation for survey participants to get a sense of what the site currently looks like.



The involvement of community members through community meetings, group exercises, and public survey - all served to provide a comprehensive look at the needs and concerns for recreational opportunities and amenities that are possible at Martin Marietta Park. The three (3) elements of the program point to a desire for the development of walking and jogging trails, outdoor amphitheater, and high adventure activities. The community is supportive of efforts to improve Martin Marietta Park's amenities and recreational opportunities.

- END OF SECTION -

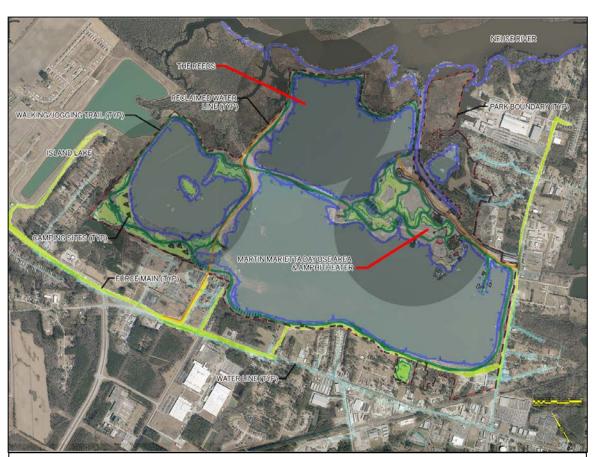


Section 4 Master Plan Development

Concept Master Plan

Utilizing information from the site analysis, input from the two (2) community meetings, survey data, and City Staff, McGill Associates began developing alternate concept plans for park development. Based on this input, the design team was able to establish the purpose and programming for the development of Martin Marietta Park.

The goals and objectives of this park development will be to serve the local community, City residents, and visitors with multiple outdoor recreational amenities. The strategic planning elements of the park should be to offer a variety of activities compatible with both active and passive recreation while also providing an adventure tourism element and a venue for special events such as concerts, and performing arts.



The Martin Marietta property is well suited to water-based recreation, and offers an excellent opportunity for nature observation/appreciation, adventure and special event type programming.



Under direction from the City, the design team focused on a peninsula that is centrally located on the site. This portion of the property offers the highest ground, and broadest expanse of land for most of the proposed facilities. It was decided that this area would serve as the hub of day-use recreation for the park.



The Martin Marietta property was often described in terms of its natural aesthetic appeal by public meeting participants.







The expressed need and desire for an outdoor performance area, various types of trails, and high adventure by the respondents of the Master Plan survey was taken into strong consideration. The desire for water based recreation and wildlife viewing opportunities was also strongly conveyed.







The proposed design options for the Park offered a number of proposed recreation amenities derived from the survey findings, community input, project oversight group, and City Staff input. The proposed Park programming comprised different opportunities for both active and passive recreation. The final design used much of the existing roadbed as multi-purpose paths that would serve to connect the various proposed amenities together. Some of these amenities included: a swim beach, community meeting building, adventure activities, a dog park, fitness stations, picnic shelters, observation/fishing docks, and an adventure playground. Additional passive recreation opportunities are an amphitheater, wild-life viewing locations, and open space green areas. Critical facilities such as patron parking areas and public restrooms were carefully considered as well.

These designs ultimately provide for a plan that can be phased in over time and lends itself to private/public partnerships and sponsorship opportunities. The amphitheater and adventure play elements such as boat rental area, zipline, high ropes course, etc. are a great opportunity for concessionaire participation.

Designing accessibility for all park amenities was of great importance in the development of all three concept plans. Parking areas were designed to provide ample parking spaces for both large events and daily use, as well as a drop-off/pick-up area.



The Concept Plans propose preserving existing wooded areas as well as adding additional reforested areas for use as a natural area for environmental education, walking, picnicking, and wildlife viewing.



Areas outside of the day use area were considered for wildlife viewing, trails, camping, boating portage, environmental and wildlife protection, and vital points of connection to the surrounding community.

- END OF SECTION -



Section 5 Final Master Plan

Based on the response from the community meetings for the proposed Martin Marietta Park project, the Board of Alderman on April 10, 2018 approved that the "Option 3" concept diagram closely reflected the needs of the City and meets many of the desires of the community as expressed in the public meetings. The "Option 3" concept plan was further refined to create the below pictured "Final Site Master Plan".

The overall consensus was that this proposed plan is sensitive to both the desires and long-term goals of the community and City Staff. This plan provides both passive and active recreation amenities necessary to meet current and future needs of park visitors.

The number of parking areas on the Master Plan reflects the best understanding of projected demand. The designated parking areas consists of a proposed 609 asphalt paved spaces. A drop-off area is also provided. Providing new restrooms, picnic facilities, and ample lighting will enhance the practicality and usability of Martin Marietta Park.







At the core of the Final Master Plan is the day use area. This area consists of a large outdoor amphitheater, walking and jogging trails, a high adventure area, as well as many other active and passive recreation opportunities. It also provides

various water activities including a swim beach, non-motorized watercraft launch and rentals, and a community building that overlooks the water.

The amphitheater is large enough to accommodate 5000 people with room to expand. It has a wonderful vista that overlooks one of the three lakes on the property.





Visitors will be able to enjoy miles of various types of trails. These will range from wide paved paths to boardwalks that span wetlands for wildlife viewing and small natural paths that wind through the meadows and woods.



An active high adventure section will be centrally located in the day use area. Some of the amenities provided will include a ropes course, ziplines, a bike pump course, a climbing wall, and a skate park.







Since the park is dominated by water there will be many opportunities to interact with the water. It can be enjoyed either on the land or by watercraft. There is a swim beach with an adjacent playground, picnic shelters and fishing docks scattered along the shores, and a community building to host various types of activities overlooking the water. A canoe/kayak/paddleboard rental facility and launch is also on site.

Cost Estimates

A detailed Cost Estimate was completed to allow the City to construct a viable Capital Improvement Plan for the future. All costs provided are per present day construction methods, means, and prices which may be subject to change. The probable cost estimate for the construction of Martin Marietta Park can be found on the following page.



PRELIMINARY OPINION OF PROBABLE COST Martin Marietta Park New Bern, NC **April 2018** Prepared by McGill Associates, PA NO. ITEM UNITS **UNIT COST** TOTAL QTY. Mobilization \$331,093 \$331,093 1 LS 2 Construction Surveying 1 LS \$150,000 \$150,000 3 Grading \$900,000 1 LS \$900,000 4 Clearing and Grubbing 30 AC \$2,500 \$75,000 5 Demolition \$100,000 \$100,000 LS UNIT COST SITE ITEMS QTY UNITS TOTAL \$1,000,000 6 Amphitheatre 1 LS \$1,000,000 7 Boat House/Lodge 1 LS \$1,000,000 \$1,000,000 8 Boat House Pier 1 LS \$200,000 \$200,000 9 Restroom/Concession 2 EΑ \$300,000 \$600,000 \$1,250,000 10 Restroom/Shelter 5 EΑ \$250,000 11 Small Picnic Shelter 10 EΑ \$40,000 \$400,000 12 Individual Picnic Table Sites 40 \$40,000 EΑ \$1,000 13 Observation Tower 1 LS \$100,000 \$100,000 14 Dock- Small (Piling 450 SF) 10 \$180,000 EΑ \$18,000 15 Dock - Boat (Floating 500 SF) FΔ 5 \$17,500 \$87,500 16 Misc. (Benches, Receptacles, Fountains) 1 AL \$80,000 \$80,000 17 Park Entrance 1 ΑL \$50,000 \$50,000 **ACTIVE RECREATION** QTY UNITS **UNIT COST** TOTAL 18 Mountain Bike Pump Track \$50,000 1 AL \$50,000 19 Adventure Playground 1 ΑL \$400,000 \$400,000 20 Climbing Wall 1 \$50,000 \$50,000 AL \$300,000 21 High Adventure Rope Course 1 AL \$300,000 22 Zip Line \$100,000 \$100,000 1 ΑL 23 Fitness Stations 6 EΑ \$9,000 \$54,000 24 Skate Board Park 1 \$250,000 \$250,000 ΔΙ **UNIT COST PASSIVE RECREATION** QTY UNITS TOTAL \$20,000 25 Boardwalks 500 \$40 LF 26 8' Natural Trails 14,000 LF \$9 \$126,000 27 10' Paved Trail 4.000 \$92,000 LF \$23 28 Multi-purpose path (stone + asphalt) 36,960 LF \$27 \$997,920 29 Non Motorized Water Craft Launch LS \$25,000 \$50,000 2 30 Wildlife Observation Blinds 10 \$8,000 \$80,000 UNIT COST **GENERAL CONSTRUCTION** QTY. UNITS TOTAL 31 Asphalt Parking (\$15 ABC+\$15 2" Aspht.) \$735,000 24,500 SY \$30 14,000 32 Roads - asphalt SY \$15 \$210,000 33 4" Concrete Walk 1,000 SY \$60,000 \$60 34 Pavers 400 SY \$225 \$90,000 35 Signs & Erection LS \$20,000 \$20,000 1 36 Pavement Markings (Painted) \$10,000 1 LS \$10,000 37 Erosion Control 1 LS \$100,000 \$100,000 38 Electrical Service (Below Ground) 1 LS \$200,000 \$200,000 39 Lights 100 EΑ \$2,000 \$200,000 40 Stormwater Control LS \$100,000 \$100,000 1 41 Domestic Water 1 LS \$100,000 \$100,000 \$100,000 42 Sanitary Sewer 1 LS \$100,000 UNIT COST LANDSCAPE TOTAL QTY. UNITS 42 Reforestation 30 \$30,000 AC \$1,000 43 Landscaping 1 AL \$200,000 \$200,000 44 Seeding 45 AC \$2,200 \$99,000 CONSTRUCTION SUBTOTAL \$11,367,513 Contingency (15)% LS \$1,705,127 \$1,705,127 1 Surveying, Planning, Engineering, Geotech 1 LS \$1,568,717 \$1,568,717 and Construction Management (12%) AREA 1 TOTAL \$14,641,356



-END OF SECTION-