

Plymouth, North Carolina Grant Narrative

Overview

Plymouth is a small historic community located in northeastern North Carolina's Inner Banks. It was founded in 1787 on the Roanoke River five miles upriver from where it empties into the Albemarle Sound. As such, Plymouth is not only the Washington County seat, but is also the *Gateway to the Roanoke River Basin and the Albemarle Sound*. There are many significant aspects of this waterway. Most people are amazed when they discover that there are over 50 miles of shoreline within 5 miles of Plymouth! One glance at a nautical chart or aerial photo will illustrate that boating opportunities are abundant. The Roanoke is a deep river averaging 20' in the channel and provides access not only from the Albemarle Sound and Intercostals Waterway, but also cruising access up the Roanoke to the towns of Jamesville, Williamston and beyond. Plymouth's upriver location has provided safe harbor for mariners during storms for hundreds of years. The Roanoke River's head waters are in the Blue Ridge Mountains of Virginia. It is 410 miles long and is navigable from the Albemarle Sound to Weldon, NC.

Plymouth is blessed with the required "liquid assets" to create a wonderful boating community *and* economy. The Albemarle Sound is the largest freshwater sound in North America! Claiborne Young writes in his book, Cruising Guide to Coastal North Carolina, (now in its sixth edition), "*The sound is well marked for navigation. Unlike other North Carolina sounds, the Albemarle is mostly free of shoals. Generally, while in the sound, cruising captains can take a welcome break from their constant vigil over the depth sounder.*" Mr. Young is the foremost expert on recreational boating in the southeastern United States and has authored eight books on cruising the coastal states from North Carolina to the Gulf Coast. He is also a marina design consultant. Therefore his observations and insight on Plymouth's maritime opportunities serve as valuable feedback from an objective expert.

Mr. Young pointed out in recent correspondence:

"Plymouth has a great advantage in regards to water depth, as your community sits on the shores of a naturally deep body of water. Generally, the North Carolina coastline is the shallowest in the Southeastern USA, from Virginia to New Orleans! The naturally deeper depths of the Roanoke River are a huge advantage to your community, and you should emphasize this advantage in all your subsequent marketing and publicity!"



A. Need

There are no deep draft transient boat slips anywhere along the entire 410 mile length of the beautiful Roanoke River that are large enough to support non-trailerable recreation vessels 26 feet or more in length. With this fact in mind, there is no direct economic impact, throughout the entire Roanoke River basin, from the large pleasure boating community. This has also virtually eliminated the ability to expose visitors to the region, who are passing very near our community but not stopping because of lack of facilities, to the unique tranquility and incredible wildlife in the Roanoke River Delta.

Plymouth's waterfront is exceptionally deep to within just a few feet of the shoreline, particularly in the selected project area, and Plymouth is the nearest town to the Albemarle Sound at a distance of only 5 miles, making Plymouth the most logical and cost effective site for deep draft transient boat slips.

The closest transient docks are on Mackey's Creek, (also known as Kendrick's Creek), on the south side of the Albemarle Sound and in Edenton on the north side of the sound. Once a larger boat operator ventures west from these locations, they are entering a beautiful maze of natural waterways with no facilities to accommodate them. In his book, Claiborne Young describes Plymouth's existing dockage shortcomings. "*Marina facilities on the Roanoke River are of the decidedly minimalist fraternity.*"

There are currently two areas that offer any public dockage at all. On the east end of the waterfront which boaters first encounter as they cruise up the river, is the Town of Plymouth docks behind the Port O' Plymouth Museum. Claiborne Young describes the shortcomings; "...*the docks behind the Port O' Plymouth Museum are in such shallow waters that they pose problems for boaters with larger boats. These depths limit the usefulness to most cruisers*" In fact, the finger piers which Mr. Young refers are only 12' long in 2-3' of water with no pilings in deeper water. The only way for larger boats to dock there is to enter bow first. But because of the short length of the finger piers boaters must disembark from the bow. Not only are the fixed finger piers short in length and in shallow water, but are extremely close to the water level making embarking and disembarking from 26' and larger boats with higher gunwales difficult if not dangerous. These docks are useful only for canoes, kayaks, and bass boats.

The only other public dockage in Plymouth is the town's face dock behind the police station. Thankfully it is in deep water measuring 15'+. However, it is only a bulkhead with no boardwalk and nothing to tie up to other than some suspect pilings. The entire bulkhead is unstable and poses a safety hazard, (as can be seen in accompanying photos).

B. Objective

The proposed Plymouth Boat Slip Project will, (for the first time since the 1800's), provide adequate safe harbor dockage for multiple transient boaters with watercraft 26' and longer on the Roanoke River, making this vast historic and pristine river basin conveniently accessible.

C. Expected Results and Benefits

This project will provide much needed dockage for transient boaters. Providing for this need also creates a watershed of opportunities for our small community. Transient boaters are a segment of tourism often overlooked. Although they have not been overlooked by many of our now-prosperous Inner Banks neighbors including Manteo, Washington, New Bern, Oriental, and Beaufort, all of which boast thriving boating communities. Not only do transient boaters directly boost the local economy, they help create the atmosphere of a *maritime* community. The maritime community then stimulates businesses in the waterfront district - multiplying the economic impact. Soon developers take interest in creating new residential condominiums and neighborhoods revolving around the waterfront which dramatically increases the tax base. Plymouth is strategically located on historic Hwy 64 that is over 2,600 miles long and is the main corridor to Nags Head, Kitty Hawk, Hatteras, Duck and Corolla on the popular North Carolina Outer Banks. Well over one million cars pass through Plymouth annually while traveling to the Outer Banks. Therefore the opportunity exists to draw increasing numbers of tourists to Plymouth and to create a prospering maritime community along its half-mile waterfront. This will require building new docks for transient boaters along the river.

D. Approach

With the need, objective, and benefits that have been described, the Town of Plymouth is proposing to build a new 9-slip facility at the west end of the waterfront conveniently located adjacent to the Roanoke River Lighthouse and Maritime Museum. The Town of Plymouth owns the property and is refurbishing the existing boardwalk which will be complete by spring 2009. (One pier exists at the west end of the boardwalk but, because of a covered shelter at the end of the pier, larger boats cannot dock there. It was designed for land based foot traffic only.) Operational revenues and expenses will be identified in the Town of Plymouth's annual budget for review, monitoring and analysis. User fees collected will be retained for facility maintenance and improvements. The Town of Plymouth intends to retain ownership and will be responsible for operation and maintenance.

Input from author Claiborne Young, specific to Plymouth boat slip construction and size:

1. Along most Southeastern USA coastlines, lunar tidal flow is a primary consideration when it comes to dock construction. That's because, for example, Charleston, South Carolina has a 6 to 8 foot lunar tidal range. Obviously, with this much natural rise and fall of water, fixed piers are not the ideal form of dock construction. Almost all but a few minimalist marinas that have a tidal range of better than 5 feet use floating docks of one type or another. However, these sorts of structures are far more initially expensive and labor intensive in the long run than fixed piers!
2. Fortunately, Plymouth lies on a body of water where lunar tides are not a serious consideration. And, based on information provided to me, even wind tides only raise or lower water levels on the average of 1 foot.
3. So, again, Plymouth has a considerable advantage in not having to worry with lunar tidal ranges.
4. Based on this data, I would strongly suggest that you consider constructing fixed wooden piers rather than employing floating dock structures.

E. Location

The proposed plan the Town of Plymouth is submitting provides for a 32' long pier leading from the existing boardwalk to access deep water, where it will "T" and provide 9 large slips along its 120' length of dock. Each of five finger piers will be a generous 4' wide and 25' long. Our plan includes four 13' wide boats slips, four 16' wide boat slips and one 18' wide boat slip. With the depths at the shallow end of the proposed slips being 6'+, allowing boaters to back into the slips for convenient usage. Power, light, and water pedestals will be located at the shore end of each of the 5 finger piers. Mooring pilings are located 32' from the shore end of each slip as prescribed by CAMA so as to not interfere with river navigation. There will be one large slip on the east end of this dock that can accommodate a boat over 60' in length.

F. Estimated Cost

This project has broad public support as evidenced by the letters and resolutions provided as part of this grant application. Plymouth's Town Council, in conjunction with four partners, have committed to financially support the proposed boat slips, providing a combined total of 30% of matching funds. Partners are both public and private. For example, the Washington County Travel and Tourism Authority has passed a resolution in support of the project, and agreed to be a financial partner, as well. Diversified Wood Products, a private national forest products company, has agreed to provide funds for consulting fees from Claiborne Young and to donate time and expertise with design. The Town will continue to vigorously seek additional financial partners, such as; The Roanoke River Partners, The Northeast Partnership, The Partnership of the Sounds, and local businesses.

Current Financial Partners:

- Town of Plymouth – Local Government
- Washington County Travel and Tourism Authority – County Government
- Diversified Wood Products - Private
- NC Rural Economic Development Center’s NC Small Town Economic Prosperity Program – State Funded

Additional Supporters:

- Washington County Chamber of Commerce – Non-Profit
- Plymouth Downtown Development Association – Non-Profit
- Washington County Waterways Commission – Non-Profit

See Attachment A: Proposed Budget Summary

G. Timeline/Milestones

See Attachment B: Timeline and Milestones

H. Deliverables

CAMA Permit – will be submitted prior to letting construction bids.
Submerged Aquatic Vegetation Study - will be submitted prior to letting construction bids.
Environmental Assessment - will be submitted prior to letting construction bids.
Progress Reports with Photographs - when appropriate

I. Safe Harbor and Linkage to Metropolitan Population Centers, Historic Sites and Natural Scenic Areas

The proposed 9-slip facility in Plymouth will provide safe harbor 5 miles up the Roanoke River from the Albemarle Sound during the most severe storms and hurricanes. Due to the narrow width of the Roanoke River and its natural undulations the wind has very little fetch.

Of cultural importance along the Plymouth waterfront are three museums within three Town blocks. There is the Roanoke River Lighthouse and Maritime Museum, God’s Creation Wildlife Museum, and the Port O’ Plymouth Museum.

The lighthouse is a full scale replica of the screw pile lighthouse that was at the mouth of the Roanoke River during the 1800's. It is furnished and has interpretive displays of what life was like during that period. The maritime museum has a collection of boats built or used in the region, including several Albemarle Sound Shad Boats, which is the official North Carolina State Boat. They are a gaff-rigged sailboat used in commercial fishing for over 100 years. The museum also has many displays related to the important commercial fishing industry that once thrived here.

The Maritime Museum conducts educational seminars related to boating and fishing. Each October the museum is host to a Wooden Boat Show. One of the popular cultural events held in conjunction with the Wooden Boat Show is "Cowboys on the Water", a program consisting of a seafood dinner followed by local Maritime Story Telling.

One block east is God's Creation Wildlife Museum, displaying mounted animals from Africa to Alaska and points in between. There are many interesting and interactive displays, including a Touch Table, and a trapper's cabin that transitions into a safari tent in "Africa".

Traveling another block to the east takes you to the Port O' Plymouth Museum. This museum interprets history from Indian Heritage to the Civil War. Most of the museum's displays relate to the important local Civil War history. Plymouth was the site of the 3rd largest battle in North Carolina and was the last major Confederate victory of the Civil War. However, Plymouth is best known for the "Cornfield Ironclad", the CSS *Albemarle*. She was literally built in a cornfield up the Roanoke River and sailed down to clinch the Confederate victory in the Battle of Plymouth on April 19, 1864. She actually twice defeated the Union Navy in battles that spring. Although the Monitor and Merrimac are famous for being the *first* ironclads, the CSS *Albemarle* was the most successful ironclad of the Civil War.

The story of the *Albemarle* doesn't end there. Six months later a 21 year old Union Navy Lt. named William Barker Cushing led a commando raid up the Roanoke River and destroyed the *Albemarle* in Plymouth in an incredible feat of bravery. As a result, Secretary of the Navy Gideon Wells later wrote:

"...the great chief of the American Navy, Farragut, who was endowed with like heroism, and for whom alone, the office of admiral was created and its honors intended, said to me that while no navy had braver or better officers than ours, young Cushing was the hero of the War."

In 2005, The History Channel came to Plymouth and filmed the story of Cushing and the CSS *Albemarle*. The title of the film puts this historic event in perspective: "The Most Daring Mission of the Civil War". Moored behind the Port O' Plymouth Museum is a 62' powered replica of the CSS *Albemarle*. A full scale wooden replica of Cushing's steam launch is housed at the Maritime Museum.

In addition to the three museums in three blocks and the Wooden Boat Show, there are three other major annual events held in downtown Plymouth. The oldest of which is the Farm City Festival that celebrates the link between producers and consumers of food. Agriculture is Washington County's #1 industry. This event has been held in Plymouth for the last 38 years. The second event is The Battle of Plymouth Living History Weekend and has been held in Plymouth for 18 years. Hundreds of Civil War army and navy re-enactors camp along the river and participate in various events including a street skirmish, artillery and naval demonstrations, a torchlight tour and the weekend ends with a battle re-enactment. The third event is our newest. Now in its 5th year, the North Carolina Forest Festival celebrates our rich forestry industry. There are a many demonstrations throughout the event from log rolling and axe throwing to modern equipment demonstrations. Some of the other festivals held in the county include Indian Heritage Week at Pettigrew State Park, the Roper Peanut Festival, and Creswell's May Daze.

For those interested in cruising undeveloped waterways, boaters cannot resist the lure of the priceless and pristine Roanoke River Basin. This extensive bottomland forest laced with countless streams and watercourses includes the 20,978 acre Roanoke River Wildlife Refuge. Lying within the refuge is North Carolina's largest heron rookery. According to the Nature Conservancy,

“The lower Roanoke River floodplain contains the largest intact and least-disturbed bottomland hardwood forest ecosystem remaining in the mid-Atlantic region. The Roanoke River bottomland hardwood ecosystem contains vast, unfragmented forests representing the full spectrum of plant communities associated with brownwater river systems in the southeastern United States. With 214 bird species, including 88 breeding species (44 of these being neotropical migrants), the Roanoke floodplain has the highest diversity of breeding birds in the North Carolina coastal plain”

The Roanoke River Basin is a National Treasure waiting to be discovered!

Innovative Techniques

Innovative design features will increase boat slip availability and utilization through the following:

1. Low Maintenance: Construction materials, including Ipe decking and other weather resistant components will ensure minimal downtime for repair and maintenance.
2. Automated Utilities: The use of a “Smart Start” automated credit card pedestal would make utilities turn-on available 24-hours per day, 7 days per week. This could significantly increase usability of the slips.
3. Designed for Simultaneous Operation with other Watercraft Types: Adding these boat slips will help de-conflict large watercraft from smaller boats, such as fishing boats, kayaks, canoes and jet skis.
4. Will Support University and Underwater Archaeological Research Vessels: A wide array of research vessels routinely conducts studies and exploration on the Roanoke River and Albemarle Sound. Our design will better facilitate docking and support of large research vessels, including those operated by East Carolina University and other state and federal agencies.
5. Wi-Fi Accessibility: Feasibility of a Wi-Fi umbrella is being explored to make the slips more versatile friendly.
6. Website Marketing: The Town of Plymouth’s website will provide boaters with detail information on our docks, such as reservations, boat slip availability, fees and special events for enjoyment. We will also provide similar information and links at our Washington County Chamber of Commerce and Washington County Government websites. The new slips will be advertised in boating magazines and other publications, when ever possible. Additional marketing efforts will be coordinated with our Washington County Travel Tourism Authority and Washington County Chamber of Commerce.
7. U.S. Coast Guard Auxiliary Resources: Plymouth Flotilla 1602, U.S. Coast Guard Auxiliary, the oldest auxiliary in North Carolina, can provide boating classes, vessel safety inspections and assistance to transient boaters using our docks and waterways. Flotilla 1602 is routinely called upon to conduct Search and Rescue, and other operations in direct support of active duty Coast Guard Units. These slips will provide added flexibility.
8. Designated NC Birding Trail Resource: The North Carolina Birding Trail was developed in close coordination with Town of Plymouth officials largely because of our unique access to water based bird watching. The construction of larger boat slips will allow more flexibility for bird watching expeditions to enjoy our wide assortment of beautiful birds including bald eagles, osprey, blue herons, and other exotic birds. Visitors may even see an occasional alligator, or two.

9. Supports Numerous Existing Development Plans: These slips comply with Plymouth's Allison Platt Plan, NC Small Town Economic Development Plan, Roanoke River Maritime Museum and Lighthouse development strategy and the Plymouth Riverfront Development Overlay.
10. Access to Historic Downtown Businesses: These slips will provide visitors with direct walking access to the heart of our downtown business district. The project site adjoins the town retail and restaurant area.

Project Cost Efficiencies

The cost efficiencies with this project are significant. Although the Town has several locations where slips could be constructed, this particular site has been selected primarily to exploit cost efficiencies. The cost efficiencies are as follows:

1. No dredging required: The site design for these deep draft transient slips was developed specifically to eliminate exceedingly costly dredging by taking advantage of the unique depth and natural contours of the river bottom. These slips will be located directly on the edge of the existing river channel, which has a near-constant average depth of 20 feet or more, and a channel over three hundred feet in width.
2. Designed for low maintenance: The decking will be made of exotic, imported Ipe decking, which is a natural wood that is three times harder than oak, has the same fire rating as concrete and steel and rated number one against insect infestation. Ipe is straight grained and inherently resists cup, warp and split. This is the same decking material used at Disney World, Universal Studios, Atlantic City's boardwalk, and many resorts and marinas.
3. Designed for low operating cost: This facility is being designed to eliminate the need for onsite staff. Use of a "Smart Start" automated credit card pedestal is being explored for user accessed utilities and internet access. A management program will be developed to ensure near autonomous operation of the entire facility.
4. Existing shoreline boardwalks and bulk heading (ADA compliant): The slips will be tied into an extensive network of existing lighted boardwalks, piers, an over water gazebo and bulk heading.
5. Existing picnic area: The slips will be constructed within approximately 50 feet of a large, well-maintained public park with picnic shelter, tables and public cooking grills.
6. Ties into existing utilities: Electrical power already installed on the existing lighted boardwalk. Our plan calls for a simple upgrade to the existing electrical system. Existing water infrastructure will be extended to supply the new slips.
7. Existing vehicle parking: Several single vehicle public parking areas adjoin the project site.

8. Adjoins existing North Carolina public boat ramp: The North Carolina Wildlife Resources Commission built and maintains a doublewide, ADA accessible, public boat ramp which adjoins the project site.
9. Convenient street access: There is an existing curb cut that will allow direct vehicle access to the existing boardwalk system to facilitate easy loading and unload of supplies and equipment for transient boats, if necessary.
10. Existing historic and cultural points-of-interest: These slips will be located at the same site at the Roanoke River Lighthouse and directly across the street from the Roanoke River Maritime Museum. Numerous other points-of-interest are within one block of the project site, including the Downtown Historic District.
11. Existing restaurants and other amenities: Simple walking distance to several restaurants and retail establishments, including one large family dining establishment directly across the intersection.
12. Historic Bed and Breakfast is within one block of project site.

Economic Impact

Although there is limited data in North Carolina pertaining to economic impact of waterfront improvements, a NC Sea Grant Study, conducted in 2000, assessed the financial impact of overnight kayakers. The Sea Grant study indicated kayakers visiting the Coastal Plain of North Carolina spent an average of \$140 a day on food, gas, lodging, guides and souvenirs. Using that figure as a basis, a general estimate for economic impact, with a 50% utilization for nine slips, would be approximately \$230,000 per year infused into the local economy. Deep draft boat slips in other communities have also spurring other large-scale development projects generating enormous financial benefits.



Roanoke River Lighthouse

Proposed Budget Summary

	Grant Assistance Requested	Local and Partner Cash Contributions	In-Kind Contributions	Total
Permit and Design Fees:				
Project planning and permits	\$4,675	\$ 8,225	\$2,000	\$ 14,900
Site Improvements Cost:				
Construct new boat slips	\$76,125	\$25,375		\$101,500
Install new electrical services, hook-ups and lighting	\$13,500	\$ 4,500		\$18,000
Install new water services	\$ 2,250	\$ 750		\$ 3,000
Install fire center with life ring	\$ 750	\$ 250		\$ 1,000
Contingency	\$ 8,700	\$ 2,900		\$ 11,600
Total Budget	\$106,000	\$42,000	\$2,000	\$150,000

Timeline for the Plymouth, NC Marina Project

Month	Sept 2008	Oct	Nov	Dec	Jan 2009	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Task																				
Submit Grant Application	X																			
Permitting Process	X	X	X	X	X	X	X	X	X											
Receive Grant Notification						X														
Receive Funding											X									
Construction											X	X	X	X	X	X	X	X	X	
Close Out																				X